

GROVE GEAR



Gear Products Catalog 8050

**GEAR REDUCERS, GEAR+MOTOR™ AND
INTEGRAL GEARMOTORS**

A Regal Brand

REGAL

COMBINING THE WORLD'S BEST GEARING INTO ONE CATALOG

Recognized throughout the world as a leader in industrial-duty gear reducers, GEAR+MOTOR™ and integral gearmotors, Grove Gear offers a range of products, from single reduction worm gear reducers to quintuple reduction helical-bevel reducers.

Grove Gear IRONMAN is the industry's most comprehensive and superior line of gear reducers, available in right angle worm and high efficiency options. Electra-Gear offers the industry's only industrial-duty aluminum worm reducers designed and built in the U.S.A. Electra-Gear products are built with premium features from the IRONMAN line and offer a clean, paint-free finish perfect for wash-down applications.

LeCENTRIC™ and Bravo® reducers are a compact and lightweight alternative to traditional cast iron units. By combining a Grove Gear or Electra-Gear reducer with any LEESON or Lincoln c-face motors, a performance-matched GEAR+MOTOR™ or integral gearmotor is created instantly.

Grove Gear designs and builds tough, long lasting, energy efficient gear reducers, GEAR+MOTOR™ and integral gearmotors to meet the increasing demands for efficiency. Our helical-inline, helical-bevel, helical-worm and parallel shaft products use less energy, generating immediate savings. Combined with performance matched LEESON or Lincoln motors, you can maximize system efficiency and rely on unmatched product strength, precision and dependability.

Grove Gear IRONMAN
High Efficiency
Gear Reducers



Grove Gear IRONMAN
GR Series
Worm Gear Reducers



Grove Gear
Stainless Steel
Worm Gear Reducers



Grove Gear
E Series High Efficiency
Gear Reducers



Electra-Gear
EL Series
Worm Gear Reducers



Grove Gear IRONMAN
NH Series
Worm Gear Reducers



Grove Gear
LeCENTRIC™
Gear Reducers



Grove Gear
BRAVO®
Gear Reducers



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Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories

GROVE GEAR

ELECTRA-GEAR



E Series Features

Single Reduction
Worm Gear Reducers

Oversized positively-retained high speed input shaft bearing for higher shock load capacity, shaft alignment and seal life. Ideal for frequent starting and reversing applications.

Precision mounting surfaces and extra threaded bolt holes on top and bottom for flexibility and to accept a wide range of stock mounting accessories.

Premium Grade 5 zinc-plated heat-treated bolts used throughout.

Push-off holes drilled and tapped into flange for quick motor removal on quill input styles (56 & 140TC frames).

Double Reduction
Worm - Worm Gear Reducers

Factory filled with premium Mobil Glygoyle 460 polyalkalene glycol (PAG) lubricant.

Double Reduction
Helical - Worm Gear Reducers

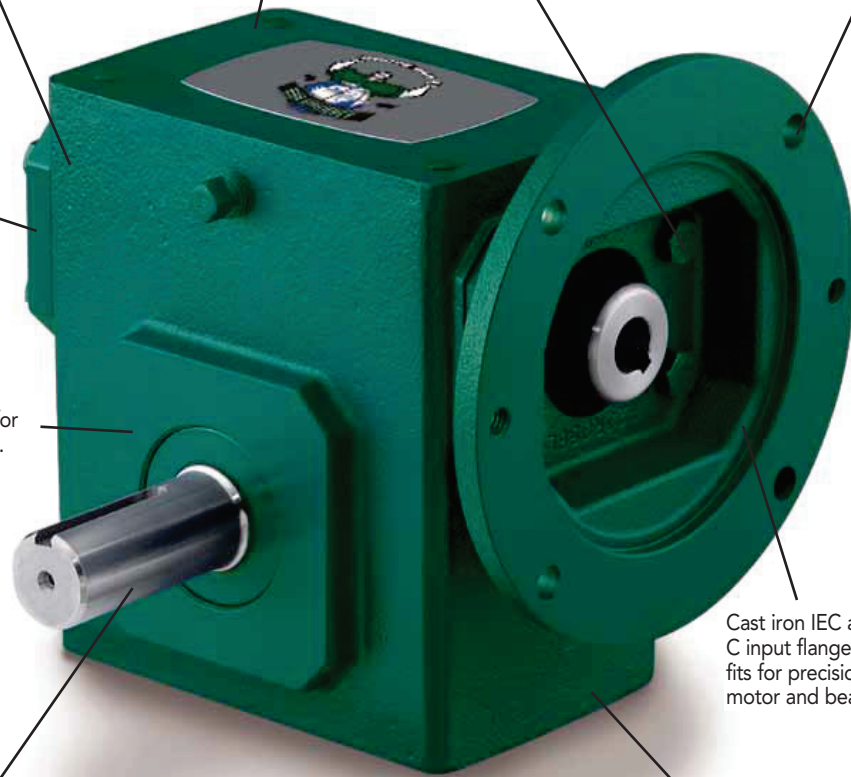
Tapered roller bearings on output shaft for high overhung and thrust load capacities.

WASHGUARD® Reducers and GEAR+MOTOR™

Robust output shaft of high strength steel alloy for superior torque and overhung load capacities.

Cast iron IEC and NEMA C input flange with machined fits for precision alignment of motor and bearings.

Multiple venting options for multi-position mounting.



Ratio Multipliers

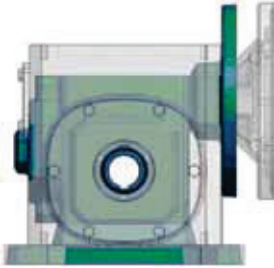
Accessories



E Series Features

The Grove Gear IronMan E Series is a high efficiency, right angle gear reducer designed for increased torque density, reduced inventory and improved efficiency. By utilizing modified helical-bevel technology, the E Series is able to operate at 90% efficiency and can provide up to 60% higher torque than a typical worm gear reducer. Through various accessories and modular components, the E Series recreates the critical dimensions of a standard worm gearbox and provides the opportunity to reduce inventory.

More Power



60% more torque than a typical worm gear reducer
Opportunity to downsize motor and gear reducer

The Grove Gear IronMan E Series offers more torque density than a typical worm reducer in the same mounting footprint. It allows for motor and gear reducer downsizing opportunities.

Less Inventory



Four models replace 10 typical worm gear reducer center distances
Plug-in shafts and mounting accessories create hundreds of style combinations

With this modular design, 10 typical worm gear center distances can be replaced with just four E Series units. Plug-in shafts and mounting accessories create hundreds of style combinations. By utilizing these modular features, the E Series can be used as a drop in replacement to worm gear reducers.

Higher Efficiency

90% operating efficiency
Rapid payback through energy cost savings



Bravo® Single
Reduction Reducers

Bravo® Worm - Worm
Double Reducers

Bravo® Helical - Worm
Double Reduction

Bravo® Accessory
Kits

Helical - Inline
Gear Reducers

Helical - Worm
Gear Reducers

E Series Features

The Grove Gear IronMan E Series Gear Reducer yields 90% operating efficiency and meets the increasing demand for high efficiency products in industrial applications. This revolutionary product utilizes modified helical-bevel technology to provide superior efficiency with the same dimensional footprint as worm gear reducers. The compact design is an ideal alternative to traditional high efficiency units. Placing greater attention on the efficiency of the entire power transmission system can reduce energy costs while boosting productivity, reliability and profitability.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

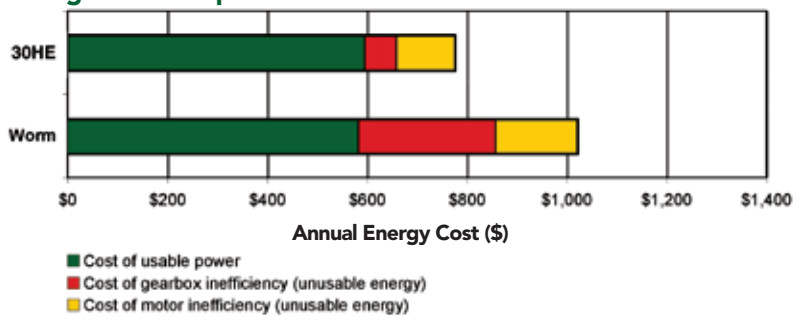
Ratio Multipliers

Accessories

	Worm Drive	ε Series
Gearbox Description	3" worm	30HE
Input Speed (rpm)	1750	
Gearbox Ratio (Input RPM / Output RPM)	60	59.79
Desired Output Torque (in-lbs)	1950	
Gearbox Operating Efficiency (%)	68.0%	90.0%
Select Motor	Standard 3-ph	LEESON WATTSAYER®
Motor HP	1.50	1.00
Motor Efficiency	83.0%	85.0%
Duty Cycle (hrs/day)	24	
Duty Cycle (days/week)	7	
Energy Cost (\$/kW-hr)	\$0.10	
Cost of usable power	\$588	\$590
Cost of gearbox inefficiency (unusable energy)	\$277	\$66
Cost of motor inefficiency (unusable energy)	\$177	\$116
Annual Energy Cost Savings (\$)	\$270	
Annual Energy Savings (kW-hrs)	2,704	

Typical operating example, actual savings will vary.

Operating Cost Example



E Series Ratings

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories

1 Select Reducer

Style HMQ Style HM



Style HMQ Style HM



Maximum Ratings - 18HE

Ratio	Input RPM	Output RPM	Input HP	Output TQ (lb-in)	NEMA Input Frame	Quill Input / Hollow Output Catalog No. ▼	Coupling Input / Hollow Output Catalog No. ▼
8.02	1750	218.20	4.23	1100	56C	E180508.XX	E180524.XX
	1150	143.39	2.78				
	850	105.99	2.06				
	100	12.47	0.24				
11.42	1750	153.24	2.97	1100	56C	E180509.XX	E180525.XX
	1150	101.70	1.95				
	850	74.43	1.44				
	100	8.76	0.17				
15.60	1750	112.18	2.18	1100	56C	E180510.XX	E180526.XX
	1150	73.72	1.43				
	850	54.49	1.06				
	100	6.41	0.12				
19.93	1750	87.81	1.70	1100	56C	E180511.XX	E180527.XX
	1150	57.70	1.12				
	850	42.65	0.83				
	100	5.02	0.10				
29.10	1750	60.14	1.17	1100	56C	E180512.XX	E180528.XX
	1150	39.52	0.77				
	850	29.21	0.57				
	100	3.44	0.07				
43.53	1750	40.20	0.78	1100	56C	E180513.XX	E180529.XX
	1150	26.42	0.51				
	850	19.53	0.38				
	100	2.30	0.04				
52.50	1750	33.33	0.65	1100	56C	E180514.XX	E180530.XX
	1150	21.90	0.42				
	850	16.19	0.31				
	100	1.90	0.04				
58.33	1750	30.00	0.58	1100	56C	E180515.XX	E180531.XX
	1150	19.72	0.38				
	850	14.57	0.28				
	100	1.71	0.03				

Maximum Ratings - 24HE

Ratio	Input RPM	Output RPM	Input HP	Output TQ (lb-in)	NEMA Input Frame	Quill Input / Hollow Output Catalog No. ▼	Coupling Input / Hollow Output Catalog No. ▼
7.80	1750	224.4	8.50	2149	56C	E240511.XX	E240541.XX
	1150	147.4	6.76				
	850	109.0	5.00				
	100	12.8	0.59				
11.36	1750	154.0	7.06	2600	56C	E240513.XX	E240543.XX
	1150	101.2	4.64				
	850	74.8	3.43				
	100	8.80	0.40				
15.60	1750	112.2	5.14	2600	56C	E240514.XX	E240544.XX
	1150	73.7	3.38				
	850	54.5	2.50				
	100	6.40	0.29				
19.50	1750	89.7	4.11	2600	56C	E240515.XX	E240545.XX
	1150	59.0	2.70				
	850	43.6	2.00				
	100	5.1	0.24				
28.01	1750	62.5	2.86	2600	56C	E240516.XX	E240546.XX
	1150	41.1	1.88				
	850	30.3	1.39				
	100	3.60	0.16				
39.98	1750	43.8	2.01	2600	56C	E240518.XX	E240548.XX
	1150	28.8	1.32				
	850	21.3	0.97				
	100	2.50	0.11				
52.50	1750	33.3	1.53	2600	56C	E240519.XX	E240549.XX
	1150	21.9	1.00				
	850	16.2	0.74				
	100	1.90	0.09				
59.79	1750	29.3	1.34	2600	56C	E240520.XX	E240550.XX
	1150	19.2	0.88				
	850	14.2	0.65				
	100	1.70	0.08				

▼ Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

▼ Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

Available bore codes 18HE

Fraction Size	3/4"	7/8"	1"	1-1/8"	1-3/16"	1-1/4"	1-7/16"
Decimal Size	0.750	0.875	1.000	1.125	1.188	1.250	1.438
Output Bore Code	12	14	16	18	19	20	23

If a solid output shaft is required for size 18HE, replace "XX" with "23" output bore code on basic reducer.

Available bore codes 24HE

Fraction Size	1"	1-1/8"	1-3/16"	1-1/4"	1-7/16"	1-1/2"
Decimal Size	1.000	1.125	1.188	1.250	1.438	1.500
Output Bore Code	16	18	19	20	23	24

If a solid output shaft is required for size 24HE, replace "XX" with "23" output bore code on basic reducer.

1 Select Reducer (cont.)

Maximum Ratings - 33HE

Ratio	Input RPM	Output RPM	Input HP	Output TQ (lb-in)	NEMA Input Frame	Style HMQ	Style HM
						Quill Input / Hollow Output Catalog No. ▼	Coupling Input / Hollow Output Catalog No. ▼
7.94	1750	220.4	13.00	3346	56C 143-5TC 182-4TC 213-5TC	E330508.XX	E330548.XX
	1150	144.8	11.49			E330516.XX	E330556.XX
	850	107.1	8.49			E330524.XX	E330564.XX
	100	12.59	1.00			E330532.XX	E330572.XX
10.77	1750	162.5	12.89	4500	56C 143-5TC 182-4TC 213-5TC	E330509.XX	E330549.XX
	1150	106.8	8.47			E330517.XX	E330557.XX
	850	78.9	6.26			E330525.XX	E330565.XX
	100	9.29	0.74			E330533.XX	E330573.XX
15.05	1750	116.3	9.22	4500	56C 143-5TC 182-4TC 213-5TC	E330510.XX	E330550.XX
	1150	76.4	6.06			E330518.XX	E330558.XX
	850	56.5	4.48			E330526.XX	E330566.XX
	100	6.64	0.53			E330534.XX	E330574.XX
21.15	1750	82.7	6.56	4500	56C 143-5TC 182-4TC 213-5TC	E330511.XX	E330551.XX
	1150	54.4	4.31			E330519.XX	E330559.XX
	850	40.2	3.19			E330527.XX	E330567.XX
	100	4.73	0.38			E330535.XX	E330575.XX
30.14	1750	58.1	4.61	4500	56C 143-5TC 182-4TC 213-5TC	E330512.XX	E330552.XX
	1150	38.2	3.03			E330520.XX	E330560.XX
	850	28.2	2.24			E330528.XX	E330568.XX
	100	3.32	0.26			E330536.XX	E330576.XX
43.97	1750	39.8	3.16	4500	56C 143-5TC 182-4TC 213-5TC	E330513.XX	E330553.XX
	1150	26.2	2.07			E330521.XX	E330561.XX
	850	19.3	1.53			E330529.XX	E330569.XX
	100	2.27	0.18			E330537.XX	E330577.XX
53.03	1750	33.0	2.62	4500	56C 143-5TC 182-4TC 213-5TC	E330514.XX	E330554.XX
	1150	21.7	1.72			E330522.XX	E330562.XX
	850	16.0	1.27			E330530.XX	E330570.XX
	100	1.89	0.15			E330538.XX	E330578.XX
58.92	1750	29.7	2.36	4500	56C 143-5TC 182-4TC 213-5TC	E330515.XX	E330555.XX
	1150	19.5	1.55			E330523.XX	E330563.XX
	850	14.4	1.14			E330531.XX	E330571.XX
	100	1.70	0.13			E330539.XX	E330579.XX

▼ Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

Available bore codes 33HE

Fraction Size	1-3/16"	1-1/4"	1-7/16"	1-1/2"	1-5/8"	1-11/16"	1-3/4"	1-7/8"	1-15/16"	2"	2-3/16"
Decimal Size	1.188	1.250	1.438	1.500	1.625	1.688	1.750	1.875	1.938	2.000	2.188
Output Bore Code	19	20	23	24	26	27	28	30	31	32	35

If a solid output shaft is required for size 33HE, replace "XX" with "31" output bore code on basic reducer.

Style HMQ Style HM



Maximum Ratings - 43HE

Ratio	Input RPM	Output RPM	Input HP	Output TQ (lb-in)	NEMA Input Frame	Style HMQ	Style HM
						Quill Input / Hollow Output Catalog No. ▼	Coupling Input / Hollow Output Catalog No. ▼
9.58	1750	182.67	27.37	8500	56C 143-5TC 182-4TC 213-5TC	E430507.XX	E430542.XX
	1150	120.04	17.99			E430514.XX	E430549.XX
	850	88.73	13.30			E430521.XX	E430556.XX
	100	10.44	1.56			E430528.XX	E430563.XX
15.05	1750	116.28	17.42	8500	56C 143-5TC 182-4TC 213-5TC	E430508.XX	E430543.XX
	1150	76.41	11.45			E430515.XX	E430550.XX
	850	56.48	8.46			E430522.XX	E430557.XX
	100	6.64	1.00			E430529.XX	E430564.XX
21.15	1750	82.74	12.40	8500	56C 143-5TC 182-4TC 213-5TC	E430509.XX	E430544.XX
	1150	54.37	8.15			E430516.XX	E430551.XX
	850	40.19	6.02			E430523.XX	E430558.XX
	100	4.73	0.71			E430530.XX	E430565.XX
30.14	1750	58.06	8.70	8500	56C 143-5TC 182-4TC 213-5TC	E430510.XX	E430545.XX
	1150	38.16	5.72			E430517.XX	E430552.XX
	850	28.20	4.23			E430524.XX	E430559.XX
	100	3.32	0.50			E430531.XX	E430566.XX
37.33	1750	46.88	7.02	8500	56C 143-5TC 182-4TC 213-5TC	E430511.XX	E430546.XX
	1150	30.81	4.62			E430518.XX	E430553.XX
	850	22.77	3.41			E430525.XX	E430560.XX
	100	2.68	0.40			E430532.XX	E430567.XX
53.03	1750	33.00	4.95	8500	56C 143-5TC 182-4TC 213-5TC	E430512.XX	E430547.XX
	1150	21.69	3.25			E430519.XX	E430554.XX
	850	16.03	2.40			E430526.XX	E430561.XX
	100	1.89	0.28			E430533.XX	E430568.XX
58.92	1750	29.70	4.45	8500	56C 143-5TC 182-4TC 213-5TC	E430513.XX	E430548.XX
	1150	19.52	2.92			E430520.XX	E430555.XX
	850	14.43	2.16			E430527.XX	E430562.XX
	100	1.70	0.25			E430534.XX	E430569.XX

▼ Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

Available bore codes 43HE

Fraction Size	1-7/16"	1-1/2"	1-15/16"	2"	2-3/16"	2-7/16"	3"	3-7/16"
Decimal Size	1.438	1.500	1.938	2.000	2.188	2.438	3.000	3.438
Output Bore Code	23	24	31	35	35	39	48	55

If a solid output shaft is required for size 43HE, replace "XX" with "39" output bore code on basic reducer.

Bravo® Single
Reduction Reducers

Bravo® Worm - Worm
Double Reducers

Bravo® Helical - Worm
Double Reduction

Bravo® Accessory
Kits

Helical - Inline
Gear Reducers

Helical - Worm
Gear Reducers

E Series

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories

2

Add "B" Interchange Base (if replacing larger worm reducer)

Base P/N	Interchange to Traditional Worm Center Distance
CB21HE	2.06"
CB23HE	2.38"
CB26HE	2.62"
CB30HE	3.00"
CB32HE	3.25"
CB38HE	3.75"
CB42HE	4.25"
CB52HE	5.25"
CB60HE	6.00"

"B" Base mounts to basic reducer and allows simple interchange to larger center distance worm reducers.

"B" Bases will be assembled to a reducer at no charge upon request. Contact Factory for details.

3

Add Output Shaft (if solid output shaft is needed)

Single Output P/N	Double Output P/N	Shaft Length (in)	Shaft Dia. (in)	Interchange to Traditional Worm Center Distance
S185040	S185043	4.31	0.875	1.75"
S185041	S185044	4.69	1.000	2.06"
S185042	S185045	5.14	1.125	2.38"
S185000	S185004	5.14	1.125	2.38"
S185001	S185005	5.63	1.125	2.62"
S185002	S185006	6.75	1.250	3.00"
S185003	S185007	7.06	1.375	3.25"
S185020	S185023	7.06	1.375	3.25"
S185021	S185024	7.75	1.625	3.75"
S185022	S185025	8.12	1.875	4.25"
S185030	S185033	8.12	1.875	4.25"
S185031	S185034	9.06	2.000	5.25"
S185032	S185035	10.00	2.250	6.00"

If solid shaft is required, substitute the XX suffix in the catalog number with the appropriate bore code.

Shaft kits will be assembled into a reducer at no charge upon request. Contact Factory for details

4

Add Accessory Kit (if replacing worm reducer)

Worm Reducer Size	Converts Basic Reducer + "B" Base Kit to Worm Reducers Below:			
	Horizontal Base (T-Mount)	Vertical Output (VL/VH Mount) ■	Output Flange (F Mount)	Torque Arm Kit
18HE	1.75" CD	E185005.00	E185717.00	E185132.00
	2.06" CD*	E185010.00	--	E185133.00
	2.38" CD*	E185015.00	--	E185734.00
24HE	2.38" CD	E185015.00	E185017.00	E185134.00
	2.62" CD*	E185020.00	--	E185135.00
	3.00" CD*	E185121.00	--	E185136.00
	3.25" CD*	E185025.00	--	--
33HE	3.25" CD	E185025.00	E185027.00	E185137.00
	3.75" CD*	E185026.00	--	--
	4.25" CD*	E185030.00	--	E185138.00
43HE	4.25" CD	E185030.00	E185032.00	E185738.00
	5.25" CD*	E185035.00	--	E185139.00
	6.00" CD*	E185040.00	--	E185140.00

* A "B" Base is required to mount accessories to base units for retrofit to larger center distance worm reducers.

■ VL & VH bases must be installed at Factory.

Accessory kits will be assembled to a reducer at no charge upon request. Contact Factory for details.

E Series Cross Reference

Grove Gear Ironman High Efficiency E Series gear reducers are designed to be dimensional and functional replacements of most worm reducer brands. This chart is meant to be a quick reference guide only. For specific dimensions and ratings of brands listed below, consult manufacturer's catalog information.

Grove Gear Style B



Grove Gear Style BM



Grove Gear Style BMQ



Grove Gear Style H



Grove Gear Style HM



Grove Gear Style HMQ



For overlapping units, determine torque and dimensional requirements.

Grove Gear	Baldor	Boston	Morse (Browning) Raider	Dodge Tigear-2	Falk Omnibox	
18HE	B18HE	S918	718	175U	17S	1175WB
	B21HE	S921	721	206U	20S	1206WB
	B23HE	S924	724	237U	23S	1238WB
	B24HE	S924	724	237U	23S	1238WB
	B26HE	S926	726	262U	26S	1262WB
	B30HE	S930	730	300U	30S	1300WB
24HE	B32HE	S932	732	325U	--	1325WB
	B33HE	S932	732	325U	--	1325WB
	B38HE	S938	738	375U	35S	--
33HE	B42HE	--	--	40S	1425WB	--
	B43HE	--	--	40S	1425WB	--
	B52HE	S952	752	516U	47S	1525WB
43HE	B60HE	S960	760	600U	--	1600WB
	18HE	BM18HE	LF918	RF718	175C	17A	1175WBF
BM21HE		LF912	RF721	206C	20A	1206WBF
BM23HE		LF924	RF724	237C	23A	1238WBF
BM24HE		LF924	RF724	237C	23A	1238WBF
BM26HE		LF926	RF726	262C	26A	1262WBF
BM30HE		LF930	RF730	300C	30A	1230WBF
24HE	BM32HE	LF932	RF732	325C	--	1325WBF
	BM33HE	LF932	RF732	325C	--	1325WBF
	BM38HE	LF938	RF738	375C	35A	--
33HE	BM42HE	--	--	40A	1425WBF	--
	BM43HE	--	--	40A	1425WBF	--
	BM52HE	--	RF752	516C	47A	1525WBF
43HE	BM60HE	--	RF760	600C	--	1600WBF
	18HE	BMQ18HE	F918	F718	175Q	17Q	1175WBM
BMQ21HE		F921	F721	206Q	20Q	1206WBM
BMQ23HE		F924	F724	237Q	23Q	1238WBM
BMQ24HE		F924	F724	237Q	23Q	1238WBM
BMQ26HE		F926	F726	262Q	26Q	1262WBM
BMQ30HE		F930	F730	300Q	30Q	1300WBM
24HE	BMQ32HE	F932	F732	325Q	--	1325WBM
	BMQ33HE	F932	F732	325Q	--	1325WBM
	BMQ38HE	F938	F738	375Q	35Q	--
33HE	BMQ42HE	--	--	40Q	1425WBM	--
	BMQ43HE	--	--	40Q	1425WBM	--
	BMQ52HE	--	F752	516Q	47Q	1525WBM
43HE	BMQ60HE	--	F760	600Q	--	1600WBM
	18HE	H18HE	HS918	H718	175UH	17SH	1175WBQ
H21HE		HS912	H721	206UH	20SH	1206WBQ
H23HE		HS924	H724	237UH	23SH	1238WBQ
H24HE		HS924	H724	237UH	23SH	1238WBQ
H26HE		HS926	H726	262UH	26SH	1262WBQ
H30HE		HS930	H730	300UH	30SH	1300WBQ
24HE	H32HE	HS932	H732	325UH	--	1325WBQ
	H33HE	HS932	H732	325UH	--	1325WBQ
	H38HE	HS938	H738	375UH	35SH	--
33HE	H42HE	--	--	40SH	1425WBQ	--
	H43HE	--	--	40SH	1425WBQ	--
	H52HE	--	--	516UH	47SH	1525WBQ
43HE	H60HE	--	--	600UH	--	1600WBQ
	18HE	HM18HE	HLF918	HRF718	175CH	17AH	1175WBQF
HM21HE		HLF921	HRF721	206CH	20AH	1206WBQF
HM23HE		HLF924	HRF724	237CH	23AH	1238WBQF
HM24HE		HLF924	HRF724	237CH	23AH	1238WBQF
HM26HE		HLF926	HRF726	262CH	26AH	1262WBQF
HM30HE		HLF930	HRF730	300CH	30AH	1300WBQF
24HE	HM32HE	HLF932	HRF732	325CH	--	1325WBQF
	HM33HE	HLF932	HRF732	325CH	--	1325WBQF
	HM38HE	HLF938	HRF738	375CH	35AH	--
33HE	HM42HE	--	--	40AH	1425WBQF	--
	HM43HE	--	--	40AH	1425WBQF	--
	HM52HE	--	--	516CH	47AH	1525WBQF
43HE	HM60HE	--	--	600CH	--	1600WBQF
	18HE	HMQ18HE	HF918	HF718	175QH	17QH	1175WBQM
HMQ21HE		HF921	HF721	206QH	20QH	1206WBQM
HMQ23HE		HF924	HF724	237QH	23QH	1238WBQM
HMQ24HE		HF924	HF724	237QH	23QH	1238WBQM
HMQ26HE		HF926	HF726	262QH	26QH	1262WBQM
HMQ30HE		HF930	HF730	300QH	30QH	1300WBQM
24HE	HMQ32HE	HF932	HF732	325QH	--	1325WBQM
	HMQ33HE	HF932	HF732	325QH	--	1325WBQM
	HMQ38HE	HF938	HF738	375QH	35QH	--
33HE	HMQ42HE	--	--	40QH	1425WBQM	--
	HMQ43HE	--	--	40QH	1425WBQM	--
	HMQ52HE	--	--	516QH	47QH	1525WBQM
43HE	HMQ60HE	--	--	600QH	--	1600WBQM

Bravo® Single Reduction Reducers

Bravo® Worm - Worm Double Reducers

Bravo® Helical - Worm Double Reduction

Bravo® Accessory Kits

Helical - Inline Gear Reducers

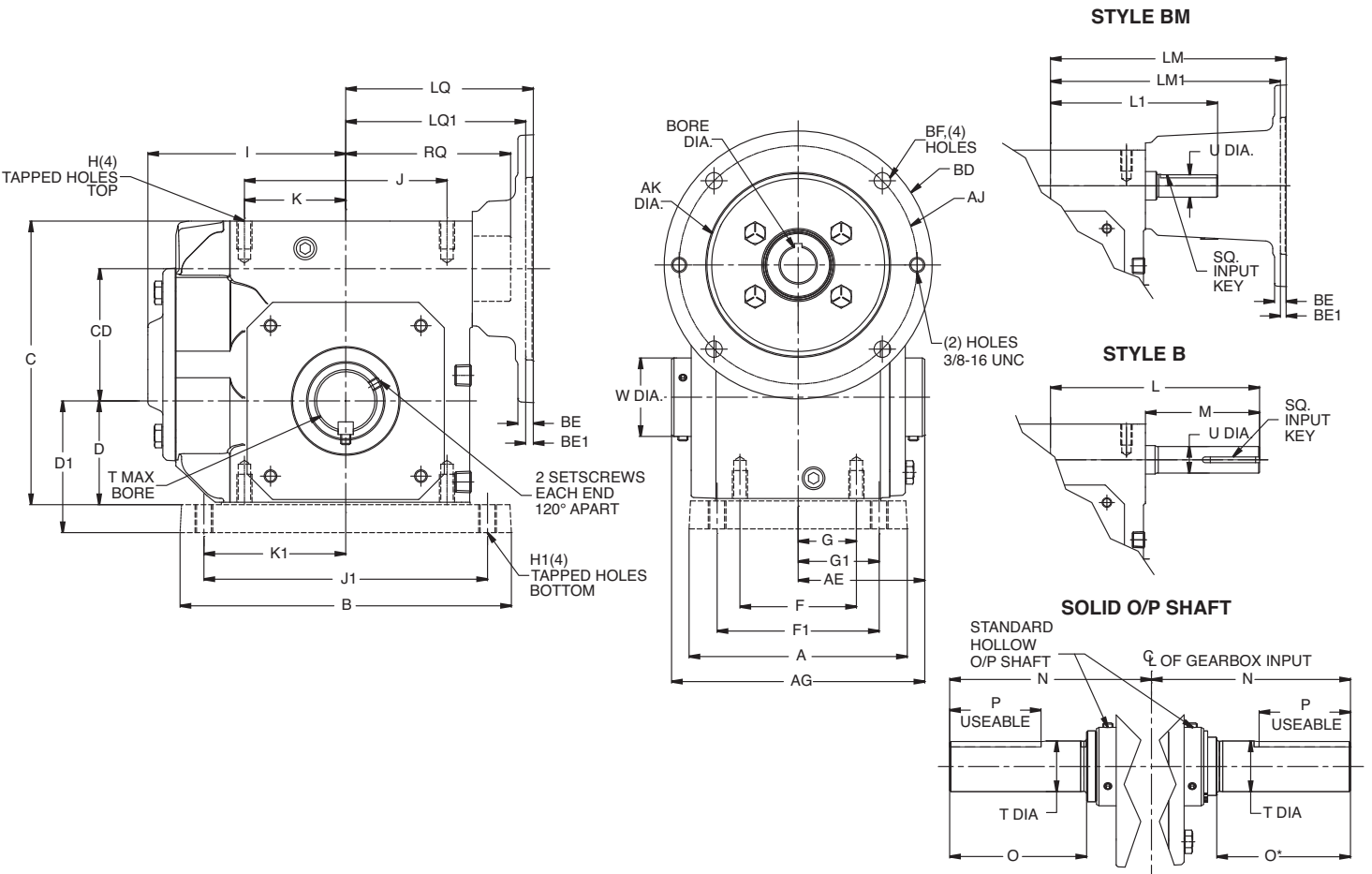
Helical - Worm Gear Reducers

E Series Dimensions

Style HMQ, HM, H • Hollow Output Shaft (Inches)

Reducer Size	A	AE	AG	B	C	CD	D	D1▼	F	F1▼	G	G1▼	H	H1▼	I	J	J1▼	K	K1▼	L	M	T MAX BORE -0.0000 +0.0015
18HE	N/A			N/A				N/A		N/A		N/A		N/A					N/A	4.88	1.44	1.438
21HE	3.85	2.75	5.50	5.84	5.75	2.51	2.06	2.28	2.75	2.88	1.38	1.44	5/16-18	3/8-16	4.25	4.190	5.00	2.09	2.50	5.13	2.13	
23HE	3.87			5.86				2.50		2.88		1.44		3/8-16			5.00		2.50	5.31	2.75	
24HE	4.06			6.28				N/A		N/A		N/A		N/A					N/A	5.50	2.00	1.500
26HE	4.43	3.13	6.25	7.11	6.94	3.26	2.50	2.94	2.88	3.38	1.44	1.69	3/8-16	3/8-16	4.88	5.00	6.38	2.50	3.19	6.31	2.81	
30HE	5.24			8.11				3.25		4.00		2.00	7/16-14	7/16-14			7.00		3.50	6.88	3.44	
32HE	5.74			8.49				3.50		4.00		2.00	7/16-14	7/16-14			7.50		3.75	7.44	4.00	
33HE	N/A			N/A				N/A		N/A		N/A		N/A					N/A	6.75	2.07	2.188
38HE	6.00	3.75	7.50	10.00	9.38	3.68	3.50	3.88	4.00	4.75	2.00	2.38	7/16-14	1/2-13	6.15	7.50	8.50	3.75	4.25	8.38	3.70	
42HE	6.12			10.25				4.44		5.00		2.50		5/8-11			8.50		4.25	9.56	4.88	
43HE	N/A			N/A				N/A		N/A		N/A		N/A					N/A	7.63	2.07	3.438
52HE	7.20	4.75	9.50	13.00	11.38	5.96	4.44	5.31	5.00	5.81	2.50	2.91	5/8-11	5/8-11	8.36	8.50	11.00	5.00	5.50	9.56	4.00	
60HE	8.14			14.50				6.50		6.38		3.19		5/8-11			12.75		6.38	10.69	5.00	

▼ Dimensions refer to "B Base" mounted to Size 18HE, 24HE, 33HE & 43HE reducer.



Style BMQ, BM, B • Solid Output Shaft Model (Inches)

Reducer Size		U -0.0000 +0.0015	W	I/P key Style (B,BM)	O/P key Style (B,BM,BMQ)
18HE	18HE	0.625	1.94	3/16 sq X 1-1/4	3/16 sq X 1-1/8
	21HE			1/4 sq X 1-1/2	
	23HE	0.750		3/16 sq X 1-1/2	1/4 sq X 1-3/4
24HE	24HE	0.750	1.94	3/16 sq. X 1-1/2	1/4 sq X 1-1/2
	26HE				1/4 sq X 1-3/4
	30HE	0.875			1/4 sq X 2-1/4
	32HE				5/16 sq X 2-3/8
33HE	33HE	0.875	2.62	1/4 sq. X 2-1/4	3/8 sq X 2-1/2
	38HE				1/2 sq X 3-1/4
	42HE				1.250
43HE	43HE	0.875	4.25	3/16 sq X 1-1/2	1/2 sq X 2-1/2
	52HE			1/4 sq X 2-1/4	1/2 sq X 3-1/2
	60HE	1.250		1/4 sq X 3	

Reducer Size	N	O	O*	P	T +0.0000 -0.0015
18HE	18HE	4.31	1.38	1.34	1.13
	21HE	4.69	1.76	1.72	1.50
	23HE	5.14	2.21	2.17	1.75
24HE	24HE	5.14	1.77	1.69	1.50
	26HE	5.63	2.25	2.18	2.00
	30HE	6.75	3.38	3.30	2.25
	32HE	7.06	3.69	3.64	2.50
33HE	33HE	7.06	3.06	3.00	2.50
	38HE	7.75	3.75	3.69	2.81
	42HE	8.12	4.12	4.03	3.31
43HE	43HE	8.12	3.06	3.00	2.56
	52HE	9.06	4.00	3.94	3.56
	60HE	10.00	4.94	4.88	3.56

Bravo® Single
Reduction Reducers

Bravo® Worm - Worm
Double Reducers

Bravo® Helical - Worm
Double Reduction

Bravo® Accessory Kits

Helical - Inline
Gear Reducers

Helical - Worm
Gear Reducers

Motor Mounting Dimensions

NEMA Dimensions (Inches)

Reducer Size	L1 All	LM 56/140TC	LM1 180TC/ 210TC	LQ 56/140TC	LQ1 180TC/210TC/ 250TC	RQ 56/140	RQ 180/210/ 250
18HE	18HE	5.32	7.57	N/A	4.44	N/A	3.88
	21HE						
	23HE						
24HE	24HE	5.51	7.76	8.76	4.63	5.06	4.07
	26HE						
	30HE						
	32HE						
33HE	33HE	6.75	9.00	10.00	5.57	6.33	5.01
	38HE						
	42HE						
43HE	43HE	7.63	9.88	10.88	6.45	7.21	5.89
	52HE						
	60HE						

NEMA Dimensions (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway♦	BF
48CZ	3.75	3.00	4.36	0.38	N/A	.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

♦ Keyway width by depth



800 Series Gear Reducers Built For Industrial Use

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories

Cast iron IEC and NEMA C input flange with machined fits for precision alignment of motor and bearings.

Push-off holes drilled and tapped into flange for quick motor removal on quill input styles (56 & 140TC frames).

Seal Guard** on quill-input styles protects input seal from damage during motor installation.

** Sizes 813 through 852 only

IronMan™ fine-grained, one-piece cast housing for rigidity and alignment. Machined for precision alignment of worm, worm gear, bearings and mounting surfaces. Superior resistance to environmental contaminants with high heat dissipation and noise reduction.

Bronze alloy worm gear is premium quality bronze for maximum strength, lubricity and superior life.

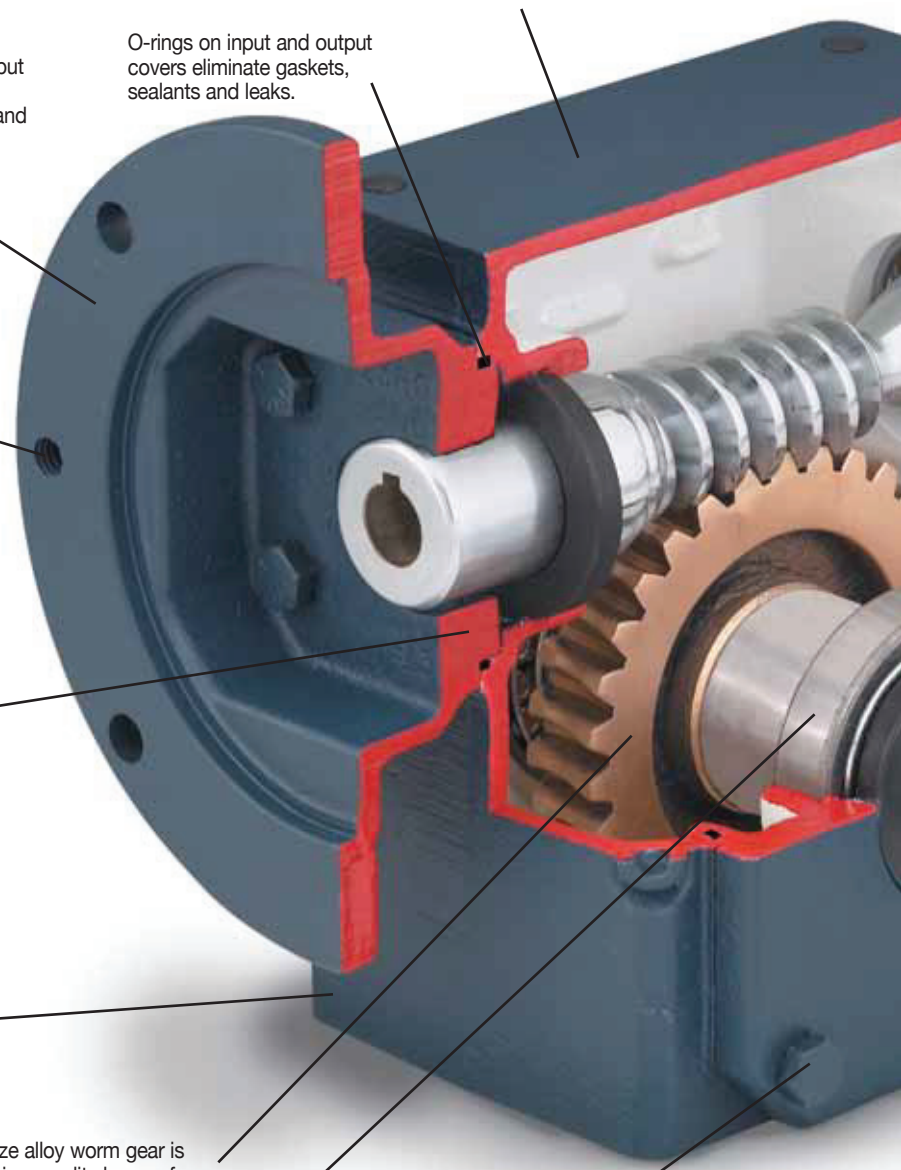
Tapered roller bearings on output shaft for high overhung and thrust load capacities.

Mounting dimensions are interchangeable with Baldor 900 series, Boston Gear, Browning Raider, Falk, Morse Invader and other "industry standard" reducers.

Precision mounting surfaces and extra threaded bolt holes on top and bottom for flexibility and to accept a wide range of stock mounting accessories.

O-rings on input and output covers eliminate gaskets, sealants and leaks.

Premium Grade 5 zinc-plated heat-treated bolts used throughout.





Oversized positively-retained high speed input shaft bearing for higher shock load capacity, shaft alignment and seal life. Ideal for frequent starting and reversing applications.

Single-piece, alloy steel input worm shaft. High lead angle worm is case-hardened, ground and polished for enhanced efficiency and noise reduction.

High capacity oil reservoir reduces noise, aids heat dissipation and lubricates for life. Multiple venting options for multi-position mounting. Factory filled with premium Mobil Glygoyle 460 polyalkalene glycol (PAG) lubricant.

Robust output shaft of high strength steel alloy for superior torque and overhung load capacities.

Viton® premium quality, double lip seals** throughout — on micro-finished surfaces — mean extended life, resistance to high temperature, abrasion and chemicals.

Single output cover design provides precise centering of gear for lower noise levels and higher overall gear efficiencies.

Right Angle Worm Gear Reducers - Single Reduction

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Right Angle Worm Gear Reducers - WASHGUARD® and Stainless

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Bravo® Aluminum Right Angle Worm Gear Reducers - Double Reduction Helical - Worm

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Bravo® Aluminum Right Angle Worm Gear Reducers

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Bravo® Single Reduction Reducers

Bravo® Worm - Worm Double Reducers

Bravo® Helical - Worm Double Reduction

Bravo® Accessory Kits

Helical - Inline Gear Reducers

Helical - Worm Gear Reducers

ELECTRA-GEAR

Aluminum Gear Reducers Built For Industrial Use

Precision mounting surfaces and extra threaded bolt holes on top and bottom for flexibility and to accept a wide range of stock mounting accessories.

High capacity oil reservoir reduces noise, aids heat dissipation and lubricates for life. Multiple venting options for multi-position mounting. Factory filled with premium synthetic Mobil Glygoyle 460 polyalkylene glycol (PAG) lubricant.

O-rings on input and output covers eliminate gaskets, sealants and leaks.

Oversized positively-retained high speed input shaft bearing for higher shock load capacity, shaft alignment and seal life. Ideal for frequent starting and reversing applications.

Single-piece, alloy steel input worm shaft. High lead angle worm is case-hardened, ground and polished for enhanced efficiency and noise reduction.

DIN1705 (CuSn45Ni4) bronze alloy provides maximum strength, lubricity and superior life.

Tapered roller bearings on output shaft for high overhung and thrust load capacities.

Viton® premium quality, double lip seals provide extended life and resistance to high temperature, abrasion and chemicals. Only non-rusting rubber O.D. seals used in all exposed locations.

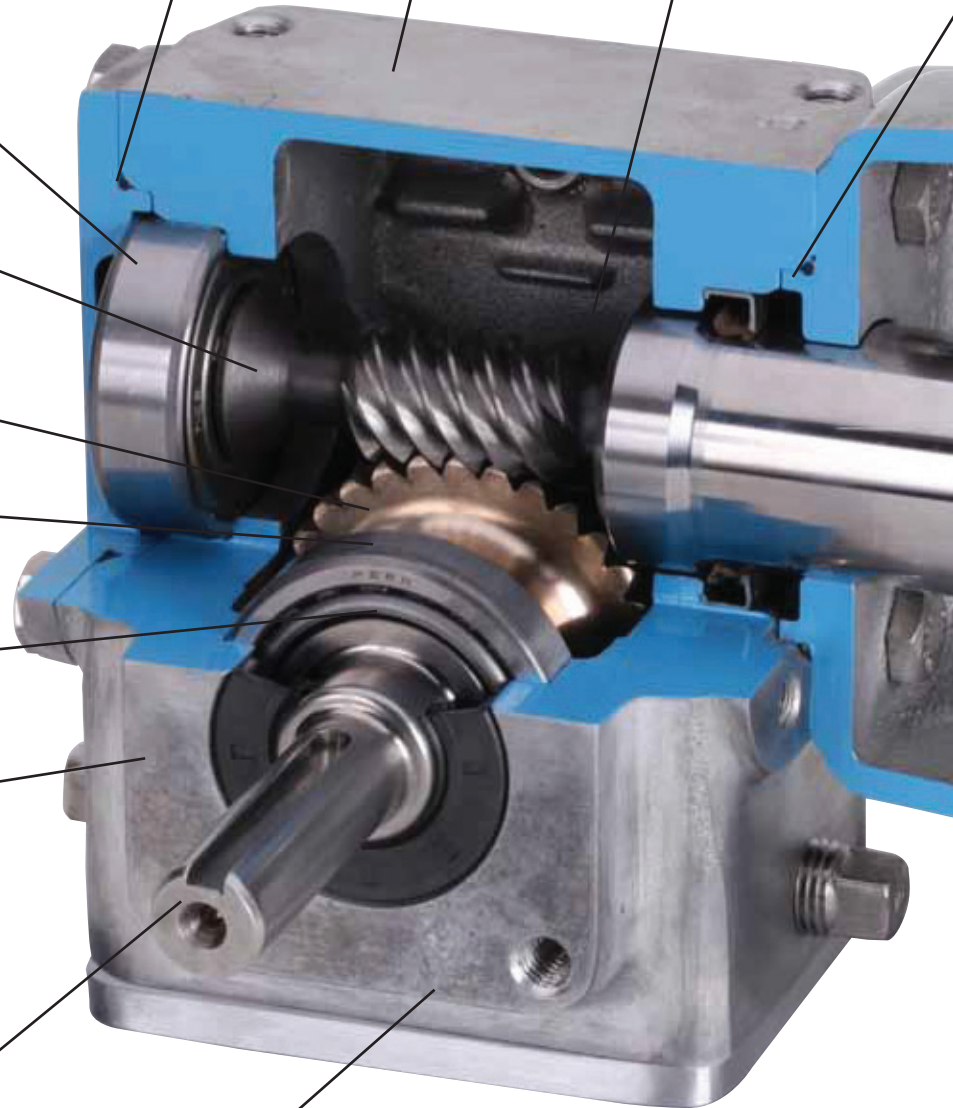
EL Series One piece 356T cast aluminum housing to provide strength and rigidity. Polished finish also available.

Robust output shaft of high strength steel alloy for superior torque and overhung load capacities.

Single output cover design provides precise centering of gear for lower noise levels and higher overall gear efficiencies. Output shaft comes out non-cover side as standard.

EL Series Mounting dimensions same as the original Electra-Gear product with an option to match the industry standard dimensions of Grove Gear.

GR and NH Series Mounting dimensions are interchangeable with Baldor 900 series, Boston Gear, Browning Raider, Falk, Morse Invader and other "industry standard" reducers.



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

ALL FEATURES SHOWN ARE SAME FOR ALL GR, NH AND EL SERIES EXCEPT WHERE NOTED.

Seal Guard** on quill-input styles protects input seal from damage during motor installation.

** Sizes 813 through 852 only

Cast aluminum NEMA C-input with machined fits for precision alignment of motors and bearings. (EL Series)

Cast iron NEMA C-input flange with machined fits for precision alignment of motors and bearings. (GR & NH Series)

Push-off holes drilled and tapped into flange for quick motor removal on quill input styles (56 & 140TC frames).

Premium Grade 5 zinc-plated bolts used throughout.

Series Comparison

CAST IRON GR SERIES



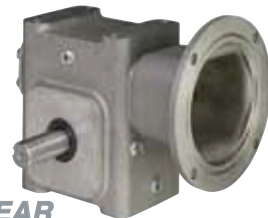
- Grove Gear IRONMAN 800 Series
- Cast Iron Housing Construction
- Mounting dimensions are interchangeable with most industry standard reducers
- Designed with industry leading premium features as standard
- Combines the premium features of the LEESON IRONMAN with the industry's broadest product offering of the Grove Gear Flexaline
- GEAR+MOTOR™ Available

CAST IRON NH SERIES



- Grove Gear IRONMAN Narrow Housing 800 Series
- Cast Iron Housing Construction
- Designed with industry leading premium features as standard
- Replacement for Grove Gear OE Series and original Alling Lander gear reducers
- Compact housing design to fit where other reducer brands cannot
- GEAR+MOTOR™ Available

ALUMINUM EL SERIES



ELECTRA-GEAR

- Electra-Gear 800 Series
- Aluminum Housing Construction
- Lightweight design with all the premium features of the GR and NH series as standard
- Replacement to original Electra-Gear reducers
- GEAR+MOTOR™ Available

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



Interchange Guide

Single Reduction

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



Style BMQ



Style TMQ



Style JMQ



Style FMQ



Style CMQ



Style FEMQ



Style HMQ



Style JHMQ



Style VLHMQ

CAST IRON
GR SERIES

CAST IRON
NH SERIES

ALUMINUM
EL SERIES

Reducer Style

Replaces Original
GROVE GEAR
OE Series Reducer Style

Replaces Original
ELECTRA-GEAR
Reducer Style

B	U	M
BM & BMQ	UFC & UF	MC & MSC
B★	N/A	ML
BM & BMQ★	N/A	MLC & MLSC
T & U	Z & UB	A
TM & TMQ	ZFC & ZF	AC & ASC
T★	N/A	AL
TM & TMQ★	N/A	ALC & ALSC
UM & UMQ	UBFC & UBF	NEW
J	J	JB
JM & JMQ	JFC & JF	JBC & JBSC
VL & VH	SL & SH	B
VLM & VLMQ	SLFC & SLF	BC & BSC
VHM	SHFC	N/A
VHMQ	SHF	N/A
F	K & V	N/A
FM & FMQ	KFC & KF / VFC & VF	N/A
C	P	N/A
CM & CMQ	PFC & PF	N/A
FE	E	N/A
FEM & FEMQ	EFC & EF	N/A
H	Y	MH_ & H_
HM & HMQ	YFC & YF	MH_C/ MH_SC & H_C/H_SC
JH	N/A	JBH_
JHM & JHMQ	N/A	JBH_C & JBH_SC
FH	M	RH_
FHM & FHMQ	MFC & MF	RH_C & H_C/H_SC & RH_SC
FR	N/A	New
FRM & FRMQ	N/A	New
FL	N/A	RL
FLM & FLMQ	N/A	RLC & RLSC
BL (Torque Limiter Reducer)	UL	N/A
BLM & BLMQ (Torque Limiter Reducer)	ULFC & ULF	N/A
ABC	N/A	ABC (contact factory)

Accessory

Horizontal Base Kit (T & U)	Horizontal Base Kit (Z & UB)	Horizontal Base Kit (AK Kit #'s)
Vert. Output Shaft Base Kit (VL & VH)	Vert. Output Shaft Base Kit (SL & SH)	Vert. Output Shaft Base Kit (BK Kit #'s)
Vertical Input Shaft Base Kit (J)	Vert. Input Shaft Base Kit (J)	Vert. Input Shaft Base Kit (JBK Kit #'s)
Cast Iron Output Flange (F)	Cast Iron Output Flange (K & V)	Cast Iron Output Flange (Square)
ABC Base Kit	N/A	ABC
Cast Iron Output Flange for Solid Output Shaft Styles (FR)	N/A	Cast Iron Output Flange (Round)
Coupling Input "C" Flange Kit – Single Red.✚	C-Flange Mounting Kit	N/A
Coupling Input "C" Flange Kit – Double Red.✚	C-Flange Mounting Kit	N/A
Hollow Shaft Tie Rod Kit	Hollow Shaft Tie Rod Kit	Hollow Shaft Tie Rod Kit
Hollow Shaft Torque Arm Bracket	Hollow Shaft Torque Arm Bracket	Hollow Shaft Torque Arm Bracket (TAK Kit #'s)

- ★ Confirm required output shaft length
- ✚ Convert Style B to BM using coupling input kit

SEE PAGE 123 FOR DOUBLE REDUCTION

Model Number System

GR • NH • EL Series

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

800 Series Gear Reducer Model Number Nomenclature

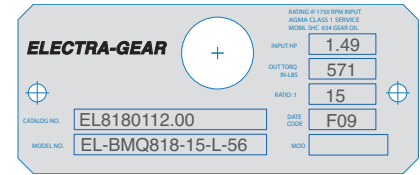
All new stock and custom 800 Series Grove Gear and Electra-Gear worm gear reducers are identified by a model number. The model number appears on the nameplate and describes pertinent features of the reducer. An example follows, along with a listing of the various letters and positions used.

NOTE: All reducers also have a catalog number—for example EL8130001 and GR8130001. Reducers and renewal parts should be ordered by catalog number. If a stock reducer has been Factory modified by the addition of an optional base for example, the modification number T818EL is stamped in the blank column of the nameplate. Accessories that are field installed will not be noted on the nameplate.

Catalog numbers 3000 and higher (for example, GR8133000 and NH8133000) are WASHGUARD® reducers for washdown service.

Catalog numbers 5000 and higher (for example, GR8135000 and EL8135000) are custom reducers manufactured for a specific application. The machinery or equipment manufacturer should be contacted for replacement reducers. Renewal parts can be ordered by catalog number.

TYPICAL NAMEPLATE (Electra-Gear shown)



<p>Series Code</p> <p>GR - Grove Gear IRONMAN Cast Iron Reducers NH - Grove Gear IRONMAN Narrow Housing Cast Iron Reducers EL - Electra-Gear Aluminum Reducers GRG - Grove Gear Flexaline Interchange (Sizes 821, 826, 832) GRL - Leeson IRONMAN Interchange (Sizes 821, 826, 832)</p>	<p>Style</p> <p>SOLID OUTPUT SHAFT BMQ – Motorized, Quill Input BM – Motorized, Flexible Coupling Input B – Non-Flanged</p> <p>HOLLOW OUTPUT SHAFT HMQ – Motorized, Quill Input HM – Motorized, Flexible Coupling Input H – Non-Flanged</p> <p>WASHGUARD STYLES W prefix; i.e. WBMQ denotes WASHDOWN Reducer S prefix; i.e. SHMQ denotes All-Stainless Steel Reducer</p>	<p>Size</p> <p>See Selection Tables on pages 32-58, for all available ratios.</p>	<p>Ratio</p> <p>See Selection Tables on pages 32-58, for all available ratios.</p>	<p>Output Shaft Orientation</p> <p>L – Left-hand Output Shaft* R – Right-hand Output Shaft* D – Double Output Shaft H – Hollow Output Shaft * Viewed from drive end of reducer.</p>	<p>Motor Flange</p>	<p>Output Bore Code</p> <p>Hollow Shaft Only See bottom right hand pages of Max Ratings Tables starting on page 37.</p>
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<p>800 SERIES CENTER DISTANCES</p> <table border="1"> <thead> <tr> <th>Size</th> <th>Center Distance (Inches)</th> </tr> </thead> <tbody> <tr><td>813</td><td>1.33</td></tr> <tr><td>815**</td><td>1.54</td></tr> <tr><td>818</td><td>1.75</td></tr> <tr><td>821</td><td>2.06</td></tr> <tr><td>824</td><td>2.38</td></tr> <tr><td>826</td><td>2.62</td></tr> <tr><td>830</td><td>3.00</td></tr> <tr><td>832</td><td>3.25</td></tr> <tr><td>842</td><td>4.25</td></tr> <tr><td>852</td><td>5.25</td></tr> <tr><td>860</td><td>6.00</td></tr> <tr><td>870*</td><td>7.00</td></tr> <tr><td>880*</td><td>8.00</td></tr> <tr><td>8100*</td><td>10.00</td></tr> </tbody> </table> <p>* GR Series only ** Not available in EL Series</p>	Size	Center Distance (Inches)	813	1.33	815**	1.54	818	1.75	821	2.06	824	2.38	826	2.62	830	3.00	832	3.25	842	4.25	852	5.25	860	6.00	870*	7.00	880*	8.00	8100*	10.00	<table border="1"> <thead> <tr> <th rowspan="2">Input Code</th> <th colspan="2">For Input Type</th> <th rowspan="2"></th> </tr> <tr> <th>Single Input</th> <th>Dual Input</th> </tr> </thead> <tbody> <tr><td>blank</td><td></td><td>A</td><td>non-motorized</td></tr> <tr><td>48**</td><td></td><td>48A</td><td>48CZ</td></tr> <tr><td>56</td><td></td><td>56A</td><td>56C</td></tr> <tr><td>140</td><td></td><td>140A</td><td>143-5TC</td></tr> <tr><td>180</td><td></td><td>180A</td><td>182-4TC</td></tr> <tr><td>210</td><td></td><td>210A</td><td>213-5TC</td></tr> <tr><td>250</td><td></td><td>250A</td><td>254-6TC</td></tr> <tr><td>63</td><td rowspan="7">Contact Factory</td><td></td><td>D63D B5</td></tr> <tr><td>71</td><td>D71D B5</td></tr> <tr><td>80</td><td>D80D B5</td></tr> <tr><td>90</td><td>D90D B5</td></tr> <tr><td>110</td><td>D100LD/D112MD B5</td></tr> <tr><td>132</td><td>D132D</td></tr> <tr><td></td><td></td><td></td></tr> </tbody> </table> <p>** Not available in EL Series</p>	Input Code	For Input Type			Single Input	Dual Input	blank		A	non-motorized	48**		48A	48CZ	56		56A	56C	140		140A	143-5TC	180		180A	182-4TC	210		210A	213-5TC	250		250A	254-6TC	63	Contact Factory		D63D B5	71	D71D B5	80	D80D B5	90	D90D B5	110	D100LD/D112MD B5	132	D132D			
Size	Center Distance (Inches)																																																																																	
813	1.33																																																																																	
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818	1.75																																																																																	
821	2.06																																																																																	
824	2.38																																																																																	
826	2.62																																																																																	
830	3.00																																																																																	
832	3.25																																																																																	
842	4.25																																																																																	
852	5.25																																																																																	
860	6.00																																																																																	
870*	7.00																																																																																	
880*	8.00																																																																																	
8100*	10.00																																																																																	
Input Code	For Input Type																																																																																	
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blank		A	non-motorized																																																																															
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56		56A	56C																																																																															
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210		210A	213-5TC																																																																															
250		250A	254-6TC																																																																															
63	Contact Factory		D63D B5																																																																															
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80		D80D B5																																																																																
90		D90D B5																																																																																
110		D100LD/D112MD B5																																																																																
132		D132D																																																																																

Sample Model Numbers

Solid Output Shaft - GR Series

Cast iron, single reduction, 2.38" reducer with 56C motorized quill input, left-hand output shaft, 30:1 ratio.

GR	- BMQ	824	- 30	- L	- 56
Series	Style	Size	Ratio	Shaft Orientation	Input Type

Hollow Output Shaft - EL Series

Aluminum, single reduction, 1.75" reducer with 56C motorized quill input, 1.00" hollow output bore, 10:1 ratio.

EL	- HMQ	818	- 10	- H	- 56	- 16
Series	Style	Size	Ratio	Shaft Orientation	Input Type	Output Bore Code



Cast Iron Solid Shaft Output Styles

**CAST IRON
GR SERIES**

**CAST IRON
NH SERIES**

Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, stock styles BMQ, BM and B can be field or Factory modified into a wide range of styles. See pages 296 for details.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

**MOTORIZED
C-FLANGE
QUILL INPUT**

**MOTORIZED C-FLANGE
FLEXIBLE COUPLING
INPUT**

**NON-FLANGED
INPUT**

	Horizontal Base Worm Over	Horizontal Base Worm Under	Horizontal Base Worm Center	Vertical Input Shaft
Style BMQ	Style TMQ	Style UMQ*	Style RMQ	Style JMQ
Ratings Pages: 32-58 Dimension Pages: GR Series 62-63 NH Series 84-85	Ratings Pages: 32-58 Dimension Pages: GR Series 64-65 NH Series 86-87	Ratings Pages: 32-58 Dimension Pages: GR Series 66-67 NH Series 88-89	Ratings Pages: 32-58 Dimension Pages: GR Series 72-73	Ratings Pages: 32-58 Dimension Pages: GR Series 68-69 NH Series 90-91
Style BM	Style TM	Style UM*	Style RM	Style JM
Ratings Pages: 32-58 Dimension Pages: GR Series 62-63 NH Series 84-85	Ratings Pages: 32-58 Dimension Pages: GR Series 64-65 NH Series 86-87	Ratings Pages: 32-58 Dimension Pages: GR Series 66-67 NH Series 88-89	Ratings Pages: 32-58 Dimension Pages: GR Series 72-73	Ratings Pages: 32-58 Dimension Pages: GR Series 68-69 NH Series 90-91
Style B	Style T	Style U*	Style R	Style J
Ratings Pages: 32-58 Dimension Pages: GR Series 62-63 NH Series 84-85	Ratings Pages: 32-58 Dimension Pages: GR Series 64-65 NH Series 86-87	Ratings Pages: 32-58 Dimension Pages: GR Series 66-67 NH Series 88-89	Ratings Pages: 32-58 Dimension Pages: GR Series 72-73	Ratings Pages: 32-58 Dimension Pages: GR Series 68-69 NH Series 90-91

* Not a recommended mounting style. Contact Factory for selection assistance.

Additional accessories, options and assembly services are available, contact Factory for details.



**Vertical
Output Shaft
Low Base**

Style VLMQ**



Ratings Pages: 32-58

Dimension Pages:
GR Series 70-71
NH Series 92-93

**Vertical
Output Shaft
High Base**

Style VHMQ**



Ratings Pages: 32-58

Dimension Pages:
GR Series 70-71
NH Series 92-93

**Flange
Mounted
Output Shaft**

Style FMQ



Ratings Pages: 32-58

Dimension Pages:
GR Series 74-75
NH Series 94-95

**"C" Flange
Mounted
Output Shaft**

Style CMQ



Ratings Pages: 32-58

Dimension Pages:
GR Series 76-77

**Extended Flange
Mounted
Output Shaft**

Style FEMQ



Ratings Pages: 32-58

Dimension Pages:
GR Series 82-83
NH Series 100-101

Style VLM**



Ratings Pages: 32-58

Dimension Pages:
GR Series 70-71
NH Series 92-93

Style VHM**



Ratings Pages: 32-58

Dimension Pages:
GR Series 70-71
NH Series 92-93

Style FM



Ratings Pages: 32-58

Dimension Pages:
GR Series 74-75
NH Series 94-95

Style CM



Ratings Pages: 32-58

Dimension Pages: GR
Series 76-77

Style FEM



Ratings Pages: 32-58

Dimension Pages:
GR Series 82-83
NH Series 100-101

Style VL**



Ratings Pages: 32-58

Dimension Pages:
GR Series 70-71
NH Series 92-93

Style VH**



Ratings Pages: 32-58

Dimension Pages:
GR Series 70-71
NH Series 92-93

Style F



Ratings Pages: 32-58

Dimension Pages:
GR Series 74-75
NH Series 94-95

Style C



Ratings Pages: 32-58

Dimension Pages:
GR Series 76-77

Style FE



Ratings Pages: 32-58

Dimension Pages:
GR Series 82-83
NH Series 100-101

** SPECIFY SHAFT UP OR DOWN FOR THESE STYLES.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



Cast Iron Hollow Shaft Output Styles

**CAST IRON
GR SERIES**

**CAST IRON
NH SERIES**

Stock Styles

Modified Stock Styles

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

**MOTORIZED
C-FLANGE
QUILL
INPUT**

Style HMQ



Ratings Pages: 32-58

Dimension Pages:
GR Series 78-79
NH Series 96-97

**Vertical
Input Shaft**

Style JHMQ



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

Style HM



Ratings Pages: 32-58

Dimension Pages:
GR Series 78-79
NH Series 96-97

Style JHM



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

**MOTORIZED
C-FLANGE
FLEXIBLE
COUPLING
INPUT**

Style H



Ratings Pages: 32-58

Dimension Pages:
GR Series 78-79
NH Series 96-97

Style JH



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

**NON-
FLANGED
INPUT**

Using off-the-shelf accessories, stock styles HMQ, HM and H can be field or Factory modified into a wide range of styles. See pages 286-287 for details.

Additional accessories, options and assembly services are available, Contact Factory for details.



Vertical Output Shaft Low Base

Style VLHMQ



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

Vertical Output Shaft High Base

Style VHHMQ



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

Flange Mounted Output Shaft

Style FHMQ



Ratings Pages: 32-58

Dimension Pages:
GR Series 80-81
NH Series 98-99

Style VLHM



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

Style VHHM



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

Style FHM



Ratings Pages: 32-58

Dimension Pages:
GR Series 80-81
NH Series 98-99

Style VLH



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

Style VHH



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

Style FH



Ratings Pages: 32-58

Dimension Pages:
GR Series 80-81
NH Series 98-99

ELECTRA-GEAR

Aluminum Solid Shaft Output Styles



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, stock styles BMQ, BM and B can be field or Factory modified into a wide range of styles. See pages 296 for details.

MOTORIZED
C-FLANGE
QUILL INPUT

Style BMQ



Ratings Pages: 32-58
Dimension Pages:
EL Series 104-105

Horizontal Base Worm Over

Style TMQ



Ratings Pages: 32-58
Dimension Pages:
EL Series 106-107

Horizontal Base Worm Under

Style UMQ*



Ratings Pages: 32-58
Dimension Pages:
EL Series 108-109

MOTORIZED
C-FLANGE
FLEXIBLE
COUPLING
INPUT

Style BM



Ratings Pages: 32-58
Dimension Pages:
EL Series 104-105

Style TM



Ratings Pages: 32-58
Dimension Pages:
EL Series 106-107

Style UM*



Ratings Pages: 32-58
Dimension Pages:
EL Series 108-109

NON-
FLANGED
INPUT

Style B



Ratings Pages: 32-58
Dimension Pages:
EL Series 104-105

Style T



Ratings Pages: 32-58
Dimension Pages:
EL Series 106-107

Style U*



Ratings Pages: 32-58
Dimension Pages:
EL Series 108-109

* Not a recommended mounting style.
Contact Factory for selection assistance.

Additional accessories, options and assembly services are available,
Contact Factory for details.

Vertical
Input Shaft

Style JMQ**



Ratings Pages: 32-58

Dimension Pages:
EL Series 110-111

Vertical
Output Shaft
Low Base

Style VLMQ**



Ratings Pages: 32-58

Dimension Pages:
EL Series 112-113

Flange
Mounted
Output Shaft

Style FRMQ



Ratings Pages: 32-58

Dimension Pages:
EL Series 114-115

Style JM**



Ratings Pages: 32-58

Dimension Pages:
EL Series 110-111

Style VLM**



Ratings Pages: 32-58

Dimension Pages:
EL Series 112-113

Style FRM



Ratings Pages: 32-58

Dimension Pages:
EL Series 114-115

Style J**



Ratings Pages: 32-58

Dimension Pages:
EL Series 110-111

Style VL**



Ratings Pages: 32-58

Dimension Pages:
EL Series 112-113

Style FR



Ratings Pages: 32-58

Dimension Pages:
EL Series 114-115

** SPECIFY SHAFT UP OR DOWN FOR THESE STYLES.

ELECTRA-GEAR

Aluminum Hollow Shaft Output Styles

Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, stock styles HMQ, HM and H can be field or Factory modified into a wide range of styles. See pages 296 for details.

Style HMQ

**MOTORIZED
C-FLANGE
QUILL
INPUT**



Style JHMQ

**Vertical
Input Shaft**



Ratings Pages: 32-58

Dimension Pages:
EL Series 116-117

Ratings Pages: 32-58

Dimension Pages:
Contact Factory

Style HM

**MOTORIZED
C-FLANGE
FLEXIBLE
COUPLING
INPUT**



Style JHM



Ratings Pages: 32-58

Dimension Pages:
EL Series 116-117

Ratings Pages: 32-58

Dimension Pages:
Contact Factory

Style H

**NON-
FLANGE
INPUT**



Style JH



Ratings Pages: 32-58

Dimension Pages:
EL Series 116-117

Ratings Pages: 32-58

Dimension Pages:
Contact Factory

Additional accessories, options and assembly services are available,
Contact Factory for details.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Vertical
Output Shaft
Low Base

Style VLHMQ



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

Style VLHM



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

Style VLH



Ratings Pages: 32-58

Dimension Pages:
Contact Factory

Flange
Mounted
Output Shaft

Style FHMQ



Ratings Pages: 32-58

Dimension Pages:
EL Series 118-119

Style FHM



Ratings Pages: 32-58

Dimension Pages:
EL Series 118-119

Style FH



Ratings Pages: 32-58

Dimension Pages:
EL Series 118-119

Additional accessories, options and assembly services are available,
Contact Factory for details.

Quick Selections



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

How to Use

Based on required output RPM and input motor horsepower, read across chart for the appropriate reducer size. As a rule of thumb, use 1.00 service factor chart for applications having uniform loads with up to 10 hours service duration per day. Use 1.25 service factor chart for longer service or shock loading. These charts are to be considered as guides only. Refer to page 642 or Contact Factory with specific application information.

1.0 Service Factor

Nominal Ratio▲	Output RPM	Input Horsepower @ 1750 RPM																			
		1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	25	30	40	50	60	75	100
5	350	813	813	813	813	813	813	815	818	821	824	830*	832**	842	852	852	860	870	880	8100	8100
7.5	233	813	813	813	813	813	813	815	818	821	824	826	832	842	852	852	860	870	880	8100	8100
10	175	813	813	813	813	813	815	818	821	824	826	830	832**	842	842	852	860	870	880	8100	8100
15	117	813	813	813	813	815	815	818	821	824	826	832	842	842	852	870	870	880	8100	8100	
20	88	813	813	813	813	815	815	818	821	824	826	832**	842	852	860	870	880	8100	8100		
25	70	813	813	813	815	815	821	824	826	830*	842	842	852	870	880	8100	8100				
30	58	813	813	813	815	821	821	824	826	832	842	852	852	880	8100	8100					
40	44	813	813	813	815	821	824	826	830*	842	842	852	870	8100	8100						
50	35	813	813	815	818	821	824	830	832**	842	852	870	880	8100							
60	29	813	813	815	821	824	826	830*	832**	842	852	880	8100								
70	25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	870	880	8100								
80	22	815	821	824	826	830	832	842	852	860											
100	18	821	824	826	830	842	842	852	852												

1.25 Service Factor

Nominal Ratio▲	Output RPM	Input Horsepower @ 1750 RPM																			
		1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	25	30	40	50	60	75
5	350	813	813	813	813	813	813	815	818	821	824	826	832**	842	852	852	860	870	880	8100	8100
7.5	233	813	813	813	813	813	813	815	818	821	824	830*	842	842	852	852	870	870	880	8100	8100
10	175	813	813	813	813	815	815	821	824	826	832	842	842	852	860	870	880	8100	8100		
15	117	813	813	813	813	815	815	818	821	824	830	842	842	852	860	870	880	8100	8100		
20	88	813	813	813	815	815	821	824	826	830*	842	842	852	870	880	8100	8100				
25	70	813	813	813	815	821	821	824	826	832**	842	852	860	880	8100	8100					
30	58	813	813	815	815	821	824	826	830*	842	842	852	870	8100	8100						
40	44	813	813	815	821	824	824	830*	832**	842	852	870	880	8100							
50	35	813	815	815	821	824	826	830*	842	842	852	880	8100								
60	29	813	815	818	821	824	830	832	842	852	870	8100	8100								
70	25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	870	880	8100									
80	22	815	821	824	830	832	842	852	852												
100	18	815	824	830	832	842	852	852	860												

Note: This chart is meant as a guide for reducer selections at specific motor horsepower.
 Actual service factor may be greater than indicated. For actual service factors and maximum worm reducer ratings, refer to pages 32-58.
 ▲ Refer to page 30 for exact ratio of single reduction worm gear reducers.
 * Size 832 must be used for NH Series for this selection.
 ** Size 842 must be used for NH Series for this selection.
 indicates a selection where a smaller reducer (1 case size) can be used with redesigned product due to rating increase.
 indicates a selection where a smaller reducer (2 case sizes) can be used with redesigned product due to rating increase.

Refer To Pages 522-581 for K Series Helical-Bevel right angle gear reducers for higher horsepower selections not covered here

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

1.50 Service Factor

Nominal Ratio▲	Output RPM	Input Horsepower @ 1750 RPM																		
		1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	25	30	40	50	60
5	350	813	813	813	813	813	815	818	821	824	830*	832**	842	852	852	870	870	880	8100	8100
7.5	233	813	813	813	813	815	815	821	824	826	832	842	842	852	860	870	880	8100	8100	
10	175	813	813	813	813	815	818	821	824	826	832**	842	852	852	870	880	8100	8100		
15	117	813	813	813	815	818	821	824	826	830*	842	852	852	870	880	8100	8100			
20	88	813	813	813	815	821	821	824	826	832**	842	852	860	880	8100	8100				
25	70	813	813	815	815	821	824	826	830*	842	842	852	870	8100	8100					
30	58	813	813	815	821	821	824	830	832	842	852	870	880	8100						
40	44	813	815	815	821	824	826	830*	832**	842	852	880	8100							
50	35	813	815	818	821	824	830	832**	842	852	870	880	8100							
60	29	813	815	821	824	826	830*	842	842	852	880	8100								
70	25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	870	880	8100								
80	22	821	824	826	830	842	842	852	860											
100	18	824	826	830	842	842	852	860												

1.75 Service Factor

Nominal Ratio▲	Output RPM	Input Horsepower @ 1750 RPM																		
		1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	25	30	40	50	60
5	350	813	813	813	813	815	815	818	821	824	830*	842	842	852	860	870	880	8100	8100	8100
7.5	233	813	813	813	813	815	818	821	824	830	832**	842	852	852	870	880	880	8100	8100	
10	175	813	813	813	815	818	821	824	824	830	842	842	852	870	880	8100	8100			
15	117	813	813	813	815	821	821	824	826	832	842	852	852	870	8100	8100				
20	88	813	813	815	815	821	824	826	830*	842	842	852	870	8100	8100					
25	70	813	813	815	818	821	824	830	832	842	852	870	880	8100						
30	58	813	815	815	821	824	826	830*	832**	842	852	870	880	8100						
40	44	813	815	818	821	824	830	832**	842	842	860	880	8100							
50	35	813	815	821	824	826	830*	842	842	852	870	8100	8100							
60	29	815	818	821	824	830*	832**	842	842	852	880	8100								
70	25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	870	8100									
80	22	821	824	826	830	842	842	852	860											
100	18	824	830	830	842	852	852													

2.00 Service Factor

Nominal Ratio▲	Output RPM	Input Horsepower @ 1750 RPM																		
		1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	25	30	40	50	
5	350	813	813	813	813	815	818	821	824	826	832**	842	852	852	870	870	880	8100	8100	8100
7.5	233	813	813	813	813	815	821	824	824	830	842	842	852	860	870	880	8100	8100	8100	
10	175	813	813	813	815	818	821	824	826	830*	842	852	852	870	880	8100	8100			
15	117	813	813	815	815	821	824	826	830	832**	842	852	870	880	8100	8100				
20	88	813	813	815	818	821	824	826	832	842	852	860	880	8100	8100					
25	70	813	815	815	821	824	824	830*	832**	842	852	870	880	8100						
30	58	813	815	818	821	824	826	832	842	842	852	880	8100							
40	44	813	815	821	824	826	830*	842	842	852	870	8100	8100							
50	35	815	818	821	824	830	832**	842	842	852	880	8100								
60	29	815	821	821	826	830*	832**	842	852	860	8100									
70	25	N/A	N/A	N/A	N/A	N/A	N/A	870	870	880	8100									
80	22	824	826	830	832	842	852	860												
100	18	826	830	832	842	852	852													

Note: This chart is meant as a guide for reducer selections at specific motor horsepower. Actual service factor may be greater than indicated. For actual service factors and maximum worm reducer ratings, refer to pages 32-58.

▲ Refer to page 30 for exact ratio of single reduction worm gear reducers.

* Size 832 must be used for NH Series for this selection.

** Size 842 must be used for NH Series for this selection.

- indicates a selection where a smaller reducer (1 case size) can be used with redesigned product due to rating increase.
- indicates a selection where a smaller reducer (2 case sizes) can be used with redesigned product due to rating increase.

Refer To Pages 522-581 for K Series Helical-Bevel right angle gear reducers for higher horsepower selections not covered here

Exact Ratios

CAST IRON
GR SERIES

CAST IRON
NH SERIES

ALUMINUM
EL SERIES

Unit	5	7.5	10	15	20	25	30	40	50	60	70	80	100
813	X	X	X	X	X	X	X	X	X	X	NA	X	X
815	X	X	X	X	X	X	X	X	X	X	NA	X	X
818	X	X	X	X	X	X	X	X	X	X	NA	X	X
821	X	X	X	X	X	X	X	X	X	X	NA	X	X
824	X	X	X	X	X	X	X	X	X	X	NA	X	X
826	5 1/6	X	X	X	X	X	X	X	X	X	NA	X	X
830	X	X	X	X	X	X	X	X	X	X	NA	X	X
832	5 1/6	X	X	X	X	X	X	X	X	X	NA	X	X
842	5 1/6	X	X	X	X	X	X	X	X	X	NA	X	X
852	5 1/8	X	X	X	X	X	X	X	X	X	NA	X	X
860	X	X	X	X	X	X	X	X	X	X	NA	X	X
870	5 1/8	7 2/5	9 3/4	14 2/3	20 1/2	24 1/2	29 1/2	X	X	X	X	NA	NA
880	5 1/8	7 2/5	9 3/4	14 2/3	20 1/2	24 1/2	29 1/2	X	X	X	X	NA	NA
8100	5 1/8	7 1/3	9 3/4	14 2/3	20 1/2	24 1/2	29 1/2	X	X	X	X	NA	NA

HOLLOW SHAFT BORE SIZES (Inches)*

Fraction Size	Decimal Size	Output Bore Code	813	815	818	821	824	826	830	832	842	852	860	870	880	8100	Keyway**
5/8	0.625	10															3/16 x 3/32
11/16	0.688	11															3/16 x 3/32
3/4	0.750	12															3/16 x 3/32
7/8	0.875	14															3/16 x 3/32
1	1.000	16															1/4 x 1/8
1-1/8	1.125	18															1/4 x 1/8
1-3/16	1.188	19															1/4 x 1/8
1-1/4	1.250	20															1/4 x 1/8
1-7/16	1.438	23															3/8 x 3/16
1-1/2	1.500	24															3/8 x 3/16
1-5/8	1.625	26															3/8 x 3/16
1-11/16	1.688	27															3/8 x 3/16
1-3/4	1.750	28															3/8 x 3/16
1-7/8	1.875	30															1/2 x 1/4
1-15/16	1.938	31															1/2 x 1/4
2	2.000	32															1/2 x 1/4
2-3/16	2.188	35															1/2 x 1/4
2-1/4	2.250	36															1/2 x 1/4
2-7/16	2.438	39															5/8 x 5/16
2-1/2	2.500	40															5/8 x 5/16
2-11/16	2.688	43															5/8 x 5/16
2-15/16	2.938	47															3/4 x 3/8
3	3.000	48															3/4 x 3/8
3-3/16	3.188	51															3/4 x 3/8
3-7/16	3.438	55															7/8 x 7/16
3-15/16	3.938	63															1 x 1/2
4-3/16	4.188	67															1 x 1/2
4-7/16	4.438	71															1 x 1/2
4-15/16	4.938	79															1-1/4 x 5/8
5-7/16	5.438	87															1-1/4 x 5/8

Stock Bore Sizes.
 * Other bore sizes are available. Contact Factory for sizes and availability.
 ** Dimensions refer to customer driven shaft.
 NOTE: Specify the required bore size when ordering. The suffix "XX" can be substituted with the bore code from table above.

"How To Use" Maximum Rating Tables

How To Use Maximum Rating Tables

Maximum Rating Tables for Single Reduction Gear Reducers are shown on pages 32-58.

BEFORE YOU START:

Identify the **Service Factor** of the application (see page 644).


Determine the **actual input horsepower** of the motor by multiplying the motor's nameplate horsepower by the Service Factor.

Determine the **output speed (RPM)** required at output shaft of reducer.

Identify the **mounting style** required by your application from the style charts shown on pages 20-27. Note the basic mounting style (BMQ, BM, etc.).

To select the proper gear reducer size, use the Maximum Rating Tables as shown:

1 Find the appropriate Maximum Rating Tables pages for your basic mounting style. The tables begin on page 32.



4 Select motor frame size.

2 Locate the Input RPM and Output RPM columns on the left side of the table. Scroll down the Input RPM column to locate a listing where the desired input speed corresponds to the output speed required in your application. (Input RPM listings are rounded to the nearest hundred. Your actual input speed of 1750 can be correlated to 1800 with no material change in performance.)

5 Identify the model number and catalog number of the basic reducer by continuing to the right. See page 19 for detailed information on building an exact model number.

6 Verify physical dimensions using the dimensional drawings shown on pages 62-121.

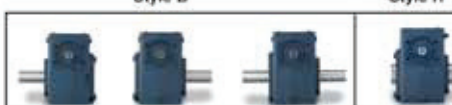
3 Move across the table to the Input HP column until you find a rating that is equal to or greater than the actual input horsepower required. Once located, check the top of the table to identify the correct gear reducer size (818, 821, 824, etc.).

Part Number Selection table
Example:


Consult Factory for other motor frames available.

Maximum Rating Tables
Size 813 • GR, NH, EL Series

Style B Style H



Style BM



Size 813						Style B				Style H			
Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.	NEMA C Input Flange ▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.
5	2500	500	1.528	1.429	180					48CZ 56C	8130109	8130121	8130133
	1750	350	1.248	1.158	209	8130001	8130013	8130025	8130501.1	48CZ 56C	8130037	8130049	8130061
	1170	234	0.952	0.872	236					48CZ 56C	8130110	8130122	8130134
7.5	2500	333	1.281	1.178	223					48CZ 56C	8130038	8130050	8130062
	1750	233	1.025	0.933	252	8130002	8130014	8130026	8130502.1	48CZ 56C	8130111	8130123	8130135
	1170	158	0.689	0.649	278					48CZ 56C	8130039	8130051	8130063
10	2500	250	1.040	0.960	270	3003	8130015	8130027	8130503.1				
	1750	175	0.780	0.720	300	3004	8130016	8130028	8130504				
	1170	117	0.520	0.480	330	3005	8130017	8130029	8130505				
15	2500	167	0.693	0.643	360	3006	8130018	8130030	8130506				
	1750	117	0.520	0.480	400					48CZ 56C	8130115	8130127	8130139
	1170	78	0.347	0.327	450	8130007	8130019	8130031	8130507.1	48CZ 56C	8130043	8130055	8130067
20	2500	125	0.520	0.480	500					48CZ 56C	8130116	8130128	8130140
	1750	83	0.364	0.344	560	8130008	8130020	8130032	8130508.1	48CZ 56C	8130044	8130056	8130068
	1170	56	0.243	0.223	630					48CZ 56C	8130117	8130129	8130141
30	2500	83	0.481	0.364	270					48CZ 56C	8130045	8130057	8130069
	1750	58	0.365	0.290	314					48CZ 56C	8130118	8130130	8130142
	1170	39	0.208	0.215	348	8130009	8130021	8130033	8130509.1	48CZ 56C	8130046	8130058	8130070
40	2500	62	0.400	0.283	285					48CZ 56C	8130119	8130131	8130143
	1750	43	0.329	0.223	327					48CZ 56C	8130047	8130059	8130071
	1170	29	0.258	0.165	355	8130010	8130022	8130034	8130510.1	48CZ 56C	8130120	8130132	8130144
50	2500	47	0.300	0.217	432					48CZ 56C	8130121	8130133	8130145
	1750	35	0.285	0.182	327	8130011	8130023	8130035	8130511.1	48CZ 56C	8130048	8130060	8130072
	1170	23	0.194	0.133	359								
60	2500	35	0.265	0.182	327								
	1750	26	0.207	0.184	279	8130012	8130024	8130036	8130512.1				
	1170	19	0.196	0.107	346								
80	2500	26	0.144	0.091	183								
	1750	21	0.121	0.064	183								
	1170	14	0.096	0.047	201								
100	2500	14	0.065	0.025	237								
	1750	11	0.058	0.011	415								
	1170	7	0.044	0.011	183								
120	2500	12	0.058	0.011	415								
	1750	9	0.044	0.011	183								
	1170	7	0.033	0.011	183								
150	2500	10	0.044	0.011	183								
	1750	7	0.033	0.011	183								
	1170	5	0.022	0.011	183								
180	2500	8	0.033	0.011	183								
	1750	6	0.022	0.011	183								
	1170	4	0.011	0.011	183								

Single Reduction Worm Gear Reducers
 Double Reduction Worm - Worm Gear Reducers
 Double Reduction Helical - Worm Gear Reducers
 WASHGUARD® Reducers and GEAR+MOTOR™
 Ratio Multipliers
 Accessories and Additional Capabilities

Maximum Rating Tables

Size 813 • GR, NH, EL Series



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Style B

Style H



Size 813









Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.
5	2500	500	1.528	1.429	180	_8130001	_8130013	_8130025	_8130501.10
	1750	350	1.248	1.158	209				
	1170	234	0.952	0.872	235				
7.5	100	20	0.140	0.095	298	_8130002	_8130014	_8130026	_8130502.10
	2500	333	1.281	1.178	223				
	1750	233	1.025	0.933	252				
10	1170	156	0.770	0.689	278	_8130003	_8130015	_8130027	_8130503.10
	100	13	0.118	0.072	339				
	2500	250	1.016	0.912	230				
15	1750	175	0.823	0.729	263	_8130004	_8130016	_8130028	_8130504.10
	1170	117	0.626	0.543	293				
	100	10	0.103	0.058	363				
20	2500	166	0.790	0.678	257	_8130005	_8130017	_8130029	_8130505.10
	1750	116	0.642	0.541	292				
	1170	78	0.491	0.402	325				
25	100	6.7	0.090	0.042	401	_8130006	_8130018	_8130030	_8130506.10
	2500	125	0.681	0.562	283				
	1750	87	0.551	0.445	320				
30	1170	58	0.422	0.328	354	_8130007	_8130019	_8130031	_8130507.10
	100	5.0	0.084	0.034	431				
	2500	100	0.544	0.431	272				
40	1750	70	0.445	0.344	309	_8130008	_8130020	_8130032	_8130508.10
	1170	46	0.344	0.255	344				
	100	4.0	0.074	0.027	423				
50	2500	83	0.481	0.364	276	_8130009	_8130021	_8130033	_8130509.10
	1750	62	0.400	0.283	285				
	1170	43	0.329	0.223	322				
60	100	2.5	0.066	0.017	432	_8130010	_8130022	_8130034	_8130510.10
	2500	50	0.346	0.232	292				
	1750	35	0.285	0.182	327				
80	1170	23	0.224	0.133	359	_8130011	_8130023	_8130035	_8130511.10
	100	2.0	0.061	0.014	431				
	2500	41	0.297	0.184	279				
100	1750	29	0.246	0.145	313	_8130012	_8130024	_8130036	_8130512.10
	1170	19	0.195	0.107	345				
	100	1.7	0.058	0.011	415				
	2500	31	0.144	0.081	163				
	1750	21	0.121	0.064	183				
	1170	14	0.096	0.047	201				
	100	1.3	0.014	0.005	237				
	2500	25	0.100	0.051	128				
	1750	17	0.084	0.040	143				
	1170	11	0.067	0.029	156				
	100	1.0	0.010	0.003	184				

How To Build a Part Number For Size GR813, NH813, EL813

1. Select partial catalog number from the selection table
2. Replace leading “_” with series code (GR, NH, EL)

Example:

Grove Gear IRONMAN, style B, 5:1 ratio, left hand output
GR-B813-5-L
GR8130001

	Style BM			Style HM	Style BMQ			Style HMQ	
									
NEMA C Input Flange ▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.	Ratio
48CZ 56C	__8130109 __8130037	__8130121 __8130049	__8130133 __8130061	__8130537.10 __8130513.10	__8130181 __8130073	__8130193 __8130085	__8130205 __8130097	__8130561.10 __8130525.10	5
48CZ 56C	__8130110 __8130038	__8130122 __8130050	__8130134 __8130062	__8130538.10 __8130514.10	__8130182 __8130074	__8130194 __8130086	__8130206 __8130098	__8130562.10 __8130526.10	7.5
48CZ 56C	__8130111 __8130039	__8130123 __8130051	__8130135 __8130063	__8130539.10 __8130515.10	__8130183 __8130075	__8130195 __8130087	__8130207 __8130099	__8130563.10 __8130527.10	10
48CZ 56C	__8130112 __8130040	__8130124 __8130052	__8130136 __8130064	__8130540.10 __8130516.10	__8130184 __8130076	__8130196 __8130088	__8130208 __8130100	__8130564.10 __8130528.10	15
48CZ 56C	__8130113 __8130041	__8130125 __8130053	__8130137 __8130065	__8130541.10 __8130517.10	__8130185 __8130077	__8130197 __8130089	__8130209 __8130101	__8130565.10 __8130529.10	20
48CZ 56C	__8130114 __8130042	__8130126 __8130054	__8130138 __8130066	__8130542.10 __8130518.10	__8130186 __8130078	__8130198 __8130090	__8130210 __8130102	__8130566.10 __8130530.10	25
48CZ 56C	__8130115 __8130043	__8130127 __8130055	__8130139 __8130067	__8130543.10 __8130519.10	__8130187 __8130079	__8130199 __8130091	__8130211 __8130103	__8130567.10 __8130531.10	30
48CZ 56C	__8130116 __8130044	__8130128 __8130056	__8130140 __8130068	__8130544.10 __8130520.10	__8130188 __8130080	__8130200 __8130092	__8130212 __8130104	__8130568.10 __8130532.10	40
48CZ 56C	__8130117 __8130045	__8130129 __8130057	__8130141 __8130069	__8130545.10 __8130521.10	__8130189 __8130081	__8130201 __8130093	__8130213 __8130105	__8130569.10 __8130533.10	50
48CZ 56C	__8130118 __8130046	__8130130 __8130058	__8130142 __8130070	__8130546.10 __8130522.10	__8130190 __8130082	__8130202 __8130094	__8130214 __8130106	__8130570.10 __8130534.10	60
48CZ 56C	__8130119 __8130047	__8130131 __8130059	__8130143 __8130071	__8130547.10 __8130523.10	__8130191 __8130083	__8130203 __8130095	__8130215 __8130107	__8130571.10 __8130535.10	80
48CZ 56C	__8130120 __8130048	__8130132 __8130060	__8130144 __8130072	__8130548.10 __8130524.10	__8130192 __8130084	__8130204 __8130096	__8130216 __8130108	__8130572.10 __8130536.10	100

▲ Consult Factory for other motor flanges available.

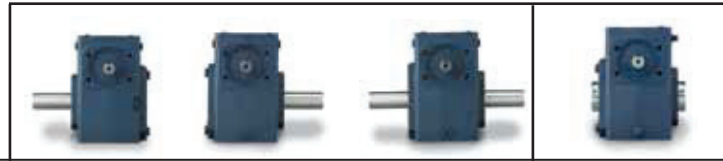
Maximum Rating Tables

Size 815 • GR, NH Series



Style B

Style H



Size 815

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*
5	2500	500	2.310	2.151	271	_8150001	_8150013	_8150025	_8150501.10
	1750	350	1.939	1.794	323				
	1170	234	1.537	1.408	379				
7.5	100	20	0.235	0.167	526	_8150002	_8150014	_8150026	_8150502.10
	2500	333	1.785	1.619	306				
	1170	156	1.205	1.068	431				
10	100	13	0.196	0.125	591	_8150003	_8150015	_8150027	_8150503.10
	2500	250	1.500	1.324	334				
	1750	175	1.279	1.116	402				
15	1170	117	1.014	0.869	468	_8150004	_8150016	_8150028	_8150504.10
	100	10	0.176	0.101	639				
	2500	166	1.174	0.982	371				
20	1750	116	1.003	0.826	446	_8150005	_8150017	_8150029	_8150505.10
	100	6.7	0.155	0.075	706				
	2500	125	1.077	0.860	434				
25	1750	87	0.919	0.719	518	_8150006	_8150018	_8150030	_8150506.10
	1170	58	0.734	0.557	600				
	100	5.0	0.155	0.064	807				
30	2500	100	0.881	0.670	422	_8150007	_8150019	_8150031	_8150507.10
	1750	70	0.752	0.559	503				
	1170	46	0.602	0.431	580				
40	100	4.0	0.137	0.049	775	_8150008	_8150020	_8150032	_8150508.10
	2500	83	0.729	0.526	398				
	1170	29	0.456	0.279	601				
50	100	2.5	0.122	0.032	808	_8150009	_8150021	_8150033	_8150509.10
	2500	50	0.536	0.329	415				
	1750	35	0.464	0.274	494				
60	1170	23	0.379	0.211	569	_8150010	_8150022	_8150034	_8150510.10
	100	2.0	0.110	0.024	760				
	2500	41	0.451	0.257	389				
80	1750	29	0.391	0.214	462	_8150011	_8150023	_8150035	_8150511.10
	1170	19	0.321	0.165	532				
	100	1.7	0.099	0.019	707				
100	2500	31	0.219	0.109	220	_8150012	_8150024	_8150036	_8150512.10
	1750	21	0.204	0.093	269				
	1170	14	0.176	0.073	314				
	100	1.3	0.032	0.008	418				
	2500	25	0.155	0.069	175				
	1750	17	0.145	0.059	213				
	1170	11	0.126	0.046	248				
	100	1.0	0.024	0.005	328				

How To Build a Part Number For Size GR815 & NH815

1. Select partial catalog number from the selection table
2. Replace leading “_” with series code (GR, NH)

Example:

Grove Gear IRONMAN, style B, 5:1 ratio, left hand output
 GR-B815-5-L
 GR8150001

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Single Reduction
Worm Gear Reducers





Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

	Style BM			Style HM	Style BMQ			Style HMQ	
									
NEMA C Input Flange ▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.	Ratio
56C 143-5TC	8150073 8150109	8150085 8150121	8150097 8150133	8150525.10 8150537.10	8150181 8150217	8150193 8150229	8150205 8150241	8150561.10 8150573.10	5
56C 143-5TC	8150074 8150110	8150086 8150122	8150098 8150134	8150526.10 8150538.10	8150182 8150218	8150194 8150230	8150206 8150242	8150562.10 8150574.10	7.5
56C 143-5TC	8150075 8150111	8150087 8150123	8150099 8150135	8150527.10 8150539.10	8150183 8150219	8150195 8150231	8150207 8150243	8150563.10 8150575.10	10
56C 143-5TC	8150076 8150112	8150088 8150124	8150100 8150136	8150528.10 8150540.10	8150184 8150220	8150196 8150232	8150208 8150244	8150564.10 8150576.10	15
56C 143-5TC	8150077 8150113	8150089 8150125	8150101 8150137	8150529.10 8150541.10	8150185 8150221	8150197 8150233	8150209 8150245	8150565.10 8150577.10	20
56C	8150078	8150090	8150102	8150530.10	8150186	8150198	8150210	8150566.10	25
48CZ 56C	8150043 8150079	8150055 8150091	8150067 8150103	8150519.10 8150531.10	8150151 8150187	8150163 8150199	8150175 8150211	8150555.10 8150567.10	30
48CZ 56C	8150044 8150080	8150056 8150092	8150068 8150104	8150520.10 8150532.10	8150152 8150188	8150164 8150200	8150176 8150212	8150556.10 8150568.10	40
48CZ 56C	8150045 8150081	8150057 8150093	8150069 8150105	8150521.10 8150533.10	8150153 8150189	8150165 8150201	8150177 8150213	8150557.10 8150569.10	50
48CZ 56C	8150046 8150082	8150058 8150094	8150070 8150106	8150522.10 8150534.10	8150154 8150190	8150166 8150202	8150178 8150214	8150558.10 8150570.10	60
48CZ 56C	8150047 8150083	8150059 8150095	8150071 8150107	8150523.10 8150535.10	8150155 8150191	8150167 8150203	8150179 8150215	8150559.10 8150571.10	80
48CZ 56C	8150048 8150084	8150060 8150096	8150072 8150108	8150524.10 8150536.10	8150156 8150192	8150168 8150204	8150180 8150216	8150560.10 8150572.10	100

▲ Consult Factory for other motor flanges available.

Maximum Rating Tables

Size 818 • GR, NH, EL Series



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

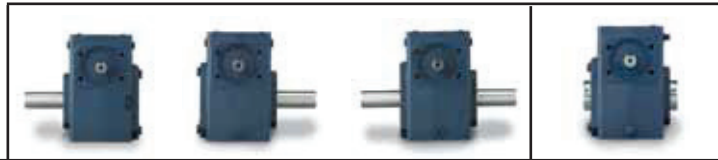
WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Style B

Style H



Size 818

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*
5	2500	500	3.095	2.900	366	__8180001	__8180013	__8180025	__8180501.XX
	1750	350	2.600	2.422	436				
	1170	234	2.066	1.906	513				
7.5	100	20	0.312	0.228	717	__8180002	__8180014	__8180026	__8180502.XX
	2500	333	2.307	2.127	402				
	1750	233	1.909	1.745	471				
10	1170	156	1.473	1.328	537	__8180003	__8180015	__8180027	__8180503.XX
	100	13	0.227	0.147	697				
	2500	250	1.996	1.820	459				
15	1750	175	1.625	1.466	528	__8180004	__8180016	__8180028	__8180504.XX
	1170	117	1.239	1.099	592				
	100	10	0.196	0.118	744				
20	2500	166	1.485	1.301	492	__8180005	__8180017	__8180029	__8180505.XX
	1750	116	1.224	1.058	571				
	100	6.7	0.165	0.087	823				
25	2500	125	1.283	1.093	551	__8180006	__8180018	__8180030	__8180506.XX
	1750	87	1.046	0.875	630				
	1170	58	0.803	0.652	702				
30	100	5.0	0.150	0.069	872	__8180007	__8180019	__8180031	__8180507.XX
	2500	100	1.088	0.900	567				
	1750	70	0.884	0.715	644				
40	1170	46	0.678	0.530	713	__8180008	__8180020	__8180032	__8180508.XX
	100	4.0	0.135	0.055	874				
	2500	83	0.892	0.702	531				
50	1750	58	0.741	0.569	614	__8180009	__8180021	__8180033	__8180509.XX
	1170	39	0.580	0.428	692				
	100	3.3	0.126	0.047	880				
60	2500	62	0.739	0.551	556	__8180010	__8180022	__8180034	__8180510.XX
	1750	43	0.609	0.440	634				
	1170	29	0.476	0.328	706				
80	100	2.5	0.113	0.035	874	__8180011	__8180023	__8180035	__8180511.XX
	2500	50	0.625	0.444	559				
	1750	35	0.515	0.352	634				
100	1170	23	0.404	0.260	701	__8180012	__8180024	__8180036	__8180512.XX
	100	2.0	0.103	0.027	857				
	2500	41	0.542	0.363	550				
100	1750	29	0.449	0.288	623	__8180011	__8180023	__8180035	__8180511.XX
	1170	19	0.354	0.213	689				
	100	1.7	0.097	0.022	842				
100	2500	31	0.247	0.156	314	__8180011	__8180023	__8180035	__8180511.XX
	1750	21	0.208	0.124	356				
	100	1.3	0.023	0.009	470				
100	2500	25	0.167	0.097	245	__8180012	__8180024	__8180036	__8180512.XX
	1750	17	0.141	0.077	277				
	1170	11	0.111	0.057	304				
100	100	1.0	0.016	0.006	362	__8180012	__8180024	__8180036	__8180512.XX

How To Build a Part Number For Size GR818, NH818 & EL818

1. Select partial catalog number from the selection table
2. Replace leading “__” with series code (GR, NH, EL)
3. For hollow output, replace “XX” suffix with bore code (see next page for codes)

Example:

Grove Gear IRONMAN, style B, 5:1 ratio, left hand output
 GR-B818-5-L
 GR8180001



Maximum Rating Tables

Size 818 • GR, NH, EL Series

	Style BM			Style HM	Style BMQ			Style HMQ	
NEMA C Input Flange ▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Ratio
56C 143-5TC	8180037 8180073	8180049 8180085	8180061 8180097	8180513.XX 8180525.XX	8180109 8180145	8180121 8180157	8180133 8180169	8180537.XX 8180549.XX	5
56C 143-5TC	8180038 8180074	8180050 8180086	8180062 8180098	8180514.XX 8180526.XX	8180110 8180146	8180122 8180158	8180134 8180170	8180538.XX 8180550.XX	7.5
56C 143-5TC	8180039 8180075	8180051 8180087	8180063 8180099	8180515.XX 8180527.XX	8180111 8180147	8180123 8180159	8180135 8180171	8180539.XX 8180551.XX	10
56C 143-5TC	8180040 8180076	8180052 8180088	8180064 8180100	8180516.XX 8180528.XX	8180112 8180148	8180124 8180160	8180136 8180172	8180540.XX 8180552.XX	15
56C 143-5TC	8180041 8180077	8180053 8180089	8180065 8180101	8180517.XX 8180529.XX	8180113 8180149	8180125 8180161	8180137 8180173	8180541.XX 8180553.XX	20
56C 143-5TC	8180042 8180078	8180054 8180090	8180066 8180102	8180518.XX 8180530.XX	8180114 8180150	8180126 8180162	8180138 8180174	8180542.XX 8180554.XX	25
56C 143-5TC	8180043 8180079	8180055 8180091	8180067 8180103	8180519.XX 8180531.XX	8180115 8180151	8180127 8180163	8180139 8180175	8180543.XX 8180555.XX	30
48CZ 56C 143-5TC	8180188 8180044 8180080	8180200 8180056 8180092	8180212 8180068 8180104	8180568.XX 8180520.XX 8180532.XX	8180224 8180116 8180152	8180236 8180128 8180164	8180248 8180140 8180176	8180580.XX 8180544.XX 8180556.XX	40
48CZ 56C 143-5TC	8180189 8180045 8180081	8180201 8180057 8180093	8180213 8180069 8180105	8180569.XX 8180521.XX 8180533.XX	8180225 8180117 8180153	8180237 8180129 8180165	8180249 8180141 8180177	8180581.XX 8180545.XX 8180557.XX	50
48CZ 56C 143-5TC	8180190 8180046 8180082	8180202 8180058 8180094	8180214 8180070 8180106	8180570.XX 8180522.XX 8180534.XX	8180226 8180118 8180154	8180238 8180130 8180166	8180250 8180142 8180178	8180582.XX 8180546.XX 8180558.XX	60
48CZ 56C	8180191 8180047	8180203 8180059	8180215 8180071	8180571.XX 8180523.XX	8180227 8180119	8180239 8180131	8180251 8180143	8180583.XX 8180547.XX	80
48CZ 56C	8180192 8180048	8180204 8180060	8180216 8180072	8180572.XX 8180524.XX	8180228 8180120	8180240 8180132	8180252 8180144	8180584.XX 8180548.XX	100

▲ Consult Factory for other motor flanges available.

* Catalog numbers are for hollow output shaft reducers.

When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	5/8"	11/16"	3/4"	7/8"	1"
Decimal Size	0.625	0.688	0.750	0.875	1.000
Output Bore Code	10	11	12	14	16

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

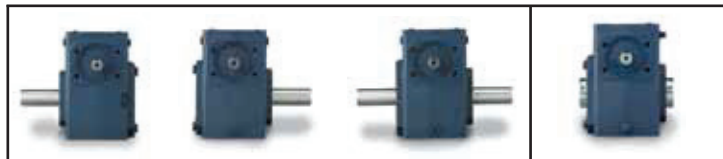
Maximum Rating Tables

Size 821 • GR, NH, EL Series



Style B

Style H



Size 821

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*
5	2500	500	4.305	4.043	510	_8210001	_8210013	_8210025	_8210501.XX
	1750	350	3.653	3.410	614				
	1170	234	2.873	2.657	716				
7.5	100	20	0.433	0.310	977	_8210002	_8210014	_8210026	_8210502.XX
	2500	333	3.300	3.051	577				
	1750	233	2.793	2.562	692				
10	1170	156	2.194	1.989	804	_8210003	_8210015	_8210027	_8210503.XX
	100	13	0.341	0.230	1089				
	2500	250	2.973	2.722	686				
15	1750	175	2.464	2.235	805	_8210004	_8210016	_8210028	_8210504.XX
	1170	117	1.905	1.702	917				
	100	10	0.300	0.189	1192				
20	2500	166	2.284	2.035	769	_8210005	_8210017	_8210029	_8210505.XX
	1750	116	1.887	1.661	897				
	1170	78	1.459	1.259	1017				
25	100	6.7	0.245	0.138	1309	_8210006	_8210018	_8210030	_8210506.XX
	2500	125	1.914	1.642	828				
	1750	87	1.584	1.338	964				
30	1170	58	1.229	1.012	1090	_8210007	_8210019	_8210031	_8210507.XX
	100	5.0	0.226	0.111	1397				
	2500	100	1.623	1.359	857				
40	1750	70	1.333	1.094	985	_8210008	_8210020	_8210032	_8210508.XX
	1170	46	1.030	0.820	1104				
	100	4.0	0.200	0.088	1386				
50	2500	83	1.359	1.102	833	_8210009	_8210021	_8210033	_8210509.XX
	1750	58	1.129	0.896	968				
	1170	39	0.882	0.677	1095				
60	100	3.3	0.181	0.074	1399	_8210010	_8210022	_8210034	_8210510.XX
	2500	62	1.096	0.829	836				
	1750	43	0.916	0.674	971				
80	1170	29	0.722	0.509	1097	_8210011	_8210023	_8210035	_8210511.XX
	100	2.5	0.167	0.056	1401				
	2500	50	0.925	0.670	845				
100	1750	35	0.769	0.539	970	_8210012	_8210024	_8210036	_8210512.XX
	1170	23	0.606	0.403	1086				
	100	2.0	0.149	0.043	1359				

How To Build a Part Number For Size GRG821, GRL821, NH821, EL821

1. Select partial catalog number from the selection table
2. Replace leading “_” with series code (GRG, GRL, NH, EL) (see next page for codes)
3. For hollow output, replace “XX” suffix with bore code

Example:

Direct replacement to LEESON IRONMAN, style B, 5:1 ratio, left hand output
 GRL-B821-5-L
 GRL8210001

GRG = **GROVE GEAR**

- Direct replacement to Grove Gear Flexaline
- Mounting footprint 3.00" x 4.75"
- See pages 62-83 for dimensions

GRL = **IRONMAN** Interchange

- Direct replacement to LEESON IRONMAN & major brands.
- Mounting footprint 2.88" x 5.00"
- See pages 62-83 for dimensions



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
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Ratio Multipliers

Accessories and
Additional Capabilities



Maximum Rating Tables

Size 821 • GR, NH, EL Series

NEMA C Input Flange ▲	Style BM			Style HM	Style BMQ			Style HMQ	Ratio
	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	
56C 143-5TC	<u>8210037</u> <u>8210073</u>	<u>8210049</u> <u>8210085</u>	<u>8210061</u> <u>8210097</u>	<u>8210513.XX</u> <u>8210525.XX</u>	<u>8210109</u> <u>8210145</u>	<u>8210121</u> <u>8210157</u>	<u>8210133</u> <u>8210169</u>	<u>8210537.XX</u> <u>8210549.XX</u>	5
56C 143-5TC	<u>8210038</u> <u>8210074</u>	<u>8210050</u> <u>8210086</u>	<u>8210062</u> <u>8210098</u>	<u>8210514.XX</u> <u>8210526.XX</u>	<u>8210110</u> <u>8210146</u>	<u>8210122</u> <u>8210158</u>	<u>8210134</u> <u>8210170</u>	<u>8210538.XX</u> <u>8210550.XX</u>	7.5
56C 143-5TC	<u>8210039</u> <u>8210075</u>	<u>8210051</u> <u>8210087</u>	<u>8210063</u> <u>8210099</u>	<u>8210515.XX</u> <u>8210527.XX</u>	<u>8210111</u> <u>8210147</u>	<u>8210123</u> <u>8210159</u>	<u>8210135</u> <u>8210171</u>	<u>8210539.XX</u> <u>8210551.XX</u>	10
56C 143-5TC	<u>8210040</u> <u>8210076</u>	<u>8210052</u> <u>8210088</u>	<u>8210064</u> <u>8210100</u>	<u>8210516.XX</u> <u>8210528.XX</u>	<u>8210112</u> <u>8210148</u>	<u>8210124</u> <u>8210160</u>	<u>8210136</u> <u>8210172</u>	<u>8210540.XX</u> <u>8210552.XX</u>	15
56C 143-5TC	<u>8210041</u> <u>8210077</u>	<u>8210053</u> <u>8210089</u>	<u>8210065</u> <u>8210101</u>	<u>8210517.XX</u> <u>8210529.XX</u>	<u>8210113</u> <u>8210149</u>	<u>8210125</u> <u>8210161</u>	<u>8210137</u> <u>8210173</u>	<u>8210541.XX</u> <u>8210553.XX</u>	20
56C 143-5TC	<u>8210042</u> <u>8210078</u>	<u>8210054</u> <u>8210090</u>	<u>8210066</u> <u>8210102</u>	<u>8210518.XX</u> <u>8210530.XX</u>	<u>8210114</u> <u>8210150</u>	<u>8210126</u> <u>8210162</u>	<u>8210138</u> <u>8210174</u>	<u>8210542.XX</u> <u>8210554.XX</u>	25
56C 143-5TC	<u>8210043</u> <u>8210079</u>	<u>8210055</u> <u>8210091</u>	<u>8210067</u> <u>8210103</u>	<u>8210519.XX</u> <u>8210531.XX</u>	<u>8210115</u> <u>8210151</u>	<u>8210127</u> <u>8210163</u>	<u>8210139</u> <u>8210175</u>	<u>8210543.XX</u> <u>8210555.XX</u>	30
56C 143-5TC	<u>8210044</u> <u>8210080</u>	<u>8210056</u> <u>8210092</u>	<u>8210068</u> <u>8210104</u>	<u>8210520.XX</u> <u>8210532.XX</u>	<u>8210116</u> <u>8210152</u>	<u>8210128</u> <u>8210164</u>	<u>8210140</u> <u>8210176</u>	<u>8210544.XX</u> <u>8210556.XX</u>	40
56C 143-5TC	<u>8210045</u> <u>8210081</u>	<u>8210057</u> <u>8210093</u>	<u>8210069</u> <u>8210105</u>	<u>8210521.XX</u> <u>8210533.XX</u>	<u>8210117</u> <u>8210153</u>	<u>8210129</u> <u>8210165</u>	<u>8210141</u> <u>8210177</u>	<u>8210545.XX</u> <u>8210557.XX</u>	50
48CZ 56C 143-5TC	<u>8210190</u> <u>8210046</u> <u>8210082</u>	<u>8210202</u> <u>8210058</u> <u>8210094</u>	<u>8210214</u> <u>8210070</u> <u>8210106</u>	<u>8210570.XX</u> <u>8210522.XX</u> <u>8210534.XX</u>	<u>8210226</u> <u>8210118</u> <u>8210154</u>	<u>8210238</u> <u>8210130</u> <u>8210166</u>	<u>8210250</u> <u>8210142</u> <u>8210178</u>	<u>8210582.XX</u> <u>8210546.XX</u> <u>8210558.XX</u>	60
48CZ 56C	<u>8210191</u> <u>8210047</u>	<u>8210203</u> <u>8210059</u>	<u>8210215</u> <u>8210071</u>	<u>8210571.XX</u> <u>8210523.XX</u>	<u>8210227</u> <u>8210119</u>	<u>8210239</u> <u>8210131</u>	<u>8210251</u> <u>8210143</u>	<u>8210583.XX</u> <u>8210547.XX</u>	80
48CZ 56C	<u>8210192</u> <u>8210048</u>	<u>8210204</u> <u>8210060</u>	<u>8210216</u> <u>8210072</u>	<u>8210572.XX</u> <u>8210524.XX</u>	<u>8210228</u> <u>8210120</u>	<u>8210240</u> <u>8210132</u>	<u>8210252</u> <u>8210144</u>	<u>8210584.XX</u> <u>8210548.XX</u>	100

▲ Consult Factory for other motor flanges available.

* Catalog numbers are for hollow output shaft reducers.

When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	1"	1-1/8"	1-3/16"	1-1/4"	1-7/16"	1-1/2"
Decimal Size	1.000	1.125	1.188	1.250	1.438	1.500
Output Bore Code	16	18	19	20	23	24

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Maximum Rating Tables

Size 824 • GR, NH, EL Series



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

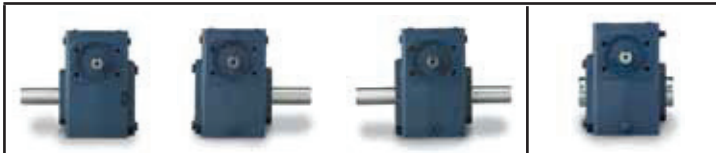
WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Style B

Style H



Size 824

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*
5	2500	500.0	6.322	5.950	750	_8240001	_8240013	_8240025	_8240501.XX
	1750	350.0	5.323	4.985	898				
	1170	234.0	4.280	3.976	1071				
7.5	100	20.0	0.655	0.489	1540	_8240002	_8240014	_8240026	_8240502.XX
	2500	333.3	4.739	4.401	832				
	1750	233.3	3.992	3.685	995				
10	1170	156.0	3.204	2.929	1183	_8240003	_8240015	_8240027	_8240503.XX
	100	13.3	0.502	0.357	1689				
	2500	250.0	4.199	3.862	974				
15	1750	175.0	3.564	3.253	1172	_8240004	_8240016	_8240028	_8240504.XX
	1170	117.0	2.808	2.531	1364				
	100	10.0	0.442	0.295	1857				
20	2500	166.7	3.268	2.913	1102	_8240005	_8240017	_8240029	_8240505.XX
	1750	116.7	2.765	2.439	1318				
	1170	78.0	2.178	1.888	1526				
25	100	6.7	0.369	0.217	2056	_8240006	_8240018	_8240030	_8240506.XX
	2500	125.0	2.750	2.365	1192				
	1750	87.5	2.326	1.972	1421				
30	1170	58.5	1.835	1.522	1640	_8240007	_8240019	_8240031	_8240507.XX
	100	5.0	0.337	0.174	2193				
	2500	100.0	2.335	1.949	1228				
40	1750	70.0	1.967	1.615	1454	_8240008	_8240020	_8240032	_8240508.XX
	1170	46.8	1.551	1.239	1669				
	100	4.0	0.302	0.140	2205				
50	2500	83.3	1.945	1.579	1194	_8240009	_8240021	_8240033	_8240509.XX
	1750	58.3	1.653	1.317	1423				
	1170	39.0	1.314	1.016	1642				
60	100	3.3	0.270	0.116	2197	_8240010	_8240022	_8240034	_8240510.XX
	2500	62.5	1.574	1.195	1205				
	1750	43.8	1.342	0.994	1433				
80	1170	29.3	1.074	0.766	1650	_8240011	_8240023	_8240035	_8240511.XX
	100	2.5	0.245	0.087	2198				
	2500	50.0	1.335	0.961	1211				
100	1750	35.0	1.137	0.795	1432	_8240012	_8240024	_8240036	_8240512.XX
	1170	23.4	0.911	0.609	1641				
	100	2.0	0.224	0.069	2163				
	2500	41.7	1.149	0.806	1219				
	1750	29.2	0.967	0.656	1418				
	1170	19.5	0.770	0.496	1604				
	100	1.7	0.197	0.054	2054				
	2500	31.3	0.520	0.348	701				
	1750	21.9	0.455	0.288	830				
	1170	14.6	0.370	0.219	946				
	100	1.3	0.056	0.024	1202				
	2500	25.0	0.351	0.219	551				
	1750	17.5	0.307	0.180	648				
	1170	11.7	0.251	0.136	735				
	100	1.0	0.039	0.015	926				

How To Build a Part Number For Size GR824, NH824, EL824

1. Select partial catalog number from the selection table
2. Replace leading “_” with series code (GR, NH, EL)
3. For hollow output, replace “XX” suffix with bore code (see next page for codes)

Example:

Grove Gear IRONMAN, style B, 5:1 ratio, left hand output
 GR-B824-5-L
 GR8240001

Style BM

Style HM

Style BMQ

Style HMQ



NEMA C Input Flange ▲	Style BM			Style HM	Style BMQ			Style HMQ	Ratio
	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	
143-5TC 182-4TC	8240073 8240109	8240085 8240121	8240097 8240133	8240525.XX 8240537.XX	8240181 8240217	8240193 8240229	8240205 8240241	8240561.XX 8240573.XX	5
143-5TC 182-4TC	8240074 8240110	8240086 8240122	8240098 8240134	8240526.XX 8240538.XX	8240182 8240218	8240194 8240230	8240206 8240242	8240562.XX 8240574.XX	7.5
143-5TC 182-4TC	8240075 8240111	8240087 8240123	8240099 8240135	8240527.XX 8240539.XX	8240183 8240219	8240195 8240231	8240207 8240243	8240563.XX 8240575.XX	10
56C 143-5TC	8240040 8240076	8240052 8240088	8240064 8240100	8240516.XX 8240528.XX	8240148 8240184	8240160 8240196	8240172 8240208	8240552.XX 8240564.XX	15
56C 143-5TC	8240041 8240077	8240053 8240089	8240065 8240101	8240517.XX 8240529.XX	8240149 8240185	8240161 8240197	8240173 8240209	8240553.XX 8240565.XX	20
56C 143-5TC	8240042 8240078	8240054 8240090	8240066 8240102	8240518.XX 8240530.XX	8240150 8240186	8240162 8240198	8240174 8240210	8240554.XX 8240566.XX	25
56C 143-5TC	8240043 8240079	8240055 8240091	8240067 8240103	8240519.XX 8240531.XX	8240151 8240187	8240163 8240199	8240175 8240211	8240555.XX 8240567.XX	30
56C 143-5TC	8240044 8240080	8240056 8240092	8240068 8240104	8240520.XX 8240532.XX	8240152 8240188	8240164 8240200	8240176 8240212	8240556.XX 8240568.XX	40
56C 143-5TC	8240045 8240081	8240057 8240093	8240069 8240105	8240521.XX 8240533.XX	8240153 8240189	8240165 8240201	8240177 8240213	8240557.XX 8240569.XX	50
56C 143-5TC	8240046 8240082	8240058 8240094	8240070 8240106	8240522.XX 8240534.XX	8240154 8240190	8240166 8240202	8240178 8240214	8240558.XX 8240570.XX	60
56C	8240047	8240059	8240071	8240523.XX	8240155	8240167	8240179	8240559.XX	80
56C	8240048	8240060	8240072	8240524.XX	8240156	8240168	8240180	8240560.XX	100

▲ Consult Factory for other motor flanges available.
* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	1"	1-1/8"	1-3/16"	1-1/4"	1-7/16"	1-1/2"
Decimal Size	1.000	1.125	1.188	1.250	1.438	1.500
Output Bore Code	16	18	19	20	23	24

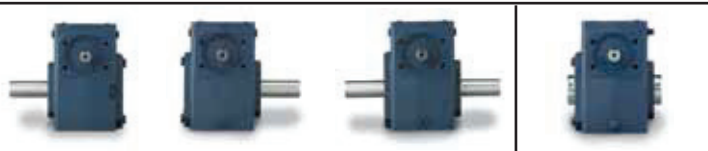
Maximum Rating Tables

Size 826 • GR, NH, EL Series



Style B

Style H



Size 826

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*
5	2500	500	7.946	7.486	944	_ 8260001	_ 8260013	_ 8260025	_ 8260501.XX
	1750	350	6.693	6.276	1130				
	1170	234	5.439	5.061	1363				
	100	20	0.844	0.638	2010				
7.5	2500	333	5.877	5.453	1031	_ 8260002	_ 8260014	_ 8260026	_ 8260502.XX
	1750	233	4.956	4.571	1235				
	1170	156	4.018	3.671	1483				
	100	13	0.640	0.458	2166				
10	2500	250	5.338	4.904	1236	_ 8260003	_ 8260015	_ 8260027	_ 8260503.XX
	1750	175	4.492	4.097	1475				
	1170	117	3.579	3.226	1738				
	100	10	0.572	0.386	2431				
15	2500	166	4.316	3.881	1468	_ 8260004	_ 8260016	_ 8260028	_ 8260504.XX
	1750	116	3.614	3.216	1737				
	1170	78	2.821	2.468	1994				
	100	6.7	0.467	0.279	2637				
20	2500	125	3.503	3.050	1538	_ 8260005	_ 8260017	_ 8260029	_ 8260505.XX
	1750	87	2.965	2.549	1836				
	1170	58	2.339	1.970	2123				
	100	5.0	0.419	0.226	2849				
25	2500	100	2.955	2.505	1579	_ 8260006	_ 8260018	_ 8260030	_ 8260506.XX
	1750	70	2.487	2.076	1869				
	1170	46	1.957	1.594	2146				
	100	4.0	0.370	0.180	2837				
30	2500	83	2.556	2.115	1600	_ 8260007	_ 8260019	_ 8260031	_ 8260507.XX
	1750	58	2.145	1.743	1883				
	1170	39	1.687	1.332	2152				
	100	3.3	0.335	0.149	2816				
40	2500	62	1.989	1.545	1558	_ 8260008	_ 8260020	_ 8260032	_ 8260508.XX
	1750	43	1.695	1.287	1854				
	1170	29	1.354	0.993	2139				
	100	2.5	0.299	0.113	2857				
50	2500	50	1.672	1.237	1560	_ 8260009	_ 8260021	_ 8260033	_ 8260509.XX
	1750	35	1.420	1.023	1843				
	1170	23	1.135	0.784	2112				
	100	2.0	0.269	0.088	2783				
60	2500	41	1.433	1.015	1536	_ 8260010	_ 8260022	_ 8260034	_ 8260510.XX
	1750	29	1.216	0.835	1805				
	1170	19	0.973	0.637	2060				
	100	1.7	0.245	0.071	2689				
80	2500	31	0.659	0.456	919	_ 8260011	_ 8260023	_ 8260035	_ 8260511.XX
	1750	21	0.577	0.379	1092				
	1170	14	0.469	0.289	1247				
	100	1.3	0.070	0.032	1593				
100	2500	25	0.441	0.286	721	_ 8260012	_ 8260024	_ 8260036	_ 8260512.XX
	1750	17	0.386	0.236	851				
	1170	11	0.314	0.179	966				
	100	1.0	0.048	0.019	1222				

How To Build a Part Number For Size GR826, GRG826, GRL826, NH826, EL826

1. Select partial catalog number from the selection table
2. Replace leading “_” with series code (GR, GRG, GRL, NH, EL)
3. For hollow output, replace “XX” suffix with bore code (see next page for codes)

Example:

Grove Gear IRONMAN, hollow output shaft, 5:1 ratio, 180TC coupling input
 GR-HMQ826-5-180TC-19
 GR8260537.19

GRG = **GROVE GEAR**

- Direct replacement to Grove Gear Flexaline
- 1-1/4" solid output shaft diameter
- For hollow bores, specify GRL Interchange
- Solid output shaft only



GRL = Interchange

- Direct replacement to LEESON IRONMAN & major brands.
- Hollow shaft option available
- 1-1/8" solid output shaft diameter



Maximum Rating Tables

Size 826 • GR, NH, EL Series

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

NEMA C Input Flange ▲	Style BM			Style HM	Style BMQ			Style HMQ	Ratio
	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	
143-5TC 182-4TC	8260073 8260109	8260085 8260121	8260097 8260133	8260525.XX 8260537.XX	8260181 8260217	8260193 8260229	8260205 8260241	8260561.XX 8260573.XX	5
143-5TC 182-4TC	8260074 8260110	8260086 8260122	8260098 8260134	8260526.XX 8260538.XX	8260182 8260218	8260194 8260230	8260206 8260242	8260562.XX 8260574.XX	7.5
143-5TC 182-4TC	8260075 8260111	8260087 8260123	8260099 8260135	8260527.XX 8260539.XX	8260183 8260219	8260195 8260231	8260207 8260243	8260563.XX 8260575.XX	10
143-5TC 182-4TC	8260076 8260112	8260088 8260124	8260100 8260136	8260528.XX 8260540.XX	8260184 8260220	8260196 8260232	8260208 8260244	8260564.XX 8260576.XX	15
56C 143-5TC 182-4TC	8260041 8260077 8260113	8260053 8260089 8260125	8260065 8260101 8260137	8260517.XX 8260529.XX 8260541.XX	8260149 8260185 8260221	8260161 8260197 8260233	8260173 8260209 8260245	8260553.XX 8260565.XX 8260577.XX	20
56C 143-5TC	8260042 8260078	8260054 8260090	8260066 8260102	8260518.XX 8260530.XX	8260150 8260186	8260162 8260198	8260174 8260210	8260554.XX 8260566.XX	25
56C 143-5TC	8260043 8260079	8260055 8260091	8260067 8260103	8260519.XX 8260531.XX	8260151 8260187	8260163 8260199	8260175 8260211	8260555.XX 8260567.XX	30
56C 143-5TC	8260044 8260080	8260056 8260092	8260068 8260104	8260520.XX 8260532.XX	8260152 8260188	8260164 8260200	8260176 8260212	8260556.XX 8260568.XX	40
56C 143-5TC	8260045 8260081	8260057 8260093	8260069 8260105	8260521.XX 8260533.XX	8260153 8260189	8260165 8260201	8260177 8260213	8260557.XX 8260569.XX	50
56C 143-5TC	8260046 8260082	8260058 8260094	8260070 8260106	8260522.XX 8260534.XX	8260154 8260190	8260166 8260202	8260178 8260214	8260558.XX 8260570.XX	60
56C 143-5TC	8260047 8260083	8260059 8260095	8260071 8260107	8260523.XX 8260535.XX	8260155 8260191	8260167 8260203	8260179 8260215	8260559.XX 8260571.XX	80
56C	8260048	8260060	8260072	8260524.XX	8260156	8260168	8260180	8260560.XX	100

▲ Consult Factory for other motor flanges available.

* Catalog numbers are for hollow output shaft reducers.

When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	1"	1-1/8"	1-3/16"	1-1/4"	1-7/16"	1-1/2"
Decimal Size	1.000	1.125	1.188	1.250	1.438	1.500
Output Bore Code	16	18	19	20	23	24

Maximum Rating Tables

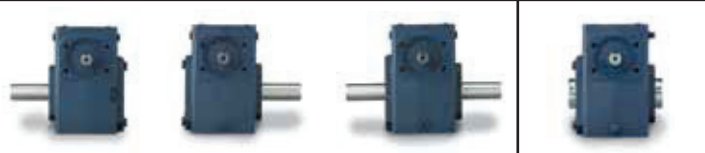
Size 830 • GR & EL Series



For NH series reducers refer to pages 36-37.

Style B

Style H



Size 830

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*
5	2500	500	10.661	10.091	1272	_8300001	_8300013	_8300025	_8300501.XX
	1750	350	9.093	8.573	1544				
	1170	234	7.434	6.966	1876				
	100	20	1.177	0.928	2925				
7.5	2500	333	8.178	7.669	1450	_8300002	_8300014	_8300026	_8300502.XX
	1750	233	6.879	6.421	1734				
	1170	156	5.668	5.251	2122				
	100	13	0.898	0.683	3228				
10	2500	250	7.293	6.745	1701	_8300003	_8300015	_8300027	_8300503.XX
	1750	175	6.151	5.655	2037				
	1170	117	4.989	4.541	2446				
	100	10	0.799	0.567	3573				
15	2500	166	5.734	5.149	1947	_8300004	_8300016	_8300028	_8300504.XX
	1750	116	4.843	4.311	2329				
	1170	78	3.903	3.426	2768				
	100	6.7	0.663	0.418	3949				
20	2500	125	4.662	4.067	2051	_8300005	_8300017	_8300029	_8300505.XX
	1750	87	3.947	3.407	2454				
	1170	58	3.198	2.713	2923				
	100	5.0	0.579	0.332	4189				
25	2500	100	3.957	3.355	2114	_8300006	_8300018	_8300030	_8300506.XX
	1750	70	3.355	2.807	2527				
	1170	46	2.713	2.223	2993				
	100	4.0	0.519	0.269	4238				
30	2500	83	3.389	2.787	2108	_8300007	_8300019	_8300031	_8300507.XX
	1750	58	2.879	2.332	2519				
	1170	39	2.335	1.845	2982				
	100	3.3	0.472	0.223	4217				
40	2500	62	2.639	2.054	2071	_8300008	_8300020	_8300032	_8300508.XX
	1750	43	2.251	1.720	2477				
	1170	29	1.843	1.366	2944				
	100	2.5	0.407	0.167	4200				
50	2500	50	2.238	1.654	2084	_8300009	_8300021	_8300033	_8300509.XX
	1750	35	1.915	1.383	2490				
	1170	23	1.569	1.094	2945				
	100	2.0	0.372	0.132	4156				
60	2500	41	1.907	1.336	2020	_8300010	_8300022	_8300034	_8300510.XX
	1750	29	1.637	1.117	2413				
	1170	19	1.348	0.883	2854				
	100	1.7	0.341	0.106	4026				
80	2500	31	0.972	0.671	1352	_8300011	_8300023	_8300035	_8300511.XX
	1750	21	0.895	0.585	1684				
	1170	14	0.757	0.463	1996				
	100	1.3	0.126	0.054	2731				
100	2500	25	0.656	0.424	1069	_8300012	_8300024	_8300036	_8300512.XX
	1750	17	0.603	0.367	1321				
	1170	11	0.511	0.289	1554				
	100	1.0	0.087	0.033	2100				

How To Build a Part Number For Size GR830 & EL830

1. Select partial catalog number from the selection table
2. Replace leading “_” with series code (GR, EL)
3. For hollow output, replace “XX” suffix with bore code (see next page for codes)

Example:

Grove Gear IRONMAN, style B, 5:1 ratio, left hand output
 GR-B830-5-L
 GR8300001

Single Reduction
Worm Gear Reducers









Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

	Style BM			Style HM	Style BMQ			Style HMQ	
									
NEMA C Input Flange ▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Ratio
182-4TC 213-5TC	8300109 8300145	8300121 8300157	8300133 8300169	8300537.XX 8300549.XX	8300253 8300289	8300265 8300301	8300277 8300313	8300585.XX 8300597.XX	5
182-4TC	8300110	8300122	8300134	8300538.XX	8300254	8300266	8300278	8300586.XX	7.5
143-5TC 182-4TC	8300075 8300111	8300087 8300123	8300099 8300135	8300527.XX 8300539.XX	8300219 8300255	8300231 8300267	8300243 8300279	8300575.XX 8300587.XX	10
143-5TC 182-4TC	8300076 8300112	8300088 8300124	8300100 8300136	8300528.XX 8300540.XX	8300220 8300256	8300232 8300268	8300244 8300280	8300576.XX 8300588.XX	15
143-5TC 182-4TC	8300077 8300113	8300089 8300125	8300101 8300137	8300529.XX 8300541.XX	8300221 8300257	8300233 8300269	8300245 8300281	8300577.XX 8300589.XX	20
143-5TC 182-4TC	8300078 8300114	8300090 8300126	8300102 8300138	8300530.XX 8300542.XX	8300222 8300258	8300234 8300270	8300246 8300282	8300578.XX 8300590.XX	25
143-5TC 182-4TC	8300079 8300115	8300091 8300127	8300103 8300139	8300531.XX 8300543.XX	8300223 8300259	8300235 8300271	8300247 8300283	8300579.XX 8300591.XX	30
56C 143-5TC	8300044 8300080	8300056 8300092	8300068 8300104	8300520.XX 8300532.XX	8300188 8300224	8300200 8300236	8300212 8300248	8300568.XX 8300580.XX	40
56C 143-5TC	8300045 8300081	8300057 8300093	8300069 8300105	8300521.XX 8300533.XX	8300189 8300225	8300201 8300237	8300213 8300249	8300569.XX 8300581.XX	50
56C 143-5TC	8300046 8300082	8300058 8300094	8300070 8300106	8300522.XX 8300534.XX	8300190 8300226	8300202 8300238	8300214 8300250	8300570.XX 8300582.XX	60
56C 143-5TC	8300047 8300083	8300059 8300095	8300071 8300107	8300523.XX 8300535.XX	8300191 8300227	8300203 8300239	8300215 8300251	8300571.XX 8300583.XX	80
56C 143-5TC	8300048 8300084	8300060 8300096	8300072 8300108	8300524.XX 8300536.XX	8300192 8300228	8300204 8300240	8300216 8300252	8300572.XX 8300584.XX	100

▲ Consult Factory for other motor flanges available.
* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	1-3/16"	1-1/4"	1-7/16"	1-1/2"	1-5/8"	1-11/16"	1-3/4"	1-7/8"	1-15/16"	2"	2-3/16"
Decimal Size	1.188	1.250	1.438	1.500	1.625	1.688	1.750	1.875	1.938	2.000	2.188
Output Bore Code	19	20	23	24	26	27	28	30	31	32	35

Maximum Rating Tables

Size 830 • NH Series

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

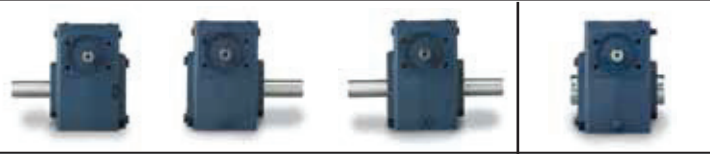
WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Style B

Style H



Size 830

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*
5	2500	500	7.726	7.325	923	NH8300001	NH8300013	NH8300025	NH8300501.XX
	1750	350	6.683	6.285	1131				
	1170	234	5.645	5.249	1413				
	100	20	0.918	0.779	2454				
7.5	2500	333	7.145	6.713	1269	NH8300002	NH8300014	NH8300026	NH8300502.XX
	1750	233	6.049	5.624	1519				
	1170	156	5.210	4.779	1930				
	100	13	0.765	0.636	3003				
10	2500	250	6.344	5.897	1486	NH8300003	NH8300015	NH8300027	NH8300503.XX
	1750	175	5.450	5.005	1802				
	1170	117	4.586	4.144	2232				
	100	10	0.649	0.526	3312				
15	2500	166	4.858	4.404	1665	NH8300004	NH8300016	NH8300028	NH8300504.XX
	1750	116	4.207	3.751	2026				
	1170	78	3.507	3.062	2473				
	100	6.7	0.498	0.378	3573				
20	2500	125	3.720	3.288	1657	NH8300005	NH8300017	NH8300029	NH8300505.XX
	1750	87	3.233	2.799	2015				
	1170	58	2.717	2.291	2467				
	100	5.0	0.400	0.284	3584				
25	2500	100	3.170	2.737	1724	NH8300006	NH8300018	NH8300030	NH8300506.XX
	1750	70	2.768	2.332	2099				
	1170	46	2.319	1.895	2551				
	100	4.0	0.345	0.232	3653				
30	2500	83	2.717	2.287	1729	NH8300007	NH8300019	NH8300031	NH8300507.XX
	1750	58	2.382	1.949	2105				
	1170	39	2.004	1.582	2556				
	100	3.3	0.305	0.193	3656				
40	2500	62	2.063	1.645	1659	NH8300008	NH8300020	NH8300032	NH8300508.XX
	1750	43	1.822	1.402	2018				
	1170	29	1.557	1.144	2464				
	100	2.5	0.252	0.141	3559				
50	2500	50	1.727	1.320	1663	NH8300009	NH8300021	NH8300033	NH8300509.XX
	1750	35	1.535	1.125	2026				
	1170	23	1.312	0.912	2456				
	100	2.0	0.217	0.111	3505				
60	2500	41	1.430	1.045	1580	NH8300010	NH8300022	NH8300034	NH8300510.XX
	1750	29	1.279	0.891	1924				
	1170	19	1.100	0.722	2332				
	100	1.7	0.188	0.088	3327				
80	2500	31	0.972	0.671	1352	NH8300011	NH8300023	NH8300035	NH8300511.XX
	1750	21	0.895	0.585	1684				
	1170	14	0.757	0.463	1996				
	100	1.3	0.126	0.054	2731				
100	2500	25	0.656	0.424	1069	NH8300012	NH8300024	NH8300036	NH8300512.XX
	1750	17	0.603	0.367	1321				
	1170	11	0.511	0.289	1554				
	100	1.0	0.087	0.033	2100				

How To Build a Part Number For Size NH830

1. Select catalog number from the selection table
2. For hollow output, replace "XX" suffix with bore code (see next page for codes)

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

NEMA C Input Flange ▲	Style BM			Style HM	Style BMQ			Style HMQ	Ratio
	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	
182-4TC 213-5TC	NH8300109 NH8300145	NH8300121 NH8300157	NH8300133 NH8300169	NH8300537.XX NH8300549.XX	NH8300253 NH8300289	NH8300265 NH8300301	NH8300277 NH8300313	NH8300585.XX NH8300597.XX	5
182-4TC	NH8300110	NH8300122	NH8300134	NH8300538.XX	NH8300254	NH8300266	NH8300278	NH8300586.XX	7.5
143-5TC 182-4TC	NH8300075 NH8300111	NH8300087 NH8300123	NH8300099 NH8300135	NH8300527.XX NH8300539.XX	NH8300219 NH8300255	NH8300231 NH8300267	NH8300243 NH8300279	NH8300575.XX NH8300587.XX	10
143-5TC 182-4TC	NH8300076 NH8300112	NH8300088 NH8300124	NH8300100 NH8300136	NH8300528.XX NH8300540.XX	NH8300220 NH8300256	NH8300232 NH8300268	NH8300244 NH8300280	NH8300576.XX NH8300588.XX	15
143-5TC 182-4TC	NH8300077 NH8300113	NH8300089 NH8300125	NH8300101 NH8300137	NH8300529.XX NH8300541.XX	NH8300221 NH8300257	NH8300233 NH8300269	NH8300245 NH8300281	NH8300577.XX NH8300589.XX	20
143-5TC 182-4TC	NH8300078 NH8300114	NH8300090 NH8300126	NH8300102 NH8300138	NH8300530.XX NH8300542.XX	NH8300222 NH8300258	NH8300234 NH8300270	NH8300246 NH8300282	NH8300578.XX NH8300590.XX	25
143-5TC 182-4TC	NH8300079 NH8300115	NH8300091 NH8300127	NH8300103 NH8300139	NH8300531.XX NH8300543.XX	NH8300223 NH8300259	NH8300235 NH8300271	NH8300247 NH8300283	NH8300579.XX NH8300591.XX	30
56C 143-5TC	NH8300044 NH8300080	NH8300056 NH8300092	NH8300068 NH8300104	NH8300520.XX NH8300532.XX	NH8300188 NH8300224	NH8300200 NH8300236	NH8300212 NH8300248	NH8300568.XX NH8300580.XX	40
56C 143-5TC	NH8300045 NH8300081	NH8300057 NH8300093	NH8300069 NH8300105	NH8300521.XX NH8300533.XX	NH8300189 NH8300225	NH8300201 NH8300237	NH8300213 NH8300249	NH8300569.XX NH8300581.XX	50
56C 143-5TC	NH8300046 NH8300082	NH8300058 NH8300094	NH8300070 NH8300106	NH8300522.XX NH8300534.XX	NH8300190 NH8300226	NH8300202 NH8300238	NH8300214 NH8300250	NH8300570.XX NH8300582.XX	60
56C 143-5TC	NH8300047 NH8300083	NH8300059 NH8300095	NH8300071 NH8300107	NH8300523.XX NH8300535.XX	NH8300191 NH8300227	NH8300203 NH8300239	NH8300215 NH8300251	NH8300571.XX NH8300583.XX	80
56C 143-5TC	NH8300048 NH8300084	NH8300060 NH8300096	NH8300072 NH8300108	NH8300524.XX NH8300536.XX	NH8300192 NH8300228	NH8300204 NH8300240	NH8300216 NH8300252	NH8300572.XX NH8300584.XX	100

▲ Consult Factory for other motor flanges available.
* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	1-3/16"	1-1/4"	1-7/16"	1-1/2"	1-5/8"	1-11/16"	1-3/4"	1-7/8"	1-15/16"	2"	2-3/16"
Decimal Size	1.188	1.250	1.438	1.500	1.625	1.688	1.750	1.875	1.938	2.000	2.188
Output Bore Code	19	20	23	24	26	27	28	30	31	32	35

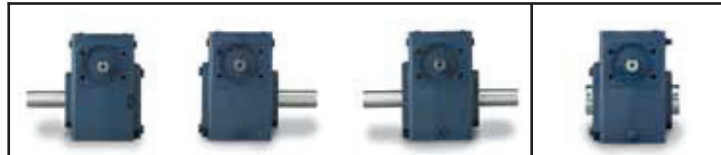
Maximum Rating Tables

Size 832 • GR & EL Series



Style B

Style H



Size 832

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*
5	2500	500	13.94	13.24	1669	_ 8320097	_ 8320101	_ 8320105	_ 8320557.XX
	1750	350	11.92	11.29	2033				
	1170	234	9.790	9.220	2483				
7.5	100	20	1.567	1.267	3994	_ 8320098	_ 8320102	_ 8320106	_ 8320558.XX
	2500	333	10.36	9.695	1833				
	1750	233	8.863	8.264	2232				
10	1170	156	7.286	6.747	2726	_ 8320001	_ 8320009	_ 8320017	_ 8320501.XX
	100	13	1.201	0.926	4375				
	2500	250	9.601	8.943	2254				
15	1750	175	8.092	7.497	2700	_ 8320002	_ 8320010	_ 8320018	_ 8320502.XX
	1170	117	6.604	6.066	3268				
	100	10	1.048	0.770	4853				
20	2500	166	7.258	6.582	2489	_ 8320003	_ 8320011	_ 8320019	_ 8320503.XX
	1750	116	6.127	5.516	2980				
	100	78	5.031	4.478	3618				
25	100	6.7	0.853	0.573	5413	_ 8320004	_ 8320012	_ 8320020	_ 8320504.XX
	2500	125	6.122	5.412	2729				
	1750	87	5.180	4.536	3267				
30	1170	58	4.215	3.636	3917	_ 8320005	_ 8320013	_ 8320021	_ 8320505.XX
	100	5.0	0.746	0.452	5695				
	2500	100	5.162	4.457	2809				
40	1750	70	4.373	3.732	3360	_ 8320006	_ 8320014	_ 8320022	_ 8320506.XX
	1170	46	3.543	2.968	3996				
	100	4.0	0.655	0.362	5710				
50	2500	83	4.262	3.562	2694	_ 8320007	_ 8320015	_ 8320023	_ 8320507.XX
	1750	58	3.619	2.986	3226				
	100	39	2.987	2.415	3902				
60	100	3.3	0.593	0.306	5787	_ 8320008	_ 8320016	_ 8320024	_ 8320508.XX
	2500	62	3.434	2.736	2759				
	1750	43	2.926	2.293	3303				
80	1170	29	2.402	1.833	3950	_ 8320009	_ 8320103	_ 8320107	_ 8320559.XX
	100	2.5	0.513	0.227	5710				
	2500	50	2.883	2.199	2772				
100	1750	35	2.462	1.841	3315	_ 8320100	_ 8320104	_ 8320108	_ 8320560.XX
	1170	23	2.018	1.461	3935				
	100	2.0	0.458	0.178	5601				
	2500	41	2.471	1.812	2741				
	1750	29	2.114	1.515	3274				
	100	19	1.733	1.197	3869				
	100	1.7	0.414	0.144	5448				
	2500	31	1.122	0.796	1605				
	1750	21	1.030	0.695	2000				
	1170	14	0.869	0.551	2371				
	100	1.3	0.143	0.064	3246				
	2500	25	0.754	0.503	1268				
	1750	17	0.691	0.435	1567				
	1170	11	0.584	0.343	1846				
	100	1.0	0.097	0.040	2496				

How To Build a Part Number For Size GR832, GRG832, GRL832, EL832

1. Select partial catalog number from the selection table
2. Replace leading “_” with series code (GR, GRG, GRL, EL) (see next page for codes)
3. For hollow output, replace “XX” suffix with bore code

Example:

Grove Gear IRONMAN, hollow output shaft, 5:1 ratio, 180TC coupling input
 GR-HM832-5-H-180TC-19
 GR8320569.19









GRG = GROVE GEAR

- Direct replacement to Grove Gear Flexaline
- 1-1/2" solid output shaft diameter
- For hollow bores, specify GRL Interchange
- Solid output shaft only



GRL = IRONMAN Interchange

- Direct replacement to LEESON IRONMAN & major brands.
- Hollow shaft option available
- 1-3/8" solid output shaft diameter

	Style BM			Style HM	Style BMQ			Style HMQ	
									
NEMA C Input Flange▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Ratio
182-4TC 213-5TC	8320205 8320217	8320209 8320229	8320213 8320241	8320569.XX 8320573.XX	8320277 8320289	8320281 8320301	8320285 8320313	8320593.XX 8320597.XX	5
182-4TC 213-5TC	8320206 8320218	8320210 8320230	8320214 8320242	8320570.XX 8320574.XX	8320278 8320290	8320282 8320302	8320286 8320314	8320594.XX 8320598.XX	7.5
143-5TC 182-4TC 213-5TC	8320049 8320073 8320219	8320057 8320081 8320231	8320065 8320089 8320243	8320517.XX 8320525.XX 8320575.XX	8320145 8320169 8320291	8320153 8320177 8320303	8320161 8320185 8320315	8320541.XX 8320549.XX 8320599.XX	10
143-5TC 182-4TC	8320050 8320074	8320058 8320082	8320066 8320090	8320518.XX 8320526.XX	8320146 8320170	8320154 8320178	8320162 8320186	8320542.XX 8320550.XX	15
143-5TC 182-4TC	8320051 8320075	8320059 8320083	8320067 8320091	8320519.XX 8320527.XX	8320147 8320171	8320155 8320179	8320163 8320187	8320543.XX 8320551.XX	20
143-5TC 182-4TC	8320052 8320076	8320060 8320084	8320068 8320092	8320520.XX 8320528.XX	8320148 8320172	8320156 8320180	8320164 8320188	8320544.XX 8320552.XX	25
143-5TC 182-4TC	8320053 8320077	8320061 8320085	8320069 8320093	8320521.XX 8320529.XX	8320149 8320173	8320157 8320181	8320165 8320189	8320545.XX 8320553.XX	30
56C 143-5TC 182-4TC	8320030 8320054 8320078	8320038 8320062 8320086	8320046 8320070 8320094	8320514.XX 8320522.XX 8320530.XX	8320126 8320150 8320174	8320134 8320158 8320182	8320142 8320166 8320190	8320538.XX 8320546.XX 8320554.XX	40
56C 143-5TC 182-4TC	8320031 8320055 8320079	8320039 8320063 8320087	8320047 8320071 8320095	8320515.XX 8320523.XX 8320531.XX	8320127 8320151 8320175	8320135 8320159 8320183	8320143 8320167 8320191	8320539.XX 8320547.XX 8320555.XX	50
56C 143-5TC 182-4TC	8320032 8320056 8320080	8320040 8320064 8320088	8320048 8320072 8320096	8320516.XX 8320524.XX 8320532.XX	8320128 8320152 8320176	8320136 8320160 8320184	8320144 8320168 8320192	8320540.XX 8320548.XX 8320556.XX	60
56C 143-5TC	8320111 8320195	8320115 8320199	8320119 8320203	8320563.XX 8320567.XX	8320255 8320267	8320259 8320271	8320263 8320275	8320587.XX 8320591.XX	80
56C	8320112	8320116	8320120	8320564.XX	8320256	8320260	8320264	8320588.XX	100

▲ Consult Factory for other motor flanges available.
* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	1-3/16"	1-1/4"	1-7/16"	1-1/2"	1-5/8"	1-11/16"	1-3/4"	1-7/8"	1-15/16"	2"	2-3/16"
Decimal Size	1.188	1.250	1.438	1.500	1.625	1.688	1.750	1.875	1.938	2.000	2.188
Output Bore Code	19	20	23	24	26	27	28	30	31	32	35

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Maximum Rating Tables

Size 832 • NH Series

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

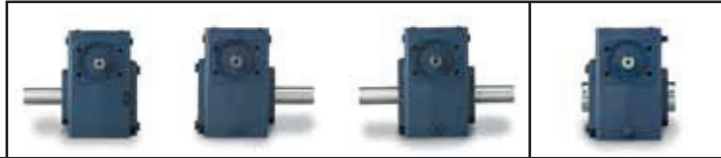
WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Style B

Style H



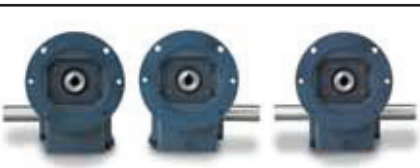



Size 832

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*
5	2500	500	10.56	10.03	1306	NH8320097	NH8320101	NH8320105	NH8320557.XX
	1750	350	9.135	8.611	1602				
	1170	234	7.694	7.172	1995				
	100	20	1.289	1.097	3571				
7.5	2500	333	9.053	8.527	1612	NH8320098	NH8320102	NH8320106	NH8320558.XX
	1750	233	7.844	7.317	1976				
	1170	156	6.642	6.114	2469				
	100	13	1.136	0.949	4075				
10	2500	250	8.232	7.701	1941	NH8320001	NH8320009	NH8320017	NH8320501.XX
	1750	175	7.034	6.507	2343				
	1170	117	5.974	5.446	2932				
	100	10	0.857	0.704	4437				
15	2500	166	6.161	5.603	2118	NH8320002	NH8320010	NH8320018	NH8320502.XX
	1750	116	5.277	4.724	2551				
	1170	78	4.531	3.971	3207				
	100	6.7	0.682	0.518	4895				
20	2500	125	4.836	4.306	2170	NH8320003	NH8320011	NH8320019	NH8320503.XX
	1750	87	4.188	3.658	2633				
	1170	58	3.547	3.020	3253				
	100	5.0	0.528	0.381	4802				
25	2500	100	3.977	3.468	2185	NH8320004	NH8320012	NH8320020	NH8320504.XX
	1750	70	3.465	2.953	2658				
	1170	46	2.914	2.413	3248				
	100	4.0	0.434	0.298	4701				
30	2500	83	3.452	2.903	2195	NH8320005	NH8320013	NH8320021	NH8320505.XX
	1750	58	3.003	2.454	2651				
	1170	39	2.604	2.052	3315				
	100	3.3	0.425	0.265	5007				
40	2500	62	2.669	2.157	2174	NH8320006	NH8320014	NH8320022	NH8320506.XX
	1750	43	2.348	1.834	2641				
	1170	29	2.019	1.509	3251				
	100	2.5	0.330	0.189	4769				
50	2500	50	2.152	1.674	2110	NH8320007	NH8320015	NH8320023	NH8320507.XX
	1750	35	1.907	1.426	2568				
	1170	23	1.634	1.163	3130				
	100	2.0	0.270	0.143	4510				
60	2500	41	1.764	1.323	2001	NH8320008	NH8320016	NH8320024	NH8320508.XX
	1750	29	1.573	1.128	2437				
	1170	19	1.346	0.913	2951				
	100	1.7	0.225	0.111	4201				
80	2500	31	1.122	0.796	1605	NH8320099	NH8320103	NH8320107	NH8320559.XX
	1750	21	1.030	0.695	2000				
	1170	14	0.869	0.551	2371				
	100	1.3	0.143	0.064	3246				
100	2500	25	0.754	0.503	1268	NH8320100	NH8320104	NH8320108	NH8320560.XX
	1750	17	0.691	0.435	1567				
	1170	11	0.584	0.343	1846				
	100	1.0	0.097	0.040	2496				

How To Build a Part Number For Size NH832

1. Select catalog number from the selection table
2. For hollow output, replace "XX" suffix with bore code (see next page for codes)

	Style BM			Style HM	Style BMQ			Style HMQ	
									
NEMA C Input Flange ▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Ratio
182-4TC 213-5TC	NH8320205 NH8320217	NH8320209 NH8320229	NH8320213 NH8320241	NH8320569.XX NH8320573.XX	NH8320277 NH8320289	NH8320281 NH8320301	NH8320285 NH8320313	NH8320593.XX NH8320597.XX	5
182-4TC 213-5TC	NH8320206 NH8320218	NH8320210 NH8320230	NH8320214 NH8320242	NH8320570.XX NH8320574.XX	NH8320278 NH8320290	NH8320282 NH8320302	NH8320286 NH8320314	NH8320594.XX NH8320598.XX	7.5
143-5TC 182-4TC 213-5TC	NH8320049 NH8320073 NH8320219	NH8320057 NH8320081 NH8320231	NH8320065 NH8320089 NH8320243	NH8320517.XX NH8320525.XX NH8320575.XX	NH8320145 NH8320169 NH8320291	NH8320153 NH8320177 NH8320303	NH8320161 NH8320185 NH8320315	NH8320541.XX NH8320549.XX NH8320599.XX	10
143-5TC 182-4TC	NH8320050 NH8320074	NH8320058 NH8320082	NH8320066 NH8320090	NH8320518.XX NH8320526.XX	NH8320146 NH8320170	NH8320154 NH8320178	NH8320162 NH8320186	NH8320542.XX NH8320550.XX	15
143-5TC 182-4TC	NH8320051 NH8320075	NH8320059 NH8320083	NH8320067 NH8320091	NH8320519.XX NH8320527.XX	NH8320147 NH8320171	NH8320155 NH8320179	NH8320163 NH8320187	NH8320543.XX NH8320551.XX	20
143-5TC 182-4TC	NH8320052 NH8320076	NH8320060 NH8320084	NH8320068 NH8320092	NH8320520.XX NH8320528.XX	NH8320148 NH8320172	NH8320156 NH8320180	NH8320164 NH8320188	NH8320544.XX NH8320552.XX	25
143-5TC 182-4TC	NH8320053 NH8320077	NH8320061 NH8320085	NH8320069 NH8320093	NH8320521.XX NH8320529.XX	NH8320149 NH8320173	NH8320157 NH8320181	NH8320165 NH8320189	NH8320545.XX NH8320553.XX	30
56C 143-5TC 182-4TC	NH8320030 NH8320054 NH8320078	NH8320038 NH8320062 NH8320086	NH8320046 NH8320070 NH8320094	NH8320514.XX NH8320522.XX NH8320530.XX	NH8320126 NH8320150 NH8320174	NH8320134 NH8320158 NH8320182	NH8320142 NH8320166 NH8320190	NH8320538.XX NH8320546.XX NH8320554.XX	40
56C 143-5TC 182-4TC	NH8320031 NH8320055 NH8320079	NH8320039 NH8320063 NH8320087	NH8320047 NH8320071 NH8320095	NH8320515.XX NH8320523.XX NH8320531.XX	NH8320127 NH8320151 NH8320175	NH8320135 NH8320159 NH8320183	NH8320143 NH8320167 NH8320191	NH8320539.XX NH8320547.XX NH8320555.XX	50
56C 143-5TC 182-4TC	NH8320032 NH8320056 NH8320080	NH8320040 NH8320064 NH8320088	NH8320048 NH8320072 NH8320096	NH8320516.XX NH8320524.XX NH8320532.XX	NH8320128 NH8320152 NH8320176	NH8320136 NH8320160 NH8320184	NH8320144 NH8320168 NH8320192	NH8320540.XX NH8320548.XX NH8320556.XX	60
56C 143-5TC	NH8320111 NH8320195	NH8320115 NH8320199	NH8320119 NH8320203	NH8320563.XX NH8320567.XX	NH8320255 NH8320267	NH8320259 NH8320271	NH8320263 NH8320275	NH8320587.XX NH8320591.XX	80
56C	NH8320112	NH8320116	NH8320120	NH8320564.XX	NH8320256	NH8320260	NH8320264	NH8320588.XX	100

▲ Consult Factory for other motor flanges available.

* Catalog numbers are for hollow output shaft reducers.

When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	1-3/16"	1-1/4"	1-7/16"	1-1/2"	1-5/8"	1-11/16"	1-3/4"	1-7/8"	1-15/16"	2"	2-3/16"
Decimal Size	1.188	1.250	1.438	1.500	1.625	1.688	1.750	1.875	1.938	2.000	2.188
Output Bore Code	19	20	23	24	26	27	28	30	31	32	35

Maximum Rating Tables

Size 842 • GR, NH & EL Series



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Style B

Style H



Size 842

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*
5	2500	500	20.79	19.87	2589	_8420001	_8420013	_8420025	_8420501.XX
	1750	350	18.08	17.25	3209				
	1170	234	15.18	14.43	4016				
	100	20	2.751	2.376	7738				
7.5	2500	333	18.84	17.83	3372	_8420002	_8420014	_8420026	_8420502.XX
	1750	233	16.27	15.36	4148				
	1170	156	13.42	12.61	5094				
	100	13	2.342	1.931	9126				
10	2500	250	17.39	16.37	4127	_8420003	_8420015	_8420027	_8420503.XX
	1750	175	14.93	14.00	5042				
	1170	117	12.31	11.47	6180				
	100	10	2.051	1.629	10629				
15	2500	166	12.94	11.92	4507	_8420004	_8420016	_8420028	_8420504.XX
	1750	116	11.13	10.20	5508				
	1170	78	9.193	8.357	6752				
	100	6.7	1.608	1.190	11245				
20	2500	125	11.02	9.91	4999	_8420005	_8420017	_8420029	_8420505.XX
	1750	87	9.462	8.458	6092				
	1170	58	7.816	6.913	7447				
	100	5.0	1.407	0.956	12056				
25	2500	100	9.256	8.164	5145	_8420006	_8420018	_8420030	_8420506.XX
	1750	70	7.940	6.946	6254				
	1170	46	6.551	5.658	7619				
	100	4.0	1.210	0.764	12038				
30	2500	83	7.517	6.455	4882	_8420007	_8420019	_8420031	_8420507.XX
	1750	58	6.481	5.517	5960				
	1170	39	5.384	4.518	7300				
	100	3.3	1.066	0.636	12026				
40	2500	62	6.101	5.013	5055	_8420008	_8420020	_8420032	_8420508.XX
	1750	43	5.262	4.274	6156				
	1170	29	4.379	3.490	7520				
	100	2.5	0.920	0.480	12090				
50	2500	50	5.088	4.029	5078	_8420009	_8420021	_8420033	_8420509.XX
	1750	35	4.389	3.426	6170				
	1170	23	3.655	2.788	7510				
	100	2.0	0.804	0.375	11809				
60	2500	41	4.333	3.317	5017	_8420010	_8420022	_8420034	_8420510.XX
	1750	29	3.681	2.772	5989				
	1170	19	3.116	2.285	7386				
	100	1.7	0.715	0.302	11439				
80	2500	31	2.019	1.486	2995	_8420011	_8420023	_8420035	_8420511.XX
	1750	21	1.760	1.257	3620				
	1170	14	1.585	1.049	4519				
	100	1.3	0.290	0.135	6804				
100	2500	25	1.341	0.933	2351	_8420012	_8420024	_8420036	_8420512.XX
	1750	17	1.201	0.792	2852				
	1170	11	1.062	0.655	3527				
100	1.0	0.197	0.083	5219					

How To Build a Part Number For Size GR842, NH842, EL842

1. Select partial catalog number from the selection table
2. Replace leading “_” with series code (GR, NH, EL)
3. For hollow output, replace “XX” suffix with bore code (see next page for codes)

Example:

Grove Gear IRONMAN, style B, 5:1 ratio, left hand output
 GR-B842-5-L
 GR8420001

NEMA C Input Flange ▲	Style BM			Style HM	Style BMQ			Style HMQ	Ratio
	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	
182-4TC	8420109	8420121	8420133	8420537.XX	8420289	8420301	8420313	8420597.XX	5
213-5TC	8420145	8420157	8420169	8420549.XX	8420325	8420337	8420349	8420609.XX	
254-6TC	8420181	8420193	8420205	8420561.XX	8420361	8420373	8420385	8420621.XX	
182-4TC	8420110	8420122	8420134	8420538.XX	8420290	8420302	8420314	8420598.XX	7.5
213-5TC	8420146	8420158	8420170	8420550.XX	8420326	8420338	8420350	8420610.XX	
254-6TC	8420182	8420194	8420206	8420562.XX	8420362	8420374	8420386	8420622.XX	
182-4TC	8420111	8420123	8420135	8420539.XX	8420291	8420303	8420315	8420599.XX	10
213-5TC	8420147	8420159	8420171	8420551.XX	8420327	8420339	8420351	8420611.XX	
254-6TC	8420183	8420195	8420207	8420563.XX	8420363	8420375	8420387	8420623.XX	
182-4TC	8420112	8420124	8420136	8420540.XX	8420292	8420304	8420316	8420600.XX	15
213-5TC	8420148	8420160	8420172	8420552.XX	8420328	8420340	8420352	8420612.XX	
182-4TC	8420113	8420125	8420137	8420541.XX	8420293	8420305	8420317	8420601.XX	20
213-5TC	8420149	8420161	8420173	8420553.XX	8420329	8420341	8420353	8420613.XX	
143-5TC	8420078	8420090	8420102	8420530.XX	8420258	8420270	8420282	8420590.XX	25
182-4TC	8420114	8420126	8420138	8420542.XX	8420294	8420306	8420318	8420602.XX	
213-5TC	8420150	8420162	8420174	8420554.XX	8420330	8420342	8420354	8420614.XX	
143-5TC	8420079	8420091	8420103	8420531.XX	8420259	8420271	8420283	8420591.XX	30
182-4TC	8420115	8420127	8420139	8420543.XX	8420295	8420307	8420319	8420603.XX	
143-5TC	8420080	8420092	8420104	8420532.XX	8420260	8420272	8420284	8420592.XX	40
182-4TC	8420116	8420128	8420140	8420544.XX	8420296	8420308	8420320	8420604.XX	
143-5TC	8420081	8420093	8420105	8420533.XX	8420261	8420273	8420285	8420593.XX	50
182-4TC	8420117	8420129	8420141	8420545.XX	8420297	8420309	8420321	8420605.XX	
56C	8420046	8420058	8420070	8420522.XX	8420226	8420238	8420250	8420582.XX	60
143-5TC	8420082	8420094	8420106	8420534.XX	8420262	8420274	8420286	8420594.XX	
182-4TC	8420118	8420130	8420142	8420546.XX	8420298	8420310	8420322	8420606.XX	
56C	8420047	8420059	8420071	8420523.XX	8420227	8420239	8420251	8420583.XX	80
143-5TC	8420083	8420095	8420107	8420535.XX	8420263	8420275	8420287	8420595.XX	
56C	8420048	8420060	8420072	8420524.XX	8420228	8420240	8420252	8420584.XX	100
143-5TC	8420084	8420096	8420108	8420536.XX	8420264	8420276	8420288	8420596.XX	

▲ Consult Factory for other motor flanges available.
 * Catalog numbers are for hollow output shaft reducers.
 When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	1-7/16"	1-1/2"	1-5/8"	1-11/16"	1-3/4"	1-7/8"	1-15/16"	2"	2-3/16"
Decimal Size	1.438	1.500	1.625	1.688	1.750	1.875	1.938	2.000	2.188
Output Bore Code	23	24	26	27	28	30	31	32	35

Maximum Rating Tables

Size 852 • GR, NH & EL Series



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

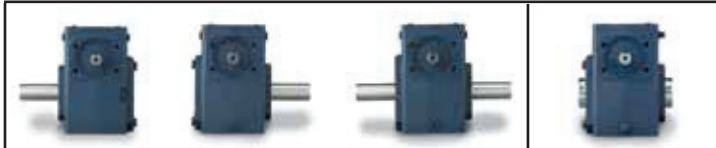
WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Style B

Style H



Size 852

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*
5	2500	500	37.08	35.61	4601	_8520085	_8520090	_8520095	_8520501.XX
	1750	350	32.51	31.17	5753				
	1170	234	27.55	26.35	7276				
	100	20	5.390	4.794	15484				
7.5	2500	333	32.21	30.68	5800	_8520086	_8520091	_8520096	_8520502.XX
	1750	233	28.10	26.70	7213				
	1170	156	23.67	22.42	9058				
	100	13	4.442	3.821	18062				
10	2500	250	26.55	24.99	6300	_8520001	_8520008	_8520015	_8520503.XX
	1750	175	23.15	21.73	7827				
	1170	117	19.50	18.23	9818				
	100	10	3.701	3.073	19367				
15	2500	166	20.77	19.05	7204	_8520002	_8520009	_8520016	_8520504.XX
	1750	116	18.11	16.55	8941				
	1170	78	15.26	13.86	11201				
	100	6.7	2.997	2.309	21826				
20	2500	125	16.89	14.95	7538	_8520003	_8520010	_8520017	_8520505.XX
	1750	87	14.56	12.98	9351				
	1170	58	12.29	10.87	11709				
	100	5.0	2.499	1.802	22716				
25	2500	100	13.95	12.18	7674	_8520087	_8520092	_8520097	_8520506.XX
	1750	70	12.19	10.57	9517				
	1170	46	10.298	8.848	11915				
	100	4.0	2.176	1.464	23068				
30	2500	83	12.056	10.264	7763	_8520004	_8520011	_8520018	_8520507.XX
	1750	58	10.538	8.910	9627				
	1170	39	8.918	7.457	12051				
	100	3.3	1.949	1.233	23305				
40	2500	62	9.258	7.533	7596	_8520005	_8520012	_8520019	_8520508.XX
	1750	43	8.105	6.538	9419				
	1170	29	6.878	5.471	11789				
	100	2.5	1.592	0.903	22772				
50	2500	50	7.727	5.990	7550	_8520006	_8520013	_8520020	_8520509.XX
	1750	35	6.777	5.199	9362				
	1170	23	5.766	4.350	11717				
	100	2.0	1.411	0.718	22622				
60	2500	41	6.621	4.912	7429	_8520007	_8520014	_8520021	_8520510.XX
	1750	29	5.816	4.263	9212				
	1170	19	4.961	3.567	11528				
	100	1.7	1.270	0.588	22251				
80	2500	31	3.226	2.217	4469	_8520088	_8520093	_8520098	_8520511.XX
	1750	21	2.906	1.902	5478				
	1170	14	2.618	1.600	6894				
	100	1.3	0.744	0.280	14089				
100	2500	25	2.285	1.504	3790	_8520089	_8520094	_8520099	_8520512.XX
	1750	17	2.072	1.291	4646				
	1170	11	1.820	1.052	5663				
	100	1.0	0.515	0.180	11331				

How To Build a Part Number For Size GR852, NH852, EL852

1. Select partial catalog number from the selection table
2. Replace leading “_” with series code (GR, NH, EL)
3. For hollow output, replace “XX” suffix with bore code (see next page for codes)

Example:

Grove Gear IRONMAN, style B, 5:1 ratio, left hand output
GR-B852-5-L
GR8520085

NEMA C Input Flange ▲	Style BM			Style HM	Style BMQ			Style HMQ	Ratio
	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	
213-5TC 254-6TC	8520187 8520202	8520192 8520207	8520197 8520212	8520549.XX 8520561.XX	8520325 8520361	8520337 8520373	8520349 8520385	8520609.XX 8520621.XX	5
213-5TC 254-6TC	8520188 8520203	8520193 8520208	8520198 8520213	8520550.XX 8520562.XX	8520326 8520362	8520338 8520374	8520350 8520386	8520610.XX 8520622.XX	7.5
213-5TC 254-6TC	8520043 8520064	8520050 8520071	8520057 8520078	8520551.XX 8520563.XX	8520327 8520363	8520339 8520375	8520351 8520387	8520611.XX 8520623.XX	10
213-5TC 254-6TC	8520044 8520065	8520051 8520072	8520058 8520079	8520552.XX 8520564.XX	8520328 8520364	8520340 8520376	8520352 8520388	8520612.XX 8520624.XX	15
182-4TC 213-5TC 254-6TC	8520024 8520045 8520066	8520031 8520052 8520073	8520038 8520059 8520080	8520541.XX 8520553.XX 8520565.XX	8520293 8520329 8520365	8520305 8520341 8520377	8520317 8520353 8520389	8520601.XX 8520613.XX 8520625.XX	20
182-4TC 213-5TC	8520174 8520189	8520179 8520194	8520184 8520199	8520542.XX 8520554.XX	8520294 8520330	8520306 8520342	8520318 8520354	8520602.XX 8520614.XX	25
182-4TC 213-5TC	8520025 8520046	8520032 8520053	8520039 8520060	8520543.XX 8520555.XX	8520295 8520331	8520307 8520343	8520319 8520355	8520603.XX 8520615.XX	30
143-5TC 182-4TC 213-5TC	8520143 8520026 8520047	8520155 8520033 8520054	8520167 8520040 8520061	8520532.XX 8520544.XX 8520556.XX	8520260 8520296 8520332	8520272 8520308 8520344	8520284 8520320 8520356	8520592.XX 8520604.XX 8520616.XX	40
143-5TC 182-4TC	8520144 8520027	8520156 8520034	8520168 8520041	8520533.XX 8520545.XX	8520261 8520297	8520273 8520309	8520285 8520321	8520593.XX 8520605.XX	50
143-5TC 182-4TC	8520145 8520028	8520157 8520035	8520169 8520042	8520534.XX 8520546.XX	8520262 8520298	8520274 8520310	8520286 8520322	8520594.XX 8520606.XX	60
143-5TC 182-4TC	8520146 8520175	8520158 8520180	8520170 8520185	8520535.XX 8520547.XX	8520263 8520299	8520275 8520311	8520287 8520323	8520595.XX 8520607.XX	80
143-5TC	8520147	8520159	8520171	8520536.XX	8520264	8520276	8520288	8520596.XX	100

▲ Consult Factory for other motor flanges available.
* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	2"	2-3/16"	2-1/4"	2-7/16"	2-1/2"	2-11/16"	2-15/16"	3"	3-3/16"	3-7/16"
Decimal Size	2.000	2.188	2.250	2.438	2.500	2.688	2.938	3.000	3.188	3.438
Output Bore Code	32	35	36	39	40	43	47	48	51	55

Maximum Rating Tables

Size 860 • GR & EL Series



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

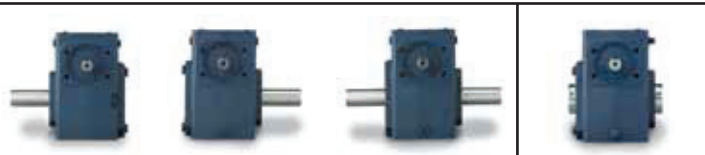
WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Style B

Style H



Size 860









Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*
5	2500	500	39.83	38.29	4827	_8600085	_8600090	_8600095	_8600501.XX
	1750	350	35.10	33.70	6068				
	1170	234	29.94	28.69	7726				
7.5	100	20	6.203	5.581	17587	_8600086	_8600091	_8600096	_8600502.XX
	2500	333	34.20	32.60	6163				
	1750	233	29.98	28.52	7704				
10	1170	156	25.41	24.11	9740	_8600001	_8600008	_8600015	_8600503.XX
	100	13	5.018	4.371	20662				
	2500	250	28.53	26.90	6782				
15	1750	175	24.99	23.51	8467	_8600002	_8600009	_8600016	_8600504.XX
	1170	117	21.17	19.84	10687				
	100	10	4.198	3.542	22324				
20	2500	166	21.95	20.17	7628	_8600003	_8600010	_8600017	_8600505.XX
	1750	116	19.23	17.61	9515				
	1170	78	16.30	14.85	11996				
25	100	6.7	3.337	2.623	24797	_8600004	_8600011	_8600018	_8600507.XX
	2500	125	17.93	16.11	8123				
	1750	87	15.71	14.06	10127				
30	1170	58	13.32	11.84	12758	_8600005	_8600012	_8600019	_8600508.XX
	100	5.0	2.805	2.078	26194				
	2500	100	14.89	13.04	8219				
40	1750	70	13.06	11.378	10245	_8600006	_8600013	_8600020	_8600509.XX
	1170	46	11.094	9.582	12903				
	100	4.0	2.418	1.678	26436				
50	2500	83	12.73	10.87	8222	_8600007	_8600014	_8600021	_8600510.XX
	1750	58	11.177	9.486	10249				
	1170	39	9.507	7.989	12911				
60	100	3.3	2.143	1.400	26480	_8600008	_8600093	_8600098	_8600511.XX
	2500	62	9.922	8.119	8187				
	1750	43	8.722	7.083	10203				
80	1170	29	7.433	5.963	12848	_8600009	_8600094	_8600099	_8600512.XX
	100	2.5	1.761	1.042	26260				
	2500	50	8.226	6.417	8088				
100	1750	35	7.242	5.597	10079	_8600088	_8600093	_8600098	_8600511.XX
	1170	23	6.188	4.712	12691				
	100	2.0	1.544	0.823	25925				
100	2500	41	6.977	5.202	7869	_8600089	_8600094	_8600099	_8600512.XX
	1750	29	6.152	4.539	9808				
	1170	19	5.269	3.822	12352				
100	100	1.7	1.376	0.669	25283	_8600088	_8600093	_8600098	_8600511.XX
	2500	31	4.130	2.939	5962				
	1750	21	3.702	2.522	7264				
100	100	1.3	0.950	0.382	19249	_8600089	_8600094	_8600099	_8600512.XX
	2500	25	2.849	1.905	4802				
	1750	17	2.571	1.635	5886				
100	1170	11	2.323	1.376	7408	_8600089	_8600094	_8600099	_8600512.XX
	100	1.0	0.686	0.244	15389				

How To Build a Part Number For Size GR860, EL860

1. Select partial catalog number from the selection table
2. Replace leading “_” with series code (GR, EL)
3. For hollow output, replace “XX” suffix with bore code (see next page for codes)

Example:

Grove Gear IRONMAN, style B, 5:1 ratio, left hand output
 GR-B860-5-L
 GR8600085

	Style BM			Style HM	Style BMQ			Style HMQ	
									
NEMA C Input Flange ▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*	Ratio
254-6TC	__8600130	__8600135	__8600140	__8600537.XX	__8600289	__8600301	__8600313	__8600597.XX	5
254-6TC	__8600131	__8600136	__8600141	__8600538.XX	__8600290	__8600302	__8600314	__8600598.XX	7.5
213-5TC 254-6TC	__8600043 __8600064	__8600050 __8600071	__8600057 __8600078	__8600527.XX __8600539.XX	__8600255 __8600291	__8600267 __8600303	__8600279 __8600315	__8600587.XX __8600599.XX	10
213-5TC 254-6TC	__8600044 __8600065	__8600051 __8600072	__8600058 __8600079	__8600528.XX __8600540.XX	__8600256 __8600292	__8600268 __8600304	__8600280 __8600316	__8600588.XX __8600600.XX	15
182-4TC 213-5TC	__8600024 __8600045	__8600031 __8600052	__8600038 __8600059	__8600517.XX __8600529.XX	__8600221 __8600257	__8600233 __8600269	__8600245 __8600281	__8600577.XX __8600589.XX	20
182-4TC 213-5TC	__8600102 __8600117	__8600107 __8600122	__8600112 __8600127	__8600518.XX __8600530.XX	__8600222 __8600258	__8600234 __8600270	__8600246 __8600282	__8600578.XX __8600590.XX	25
182-4TC 213-5TC	__8600025 __8600046	__8600032 __8600053	__8600039 __8600060	__8600519.XX __8600531.XX	__8600223 __8600259	__8600235 __8600271	__8600247 __8600283	__8600579.XX __8600591.XX	30
182-4TC 213-5TC	__8600026 __8600047	__8600033 __8600054	__8600040 __8600061	__8600520.XX __8600532.XX	__8600224 __8600260	__8600236 __8600272	__8600248 __8600284	__8600580.XX __8600592.XX	40
182-4TC	__8600027	__8600034	__8600041	__8600521.XX	__8600225	__8600237	__8600249	__8600581.XX	50
143-5TC 182-4TC	__8600028	__8600035	__8600042	__8600522.XX	__8600190 __8600226	__8600202 __8600238	__8600214 __8600250	__8600570.XX __8600582.XX	60
143-5TC 182-4TC	__8600103	__8600108	__8600113	__8600523.XX	__8600191 __8600227	__8600203 __8600239	__8600215 __8600251	__8600571.XX __8600583.XX	80
143-5TC 182-4TC	__8600104	__8600109	__8600114	__8600524.XX	__8600192 __8600228	__8600204 __8600240	__8600216 __8600252	__8600572.XX __8600584.XX	100

▲ Consult Factory for other motor flanges available.

* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	2"	2-3/16"	2-1/4"	2-7/16"	2-1/2"	2-11/16"	2-15/16"	3"	3-3/16"	3-7/16"
Decimal Size	2.000	2.188	2.250	2.438	2.500	2.688	2.938	3.000	3.188	3.438
Output Bore Code	32	35	36	39	40	43	47	48	51	55

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Maximum Rating Tables

Size 870, 880, 8100 • GR Series

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Size 870, 880, 8100

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Input HP	Output HP	Output Torque (lb-in)	Input HP	Output HP	Output Torque (lb-in)
5	1750	350	51.1	49.1	9062	66.8	64.3	11866	104.6	100.9	18619
	1170	234	43.3	41.3	11404	56.6	54.1	14932	88.5	84.9	23431
	(5.13 actual) 100	20	9.2	8.18	26416	13.9	12.4	36447	22.1	19.8	63935
7.5	1750	233	41.5	39.6	10572	54.3	52.0	13867	84.4	81.1	21413
	1170	156	35.2	33.3	13304	46.0	43.8	17451	71.4	68.2	26947
	(7.33 actual) 100	13	6.97	6.09	28388	9.72	8.54	39793	16.5	14.6	67727
10	1750	175	35.7	33.8	11893	43.3	41.1	14447	67.1	64.0	22466
	1170	117	30.3	28.5	14967	36.7	34.6	18181	56.8	53.8	28273
	(9.75 actual) 100	10	6.15	5.26	32282	7.96	6.83	41958	13.6	11.8	72712
15	1750	116	25.9	24.2	12827	33.8	31.7	16766	52.7	49.8	26308
	1170	78	22.1	20.4	16143	28.7	26.7	21099	44.8	41.9	33107
	(14.67 actual) 100	6.7	4.16	3.44	31744	5.75	6.82	44195	9.95	8.37	77295
20	1750	87	19.9	18.2	13431	25.9	23.8	17575	40.4	37.3	27597
	1170	58	17.0	15.3	16903	22.1	20.0	22118	34.4	31.4	34730
	(20.50 actual) 100	5.0	3.35	2.60	33520	4.63	3.62	46792	8.01	6.35	82011
25	1750	70	16.9	15.2	13462	21.9	19.9	17578	34.2	31.3	27618
	1170	46	14.0	12.4	16417	18.7	16.7	22122	29.2	26.3	34756
	(24.50 actual) 100	4.0	2.82	2.12	32790	3.86	2.94	45421	6.70	5.18	79871
30	1750	58	14.1	12.5	13356	17.9	16.1	17166	28.5	25.8	27433
	1170	39	11.9	10.3	16491	14.9	13.2	21058	24.4	21.7	34523
	(29.50 actual) 100	3.3	2.30	1.68	31233	2.94	2.21	41088	5.49	4.12	76598
40	1750	43	10.8	9.31	13399	14.0	12.1	17507	21.8	19.0	27471
	1170	29	9.18	7.62	16416	12.1	10.2	22032	18.8	16.0	34571
	100	2.5	1.94	1.28	32194	2.64	1.77	44687	4.54	3.11	78246
50	1750	35	8.74	7.23	13011	11.3	9.46	17028	17.4	14.8	26703
	1170	23	7.43	5.93	15966	9.84	7.96	21429	15.1	12.4	33605
	100	2.0	1.62	0.99	31109	2.22	1.38	43469	3.79	2.41	75935
60	1750	29	7.00	5.66	12220	9.05	7.40	15982	13.9	11.6	25107
	1170	19	6.03	4.69	15143	7.63	6.01	19430	12.1	9.78	31597
	100	1.7	1.27	0.74	28131	1.75	1.04	39244	3.01	1.83	69119
70	1750	21	5.74	4.48	11300	7.37	5.85	14743	11.4	9.22	23235
	1170	14	4.96	3.71	13979	6.24	4.76	17921	9.98	7.76	29240
	100	1.3	1.09	0.60	26222	1.48	0.82	36215	2.59	1.46	64584

Specify model number when ordering reducer size 870, 880 or 8100. Refer to page 19 for how to build a model number.

Available bore codes - Size 870

Fraction Size	2-7/16"	2-1/2"	2-11/16"	2-15/16"	3"	3-7/16"	3-15/16"
Decimal Size	2.438	2.500	2.688	2.938	3.000	3.438	3.938
Output Bore Code	39	40	43	47	48	55	63

Available bore codes - Size 880

Fraction Size	3-7/16"	3-15/16"	4-3/16"	4-7/16"
Decimal Size	3.438	3.938	4.188	4.438
Output Bore Code	55	63	67	71

Available bore codes - Size 8100

Fraction Size	3-7/16"	3-15/16"	4-7/16"	4-15/16"	5-7/16"
Decimal Size	3.438	3.938	4.438	4.938	5.438
Output Bore Code	55	63	71	79	87



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

GR SERIES · SINGLE REDUCTION · APPROXIMATE WEIGHTS^Δ (LBS.)

Reducer Style	Reducer Size													
	GR813	GR815	GR818	GR821	GR824	GR826	GR830	GR832	GR842	GR852	GR860	GR870	GR880	GR8100
Solid Output Shaft														
BMQ	17	21	24	29	45	56	68	75	146	247	331	---	---	---
BM	22	23	26	30	47	57	69	76	154	254	336	429	612	---
B	17	18	20	25	40	52	64	71	136	232	321	399	582	904
TMQ & UMQ	19	24	27	33	49	62	74	84	160	267	362	---	---	---
TM & UM	24	26	29	34	51	63	75	85	168	274	367	470	660	---
T & U	19	21	23	29	44	58	70	80	150	252	352	440	630	980
RMQ	---	28	31	38	54	68	83	106	170	262	---	---	---	---
RM	---	30	33	39	56	69	84	107	178	269	---	---	---	---
R	---	25	27	34	49	64	79	102	160	247	---	---	---	---
JMQ	18	22	26	32	48	61	74	81	156	262	---	---	---	---
JM	23	24	28	33	50	62	75	82	164	269	---	---	---	---
J	18	19	22	28	43	57	70	77	146	247	---	---	---	---
VHMQ & VLMQ	19	24	27	36	52	65	78	88	166	272	367	---	---	---
VHM & VLM	24	26	29	37	54	66	79	89	174	279	372	500	690	---
VH & VL	19	21	23	32	47	61	74	84	156	257	357	470	660	1060
FMQ	18	22	25	32	48	60	78	85	161	277	369	---	---	---
FM	23	24	27	33	50	61	79	86	169	284	374	489	630	---
F	18	19	21	28	43	56	74	81	151	262	359	459	600	925
BFMQ	19	---	26	32	49	62	---	---	---	---	---	---	---	---
BFM	24	---	28	33	51	63	---	---	---	---	---	---	---	---
BF	19	---	22	28	44	58	---	---	---	---	---	---	---	---
CMQ	19	---	26	---	51	---	---	---	---	---	---	---	---	---
CM	24	---	28	---	53	---	---	---	---	---	---	---	---	---
C	19	---	22	---	48	---	---	---	---	---	---	---	---	---
FEMQ	---	---	---	---	---	---	78	85	176	278	373	---	---	---
FEM	---	---	---	---	---	---	79	86	184	285	378	590	810	---
FE	---	---	---	---	---	---	74	71	166	263	363	560	780	1180
Hollow Output Shaft														
HMQ	18	21	25	30	47	55	69	77	149	247	331	---	---	---
HM	22	23	27	31	49	56	70	78	157	254	336	429	612	---
H	18	19	21	26	42	51	65	73	139	232	321	399	582	904
FHMQ	19	22	27	33	50	59	79	87	164	277	369	---	---	---
FHM	23	24	29	34	51	60	80	88	172	284	374	444	630	---
FH	19	20	23	29	45	55	75	83	154	262	359	414	600	925
BFHMQ	20	---	27	33	51	61	---	---	---	---	---	---	---	---
BFHM	24	---	29	34	53	62	---	---	---	---	---	---	---	---
BFH	20	---	23	29	46	57	---	---	---	---	---	---	---	---

^Δ Weights include oil.

GR SERIES · ACCESSORIES · APPROXIMATE WEIGHTS (LBS.)

Accessory	Reducer Size													
	GR813	GR815	GR818	GR821	GR824	GR826	GR830	GR832	GR842	GR852	GR860	GR870	GR880	GR8100
T/U-Base	2	3	3	4	4	6	6	9	14	20	31	41	48	76
J-Base	1	1	2	3	3	5	6	6	10	15	---	---	---	---
VL/VH-Base	2	3	3	7	7	9	10	13	20	25	36	**	**	**
F-Flange (cast Iron)	1	1	2	3	3	4	10	10	15	30	38	**	**	**
BF-Flange (Steel)	2	---	2	3	4	6	---	---	---	---	---	---	---	---
R-Riser Block	---	7	7	9	9	12	15	31	24	15	---	---	---	---
Hollow Shaft Torque Arm Kit	5	5	5	5	5	5	5	5	5	8	8	---	---	---
Coupling Input C-Flange Kits														
48CZ, 56C, 140TC	7	7	7	7	8	8	11	11	14	16	---	---	---	---
180TC-210TC	---	---	---	---	11	11	11	11	16	18	22	30	30	---
250TC	---	---	---	---	---	---	---	28	30	30	32	34	36	---

** This accessory must be assembled at the Factory. It is not available as a kit for field installation.



NH Series Weights



NH SERIES • SINGLE REDUCTION • APPROXIMATE WEIGHTS^A (LBS.)

Reducer Style	Reducer Size									
	NH813	NH815	NH818	NH821	NH824	NH826	NH830	NH832	NH842	NH852
Solid Output Shaft										
BMQ	14	18	20	25	38	48	58	64	124	210
BM	19	20	22	26	40	48	59	65	131	216
B	14	15	17	21	34	44	54	60	116	197
TMQ & UMQ	16	21	23	29	42	54	64	73	138	230
TM & UM	21	23	25	30	44	54	65	74	145	236
T & U	16	18	20	25	38	50	60	69	130	217
JMQ	15	19	22	28	41	53	64	70	134	225
JM	20	21	24	29	43	53	65	71	141	231
J	15	16	19	24	37	49	60	66	126	212
VHMQ & VLMQ	16	21	23	32	45	57	68	77	144	235
VHM & VLM	21	23	25	33	47	57	69	78	151	241
VH & VL	16	18	20	28	41	53	64	73	136	222
FMQ	15	19	22	28	41	52	68	74	139	240
FM	20	21	24	29	43	52	69	75	146	246
F	15	16	19	24	37	48	64	70	131	227
FEMQ	---	---	---	---	---	---	66	72	150	236
FEM	---	---	---	---	---	---	67	73	156	242
FE	---	---	---	---	---	---	63	60	141	224
BLMQ	---	---	20	---	38	---	---	---	---	---
BLM	---	---	22	---	40	---	---	---	---	---
BL	---	---	17	---	34	---	---	---	---	---
Hollow Output Shaft										
HMQ	15	18	21	26	40	47	59	65	127	210
HM	19	20	23	26	42	48	60	66	133	216
H	15	16	18	22	36	43	55	62	118	197
FHMQ	16	19	23	29	43	51	69	75	142	240
FHM	20	21	25	29	45	52	70	76	148	246
FH	16	17	20	25	39	47	65	72	133	227

^AWeights include oil.

NH SERIES • ACCESSORIES • APPROXIMATE WEIGHTS (LBS.)

Accessory	Reducer Size									
	NH813	NH815	NH818	NH821	NH824	NH826	NH830	NH832	NH842	NH852
T/U-Base	2	3	3	4	4	6	6	9	14	20
J-Base	1	1	2	3	3	5	6	6	10	15
VL/VH-Base	2	3	3	7	7	9	10	13	20	25
F-Flange (cast Iron)	1	1	2	3	3	4	10	10	15	30
Hollow Shaft Torque Arm Kit	5	5	5	5	5	5	5	5	5	8
Coupling Input C-Flange Kits										
48CZ, 56C, 140TC	7	7	7	7	8	8	11	11	14	16
180TC-210TC	---	---	---	---	11	11	11	11	16	18
250TC	---	---	---	---	---	---	---	28	30	30

EL SERIES • SINGLE REDUCTION • APPROXIMATE WEIGHTS^Δ (LBS.)

Reducer Style	Reducer Size									
	EL813	EL818	EL821	EL824	EL826	EL830	EL832	EL842	EL852	EL860
Solid Output Shaft										
BMQ	11	16	19	30	37	45	50	96	163	218
BM	15	17	20	31	38	46	50	102	168	222
B	11	13	17	26	34	42	47	90	153	212
TMQ & UMQ	12	18	22	33	41	51	58	103	171	228
TM & UM	16	19	23	34	42	52	58	109	176	232
T & U	12	15	20	29	38	48	55	97	161	222
JMQ	12	18	22	33	41	50	55	102	171	228
JM	16	19	23	34	42	51	55	108	176	232
J	12	15	20	29	38	47	52	96	161	222
VLMQ	13	19	22	33	41	50	55	102	171	228
VLM	17	20	23	34	42	51	55	108	176	232
VL	13	16	20	29	38	47	52	96	161	222
FMQ	---	18	22	33	40	51	57	104	171	239
FM	---	19	23	34	41	52	57	110	176	243
F	---	15	20	29	37	48	54	98	161	233
Hollow Output Shaft										
HMQ	12	17	20	31	36	46	51	98	163	218
HM	15	18	20	32	37	46	51	104	168	222
H	12	14	17	28	34	43	48	92	153	212
FHMQ	---	19	23	34	39	52	58	106	171	239
FHM	---	20	23	35	40	52	58	112	176	243
FH	---	16	20	31	37	49	55	100	161	233

^Δ Weights include oil.

EL SERIES • ACCESSORIES • APPROXIMATE WEIGHTS (LBS.)

Accessory	Reducer Size									
	EL813	EL818	EL821	EL824	EL826	EL830	EL832	EL842	EL852	EL860
ABC-Base	1	2	3	3	4	6	8	7	8	10
T/U-Base	1	2	3	3	4	6	8	7	8	10
J-Base	1	2	3	3	4	5	5	6	8	10
VL Base	2	3	3	3	4	5	5	6	8	10
FR & F-Flange	---	2	3	3	3	6	7	8	8	21
Hollow Shaft Torque Arm Kit	5	5	5	5	5	5	5	5	8	8
Coupling Input C-Flange Kits										
48CZ, 56C, 140TC	3	3	3	4	4	5	5	7	7	---
180TC-210TC	---	---	---	5	5	5	5	8	8	8
250TC	---	---	---	---	---	---	8	8	8	8



GR Series Dimensions

Styles: BMQ, BM, B

**CAST IRON
GR SERIES**

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

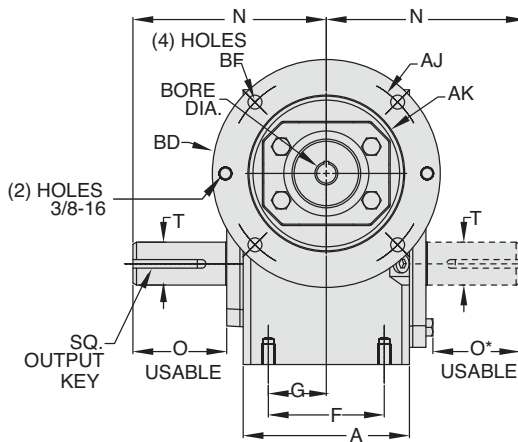
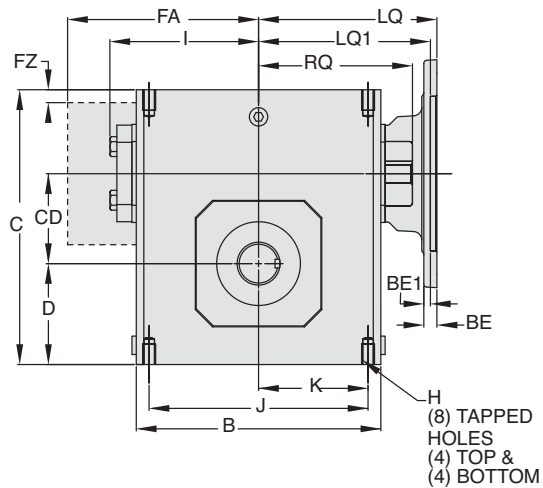
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

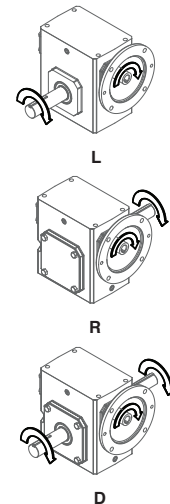
Ratio Multipliers

Accessories and
Additional Capabilities

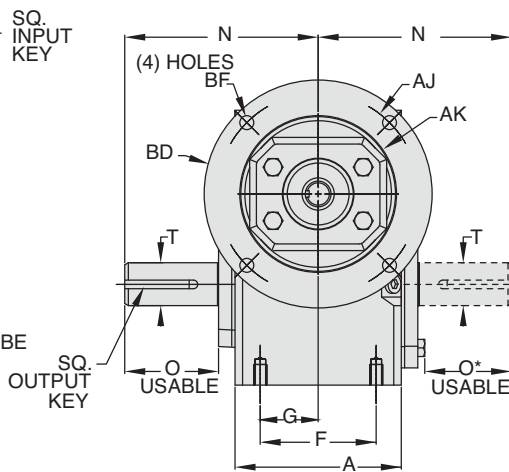
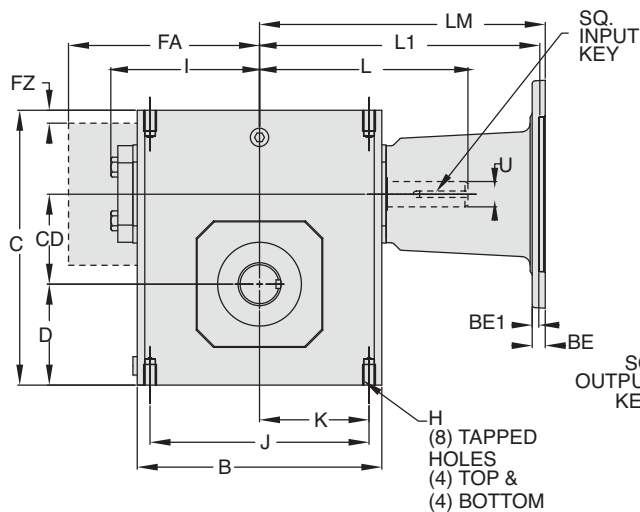
Style BMQ



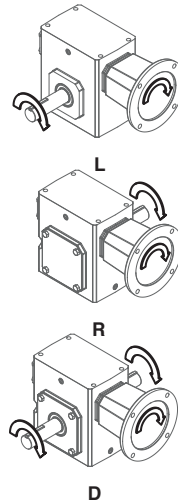
ASSEMBLIES



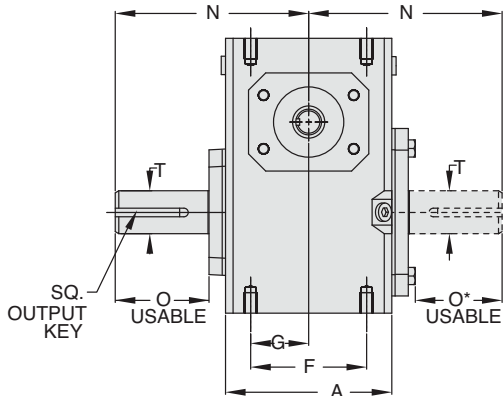
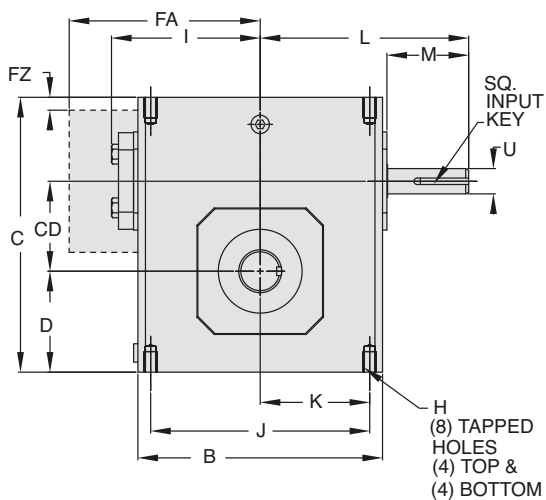
Style BM



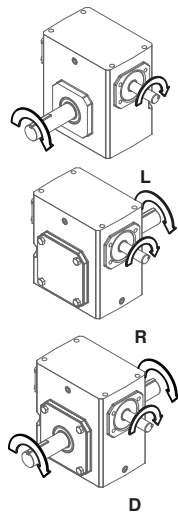
ASSEMBLIES



Style B



ASSEMBLIES



REVERSE ALL ARROWS
FOR OPPOSITE INPUT SHAFT
ROTATION. CONTACT FACTORY
FOR OTHER MOUNTINGS OR
ASSEMBLY POSITIONS.



GR Series Dimensions

Styles: TMQ, TM, T

CAST IRON
GR SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

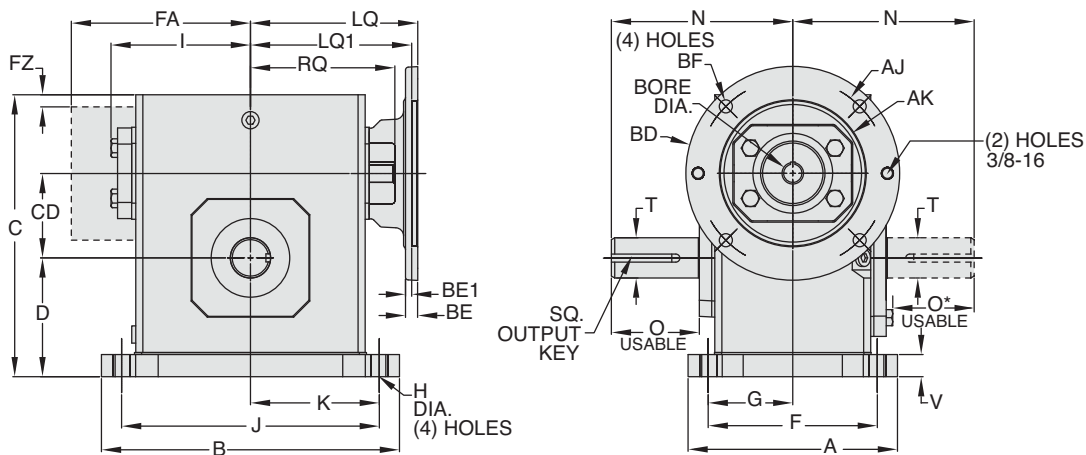
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

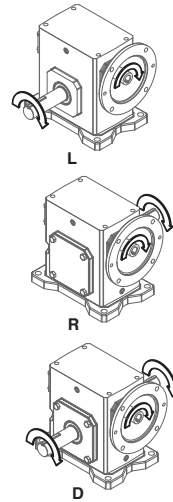
Ratio Multipliers

Accessories and
Additional Capabilities

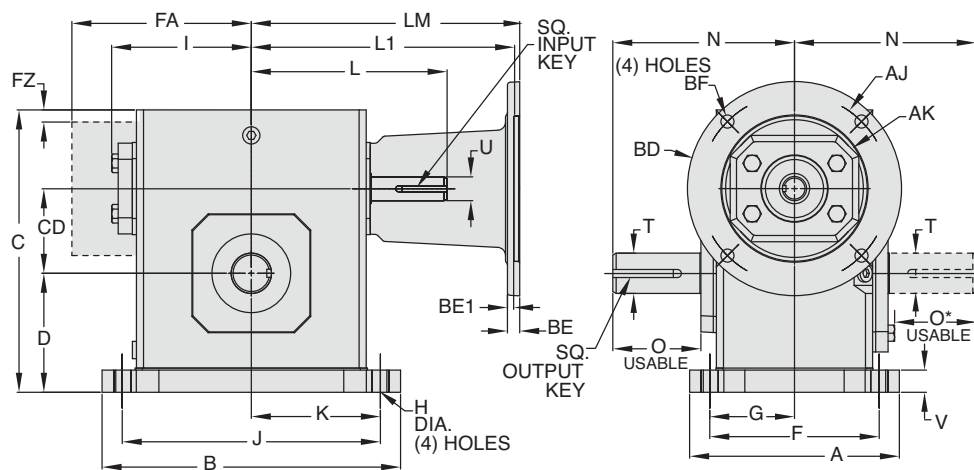
Style TMQ



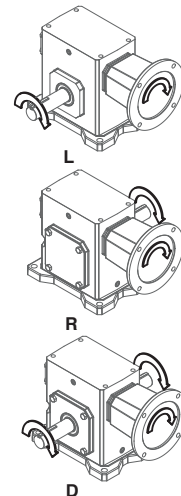
ASSEMBLIES



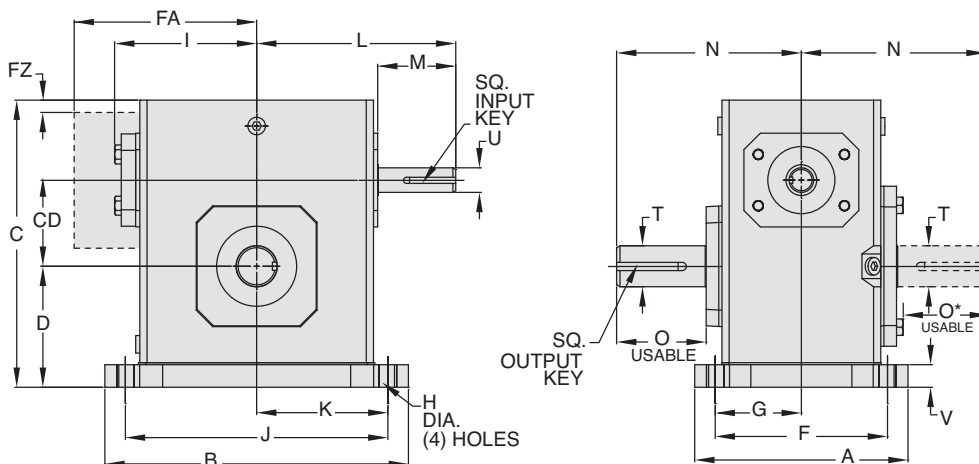
Style TM



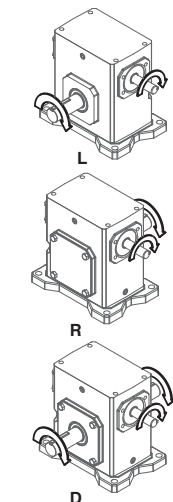
ASSEMBLIES



Style T



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



GR Series Dimensions

Styles: UMQ, UM, U

**CAST IRON
GR SERIES**

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

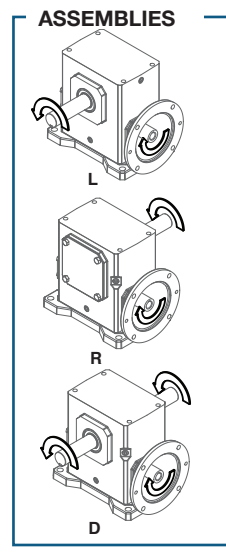
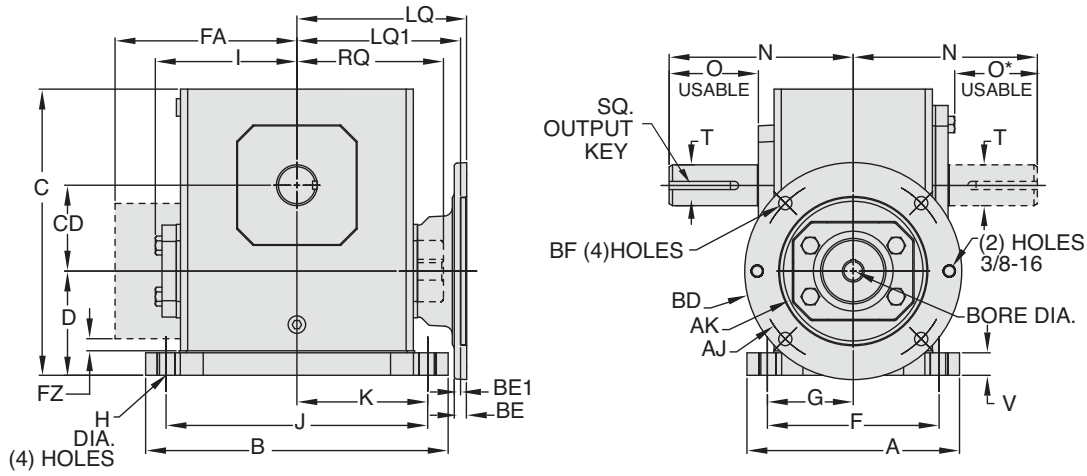
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

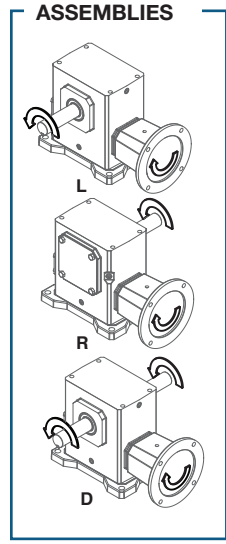
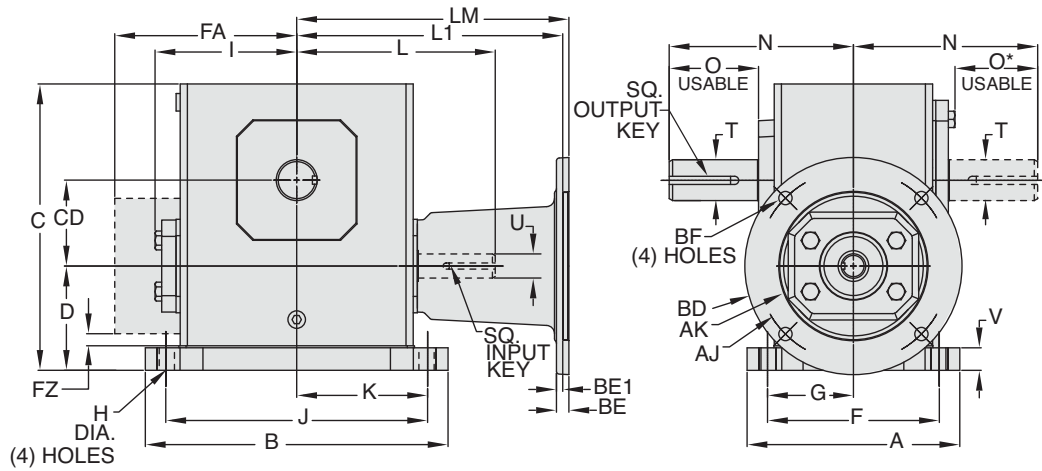
Ratio Multipliers

Accessories and
Additional Capabilities

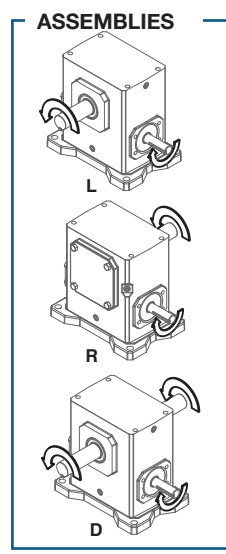
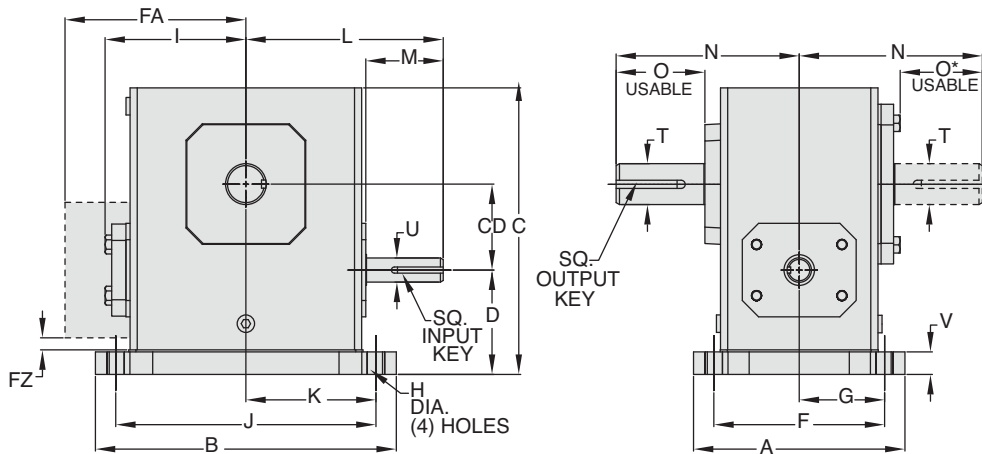
Style UMQ



Style UM



Style U



REVERSE ALL ARROWS
FOR OPPOSITE INPUT SHAFT
ROTATION. CONTACT FACTORY
FOR OTHER MOUNTINGS OR
ASSEMBLY POSITIONS.

STYLE UMQ, UM, U DIMENSIONS (Inches)

Size	A	B	C	D	CD	F	FA ▼	FZ ▼	G	H	I	J	K	L	M	N	O	O*	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key#*	Output Key
GR813	4.24	5.37	5.19	2.14	1.33	3.31	N/A	N/A	1.66	.34	2.61	4.37	2.19	3.82	1.76	4.00	2.16	1.94	0.53	.625	.500	1/8 X 1.00	3/16 X 1.50
GR815	5.56	6.50	5.97	2.52	1.54	4.31	N/A	N/A	2.16	.41	3.14	5.25	2.63	4.35	1.76	4.31	2.11	1.90	0.59	.750	.625	3/16 X 1.38	3/16 X 1.50
GR818	5.75	6.99	6.44	2.63	1.75	4.50	N/A	N/A	2.25	.41	3.24	5.75	2.88	4.45	1.76	4.31	2.05	1.84	0.69	.875	.625	3/16 X 1.38	3/16 X 1.38
GR821	6.00	7.69	7.09	2.75	2.06	4.69	N/A	N/A	2.34	.47	3.61	6.38	3.19	4.82	1.76	4.68	2.29	2.08	0.72	1.000	.625	3/16 X 1.38	1/4 X 1.44
GR824	6.19	8.37	7.69	2.81	2.38	4.88	N/A	N/A	2.44	.49	3.77	7.06	3.53	5.51	2.38	5.14	2.66	2.44	0.75	1.125	.750	3/16 X 1.63	1/4 X 1.75
GR826	6.50	9.25	8.75	3.19	2.63	5.25	N/A	N/A	2.63	.53	4.34	8.00	4.00	6.07	2.38	5.63	2.73	2.52	0.75	▲	.750	3/16 X 1.63	1/4 X 1.75
GR830	7.50	10.00	9.63	3.38	3.00	5.88	N/A	N/A	2.94	.53	4.84	8.44	4.22	6.57	2.38	6.75	3.60	3.36	0.75	1.250	.875	3/16 X 1.63	1/4 X 1.75
GR832	7.75	11.12	10.25	3.50	3.25	6.13	N/A	N/A	3.06	.53	5.02	9.50	4.75	6.76	2.38	7.06	3.66	3.42	0.81	▲	.875	3/16 X 1.63	3/8 X 2.25
GR842	9.75	13.24	12.38	3.69	4.25	7.63	N/A	N/A	3.81	.66	6.10	11.12	5.56	9.57	3.47	8.12	4.50	4.21	1.00	1.875	1.250	1/4 X 2.50	1/2 X 3.06
GR852	10.50	16.24	15.13	4.76	5.25	8.38	N/A	N/A	4.19	.78	7.50	14.12	7.06	10.88	3.38	9.06	4.78	4.53	1.13	2.000	1.250	1/4 X 3.00	1/2 X 3.50
GR860	12.00	18.99	17.75	5.25	6.00	9.50	11.13	0.33	4.75	.91	N/A	16.49	8.25	11.78	3.41	10.00	4.65	4.65	1.25	2.500	1.500	3/8 X 3.00	5/8 X 4.00
GR870	13.38	15.38	20.33	5.74	7.00	11.25	11.37	0.35	5.63	1.13	N/A	13.00	6.50	11.50	2.97	11.76	5.65	5.65	1.42	2.750	1.625	3/8 x 2.87**	5/8 x 4.00**
GR880	13.50	17.37	22.61	5.75	8.00	11.50	12.52	0.57	5.75	1.13	N/A	14.75	7.38	12.50	2.84	12.25	5.98	5.98	1.65	3.000	1.875	1/2 x 2.81**	3/4 x 4.50**
GR8100	16.88	21.14	27.12	6.76	10.00	14.00	14.69	0.51	7.00	1.44	N/A	17.00	8.50	15.50	3.76	14.75	6.76	6.76	1.65	3.750	2.250	1/2 x 3.69**	7/8 x 5.00**

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical	Identical	Identical	✓	✓	GRG
							GRL
826	1.250"	Identical	Identical	Identical	✓	✓	GRG
	1.125"						GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✓	✓	GRG
	1.375"		5/16 x 2.63				GRL

⚠ If Accessory kit is removed, dimensions will vary. NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 62-63 (B, BM, BMQ).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 48CZ	56C/ 140TC	180TC/ 210TC	L1 250TC	LQ 48CZ/ 56C/140TC	180TC	LQ1 210TC	250TC	RQ 48CZ/ 56C/140TC	180TC	250TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A
GR815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A	N/A
GR818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A
GR821*	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A
GR824	N/A	7.76	8.76	N/A	4.63■	5.06	N/A	N/A	4.09■	4.56	N/A
GR826*	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A
GR830	N/A	8.82	9.82	N/A	5.95■	6.15	6.56	N/A	5.32■	5.63	N/A
GR832*	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	N/A
GR842	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	7.24
GR852	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	8.54
GR860	N/A	N/A	15.88	16.50	10.45■	9.33	9.33	9.94	10.01■	8.69	8.69
GR870	N/A	N/A	15.50	15.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A
GR880	N/A	N/A	16.58●	16.58	N/A	N/A	N/A	N/A	N/A	N/A	N/A

* Applies to double output shaft

** Key not provided with gear reducer. Keyway dimension shown.

◆ Keyway width by depth

⊙ Mounting holes rotated 45 degrees from positions shown on Size GR860, Style UM with frame sizes 180TC-250TC.

■ 48CZ not available

● 180TC not available

⊕ Metric IEC B5 input flange options are available only on quill input styles.

* Dimensions same for GRG and GRL Series

* Style U and UM only.

▼ Sizes 860-8100 are supplied with a fan. Dimensions refer to fan guard location.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

NEMA DIMENSIONS (Inches)

Frame	AjB	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BFb
48CZ	3.75	3.00	4.36	0.38	N/A	.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

Note: Styles UMQ, UM and U are worm under mounting assemblies and not recommended due to increase potential for high speed shaft seal leakage and potential mounting interference. Motor flange may extend below base. Riser blocks are available upon request (see page 290). Contact Factory for selection assistance.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

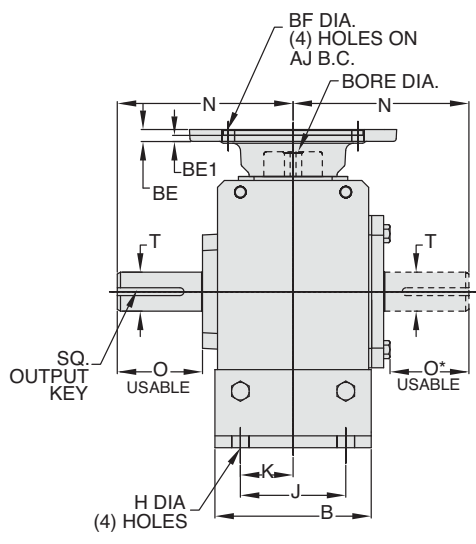
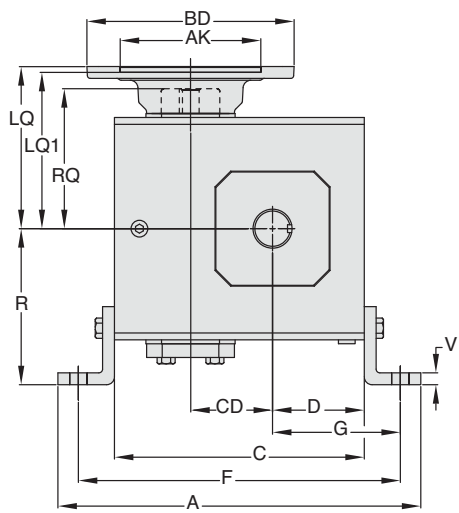


GR Series Dimensions

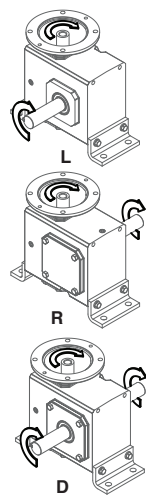
Styles: JMQ, JM, J

CAST IRON
GR SERIES

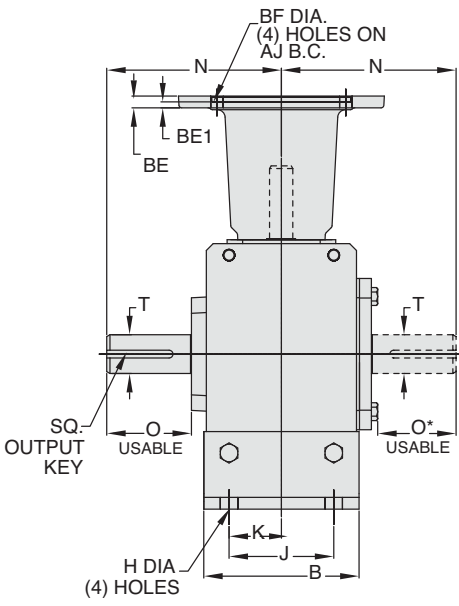
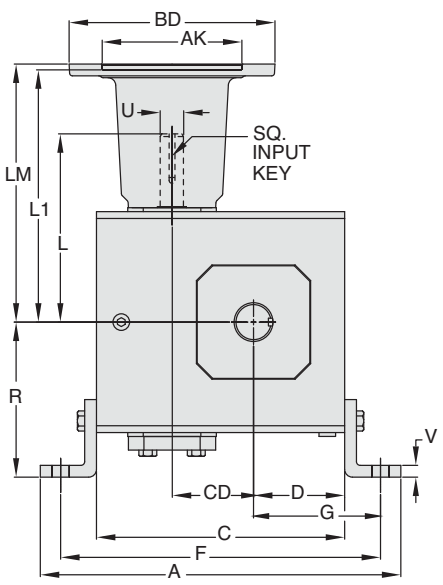
Style JMQ



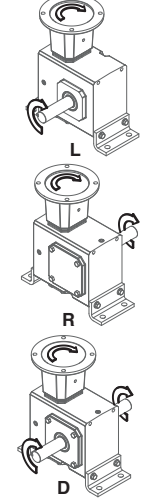
ASSEMBLIES



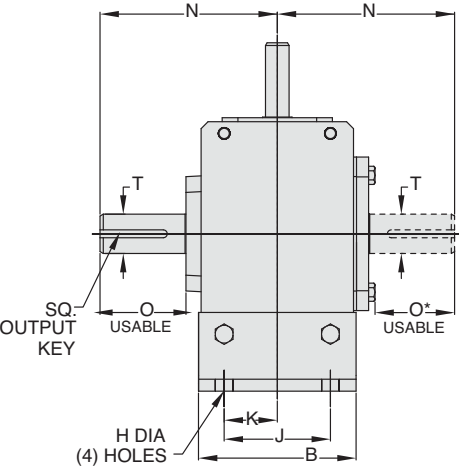
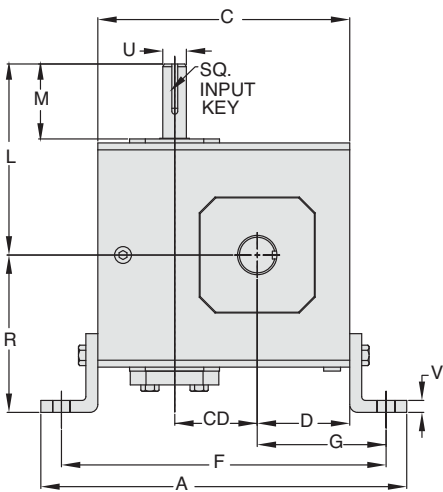
Style JM



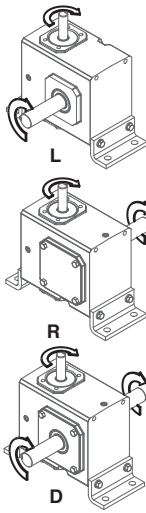
ASSEMBLIES



Style J



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



STYLE JMQ, JM, J DIMENSIONS (Inches)

Size	A	B	C	D	CD	F	G	H	J	K	L	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key*	Output Key
GR813	7.42	2.75	4.66	1.72	1.33	6.42	2.60	.38	2.00	1.00	3.82	1.76	4.00	2.16	1.94	2.94	0.25	.625	.500	1/8 X 1.00	3/16 X 1.50
GR815	8.14	3.50	5.38	1.91	1.54	7.08	2.76	.44	2.75	1.38	4.35	1.76	4.31	2.11	1.90	3.50	0.25	.750	.625	3/16 X 1.38	3/16 X 1.50
GR818	8.51	3.50	5.75	2.06	1.75	7.45 - 7.63	3.00	.44 slot	2.50 - 2.75	1.25 - 1.38	4.45	1.76	4.31	2.05	1.84	3.50	0.25	.875	.625	3/16 X 1.38	3/16 X 1.38
GR821	9.76	4.00	6.38	2.28	2.06	8.63	3.40	.56 slot	2.63 - 2.75	1.31-1.38	4.82	1.76	4.68	2.29	2.08	4.01	0.38	1.000	.625	3/16 X 1.38	1/4 X 1.44
GR824	10.31	4.00	6.94	2.50	2.38	9.19	3.63	.69	2.88	1.44	5.51	2.38	5.14	2.66	2.44	4.06	0.38	1.125	.750	3/16 X 1.63	1/4 X 1.75
GR826	11.62	5.00	8.00	2.94	2.63	10.38	4.13	.56	3.38	1.69	6.07	2.38	5.63	2.73	2.52	5.00	0.38	.750	.750	3/16 X 1.63	1/4 X 1.75
GR830	12.64	6.00	8.88	3.25	3.00	11.38	4.50	.56	3.88	1.94	6.57	2.38	6.75	3.60	3.36	5.62	0.38	1.250	.875	3/16 X 1.63	1/4 X 1.75
GR832	13.14	6.00	9.38	3.50	3.25	11.88	4.75	.56	3.88	1.94	6.76	2.38	7.06	3.66	3.42	5.63	0.38	.875	.875	3/16 X 1.63	3/8 X 2.25
GR842	16.38	7.00	11.38	4.44	4.25	14.88	6.19	.69	5.00	2.50	9.57	3.47	8.12	4.50	4.21	6.50	0.50	1.875	1.250	1/4 X 2.50	1/2 X 3.06
GR852	19.00	7.00	14.00	5.12	5.25	17.50	6.87	.69	5.81	2.91	10.88	3.38	9.06	4.78	4.53	7.75	0.50	2.000	1.250	1/4 X 3.00	1/2 X 3.50

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical	Identical	Identical	✓	✓	GRG
							GRL
826	1.250"	Identical	Identical	Identical	✓	✓	GRG
	1.125"						GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✓	✓	GRG
	1.375"		5/16 x 2.63				GRL

⚠ If Accessory kit is removed, dimensions will vary. NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 62-63 (B, BM, BMQ).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	48CZ ^{LM}	56C/140TC	180TC/210TC	L1	250TC	LQ 48CZ/56C/140TC	180TC	LQ1 210TC	250TC	RQ 48CZ/56C/140TC	180TC
GR813	5.63	6.07	N/A	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A
GR815	6.16	6.60	N/A	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A
GR818	6.26	6.70	N/A	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A
GR821*	6.63	7.07	N/A	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A
GR824	N/A	7.76	8.76	N/A	N/A	4.63	5.06	N/A	N/A	4.09	4.56
GR826*	N/A	8.32	9.32	N/A	N/A	5.19	5.62	N/A	N/A	4.82	5.13
GR830	N/A	8.82	9.82	N/A	N/A	5.95	6.15	6.56	N/A	5.32	5.63
GR832*	N/A	9.01	10.01	N/A	N/A	6.14	6.34	6.75	N/A	5.51	5.81
GR842	N/A	11.81	12.90	13.46	N/A	6.45	7.21	7.21	7.77	6.04	6.68
GR852	N/A	13.21	14.30	14.86	N/A	7.85	8.61	8.61	9.17	7.35	7.98

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	N/A	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	8.50	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	8.50	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)

Size	LQ1						RQ			
	D63D	D71D	D80D	D90D	D100LD/D112MD	D132D	D63D	D71D	D80D	D90D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A
GR815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A
GR818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A
GR821*	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A
GR824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A
GR826*	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72
GR830	N/A	4.78	5.41	5.41	5.88	N/A	N/A	4.59	5.22	5.22
GR832*	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41
GR842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16
GR852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

- * Applies to double output shaft
- ** Key not provided with gear reducer. Keyway dimension shown.
- ◆ Keyway width by depth
- ⊕ Mounting holes rotated 45 degrees from positions shown on Size GR860, Style JM with frame sizes 180TC-250TC.
- 48CZ not available
- 180TC not available

- ⚡ Metric IEC B5 input flange options are available only on quill input styles.
- ✳ Dimensions same for GRG and GRL Series
- ✳ Style J and JM only.
- ▼ Sizes 860-8100 are supplied with a fan. Dimensions refer to fan guard location.
- WARNING** For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

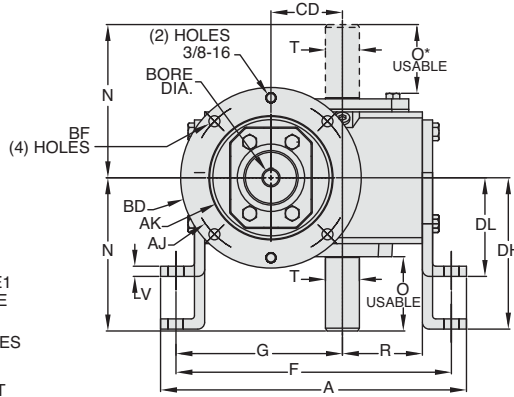
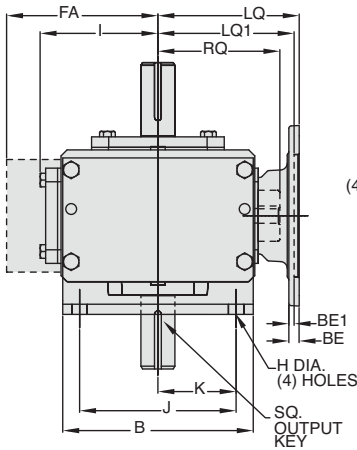


GR Series Dimensions

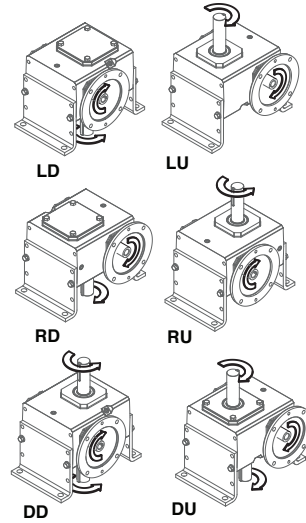
Styles: V_MQ, V_M, V_

**CAST IRON
GR SERIES**

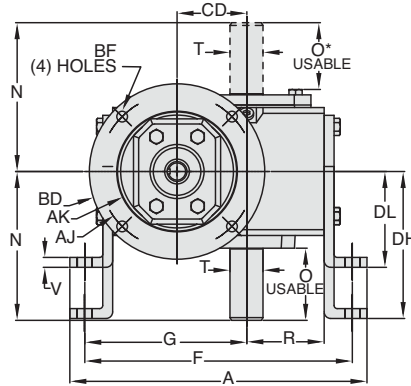
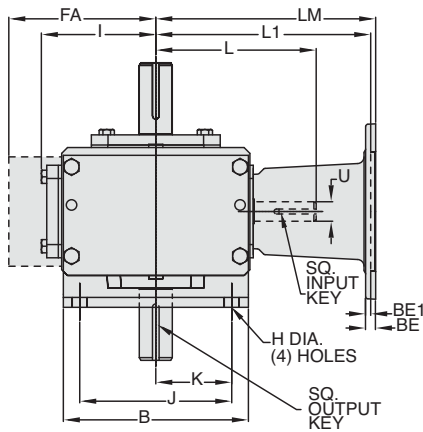
Style V(L or H)MQ



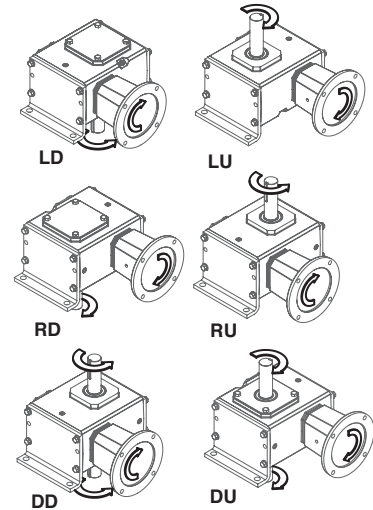
ASSEMBLIES



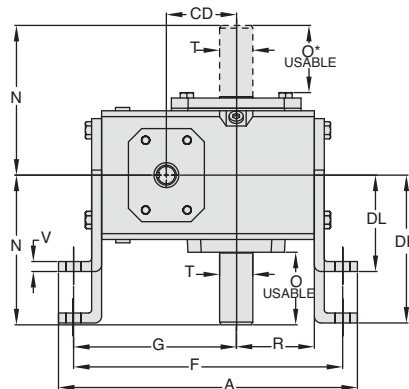
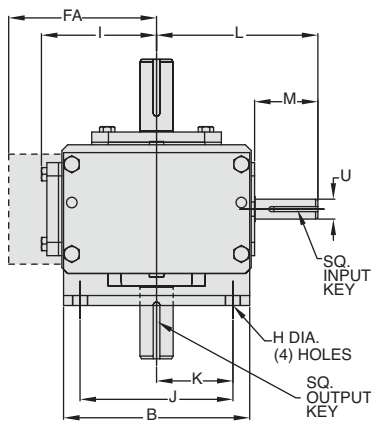
Style V(L or H)M



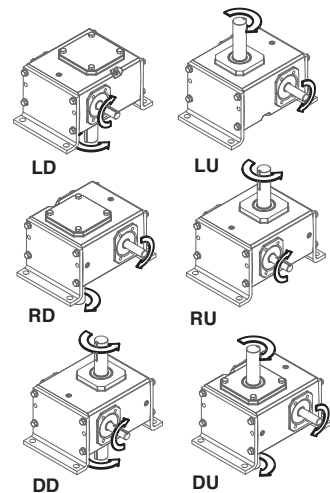
ASSEMBLIES



Style V(L or H)



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



GR Series Dimensions

Styles: RMQ, RM, R

CAST IRON
GR SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

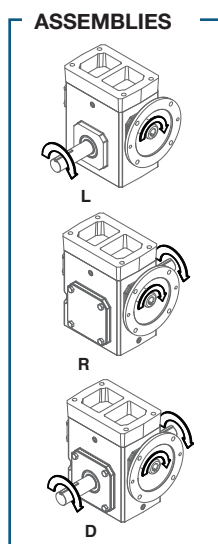
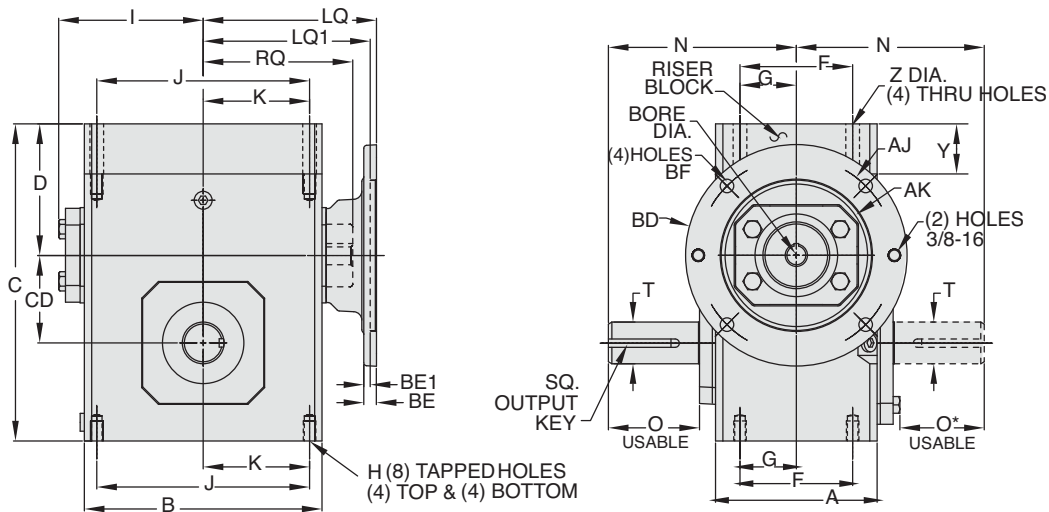
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

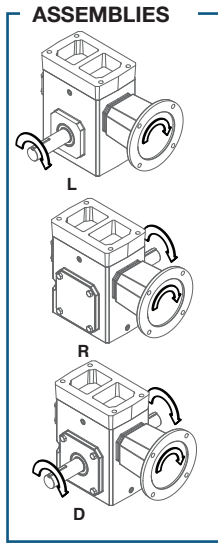
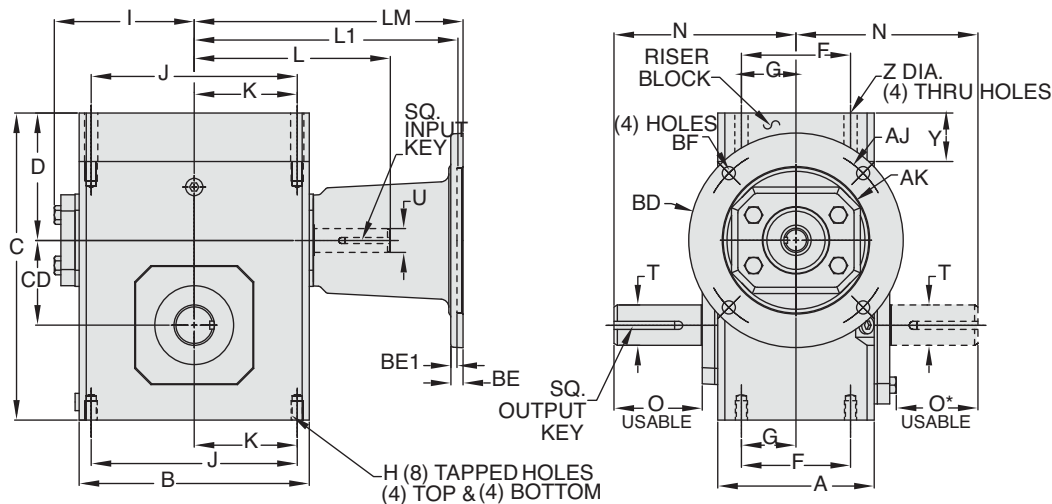
Ratio Multipliers

Accessories and
Additional Capabilities

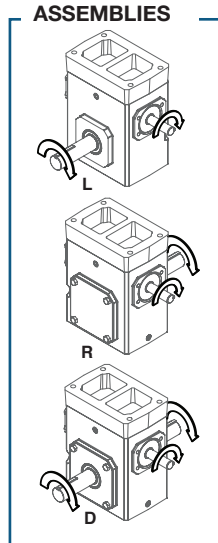
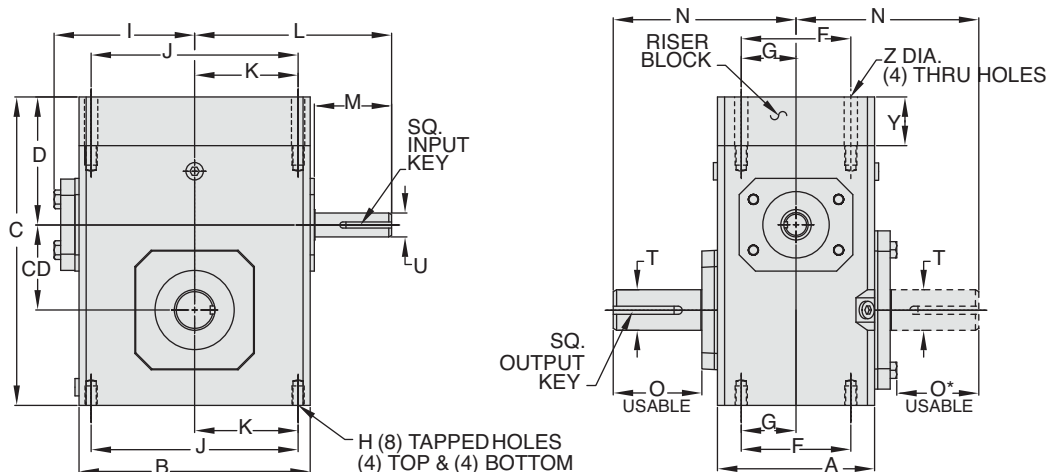
Style RMQ



Style RM



Style R



REVERSE ALL ARROWS
FOR OPPOSITE INPUT SHAFT
ROTATION. CONTACT FACTORY
FOR OTHER MOUNTINGS OR
ASSEMBLY POSITIONS.



STYLE RMQ, RM, R DIMENSIONS (Inches)

Size	A	B	C	D	CD	F	G	H		I	J	K	L	M	N	O	O*	Y	Z	T	U	Input Key#*	Output Key
								Tap Size	Depth											+0.000 -0.0015	+0.000 -0.0015		
GR815	3.44	4.88	7.38	3.93	1.54	2.75	1.38	5/16-18 UNC	.63	3.14	4.19	2.09	4.35	1.76	4.31	2.11	1.90	2.00	0.34	.750	.625	3/16 X 1.38	3/16 X 1.50
GR818	3.56	5.06	7.75	3.94	1.75	2.75	1.38	5/16-18 UNC	.63	3.24	4.19	2.09	4.45	1.76	4.31	2.05	1.84	2.00	0.34	.875	.625	3/16 X 1.38	3/16 X 1.38
GR821	3.81	5.80	8.38	4.03	2.06	▲	1.44	3/8-16 UNC	.63	3.61	▲	2.50	4.82	1.76	4.68	2.29	2.08	2.00	0.41	1.000	.625	3/16 X 1.38	1/4 X 1.44
GR824	4.06	6.12	8.94	4.06	2.38	2.88	1.44	3/8-16 UNC	.69	3.77	5.00	2.50	5.51	2.38	5.14	2.66	2.44	2.00	0.41	1.125	.750	3/16 X 1.63	1/4 X 1.75
GR826	4.84	7.12	9.50	3.94	2.63	3.38	1.69	3/8-16 UNC	.69	4.34	6.38	3.19	6.07	2.38	5.63	2.73	2.52	1.50	0.41	▲	.750	3/16 X 1.63	1/4 X 1.75
GR830	5.25	8.12	11.01	4.76	3.00	4.00	2.00	7/16-14 UNC	.88	4.84	7.00	3.50	6.57	2.38	6.75	3.60	3.36	2.13	0.47	1.250	.875	3/16 X 1.63	1/4 X 1.75
GR832	5.75	8.50	11.50	4.75	3.25	4.00	2.00	7/16-14 UNC	.88	5.02	7.50	3.75	6.76	2.38	7.06	3.66	3.42	2.13	0.47	▲	.875	3/16 X 1.63	3/8 X 2.25
GR842	6.13	10.25	13.51	4.82	4.25	5.00	2.50	5/8-11 UNC	1.00	6.10	8.50	4.25	9.57	3.47	8.12	4.50	4.21	2.13	0.66	1.875	1.250	1/4 X 2.50	1/2 X 3.06
GR852	7.19	13.00	15.25	4.88	5.25	5.81	2.91	5/8-11 UNC	1.25	7.50	11.00	5.50	10.88	3.38	9.06	4.78	4.53	1.25	0.66	2.000	1.250	1/4 X 3.00	1/2 X 3.50*

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	(F)3.00" x (J)4.75"	Identical	Identical	✓		GRG
		(F)2.88" x (J)5.00"					GRL
826	1.250"	Identical	Identical	Identical	✓	✓	GRG
	1.125"						GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✓	✓	GRG
	1.375"		5/16 x 2.63				GRL

NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 62-63 (B, BM, BMQ).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM		L1		LQ		LQ1			RQ		
	48CZ	56C/140TC	180TC/210TC	250TC	48CZ/56C/140TC	180TC	210TC	250TC	48CZ/56C/140TC	180TC	210TC	250TC
GR815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A	N/A	N/A
GR818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR821*	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
GR824	N/A	7.76	8.76	N/A	4.63	5.06	N/A	N/A	4.09	4.56	N/A	N/A
GR826*	N/A	8.32	9.32	N/A	5.19	5.62	N/A	N/A	4.82	5.13	N/A	N/A
GR830	N/A	8.82	9.82	N/A	5.95	6.15	6.56	N/A	5.32	5.63	6.06	N/A
GR832*	N/A	9.01	10.01	N/A	6.14	6.34	6.75	N/A	5.51	5.81	6.25	N/A
GR842	N/A	11.81	12.90	13.46	6.45	7.21	7.21	7.77	6.04	6.68	6.68	7.24
GR852	N/A	13.21	14.30	14.86	7.85	8.61	8.61	9.17	7.35	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway♦	BF
48CZ	3.75	3.00	4.36	0.38	N/A	.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)*

Size	LQ1						RQ					
	D63D	D71D	D80D	D90D	D100LD/D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/D112MD	D132D
GR815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A	N/A
GR818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR821*	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
GR824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A
GR826*	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
GR830	N/A	4.78	5.41	5.41	5.88	N/A	N/A	4.59	5.22	5.22	5.57	N/A
GR832*	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
GR852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway♦	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

* Applies to double output shaft

♦ Keyway width by depth

■ 48CZ not available

✦ Metric IEC B5 input flange options are available only on quill input styles.

* Dimensions same for GRG and GRL Series

* Style R and RM only.

WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGARD® Reducers
and GEAR-HOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

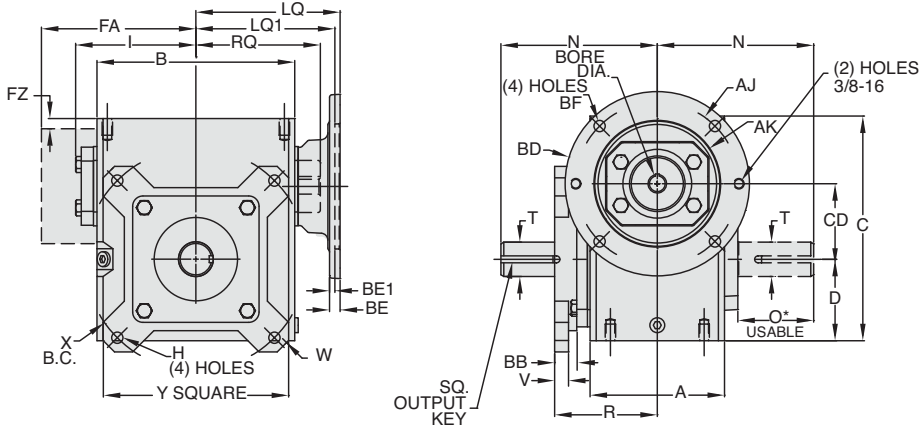


GR Series Dimensions

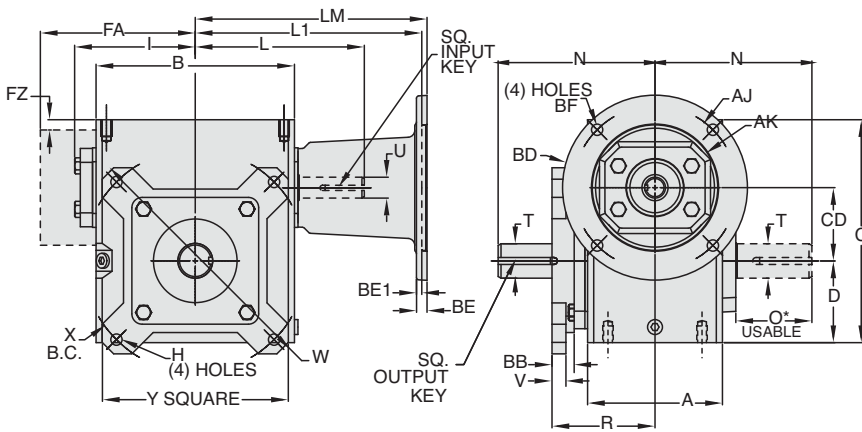
Styles: FMQ, FM, F

CAST IRON
GR SERIES

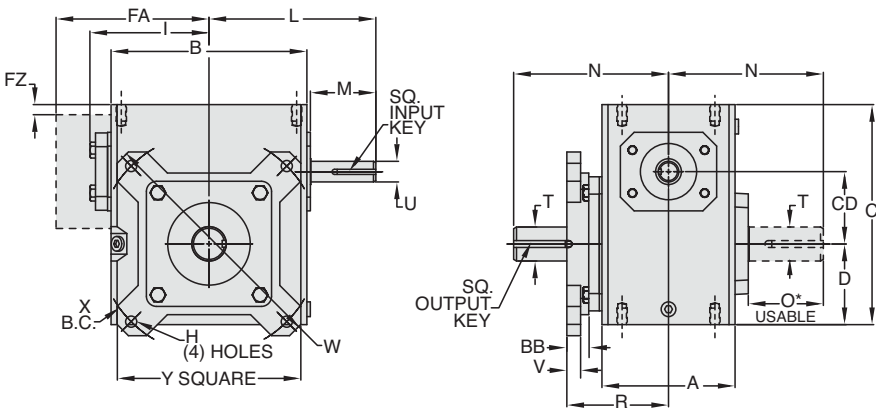
Style FMQ



Style FM

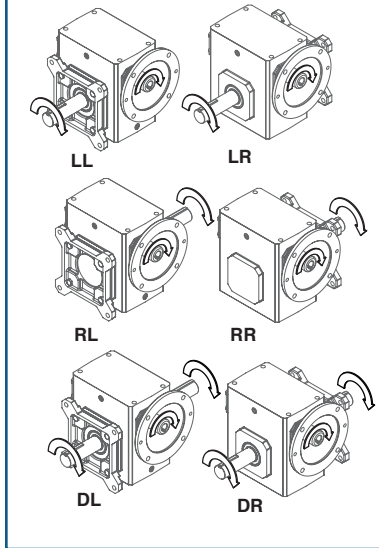


Style F

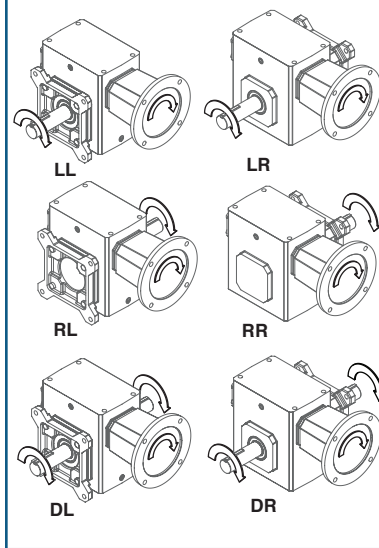


Sizes 815-8100 output flange must be mounted at Factory on styles FMQ, FM, F.

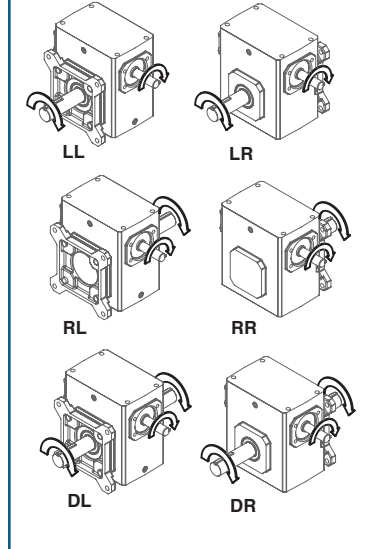
ASSEMBLIES



ASSEMBLIES



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



GR Series Dimensions

Styles: CMQ, CM, C

CAST IRON
GR SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

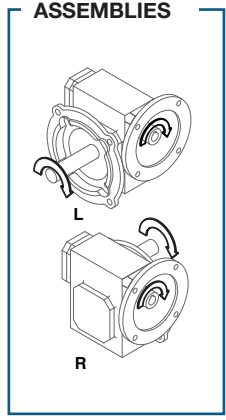
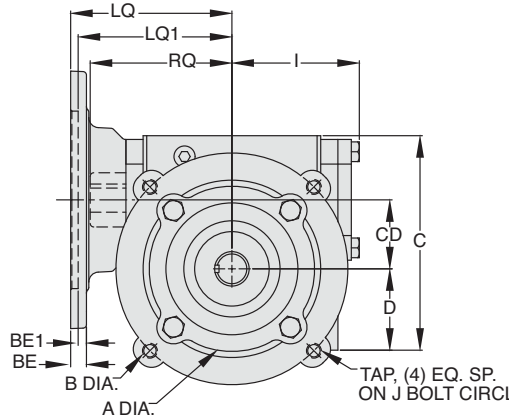
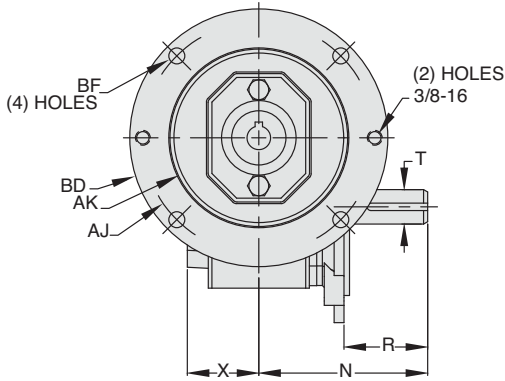
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

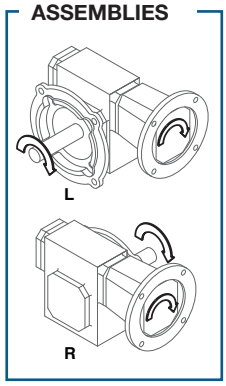
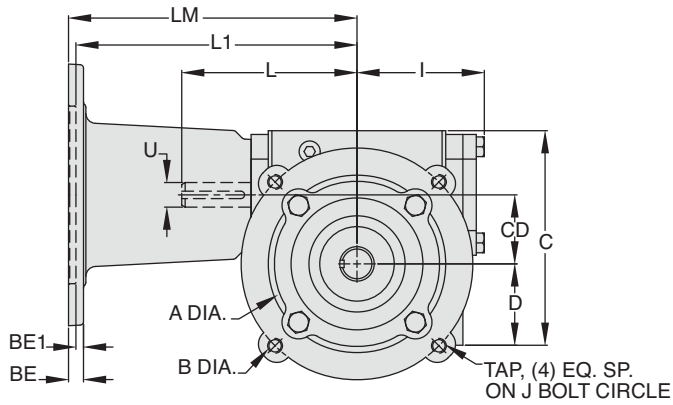
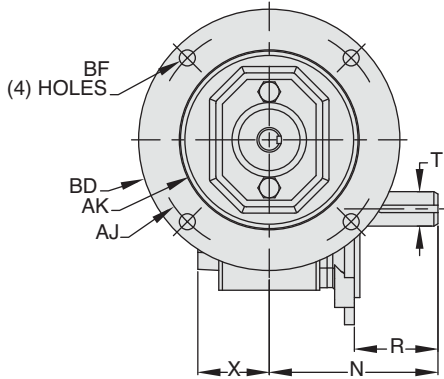
Ratio Multipliers

Accessories and
Additional Capabilities

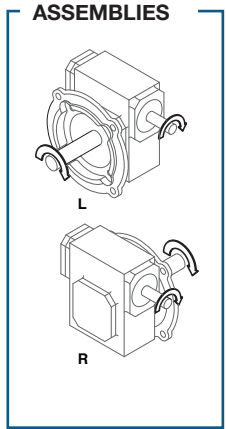
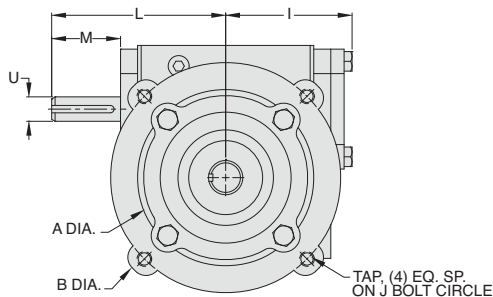
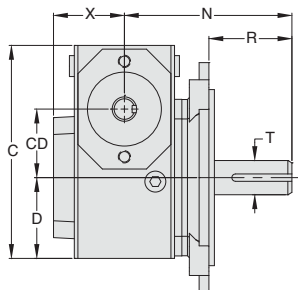
Style CMQ



Style CM



Style C



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR-H+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE CMQ, CM, C DIMENSIONS (Inches)

Series	Output C-Face Frame	A	B	C	D	CD	I	J	L	M	N	R	X	Tap Size	T +0.000 -0.0015	U +0.000 -0.0015	Input Key*	Output Key
GR813	56C	4.50	6.64	4.66	1.72	1.33	2.61	5.88	3.82	1.76	5.00	2.06	1.84	3/8-16 UNC	.625	.500	1/8 X 1.00	3/16 X 1.50
GR818	140TC	4.50	6.64	5.44	2.06	1.75	3.24	5.88	4.45	1.76	4.28	2.13	1.81	3/8-16 UNC	.875	.625	3/16 X 1.38	3/16 X 1.38
GR824	180TC	8.50	9.00	6.88	2.69	2.38	3.77	7.25	5.51	2.38	6.59	2.37	1.97	1/2-13 UNC	1.125	.750	3/16 X 1.63	1/4 X 1.75

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Series	LM		L1		LQ 48CZ/ 56C/140TC	180TC	LQ1		250TC	RQ		
	48CZ	56C/ 140TC	180TC/ 210TC	250TC			180TC	210TC		250TC	48CZ/ 56C/140TC	180TC	210TC	250TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR824	N/A	7.76	8.76	N/A	4.63■	5.06	N/A	N/A	4.09■	4.56	N/A	N/A

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway♦	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)*

Size	LQ1						RQ					
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway♦	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184

- ♦ Keyway width by depth
- 48CZ not available
- ❖ Metric IEC B5 input flange options are available only on quill input styles.
- * Style C and CM only.

WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

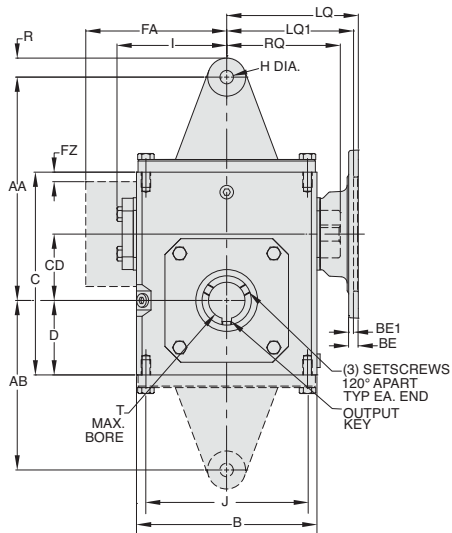


GR Series Dimensions

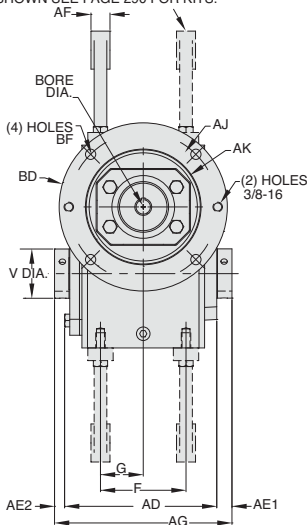
Styles: HMQ, HM, H

CAST IRON
GR SERIES

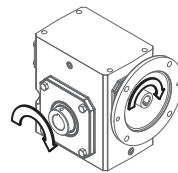
Style HMQ



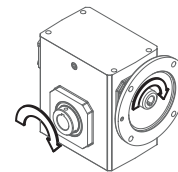
OPTIONAL TORQUE ARM BRACKET
(TORQUE ARM BRACKET IS NOT SUPPLIED WITH REDUCER AS STANDARD):
ALL POSSIBLE MOUNTING POSITIONS
SHOWN SEE PAGE 290 FOR KITS.



ASSEMBLIES



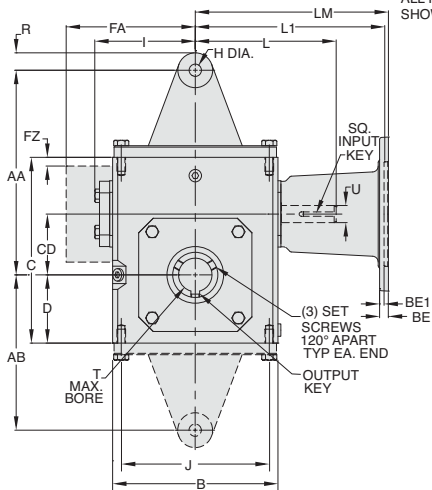
H1



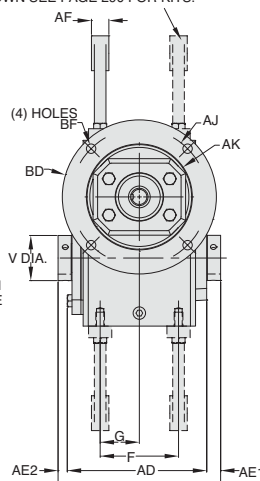
H2

H1 SUPPLIED AS STANDARD UNLESS SPECIFIED.

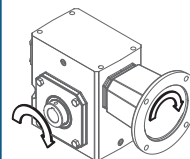
Style HM



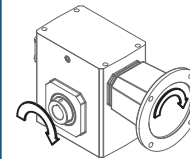
OPTIONAL TORQUE ARM BRACKET
(TORQUE ARM BRACKET IS NOT SUPPLIED WITH REDUCER AS STANDARD):
ALL POSSIBLE MOUNTING POSITIONS
SHOWN SEE PAGE 290 FOR KITS.



ASSEMBLIES



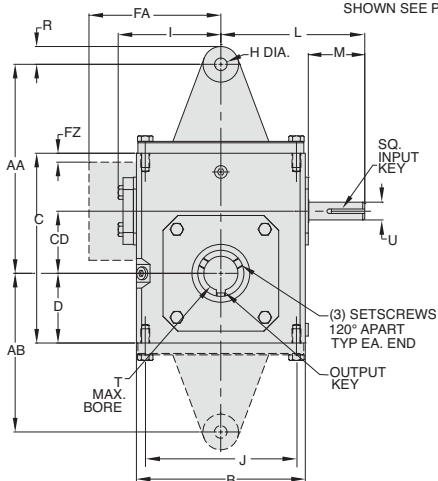
H1



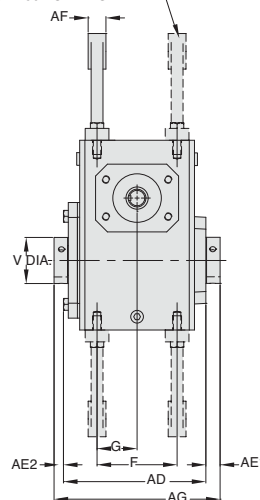
H2

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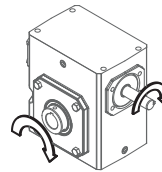
Style H



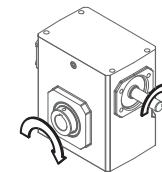
OPTIONAL TORQUE ARM BRACKET
(TORQUE ARM BRACKET IS NOT SUPPLIED WITH REDUCER AS STANDARD):
ALL POSSIBLE MOUNTING POSITIONS
SHOWN SEE PAGE 290 FOR KITS.



ASSEMBLIES



H1



H2

REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

H1 SUPPLIED AS STANDARD UNLESS SPECIFIED.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

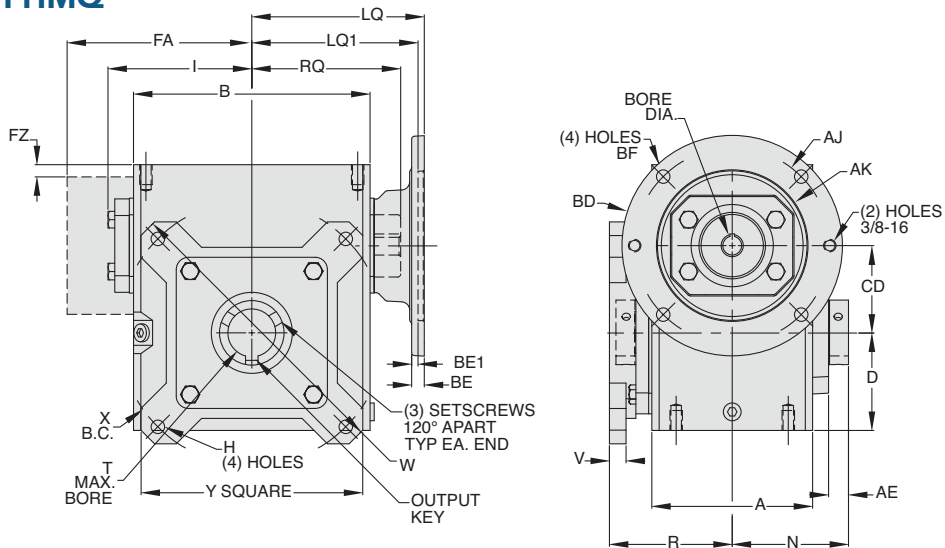


GR Series Dimensions

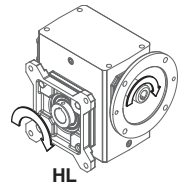
Styles: FHMQ, FHM, FH

CAST IRON
GR SERIES

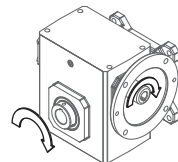
Style FHMQ



ASSEMBLIES

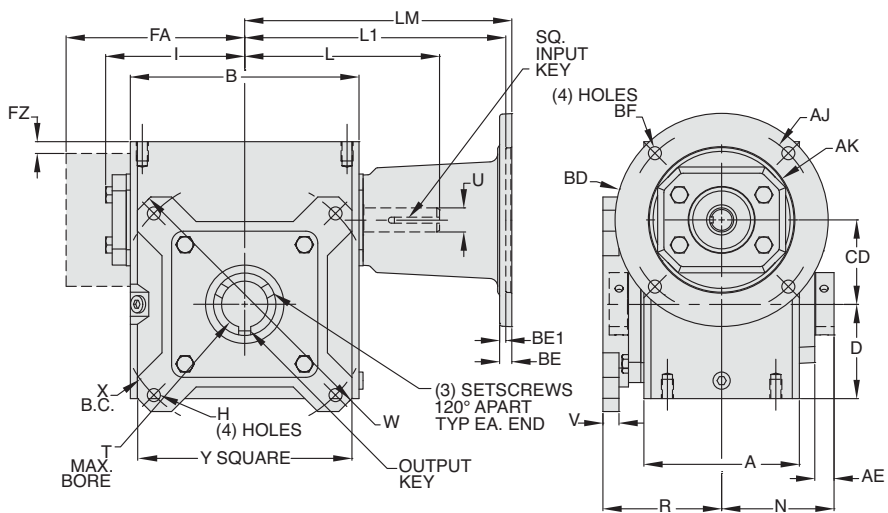


HL

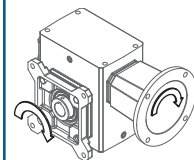


HR

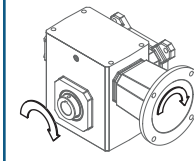
Style FHM



ASSEMBLIES

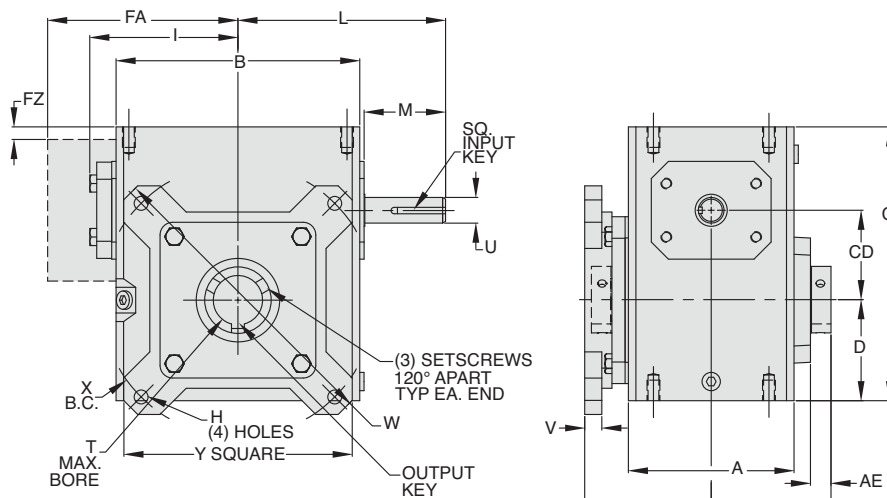


HL

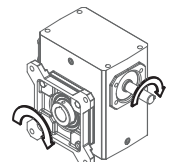


HR

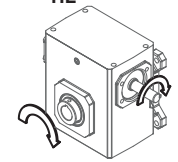
Style FH



ASSEMBLIES



HL



HR

REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR-MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

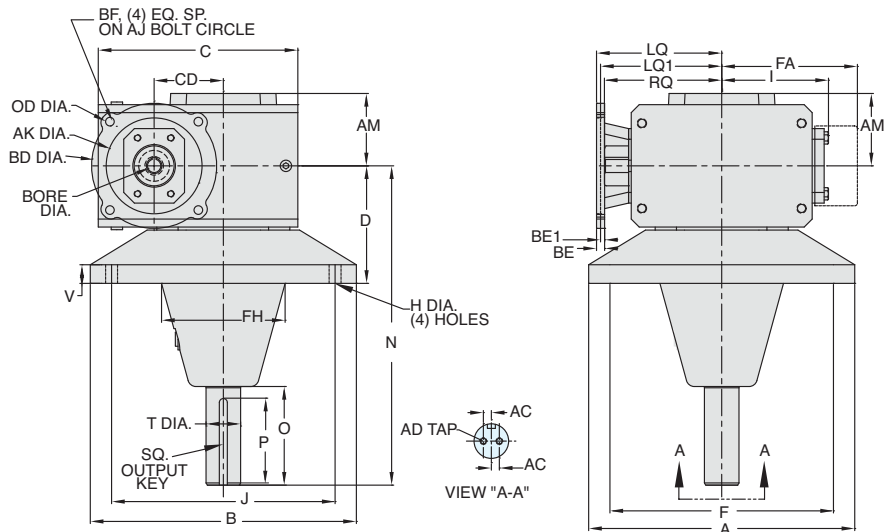


GR Series Dimensions

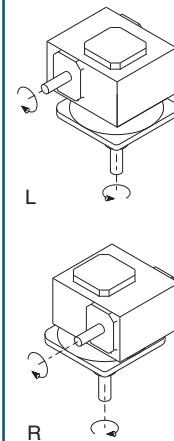
Styles: FEMQ, FEM, FE

CAST IRON
GR SERIES

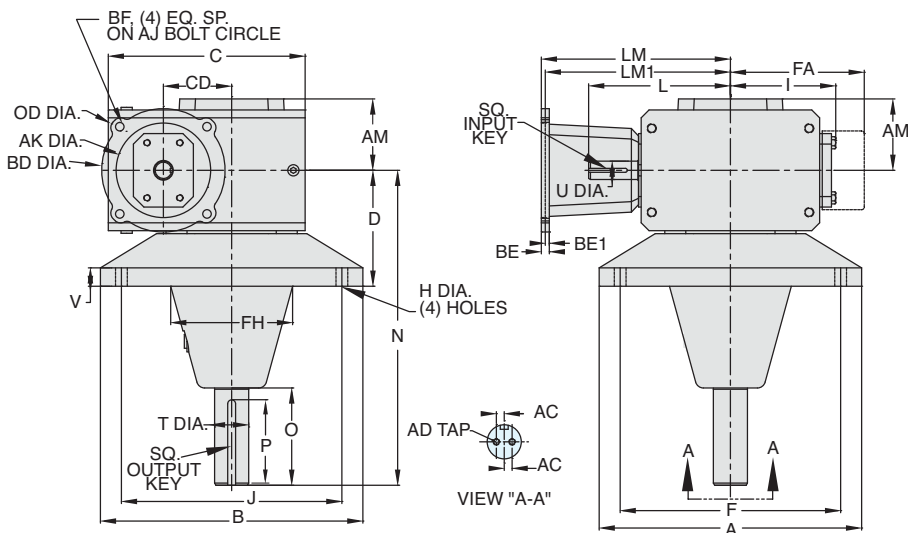
Style FEMQ



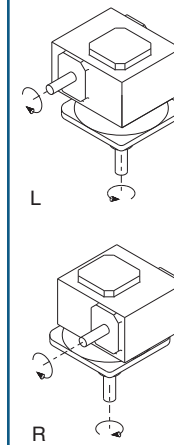
ASSEMBLIES



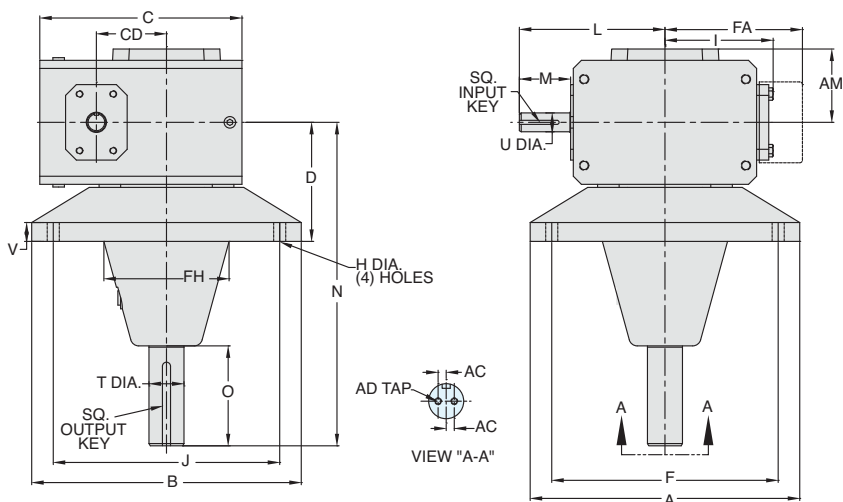
Style FEM



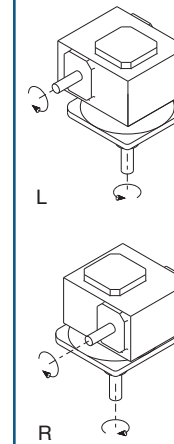
ASSEMBLIES



Style FE



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR-H+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE FEMQ, FEM, FE DIMENSIONS (Inches)

Series	A	AC	AD	AM	B	D	CD	F	FA ▼	FH	H	I	J	L	M
GR830	11.00	0.375	.31-18 UNC X 1.00 DP	3.15	11.00	4.60	3.00	9.00	N/A	5.12	.56	4.84	9.00	6.57	2.38
GR832	12.50	0.375	.31-18 UNC X 1.00 DP	3.40	12.50	5.52	3.25	10.50	N/A	5.75	.56	5.02	10.50	6.76	2.38
GR842	14.00	0.500	.38-16 UNC X 1.00 DP	3.62	14.00	5.74	4.25	12.00	N/A	6.75	.69	6.10	12.00	9.57	3.47
GR852	16.00	0.750	.38-16 UNC X 1.00 DP	4.28	16.00	6.00	5.25	14.00	N/A	8.00	.81	7.50	14.00	10.88	3.38
GR860	19.50	0.750	.38-16 UNC X 1.00 DP	5.28	19.50	7.00	6.00	17.00	11.13	9.50	.88	N/A	17.00	11.78	3.41
GR870	22.00	1.000	.38-16 UNC X 1.00 DP	6.06	22.00	8.50	7.00	19.00	11.37	10.75	1.13	N/A	19.00	11.50	2.97
GR880	28.00	1.062	.62-11 UNC X 1.50 DP	6.22	28.00	10.00	8.00	24.00	12.52	13.75	1.31	N/A	24.00	12.50	2.84
GR8100	32.00	1.118	.62-11 UNC X 1.50 DP	7.94	32.00	12.50	10.00	28.00	14.69	17.00	1.31	N/A	28.00	15.50	3.76

Series	N	O*	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key*	P⚙
GR830	14.38	4.96	0.78	1.438	.875	3/16 x 1.63	3/8 x 3.88
GR832	15.00	4.63	0.88	1.625	.875	3/16 x 1.63	3/8 x 3.69
GR842	16.50	5.91	1.00	1.688	1.250	1/4 X 2.50	3/8 x 4.68
GR852	16.50	5.62	1.25	2.188	1.250	1/4 X 3.00	1/2 x 4.63
GR860	22.50	7.63	1.50	2.438	1.500	3/8 X 3.00	5/8 x 6.50
GR870	24.00	7.63	1.75	2.937	1.625	3/8 x 2.87**	3/4 x 6.44
GR880	27.06	9.25	2.00	3.438	1.875	1/2 x 2.81**	7/8 x 8.00
GR8100	29.50	9.43	2.25	3.938	2.250	1/2 x 3.69**	1 x 7.75

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/ 140TC	180TC/ 210TC	L1 250TC	LQ 56C/140TC	180TC	LQ1 210TC	250TC	56C/140TC	180TC	RQ 210TC	250TC
GR830	8.82	9.82	N/A	5.95	6.15	6.56	N/A	5.32	5.63	6.06	N/A
GR832	9.01	10.01	N/A	6.14	6.34	6.75	N/A	5.51	5.81	6.25	N/A
GR842	11.81	12.90	13.46	6.45	7.21	7.21	7.77	6.04	6.68	6.68	7.24
GR852	13.21	14.30	14.86	7.85	8.61	8.61	9.17	7.35	7.98	7.98	8.54
GR860	N/A	15.88	16.50	10.45	9.33	9.33	9.94	10.01	8.69	8.69	8.69
GR870	N/A	15.50	15.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
GR880	N/A	16.58●	16.58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NEMA DIMENSIONS (Inches)

Frame	AJb	AK	BD	BE	BE1	Bore Dia.	Keyway♦	BfB
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)*

Size	LQ					RQ				
	D71D	D80D	D90D	D100LD/ D112MD	D132D	D71D	D80D	D90D	D100LD/ D112MD	D132D
GR830	4.78	5.41	5.41	5.88	N/A	4.59	5.22	5.22	5.57	N/A
GR832	4.97	5.59	5.59	6.07	N/A	4.78	5.41	5.41	5.76	N/A
GR842	N/A	N/A	6.38	6.39	7.17	N/A	N/A	6.16	6.14	6.93
GR852	N/A	N/A	7.78	7.78	8.57	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway♦	BF TAP	OD
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

** Key not provided with gear reducer. Keyway dimension shown.

♦ Keyway width by depth

⚙ Mounting holes rotated 45 degrees from positions shown on Size GR860, Style FEM with frame sizes 180TC-250TC.

● 180TC not available

● Metric IEC B5 input flange options are available only on quill input styles.

* Style FE and FEM only.

▼ Sizes 860-8100 are supplied with a fan. Dimensions refer to fan guard location.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.



NH Series Dimensions

Styles: BMQ, BM, B

CAST IRON
NH SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

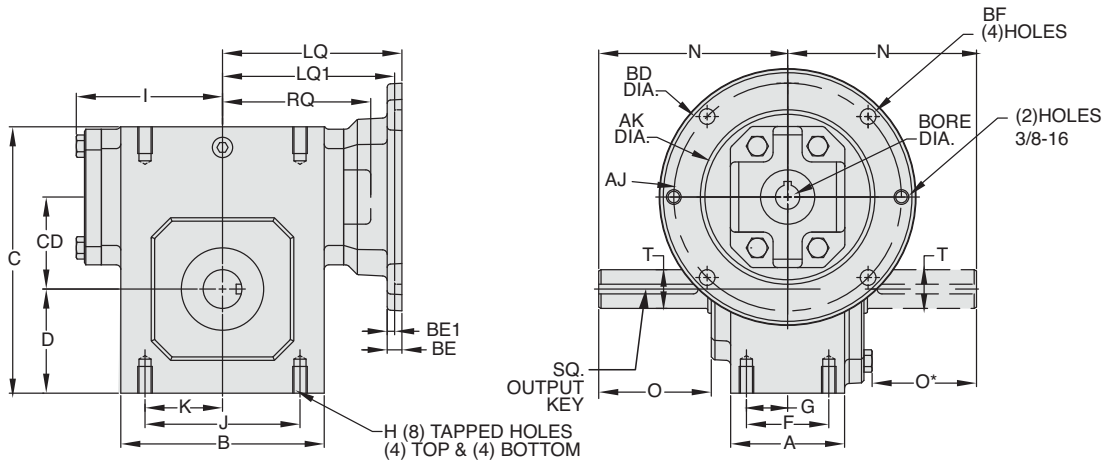
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

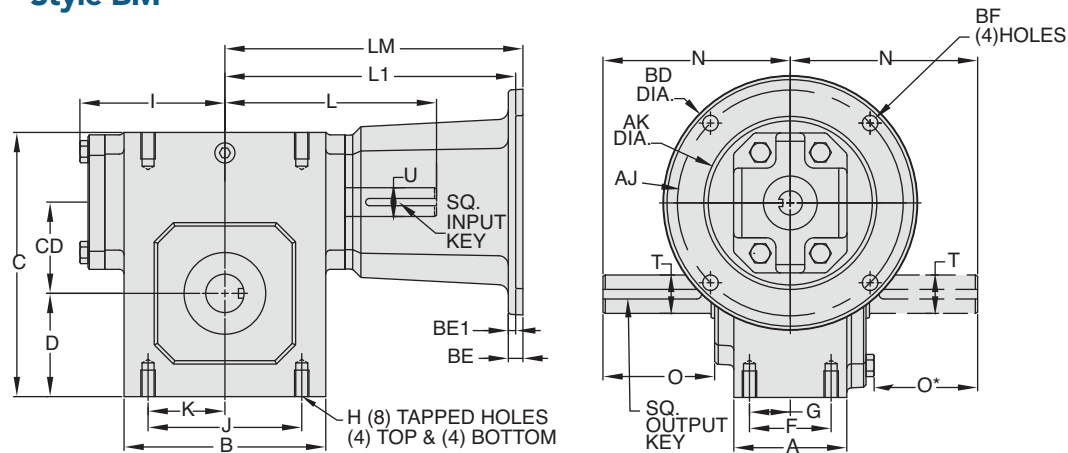
Ratio Multipliers

Accessories and
Additional Capabilities

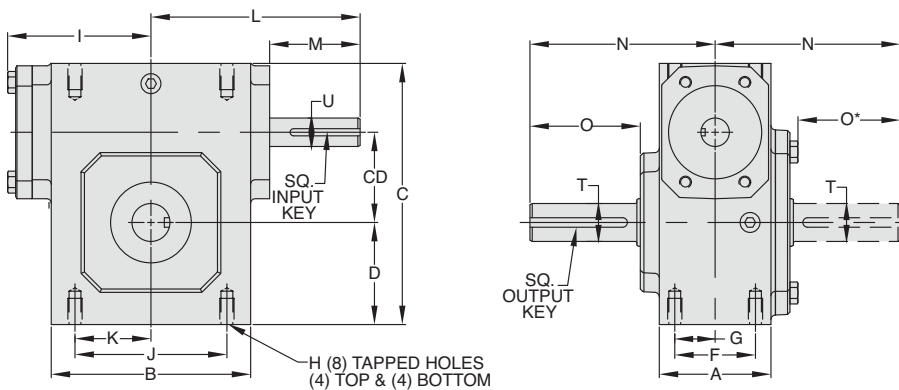
Style BMQ



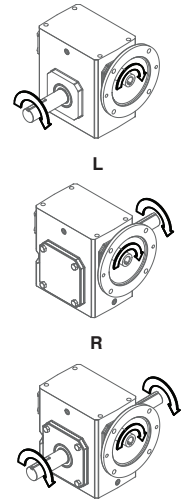
Style BM



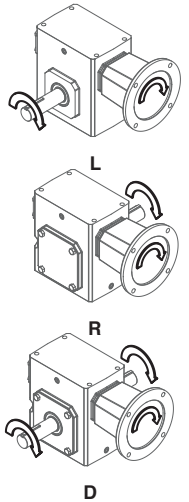
Style B



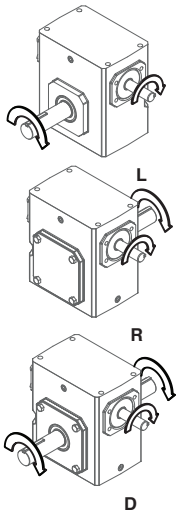
ASSEMBLIES



ASSEMBLIES



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



NH Series Dimensions

Styles: BMQ, BM, B



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHQUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE BMQ, BM, B DIMENSIONS (Inches)

Size	A	B	C	CD	D	F	G	H		I	J	K	L	M	N	O	O*	T +0.000 -0.0015	U +0.000 -0.0015	Input Key**	Output Key
								Tap Size	Depth												
NH813	2.82	3.80	4.66	1.33	1.72	2.00	1.00	5/16-18 UNC	.50	2.61	3.25	1.63	3.82	1.76	4.00	2.16	1.94	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH815	2.57	4.06	5.00	1.54	1.88	1.88	0.94	5/16-18 UNC	.63	3.14	3.25	1.63	4.35	1.76	4.25	2.56	2.35	0.750	0.625	3/16 X 1.38	3/16 X 1.50
NH818	2.56	4.50	5.44	1.75	2.06	1.88	0.94	5/16-18 UNC	.63	3.24	3.75	1.88	4.45	1.76	4.75	2.94	2.73	1.000	0.625	3/16 X 1.38	1/4 X 1.75
NH821	2.50	4.50	6.00	2.06	2.31	1.88	0.94	5/16-18 UNC	.63	3.61	3.25	1.63	4.82	1.76	4.34	2.66	2.45	0.875	0.625	3/16 X 1.38	3/16 X 1.50
NH824	2.94	5.25	6.88	2.38	2.69	2.13	1.06	3/8-16 UNC	.69	3.77	4.00	2.00	5.51	2.38	4.88	2.91	2.69	1.000	0.750	3/16 X 1.63	1/4 X 1.75
NH826	2.88	5.75	7.38	2.63	2.94	2.13	1.06	3/8-16 UNC	.69	4.34	4.00	2.00	6.07	2.38	5.25	3.28	3.07	1.125	0.750	3/16 X 1.63	1/4 X 1.75
NH830	3.12	6.62	8.25	3.00	3.38	2.38	1.19	3/8-16 UNC	.75	4.84	4.63	2.31	6.57	2.38	5.77	3.56	3.31	1.250	0.875	3/16 X 1.63	1/4 X 1.75
NH832	4.44	8.00	10.06	3.25	4.19	3.50	1.75	1/2-13 UNC	1.00	5.02	7.00	3.50	6.76	2.38	7.03	4.24	3.99	1.500	0.875	3/16 X 1.63	3/8 X 2.25
NH842	4.75	9.75	11.50	4.25	4.50	3.75	1.88	1/2-13 UNC	1.00	6.10	7.50	3.75	9.57	3.47	7.50	3.88	3.59	1.750	1.250	1/4 X 2.50	3/8 X 2.25
NH852	6.19	11.00	12.69	5.25	4.88	4.50	2.25	5/8-11 UNC	1.25	7.50	9.00	4.50	10.88	3.38	9.00	4.72	4.47	2.000	1.250	1/4 X 3.00	1/2 X 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM		L1		LQ 48CZ/ 56C/140TC	180TC	LQ1		RQ			
	48CZ	56C/ 140TC	180TC/ 210TC	250TC			180TC	210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC
NH813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
NH815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A	N/A	N/A
NH818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
NH821	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
NH824	N/A	7.76	8.76	N/A	4.63	5.06	N/A	N/A	4.09	4.56	N/A	N/A
NH826	N/A	8.32	9.32	N/A	5.19	5.62	N/A	N/A	4.82	5.13	N/A	N/A
NH830	N/A	8.82	9.82	N/A	5.69	6.12	6.56	N/A	5.32	5.63	6.06	N/A
NH832	N/A	9.01	10.01	N/A	5.88	6.31	6.75	N/A	5.51	5.81	6.25	N/A
NH842	N/A	11.81	12.90	13.46	6.77	7.21	7.21	7.77	6.04	6.68	6.68	7.24
NH852	N/A	13.21	14.30	14.86	7.85	8.61	8.61	9.17	7.35	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway♦	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)♦

Size	LQ1					RQ						
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D
NH813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
NH815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A	N/A
NH818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
NH821	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
NH824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A
NH826	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
NH830	N/A	4.78	5.41	5.41	5.80	N/A	N/A	4.59	5.22	5.22	5.57	N/A
NH832	N/A	4.97	5.59	5.59	5.99	N/A	N/A	4.78	5.41	5.41	5.76	N/A
NH842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
NH852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway♦	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

- * Applies to double output shaft
- ♦ Keyway width by depth
- 48CZ not available
- ♦ Metric IEC B5 input flange options are available only on quill input styles.
- * Style B and BM only.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
UF	BMQ
UFC	BM
U	B

Refer to page 18 for complete interchange guide for original Grove Gear OE Series products.



NH Series Dimensions

Styles: TMQ, TM, T

CAST IRON
NH SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

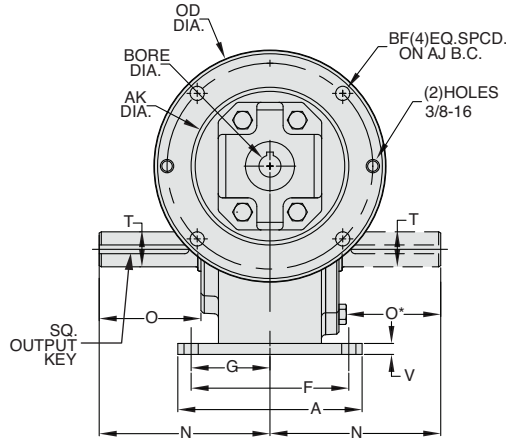
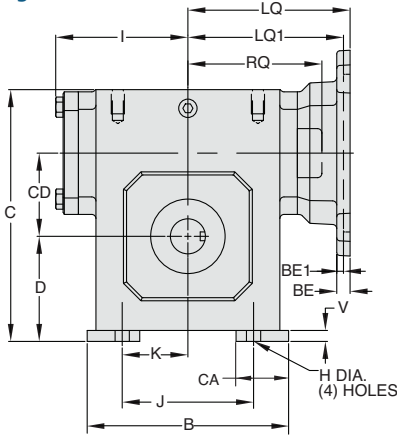
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR-MOTOR™

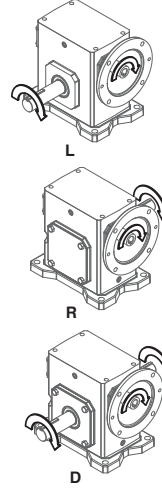
Ratio Multipliers

Accessories and
Additional Capabilities

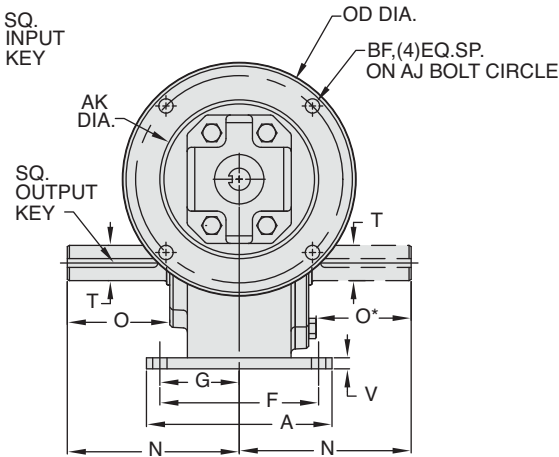
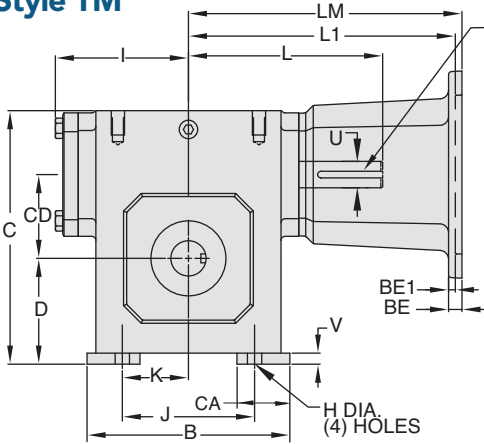
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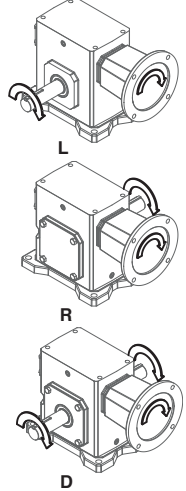
ASSEMBLIES



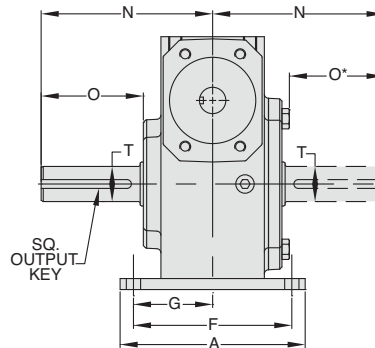
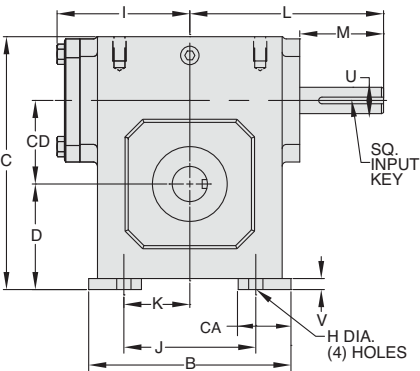
Style TM



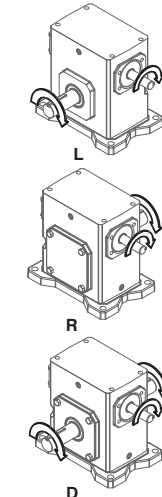
ASSEMBLIES



Style T



ASSEMBLIES



REVERSE ALL ARROWS
FOR OPPOSITE INPUT SHAFT
ROTATION. CONTACT FACTORY
FOR OTHER MOUNTINGS OR
ASSEMBLY POSITIONS.



NH Series Dimensions

Styles: TMQ, TM, T



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHQUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE TMQ, TM, T DIMENSIONS (Inches)

Size	A	B	C	CA	CD	D	F	G	H	I	J	K	L	M	N	O	O*	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key*	Output Key
NH813	4.00	5.01	4.97	1.50	1.33	2.03	3.25	1.63	0.28	2.61	4.25	2.13	3.82	1.76	4.00	2.16	1.94	0.31	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH815	5.25	5.19	5.31	1.50	1.54	2.19	4.50	2.25	0.34	3.14	4.19	2.09	4.35	1.76	4.25	2.56	2.35	0.31	0.750	0.625	3/16 X 1.38	3/16 X 1.50
NH818	4.62	5.89	5.82	1.88	1.75	2.44	3.50	1.75	0.41	3.24	4.63	2.31	4.45	1.76	4.75	2.94	2.73	0.38	1.000	0.625	3/16 X 1.38	1/4 X 1.75
NH821	5.25	5.19	6.31	1.50	2.06	2.63	4.50	2.25	0.34	3.61	4.19	2.09	4.82	1.76	4.34	2.66	2.45	0.31	0.875	0.625	3/16 X 1.38	3/16 X 1.50
NH824	5.25	5.75	7.19	1.50	2.38	3.00	4.50	2.25	0.41	3.77	3.75	1.88	5.51	2.38	4.88	2.91	2.69	0.31	1.000	0.750	3/16 X 1.63	1/4 X 1.75
NH826	6.13	6.51	7.69	2.00	2.63	3.25	4.13	2.06	0.41	4.34	4.75	2.38	6.07	2.38	5.25	3.28	3.07	0.31	1.125	0.750	3/16 X 1.63	1/4 X 1.75
NH830	6.13	7.74	8.56	2.25	3.00	3.69	4.13	2.06	0.41	4.84	6.00	3.00	6.57	2.38	5.77	3.56	3.31	0.31	1.250	0.875	3/16 X 1.63	1/4 X 1.75
NH832	7.50	9.25	10.44	2.50	3.25	4.56	6.50	3.25	0.41	5.02	7.75	3.88	6.76	2.38	7.03	4.24	3.99	0.38	1.500	0.875	3/16 X 1.63	3/8 X 2.25
NH842	6.75	10.99	12.00	2.50	4.25	5.00	5.75	2.88	0.56	6.10	9.75	4.88	9.57	3.47	7.50	3.88	3.59	0.50	1.750	1.250	1/4 X 2.50	3/8 X 2.25
NH852	8.25	13.24	13.82	3.00	5.25	6.00	7.00	3.50	0.69	7.50	12.00	6.00	10.88	3.38	9.00	4.72	4.47	1.13	2.000	1.250	1/4 X 3.00	1/2 X 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM		L1		LQ		LQ1			RQ		
	48CZ	56C/140TC	180TC/210TC	250TC	48CZ/56C/140TC	180TC	210TC	250TC	48CZ/56C/140TC	180TC	210TC	250TC
NH813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
NH815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A	N/A	N/A
NH818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
NH821	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
NH824	N/A	7.76	8.76	N/A	4.63	5.06	N/A	N/A	4.09	4.56	N/A	N/A
NH826	N/A	8.32	9.32	N/A	5.19	5.62	N/A	N/A	4.82	5.13	N/A	N/A
NH830	N/A	8.82	9.82	N/A	5.69	6.12	6.56	N/A	5.32	5.63	6.06	N/A
NH832	N/A	9.01	10.01	N/A	5.88	6.31	6.75	N/A	5.51	5.81	6.25	N/A
NH842	N/A	11.81	12.90	13.46	6.45	7.21	7.21	7.77	6.04	6.68	6.68	7.24
NH852	N/A	13.21	14.30	14.86	7.85	8.61	8.61	9.17	7.35	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)*

Size	LQ1						RQ					
	D63D	D71D	D80D	D90D	D100LD/D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/D112MD	D132D
NH813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
NH815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A	N/A
NH818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
NH821	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
NH824	N/A	3.72	4.34	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A	N/A
NH826	N/A	4.28	4.90	4.90	5.30	N/A	4.09	4.72	4.72	5.07	N/A	N/A
NH830	N/A	4.78	5.41	5.41	5.80	N/A	4.59	5.22	5.22	5.57	N/A	N/A
NH832	N/A	4.97	5.59	5.59	5.99	N/A	4.78	5.41	5.41	5.76	N/A	N/A
NH842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
NH852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

- * Applies to double output shaft
- ◆ Keyway width by depth
- 48CZ not available
- ◇ Metric IEC B5 input flange options are available only on quill input styles.
- * Style T and TM only.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
ZF	TMQ
ZFC	TM
Z	T

Refer to page 18 for complete interchange guide for original Grove Gear OE Series products.



NH Series Dimensions

Styles: UMQ, UM, U

CAST IRON
NH SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

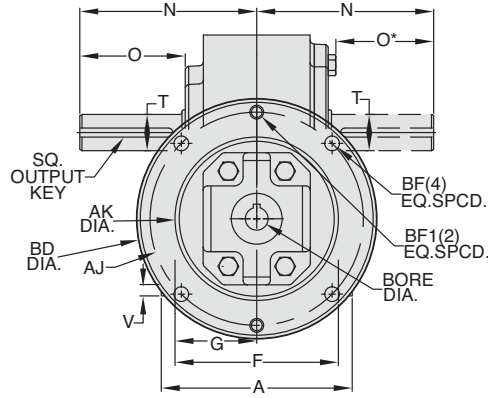
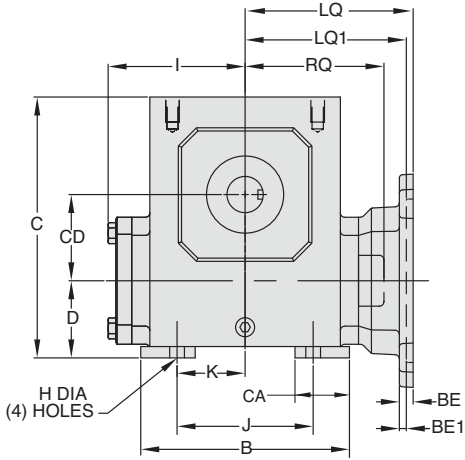
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

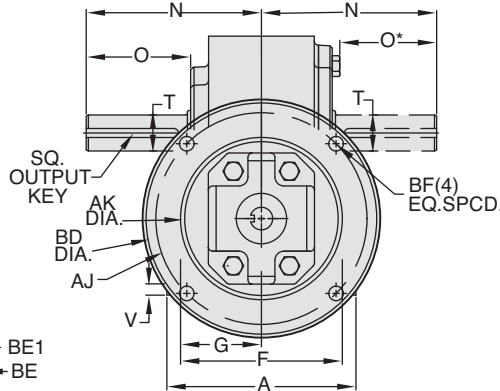
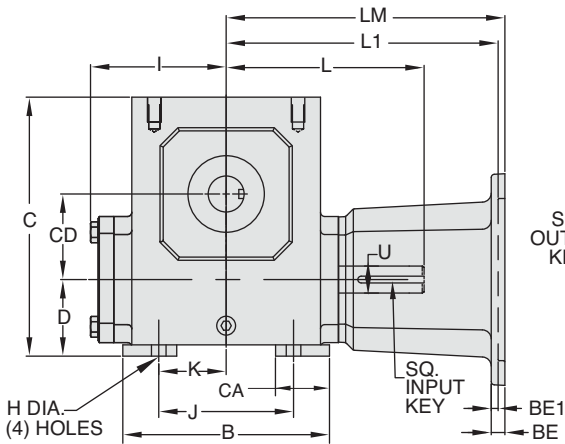
Accessories and
Additional Capabilities

Style UMQ



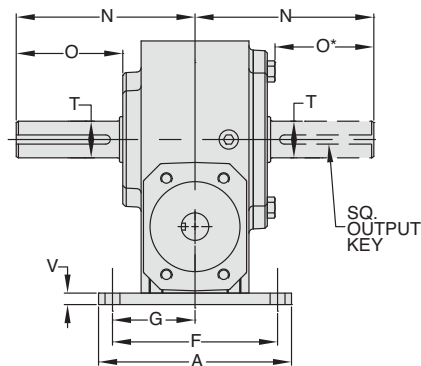
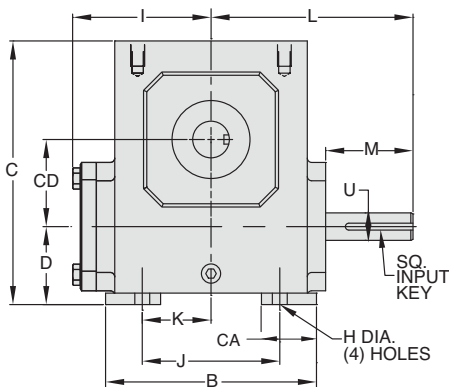
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Style UM

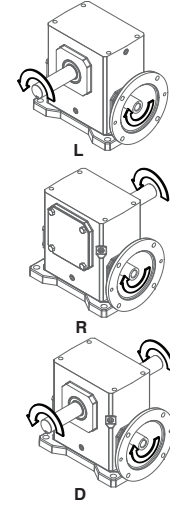


WARNING: "FLANGE MAY EXTEND BELOW BASE."

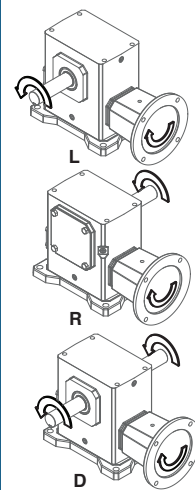
Style U



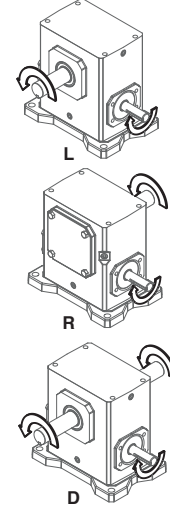
ASSEMBLIES



ASSEMBLIES



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



NH Series Dimensions

Styles: UMQ, UM, U



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE UMQ, UM, U DIMENSIONS (Inches)

Size	A	B	C	CA	CD	D	F	G	H	I	J	K	L	M	N	O	O*	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key**	Output Key
NH813	4.00	5.01	4.97	1.50	1.33	1.92	3.25	1.63	0.28	2.61	4.25	2.13	3.82	1.76	4.00	2.16	1.94	0.31	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH815	5.25	5.19	5.31	1.50	1.54	1.90	4.50	2.25	0.34	3.14	4.19	2.09	4.35	1.76	4.25	2.56	2.35	0.31	0.750	0.625	3/16 X 1.38	3/16 X 1.50
NH818	4.62	5.89	5.82	1.88	1.75	2.00	3.50	1.75	0.41	3.24	4.63	2.31	4.45	1.76	4.75	2.94	2.73	0.38	1.000	0.625	3/16 X 1.38	1/4 X 1.75
NH821	5.25	5.19	6.31	1.50	2.06	1.94	4.50	2.25	0.34	3.61	4.19	2.09	4.82	1.76	4.34	2.66	2.45	0.31	0.875	0.625	3/16 X 1.38	3/16 X 1.50
NH824	5.25	5.75	7.19	1.50	2.38	2.13	4.50	2.25	0.41	3.77	3.75	1.88	5.51	2.38	4.88	2.91	2.69	0.31	1.000	0.750	3/16 X 1.63	1/4 X 1.75
NH826	6.13	6.51	7.69	2.00	2.63	2.13	4.13	2.06	0.41	4.34	4.75	2.38	6.07	2.38	5.25	3.28	3.07	0.31	1.125	0.750	3/16 X 1.63	1/4 X 1.75
NH830	6.13	7.74	8.56	2.25	3.00	2.19	4.13	2.06	0.41	4.84	6.00	3.00	6.57	2.38	5.77	3.56	3.31	0.31	1.250	0.875	3/16 X 1.63	1/4 X 1.75
NH832	7.50	9.25	10.44	2.50	3.25	3.00	6.50	3.25	0.41	5.02	7.75	3.88	6.76	2.38	7.03	4.24	3.99	0.38	1.500	0.875	3/16 X 1.63	3/8 X 2.25
NH842	6.75	10.99	12.00	2.50	4.25	3.25	5.75	2.88	0.56	6.10	9.75	4.88	9.57	3.47	7.50	3.88	3.59	0.50	1.750	1.250	1/4 X 2.50	3/8 X 2.25
NH852	8.25	13.24	13.82	3.00	5.25	3.69	7.00	3.50	0.69	7.50	12.00	6.00	10.88	3.38	9.00	4.72	4.47	1.13	2.000	1.250	1/4 X 3.00	1/2 X 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM		L1		LQ 48CZ/ 56C/140TC	180TC	LQ1		250TC	RQ			
	48CZ	56C/ 140TC	180TC/ 210TC	250TC			180TC	210TC		250TC	48CZ/ 56C/140TC	180TC	210TC	250TC
NH813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	N/A	3.09	N/A	N/A	N/A
NH815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	N/A	3.62	N/A	N/A	N/A
NH818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	N/A	3.59	N/A	N/A	N/A
NH821	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	N/A	4.06	N/A	N/A	N/A
NH824	N/A	7.76	8.76	N/A	4.63	5.06	N/A	N/A	N/A	4.09	4.56	N/A	N/A
NH826	N/A	8.32	9.32	N/A	5.19	5.62	N/A	N/A	N/A	4.82	5.13	N/A	N/A
NH830	N/A	8.82	9.82	N/A	5.69	6.12	6.56	N/A	N/A	5.32	5.63	6.06	N/A
NH832	N/A	9.01	10.01	N/A	5.88	6.31	6.75	N/A	N/A	5.51	5.81	6.25	N/A
NH842	N/A	11.81	12.90	13.46	6.45	7.21	7.21	7.77	7.77	6.04	6.68	6.68	7.24
NH852	N/A	13.21	14.30	14.86	7.85	8.61	8.61	9.17	9.17	7.35	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)*

Size	LQ1						RQ					
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D
NH813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
NH815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A	N/A
NH818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
NH821	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
NH824	N/A	3.72	4.34	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A	N/A
NH826	N/A	4.28	4.90	4.90	5.30	N/A	4.09	4.72	4.72	5.07	N/A	N/A
NH830	N/A	4.78	5.41	5.41	5.80	N/A	4.59	5.22	5.22	5.57	N/A	N/A
NH832	N/A	4.97	5.59	5.59	5.99	N/A	4.78	5.41	5.41	5.76	N/A	N/A
NH842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
NH852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

* Applies to double output shaft

◆ Keyway width by depth

■ 48CZ not available

◇ Metric IEC B5 input flange options are available only on quill input styles.

* Style U and UM only.

Note: Styles UMQ, UM and U are worm under mounting assemblies and not recommended due to increase potential for high speed shaft seal leakage and potential mounting interference. Motor flange may extend below base. Contact Factory for selection assistance.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
UBF	UMQ
UBFC	UM
UB	U

Refer to page 18 for complete interchange guide for original Grove Gear OE Series products.



NH Series Dimensions

Styles: JMQ, JM, J

CAST IRON
NH SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

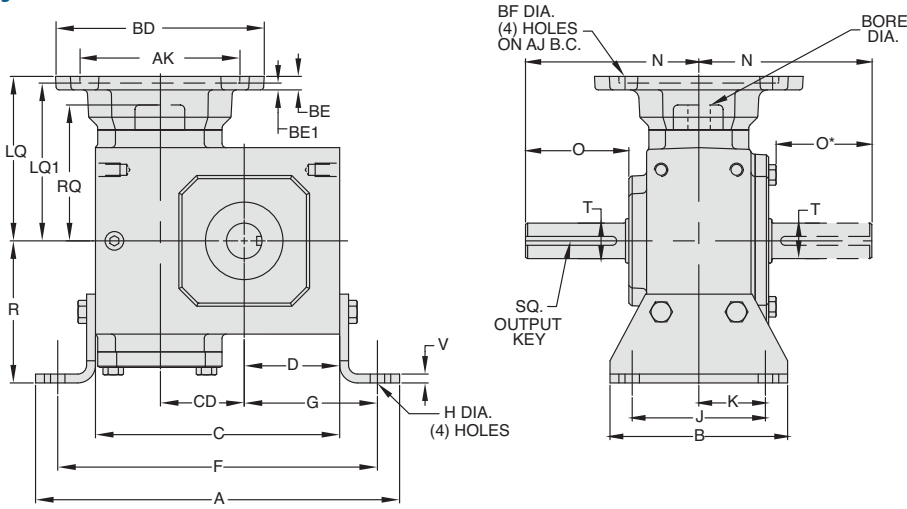
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

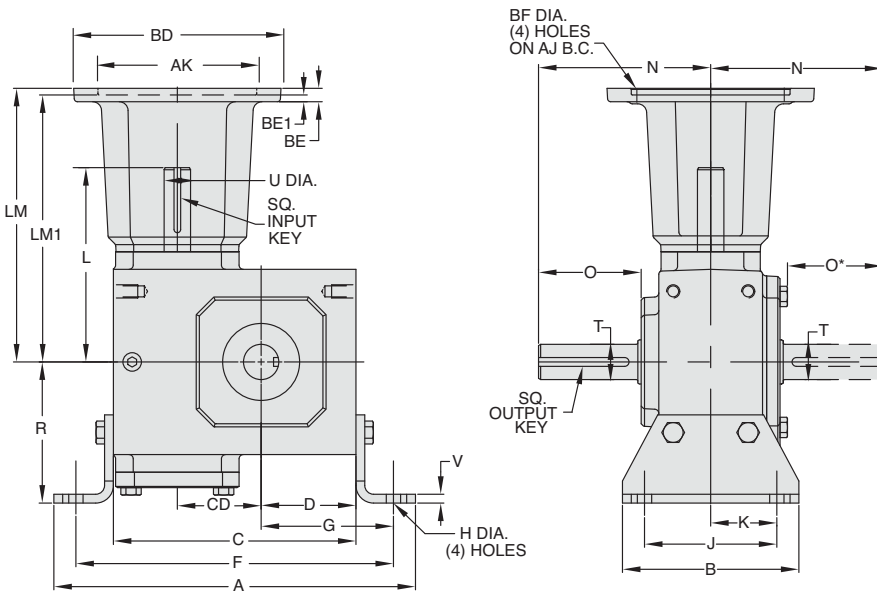
Ratio Multipliers

Accessories and
Additional Capabilities

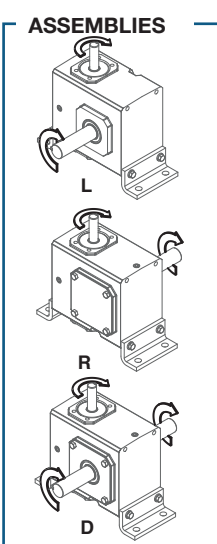
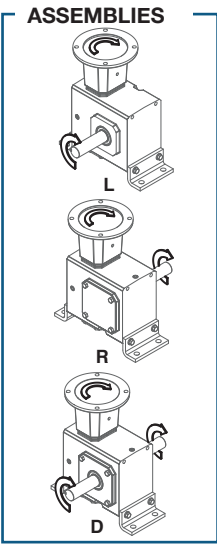
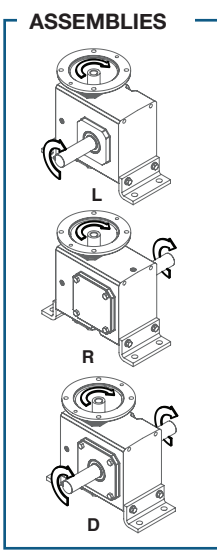
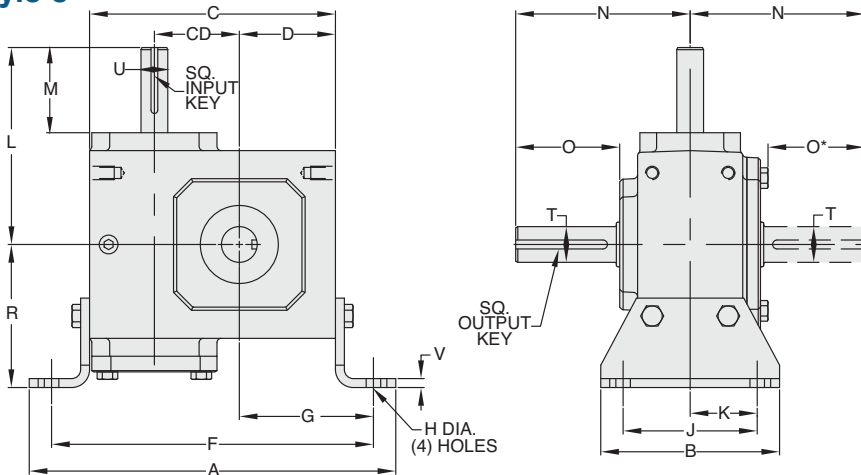
Style JMQ



Style JM



Style J



REVERSE ALL ARROWS
FOR OPPOSITE INPUT SHAFT
ROTATION. CONTACT FACTORY
FOR OTHER MOUNTINGS OR
ASSEMBLY POSITIONS.



NH Series Dimensions

Styles: JMQ, JM, J



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE JMQ, JM, J DIMENSIONS (Inches)

Size	A	B	C	CD	D	F	G	H	J	K	L	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key*	Output Key
NH813	7.42	2.75	4.66	1.33	1.72	6.42	2.60	0.38	2.00	1.00	3.82	1.76	4.00	2.16	1.94	2.94	0.25	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH815	8.06	3.75	5.00	1.54	1.88	7.06	2.91	0.34	2.75	1.38	4.35	1.76	4.25	2.56	2.35	3.75	0.25	0.750	0.625	3/16 X 1.38	3/16 X 1.50
NH818	8.50	3.75	5.44	1.75	2.06	7.50	3.09	0.34	2.75	1.38	4.45	1.76	4.75	2.94	2.73	4.00	0.25	1.000	0.625	3/16 X 1.38	1/4 X 1.75
NH821	9.06	3.75	6.00	2.06	2.31	8.06	3.34	0.34	2.75	1.38	4.82	1.76	4.34	2.66	2.45	3.75	0.25	0.875	0.625	3/16 X 1.38	3/16 X 1.50
NH824	9.96	5.00	6.88	2.38	2.69	8.70	3.60	0.41	3.75	1.88	5.51	2.38	4.88	2.91	2.69	4.44	0.25	1.000	0.750	3/16 X 1.63	1/4 X 1.75
NH826	10.46	5.00	7.38	2.63	2.94	9.20	3.85	0.41	3.75	1.88	6.07	2.38	5.25	3.28	3.07	4.44	0.25	1.125	0.750	3/16 X 1.63	1/4 X 1.75
NH830	12.01	5.25	8.25	3.00	3.38	10.75	4.63	0.41	4.00	2.00	6.57	2.38	5.77	3.56	3.31	4.94	0.31	1.250	0.875	3/16 X 1.63	1/4 X 1.75
NH832	14.00	6.25	10.06	3.25	4.19	12.50	5.41	0.53	5.00	2.50	6.76	2.38	7.03	4.24	3.99	5.25	0.31	1.500	0.875	3/16 X 1.63	3/8 X 2.25
NH842	16.50	6.75	11.50	4.25	4.50	15.00	6.25	0.69	5.00	2.50	9.57	3.47	7.50	3.88	3.59	6.50	0.50	1.750	1.250	1/4 X 2.50	3/8 X 2.25
NH852	17.69	7.20	12.69	5.25	4.88	16.31	6.69	0.69	5.81	2.91	10.88	3.38	9.00	4.72	4.47	7.75	0.50	2.000	1.250	1/4 X 3.00	1/2 X 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM		L1		LQ		LQ1			RQ		
	48CZ	56C/140TC	180TC/210TC	250TC	48CZ/56C/140TC	180TC	210TC	250TC	48CZ/56C/140TC	180TC	210TC	250TC
NH813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
NH815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A	N/A	N/A
NH818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
NH821	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
NH824	N/A	7.76	8.76	N/A	4.63	5.06	N/A	N/A	4.09	4.56	N/A	N/A
NH826	N/A	8.32	9.32	N/A	5.19	5.62	N/A	N/A	4.82	5.13	N/A	N/A
NH830	N/A	8.82	9.82	N/A	5.69	6.12	6.56	N/A	5.32	5.63	6.06	N/A
NH832	N/A	9.01	10.01	N/A	5.88	6.31	6.75	N/A	5.51	5.81	6.25	N/A
NH842	N/A	11.81	12.90	13.46	6.45	7.21	7.21	7.77	6.04	6.68	6.68	7.24
NH852	N/A	13.21	14.30	14.86	7.85	8.61	8.61	9.17	7.35	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)*

Size	LQ1					RQ						
	D63D	D71D	D80D	D90D	D100LD/D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/D112MD	D132D
NH813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
NH815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A	N/A
NH818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
NH821	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
NH824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A
NH826	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
NH830	N/A	4.78	5.41	5.41	5.80	N/A	N/A	4.59	5.22	5.22	5.57	N/A
NH832	N/A	4.97	5.59	5.59	5.99	N/A	N/A	4.78	5.41	5.41	5.76	N/A
NH842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
NH852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

- * Applies to double output shaft
- ◆ Keyway width by depth
- 48CZ not available
- ◇ Metric IEC B5 input flange options are available only on quill input styles.
- * Style J and JM only.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
JF	JMQ
JFC	JM
J	J

Refer to page 18 for complete interchange guide for original Grove Gear OE Series products.

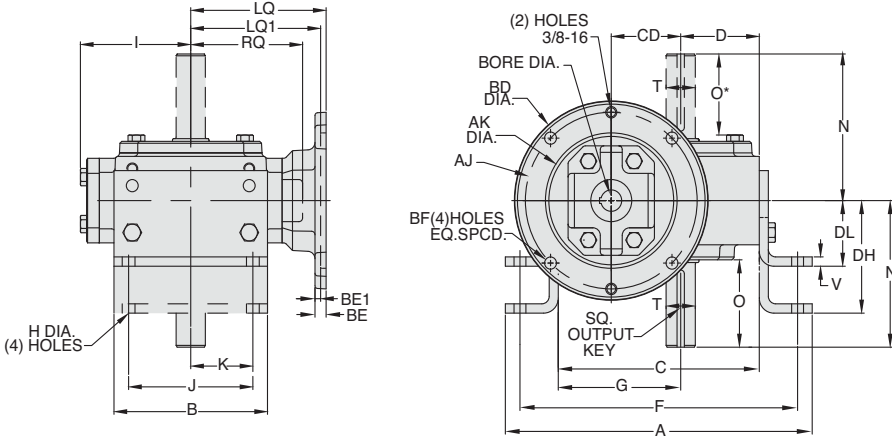


NH Series Dimensions

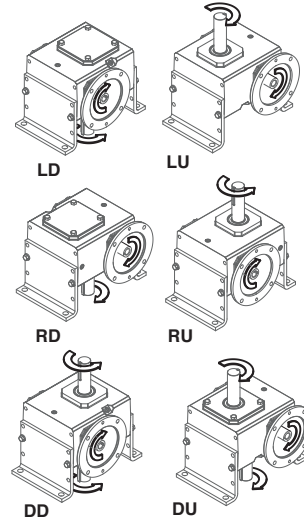
Styles: V_MQ, V_M, V_

CAST IRON
NH SERIES

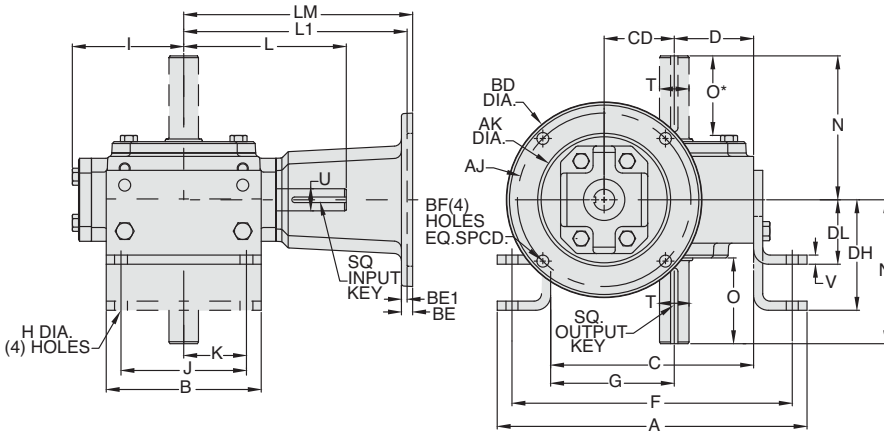
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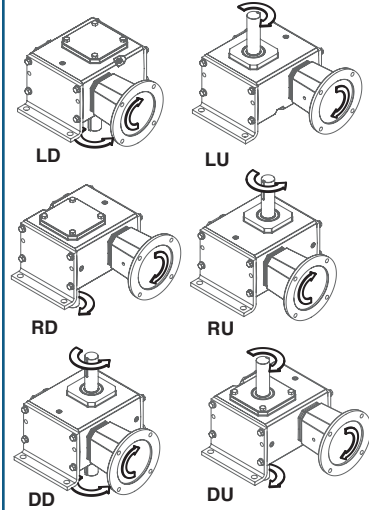
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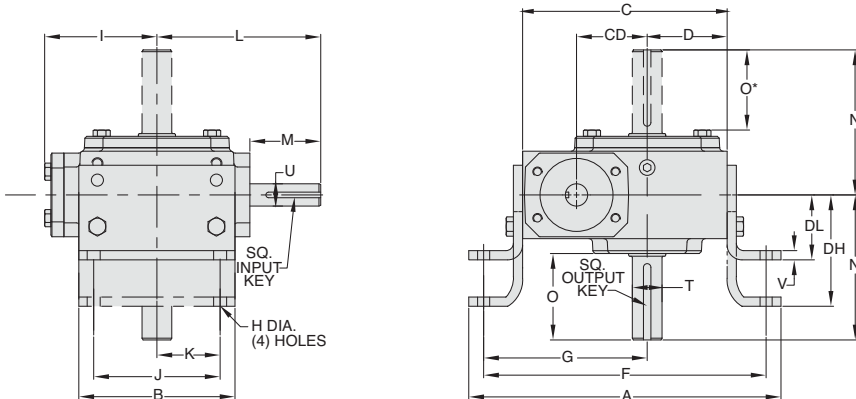
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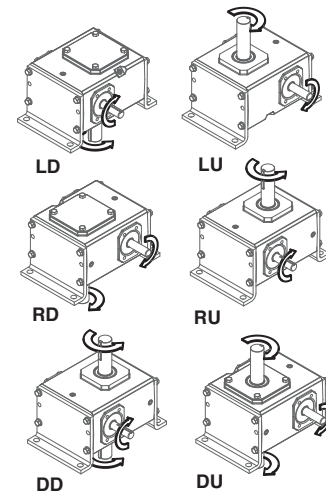
ASSEMBLIES



Style V(L OR H)



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



NH Series Dimensions

Styles: V_MQ, V_M, V_



STYLE V_MQ, V_M, V_ DIMENSIONS (Inches)

Size	A	B	CD	DL	DH	F	G	H	I	J	K	L	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key* [‡]	Output Key
NH813	7.78	4.00	1.33	2.00	3.88	6.78	4.00	0.44	2.61	3.00	1.50	3.82	1.76	4.00	2.16	1.94	1.72	0.31	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH815	8.12	4.00	1.54	1.94	3.82	7.12	4.18	0.44	3.14	3.00	1.50	4.35	1.76	4.25	2.56	2.35	1.88	0.31	0.750	0.625	3/16 X 1.38	3/16 X 1.50
NH818	8.56	4.75	1.75	1.94	3.82	7.56	4.44	0.44	3.24	3.00	1.50	4.45	1.76	4.75	2.94	2.73	2.06	0.31	1.000	0.625	3/16 X 1.38	1/4 X 1.75
NH821	9.12	4.00	2.06	1.94	3.82	8.12	4.75	0.44	3.61	3.00	1.50	4.82	1.76	4.34	2.66	2.45	2.31	0.31	0.875	0.625	3/16 X 1.38	3/16 X 1.50
NH824	10.50	5.25	2.38	2.18	3.74	9.50	5.50	0.44	3.77	4.25	2.13	5.51	2.38	4.88	2.91	2.69	2.69	0.31	1.000	0.750	3/16 X 1.63	1/4 X 1.75
NH826	11.00	5.25	2.63	2.18	3.74	10.00	5.75	0.44	4.34	4.25	2.13	6.07	2.38	5.25	3.28	3.07	2.94	0.31	1.125	0.750	3/16 X 1.63	1/4 X 1.75
NH830	11.87	6.00	3.00	2.31	3.69	10.87	6.18	0.44	4.84	4.75	2.38	6.57	2.38	5.77	3.56	3.31	3.38	0.31	1.250	0.875	3/16 X 1.63	1/4 X 1.75
NH832	13.86	8.00	3.25	3.50	4.81	12.82	7.25	0.47	5.02	7.00	3.50	6.76	2.38	7.03	4.24	3.99	4.19	0.31	1.500	0.875	3/16 X 1.63	3/8 X 2.25
NH842	16.38	9.50	4.25	5.00	7.50	15.00	8.75	0.69	6.10	7.88	3.94	9.57	3.47	7.50	3.88	3.59	4.50	0.50	1.750	1.250	1/4 X 2.50	3/8 X 2.25
NH852	18.29	11.50	5.25	5.16	9.16	16.69	9.81	0.78	7.50	10.00	5.00	10.88	3.38	9.00	4.72	4.47	4.88	0.50	2.000	1.250	1/4 X 3.00	1/2 X 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM		L1		LQ 48CZ/ 56C/140TC	LQ1			RQ			
	48CZ	56C/ 140TC	180TC/ 210TC	250TC		180TC	210TC	250TC	180TC	210TC	250TC	
NH813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
NH815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A	N/A	N/A
NH818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
NH821	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
NH824	N/A	7.76	8.76	N/A	4.63	5.06	N/A	N/A	4.09	4.56	N/A	N/A
NH826	N/A	8.32	9.32	N/A	5.19	5.62	N/A	N/A	4.82	5.13	N/A	N/A
NH830	N/A	8.82	9.82	N/A	5.69	6.12	6.56	N/A	5.32	5.63	6.06	N/A
NH832	N/A	9.01	10.01	N/A	5.88	6.31	6.75	N/A	5.51	5.81	6.25	N/A
NH842	N/A	11.81	12.90	13.46	6.45	7.21	7.21	7.77	6.04	6.68	6.68	7.24
NH852	N/A	13.21	14.30	14.86	7.85	8.61	8.61	9.17	7.35	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)*

Size	LQ1						RQ					
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D
NH813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
NH815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A	N/A
NH818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
NH821	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
NH824	N/A	3.72	4.34	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A	N/A
NH826	N/A	4.28	4.90	4.90	5.30	N/A	4.09	4.72	4.72	5.07	N/A	N/A
NH830	N/A	4.78	5.41	5.41	5.80	N/A	4.59	5.22	5.22	5.57	N/A	N/A
NH832	N/A	4.97	5.59	5.59	5.99	N/A	4.78	5.41	5.41	5.76	N/A	N/A
NH842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
NH852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

- * Applies to double output shaft
- ◆ Keyway width by depth
- 48CZ not available
- ◇ Metric IEC B5 input flange options are available only on quill input styles.
- * Style V_ and V_M only.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
SLF	VLMQ
SLFC	VLM
SL	VL
SHF	VHMQ
SHFC	VHM
SH	VH

Refer to page 18 for complete interchange guide for original Grove Gear OE Series products.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHQUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



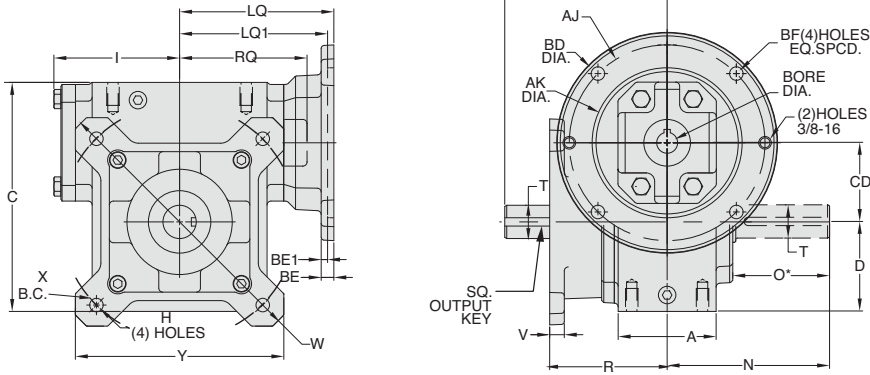
NH Series Dimensions

Styles: FMQ, FM, F

CAST IRON
NH SERIES

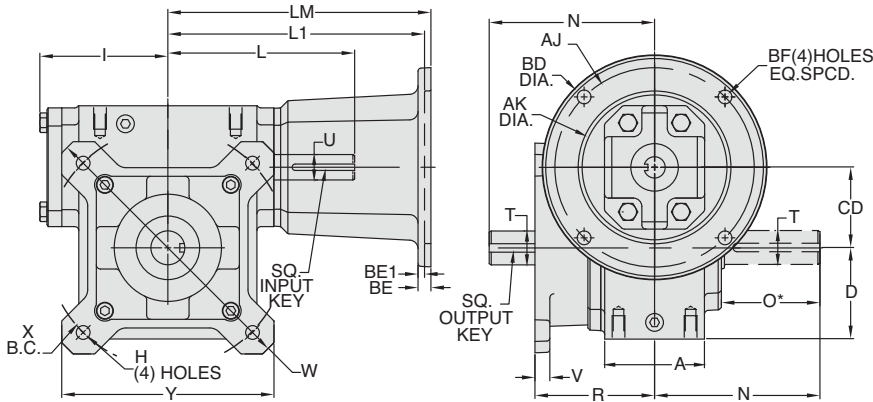
Single Reduction
Worm Gear Reducers

Style FMQ



Double Reduction
Worm - Worm Gear Reducers

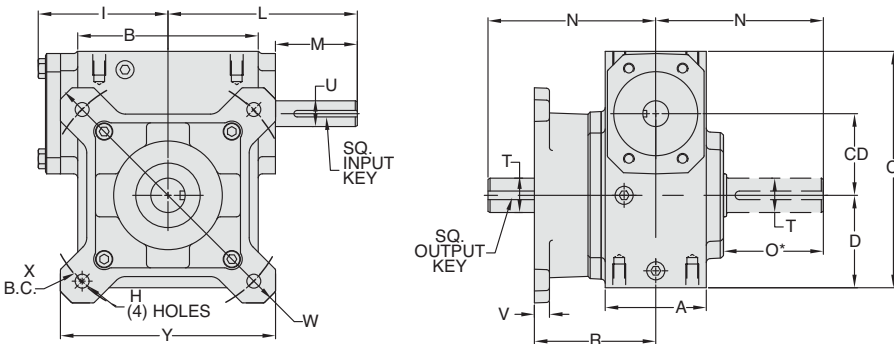
Style FM



Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

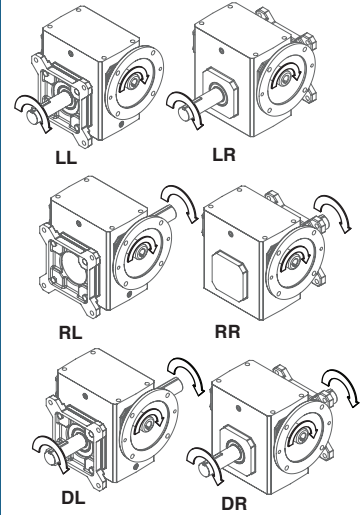
Style F



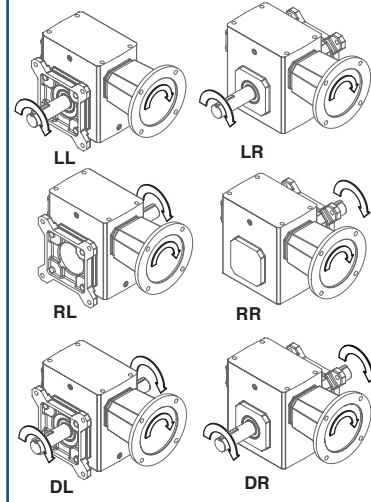
Ratio Multipliers

Accessories and
Additional Capabilities

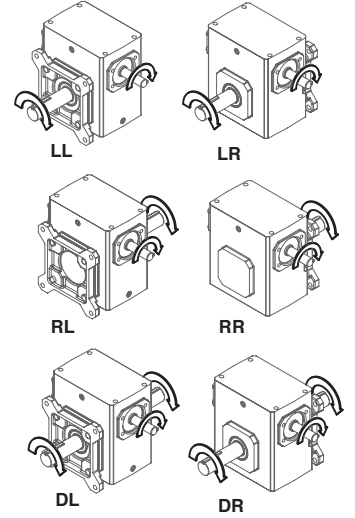
ASSEMBLIES



ASSEMBLIES



ASSEMBLIES



Sizes 815-852 output flange must be mounted at
Factory on styles FMQ, FM, F.

REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT
ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS
OR ASSEMBLY POSITIONS.



NH Series Dimensions

Styles: FMQ, FM, F



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHQUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE FMQ, FM, F DIMENSIONS (Inches)

Size	A	B	BL	C	CD	D	H	I	L	M	N	O*	R	W	X	Y	T +0.000 -0.0015	U +0.000 -0.0015	Input Key**	Output Key
NH813	2.82	3.80	0.38	4.66	1.33	1.72	0.34	2.61	3.82	1.76	4.00	1.94	2.52	5.92	5.00	4.50	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH815	2.57	4.06	0.38	5.00	1.54	1.88	0.34	3.14	4.35	1.76	4.25	2.35	3.50	6.79	5.88	5.12	0.750	0.625	3/16 X 1.38	3/16 X 1.50
NH818	2.56	4.50	0.38	5.44	1.75	2.06	0.34	3.24	4.45	1.76	4.75	2.73	2.73	6.64	5.88	5.00	1.000	0.625	3/16 X 1.38	1/4 X 1.75
NH821	2.50	4.50	0.38	6.00	2.06	2.31	0.34	3.61	4.82	1.76	4.34	2.45	3.51	7.37	6.25	5.56	0.875	0.625	3/16 X 1.38	3/16 X 1.50
NH824	2.94	5.25	0.44	6.88	2.38	2.69	0.34	3.77	5.51	2.38	4.88	2.69	3.47	8.29	7.06	6.24	1.000	0.750	3/16 X 1.63	1/4 X 1.75
NH826	2.88	5.75	0.50	7.38	2.63	2.94	0.34	4.34	6.07	2.38	5.25	3.07	3.56	8.90	7.63	6.68	1.125	0.750	3/16 X 1.63	1/4 X 1.75
NH830	3.12	6.62	0.50	8.25	3.00	3.38	0.41	4.84	6.57	2.38	5.77	3.31	3.69	9.50	8.63	7.34	1.250	0.875	3/16 X 1.63	1/4 X 1.75
NH832	4.44	8.00	0.56	10.06	3.25	4.19	0.53	5.02	6.76	2.38	7.03	3.99	5.00	11.84	10.63	9.00	1.500	0.875	3/16 X 1.63	3/8 X 2.25
NH842	4.75	9.75	0.62	11.50	4.25	4.50	0.56	6.10	9.57	3.47	7.50	3.59	4.50	12.95	11.50	9.66	1.750	1.250	1/4 X 2.50	3/8 X 2.25
NH852	6.19	11.00	0.75	12.69	5.25	4.88	0.69	7.50	10.88	3.38	9.00	4.47	5.56	15.50	14.00	11.76	2.000	1.250	1/4 X 3.00	1/2 X 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM		180TC/ 210TC	L1 250TC	LQ 48CZ/ 56C/140TC		180TC	LQ1 210TC		250TC	RQ		
	48CZ	56C/ 140TC			48CZ/ 56C/140TC	180TC		210TC	250TC		48CZ/ 56C/140TC	180TC	210TC	250TC
NH813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	N/A	3.09	N/A	N/A	N/A
NH815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	N/A	3.62	N/A	N/A	N/A
NH818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	N/A	3.59	N/A	N/A	N/A
NH821	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	N/A	4.06	N/A	N/A	N/A
NH824	N/A	7.76	8.76	N/A	4.63	5.06	N/A	N/A	N/A	4.09	4.56	N/A	N/A
NH826	N/A	8.32	9.32	N/A	5.19	5.62	N/A	N/A	N/A	4.82	5.13	N/A	N/A
NH830	N/A	8.82	9.82	N/A	5.69	6.12	6.56	N/A	N/A	5.32	5.63	6.06	N/A
NH832	N/A	9.01	10.01	N/A	5.88	6.31	6.75	N/A	N/A	5.51	5.81	6.25	N/A
NH842	N/A	11.81	12.90	13.46	6.45	7.21	7.21	7.77	6.04	6.68	6.68	7.24	N/A
NH852	N/A	13.21	14.30	14.86	7.85	8.61	8.61	9.17	7.35	7.98	7.98	8.54	N/A

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway♦	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)✦

Size	LQ1				RQ							
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D
NH813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
NH815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A	N/A
NH818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
NH821	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
NH824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A
NH826	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
NH830	N/A	4.78	5.41	5.41	5.80	N/A	N/A	4.59	5.22	5.22	5.57	N/A
NH832	N/A	4.97	5.59	5.59	5.99	N/A	N/A	4.78	5.41	5.41	5.76	N/A
NH842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
NH852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway♦	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

- * Applies to double output shaft
- ♦ Keyway width by depth
- 48CZ not available
- ✦ Metric IEC B5 input flange options are available only on quill input styles.
- * Style F and FM only.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
KF & VF	FMQ
KFC & VFC	FM
K & V	F

Refer to page 18 for complete interchange guide for original Grove Gear OE Series products.



NH Series Dimensions

Styles: HMQ, HM, H

CAST IRON
NH SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

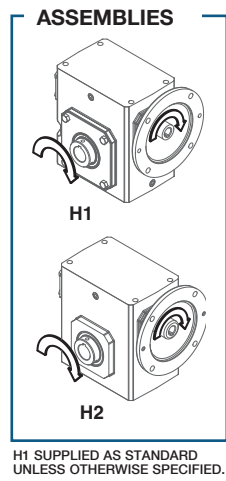
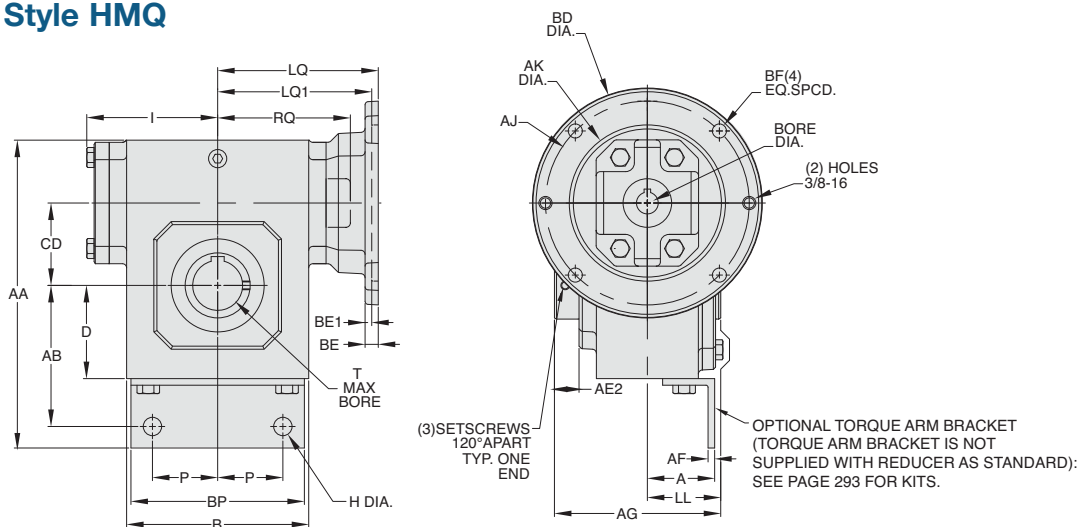
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

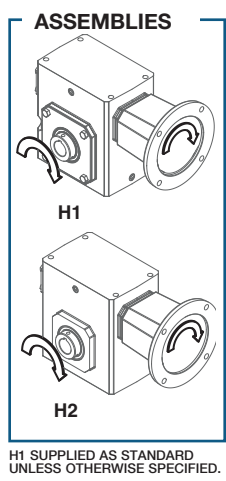
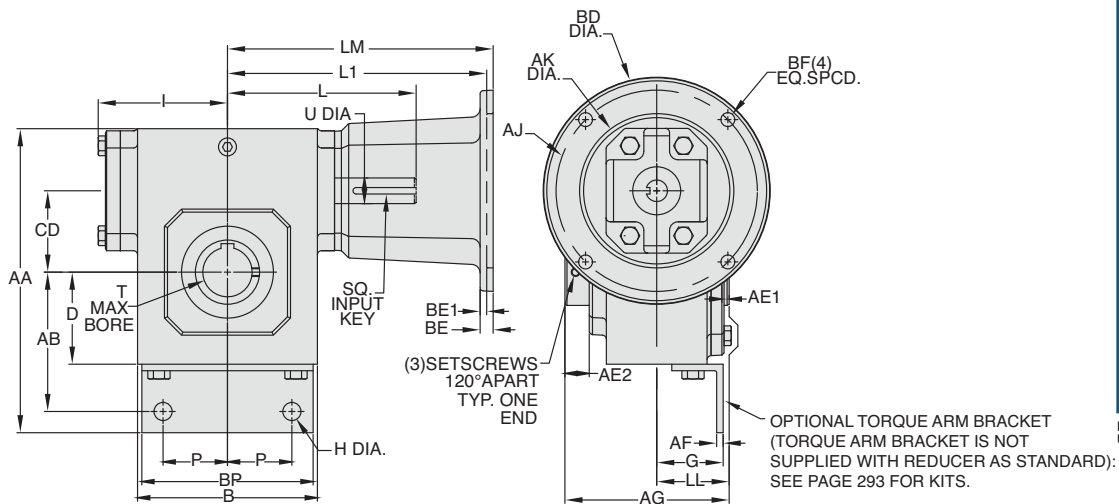
Ratio Multipliers

Accessories and
Additional Capabilities

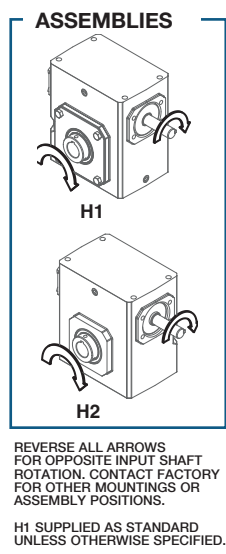
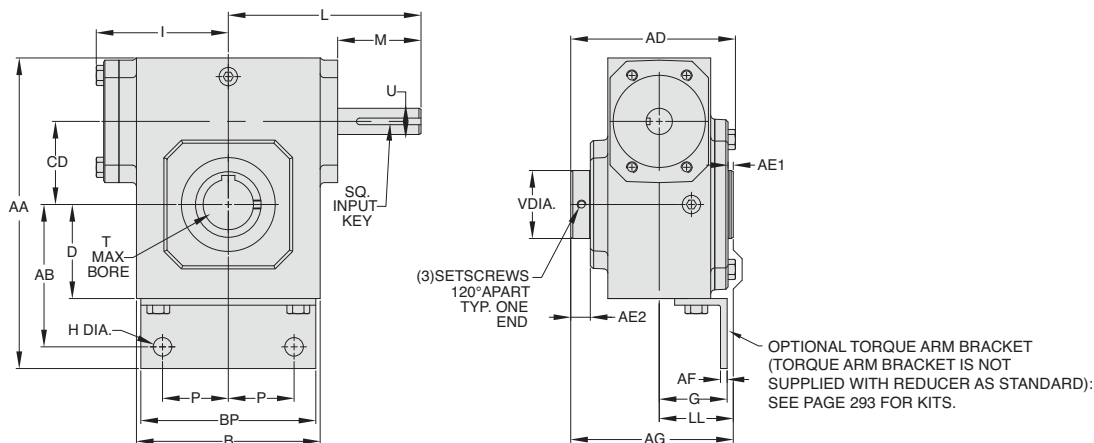
Style HMQ



Style HM



Style H





NH Series Dimensions

Styles: HMQ, HM, H



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHQUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE HMQ, HM, H DIMENSIONS (Inches)

Size	AA	AB	AD	AE2	AF	AG	B	C	CD	D	G	H	I	L	LL	M	P	V	T MAX* -0.000 +0.0025	U +0.000 -0.0015	Input Key**	Output Key*
NH813	6.66	3.10	3.90	0.53	0.19	4.75	3.80	4.66	1.33	1.72	1.88	0.53	2.61	3.82	2.38	1.76	1.38	1.00	0.625	0.500	1/8 X 1.00	3/16 x 1.50
NH815	7.00	3.26	3.59	0.51	0.19	4.08	4.06	5.00	1.54	1.88	1.82	0.53	3.14	4.35	1.88	1.76	1.38	1.00	0.625	0.625	3/16 X 1.38	3/16 x 1.50
NH818	7.44	3.44	3.83	0.56	0.19	4.29	4.50	5.44	1.75	2.06	1.82	0.53	3.24	4.45	1.98	1.76	1.38	1.44	1.000	0.625	3/16 X 1.38	1/4 x 3.00
NH821	8.00	3.69	3.57	0.85	0.19	4.65	4.50	6.00	2.06	2.31	1.82	0.53	3.61	4.82	2.12	1.76	1.38	1.94	1.500	0.625	3/16 X 1.38	3/8 x 3.00
NH824	8.88	4.07	4.16	0.56	0.19	4.65	5.25	6.88	2.38	2.69	1.94	0.53	3.77	5.51	2.12	2.38	1.88	1.94	1.500	0.750	3/16 X 1.63	3/8 x 3.00
NH826	9.38	4.32	4.15	0.56	0.19	4.65	5.75	7.38	2.63	2.94	1.94	0.53	4.34	6.07	2.12	2.38	1.88	1.94	1.500	0.750	3/16 X 1.63	3/8 x 3.00
NH830	10.25	4.76	4.67	0.56	0.25	5.16	6.62	8.25	3.00	3.38	2.32	0.53	4.84	6.57	2.38	2.38	2.38	2.51	2.188	0.875	3/16 X 1.63	1/2 x 3.00
NH832	12.06	5.57	5.83	0.57	0.25	6.31	8.00	10.06	3.25	4.19	2.87	0.53	5.02	6.76	2.95	2.38	3.51	2.51	2.188	0.875	3/16 X 1.63	1/2 x 3.00
NH842	14.00	6.38	7.53	0.63	0.38	8.50	9.75	11.50	4.25	4.50	3.26	0.53	6.10	9.57	4.25	3.47	3.69	2.75	2.188	1.250	1/4 X 2.50	1/2 x 3.00
NH852	15.19	6.76	8.81	0.97	0.38	10.50	11.00	12.69	5.25	4.88	3.63	0.53	7.50	10.88	5.25	3.38	4.62	4.26	3.438	1.250	1/4 X 3.00	7/8 x 3.44

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM		L1		LQ			LQ1			RQ		
	48CZ	56C/140TC	180TC/210TC	250TC	48CZ/56C/140TC	180TC	210TC	250TC	48CZ/56C/140TC	180TC	210TC	250TC	
NH813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A	
NH815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A	N/A	N/A	
NH818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A	
NH821	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A	
NH824	N/A	7.76	8.76	N/A	4.63	5.06	N/A	N/A	4.09	4.56	N/A	N/A	
NH826	N/A	8.32	9.32	N/A	5.19	5.62	N/A	N/A	4.82	5.13	N/A	N/A	
NH830	N/A	8.82	9.82	N/A	5.69	6.12	6.56	N/A	5.32	5.63	6.06	N/A	
NH832	N/A	9.01	10.01	N/A	5.88	6.31	6.75	N/A	5.51	5.81	6.25	N/A	
NH842	N/A	11.81	12.90	13.46	6.45	7.21	7.21	7.77	6.04	6.68	6.68	7.24	
NH852	N/A	13.21	14.30	14.86	7.85	8.61	8.61	9.17	7.35	7.98	7.98	8.54	

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)*

Size	LQ1					RQ						
	D63D	D71D	D80D	D90D	D100LD/D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/D112MD	D132D
NH813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
NH815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A	N/A
NH818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
NH821	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
NH824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A
NH826	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
NH830	N/A	4.78	5.41	5.41	5.80	N/A	N/A	4.59	5.22	5.22	5.57	N/A
NH832	N/A	4.97	5.59	5.59	5.99	N/A	N/A	4.78	5.41	5.41	5.76	N/A
NH842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
NH852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

- Max bore dimensions shown. For additional bores available, refer to page 30.
- ◆ Keyway width by depth
- 48CZ not available
- ◇ Metric IEC B5 input flange options are available only on quill input styles.
- * Style H and HM only.

Note: Torque arm bracket available separately. Refer to page 288 for kits. If a special bracket is required, refer to Style BMQ dimensions for mounting pad dimensions on top/bottom of reducer.

WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
YF	HMQ
YFC	HM
Y	H

Refer to page 18 for complete interchange guide for original Grove Gear OE Series products.



NH Series Dimensions

Styles: FHMQ, FHM, FH

CAST IRON
NH SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

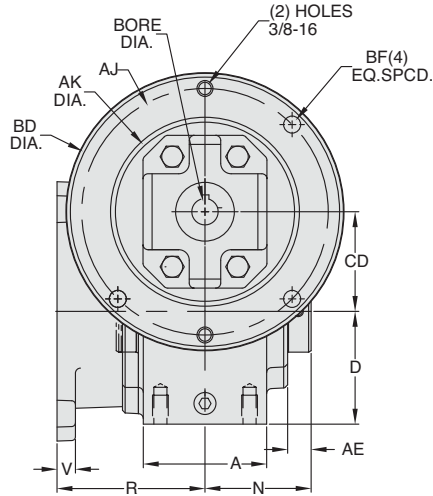
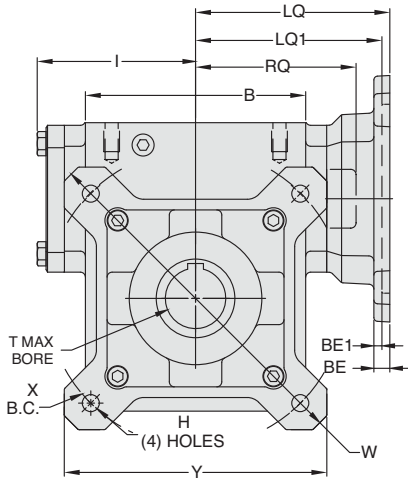
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

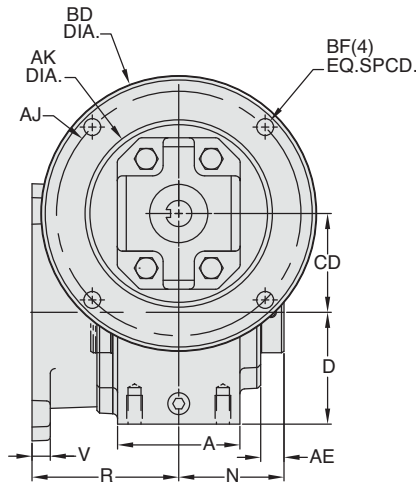
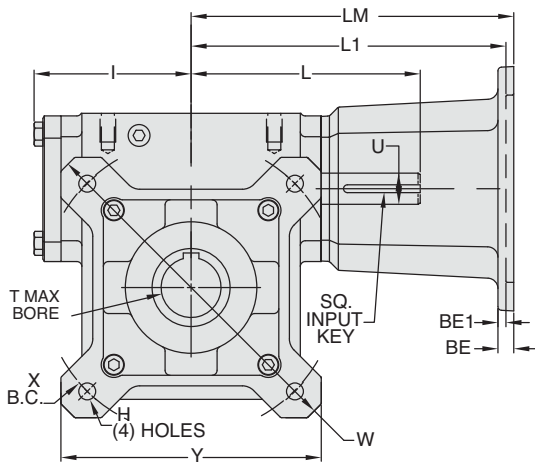
Ratio Multipliers

Accessories and
Additional Capabilities

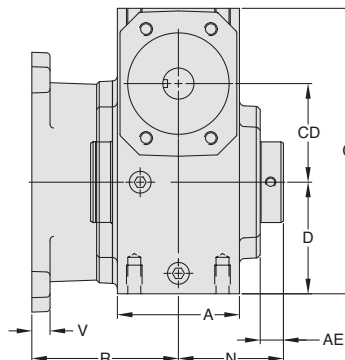
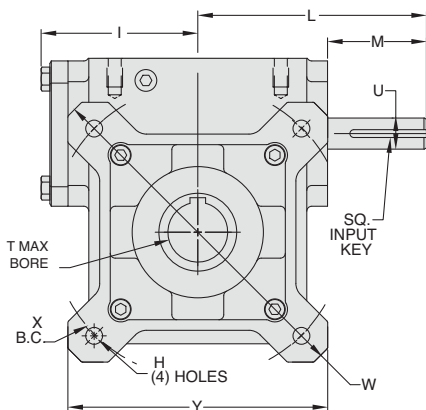
Style FHMQ



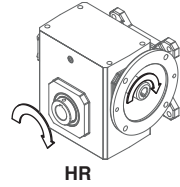
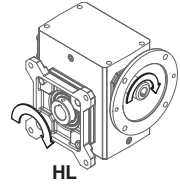
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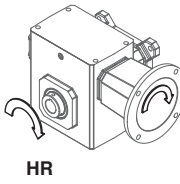
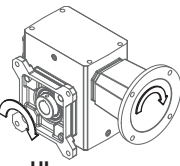
Style FH



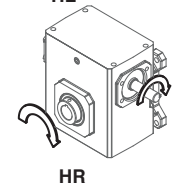
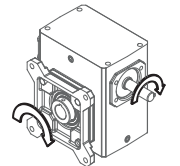
ASSEMBLIES



ASSEMBLIES



ASSEMBLIES



REVERSE ALL ARROWS
FOR OPPOSITE INPUT SHAFT
ROTATION. CONTACT FACTORY
FOR OTHER MOUNTINGS OR
ASSEMBLY POSITIONS.



NH Series Dimensions

Styles: FHM, FHM, FH



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHQUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE FHM, FHM, FH DIMENSIONS (Inches)

Size	A	AE	B	BL	C	CD	D	H	I	L	LL	M	N	R	V	W	X	Y	T MAX -0.000 +0.0025	U +0.000 -0.0015	Input Key*	Output Key •
NH813	2.82	0.53	3.80	0.38	4.66	1.33	1.72	0.34	2.61	3.82	2.38	1.76	2.37	2.52	1.00	5.92	5.00	4.50	0.625	0.500	1/8 X 1.00	3/16 x 1.50
NH815	2.57	0.51	4.06	0.38	5.00	1.54	1.88	0.34	3.14	4.35	1.88	1.76	2.20	3.50	1.00	6.79	5.88	5.12	0.625	0.625	3/16 X 1.38	3/16 x 1.50
NH818	2.56	0.56	4.50	0.38	5.44	1.75	2.06	0.34	3.24	4.45	1.92	1.76	2.37	2.74	1.44	6.64	5.88	5.00	1.000	0.625	3/16 X 1.38	1/4 x 3.00
NH821	2.50	0.85	4.50	0.38	6.00	2.06	2.31	0.34	3.61	4.82	2.12	1.76	2.53	3.50	1.94	7.37	6.25	5.56	1.500	0.625	3/16 X 1.38	3/8 x 3.00
NH824	2.94	0.56	5.25	0.44	6.88	2.38	2.69	0.34	3.77	5.51	2.12	2.38	2.53	3.53	1.94	8.29	7.06	6.24	1.500	0.750	3/16 X 1.63	3/8 x 3.00
NH826	2.88	0.56	5.75	0.50	7.38	2.63	2.94	0.34	4.34	6.07	2.12	2.38	2.53	3.62	1.94	8.90	7.63	6.68	1.500	0.750	3/16 X 1.63	3/8 x 3.00
NH830	3.12	0.56	6.62	0.50	8.25	3.00	3.38	0.41	4.84	6.57	2.38	2.38	2.78	3.75	2.51	9.50	8.63	7.34	2.188	0.875	3/16 X 1.63	1/2 x 3.00
NH832	4.44	0.57	8.00	0.56	10.06	3.25	4.19	0.53	5.02	6.76	2.95	2.38	3.36	5.06	2.51	11.84	10.63	9.00	2.188	0.875	3/16 X 1.63	1/2 x 3.00
NH842	4.75	0.63	9.75	0.62	11.50	4.25	4.50	0.56	6.10	9.57	4.25	3.47	4.25	4.56	2.75	12.95	11.50	9.66	2.188	1.250	1/4 X 2.50	1/2 x 3.00
NH852	6.19	0.97	11.00	0.75	12.69	5.25	4.88	0.69	7.50	10.88	5.25	3.38	5.25	5.62	4.26	15.50	14.00	11.76	3.438	1.250	1/4 X 3.00	7/8 x 3.44

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM		L1		LQ		LQ1			RQ		
	48CZ	56C/140TC	180TC/210TC	250TC	48CZ/56C/140TC	180TC	210TC	250TC	48CZ/56C/140TC	180TC	210TC	250TC
NH813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
NH815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A	N/A	N/A
NH818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
NH821	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
NH824	N/A	7.76	8.76	N/A	4.63	5.06	N/A	N/A	4.09	4.56	N/A	N/A
NH826	N/A	8.32	9.32	N/A	5.19	5.62	N/A	N/A	4.82	5.13	N/A	N/A
NH830	N/A	8.82	9.82	N/A	5.69	6.12	6.56	N/A	5.32	5.63	6.06	N/A
NH832	N/A	9.01	10.01	N/A	5.88	6.31	6.75	N/A	5.51	5.81	6.25	N/A
NH842	N/A	11.81	12.90	13.46	6.45	7.21	7.21	7.77	6.04	6.68	6.68	7.24
NH852	N/A	13.21	14.30	14.86	7.85	8.61	8.61	9.17	7.35	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway♦	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)*

Size	LQ1						RQ					
	D63D	D71D	D80D	D90D	D100LD/D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/D112MD	D132D
NH813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
NH815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A	N/A
NH818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
NH821	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
NH824	N/A	3.72	4.34	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A	N/A
NH826	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
NH830	N/A	4.78	5.41	5.41	5.80	N/A	N/A	4.59	5.22	5.22	5.57	N/A
NH832	N/A	4.97	5.59	5.59	5.99	N/A	N/A	4.78	5.41	5.41	5.76	N/A
NH842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
NH852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway♦	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

- Max bore dimensions shown. For additional bores available, refer to page 30.
- ♦ Keyway width by depth
- 48CZ not available
- ♦ Metric IEC B5 input flange options are available only on quill input styles.
- * Style FH and FHM only.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
MF	FHM
MFC	FHM
M	FH

Refer to page 18 for complete interchange guide for original Grove Gear OE Series products.



NH Series Dimensions

Styles: FEMQ, FEM, FE



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

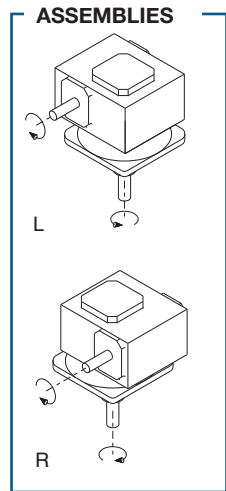
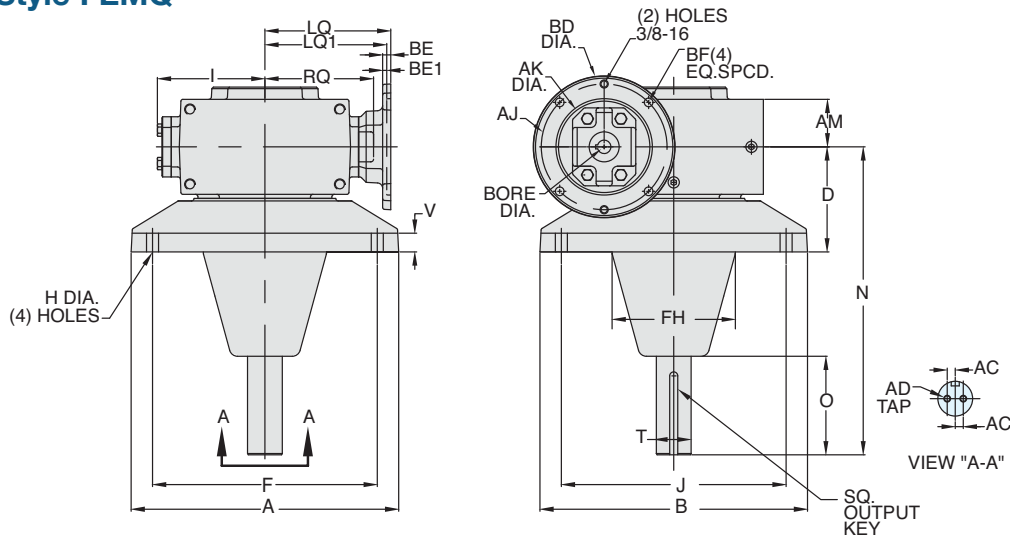
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

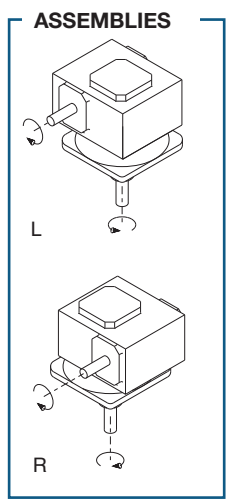
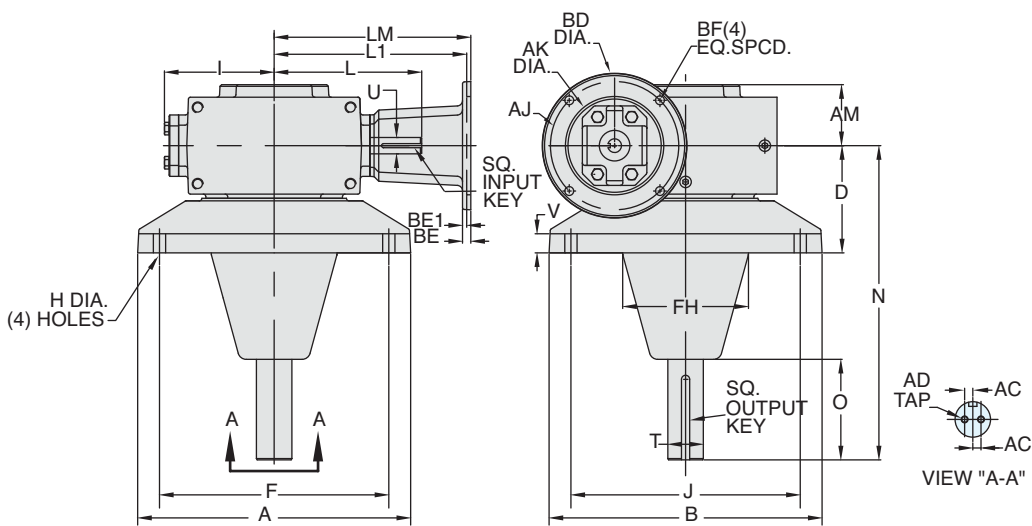
Ratio Multipliers

Accessories and
Additional Capabilities

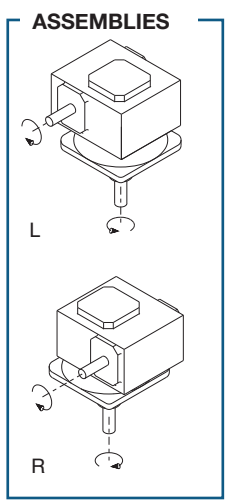
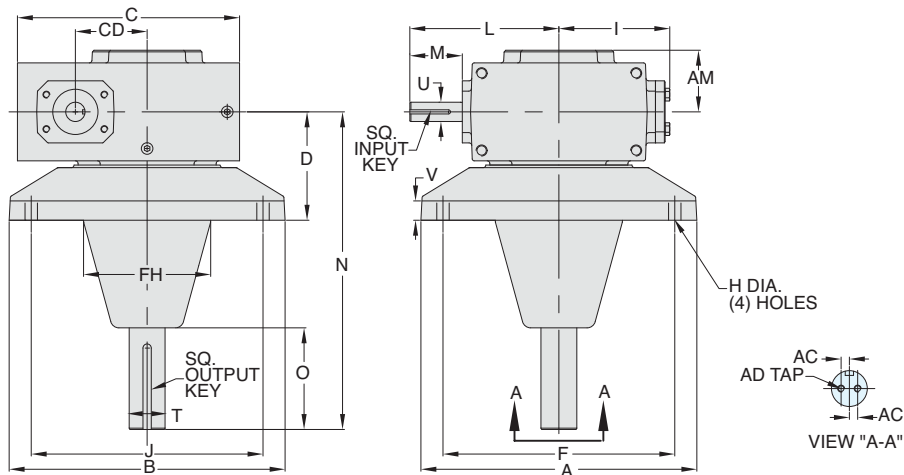
Style FEMQ



Style FEM



Style FE



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



NH Series Dimensions

Styles: FEMQ, FEM, FE



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE FEMQ, FEM, FE DIMENSIONS (Inches)

Size	A	AC	AD	AM	B	C	CD	D	F	FH	H	I	J	L	M	N	O	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key**	P**
NH830	11.00	0.375	.31-18 UNC X 1.00 DP	2.22	11.00	8.25	3.00	3.67	9.00	5.12	.56	4.84	9.00	6.57	2.38	13.15	4.66	0.78	1.438	.875	3/16 X 1.63	3/8 x 3.88
NH832	12.50	0.375	.31-18 UNC X 1.00 DP	2.79	12.50	10.06	3.25	4.91	10.50	5.75	.56	5.02	10.50	6.76	2.38	14.39	4.63	0.88	1.625	.875	3/16 X 1.63	3/8 x 3.69
NH842	14.00	0.500	.38-16 UNC X 1.00 DP	3.62	14.00	11.50	4.25	5.74	12.00	6.75	.69	6.10	12.00	9.57	3.47	16.25	5.66	1.00	1.688	1.25	1/4 X 2.50	3/8 x 4.68
NH852	16.00	0.750	.38-16 UNC X 1.00 DP	4.28	16.00	12.69	5.25	6.00	14.00	8.00	.81	7.50	14.00	10.88	3.38	16.50	5.62	1.25	2.188	1.25	1/4 X 3.00	1/2 x 4.63

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM		L1		LQ		LQ1			RQ		
	48CZ	56C/ 140TC	180TC/ 210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC
NH830	N/A	8.82	9.82	N/A	5.69	6.12	6.56	N/A	5.32	5.63	6.06	N/A
NH832	N/A	9.01	10.01	N/A	5.88	6.31	6.75	N/A	5.51	5.81	6.25	N/A
NH842	N/A	11.81	12.90	13.46	6.45	7.21	7.21	7.77	6.04	6.68	6.68	7.24
NH852	N/A	13.21	14.30	14.86	7.85	8.61	8.61	9.17	7.35	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway♦	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)♦

Size	LQ1						RQ					
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D
	N/A	4.78	5.41	5.41	5.80	N/A	N/A	4.59	5.22	5.22	5.57	N/A
	N/A	4.97	5.59	5.59	5.99	N/A	N/A	4.78	5.41	5.41	5.76	N/A
	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway♦	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

- ** Key not provided with gear reducer. Keyway dimension shown.
- ♦ Keyway width by depth
- 48CZ not available
- ♦ Metric IEC B5 input flange options are available only on quill input styles.
- * Style FE and FEM only.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
EF	FEMQ
EFC	FEM
E	FE

Refer to page 18 for complete interchange guide for original Grove Gear OE Series products.



NH Series Dimensions

Styles: BLMQ, BLM, BL



TORQUE LIMITING DESIGN

Features

- ★ No external parts to align, assemble, or adjust for easy installation.
- ★ Pre-set to your torque limit for reduced installation time.
- ★ Clutch slips automatically to reduce costly downtime and shock damage.
- ★ When overload is removed the reducer returns to normal operation without having to reset the clutch.
- ★ Internal slip clutch runs in oil bath for longer life, rust prevention and less maintenance.
- ★ Lifetime torque setting eliminates the need for frequent adjustments.
- ★ Easily adjusted in the field, eliminating the need for factory re-calibration.



STYLE BLMQ, BLM, BL DIMENSIONS (Inches)

Size	A	B	C	CD	D	F	G	H		I	J	K	L	LL	M	N	O	T +0.000 -0.0015	U +0.000 -0.0015	Input Key#	Output Key
								Tap Size	Depth												
NH818	2.56	4.50	5.44	1.75	2.06	1.88	0.94	5/16-18 UNC	.63	3.24	3.75	1.88	4.45	3.60	1.76	4.75	2.94	1.000	0.625	3/16 X 1.38	1/4 X 1.75
NH824	2.94	5.25	6.88	2.38	2.69	2.13	1.06	3/8-16 UNC	.69	3.77	4.00	2.00	5.51	3.78	2.38	4.88	2.91	1.000	0.750	3/16 X 1.63	1/4 X 1.75

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM		L1	LQ		LQ1			RQ			
	48CZ	56C/140TC		180TC/210TC	250TC	48CZ/56C/140TC	180TC	210TC	250TC	48CZ/56C/140TC	180TC	210TC	250TC
NH818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
NH824	N/A	7.76	8.76	N/A	4.63	5.06	N/A	N/A	4.09	4.56	N/A	N/A

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)✦

Size	D			LQ1			RQ					
	D63D	D71D	D80D	D90D	D100LD/D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/D112MD	D132D
NH818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
NH824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184

- ✦ Keyway width by depth
- 48CZ not available
- ✦ Metric IEC B5 input flange options are available only on quill input styles.
- * Style BL and BLM only.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
ULF	BLMQ
ULFC	BLM
UL	BL

Refer to page 18 for complete interchange guide for original Grove Gear OE Series products.

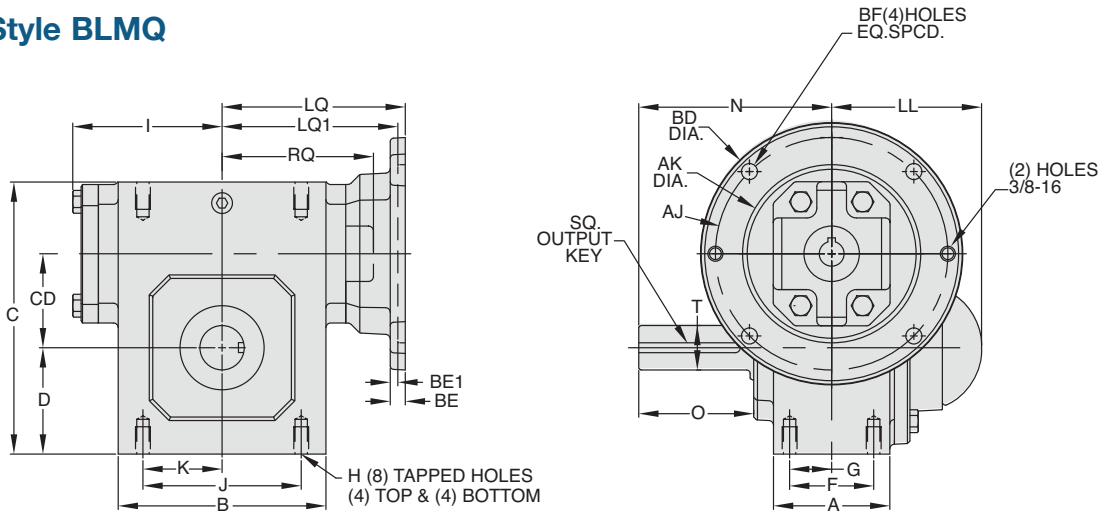
CAPACITY RATINGS

Ratings	NH818				NH824		
	Output RPM	Max. Input H.P.	Output H.P.	Output Torque	Max. Input H.P.	Output H.P.	Output Torque
5	350	1.70	1.56	281	3.89	3.63	653
7 1/2	233	1.67	1.52	407	3.47	3.20	863
10	175	1.37	1.23	442	3.08	2.81	1011
15	117	1.03	.876	473	2.30	2.03	1095
20	87.5	.814	.677	487	1.83	1.56	1121
25	70.0	.665	.537	483	1.51	1.25	1124
30	58.3	.597	.451	487	1.32	1.05	1133
40	43.8	.469	.338	486	1.04	.778	1121
50	35.0	.377	.258	465	.847	.602	1084
60	29.2	.317	.204	442	.674	.466	1007
80	21.9	.208	.124	356	.455	.288	830
100	17.5	.141	.077	277	.307	.180	468

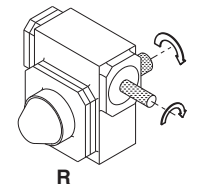
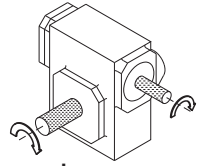
NOTE: All ratings based on 1750 RPM input speed with service factor of 1.0.



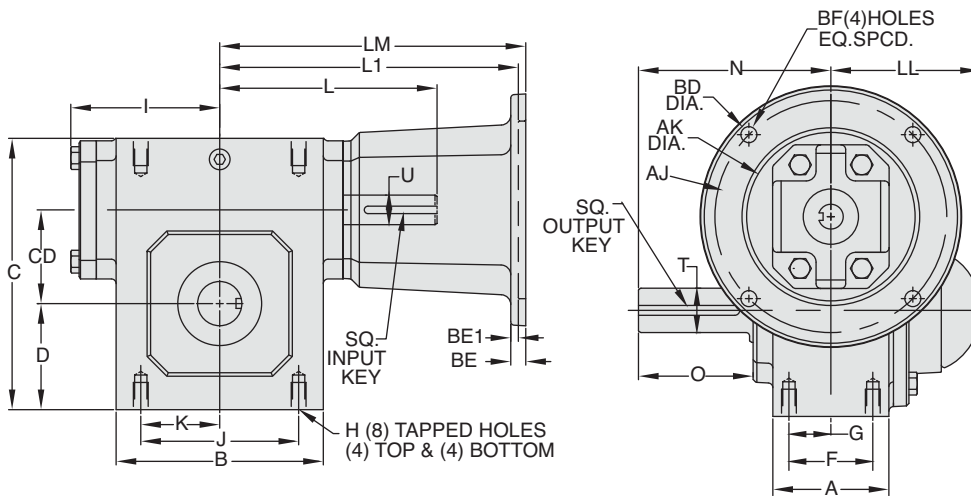
Style BLMQ



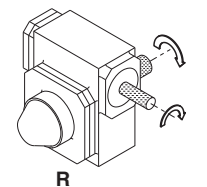
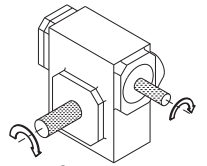
ASSEMBLIES



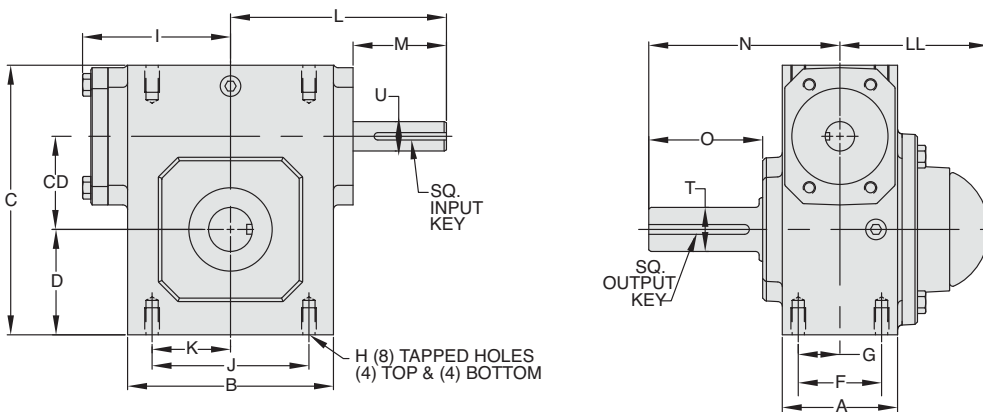
Style BLM



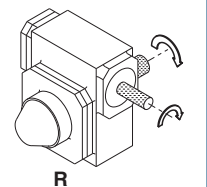
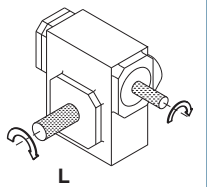
ASSEMBLIES



Style BL



ASSEMBLIES

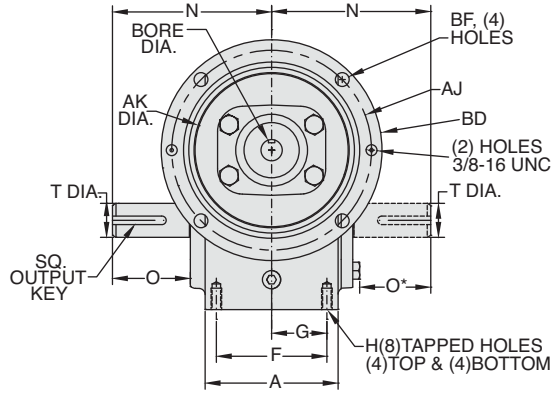
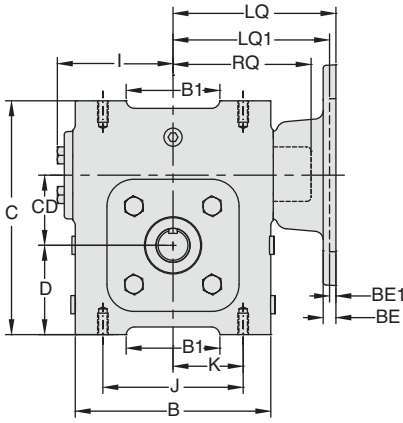


REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

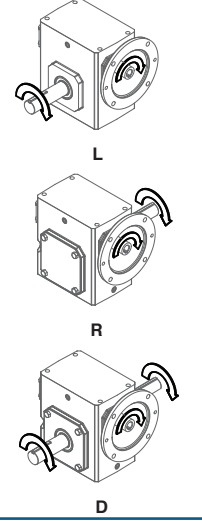
ELECTRA-GEAR EL Series Dimensions

Styles: BMQ, BM, B

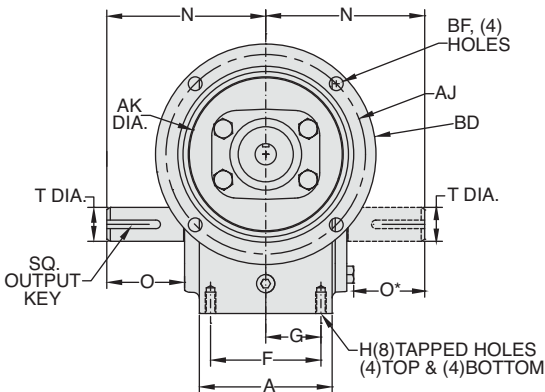
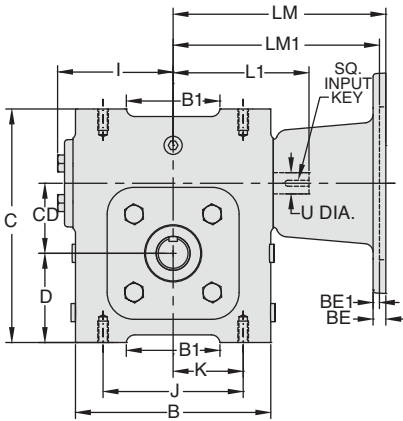
Style BMQ



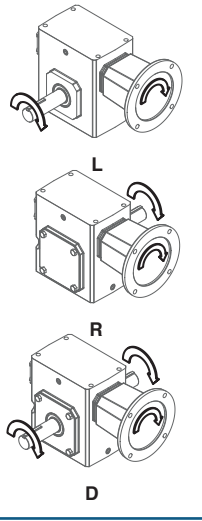
ASSEMBLIES



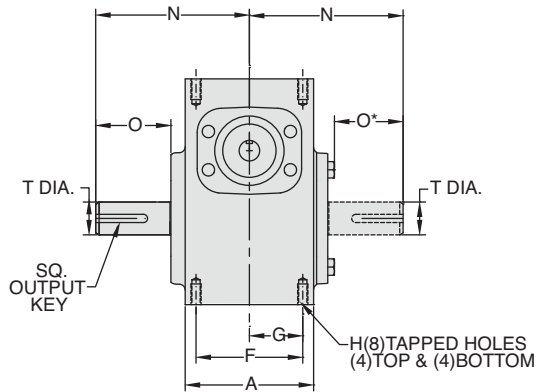
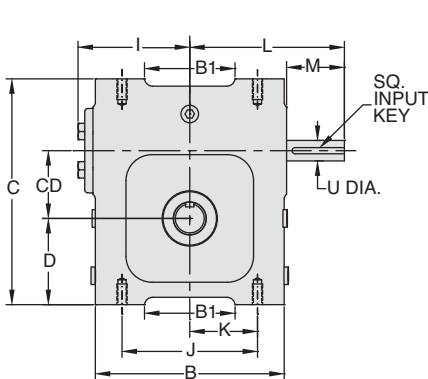
Style BM



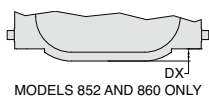
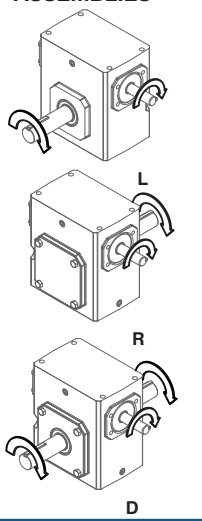
ASSEMBLIES



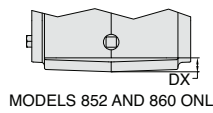
Style B



ASSEMBLIES



SIDE VIEW



END VIEW

REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE BMQ, BM, B DIMENSIONS (Inches)

Size	A	B	B1	C	CD	D	DX	F	G	H		I	J	K	L	M	N	O	O*	T +0.000 -0.0015	U +0.000 -0.0015	Input Key (Style B only)*:	Input Key (Style BM only)*:	Output Key
										Tap Size	Depth													
EL813	2.82	3.80	--	4.66	1.33	1.72	--	2.00	1.00	5/16-18	0.50	2.40	3.25	1.63	3.82	1.87	4.00	2.16	1.96	0.625	0.500	1/8 x 1.00	1/8 x 1.00	3/16 x 1.38
EL818	3.50	4.83	2.48	5.86	1.75	2.31	--	2.94	1.47	5/16-18	0.63	3.03	3.69	1.84	4.45	1.78	4.39	2.05	1.85	0.750	0.625	3/16 x 1.38	3/16 x .500	3/16 X 1.38
EL821	3.91	5.75	2.76	6.88	2.06	2.63	--	3.25	1.63	3/8-16	0.87	3.40	4.13	2.06	4.82	1.76	4.68	2.29	2.09	1.000	0.625	3/16 X 1.38	3/16 x .500	1/4 x 1.44
EL824	4.06	5.86	--	6.94	2.38	2.50	--	2.88	1.44	3/8-16	0.69	3.61	5.00	2.50	5.51	2.45	5.14	2.66	2.46	1.125	0.750	3/16 X 1.63	3/16 x .500	1/4 X 1.62
EL826	4.84	7.17	4.21	8.00	2.63	3.25	--	3.38	1.69	3/8-16	0.69	4.17	5.00	2.50	6.07	2.45	5.63	2.73	2.53	1.250	0.750	3/16 x 1.63	3/16 x .500	1/4 X 1.62
EL830	5.25	8.11	4.50	8.94	3.00	3.50	--	4.13	2.06	1/2-13	1.00	4.81	5.75	2.88	6.56	2.31	6.62	3.60	3.37	1.500	0.875	3/16 x 1.63	3/16 x .500	3/8 X 2.25
EL832	5.25	8.11	4.53	10.50	3.25	4.00	--	4.13	2.06	1/2-13	1.00	5.00	6.63	3.31	6.75	2.31	6.62	3.60	3.37	1.625	0.875	3/16 x 1.63	3/16 x .500	3/8 X 2.25
EL842	6.13	9.63	5.71	11.69	4.25	4.50	--	3.75	1.88	5/8-11	1.19	6.15	7.00	3.50	9.57	3.47	8.12	4.50	4.22	1.875	1.250	1/4 x 2.50	1/4 x 2.50	3/8 x 2.50
EL852	7.19	11.50	7.82	12.25	5.25	4.25	0.75	5.25	2.63	3/4-10	1.44	7.55	9.62	4.81	10.88	3.38	9.06	4.78	4.50	2.000	1.250	1/4 X 3.00	1/4 x 3.00	1/2 x 2.50
EL860	7.00	13.50	--	14.25	6.00	5.00	1.63	5.38	2.69	7/8-9	1.63	7.88	11.00	5.50	10.99	3.00	10.75	5.25	5.25	2.250	1.500	3/8 x 3.00	3/8 x 2.75	5/8 X 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM	LM1	L1	LQ	LQ1	RQ
	56C/140TC	180TC / 210TC	56C/140TC	180TC / 210TC	56C/140TC	180TC / 210TC
EL813	6.07	--	3.82	--	3.79	--
EL818	5.89	--	3.64	--	4.42	--
EL821	6.26	--	4.00	--	4.79	--
EL824	6.48	7.30	4.29	4.29	4.77	4.09
EL826	7.04	7.86	4.88	4.88	5.33	4.82
EL830	7.67	8.31	5.38	5.38	5.97	5.32
EL832	7.86	8.50	5.56	5.56	6.16	5.51
EL842	11.25	12.53	9.57	9.57	6.45	6.04
EL852	12.65	13.93	10.88	10.88	7.85	7.35
EL860	--	11.94	10.99	--	--	--

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

- * Applies to double output shaft
- ◆ Keyway width by depth
- * Solid input shaft and C-faced coupling input reducers have different input shaft length and key.



WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

- EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
- See page 62 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
MSC or MLSC	BMQ
MC or MLC	BM
M or ML	B
M + "KV" Kit	B + "KV" Kit

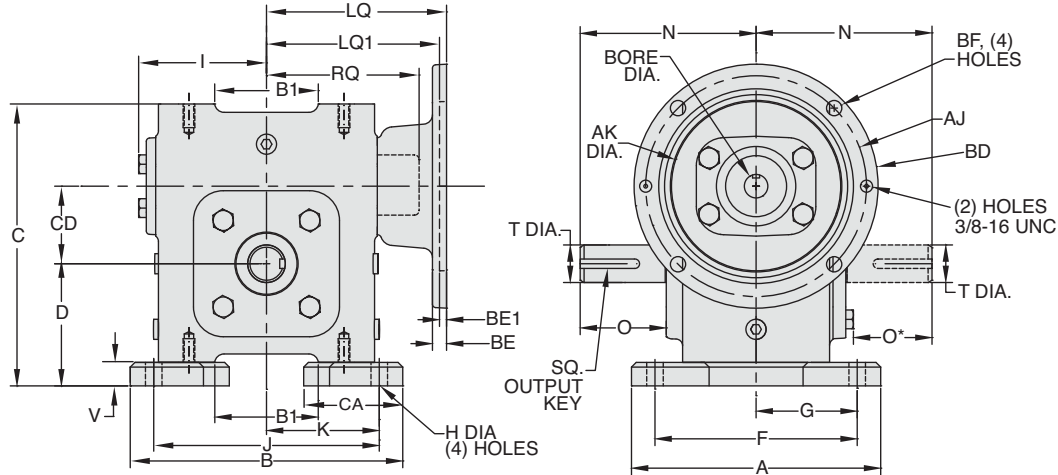
Convert Style B to motorized coupling input using kits shown on page 294.

ELECTRA-GEAR

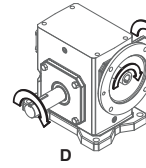
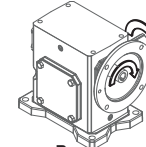
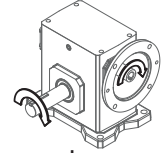
EL Series Dimensions

Styles: TMQ, TM, T

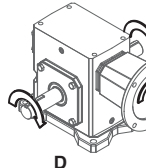
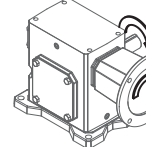
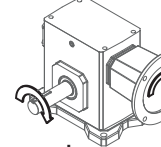
Style TMQ



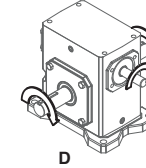
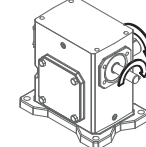
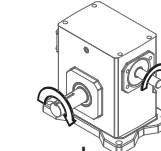
ASSEMBLIES



ASSEMBLIES

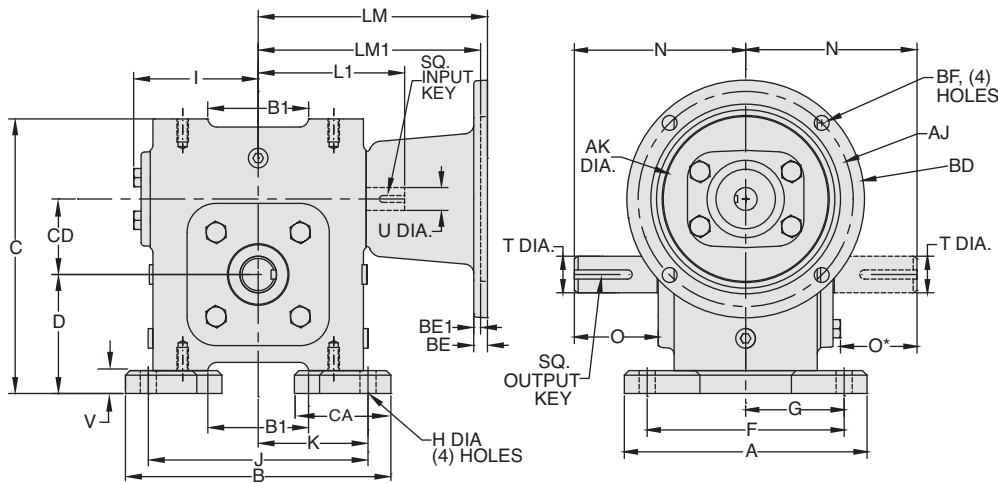


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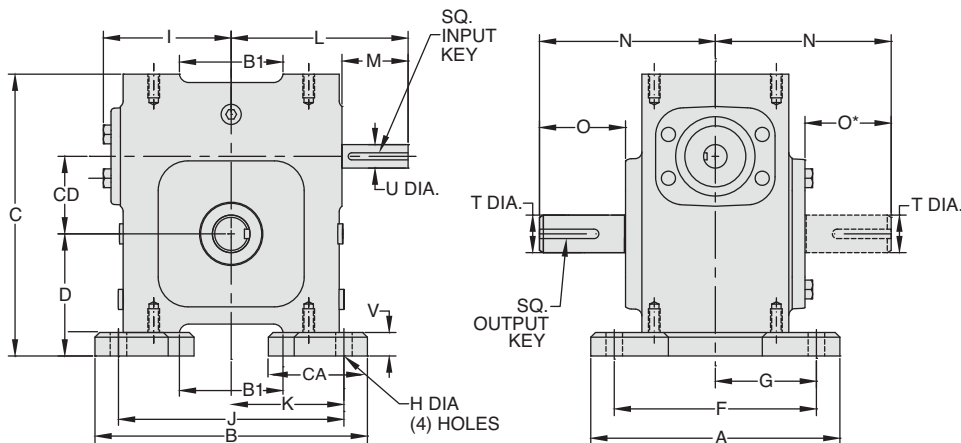


REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

Style TM



Style T



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE TMQ, TM, T DIMENSIONS (Inches)

Size	A	B	B1	C	CA	CD	D	F	G	H	I	J	K	L	M	N	O	O*	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key (Style T only)*	Input Key (Style TM only)*	Output Key
EL813	4.06	5.13	--	5.19	1.56	1.33	2.25	3.31	1.66	0.34	2.40	4.38	2.19	3.82	1.87	4.00	2.16	1.96	0.53	0.625	0.500	1/8 x 1.00	1/8 x 1.00	3/16 x 1.38
EL818	5.19	6.06	2.48	6.42	2.15	1.75	2.84	4.38	2.19	0.38	3.03	5.25	2.63	4.35	1.78	4.39	2.05	1.85	0.56	0.750	0.625	3/16 x 1.38	3/16 x .500	3/16 X 1.38
EL821	6.63	7.25	2.76	7.51	2.66	2.06	3.25	5.38	2.69	0.44	3.40	6.00	3.00	4.71	1.76	4.68	2.29	2.09	0.63	1.000	0.625	3/16 X 1.38	3/16 x .500	1/4 x 1.44
EL824	6.38	7.69	--	7.63	2.59	2.38	3.25	4.88	2.44	0.47	3.61	6.19	3.09	5.51	2.45	5.14	2.66	2.46	0.75	1.125	0.750	3/16 X 1.63	3/16 x .500	1/4 X 1.62
EL826	6.63	8.13	4.21	8.69	2.81	2.63	3.94	5.38	2.69	0.50	4.17	6.88	3.44	6.07	2.45	5.63	2.73	2.53	0.69	1.250	0.750	3/16 x 1.63	3/16 x .500	1/4 X 1.62
EL830	9.00	9.88	4.50	9.69	3.69	3.00	4.25	7.50	3.75	0.56	4.81	8.38	4.19	6.56	2.31	6.62	3.60	3.37	0.75	1.500	0.875	3/16 x 1.63	3/16 x .500	3/8 X 2.25
EL832	9.13	10.88	4.53	11.25	3.69	3.25	4.75	7.63	3.82	0.56	5.00	9.38	4.69	6.75	2.31	6.62	3.60	3.37	0.75	1.625	0.875	3/16 x 1.63	3/16 x .500	3/8 X 2.25
EL842	10.00	10.50	5.71	12.94	3.38	4.25	5.75	8.00	4.00	0.81	6.15	8.50	4.25	9.57	3.47	8.12	4.50	4.22	1.25	1.875	1.250	1/4 x 2.50	1/4 x 2.50	3/8 x 2.50
EL852	10.75	12.13	7.82	13.75	2.50	5.25	5.75	8.75	4.38	0.81	7.55	9.75	4.88	10.88	3.38	9.06	4.78	4.50	1.50	2.000	1.250	1/4 X 3.00	1/4 x 3.00	1/2 x 2.50
EL860	11.75	13.50	--	16.00	4.35	6.00	6.75	9.50	4.75	0.94	7.88	10.50	5.25	10.99	3.00	10.75	5.25	5.25	1.75	2.250	1.500	3/8 x 3.00	3/8 x 2.75	5/8 X 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC | 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC | 180TC / 210TC
EL813	6.07	--	3.82	--	3.79	--
EL818	5.89	--	3.64	--	4.42	--
EL821	6.26	--	4.00	--	4.79	--
EL824	6.48	7.30	4.29	4.29	4.77	4.09
EL826	7.04	7.86	4.88	4.88	5.33	4.82
EL830	7.67	8.31	5.38	5.38	5.97	5.32
EL832	7.86	8.50	5.56	5.56	6.16	5.51
EL842	11.25	12.53	9.57	9.57	6.45	6.04
EL852	12.65	13.93	10.88	10.88	7.85	7.35
EL860	--	11.94	10.99	10.99	--	--

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway♦	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

- * Applies to double output shaft
- ♦ Keyway width by depth
- ※ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.



WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

- EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
- See page 62 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
ASC or ALSC	TMQ
AC or ALC	TM
A or AL	T
A + "KV" Kit	T + "KV" Kit

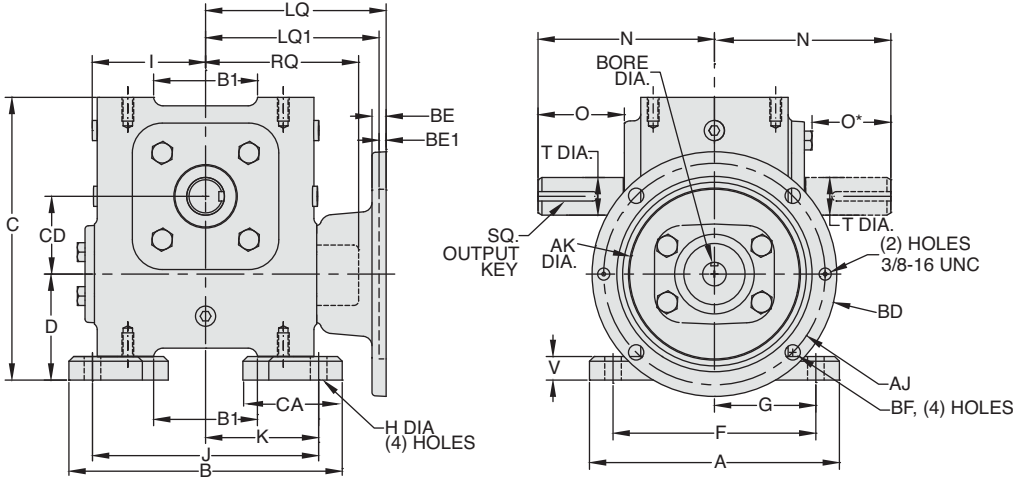
Convert Style T to motorized coupling input using kits shown on page 294.

ELECTRA-GEAR

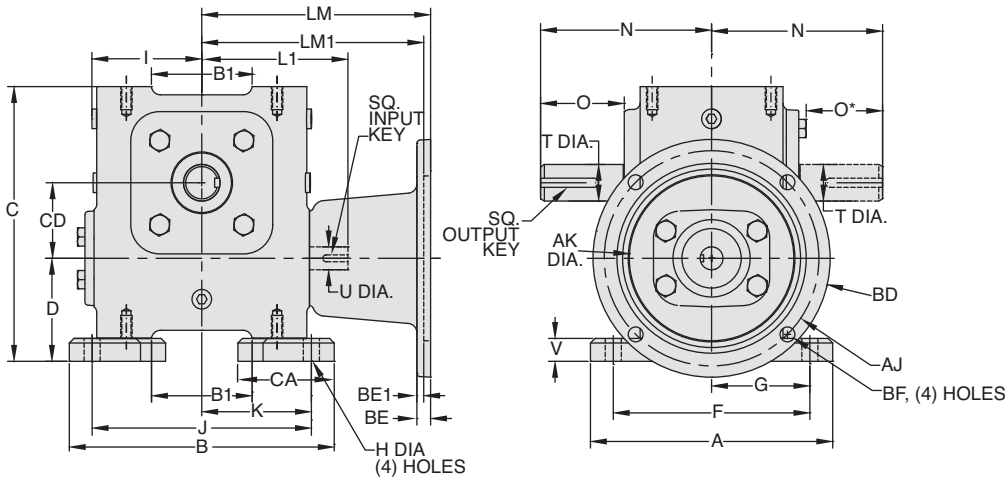
EL Series Dimensions

Styles: UMQ, UM, U

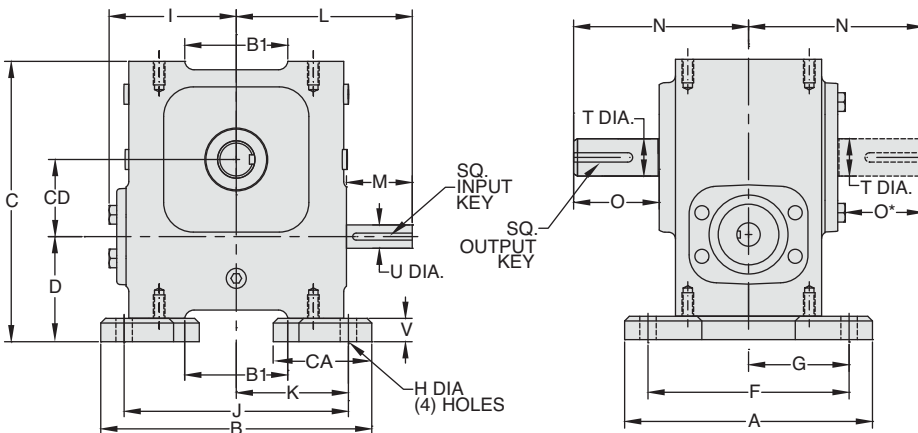
Style UMQ



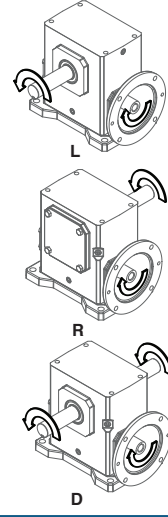
Style UM



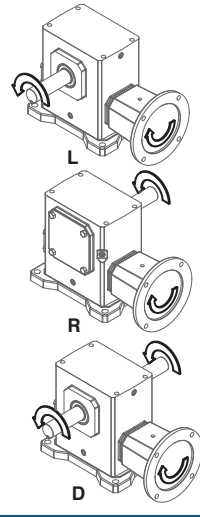
Style U



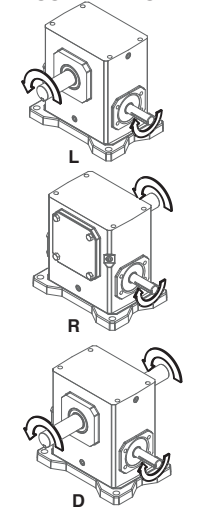
ASSEMBLIES



ASSEMBLIES



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE UMQ, UM, U DIMENSIONS (Inches)

Size	A	B	B1	C	CA	CD	D	F	G	H	I	J	K	L	M	N	O	O*	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key (Style U only)※	Input Key (Style UM only)※	Output Key
EL813	4.06	5.13	--	5.19	1.56	1.33	2.13	3.31	1.66	0.34	2.40	4.38	2.19	3.82	1.87	4.00	2.16	1.96	0.53	0.625	0.500	1/8 x 1.00	1/8 x 1.00	3/16 x 1.38
EL818	5.19	6.06	2.48	6.42	2.15	1.75	2.37	4.38	2.19	0.38	3.03	5.25	2.63	4.35	1.78	4.39	2.05	1.85	0.56	0.750	0.625	3/16 x 1.38	3/16 x .500	3/16 X 1.38
EL821	6.63	7.25	2.76	7.51	2.66	2.06	2.82	5.38	2.69	0.44	3.40	6.00	3.00	4.71	1.76	4.68	2.29	2.09	0.63	1.000	0.625	3/16 X 1.38	3/16 x .500	1/4 x 1.44
EL824	6.38	7.69	--	7.63	2.59	2.38	2.81	4.88	2.44	0.47	3.61	6.19	3.09	5.51	2.45	5.14	2.66	2.46	0.75	1.125	0.750	3/16 X 1.63	3/16 x .500	1/4 X 1.62
EL826	6.63	8.13	4.21	8.69	2.81	2.63	2.81	5.38	2.69	0.50	4.17	6.88	3.44	6.07	2.45	5.63	2.73	2.53	0.69	1.250	0.750	3/16 x 1.63	3/16 x .500	1/4 X 1.62
EL830	9.00	9.88	4.50	9.69	3.69	3.00	3.19	7.50	3.75	0.56	4.81	8.38	4.19	6.56	2.31	6.62	3.60	3.37	0.75	1.500	0.875	3/16 x 1.63	3/16 x .500	3/8 X 2.25
EL832	9.13	10.88	4.53	11.25	3.69	3.25	4.00	7.63	3.82	0.56	5.00	9.38	4.69	6.75	2.31	6.62	3.60	3.37	0.75	1.625	0.875	3/16 x 1.63	3/16 x .500	3/8 X 2.25
EL842	10.00	10.50	5.71	12.94	3.38	4.25	4.19	8.00	4.00	0.81	6.15	8.50	4.25	9.57	3.47	8.12	4.50	4.22	1.25	1.875	1.250	1/4 x 2.50	1/4 x 2.50	3/8 x 2.50
EL852	10.75	12.13	7.82	13.75	2.50	5.25	4.25	8.75	4.38	0.81	7.55	9.75	4.88	10.88	3.38	9.06	4.78	4.50	1.50	2.000	1.250	1/4 X 3.00	1/4 x 3.00	1/2 x 2.50
EL860	11.75	13.50	--	16.00	4.35	6.00	5.00	9.50	4.75	0.94	7.88	10.50	5.25	10.99	3.00	10.75	5.25	5.25	1.75	2.250	1.500	3/8 x 3.00	3/8 x 2.75	5/8 X 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC 180TC / 210TC
EL813	6.07	--	3.82	--	3.79	--
EL818	5.89	--	3.64	--	4.42	--
EL821	6.26	--	4.00	--	4.79	--
EL824	6.48	7.30	4.29	4.29	4.77	4.09
EL826	7.04	7.86	4.88	4.88	5.33	4.82
EL830	7.67	8.31	5.38	5.38	5.97	5.32
EL832	7.86	8.50	5.56	5.56	6.16	5.51
EL842	11.25	12.53	9.57	9.57	6.45	6.04
EL852	12.65	13.93	10.88	10.88	7.85	7.35
EL860	--	11.94	10.99	--	--	--

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

- * Applies to double output shaft
- ◆ Keyway width by depth
- * Solid input shaft and C-faced coupling input reducers have different input shaft length and key.



WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

- EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
- See page 62 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
NOT A	UMQ
STANDARD CATALOGED	UM
OPTION	U

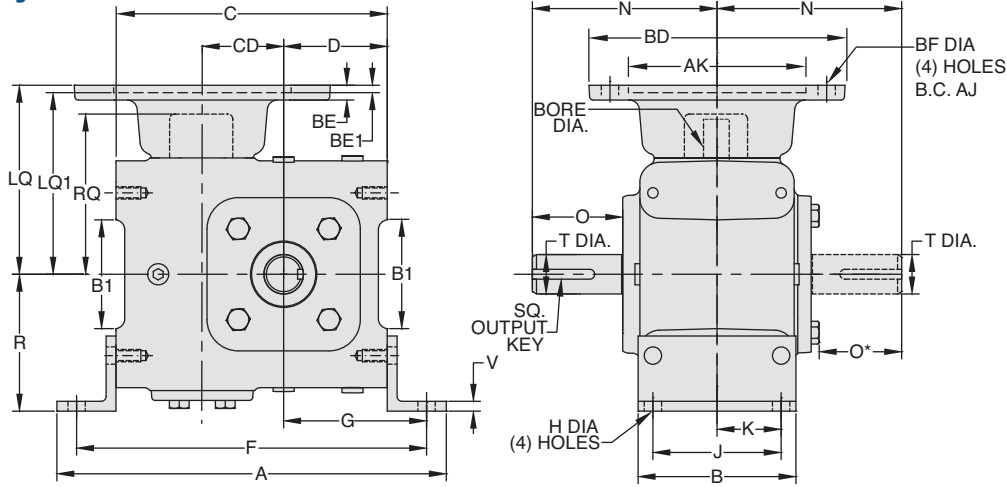
Convert Style U to motorized coupling input using kits shown on page 294.

ELECTRA-GEAR

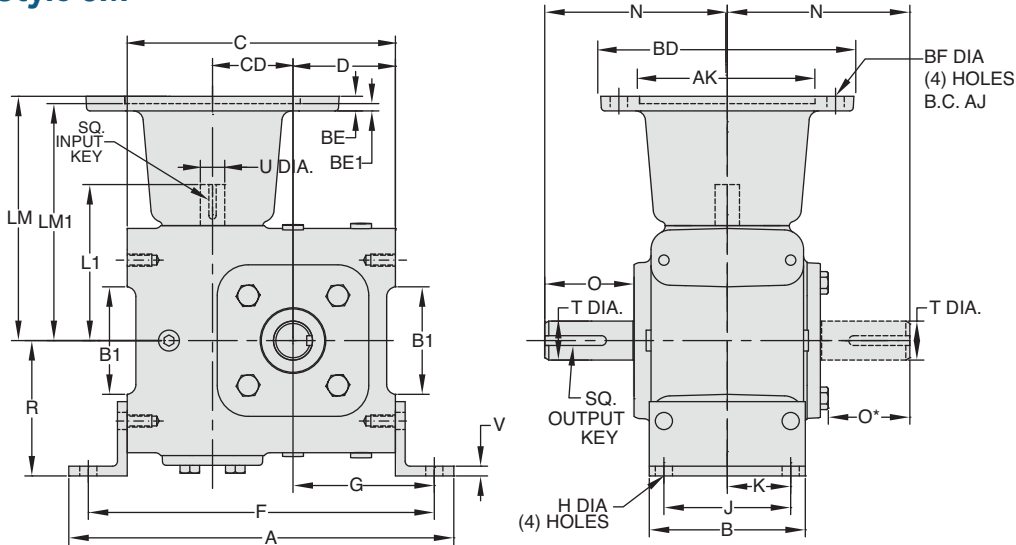
EL Series Dimensions

Styles: JMQ, JM, J

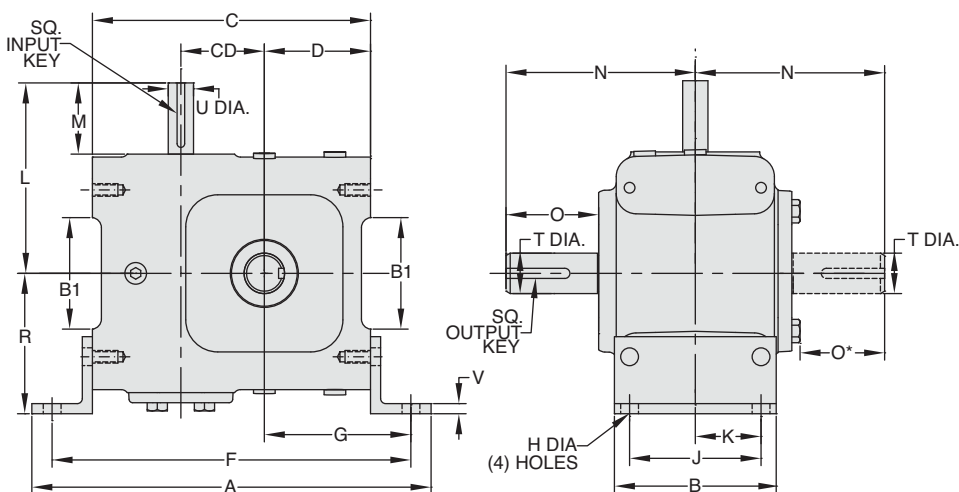
Style JMQ



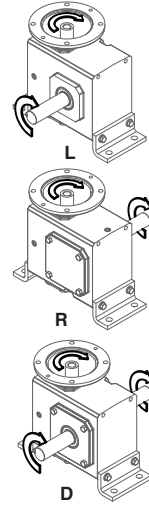
Style JM



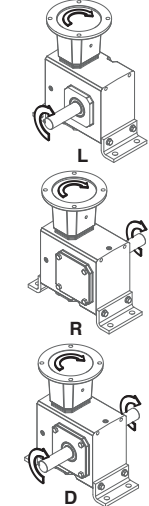
Style J



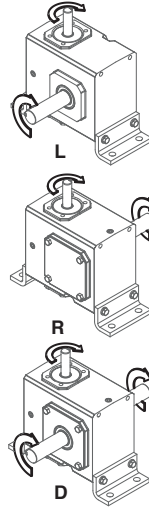
ASSEMBLIES



ASSEMBLIES



ASSEMBLIES



REVERSE ALL ARROWS
FOR OPPOSITE INPUT SHAFT
ROTATION. CONTACT FACTORY
FOR OTHER MOUNTINGS OR
ASSEMBLY POSITIONS.

STYLE JMQ, JM, J DIMENSIONS (Inches)

Size	A	B	B1	C	CD	D	F	G	H	J	K	L	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key (Style J only)*	Input Key (Style JM only)*	Output Key
EL813	7.16	2.91	--	4.66	1.33	1.72	6.41	2.60	0.34	2.00	1.00	3.82	1.87	4.00	2.16	1.96	2.94	0.19	0.625	0.500	1/8 x 1.00	1/8 x 1.00	3/16 x 1.38
EL818	8.88	3.56	2.48	5.86	1.75	2.31	7.88	3.32	0.38	2.94	1.47	4.35	1.78	4.39	2.05	1.85	2.97	0.38	0.750	0.625	3/16 x 1.38	3/16 x .500	3/16 X 1.38
EL821	9.87	4.00	2.76	6.88	2.06	2.63	8.87	3.62	0.44	3.25	1.63	4.71	1.76	4.68	2.29	2.09	3.47	0.25	1.000	0.625	3/16 X 1.38	3/16 x .500	1/4 x 1.44
EL824	10.31	4.00	--	6.94	2.38	2.50	9.19	3.63	0.69	2.88	1.44	5.51	2.45	5.14	2.66	2.46	4.06	0.38	1.125	0.750	3/16 X 1.63	3/16 x .500	1/4 X 1.62
EL826	12.00	4.38	4.21	8.00	2.63	3.25	10.50	4.50	0.50	3.38	1.69	6.07	2.45	5.63	2.73	2.53	4.03	0.31	1.250	0.750	3/16 x 1.63	3/16 x .500	1/4 X 1.62
EL830	12.94	5.13	4.50	8.94	3.00	3.50	11.44	4.75	0.56	4.13	2.06	6.56	2.31	6.62	3.60	3.37	4.81	0.80	1.500	0.875	3/16 x 1.63	3/16 x .500	3/8 X 2.25
EL832	14.50	5.13	4.53	10.50	3.25	4.00	13.00	5.25	0.56	4.13	2.06	6.75	2.31	6.62	3.60	3.37	5.25	0.38	1.625	0.875	3/16 x 1.63	3/16 x .500	3/8 X 2.25
EL842	17.50	5.13	5.71	11.69	4.25	4.50	14.50	5.91	0.81	3.75	1.88	9.57	3.47	8.12	4.50	4.22	5.63	0.50	1.875	1.250	1/4 x 2.50	1/4 x 2.50	3/8 x 2.50
EL852	20.25	6.50	7.82	12.25	5.25	4.25	16.75	6.50	0.81	5.25	2.63	10.88	3.38	9.06	4.78	4.50	7.63	0.50	2.000	1.250	1/4 X 3.00	1/4 x 3.00	1/2 x 2.50
EL860	22.25	7.00	--	14.25	6.00	5.00	18.75	7.63	0.94	5.38	2.69	10.99	3.00	10.75	5.25	5.25	8.38	0.50	2.250	1.500	3/8 x 3.00	3/8 x 2.75	5/8 X 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC	180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	180TC / 210TC
EL813	6.07	--	3.82	--	3.79	--	3.09	--
EL818	5.89	--	3.64	--	4.42	--	3.59	--
EL821	6.26	--	4.00	--	4.79	--	4.06	--
EL824	6.48	7.30	4.29	4.29	4.77	4.77	4.09	4.09
EL826	7.04	7.86	4.88	4.88	5.33	5.33	4.82	4.82
EL830	7.67	8.31	5.38	5.38	5.97	5.97	5.32	5.32
EL832	7.86	8.50	5.56	5.56	6.16	6.16	5.51	5.51
EL842	11.25	12.53	9.57	9.57	6.45	6.45	6.04	6.04
EL852	12.65	13.93	10.88	10.88	7.85	7.85	7.35	7.35
EL860	--	11.94	10.99	10.99	--	--	--	--

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway♦	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

- * Applies to double output shaft
- ♦ Keyway width by depth
- * Solid input shaft and C-faced coupling input reducers have different input shaft length and key.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

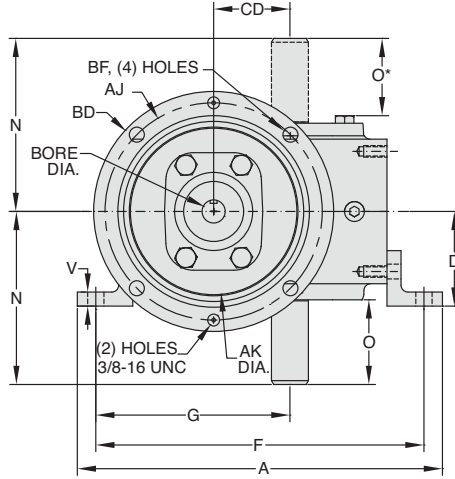
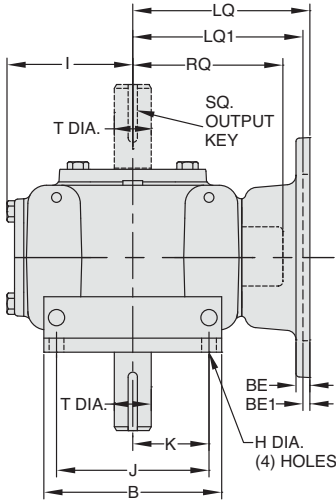
- EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
- See page 62 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

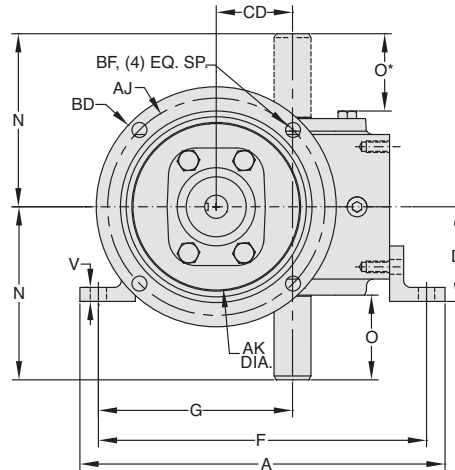
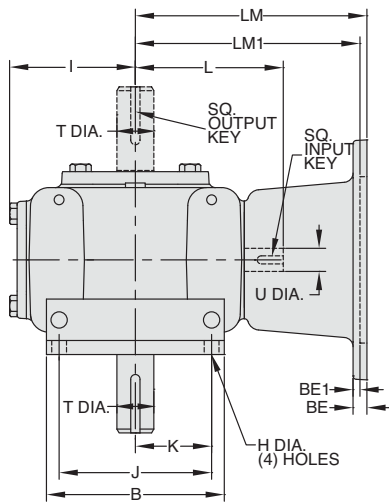
Original Style	New Style
JBSC or JBLSC	JMQ
JBC or JBLC	JM
JB or JBL	J
JB + "KV" Kit	J + "KV" Kit

Convert Style J to motorized coupling input using kits shown on page 294.

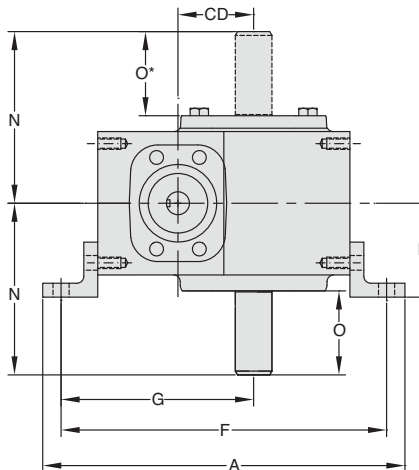
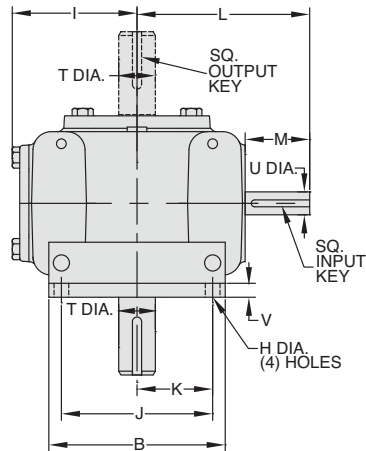
**ELECTRA-GEAR
EL Series
Dimensions**
Styles: VLMQ, VLM, VL
Style VLMQ



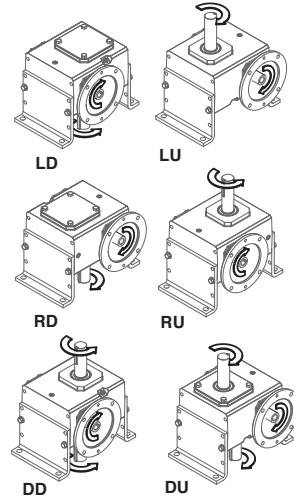
Style VLM



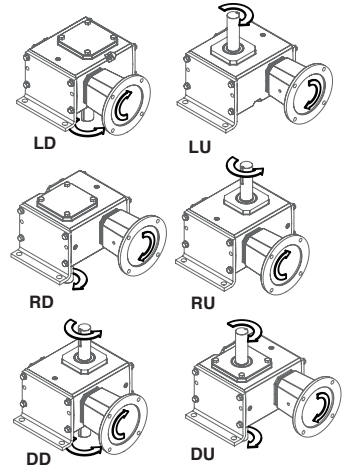
Style VL



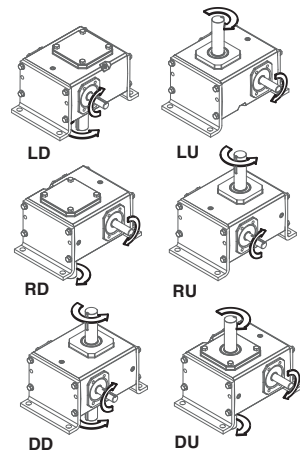
ASSEMBLIES



ASSEMBLIES



ASSEMBLIES



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Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE VLMQ, VLM, VL DIMENSIONS (Inches)

Size	A	B	CD	D	F	G	H	I	J	K	L	M	N	O	O*	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key (Style VL only)*	Input Key (Style VLM only)*	Output Key
EL813	7.16	4.13	1.33	2.31	6.16	3.69	0.34	2.40	3.25	1.63	3.82	1.87	4.00	2.16	1.96	0.19	0.625	0.500	1/8 x 1.00	1/8 x 1.00	3/16 x 1.38
EL818	8.88	4.25	1.75	2.28	7.88	4.57	0.38	3.03	3.69	1.84	4.35	1.78	4.39	2.05	1.85	0.38	0.750	0.625	3/16 x 1.38	3/16 x .500	3/16 X 1.38
EL821	9.87	4.81	2.06	2.56	8.87	5.25	0.44	3.40	4.13	2.06	4.71	1.76	4.68	2.29	2.09	0.38	1.000	0.625	3/16 X 1.38	3/16 x .500	1/4 x 1.44
EL824	10.88	5.88	2.38	2.75	9.38	5.66	0.50	3.61	5.00	2.50	5.51	2.45	5.14	2.66	2.46	0.31	1.125	0.750	3/16 X 1.63	3/16 x .500	1/4 X 1.62
EL826	12.00	5.88	2.63	2.81	10.50	6.00	0.50	4.17	5.00	2.50	6.07	2.45	5.63	2.73	2.53	0.31	1.250	0.750	3/16 x 1.63	3/16 x .500	1/4 X 1.62
EL830	12.94	6.75	3.00	3.75	11.44	6.69	0.56	4.81	5.75	2.88	6.56	2.31	6.62	3.60	3.37	0.25	1.500	0.875	3/16 x 1.63	3/16 x .500	3/8 X 2.25
EL832	14.50	7.63	3.25	3.75	13.00	7.75	0.56	5.00	6.63	3.31	6.75	2.31	6.62	3.60	3.37	0.38	1.625	0.875	3/16 x 1.63	3/16 x .500	3/8 X 2.25
EL842	17.50	8.38	4.25	4.59	14.69	8.69	0.81	6.15	7.00	3.50	9.57	3.47	8.12	4.50	4.22	0.50	1.875	1.250	1/4 x 2.50	1/4 x 2.50	3/8 x 2.50
EL852	19.25	11.50	5.25	5.88	16.88	10.35	0.81	7.55	9.63	4.82	10.88	3.38	9.06	4.78	4.50	0.50	2.000	1.250	1/4 X 3.00	1/4 x 3.00	1/2 x 2.50
EL860	21.25	13.50	6.00	6.38	18.63	11.44	0.94	7.88	11.00	5.50	10.99	3.00	10.75	5.25	5.25	0.63	2.250	1.500	3/8 x 3.00	3/8 x 2.75	5/8 X 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM	LM1	L1		LQ	LQ1	RQ	
	56C/140TC	180TC / 210TC	56C/140TC	180TC / 210TC	56C/140TC	180TC / 210TC	56C/140TC	180TC / 210TC
EL813	6.07	--	3.82	--	3.79	--	3.09	--
EL818	5.89	--	3.64	--	4.42	--	3.59	--
EL821	6.26	--	4.00	--	4.79	--	4.06	--
EL824	6.48	7.30	4.29	4.29	4.77	4.77	4.09	4.09
EL826	7.04	7.86	4.88	4.88	5.33	5.33	4.82	4.82
EL830	7.67	8.31	5.38	5.38	5.97	5.97	5.32	5.32
EL832	7.86	8.50	5.56	5.56	6.16	6.16	5.51	5.51
EL842	11.25	12.53	9.57	9.57	6.45	6.45	6.04	6.04
EL852	12.65	13.93	10.88	10.88	7.85	7.85	7.35	7.35
EL860	--	11.94	10.99	10.99	--	--	--	--

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

- * Applies to double output shaft
- ◆ Keyway width by depth
- ※ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.



WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

- EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
- See page 62 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
BSC or BLSC	VLMQ
BC or BLC	VLM
B or BL	VL
B + "KV" Kit	VL + "KV" Kit

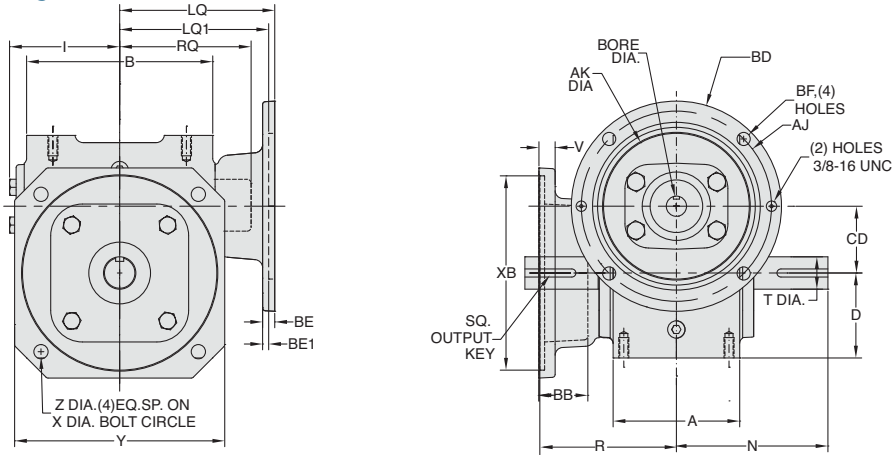
Convert Style VL to motorized coupling input using kits shown on page 294.

ELECTRA-GEAR

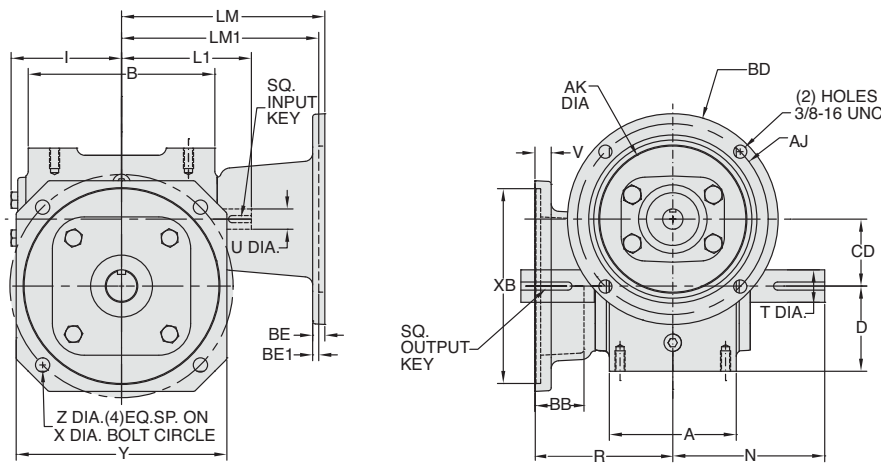
EL Series Dimensions

Styles: FRMQ, FRM, FR

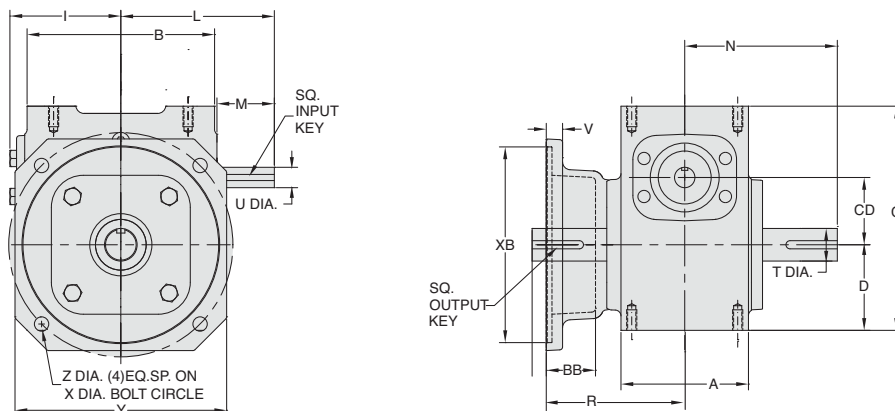
Style FRMQ



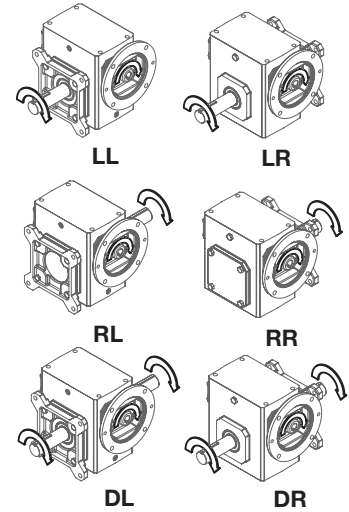
Style FRM



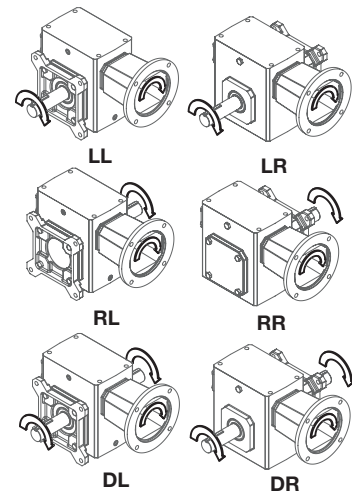
Style FR



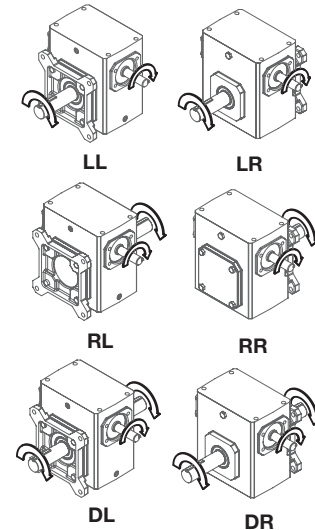
ASSEMBLIES



ASSEMBLIES



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE FRMQ, FRM, FR DIMENSIONS (Inches)

Size	A	B	BB	C	CD	D	I	L	M	N	R	V	X	XB	Y	Z	T +0.000 -0.0015	U +0.000 -0.0015	Input Key (Style F only)*	Input Key (Style FM only)*	Output Key
EL818	3.50	4.83	1.27	5.86	1.75	2.31	3.03	4.35	1.78	4.39	3.53	0.38	3.13	-	4.00	0.34	0.750	0.625	3/16 x 1.38	3/16 x .500	3/16 X 1.38
EL821	3.91	5.75	1.51	6.88	2.06	2.63	3.40	4.71	1.76	4.68	4.25	0.50	6.88	6.00	6.49	0.44	1.000	0.625	3/16 X 1.38	3/16 x .500	1/4 x 1.44
EL824	4.06	5.86	1.35	6.94	2.38	2.50	3.61	5.51	2.45	5.14	4.15	0.63	7.75	6.50	6.99	0.50	1.125	0.750	3/16 X 1.63	3/16 x .500	1/4 X 1.62
EL826	4.84	7.17	1.35	8.00	2.63	3.25	4.17	6.07	2.45	5.63	4.56	0.63	7.75	6.50	6.99	0.50	1.250	0.750	3/16 x 1.63	3/16 x .500	1/4 X 1.62
EL830	5.25	8.11	2.36	8.94	3.00	3.50	4.81	6.56	2.31	6.62	5.75	0.81	9.125-9.500	8.25	8.74	0.56	1.500	0.875	3/16 x 1.63	3/16 x .500	3/8 X 2.25
EL832	5.25	8.11	2.54	10.50	3.25	4.00	5.00	6.75	2.31	6.62	5.94	0.81	9.125-9.500	8.25	8.74	0.56	1.625	0.875	3/16 x 1.63	3/16 x .500	3/8 X 2.25
EL842	6.13	9.63	2.06	11.69	4.25	4.50	6.15	9.57	3.47	8.12	6.06	0.75	10.75	9.75	11.00	0.69	1.875	1.250	1/4 x 2.50	1/4 x 2.50	3/8 x 2.50
EL852	7.19	11.50	1.18	12.25	5.25	4.25	7.55	10.88	3.38	9.06	5.75	0.69	12.75	11.50	14.24	0.81	2.000	1.250	1/4 X 3.00	1/4 x 3.00	1/2 x 2.50
EL860	7.00	13.50	0.25	14.25	6.00	5.00	7.88	10.99	3.00	10.75	7.25	1.00	15.25	13.00	17.00	0.81	2.250	1.500	3/8 x 3.00	3/8 x 2.75	5/8 X 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC / 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC / 180TC / 210TC
EL818	5.89	--	3.64	--	4.42	3.59
EL821	6.26	--	4.00	--	4.79	4.06
EL824	6.48	7.30	4.29	4.29	4.77	4.09
EL826	7.04	7.86	4.88	4.88	5.33	4.82
EL830	7.67	8.31	5.38	5.38	5.97	5.32
EL832	7.86	8.50	5.56	5.56	6.16	5.51
EL842	11.25	12.53	9.57	9.57	6.45	6.04
EL852	12.65	13.93	10.88	10.88	7.85	7.35
EL860	--	11.94	10.99	--	--	--

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

- * Applies to double output shaft
 - ◆ Keyway width by depth
 - * Solid input shaft and C-faced coupling input reducers have different input shaft length and key.
- NOTE: Size 813 not available.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

- EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
- See page 62 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
NOT A STANDARD CATALOGED OPTION	FRMQ FRM FR

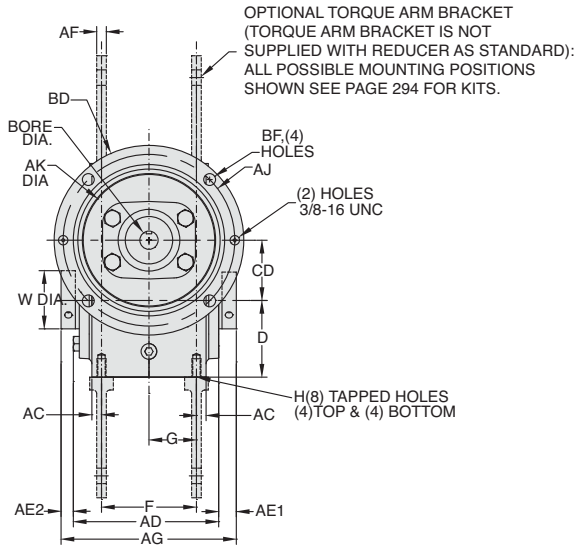
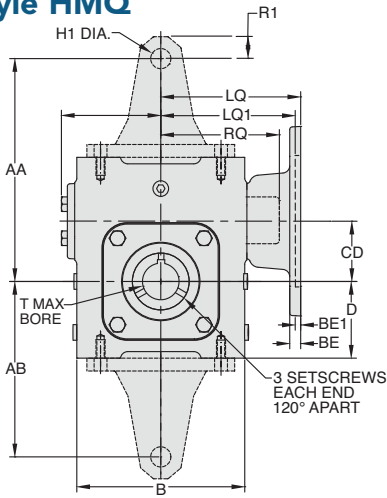
NOTE: Not a direct replacement to original ring base mounts. Styles R, RC, RSC.

Convert Style FR to motorized coupling input using kits shown on page 294.

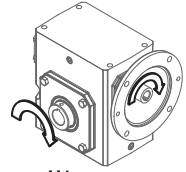
ELECTRA-GEAR EL Series Dimensions

Styles: HMQ, HM, H

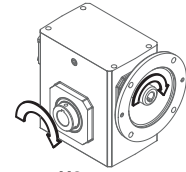
Style HMQ



ASSEMBLIES



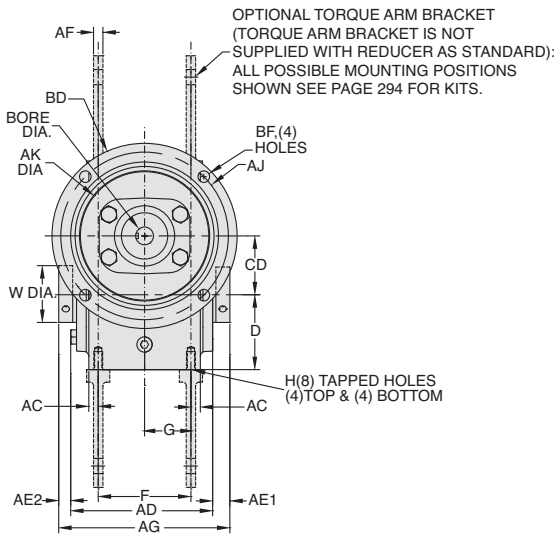
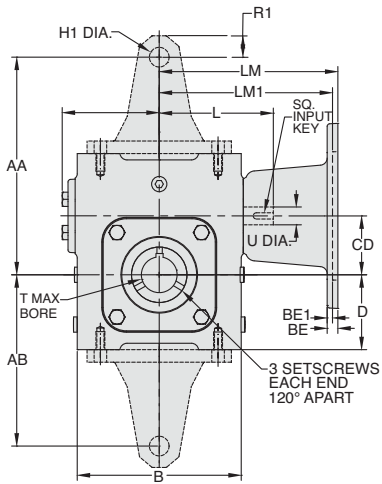
H1



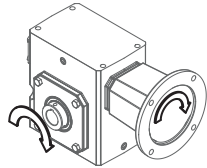
H2

H1 SUPPLIED AS STANDARD UNLESS SPECIFIED. ACCESSORY KITS CAN MOUNT TO EITHER OUTPUT SIDE OF REDUCER.

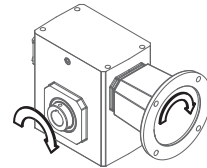
Style HM



ASSEMBLIES



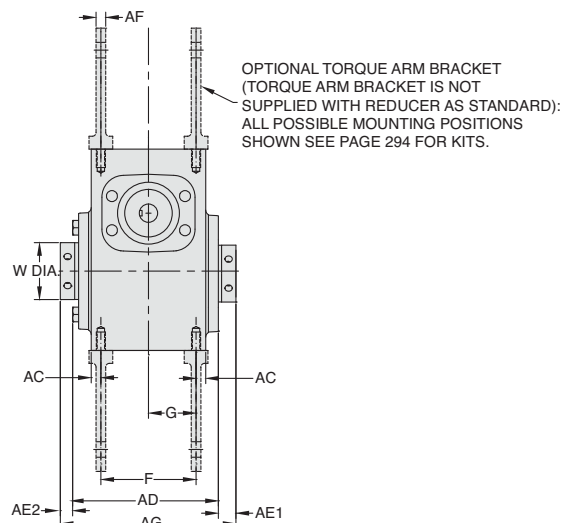
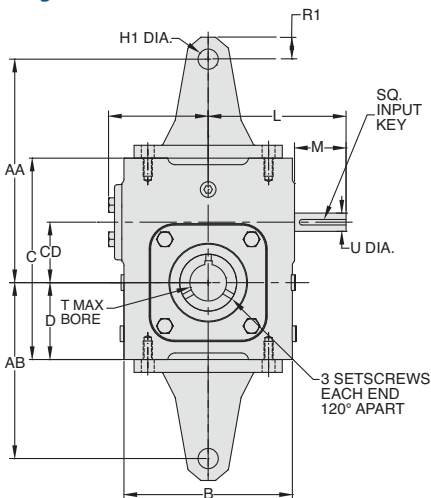
H1



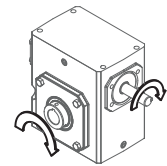
H2

H1 SUPPLIED AS STANDARD UNLESS SPECIFIED. ACCESSORY KITS CAN MOUNT TO EITHER OUTPUT SIDE OF REDUCER.

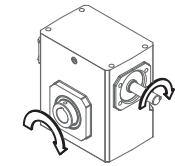
Style H



ASSEMBLIES



H1



H2

REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

H1 SUPPLIED AS STANDARD UNLESS SPECIFIED. ACCESSORY KITS CAN MOUNT TO EITHER OUTPUT SIDE OF REDUCER.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE HMQ, HM, H DIMENSIONS (Inches)

Size	AA	AB	AC	AD	AE1	AE2	AF	AG	B	C	CD	D	F	G	H1	I	L	M	R1	V	T MAX* +0.000 -0.0025	U +0.000 -0.0015	Input Key (Style H only)※	Input Key (Style HM only)※	Output Key
EL813	--	--	0.41	3.89	0.58	0.26	--	4.75	3.80	4.66	1.33	1.72	2.00	1.00	--	2.40	3.82	1.87	-	1.00	0.625	0.500	1/8 x 1.00	--	3/16 x 1.50
EL818	6.25	5.00	0.28	4.72	0.49	0.29	0.69	5.50	4.83	5.86	1.75	2.31	2.95	1.48	0.53	3.03	4.35	1.78	0.66	1.44	1.000	0.625	3/16 x 1.38	3/16 x .500	1/4 x 3.00
EL821	7.63	6.00	0.33	4.98	0.60	0.42	0.69	6.00	5.75	6.88	2.06	2.63	3.25	1.63	0.53	3.40	4.71	1.76	0.75	1.94	1.500*	0.625	3/16 X 1.38	3/16 x .500	3/8 x 3.00
EL824	7.81	5.87	0.59	5.17	1.02	0.81	0.69	6.00	5.86	6.94	2.38	2.50	2.88	1.44	0.53	3.61	5.51	2.45	0.75	1.94	1.500*	0.750	3/16 X 1.63	3/16 x .500	3/8 x 3.00
EL826	8.50	7.00	0.73	6.00	0.60	0.40	0.69	7.00	7.17	8.00	2.63	3.25	3.37	1.69	0.53	4.17	6.07	2.45	0.75	1.94	1.500*	0.750	3/16 x 1.63	3/16 x .500	3/8 x 3.00
EL830	9.94	8.00	0.56	6.52	0.60	0.38	0.69	7.50	8.11	8.94	3.00	3.50	4.13	2.07	0.53	4.81	6.56	2.31	0.81	2.75	2.188	0.875	3/16 x 1.63	3/16 x .500	1/2 x 3.00
EL832	12.50	10.00	0.56	6.52	0.60	0.38	0.69	7.50	8.11	10.50	3.25	4.00	4.13	2.07	0.53	5.00	6.75	2.31	0.88	2.75	2.188	0.875	3/16 x 1.63	3/16 x .500	1/2 x 3.00
EL842	14.69	12.00	1.19	7.52	0.63	0.35	0.69	8.50	9.63	11.69	4.25	4.50	3.75	1.88	0.53	6.15	9.57	3.47	0.88	2.75	2.188	1.250	1/4 x 2.50	1/4 x 2.50	3/8 x 3.00
EL852	17.75	14.00	0.97	8.84	0.97	0.69	0.81	10.50	11.50	12.25	5.25	4.25	5.25	2.63	0.66	7.55	10.88	3.38	1.13	4.26	3.438	1.250	1/4 X 3.00	1/4 x 3.00	7/8 x 4.00
EL860	20.25	16.00	0.81	11.00	0.81	0.81	0.81	10.38	13.50	14.25	6.00	5.00	5.38	2.89	0.66	7.88	10.99	3.00	1.13	3.74	3.438	1.500	3/8 x 3.00	3/8 x 2.75	7/8 x 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC / 180TC / 210TC		LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC / 180TC / 210TC	
EL813	6.07	--	3.82	--	3.79	--	3.09	--
EL818	5.89	--	3.64	--	4.42	--	3.59	--
EL821	6.26	--	4.00	--	4.79	--	4.06	--
EL824	6.48	7.30	4.29	4.29	4.77	4.77	4.09	4.09
EL826	7.04	7.86	4.88	4.88	5.33	5.33	4.82	4.82
EL830	7.67	8.31	5.38	5.38	5.97	5.97	5.32	5.32
EL832	7.86	8.50	5.56	5.56	6.16	6.16	5.51	5.51
EL842	11.25	12.53	9.57	9.57	6.45	6.45	6.04	6.04
EL852	12.65	13.93	10.88	10.88	7.85	7.85	7.35	7.35
EL860	--	11.94	10.99	10.99	--	--	--	--

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

- Max bore dimensions shown. For additional bores available, refer to page 30.
- ◆ Keyway width by depth
- ※ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

Note: Torque arm bracket available separately. Refer to page 294 for kits. If a special bracket is required, refer to Style BMQ dimensions for mounting pad dimensions on top/bottom of reducer.



WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

- EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
- See page 62 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
MHSC	HMQ
MHC	HM
MH	H
MH + "KV" Kit	H + "KV" Kit

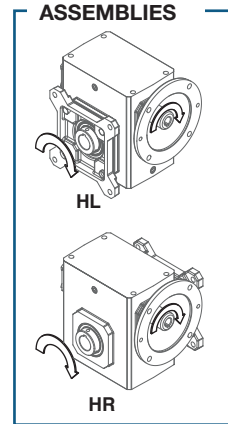
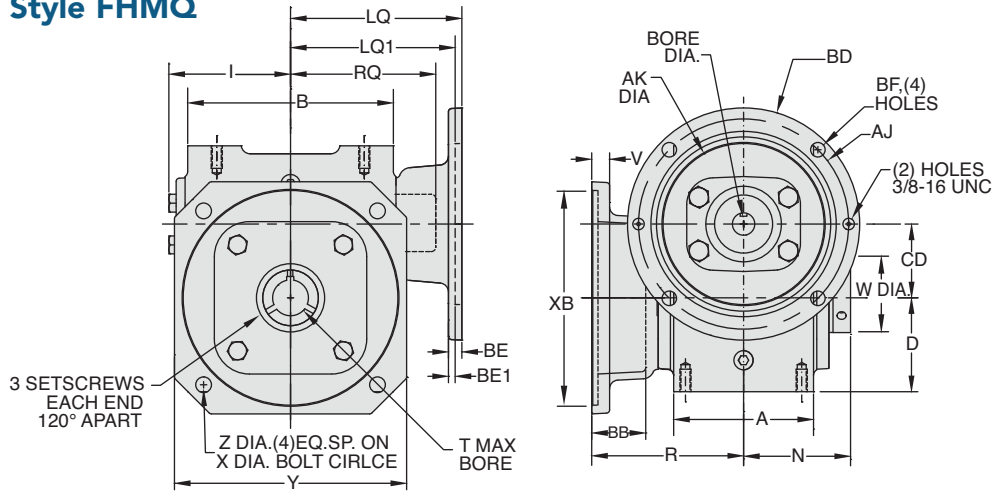
Convert Style H to motorized coupling input using kits shown on page 294.

ELECTRA-GEAR

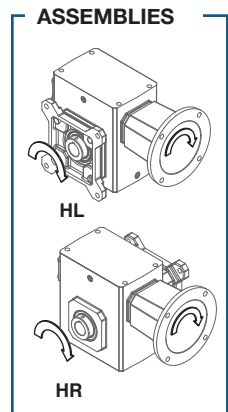
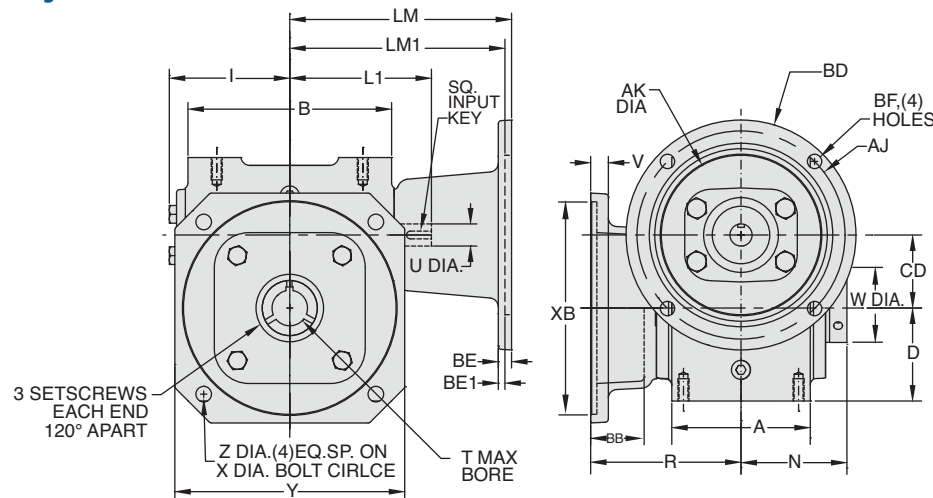
EL Series Dimensions

Styles: FHMQ, FHM, FH

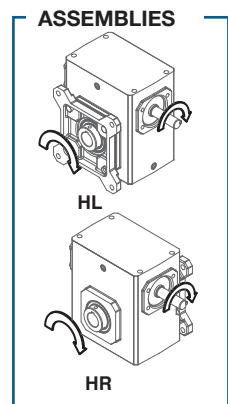
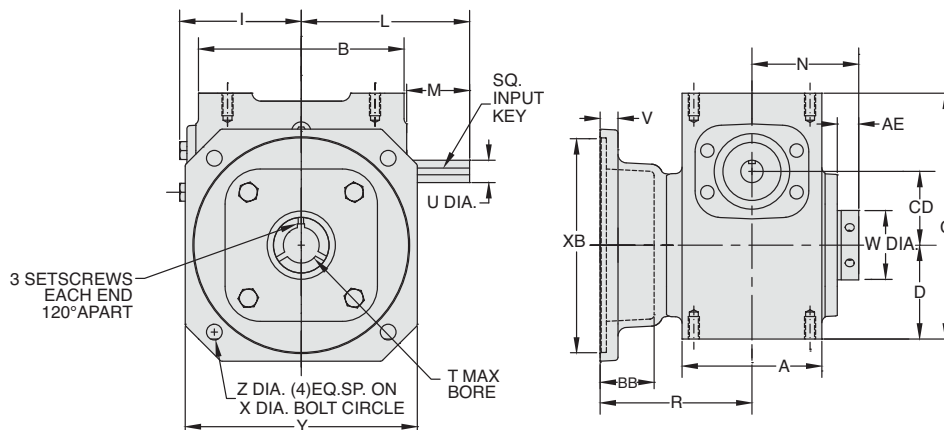
Style FHMQ



Style FHM



Style FH



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT INPUT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE FHM, FHM, FH DIMENSIONS (Inches)

Size	A	AE	B	BB	C	CD	D	I	L	M	N	R	V	X	XB	Y	Z	T MAX* +0.000 -0.0025	U +0.000 -0.0015	Input Key (Style FH only)*:	Input Key (Style FHM only)*:	Output Key
EL818	3.50	0.49	4.83	1.27	5.86	1.75	2.31	3.03	4.35	1.78	2.75	3.53	0.38	3.13	-	4.00	0.34	1.000	0.625	3/16 x 1.38	3/16 x .500	1/4 x 3.00
EL821	3.91	0.60	5.75	1.51	6.88	2.06	2.63	3.40	4.71	1.76	2.99	4.25	0.50	6.88	6.00	6.49	0.44	1.500*	0.625	3/16 X 1.38	3/16 x .500	3/8 x 3.00
EL824	4.06	1.05	5.86	1.35	6.94	2.38	2.50	3.61	5.51	2.45	3.51	4.15	0.63	7.38	6.50	6.99	0.50	1.500*	0.750	3/16 X 1.63	3/16 x .500	3/8 x 3.00
EL826	4.84	0.60	7.17	1.35	8.00	2.63	3.25	4.17	6.07	2.45	3.19	4.56	0.63	7.38	6.50	6.99	0.50	1.500*	0.750	3/16 x 1.63	3/16 x .500	3/8 x 3.00
EL830	5.25	0.60	8.11	2.36	8.94	3.00	3.50	4.81	6.56	2.31	3.75	5.75	0.81	9.125-9.500	8.25	8.74	0.56	2.188	0.875	3/16 x 1.63	3/16 x .500	1/2 x 3.00
EL832	5.25	0.60	8.11	2.54	10.50	3.25	4.00	5.00	6.75	2.31	3.75	5.94	0.81	10.75	9.75	8.74	0.56	2.188	0.875	3/16 x 1.63	3/16 x .500	1/2 x 3.00
EL842	6.13	0.63	9.63	2.06	11.69	4.25	4.50	6.15	9.57	3.47	4.25	6.06	0.75	10.75	10.25	11.00	0.69	2.188	1.250	1/4 x 2.50	1/4 x 2.50	3/8 x 3.00
EL852	7.19	0.97	11.50	1.18	12.25	5.25	4.25	7.55	10.88	3.38	5.25	5.75	0.69	12.75	11.50	14.24	0.81	3.438	1.250	1/4 X 3.00	1/4 x 3.00	7/8 x 4.00
EL860	7.00	0.81	13.50	0.25	14.25	6.00	5.00	7.88	10.99	3.00	5.19	7.25	1.00	15.25	13.00	17.00	0.81	3.438	1.500	3/8 x 3.00	3/8 x 2.75	7/8 x 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC 180TC / 210TC
EL818	5.89	--	3.64	--	4.42	3.59
EL821	6.26	--	4.00	--	4.79	4.06
EL824	6.48	7.30	4.29	4.29	4.77	4.09
EL826	7.04	7.86	4.88	4.88	5.33	4.82
EL830	7.67	8.31	5.38	5.38	5.97	5.32
EL832	7.86	8.50	5.56	5.56	6.16	5.51
EL842	11.25	12.53	9.57	9.57	6.45	6.04
EL852	12.65	13.93	10.88	10.88	7.85	7.35
EL860	--	11.94	10.99	10.99	--	--

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

- Max bore dimensions shown. For additional bores available, refer to page 30.
- ◆ Keyway width by depth
- * Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

– Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

- EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
- See page 62 for GR Series dimensions.

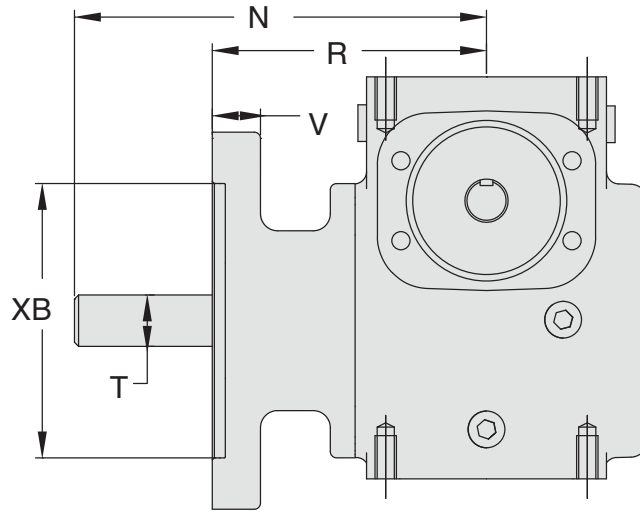
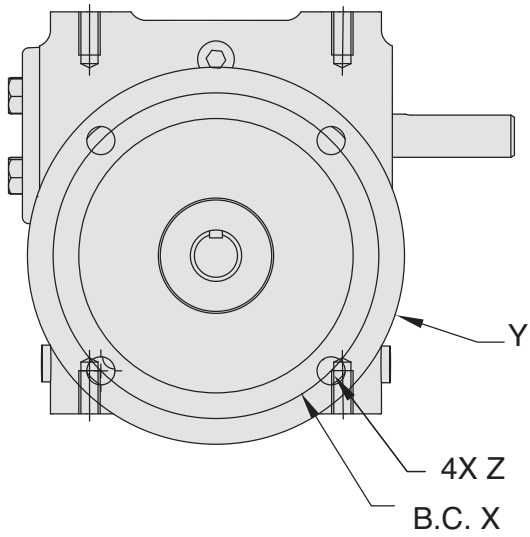
ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
RHSC	FHM
RHC	FHM
RH	FH
RH + "KV" Kit	FH + "KV" Kit

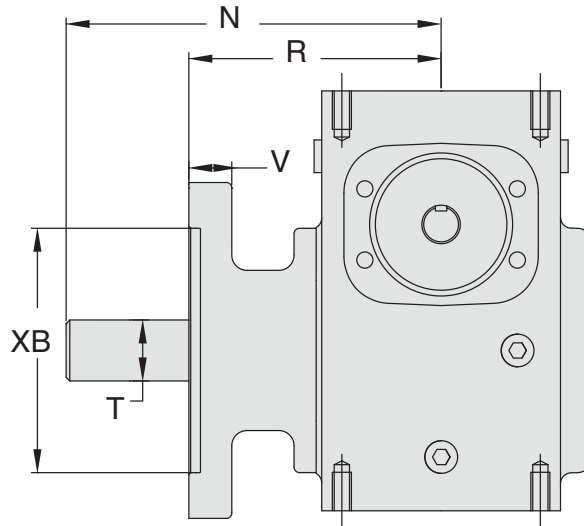
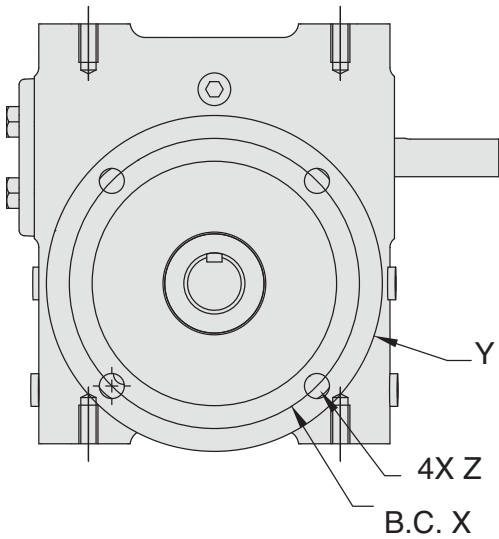
Convert Style FH to motorized coupling input using kits shown on page 294.

FL (Ring Base) Output Flange

SIZE 818



SIZE 821



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

FL DIMENSIONS (inches)

Size	N	R	T +0.000 -0.0015	V	X	XB	Y	Z
818	6.01	400	0.750	0.703	4.75	4.002	5.50	0.41
821	6.14	4.13	1.000	0.703	4.75	4.002	5.50	0.41

FL Flange Kit must be assembled at Factory. Contact Factory to order.
Must designate LL (left) or RR (right).

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
RL	FL
RLC	FLM
RLSC	FLMQ

Model Number System

Double Reduction Worm - Worm



800 Series Gear Reducer Model Number Nomenclature

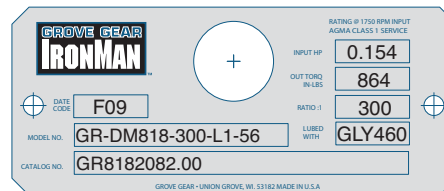
All new stock and custom 800 Series Grove Gear and Electra-Gear worm reducers are identified by a model number. The model number appears on the nameplate and describes pertinent features of the reducer. An example follows, along with a listing of the various letters and positions used.

NOTE: All reducers also have a catalog number—for example EL8130001 and GR8130001. Reducers and renewal parts should be ordered by catalog number. If a stock reducer has been Factory modified by the addition of an optional accessory, the modification number T818EL, for example, is stamped in the catalog number field of the nameplate. Accessories that are field installed will not be noted on the nameplate.

Catalog numbers 3000 and higher (for example, GR8133000 and NH8133000) are WASHGUARD® reducers for washdown service.

Catalog numbers 5000 (for example, GR8135000 and EL8135000) and higher are custom reducers manufactured for a specific application. The machinery or equipment manufacturer should be contacted for replacement reducers. Renewal parts can be ordered by catalog number.

TYPICAL NAMEPLATE (Grove Gear shown)



	Series Code	Style	Size	Ratio	Output Shaft Orientation	Mounting Assembly	Motor Flange	Output Bore Code																																				
		<p>SOLID OUTPUT SHAFT DMQ – Motorized, Quill Input DM – Motorized, Flexible Coupling Input D – Non-Flanged</p> <p>HOLLOW OUTPUT SHAFT DHMQ – Motorized, Quill Input DHM – Motorized, Flexible Coupling Input DH – Non-Flanged</p> <p>WASHGUARD STYLES W prefix; i.e. WDMQ denotes WASHDOWN Reducer S prefix; i.e. SDMQ denotes All-Stainless Steel Reducer</p>	<p>See Selection Tables on pages 132-136, for all available ratios.</p>	<p>L – Left-hand Output Shaft* R – Right-hand Output Shaft* D – Double Output Shaft H – Hollow Output Shaft * Viewed from drive end of reducer.</p>	<p>Assembly numbers 1-6 are available. Refer to dimension layouts.</p>		<p>Hollow Shaft Only See page 140.</p>																																					
			<p>800 SERIES CENTER DISTANCES</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Size</th> <th>Center Distance (Inches)</th> </tr> </thead> <tbody> <tr><td>813</td><td>1.33</td></tr> <tr><td>815</td><td>1.54</td></tr> <tr><td>818</td><td>1.75</td></tr> <tr><td>821</td><td>2.06</td></tr> <tr><td>824</td><td>2.38</td></tr> <tr><td>826</td><td>2.62</td></tr> <tr><td>830</td><td>3.00</td></tr> <tr><td>832</td><td>3.25</td></tr> <tr><td>842</td><td>4.25</td></tr> <tr><td>852</td><td>5.25</td></tr> <tr><td>860</td><td>6.00</td></tr> <tr><td>870*</td><td>7.00</td></tr> <tr><td>880*</td><td>8.00</td></tr> <tr><td>8100*</td><td>10.00</td></tr> </tbody> </table> <p><small>* GR series only</small></p>		Size	Center Distance (Inches)	813	1.33	815	1.54	818	1.75	821	2.06	824	2.38	826	2.62	830	3.00	832	3.25	842	4.25	852	5.25	860	6.00	870*	7.00	880*	8.00	8100*	10.00										
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						<table border="1" style="width: 100%;"> <thead> <tr> <th colspan="2">Input Code</th> <th>For Input Type</th> </tr> </thead> <tbody> <tr> <td>blank</td> <td>A</td> <td>non-motorized</td> </tr> <tr> <td>48</td> <td>48A</td> <td>48CZ</td> </tr> <tr> <td>56</td> <td>56A</td> <td>56C</td> </tr> <tr> <td>140</td> <td>140A</td> <td>143-5TC</td> </tr> <tr> <td>180</td> <td>180A</td> <td>182-4TC</td> </tr> <tr> <td>210</td> <td>210A</td> <td>213-5TC</td> </tr> <tr> <td>250</td> <td>250A</td> <td>254-6TC</td> </tr> <tr> <td>63</td> <td rowspan="5" style="text-align: center;">Contact Factory</td> <td>D63D B5</td> </tr> <tr> <td>71</td> <td>D71D B5</td> </tr> <tr> <td>80</td> <td>D80D B5</td> </tr> <tr> <td>90</td> <td>D90D B5</td> </tr> <tr> <td>110</td> <td>D100LD/D112MD B5</td> </tr> <tr> <td>132</td> <td></td> <td>D132D</td> </tr> </tbody> </table>	Input Code		For Input Type	blank	A	non-motorized	48	48A	48CZ	56	56A	56C	140	140A	143-5TC	180	180A	182-4TC	210	210A	213-5TC	250	250A	254-6TC	63	Contact Factory	D63D B5	71	D71D B5	80	D80D B5	90	D90D B5	110	D100LD/D112MD B5	132		D132D
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132		D132D																																										
	<p>GR - Grove Gear IRONMAN Cast Iron Reducers NH - Grove Gear IRONMAN Narrow Housing Cast Iron Reducers EL - Electra-Gear Aluminum Reducers GRG - Grove Gear Flexaline Interchange (Sizes 821, 826, 832) GRL - Leeson IRONMAN Interchange (Sizes 821, 826, 832)</p>																																											

Sample Model Number

Solid Output Shaft - GR Series

Cast iron, double reduction, 2.38" reducer with 56C motorized quill input, left-hand output shaft, 300:1 ratio.

GR - DMQ 824 - 300 - L1 - 56
 Series Style Size Ratio Shaft Orientation Input Type

Hollow Output Shaft - EL Series

Aluminum housing, double reduction, 1.75" reducer with 56C motorized quill input, 1.00" hollow output bore, 100:1 ratio.

EL - DHMQ 818 - 100 - H1 - 56 - 16
 Series Style Size Ratio Shaft Orientation Input Type Output Bore Code

Single Reduction Worm Gear Reducers

Double Reduction Worm - Worm Gear Reducers

Double Reduction Helical - Worm Gear Reducers

WASHGUARD® Reducers and GEAR+MOTOR™

Ratio Multipliers

Accessories and Additional Capabilities

Interchange Guide

Double Reduction



CAST IRON GR SERIES **CAST IRON NH SERIES** **ALUMINUM EL SERIES**



Reducer Style	Replaces Original GROVE GEAR OE Series Reducer Style	Replaces Original ELECTRA-GEAR Reducer Style
D	DU	D_M
DM & DMQ	DUFC & DUF	D_MC & D_MSC
DT & DU	DZ & DUB	D_A
DTM & DTMQ	DZFC & DZF	D_AC & D_ASC
DUM & DUMQ	DUBFC & DUBF	New
DJ	DJ	D_JB
DJM & DJMQ	DJFC & DJF	D_JBC & D_JBSC
DF	DK & DV	N/A
DFM & DFMQ	DKFC & DKF / DVFC & DVF	N/A
DFE	DE	N/A
DFEM & DFEMQ	DEFC & DEF	N/A
DH	DY	D_MH
DHM & DHMQ	DYFC & DYF	D_MHC & D_MHSC
DFH	DM	N/A
DFHM	DMFC	N/A
DFHMQ	DMF	N/A
DX	HWU	H_M
DXM	HWUFC	H_MC
DXMQ	HWUF	NEW
DXT & DXU	HWZ	H_A
DXTM	HWZFC	H_AC
DXTMQ	HWZF	NEW
DXUM	HWUBFC	H_AC
DXUMQ	HWUBF	NEW
DXJ	N/A	H_JB
DXJM	N/A	H_JBC
DXJMQ	N/A	NEW
DXVL	N/A	H_B
DXVLM	N/A	H_BC
DXVLMQ	N/A	NEW
DXFE	HWE	N/A
DXFEM & DXFEMQ	HWEFC & HWEF	N/A
DXH	HWY	H_MH
DXHM & DXHMQ	HWYFC & HWYF	H_MHC & H_MHSC
DFL	N/A	D_RL
DFLM & DFLMQ	N/A	D_RLC & D_RLSC
DFR	N/A	New
DFRM & DFRMQ	N/A	New
DVL & DVH	DSL & DSH	D_B
DVLM & DVLMQ	DSLFC & DSLF	D_BC & D_BSC
DVHM & DVHMQ	DSHFC & DSHF	N/A
DXFR	N/A	New
DXFRM	N/A	New
DXFRMQ	N/A	New
DXFL	N/A	H_RL
DXFLM & DXFLMQ	N/A	H_RLC

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



Cast Iron Solid Shaft Output Styles

**CAST IRON
GR SERIES**

**CAST IRON
NH SERIES**

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, stock styles DMQ, DM and D can be field or Factory modified into a wide range of styles. See page 288 for details.

**MOTORIZED
C-FLANGE
QUILL
INPUT**

Style DMQ



Horizontal Base Worm Over

Style DTMQ



Horizontal Base Worm Under

Style DUMQ *



Ratings Pages: 132-136

Dimension Pages:
GR Series 142-143
NH Series 160-161

Ratings Pages: 132-136

Dimension Pages:
GR Series 144-145
NH Series 162-163

Ratings Pages: 132-136

Dimension Pages:
GR Series 146-147
NH Series 164-165

Style DM



Style DTM



Style DUM *



**MOTORIZED
C-FLANGE
FLEXIBLE
COUPLING INPUT**

Ratings Pages: 132-136

Dimension Pages:
GR Series 142-143
NH Series 1160-161

Ratings Pages: 132-136

Dimension Pages:
GR Series 144-145
NH Series 162-163

Ratings Pages: 132-136

Dimension Pages:
GR Series 146-147
NH Series 164-165

Style D



Style DT



Style DU *



Ratings Pages: 132-136

Dimension Pages:
GR Series 142-143
NH Series 160-161

Ratings Pages: 132-136

Dimension Pages:
GR Series 144-145
NH Series 162-163

Ratings Pages: 132-136

Dimension Pages:
GR Series 146-147
NH Series 164-165

Additional accessories, options and assembly services are available,
Contact Factory for details.

* Not a recommended mounting style.
Consult Factory for selection assistance.



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Vertical Input Shaft

Style DJMQ



Ratings Pages: 132-136

Dimension Pages:
GR Series 148-149
NH Series 166-167

Vertical Output Shaft High/Low Base

Style DV_HMQ**



Ratings Pages: 132-136

Dimension Pages:
GR Series 150-151
NH Series 168-169

Flange Mounted Output Shaft

Style DFMQ



Ratings Pages: 132-136

Dimension Pages:
GR Series 152-153
NH Series 170-171

Drop Bearing Output Flange

Style DFEMQ



Ratings Pages: 132-136

Dimension Pages:
GR Series 158-159
NH Series 176-177

Style DJM



Ratings Pages: 132-136

Dimension Pages:
GR Series 148-149
NH Series 166-167

Style DV_HM **



Ratings Pages: 132-136

Dimension Pages:
GR Series 150-151
NH Series 168-169

Style DFM



Ratings Pages: 132-136

Dimension Pages:
GR Series 152-153
NH Series 170-171

Style DFEM



Ratings Pages: 132-136

Dimension Pages:
GR Series 158-159
NH Series 176-177

Style DJ



Ratings Pages: 132-136

Dimension Pages:
GR Series 148-149
NH Series 166-167

Style DV_H**



Ratings Pages: 132-136

Dimension Pages:
GR Series 150-151
NH Series 168-169

Style DF



Ratings Pages: 132-136

Dimension Pages:
GR Series 152-153
NH Series 170-171

Style DFE



Ratings Pages: 132-136

Dimension Pages:
GR Series 158-159
NH Series 176-177

** SPECIFY SHAFT UP OR DOWN FOR THESE STYLES.



Cast Iron Hollow Shaft Output Styles

**CAST IRON
GR SERIES**

**CAST IRON
NH SERIES**

Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, stock styles DHMQ, DHM and DH can be field or Factory modified into a wide range of styles. See page 288 for details.

Style DHMQ

**MOTORIZED
C-FLANGE
QUILL
INPUT**



Ratings Pages: 132-136

Dimension Pages:
GR Series 154-155
NH Series 172-173

Flange Mounted Output Shaft

Style DFHMQ



Ratings Pages: 132-136

Dimension Pages:
GR Series 154-157
NH Series 1174-175

Style DHM

**MOTORIZED
C-FLANGE
FLEXIBLE
COUPLING
INPUT**



Ratings Pages: 132-136

Dimension Pages:
GR Series 154-155
NH Series 172-173

Style DFHM



Ratings Pages: 132-136

Dimension Pages:
GR Series 156-157
NH Series 174-175

Style DH

**NON-FLANGED
INPUT**



Ratings Pages: 132-136

Dimension Pages:
GR Series 154-155
NH Series 172-173

Style DFH



Ratings Pages: 132-136

Dimension Pages:
GR Series 156-157
NH Series 174-175

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, stock styles DHMQ, DHM and DH can be field or Factory modified into a wide range of styles. See page 286 for details.

Style DHMQ

Style DFHMQ

**MOTORIZED
C-FLANGE
QUILL
INPUT**



Ratings Pages: 132-136

Dimension Pages:
EL Series 190-191

Ratings Pages: 132-136

Dimension Pages:
EL Series 192-193

Style DHM

Style DFHM

**MOTORIZED
C-FLANGE
FLEXIBLE
COUPLING
INPUT**



Ratings Pages: 132-136

Dimension Pages:
EL Series 190-191

Ratings Pages: 132-136

Dimension Pages:
EL Series 192-193

Style DH

Style DFH

**NON--
FLANGED
INPUT**



Ratings Pages: 132-136

Dimension Pages:
EL Series 190-191

Ratings Pages: 132-136

Dimension Pages:
EL Series 192-193

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

ELECTRA-GEAR Aluminum Solid Shaft Output Styles

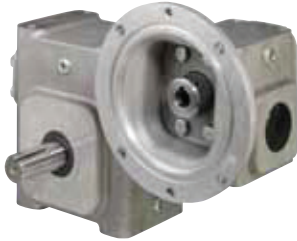
Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, stock styles DMQ, DM and D can be field or Factory modified into a wide range of styles. See page 288 for details.

**MOTORIZED
C-FLANGE
QUILL
INPUT**

Style DMQ



Ratings Pages: 132-136

Dimension Pages:
EL Series 178-179

Horizontal Base Worm Over

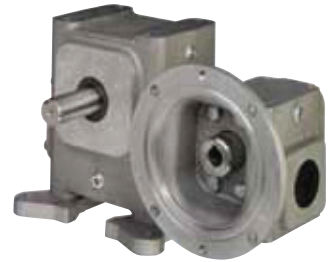
Style DTMQ



Ratings Pages: 132-136

Dimension Pages:
EL Series 180-181

Style DUMQ



Ratings Pages: 132-136

Dimension Pages:
EL Series 182-183

**MOTORIZED
C-FLANGE
FLEXIBLE
COUPLING
INPUT**

Style DM



Ratings Pages: 132-136

Dimension Pages:
EL Series 178-179

Style DTM



Ratings Pages: 132-136

Dimension Pages:
EL Series 180-181

Style DUM *



Ratings Pages: 132-136

Dimension Pages:
EL Series 182-183

**NON-
FLANGED
INPUT**

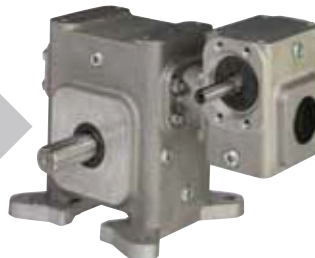
Style D



Ratings Pages: 132-136

Dimension Pages:
EL Series 178-179

Style DT



Ratings Pages: 132-136

Dimension Pages:
EL Series 180-181

Style DU *



Ratings Pages: 132-136

Dimension Pages:
EL Series 182-183

Additional accessories, options and assembly services are available,
Contact Factory for details.

* Not a recommended mounting style.
Consult Factory for selection assistance.

**Vertical
Input Shaft**

Style DJMQ



Ratings Pages: 132-136

Dimension Pages:
EL Series 184-185

**Vertical Output Shaft
Low Base**

Style DVLMQ **



Ratings Pages: 132-136

Dimension Pages:
EL Series 186-187

**Flange Mounted
Output Shaft**

Style DFRMQ



Ratings Pages: 132-136

Dimension Pages:
EL Series 188-189

Style DJM



Ratings Pages: 132-136

Dimension Pages:
EL Series 184-185

Style DVLM **



Ratings Pages: 132-136

Dimension Pages:
EL Series 186-187

Style DFRM



Ratings Pages: 132-136

Dimension Pages:
EL Series 188-189

Style DJ



Ratings Pages: 132-136

Dimension Pages:
EL Series 184-185

Style DVL **



Ratings Pages: 132-136

Dimension Pages:
EL Series 186-187

Style DFR



Ratings Pages: 132-136

Dimension Pages:
EL Series 188-189

** SPECIFY SHAFT UP OR DOWN FOR THESE STYLES.

Quick Selections





How to Use

Based on required output RPM and input motor horsepower, read across chart for the appropriate reducer size. As a rule of thumb, use 1.00 service factor chart for applications having uniform loads with up to 10 hours service duration per day. Use 1.25 service factor chart for longer service or shock loading. These charts are to be considered as guides only. Typically double reduction reducers are selected based on application torque, not necessarily HP. Refer to page 644 or contact Factory with specific application information. Reducer size corresponds to center distances of secondary stage reducer, as shown in the chart below.

1.00 Service Factor

Nominal Ratio▲	Output RPM	Input Horsepower @ 1750 RPM															
		1/8	1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	25
75	23.3	813	813	815	815	821	824	826	830	832**	842	852	860	880	880	8100	8100
100	17.5	813	813	815	815	821	824	826	830*	842	842	852	860	880	8100	8100	
150	11.7	813	815	821	821	824	826	830*	832**	842	852	852	880	8100	8100		
200	8.75	815	815	821	824	826	830	832	842	842	852	870	880	8100			
250	7.00	815	818	821	824	826	830*	832**	842	852	852	880	8100	8100			
300	5.83	815	821	824	824	830	832	842	842	852	852	880	8100	8100			
400	4.38	821	821	824	826	830*	842	842	852	852	860	8100	8100				
500	3.50	821	824	826	830	832	842	842	852	852	880	8100					
600	2.92	821	824	826	830	832	842	842	852	852	860	880	8100				
750	2.33	824	824	830	830*	842	842	852	852	870	8100	8100					
900	1.94	824	826	830	832	842	842	852	852	880	8100						
1000	1.75	824	830	830	832	842	842	852	860	880	8100						
1200	1.46	824	830	830*	832	842	852	852	870	880	8100						
1500	1.17	830	830	832	842	842	852	860	880	8100	8100						
1800	9.72	830	830	832	842	852	852	860	8100	8100							
2400	.729	830	830*	842	842	852	852	880	8100	8100							
3000	.583	830	830*	842	842	852	852	880	8100								
3600	.486	830*	832**	842	852	852	880	8100									

Nominal Ratio▲	Output RPM	Input Horsepower @ 1750 RPM															
		1/8	1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	25
75	23.3	813	813	815	818	821	824	830	832**	842	842	852	880	880	8100	8100	
100	17.5	813	815	815	821	824	826	830	832**	842	842	852	880	880	8100		
150	11.7	815	815	821	824	826	830	832	842	842	852	870	880	8100			
200	8.75	815	821	824	824	830	832	842	842	852	852	880	8100	8100			
250	7.00	815	821	824	826	830	832**	842	842	852	852	880	8100	8100			
300	5.83	818	821	824	826	830*	842	842	852	852	870	8100	8100				
400	4.38	821	824	826	830	832	842	842	852	852	880	8100					
500	3.50	824	824	830	830*	842	842	852	852	860	880	8100					
600	2.92	824	824	830	832	842	842	852	852	870	8100						
750	2.33	824	826	830	832	842	852	852	860	880	8100						
900	1.94	824	830	830*	832**	842	852	852	880	880	8100						
1000	1.75	826	830	830*	842	842	852	852	880	8100	8100						
1200	1.46	830	830	832	842	842	852	852	880	8100	8100						
1500	1.17	830	830	842	842	852	852	880	8100	8100							
1800	9.72	830	832	842	842	852	860	880	8100	8100							
2400	.729	830	842	842	852	852	880	8100	8100								
3000	.583	830*	842	842	852	852	880	8100									
3600	.486	832**	842	842	852	852	8100	8100									

Note: This chart is meant as a guide for reducer selections at specific motor horsepower.
 Actual service factor may be greater than indicated. For actual service factors and maximum worm reducer ratings, refer to pages 132-136.
 ▲ Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements.
 Refer to page 141 for exact ratio of double reduction worm-worm gear reducers.
 * Size 832 must be used for NH Series for this selection.
 ** Size 842 must be used for NH Series for this selection.
 indicates a selection where a smaller reducer (1 case size) can be used with redesigned product due to rating increase.
 indicates a selection where a smaller reducer (2 case sizes) can be used with redesigned product due to rating increase.

1.50 Service Factor

Nominal Ratio▲	Output RPM	Input Horsepower @ 1750 RPM													
		1/8	1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15
75	23.3	813	815	815	821	824	826	830	842	842	852	860	880	880	8100
100	17.5	815	815	821	821	824	826	830	830*	842	842	852	860	880	8100
150	11.7	815	821	821	824	826	832**	832**	842	852	852	860	880	8100	8100
200	8.75	815	821	824	826	830	832**	842	842	852	860	880	8100	8100	
250	7.00	821	821	824	826	830*	842	842	852	852	870	8100	8100		
300	5.83	821	824	826	830	832	842	842	852	852	860	8100			
400	4.38	824	824	830	830*	842	842	842	852	852	860	880	8100		
500	3.50	824	826	830	832	842	842	852	852	860	8100				
600	2.92	824	826	830*	832**	842	852	852	870	880	8100				
750	2.33	826	830	832**	842	842	852	852	880	8100	8100				
900	1.94	826	830	832**	842	842	852	852	880	8100					
1000	1.75	830	830	832**	842	842	852	860	880	8100					
1200	1.46	830	830*	832**	842	852	852	870	8100	8100					
1500	1.17	830	832	842	842	852	860	880	8100	8100					
1800	9.72	830	842	842	852	852	880	8100	8100						
2400	.729	842	842	852	852	852	880	8100							
3000	.583	842	842	852	852	852	8100	8100							
3600	.486	842	842	852	852	880	8100								

1.75 Service Factor

Nominal Ratio▲	Output RPM	Input Horsepower @ 1750 RPM													
		1/8	1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15
75	23.3	813	815	821	821	824	826	830	830	842	842	852	860	880	8100
100	17.5	815	815	821	824	826	830	832	842	842	852	860	870	8100	8100
150	11.7	815	821	824	826	830	832	842	842	852	852	880	8100	8100	
200	8.75	821	821	824	826	830*	842	842	852	852	870	8100	8100		
250	7.00	821	824	826	830	832**	842	842	852	852	880	8100	8100		
300	5.83	821	824	826	830*	832**	842	852	852	860	880	8100			
400	4.38	824	826	830	832	842	842	852	852	880	8100				
500	3.50	824	826	830*	832**	842	852	852	870	880	8100				
600	2.92	826	830	832	842	842	852	852	880	8100	8100				
750	2.33	826	830	832**	842	842	852	860	880	8100					
900	1.94	830	830*	832**	842	852	852	880	8100	8100					
1000	1.75	830	830*	842	842	852	852	880	8100	8100					
1200	1.46	830	832	842	842	852	852	880	8100	8100					
1500	1.17	832	842	842	852	852	880	8100	8100						
1800	9.72	832	842	842	852	852	8100	8100							
2400	.729	842	842	852	852	870	8100	8100							
3000	.583	842	842	852	852	880	8100	8100							
3600	.486	842	842	852	852	8100	8100								

2.0 Service Factor

Nominal Ratio▲	Output RPM	Input Horsepower @ 1750 RPM													
		1/8	1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15
75	23.3	815	815	821	824	826	830	832**	842	852	852	880	880	8100	8100
100	17.5	815	815	821	824	826	830*	842	842	852	852	880	880	8100	8100
150	11.7	821	821	824	826	830*	832**	842	852	852	870	8100	8100	8100	
200	8.75	821	824	826	830	832	842	842	852	852	880	8100	8100		
250	7.00	821	824	826	830*	832**	842	852	852	860	880	8100	8100		
300	5.83	824	824	830	832	842	842	852	852	870	8100	8100	8100		
400	4.38	824	826	830*	832**	842	852	852	860	880	8100				
500	3.50	826	830	832	842	842	852	852	880	8100	8100				
600	2.92	826	830	832**	842	852	852	860	880	8100	8100				
750	2.33	830	830*	842	842	852	852	870	8100	8100					
900	1.94	830	832	842	842	852	852	880	8100	8100					
1000	1.75	830	832	842	842	852	860	880	8100	8100					
1200	1.46	830*	832**	842	842	852	870	880	8100						
1500	1.17	832	842	842	852	860	880	8100	8100						
1800	9.72	842	842	852	852	860	8100	8100							
2400	.729	842	842	852	852	880	8100	8100							
3000	.583	842	842	852	852	880	8100								
3600	.486	842	852	852	852	8100									

Note: This chart is meant as a guide for reducer selections at specific motor horsepower.
 Actual service factor may be greater than indicated. For actual service factors and maximum worm reducer ratings, refer to pages 132-136.
 ▲ Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements.
 Refer to page 141 for exact ratio of double reduction worm-worm gear reducers.
 * Size 832 must be used for NH Series for this selection.
 ** Size 842 must be used for NH Series for this selection.

indicates a selection where a smaller reducer (1 case size) can be used with redesigned product due to rating increase.
 indicates a selection where a smaller reducer (2 case sizes) can be used with redesigned product due to rating increase.
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Maximum Rating Tables

GR, NH & EL Series • All Stock Styles



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

SIZE 813, 815, 818 • 1.0 S.F.

Overall Ratio	Input RPM	Output RPM	SIZE 813			SIZE 815**			SIZE 818		
			Input HP	Output HP	Output TQ (lb-in)	Input HP	Output HP	Output TQ (lb-in)	Input HP	Output HP	Output TQ (lb-in)
75	1750	23.30	0.215	0.141	381	0.391	0.242	654	0.415	0.287	776
	1170	15.60	0.154	0.097	390	0.286	0.168	678	0.295	0.197	797
100	1750	17.50	0.183	0.114	411	0.339	0.194	698	0.344	0.230	827
	1170	11.70	0.130	0.078	420	0.249	0.134	721	0.244	0.157	847
150	1750	11.70	0.122	0.073	395	0.233	0.125	674	0.235	0.150	809
	1170	7.80	0.085	0.050	400	0.166	0.085	690	0.166	0.101	820
200	1750	8.75	0.104	0.059	425	0.187	0.095	686	0.195	0.119	858
	1170	5.85	0.075	0.040	430	0.136	0.065	698	0.137	0.081	868
250	1750	7.00	0.090	0.046	417	0.158	0.073	660	0.165	0.096	861
	1170	4.68	0.064	0.031	422	0.113	0.050	671	0.115	0.065	871
300	1750	5.83	0.084	0.039	422	0.139	0.064	699	0.154	0.080	864
	1170	3.90	0.060	0.026	427	0.099	0.044	706	0.110	0.054	876
400	1750	4.38	0.062	0.030	432	0.111	0.049	705	0.114	0.061	874
	1170	2.93	0.043	0.020	435	0.081	0.033	711	0.081	0.040	879
500	1750	3.50	0.053	0.024	424	0.098	0.039	708	0.097	0.049	877
	1170	2.34	0.007	0.016	427	0.069	0.026	713	0.068	0.032	882
600	1750	2.92	0.048	0.020	430	0.086	0.033	711	0.090	0.041	882
	1170	1.95	0.034	0.013	432	0.065	0.022	714	0.066	0.027	888
750	1750	2.33	0.040	0.016	427	0.071	0.025	683	0.080	0.032	886
	1170	1.56	0.030	0.011	429	0.055	0.017	686	0.061	0.023	891
900	1750	1.94	0.036	0.013	432	0.067	0.020	665	0.068	0.027	888
	1170	1.30	0.028	0.009	434	0.048	0.014	668	0.050	0.018	893
1000	1750	1.75	0.038	0.012	428	0.063	0.020	715	0.064	0.025	884
	1170	1.17	0.029	0.008	429	0.045	0.014	718	0.045	0.017	886
1200	1750	1.46	0.034	0.010	434	0.052	0.017	717	0.059	0.021	892
	1170	0.975	0.025	0.007	435	0.041	0.011	719	0.043	0.014	895
1500	1750	1.17	0.030	0.008	429	0.052	0.013	689	0.054	0.017	893
	1170	0.780	0.022	0.005	430	0.038	0.009	691	0.038	0.011	896
1800	1750	0.972	0.028	0.007	435	0.045	0.010	601	0.048	0.014	895
	1170	0.650	0.018	0.005	436	0.032	0.007	603	0.038	0.010	897
2400	1750	0.729	0.021	0.005	438	0.039	0.007	644	0.036	0.010	887
	1170	0.488	0.014	0.003	439	0.032	0.005	646	0.030	0.007	889
3000	1750	0.583	0.021	0.004	437	0.033	0.006	605	0.032	0.008	869
	1170	0.390	0.014	0.003	438	0.028	0.004	607	0.023	0.006	871
3600	1750	0.486	0.020	0.003	421	0.029	0.004	562	0.027	0.007	854
	1170	0.325	0.009	0.002	422	0.017	0.003	564	0.020	0.004	856

Select and order double reduction reducers with model number. Refer to page 122 for Model Number System.

* Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements. Refer to page 141 for exact ratio of worm gear primary stage and worm gear secondary stage. At speeds above 1750 input RPM, gear reducers may become thermally limited. For continuous operation, limit input HP to 1750 RPM input ratings shown. Contact Factory with application requirements if higher speeds are required. ** Size 815 is not available in Electra aluminum EL Series. For input/ output shaft overhung load and thrust load ratings, refer to pages 646-648.



Select and order double reduction reducers with model number. Refer to page 122 for Model Number System.

SIZES 821, 824, 826 • 1.0 S.F.

Overall Ratio	Input RPM	Output RPM	SIZE 821			SIZE 824			SIZE 826		
			Input HP	Output HP	Output TQ (lb-in)	Input HP	Output HP	Output TQ (lb-in)	Input HP	Output HP	Output TQ (lb-in)
75	1750	23.30	0.631	0.455	1230	0.979	0.707	1910	1.226	0.911	2461
	1170	15.60	0.451	0.313	1266	0.702	0.489	1975	0.872	0.629	2540
100	1750	17.50	0.537	0.365	1315	0.829	0.567	2041	1.048	0.736	2649
	1170	11.70	0.384	0.251	1352	0.597	0.392	2109	0.755	0.508	2739
150	1750	11.70	0.366	0.238	1284	0.572	0.373	2010	0.753	0.509	2740
	1170	7.80	0.253	0.161	1303	0.397	0.253	2045	0.532	0.347	2803
200	1750	8.75	0.305	0.190	1372	0.478	0.298	2145	0.602	0.387	2787
	1170	5.85	0.216	0.129	1392	0.339	0.203	2182	0.426	0.263	2835
250	1750	7.00	0.252	0.151	1363	0.405	0.240	2160	0.501	0.309	2779
	1170	4.68	0.180	0.103	1381	1.276	0.164	2195	0.356	0.211	2824
300	1750	5.83	0.222	0.128	1392	0.346	0.201	2182	0.436	0.261	2835
	1170	3.90	0.158	0.087	1405	0.248	0.137	2207	0.312	0.177	2868
400	1750	4.38	0.179	0.098	1402	0.280	0.154	2201	0.353	0.200	2860
	1170	2.93	0.126	0.065	1412	0.197	0.102	2220	0.249	0.133	2885
500	1750	3.50	0.154	0.078	1408	0.241	0.123	2212	0.303	0.160	2875
	1170	2.34	0.108	0.052	1416	0.169	0.081	2227	0.215	0.106	2895
600	1750	2.92	0.134	0.065	1412	0.213	0.101	2205	0.253	0.127	2752
	1170	1.95	0.098	0.044	1419	0.154	0.069	2224	0.171	0.079	2568
750	1750	2.33	0.114	0.051	1409	0.181	0.081	2217	0.219	0.105	2871
	1170	1.56	0.087	0.036	1417	0.137	0.057	2232	0.166	0.073	2887
900	1750	1.94	0.100	0.043	1413	0.159	0.067	2224	0.189	0.086	2848
	1170	1.30	0.076	0.029	1420	0.118	0.046	2237	0.141	0.059	2863
1000	1750	1.75	0.099	0.041	1420	0.152	0.062	2175	0.156	0.066	2309
	1170	1.17	0.072	0.027	1424	0.099	0.038	1989	0.050	0.040	2107
1200	1750	1.46	0.088	0.034	1418	0.139	0.053	2234	0.125	0.048	2029
	1170	0.975	0.061	0.022	1423	0.100	0.035	2244	0.081	0.029	1882
1500	1750	1.17	0.076	0.027	1421	0.119	0.043	2240	0.113	0.042	2209
	1170	0.780	0.056	0.018	1426	0.087	0.029	2248	0.077	0.026	2044
1800	1750	0.972	0.068	0.023	1424	0.111	0.036	2244	0.107	0.038	2365
	1170	0.650	0.053	0.016	1427	0.085	0.025	2250	0.075	0.024	2184
2400	1750	0.729	0.056	0.016	1425	0.087	0.025	2244	0.096	0.028	2563
	1170	0.488	0.043	0.011	1429	0.069	0.018	2250	0.070	0.019	2336
3000	1750	0.583	0.053	0.013	1381	0.080	0.021	2206	0.091	0.026	2691
	1170	0.390	0.040	0.009	1384	0.057	0.014	2212	0.061	0.016	2456
3600	1750	0.486	0.048	0.011	1378	0.064	0.017	2090	0.084	0.022	2741
	1170	0.325	0.034	0.007	1381	0.042	0.010	2095	0.055	0.013	2748

* Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements. Refer to page 141 for exact ratio of worm gear primary stage and worm gear secondary stage. At speeds above 1750 input RPM, gear reducers may become thermally limited. For continuous operation, limit input HP to 1750 RPM input ratings shown. Contact Factory with application requirements if higher speeds are required.

For input/ output shaft overhung load and thrust load ratings, refer to pages 646-648.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Maximum Rating Tables

GR, NH & EL Series • All Stock Styles



Select and order double reduction reducers with model number. Refer to page 122 for Model Number System.

SIZES 830, 832 • 1.0 S.F.

Overall Ratio	Input RPM	Output RPM	SIZE GR830 & EL830			SIZE NH830			SIZE GR832 & EL832			SIZE NH832		
			Input HP	Output HP	Output TQ (lb-in)	Input HP	Output HP	Output TQ (lb-in)	Input HP	Output HP	Output TQ (lb-in)	Input HP	Output HP	Output TQ (lb-in)
75	1750	23.30	1.811	1.338	3615	1.610	1.190	3206	2.005	1.482	4002	1.610	1.190	3214
	1170	15.60	1.312	0.932	3764	1.190	0.845	3412	1.569	1.109	4481	1.320	0.933	3770
100	1750	17.50	1.528	1.063	3830	1.310	0.912	3284	1.984	1.405	5059	1.610	1.140	4114
	1170	11.70	1.108	0.741	3990	0.950	0.635	3420	1.528	1.038	5592	1.250	0.849	4574
150	1750	11.70	1.075	0.714	3844	0.970	0.644	3482	1.537	0.973	5243	1.330	0.842	4547
	1170	7.80	0.766	0.486	3925	0.694	0.440	3552	1.136	0.679	5485	0.984	0.588	4755
200	1750	8.75	0.904	0.566	4076	0.775	0.485	3491	1.208	0.768	5534	1.020	0.649	4673
	1170	5.85	0.649	0.386	4163	0.556	0.331	3563	0.870	0.525	5658	0.734	0.443	4773
250	1750	7.00	0.770	0.458	4128	0.665	0.396	3563	1.016	0.617	5557	0.838	0.509	4581
	1170	4.68	0.557	0.314	4213	0.479	0.270	3633	0.735	0.423	5675	0.603	0.347	4673
300	1750	5.83	0.638	0.365	3967	0.580	0.332	3589	0.931	0.517	5615	0.811	0.450	4865
	1170	3.90	0.462	0.248	4010	0.417	0.224	3625	0.680	0.356	5747	0.589	0.308	4975
400	1750	4.38	0.549	0.294	4209	0.467	0.250	3599	0.735	0.399	5722	0.616	0.335	4824
	1170	2.93	0.389	0.196	4254	0.336	0.169	3636	0.523	0.266	5786	0.444	0.226	4876
500	1750	3.50	0.466	0.236	4257	0.402	0.204	3669	0.591	0.302	5440	0.528	0.270	4855
	1170	2.34	0.330	0.157	4301	0.290	0.138	3705	0.414	0.197	5400	0.382	0.182	4896
600	1750	2.92	0.409	0.195	4235	0.357	0.170	3671	0.571	0.268	5817	0.497	0.233	5032
	1170	1.95	0.297	0.132	4279	0.258	0.115	3707	0.419	0.182	5886	0.361	0.157	5088
750	1750	2.33	0.359	0.157	4301	0.313	0.137	3705	0.484	0.214	5858	0.429	0.188	5066
	1170	1.56	0.274	0.110	4331	0.229	0.092	3729	0.370	0.150	5914	0.313	0.127	5111
900	1750	1.94	0.315	0.129	4279	0.278	0.114	3707	0.440	0.177	5886	0.389	0.157	5088
	1170	1.30	0.234	0.089	4309	0.203	0.077	3731	0.330	0.122	5933	0.286	0.106	5127
1000	1750	1.75	0.314	0.123	4324	0.262	0.103	3723	0.411	0.165	5776	0.334	0.134	4821
	1170	1.17	0.234	0.083	4346	0.195	0.069	3741	0.301	0.111	5827	0.244	0.090	4861
1200	1750	1.46	0.277	0.102	4302	0.233	0.086	3725	0.378	0.136	5731	0.327	0.118	5117
	1170	0.975	0.200	0.067	4324	0.174	0.058	3743	0.258	0.085	5503	0.241	0.079	5146
1500	1750	1.17	0.206	0.067	3537	0.211	0.069	3741	0.282	0.093	4905	0.287	0.095	5134
	1170	0.780	0.148	0.043	3395	0.158	0.046	3754	0.201	0.059	4684	0.216	0.064	5158
1800	1750	0.972	0.193	0.059	3746	0.188	0.058	3743	0.221	0.067	4221	0.261	0.079	5146
	1170	0.650	0.145	0.040	3580	0.142	0.039	3755	0.169	0.045	4045	0.199	0.053	5165
2400	1750	0.729	0.173	0.046	4136	0.158	0.042	3646	0.183	0.051	4565	0.206	0.057	4892
	1170	0.488	0.133	0.031	3900	0.120	0.028	3659	0.141	0.034	4318	0.156	0.038	4909
3000	1750	0.583	0.168	0.041	4261	0.137	0.033	3588	0.182	0.046	4823	0.170	0.043	4620
	1170	0.390	0.149	0.027	4276	0.104	0.019	3600	0.129	0.029	4553	0.129	0.029	4636
3600	1750	0.486	0.151	0.033	4128	0.120	0.026	3406	0.174	0.040	5064	0.143	0.033	4300
	1170	0.325	0.100	0.020	4142	0.091	0.018	3417	0.112	0.023	4767	0.109	0.022	4314

* Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements. Refer to page 141 for exact ratio of worm gear primary stage and worm gear secondary stage. At speeds above 1750 input RPM, gear reducers may become thermally limited. For continuous operation, limit input HP to 1750 RPM input ratings shown. Contact Factory with application requirements if higher speeds are required.

For input/output shaft overhung load and thrust load ratings, refer to pages 646-648.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



Select and order double reduction reducers with model number. Refer to page 122 for Model Number System.

SIZES 842, 852, 860 • 1.0 S.F.

Overall Ratio	Input RPM	Output RPM	SIZE 842			SIZE 852			SIZE 860**		
			Input HP	Output HP	Output TQ (lb-in)	Input HP	Output HP	Output TQ (lb-in)	Input HP	Output HP	Output TQ (lb-in)
75	1750	23.30	3.845	2.941	7945	7.099	5.472	14782	9.100	7.135	19271
	1170	15.60	3.001	2.215	8949	5.800	4.296	17357	6.941	5.231	21133
100	1750	17.50	3.820	2.815	10140	7.206	5.269	18977	8.665	5.947	21417
	1170	11.70	2.978	2.099	11307	5.470	3.822	20589	6.123	4.355	23458
150	1750	11.70	2.870	2.029	10931	5.336	3.724	20059	5.945	4.357	23471
	1170	7.80	2.182	1.479	11950	4.273	2.845	22985	3.283	3.093	24995
200	1750	8.75	2.347	1.612	11613	4.438	2.983	21487	4.954	3.416	24607
	1170	5.85	1.689	1.109	11953	3.258	2.082	22429	2.728	2.397	25821
250	1750	7.00	1.960	1.290	11619	3.834	2.424	21825	4.251	2.759	24841
	1170	4.68	1.417	0.890	11941	2.827	1.699	22777	2.354	1.943	26061
300	1750	5.83	1.704	1.100	11955	3.230	2.065	22434	3.607	2.376	25821
	1170	3.90	1.226	0.754	12191	2.358	1.429	23097	2.627	1.652	26689
400	1750	4.38	1.376	0.847	12132	2.660	1.601	22932	3.009	1.848	26473
	1170	2.93	0.973	0.567	12313	1.895	1.079	23443	2.138	1.249	27140
500	1750	3.50	1.149	0.679	12219	2.249	1.290	23238	2.516	1.492	26872
	1170	2.34	0.787	0.441	12092	1.591	0.863	23655	1.801	1.000	27416
600	1750	2.92	0.936	0.524	11386	1.951	1.079	23447	2.242	1.249	27151
	1170	1.95	0.665	0.348	11241	1.411	0.736	23798	1.629	0.854	27602
750	1750	2.33	0.873	0.446	12217	1.686	0.869	23807	1.929	0.999	27386
	1170	1.56	0.650	0.314	12369	1.270	0.613	24161	1.458	0.707	27851
900	1750	1.94	0.766	0.371	12293	1.516	0.725	24049	1.622	0.827	27434
	1170	1.30	0.566	0.256	12420	1.121	0.503	24406	1.218	0.575	27900
1000	1750	1.75	0.749	0.351	12273	1.467	0.687	24072	1.611	0.792	27737
	1170	1.17	0.538	0.236	12417	1.059	0.463	24342	1.171	0.535	28088
1200	1750	1.46	0.665	0.295	12389	1.325	0.579	24316	1.403	0.659	27683
	1170	0.975	0.465	0.192	12485	0.931	0.378	24589	1.000	0.433	28138
1500	1750	1.17	0.538	0.226	11853	0.938	0.393	20658	1.240	0.535	28088
	1170	0.780	0.361	0.141	11117	0.654	0.254	19979	0.903	0.360	28328
1800	1750	0.972	0.439	0.168	10608	0.915	0.356	22441	1.000	0.401	25273
	1170	0.650	0.320	0.111	10016	0.666	0.238	21472	0.767	0.283	25490
2400	1750	0.729	0.371	0.129	11595	0.785	0.267	24026	0.839	0.310	27893
	1170	0.488	0.272	0.086	10782	0.618	0.192	24206	0.694	0.223	28130
3000	1750	0.583	0.360	0.116	12214	0.756	0.227	23866	0.750	0.255	26792
	1170	0.390	0.269	0.078	12271	0.557	0.153	24044	0.602	0.171	27020
3600	1750	0.486	0.315	0.094	11816	0.688	0.186	23474	0.653	0.183	23067
	1170	0.325	0.213	0.057	11870	0.456	0.113	23649	0.436	0.111	23264

* Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements. Refer to page 141 for exact ratio of worm gear primary stage and worm gear secondary stage.

At speeds above 1750 input RPM, gear reducers may become thermally limited. For continuous operation, limit input HP to 1750 RPM input ratings shown. Contact Factory with application requirements if higher speeds are required.
** Size 860 is only available in GR & EL Series.
For input/ output shaft overhung load and thrust load ratings, refer to pages 646-648.

Maximum Rating Tables

GR Series • All Stock Styles



SIZES 870, 880, 8100 • 1.0 S.F.

Overall Ratio	Input RPM	Output RPM	SIZE GR870			SIZE GR880			SIZE GR8100		
			Input HP	Output HP	Output TQ (lb-in)	Input HP	Output HP	Output TQ (lb-in)	Input HP	Output HP	Output TQ (lb-in)
75	1750	23.30	9.13	7.55	20601	15.50	13.00	35507	26.50	22.50	61010
	1170	15.60	7.69	6.16	25161	12.00	9.78	39931	20.40	16.90	68348
100	1750	17.50	9.13	7.22	27535	12.60	10.10	38575	20.80	17.00	64363
	1170	11.70	7.04	5.37	30607	9.55	7.40	42191	16.20	12.80	72302
150	1750	11.70	7.25	5.53	30621	9.82	7.62	42212	16.50	13.00	72069
	1170	7.80	5.31	3.90	32270	7.23	5.41	44811	12.30	9.38	77678
200	1750	8.75	5.81	4.32	31857	7.92	5.98	44158	13.50	10.30	76261
	1170	5.85	4.21	3.00	33136	5.75	4.18	46181	9.93	7.31	80671
250	1750	7.00	4.90	3.54	31238	6.61	4.88	43010	11.30	8.45	74571
	1170	4.68	3.55	2.46	32432	4.80	3.40	44863	8.31	5.96	78638
300	1750	5.83	4.27	2.99	33136	5.82	4.17	46181	10.10	7.29	80671
	1170	3.90	3.06	2.05	34024	4.19	2.87	47593	7.29	5.06	83779
400	1750	4.38	3.41	2.29	33805	4.65	3.20	47245	8.12	5.62	83011
	1170	2.93	2.43	1.56	34477	3.33	2.19	48316	5.85	3.87	85377
500	1750	3.50	2.86	1.85	34209	3.88	2.60	45835	6.89	4.57	84431
	1170	2.34	2.04	1.26	34752	2.78	1.77	46812	4.96	3.13	86351
600	1750	2.92	2.53	1.56	34477	3.43	2.18	48316	6.03	3.86	85377
	1170	1.95	1.81	1.06	34936	2.46	1.48	49049	4.34	2.63	87006
750	1750	2.33	2.13	1.27	33682	2.87	1.77	46812	5.04	3.13	82964
	1170	1.56	1.53	0.86	34109	2.05	1.20	47481	3.63	2.13	84459
900	1750	1.94	1.73	1.01	32016	2.50	1.47	46627	4.13	2.49	79353
	1170	1.30	1.24	0.68	32391	1.80	0.99	46972	2.97	1.69	80681
1000	1750	1.75	1.73	0.95	35031	2.34	1.33	49201	4.21	2.37	87344
	1170	1.17	1.24	0.64	35308	1.68	0.90	49644	3.05	1.60	88332
1200	1750	1.46	1.52	0.79	35168	2.05	1.12	49420	3.73	1.98	87832
	1170	0.975	1.10	0.53	35402	1.48	0.75	49793	2.72	1.34	88666
1500	1750	1.17	1.28	0.65	34325	1.71	0.90	47819	3.13	1.61	85216
	1170	0.780	0.93	0.44	34542	1.23	0.61	48159	2.28	1.09	85980
1800	1750	0.972	1.04	0.51	32580	1.29	0.67	42944	2.56	1.28	81353
	1170	0.650	0.76	0.34	32770	0.93	0.45	43207	1.86	0.86	82031
2400	1750	0.729	0.90	0.39	33661	1.20	0.54	46987	2.17	0.96	83314
	1170	0.488	0.65	0.26	33868	0.87	0.37	47314	1.59	0.65	84037
3000	1750	0.583	0.76	0.30	32512	1.02	0.42	45708	1.83	0.78	80836
	1170	0.390	0.55	0.20	32710	0.74	0.29	46025	1.35	0.51	81535
3600	1750	0.486	0.60	0.23	29307	0.80	0.32	41112	1.46	0.57	73284
	1170	0.325	0.44	0.15	29473	0.58	0.21	41376	1.07	0.38	73877

Select and order double reduction reducers with model number. Refer to page 122 for Model Number System.

* Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements. Refer to page 141 for exact ratio of worm gear primary stage and worm gear secondary stage.

At speeds above 1750 input RPM, gear reducers may become thermally limited. For continuous operation, limit input HP to 1750 RPM input ratings shown. Contact Factory with application requirements if higher speeds are required.

For input/ output shaft overhung load and thrust load ratings, refer to pages 646-648.



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

GR SERIES • DOUBLE REDUCTION WORM - WORM • APPROXIMATE WEIGHTSΔ (LBS.)

Reducer Style	Reducer Size													
	GR813	GR815	GR818	GR821	GR824	GR826	GR830	GR832	GR842	GR852	GR860	GR870	GR880	GR8100
Solid Output Shaft														
DMQ	34	38	41	46	62	73	89	96	175	303	406	482	728	1151
DM	39	43	46	51	67	78	91	98	176	304	407	493	736	1158
D	34	38	41	46	62	73	86	93	171	299	402	478	718	1136
DTMQ & DUMQ	36	41	44	50	66	79	95	105	189	323	437	523	776	1227
DTM & DUM	41	46	49	55	71	84	97	107	190	324	438	534	784	1234
DT & DU	36	41	44	50	66	79	92	102	185	319	433	519	766	1212
DJMQ	35	39	43	49	65	78	95	102	185	318	---	---	---	---
DJM	40	44	48	54	70	83	97	104	186	319	---	---	---	---
DJ	35	39	43	49	65	78	92	99	181	314	---	---	---	---
DVLMQ & DVHMQ	36	41	44	53	69	82	99	109	195	328	442	553	806	1307
DVLM & DVHM	41	46	49	58	74	87	101	111	196	329	443	564	814	1314
DVL & DVH	36	41	44	53	69	82	96	106	191	324	438	549	796	1292
DFMQ	35	39	43	49	65	77	99	106	190	333	444	497	746	1172
DFM	40	44	48	54	70	82	101	108	191	334	445	508	754	1179
DF	35	39	43	49	65	77	96	103	186	329	440	493	736	1157
DFEMQ	---	---	---	---	---	---	99	106	205	334	448	647	930	1431
DFEM	---	---	---	---	---	---	101	108	206	335	449	658	938	1438
DFE	---	---	---	---	---	---	96	103	201	330	444	643	920	1406
Hollow Output Shaft														
DHMQ	35	38	42	47	64	72	90	98	178	303	406	482	728	1151
DHM	40	42	46	51	68	76	92	100	179	304	407	493	736	1158
DH	35	38	42	47	64	72	87	95	174	299	402	478	718	1136
DFHMQ	36	39	44	50	67	76	100	108	193	333	444	497	746	1172
DFHM	41	43	48	54	71	80	102	110	194	334	445	508	754	1179
DFH	36	39	44	50	67	76	97	105	189	329	440	493	736	1157
DBFHM	37	---	44	50	68	78	---	---	---	---	---	---	---	---
DBFH	42	---	48	54	72	82	---	---	---	---	---	---	---	---
DBFH	37	---	44	50	68	78	---	---	---	---	---	---	---	---

Δ Weights include oil.

GR SERIES • ACCESSORIES • APPROXIMATE WEIGHTS (LBS.)

Accessory	IRONMAN Reducer Size													
	GR813	GR815	GR818	GR821	GR824	GR826	GR830	GR832	GR842	GR852	GR860	GR870	GR880	GR8100
T/U-Base	2	3	3	4	4	6	6	9	14	20	31	41	48	76
J-Base	1	1	2	3	3	5	6	6	10	15	---	---	---	---
VL/VH-Base	2	3	3	7	7	9	10	13	20	25	36	**	**	**
**F-Flange (cast Iron)	1	1	2	3	3	4	10	10	15	30	38	**	**	**
BF-Flange (Steel)	2	---	2	3	4	6	---	---	---	---	---	---	---	---
R-Riser Block	---	7	7	9	9	12	15	31	24	15	---	---	---	---
Hollow Shaft Torque Arm Kit	5	5	5	5	5	5	5	5	5	8	8	---	---	---
Coupling Input C-Flange Kits														
48CZ, 56C, 140TC	7	7	7	7	8	8	11	11	14	16	---	---	---	---
180TC-210TC	---	---	---	---	11	11	11	11	16	18	22	30	30	---
250TC	---	---	---	---	---	---	---	28	30	30	32	34	36	---

** This accessory must be assembled at the Factory. It is not available as a kit for field installation.



NH Series Weights



NH SERIES • DOUBLE REDUCTION WORM-WORM • APPROXIMATE WEIGHTS Δ (LBS.)

Reducer Style	Reducer Size									
	NH813	NH815	NH818	NH821	NH824	NH826	NH830	NH832	NH842	NH852
Solid Output Shaft										
DMQ	29	32	35	39	53	62	76	82	149	258
DM	33	37	39	43	57	66	77	83	150	258
D	29	32	35	39	53	62	73	79	145	254
DTMQ & DUMQ	31	35	38	43	57	68	82	91	163	278
DTM & DUM	35	40	42	47	61	72	83	92	164	278
DT & DU	31	35	38	43	57	68	79	88	159	274
DJMQ	30	33	37	42	56	67	82	88	159	273
DJM	34	38	41	46	60	71	83	89	160	273
DJ	30	33	37	42	56	67	79	85	155	269
DVLMQ & DVHMQ	31	35	38	46	60	71	86	95	169	283
DVLM & DVHM	35	40	42	50	64	75	87	96	170	283
DVL & DVH	31	35	38	46	60	71	83	92	165	279
DFMQ	30	33	37	42	56	66	86	92	164	288
DFM	34	38	41	46	60	70	87	93	165	288
DF	30	33	37	42	56	66	83	89	160	284
DFEMQ	---	---	---	---	---	---	99	106	205	334
DFEM	---	---	---	---	---	---	101	108	206	335
DFE	---	---	---	---	---	---	96	103	201	330
Hollow Output Shaft										
DHMQ	30	32	36	40	54	61	77	83	151	258
DHM	34	36	39	43	58	65	78	85	152	258
DH	30	32	36	40	54	61	74	81	148	254
DFHMQ	31	33	38	43	57	65	87	93	166	288
DFHM	35	37	41	46	61	69	88	95	167	288
DFH	31	33	38	43	57	65	84	91	163	284

Δ Weights include oil.

NH SERIES • ACCESSORIES • APPROXIMATE WEIGHTS Δ (LBS.)

Accessory	IRONMAN Reducer Size									
	NH813	NH815	NH818	NH821	NH824	NH826	NH830	NH832	NH842	NH852
T/U-Base	2	3	3	4	4	6	6	9	14	20
J-Base	1	1	2	3	3	5	6	6	10	15
VL/VH-Base	2	3	3	7	7	9	10	13	20	25
F-Flange (cast Iron)	1	1	2	3	3	4	10	10	15	30
Hollow Shaft Torque Arm Kit	5	5	5	5	5	5	5	5	5	8
Coupling Input C-Flange Kits										
48CZ, 56C, 140TC	7	7	7	7	8	8	11	11	14	16
180TC-210TC	---	---	---	---	11	11	11	11	16	18
250TC	---	---	---	---	---	---	---	28	30	30

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

EL SERIES • DOUBLE REDUCTION WORM-WORM • APPROXIMATE WEIGHTS Δ (LBS.)

Reducer Style	Reducer Size									
	EL813	EL818	EL821	EL824	EL826	EL830	EL832	EL842	EL852	EL860
Solid Output Shaft										
DMQ	22	27	30	41	48	59	63	116	200	268
DM	26	30	34	44	51	60	65	116	201	269
D	22	27	30	41	48	57	61	113	197	265
DTMQ & DUMQ	23	29	33	44	52	65	71	123	208	278
DTM & DUM	27	32	37	47	55	66	73	123	209	279
DT & DU	23	29	33	44	52	63	69	120	205	275
DJMQ	23	29	33	44	52	64	68	122	208	278
DJM	27	32	37	47	55	65	70	122	209	279
DJ	23	29	33	44	52	62	66	119	205	275
DVLMQ	24	30	33	44	52	64	68	122	208	278
DVLM	28	33	37	47	55	65	70	122	209	279
DVL	24	30	33	44	52	62	66	119	205	275
DFMQ	---	29	33	44	51	65	70	124	208	289
DFM	---	32	37	47	54	66	72	124	209	290
DF	---	29	33	44	51	63	68	121	205	286
Hollow Output Shaft										
DHMQ	23	28	31	42	48	59	65	117	200	268
DHM	26	30	34	45	50	61	66	118	201	269
DH	23	28	31	42	48	57	63	115	197	265
DFHMQ	---	30	34	45	51	65	72	125	208	289
DFHM	---	32	37	48	53	67	73	126	209	290
DFH	---	30	34	45	51	63	70	123	205	286

Δ Weights include oil.

EL SERIES • ACCESSORIES • APPROXIMATE WEIGHTS (LBS.)

Accessory	Reducer Size									
	EL813	EL818	EL821	EL824	EL826	EL830	EL832	EL842	EL852	EL860
ABC Base	1	2	3	3	4	6	8	7	8	10
T/U-Base	1	2	3	3	4	6	8	7	8	10
J-Base	1	2	3	3	4	5	5	6	8	10
VL Base	2	3	3	3	4	5	5	6	8	10
FR and F-Flange	---	2	3	3	3	6	7	8	8	21
Hollow Shaft Torque Arm Kit	5	5	5	5	5	5	5	5	8	8
Coupling Input C-Flange Kits										
48CZ, 56C, 140TC	3	3	3	4	4	5	5	7	7	---
180TC-210TC	---	---	---	5	5	5	5	8	8	8
250TC	---	---	---	---	---	---	8	8	8	8

* Will not fit solid output shaft models.
 Ⓞ Will not fit hollow output shaft models.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Hollow Bore Shaft Sizes

GR, NH & EL Series



HOLLOW SHAFT BORE SIZES (Inches)*

Fraction Size	Decimal Size	Output Bore Code	813	815	818	821	824	826	830	832	842	852	860	870	880	8100	Keyway**
5/8	0.625	10															3/16 x 3/32
11/16	0.688	11															3/16 x 3/32
3/4	0.750	12															3/16 x 3/32
7/8	0.875	14															3/16 x 3/32
1	1.000	16															1/4 x 1/8
1-1/8	1.125	18															1/4 x 1/8
1-3/16	1.188	19															1/4 x 1/8
1-1/4	1.250	20															1/4 x 1/8
1-7/16	1.438	23															3/8 x 3/16
1-1/2	1.500	24															3/8 x 3/16
1-5/8	1.625	26															3/8 x 3/16
1-11/16	1.688	27															3/8 x 3/16
1-3/4	1.750	28															3/8 x 3/16
1-7/8	1.875	30															1/2 x 1/4
1-15/16	1.938	31															1/2 x 1/4
2	2.000	32															1/2 x 1/4
2- 3/16	2.188	35															1/2 x 1/4
2-1/4	2.250	36															1/2 x 1/4
2-7/16	2.438	39															5/8 x 5/16
2-1/2	2.500	40															5/8 x 5/16
2-11/16	2.688	43															5/8 x 5/16
2-15/16	2.938	47															3/4 x 3/8
3	3.000	48															3/4 x 3/8
3-3/16	3.188	51															3/4 x 3/8
3-7/16	3.438	55															7/8 x 7/16
3-15/16	3.938	63															1 x 1/2
4-3/16	4.188	67															1 x 1/2
4-7/16	4.438	71															1 x 1/2
4-15/16	4.938	79															1-1/4 x 5/8
5-7/16	5.438	87															1-1/4 x 5/8

Stock Bore Sizes.

* Other bore sizes are available. Contact Factory for sizes and availability.

** Dimensions refer to customer driven shaft.

NOTE: Specify the required bore size when ordering. The suffix "XX" can be substituted with the bore code from table above.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



Exact Ratios

GR, NH & EL Series

DOUBLE REDUCTION & WORM-WORM EXACT RATIO COMBINATIONS

Total Ratio	GEAR REDUCER SIZE													
	813		815 (GR+NH)		818		821		824		826		830**	
	P 813	S 813	P 813	S 815	P 813	S 818	P 813	S 821	P 813	S 824	P 813	S 826	P 818	S 830
75	5	15	5	15	5	15	5	15	5	15	5	15	5	15
100	5	20	5	20	5	20	5	20	5	20	5	20	5	20
150	10	15	7.5	20	10	15	10	15	10	15	7.5	20	10	15
200	10	20	10	20	10	20	10	20	10	20	10	20	10	20
250	10	25	10	25	10	25	10	25	10	25	10	25	10	25
300	10	30	15	20	10	30	15	20	15	20	15	20	20	15
400	20	20	20	20	20	20	20	20	20	20	20	20	20	20
500	20	25	25	20	25	20	25	20	25	20	25	20	20	25
600	20	30	30	20	20	30	30	20	20	30	30	20	20	30
750	30	25	30	25	25	30	25	30	25	30	30	25	30	25
900	30	30	30	30	30	30	30	30	30	30	30	30	30	30
1000	40	25	50	20	50	20	50	20	50	20	50	20	40	25
1200	40	30	60	20	40	30	40	30	40	30	60	20	40	30
1500	60	25	60	25	50	30	50	30	50	30	60	25	60	25
1800	60	30	60	30	60	30	60	30	60	30	60	30	60	30
2400	60	40	60	40	60	40	60	40	60	40	60	40	60	40
3000	60	50	60	50	60	50	60	50	60	50	60	50	60	50
3600	60	60	60	60	60	60	60	60	60	60	60	60	60	60

Total Ratio	GEAR REDUCER SIZE													
	832**		842		852		860		870		880		8100	
	P 818	S 832	P 821	S 842	P 826	S 852	P 832	S 860	P 832	S 870	P 842	S 880	P 852	S 8100
75	5	15	5	15	5.17	15	5.17	15	5.17	14.67	5.17	14.67	5.13	14.67
100	5	20	5	20	5.17	20	5.17	20	5.17	20.50	5.17	20.50	5.13	20.50
150	5	30	7.5	20	7.5	20	10	15	7.5	20.50	7.5	20.50	10	14.67
200	10	20	10	20	10	20	10	20	10	20.50	10	20.50	10	20.50
250	10	25	10	25	10	25	10	25	10	24.50	10	24.50	10	24.50
300	10	30	15	20	15	20	20	15	15	20.50	15	20.50	20	14.67
400	20	20	20	20	20	20	20	20	20	20.50	20	20.50	20	20.50
500	25	20	25	20	25	20	25	20	25	20.50	25	20.50	25	20.50
600	20	30	30	20	30	20	30	20	30	20.50	30	20.50	30	20.50
750	25	30	25	30	30	25	30	25	30	24.50	30	24.50	30	24.50
900	30	30	30	30	30	30	60	15	30	29.50	30	29.50	60	14.67
1000	25	40	25	40	40	25	50	20	50	20.50	40	24.50	50	20.50
1200	40	30	40	30	40	30	60	20	60	20.50	40	29.50	60	20.50
1500	50	30	50	30	60	25	60	25	60	24.50	60	24.50	60	24.50
1800	60	30	60	30	60	30	60	30	60	29.50	60	29.50	60	29.50
2400	60	40	60	40	60	40	60	40	60	40	60	40	60	40
3000	60	50	60	50	60	50	60	50	60	50	60	50	60	50
3600	60	60	60	60	60	60	60	60	60	60	60	60	60	60

Note: Exact ratios are listed. P = Primary stage reducer ratio S = Secondary stage reducer ratio
 * Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements.
 ** For NH Series, P = 815

For exact total of double reduction package multiply "P" by the "S" ratio.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



GR Series Dimensions

Styles: DMQ, DM, D

CAST IRON
GR SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

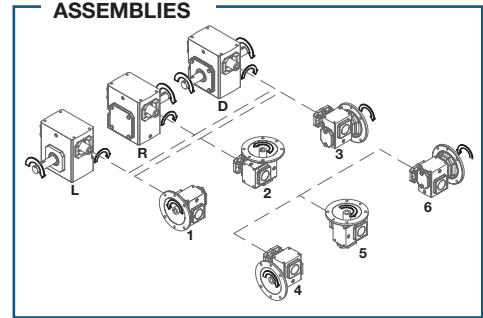
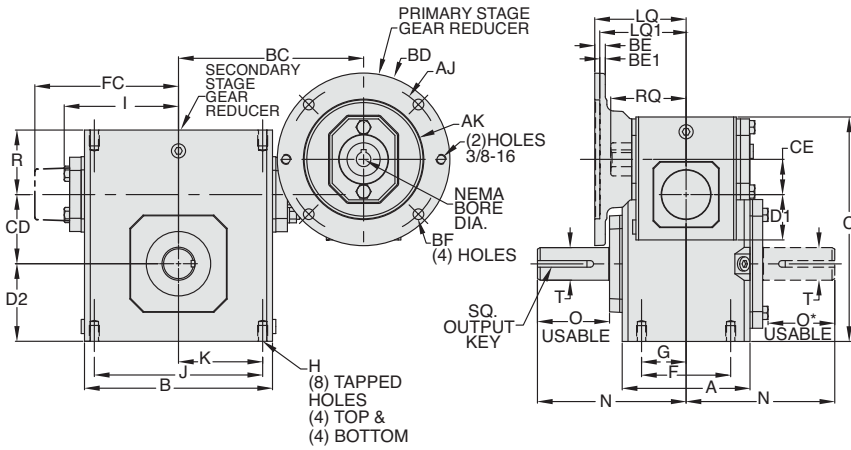
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

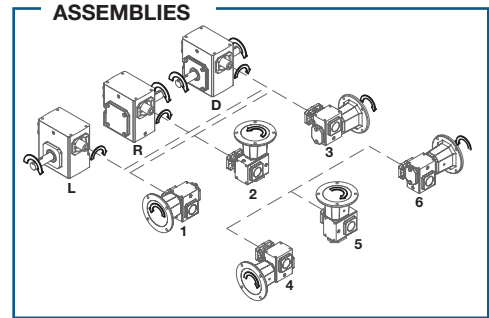
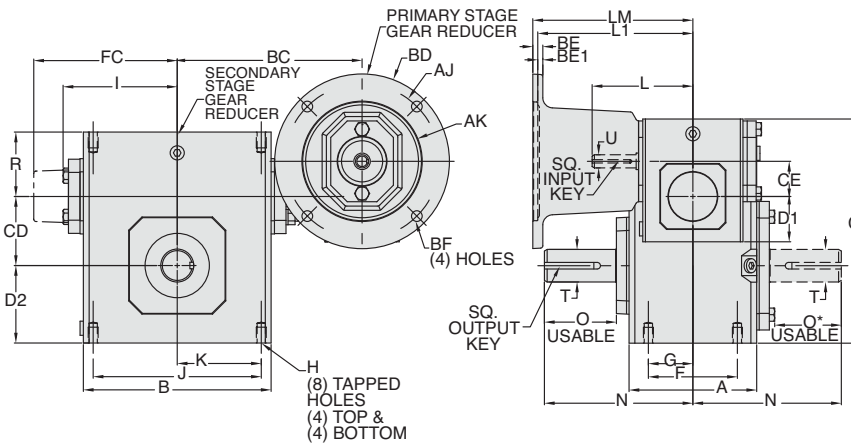
Ratio Multipliers

Accessories and
Additional Capabilities

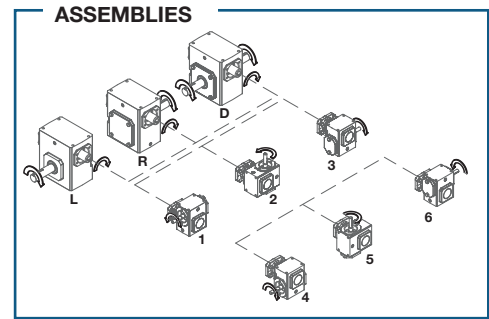
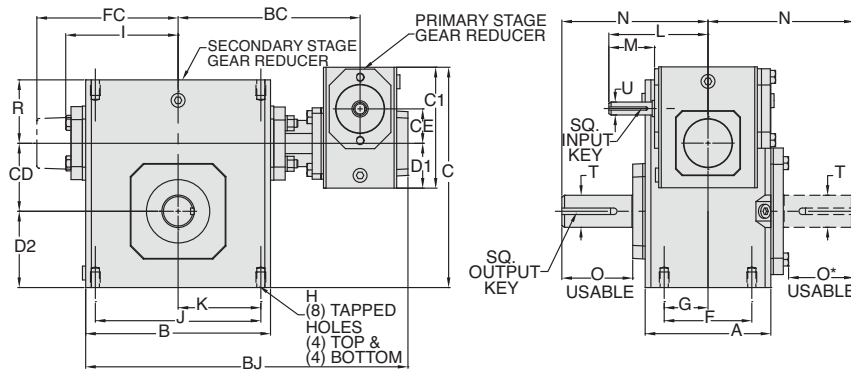
Style DMQ



Style DM



Style D



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



STYLE DMQ, DM, D DIMENSIONS (Inches)

Size	A	B	BC	BJ	C	CD	CE	C1	D1	D2	F	FC▼	G	H		I	J	K	L	M	N	O	O*	R	T +0.000 -0.0015	U +0.000 -0.0015	Input Key**	Output Key
														Tap Size	Depth													
GR813	2.82	3.80	5.32	9.06	5.99	1.33	1.33	4.66	1.72	1.72	2.00	N/A	1.00	5/16-18 UNC	.50	2.61	3.25	1.63	3.82	1.76	4.00	2.16	1.94	1.61	.625	0.500	1/8 x 1.00	3/16 X 1.50
GR815	3.44	4.88	5.85	10.13	6.38	1.54	1.33	4.66	1.72	1.91	2.75	N/A	1.38	5/16-18 UNC	.63	3.14	4.19	2.09	3.82	1.76	4.31	2.11	1.90	1.93	.750	0.500	1/8 x 1.00	3/16 X 1.50
GR818	3.56	5.06	5.94	10.32	6.75	1.75	1.33	4.66	1.72	2.06	2.75	N/A	1.38	5/16-18 UNC	.63	3.24	4.19	2.09	3.82	1.76	4.31	2.05	1.84	1.94	.875	0.500	1/8 x 1.00	3/16 X 1.38
GR821	3.81	5.80	6.32	11.06	7.28	2.06	1.33	4.66	1.72	2.28	▲	N/A	1.44	3/8-16 UNC	.63	3.61	▲	2.50	3.82	1.76	4.68	2.29	2.08	2.03	1.000	0.500	1/8 x 1.00	1/4 X 1.44
GR824	4.06	6.12	6.44	11.35	7.81	2.38	1.33	4.66	1.72	2.50	2.88	N/A	1.44	3/8-16 UNC	.69	3.77	5.00	2.50	3.82	1.76	5.14	2.66	2.44	2.06	1.125	0.500	1/8 x 1.00	1/4 X 1.75
GR826	4.84	7.12	7.01	12.41	8.50	2.63	1.33	4.66	1.72	2.94	3.38	N/A	1.69	3/8-16 UNC	.69	4.34	6.38	3.19	3.82	1.76	5.63	2.73	2.52	2.44	▲	0.500	1/8 x 1.00	1/4 X 1.75
GR830	5.25	8.12	7.86	14.12	9.94	3.00	1.75	5.38	2.06	3.25	4.00	N/A	2.00	7/16-14 UNC	.88	4.84	7.00	3.50	4.45	1.76	6.75	3.60	3.36	2.63	1.250	0.625	3/16 x 1.38	1/4 X 1.75
GR832	5.75	8.50	8.05	14.50	10.44	3.25	1.75	5.38	2.06	3.50	4.00	N/A	2.00	7/16-14 UNC	.88	5.02	7.50	3.75	4.45	1.76	7.06	3.66	3.42	2.63	▲	0.625	3/16 x 1.38	3/8 X 2.25
GR842	6.13	10.25	9.18	16.69	12.78	4.25	2.06	6.38	2.28	4.44	5.00	N/A	2.50	5/8-11 UNC	1.00	6.10	8.50	4.25	4.82	1.76	8.12	4.50	4.21	2.69	1.875	0.625	3/16 x 1.38	1/2 X 3.06
GR852	7.19	13.00	11.57	20.97	15.43	5.25	2.63	8.00	2.94	5.12	5.81	N/A	2.91	5/8-11 UNC	1.25	7.50	11.00	5.50	6.07	2.38	9.06	4.78	4.53	3.63	2.000	0.750	3/16 x 1.63	1/2 X 3.50
GR860	8.13	14.25	13.30	23.82	18.38	6.00	3.25	9.38	3.50	6.50	6.38	10.24	3.19	5/8-11 UNC	1.00	N/A	12.75	6.38	6.76	2.38	10.00	4.65	4.65	4.00	2.500	0.875	3/16 x 1.63	5/8 X 4.00
GR870	7.63	14.88	12.96	24.33	20.46	7.00	3.25	9.38	3.50	7.59	5.50	10.63	2.75	1-8 UNC	1.56	N/A	12.50	6.25	6.76	2.38	11.76	5.65	5.65	4.33	2.750	0.875	3/16 x 1.75**	5/8 x 4.00**
GR880	8.63	17.00	13.94	26.69	23.79	8.00	4.25	11.38	4.44	8.86	6.50	11.93	3.25	1-8 UNC	1.66	N/A	14.25	7.13	9.57	3.47	12.25	5.98	5.98	4.11	3.000	1.250	1/4 X 2.88**	3/4 x 4.50**
GR8100	9.53	20.88	17.05	32.74	29.24	10.00	5.25	14.00	5.12	10.36	6.88	14.34	3.44	1-1/4 -7 UNC	2.04	N/A	17.75	8.88	10.88	3.38	14.75	6.76	6.76	5.12	3.750	1.250	1/4 X 3.00**	7/8 x 5.00**

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	(F)3.00" x (J)4.75"	Identical	Identical	✓	✓	GRG
		(F)2.88" x (J)5.00"					GRL
826	1.250"	Identical	Identical	Identical	✓	✓	GRG
							1.125"	GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✓	✓	GRG
			5/16 x 2.63				GRL

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM			L1	LQ	LQ1			48CZ/56C/140TC	RQ		
	48CZ	56C/140TC	180TC/210TC			180TC	210TC	250TC		180TC	210TC	250TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR815	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR818	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR821*	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR824	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR826*	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR830	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR832*	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR842	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
GR852	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
GR860	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR870	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR880	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
GR8100	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway♦	BF	BFØ
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28	
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41	
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41	
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53	
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53	
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53	

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)◆

Size	LQ1						RQ					
	D63D	D71D	D80D	D90D	D100LD/D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/D112MD	D132D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR815	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR818	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR821*	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR824	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR826*	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR830	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR832*	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR842	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
GR852	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
GR860	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR870	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR880	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
GR8100	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway♦	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

* Applies to double output shaft

** Key not provided with gear reducer. Keyway dimension shown.

◆ Keyway width by depth

■ 48CZ not available

※ Style D and DM only.

◆ Metric IEC B5 input flange options are available only on quill input styles.

* Dimensions same for GRG and GRL Series

▼ Sizes 860-8100 have extended cap. Dimensions refer to cap location.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



GR Series Dimensions

Styles: DTMQ, DTM, DT

CAST IRON
GR SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

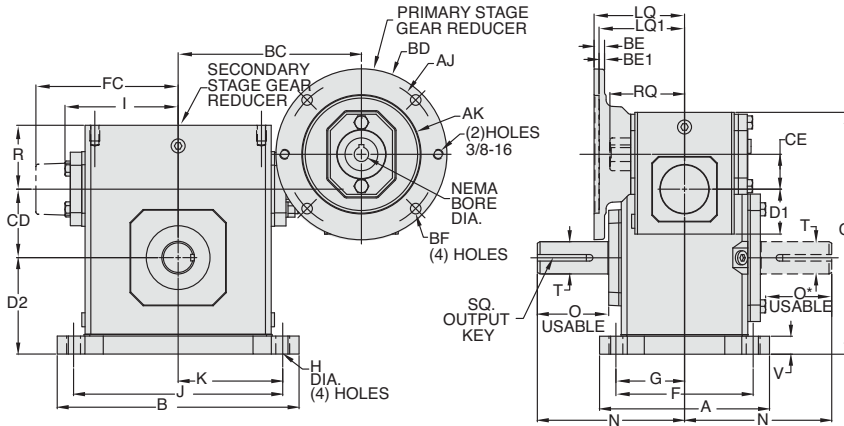
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

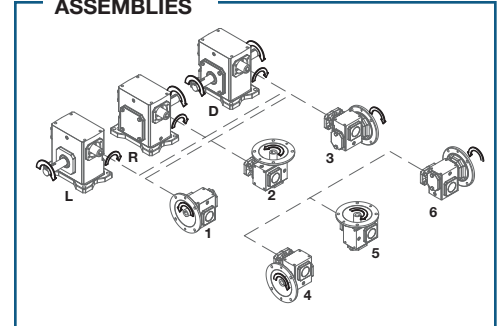
Ratio Multipliers

Accessories and
Additional Capabilities

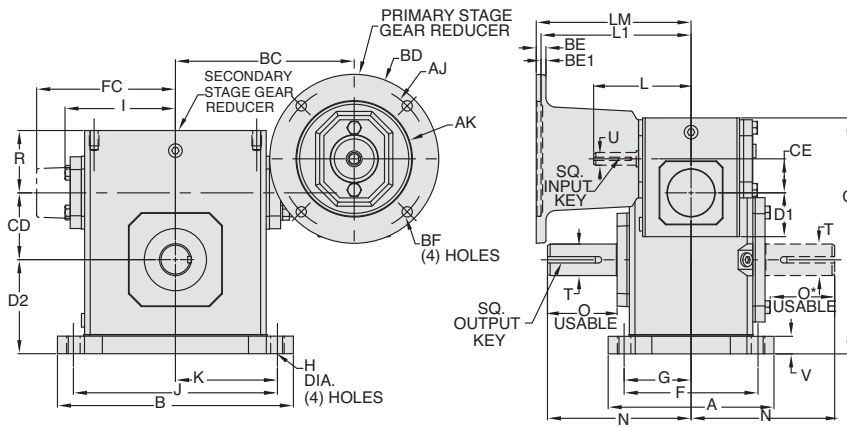
Style DTMQ



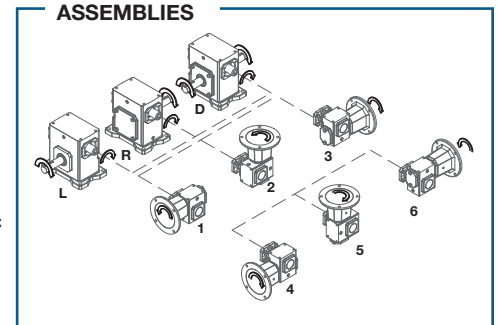
ASSEMBLIES



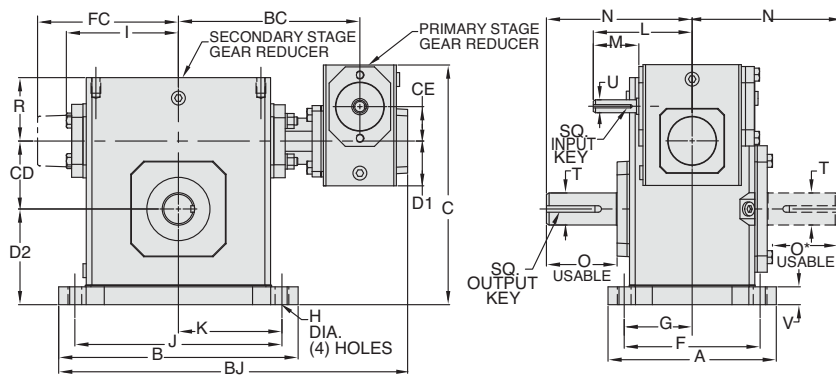
Style DTM



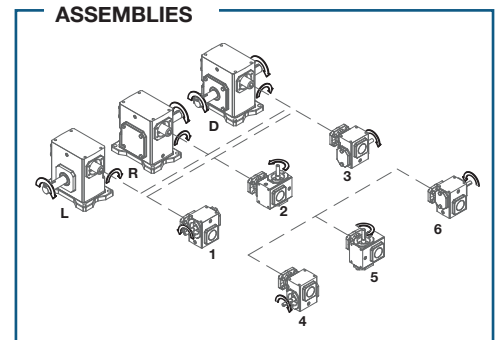
ASSEMBLIES



Style DT



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



STYLE DTMQ, DTM, DT DIMENSIONS (Inches)

Size	A	B	BC	BJ	C	CD	CE	C1	D1	D2	F	FC*	G	H	I	J	K	L	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key**	Output Key
GR813	4.24	5.37	5.32	9.85	6.52	1.33	1.33	4.66	1.72	2.25	3.31	N/A	1.66	.34	2.61	4.37	2.19	3.82	1.76	4.00	2.16	1.94	1.61	0.53	.625	0.500	1/8 x 1.00	3/16 X 1.50
GR815	5.56	6.50	5.85	10.94	6.98	1.54	1.33	4.66	1.72	2.50	4.31	N/A	2.16	.41	3.14	5.25	2.63	3.82	1.76	4.31	2.11	1.90	1.93	0.59	.750	0.500	1/8 x 1.00	3/16 X 1.50
GR818	5.75	6.99	5.94	11.28	7.44	1.75	1.33	4.66	1.72	2.75	4.50	N/A	2.25	.41	3.24	5.75	2.88	3.82	1.76	4.31	2.05	1.84	1.94	0.69	.875	0.500	1/8 x 1.00	3/16 X 1.38
GR821	6.00	7.69	6.32	12.01	8.00	2.06	1.33	4.66	1.72	3.00	4.69	N/A	2.34	.47	3.61	6.38	3.19	3.82	1.76	4.68	2.29	2.08	2.03	0.72	1.000	0.500	1/8 x 1.00	1/4 X 1.44
GR824	6.19	8.37	6.44	12.48	8.56	2.38	1.33	4.66	1.72	3.25	4.88	N/A	2.44	.49	3.77	7.06	3.53	3.82	1.76	5.14	2.66	2.44	2.06	0.75	1.125	0.500	1/8 x 1.00	1/4 X 1.75
GR826	6.50	9.25	7.01	13.48	9.25	2.63	1.33	4.66	1.72	3.69	5.25	N/A	2.63	.53	4.34	8.00	4.00	3.82	1.76	5.63	2.73	2.52	2.44	0.75	▲	0.500	1/8 x 1.00	1/4 X 1.75
GR830	7.50	10.00	7.86	15.08	9.94	3.00	1.75	5.38	2.06	4.00	5.88	N/A	2.94	.53	4.84	8.44	4.22	4.35	1.76	6.75	3.60	3.36	2.63	0.75	1.250	0.625	3/16 x 1.38	1/4 X 1.75
GR832	7.75	11.12	8.05	15.81	10.44	3.25	1.75	5.38	2.06	4.38	6.13	N/A	3.06	.53	5.02	9.50	4.75	4.35	1.76	7.06	3.66	3.42	2.63	0.81	▲	0.625	3/16 x 1.38	3/8 X 2.25
GR842	9.75	13.24	9.18	18.19	13.78	4.25	2.06	6.38	2.28	5.44	7.63	N/A	3.81	.66	6.10	11.12	5.56	4.82	1.76	8.12	4.50	4.21	2.69	1.00	1.875	0.625	3/16 x 1.38	1/2 X 3.06
GR852	10.50	16.24	11.57	22.59	16.56	5.25	2.63	8.00	2.94	6.25	8.38	N/A	4.19	.78	7.50	14.12	7.06	6.07	2.38	9.06	4.78	4.53	3.63	1.13	2.000	0.750	3/16 x 1.63	1/2 X 3.50
GR860	12.00	18.99	13.30	26.19	19.63	6.00	3.25	9.38	3.50	7.75	9.50	10.24	4.75	.91	N/A	16.49	8.25	6.76	2.38	10.00	4.65	4.65	4.00	1.25	2.500	0.875	3/16 x 1.63	5/8 X 4.00
GR870	13.38	15.38	12.96	24.58	21.88	7.00	3.25	9.38	3.50	9.00	11.25	10.63	5.63	1.13	N/A	13.00	6.50	6.76	2.38	11.76	5.65	5.65	4.33	1.42	2.750	0.875	3/16 x 1.75**	5/8 x 4.00**
GR880	13.50	17.37	13.94	26.88	25.44	8.00	4.25	11.38	4.44	10.50	11.50	11.93	5.75	1.13	N/A	14.75	7.38	9.57	3.47	12.25	5.98	5.98	4.11	1.65	3.000	1.250	1/4 X 2.88**	3/4 x 4.50**
GR8100	16.88	21.14	17.05	32.92	30.88	10.00	5.25	14.00	5.12	12.00	14.00	14.34	7.00	1.44	N/A	17.00	8.50	10.88	3.38	14.75	6.76	6.76	5.12	1.65	3.750	1.250	1/4 X 3.00**	7/8 x 5.00**

FEATURE COMPARISON (821, 826, 832)

▲ See feature comparison chart.

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical	Identical	Identical	✓	✓	GRG
							GRL
826	1.250"	Identical	Identical	Identical	✓	✓	GRG
	1.125"						GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✓	✓	GRG
	1.375"		5/16 x 2.63				GRL

◇ If Accessory kit is removed, dimensions will vary. NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 142-143 (DMQ, DM, D).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM		180TC/210TC	L1	250TC	LQ			RQ			
	48CZ	56C/140TC				48CZ/56C/140TC	180TC	LQ1 210TC	250TC	48CZ/56C/140TC	180TC	210TC	250TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR815	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR818	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR821*	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR824	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR826*	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR830	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR832*	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR842	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
GR852	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
GR860	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR870	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR880	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
GR8100	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BFG
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)◆

Size	LQ1					RQ						
	D63D	D71D	D80D	D90D	D100LD/D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/D112MD	D132D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR815	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR818	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR821*	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR824	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR826*	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR830	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR832*	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR842	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
GR852	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
GR860	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR870	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR880	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
GR8100	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BFTAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

* Applies to double output shaft

** Key not provided with gear reducer. Keyway dimension shown.

◆ Keyway width by depth

■ 48CZ not available

※ Style DT and DTM only.

◆ Metric IEC B5 input flange options are available only on quill input styles.

※ Dimensions same for GRG and GRL Series

▼ Sizes 860-8100 have extended cap. Dimensions refer to cap location.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



STYLE DUMQ, DUM, DU DIMENSIONS (Inches)

Size	A	B	BC	BJ	C	CD	CE	C1	D1	D2	F	FC▼	G	H	I	J	K	L	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key*:	Output Key
GR813	4.24	5.37	5.32	9.85	5.19	1.33	1.33	4.66	1.72	2.14	3.31	N/A	1.66	.34	2.61	4.37	2.19	3.82	1.76	4.00	2.16	1.94	1.72	0.53	.625	0.500	1/8 x 1.00	3/16 X 1.50
GR815	5.56	6.50	5.85	10.94	5.97	1.54	1.33	4.66	1.72	2.52	4.31	N/A	2.16	.41	3.14	5.25	2.63	3.82	1.76	4.31	2.11	1.90	1.91	0.59	.750	0.500	1/8 x 1.00	3/16 X 1.50
GR818	5.75	6.99	5.94	11.28	6.44	1.75	1.33	4.66	1.72	2.63	4.50	N/A	2.25	.41	3.24	5.75	2.88	3.82	1.76	4.31	2.05	1.84	2.06	0.69	.875	0.500	1/8 x 1.00	3/16 X 1.38
GR821	6.00	7.69	6.32	12.01	7.09	2.06	1.33	4.66	1.72	2.75	4.69	N/A	2.34	.47	3.61	6.38	3.19	3.82	1.76	4.68	2.29	2.08	2.28	0.72	1.000	0.500	1/8 x 1.00	1/4 X 1.44
GR824	6.19	8.37	6.44	12.48	7.69	2.38	1.33	4.66	1.72	2.81	4.88	N/A	2.44	.49	3.77	7.06	3.53	3.82	1.76	5.14	2.66	2.44	2.50	0.75	1.125	0.500	1/8 x 1.00	1/4 X 1.75
GR826	6.50	9.25	7.01	13.48	8.75	2.63	1.33	4.66	1.72	3.19	5.25	N/A	2.63	.53	4.34	8.00	4.00	3.82	1.76	5.63	2.73	2.52	2.94	0.75	▲	0.500	1/8 x 1.00	1/4 X 1.75
GR830	7.50	10.00	7.86	15.08	9.94	3.00	1.75	5.38	2.06	3.38	5.88	N/A	2.94	.53	4.84	8.44	4.22	4.35	1.76	6.75	3.60	3.36	3.25	0.75	1.250	0.625	3/16 x 1.38	1/4 X 1.75
GR832	7.75	11.12	8.05	15.81	10.44	3.25	1.75	5.38	2.06	3.50	6.13	N/A	3.06	.53	5.02	9.50	4.75	4.35	1.76	7.06	3.66	3.42	3.50	0.81	▲	0.625	3/16 x 1.38	3/8 X 2.25
GR842	9.75	13.24	9.18	18.19	12.38	4.25	2.06	6.38	2.28	3.69	7.63	N/A	3.81	.66	6.10	11.12	5.56	4.82	1.76	8.12	4.50	4.21	4.44	1.00	1.875	0.625	3/16 x 1.38	1/2 X 3.06
GR852	10.50	16.24	11.57	22.59	15.13	5.25	2.63	8.00	2.94	4.76	8.38	N/A	4.19	.78	7.50	14.12	7.06	6.07	2.38	9.06	4.78	4.53	5.12	1.13	2.000	0.750	3/16 x 1.63	1/2 X 3.50
GR860	12.00	18.99	13.30	26.19	17.75	6.00	3.25	9.38	3.50	5.25	9.50	10.24	4.75	.91	N/A	16.49	8.25	6.76	2.38	10.00	4.65	4.65	6.50	1.25	2.500	0.875	3/16 x 1.63	5/8 X 4.00
GR870	13.38	15.38	12.96	24.58	20.33	7.00	3.25	9.38	3.50	5.74	11.25	10.63	5.63	1.13	N/A	13.00	6.50	6.76	2.38	11.76	5.65	5.65	7.59	1.42	2.750	0.875	3/16 x 1.75**	5/8 x 4.00**
GR880	13.50	17.37	13.94	26.88	22.61	8.00	4.25	11.38	4.44	5.75	11.50	11.93	5.75	1.13	N/A	14.75	7.38	9.57	3.47	12.25	5.98	5.98	8.86	1.65	3.000	1.250	1/4 X 2.88**	3/4 x 4.50**
GR8100	16.88	21.14	17.05	32.92	27.12	10.00	5.25	14.00	5.12	6.76	14.00	14.34	7.00	1.44	N/A	17.00	8.50	10.88	3.38	14.75	6.76	6.76	10.36	1.65	3.750	1.250	1/4 X 3.00**	7/8 x 5.00**

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical	Identical	Identical	✓	✓	GRG GRL
	1.250" 1.125"	Identical	Identical	Identical	✓	✓	GRG GRL
832	1.500" 1.375"	Identical	3/8 x 2.63 5/16 x 2.63	Identical	✓	✓	GRG GRL

▲ See feature comparison chart.

○ If Accessory kit is removed, dimensions will vary. NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 142-143 (DMQ, DM, D).

**Motor Mounting Dimensions
NEMA DIMENSIONS (Inches)**

Size	LM		L1		LQ		LQ1			RQ		
	48CZ	56C/140TC	180TC/210TC	250TC	48CZ/56C/140TC	180TC	210TC	250TC	48CZ/56C/140TC	180TC	210TC	250TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR815	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR818	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR821*	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR824	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR826*	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR830	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR832*	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR842	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
GR852	N/A	8.32	9.32	N/A	5.19	5.62	N/A	N/A	4.82	5.13	N/A	N/A
GR860	N/A	9.01	10.01	N/A	6.14	6.34	6.75	N/A	5.51	5.81	6.25	N/A
GR870	N/A	9.01	10.01	N/A	6.14	6.34	6.75	N/A	5.51	5.81	6.25	N/A
GR880	N/A	11.81	12.90	13.46	6.45	7.21	7.21	7.77	6.04	6.68	6.68	7.24
GR8100	N/A	13.21	14.30	14.86	7.85	8.61	8.61	9.17	7.35	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF⊕
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)*

Size	LQ1						RQ					
	D63D	D71D	D80D	D90D	D100LD/D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/D112MD	D132D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR815	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR818	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR821*	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR824	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR826*	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR830	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR832*	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR842	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
GR852	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
GR860	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR870	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR880	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
GR8100	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

* Applies to double output shaft
 ** Key not provided with gear reducer. Keyway dimension shown.
 ◆ Keyway width by depth
 ■ 48CZ not available
 ※ Style DU and DUM only.

◆ Metric IEC B5 input flange options are available only on quill input styles.
 ✖ Dimensions same for GRG and GRL Series
 ▼ Sizes 860-8100 have extended cap. Dimensions refer to cap location.



WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



GR Series Dimensions

Styles: DJMQ, DJM, DJ

CAST IRON
GR SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

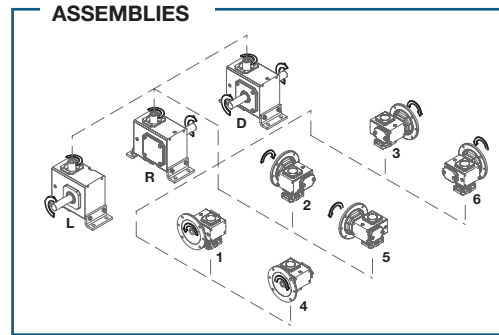
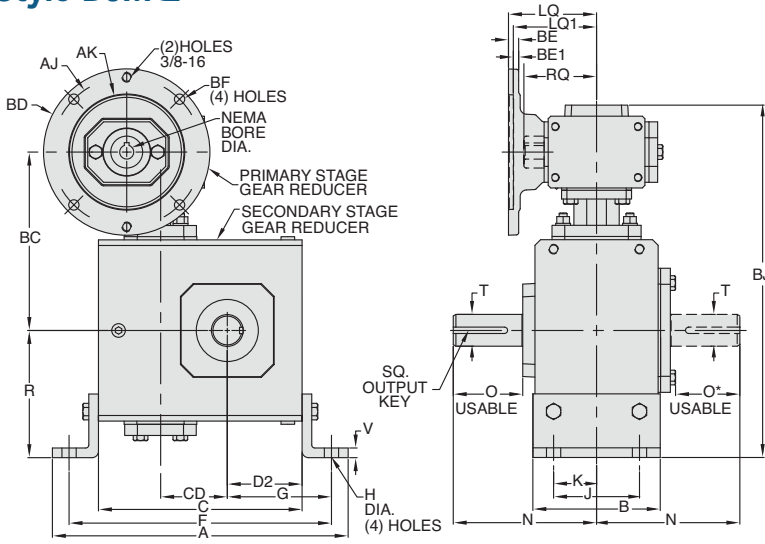
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

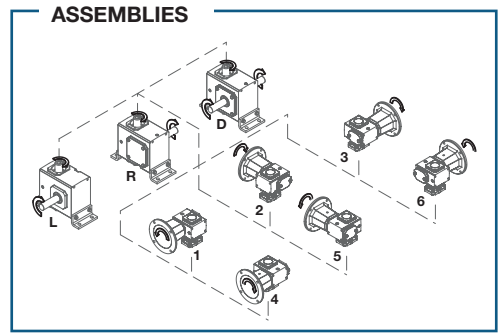
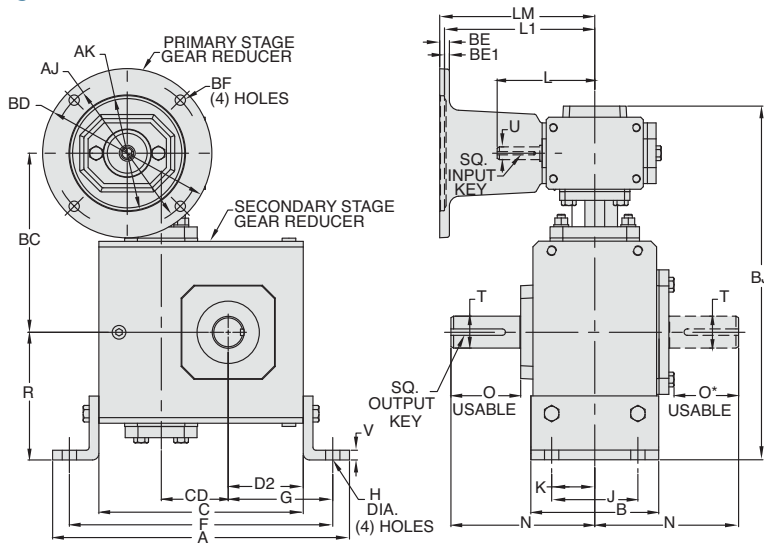
Ratio Multipliers

Accessories and
Additional Capabilities

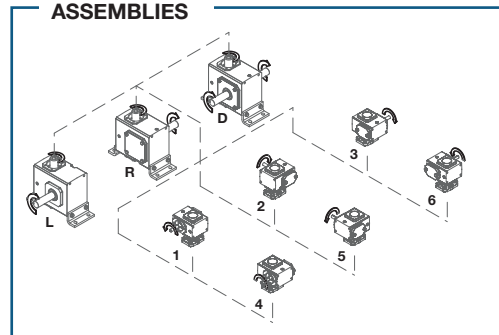
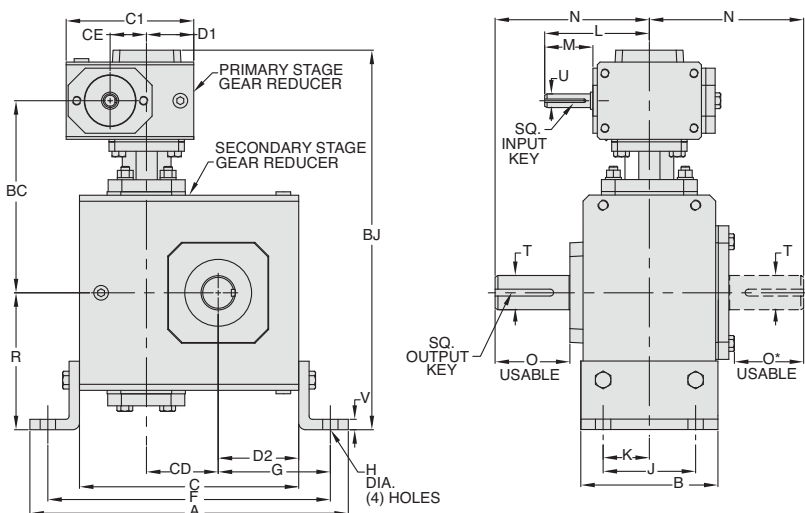
Style DJMQ



Style DJM



Style DJ



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



STYLE DJMQ, DJM, DJ DIMENSIONS (Inches)

Size	A	B	BC	BJ	C	CD	CE	C1	D1	D2	F	G	H	J	K	L	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key*	Output Key
GR813	7.42	2.75	5.32	10.10	4.66	1.33	1.33	4.66	1.72	1.72	6.42	2.60	.38	2.00	1.00	3.82	1.76	4.00	2.16	1.94	2.94	0.25	.625	0.500	1/8 x 1.00	3/16 X 1.50
GR815	8.14	3.50	5.85	11.20	5.38	1.54	1.33	4.66	1.72	1.91	7.08	2.76	.44	2.75	1.38	3.82	1.76	4.31	2.11	1.90	3.50	0.25	.750	0.500	1/8 x 1.00	3/16 X 1.50
GR818	8.51	3.50	5.94	11.29	5.75	1.75	1.33	4.66	1.72	2.06	7.45 - 7.63	3.00	.44 slot	2.50 - 2.75	1.25 - 1.38	3.82	1.76	4.31	2.05	1.84	3.50	0.25	.875	0.500	1/8 x 1.00	3/16 X 1.38
GR821	9.76	4.00	6.32	12.17	6.38	2.06	1.33	4.66	1.72	2.28	8.63	3.40	.56 slot	2.63 - 2.75	1.31-1.38	3.82	1.76	4.68	2.29	2.08	4.01	0.38	1.000	0.500	1/8 x 1.00	1/4 X 1.44
GR824	10.31	4.00	6.44	12.35	6.94	2.38	1.33	4.66	1.72	2.50	9.19	3.63	.69	2.88	1.44	3.82	1.76	5.14	2.66	2.44	4.06	0.38	1.125	0.500	1/8 x 1.00	1/4 X 1.75
GR826	11.62	5.00	7.01	13.85	8.00	2.63	1.33	4.66	1.72	2.94	10.38	4.13	.56	3.38	1.69	3.82	1.76	5.63	2.73	2.52	5.00	0.38	▲	0.500	1/8 x 1.00	1/4 X 1.75
GR830	12.64	6.00	7.86	15.68	9.94	3.00	1.75	5.38	2.06	3.25	11.38	4.50	.56	3.88	1.94	4.35	1.76	6.75	3.60	3.36	5.62	0.38	1.250	0.625	3/16 x 1.38	1/4 X 1.75
GR832	13.14	6.00	8.05	15.88	10.44	3.25	1.75	5.38	2.06	3.50	11.88	4.75	.56	3.88	1.94	4.35	1.76	7.06	3.66	3.42	5.63	0.38	▲	0.625	3/16 x 1.38	3/8 X 2.25
GR842	16.38	7.00	9.18	18.07	11.38	4.25	2.06	6.38	2.28	4.44	14.88	6.19	.69	5.00	2.50	4.82	1.76	8.12	4.50	4.21	6.50	0.50	1.875	0.625	1/4 X 2.88**	1/2 X 3.06
GR852	19.00	7.00	11.57	22.22	14.00	5.25	2.63	8.00	2.94	5.12	17.50	6.87	.69	5.81	2.91	6.07	2.38	9.06	4.78	4.53	7.75	0.50	2.000	0.750	1/4 X 3.00**	1/2 X 3.50

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical ◊	Identical	Identical	✓	✓	GRG
							GRL
826	1.250"	Identical	Identical	Identical	✓	✓	GRG
	1.125"						GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✓	✓	GRG
	1.375"		5/16 x 2.63				GRL

◊ If Accessory kit is removed, dimensions will vary. NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 142-143 (DMQ, DM, D).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM		180TC/210TC	L1	250TC	LQ 48CZ/56C/140TC	180TC	LQ1 210TC	250TC	48CZ/56C/140TC	RQ		
	48CZ	56C/140TC									180TC	210TC	250TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A	
GR815	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A	
GR818	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A	
GR821*	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A	
GR824	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A	
GR826*	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A	
GR830	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A	
GR832*	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A	
GR842	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A	
GR852	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A	

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF⊕
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)◆

Size	LQ1				D100LD/D112MD	D132D	RQ					
	D63D	D71D	D80D	D90D			D63D	D71D	D80D	D90D	D100LD/D112MD	D132D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR815	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR818	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR821*	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR824	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR826*	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR830	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR832*	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR842	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
GR852	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BFTAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

* Applies to double output shaft

** Key not provided with gear reducer. Keyway dimension shown.

◆ Keyway width by depth

■ 48CZ not available

※ Style DJ and DJM only.

◆ Metric IEC B5 input flange options are available only on quill input styles.

※ Dimensions same for GRG and GRL Series

▼ Sizes 860-8100 have extended cap. Dimensions refer to cap location.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



GR Series Dimensions

Styles: DV_MQ, DV_M, DV_



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

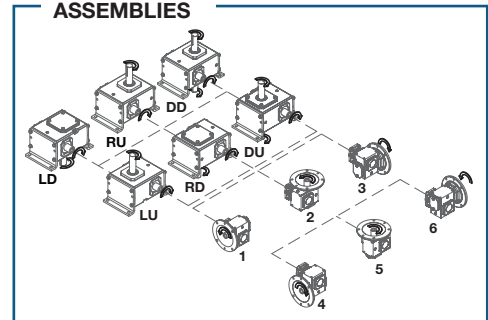
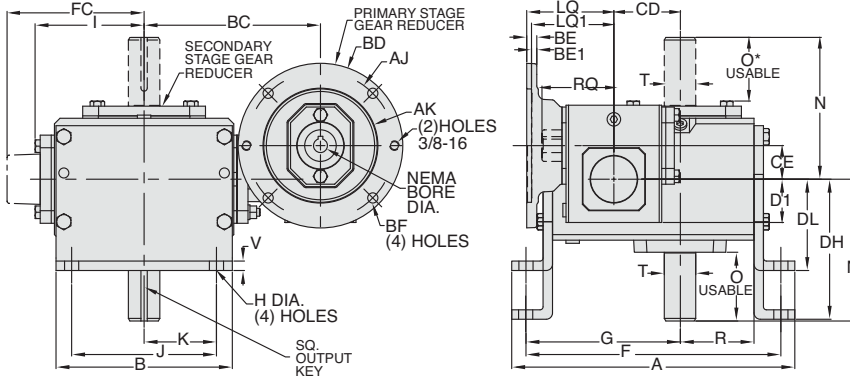
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

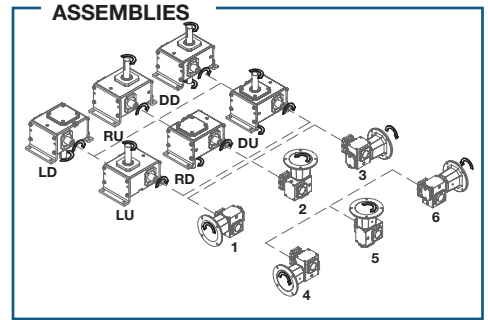
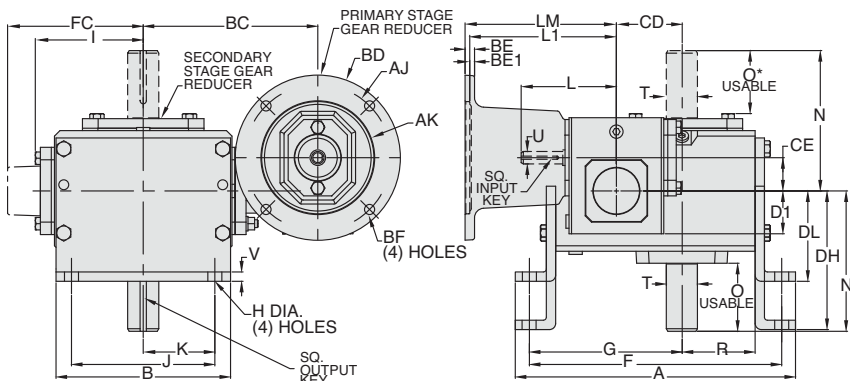
Ratio Multipliers

Accessories and
Additional Capabilities

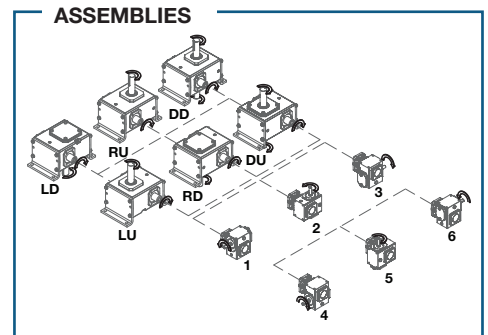
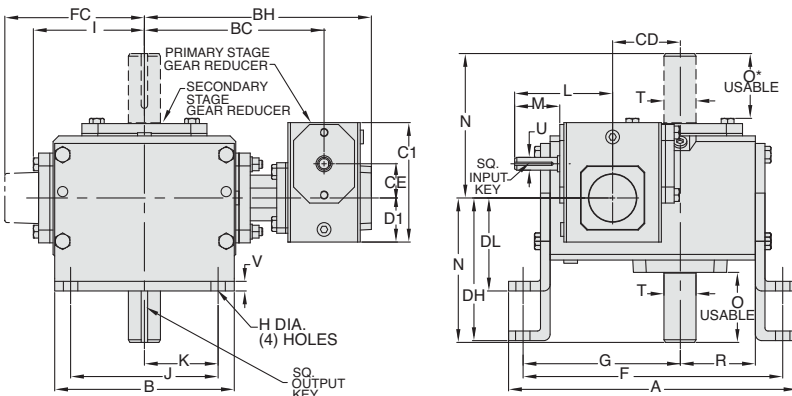
Style DV(L or H)MQ



Style DV(L or H)M



Style DV(L or H)



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



STYLE DV_MQ, DV_M, DV_ DIMENSIONS (Inches)

Size	A	B	BC	BH	CD	CE	C1	D1	DL	DH	F	FC▼	G	H	I	J	K	L	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key*	Output Key
GR813	7.26	4.00	5.32	7.16	1.33	1.33	4.66	1.72	2.63	3.56	6.50	N/A	3.86	.38	2.61	3.00	1.50	3.82	1.76	4.00	2.16	1.94	1.72	0.25	.625	0.500	1/8 x 1.00	3/16 X 1.50
GR815	7.88	5.00	5.85	7.69	1.54	1.33	4.66	1.72	3.00	4.38	7.00	N/A	4.28	.44	3.14	4.00	2.00	3.82	1.76	4.31	2.11	1.90	1.91	0.25	.750	0.500	1/8 x 1.00	3/16 X 1.50
GR818	8.25	5.00	5.94	7.79	1.75	1.33	4.66	1.72	3.00	4.38	7.37	N/A	4.50	.44	3.24	4.00	2.00	3.82	1.76	4.31	2.05	1.84	2.06	0.25	.875	0.500	1/8 x 1.00	3/16 X 1.38
GR821	9.38	6.00	6.32	8.16	2.06	1.33	4.66	1.72	3.13	4.88	8.38	N/A	5.09	.50	3.61	4.88	2.44	3.82	1.76	4.68	2.29	2.08	2.28	0.38	1.000	0.500	1/8 x 1.00	1/4 X 1.44
GR824	9.94	6.00	6.44	8.29	2.38	1.33	4.66	1.72	3.38	5.25	8.81	N/A	5.44	.50	3.77	4.88	2.44	3.82	1.76	5.14	2.66	2.44	2.50	0.38	1.125	0.500	1/8 x 1.00	1/4 X 1.75
GR826	11.24	7.00	7.01	8.85	2.63	1.33	4.66	1.72	3.63	5.56	10.12	N/A	6.12	.56	4.34	5.75	2.88	3.82	1.76	5.63	2.73	2.52	2.94	0.38	▲	0.500	1/8 x 1.00	1/4 X 1.75
GR830	12.50	8.00	7.86	10.06	3.00	1.75	5.38	2.06	3.94	5.88	11.13	N/A	6.75	.56	4.84	6.00	3.00	4.35	1.76	6.75	3.60	3.36	3.25	0.38	1.250	0.625	3/16 x 1.38	1/4 X 1.75
GR832	13.00	8.50	8.05	10.25	3.25	1.75	5.38	2.06	4.69	6.25	11.88	N/A	7.13	.56	5.02	6.13	3.06	4.35	1.76	7.06	3.66	3.42	3.50	0.38	▲	0.625	3/16 x 1.38	3/8 X 2.25
GR842	16.26	10.00	9.18	11.57	4.25	2.06	6.38	2.28	5.00	7.50	14.88	N/A	8.69	.69	6.10	7.88	3.94	4.82	1.76	8.12	4.50	4.21	4.44	0.50	1.875	0.625	3/16 x 1.38	1/2 X 3.06
GR852	19.62	13.00	11.57	14.47	5.25	2.63	8.00	2.94	5.16	9.16	18.00	N/A	10.88	.78	7.50	10.00	5.00	6.07	2.38	9.06	4.78	4.53	5.12	0.50	2.000	0.750	3/16 x 1.63	1/2 X 3.50
GR860	23.26	14.75	13.30	16.70	6.00	3.25	9.38	3.50	7.31	9.63	20.88	N/A	12.24	1.13	9.13	11.76	5.88	6.76	2.38	10.00	4.65	4.65	6.50	0.50	2.500	0.875	3/16 x 1.63	5/8 X 4.00
GR870	26.91	14.88	12.96	16.90	7.00	3.25	9.38	3.50	7.00	N/A	23.99	N/A	10.63	1.13	9.13	12.50	6.25	6.76	2.38	11.76	5.65	5.65	7.59	0.75	2.750	0.875	3/16 x 1.75**	5/8 x 4.00**
GR880	28.96	17.00	13.94	18.19	8.00	4.25	11.38	4.44	8.00	N/A	25.50	N/A	11.93	1.13	9.13	14.00	7.00	9.57	3.47	12.25	5.98	5.98	8.86	0.75	3.000	1.250	1/4 X 2.88**	3/4 x 4.50**
GR8100	37.47	20.88	17.05	22.30	10.00	5.25	14.00	5.12	9.00	N/A	30.75	N/A	14.34	1.44	9.13	17.75	8.88	10.88	3.38	14.75	6.76	6.76	10.36	1.00	3.750	1.250	1/4 X 3.00**	7/8 x 5.00**

FEATURE COMPARISON (821, 826, 832)

▲ See feature comparison chart.

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical	Identical	Identical	✓	✓	GRG GRL
826	1.250" 1.125"	Identical	Identical	Identical	✓	✓	GRG GRL
832	1.500" 1.375"	Identical	3.8 x 2.63 5/16 x 2.63	Identical	✓	✓	GRG GRL

♦ If Accessory kit is removed, dimensions will vary. NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 142-143 (DMQ, DM, D).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	48CZ ^{LM}	56C/ 140TC	180TC/ 210TC	L1 250TC	LQ 48CZ/ 56C/140TC	180TC	LQ1 210TC	250TC	48CZ/ 56C/140TC	180TC	RQ 210TC	250TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR815	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR818	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR821*	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR824	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR826*	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR830	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR832*	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR842	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
GR852	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
GR860	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR870	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR880	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
GR8100	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF◆
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)

Size	LQ1						RQ					
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR815	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR818	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR821*	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR824	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR826*	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR830	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR832*	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR842	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
GR852	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
GR860	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR870	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR880	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	6.16	6.14	6.93	N/A
GR8100	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	7.46	7.45	8.24	N/A

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

* Applies to double output shaft

** Key not provided with gear reducer. Keyway dimension shown.

◆ Keyway width by depth

■ 48CZ not available

* Style DVL/DVH and DVLM/DVHM only.

◆ Metric IEC B5 input flange options are available only on quill input styles.

* Dimensions same for GRG and GRL Series

▼ Sizes 860-8100 have extended cap. Dimensions refer to cap location.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



GR Series Dimensions

Styles: DFMQ, DFM, DF



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

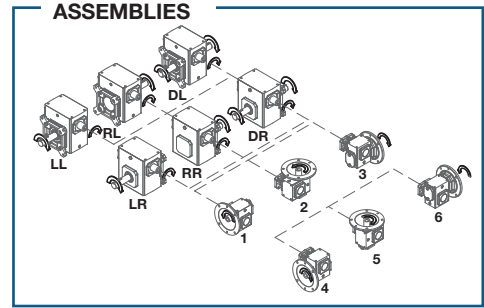
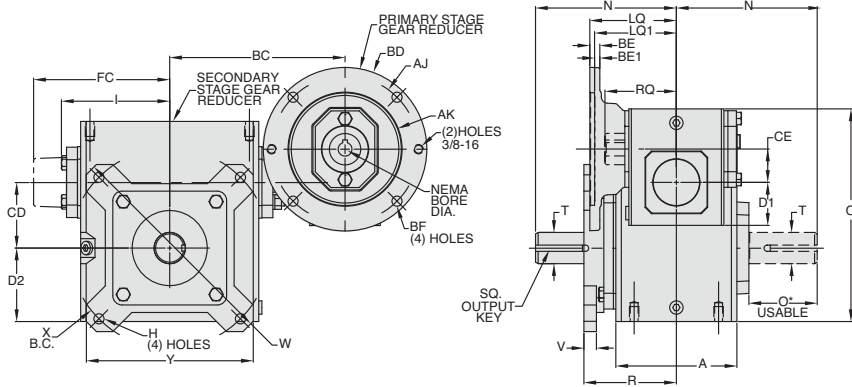
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

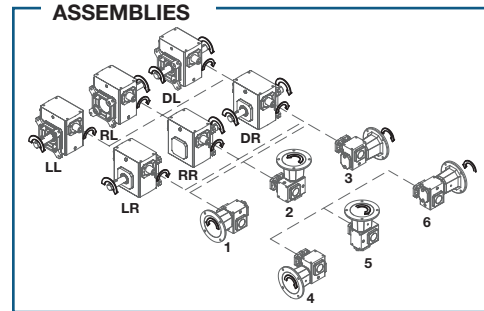
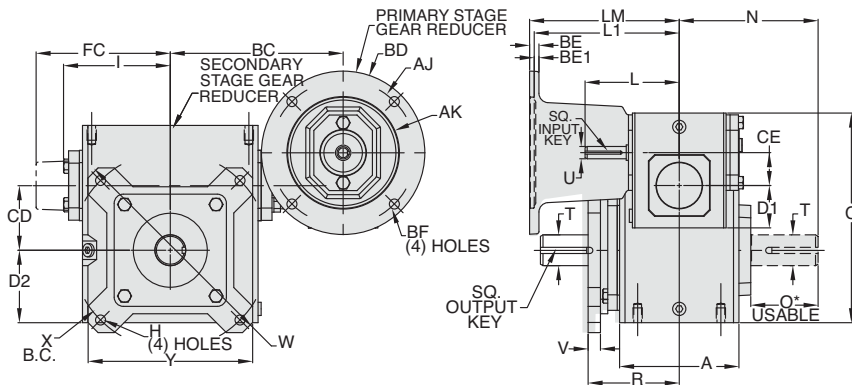
Ratio Multipliers

Accessories and
Additional Capabilities

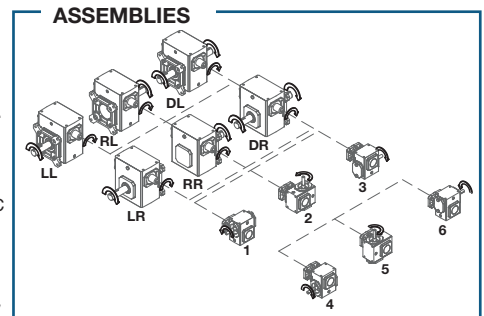
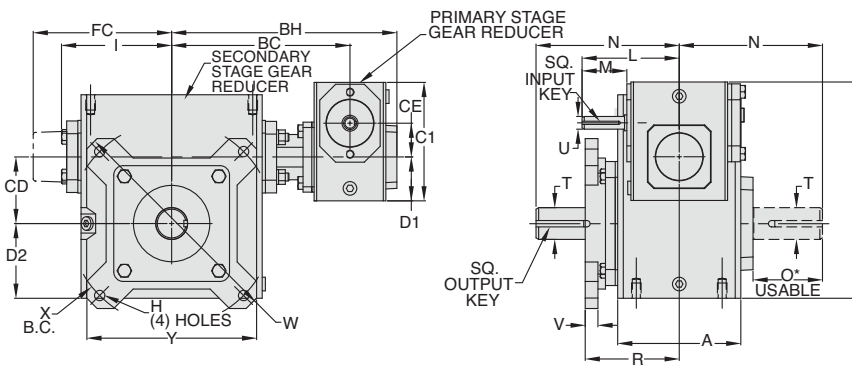
Style DFMQ



Style DFM



Style DF



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

Sizes 815-852 output flange must be mounted at
Factory on styles FMQ, FM, F.



STYLE DFMQ, DFM, DF DIMENSIONS (Inches)

Table with columns for Size, A, BC, BH, C, CD, CE, C1, D1, D2, FC, H, I, L, M, N, O*, R, V, W, X, Y, T, U, Input Key, and Output Key. Rows include models GR813 through GR8100.

FEATURE COMPARISON (821, 826, 832)

▲ See feature comparison chart.

Feature comparison table for models GR821, GR826, and GR832, comparing Output Shaft Diameter, Mounting Footprint, Output Key, All Other Features, Grove Gear Flexaline Interchange, LEESON IRONMAN Interchange, and Replace With Series Code.

◇ If Accessory kit is removed, dimensions will vary. NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 142-143 (DMQ, DM, D).

MOTOR MOUNTING DIMENSIONS

NEMA DIMENSIONS (Inches)

Table with columns for Size, LM (48CZ, 56C/140TC), L1 (180TC/210TC, 250TC), LQ (48CZ/56C/140TC), LQ1 (180TC, 210TC, 250TC), and RQ (48CZ/56C/140TC, 180TC, 210TC, 250TC). Rows include models GR813 through GR8100.

NEMA DIMENSIONS (Inches)

Table with columns for Frame, AJ, AK, BD, BE, BE1, Bore Dia, Keyway, and BF. Rows include frames 48CZ, 56C, 140TC, 180TC, 210TC, and 250TC.

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)*

Table with columns for Size, LQ1 (D63D, D71D, D80D, D90D, D100LD/D112MD, D132D), and RQ (D63D, D71D, D80D, D90D, D100LD/D112MD, D132D). Rows include models GR813 through GR8100.

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Table with columns for Frame, AJ, AK, BD, BE, Bore Dia, Keyway, BF TAP, and OD. Rows include frames D63D, D71D, D80D, D90D, D100LD/D112MD, and D132D.

* Applies to double output shaft

** Key not provided with gear reducer. Keyway dimension shown.

◆ Keyway width by depth

■ 48CZ not available

* Style DF and DFM only.

◆ Metric IEC B5 input flange options are available only on quill input styles.

✖ Dimensions same for GRG and GRL Series

▼ Sizes 860-8100 have extended cap. Dimensions refer to cap location.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

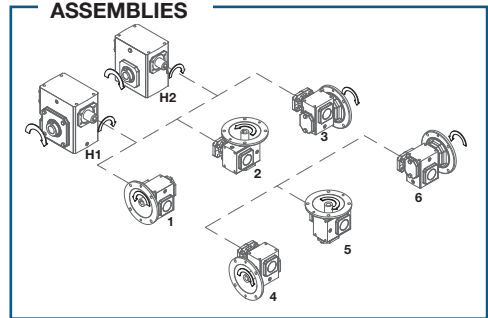
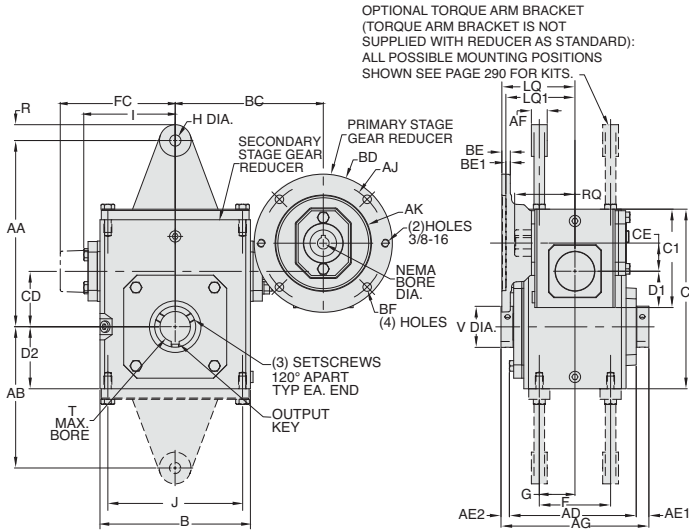


GR Series Dimensions

Styles: DHMQ, DHM, DH

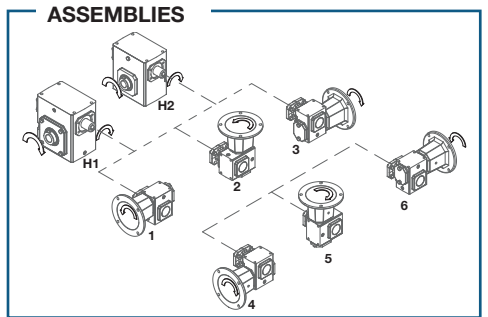
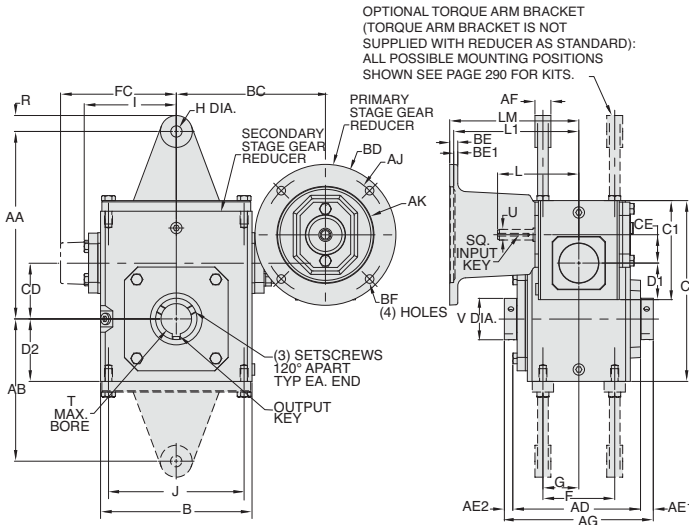
CAST IRON
GR SERIES

Style DHMQ



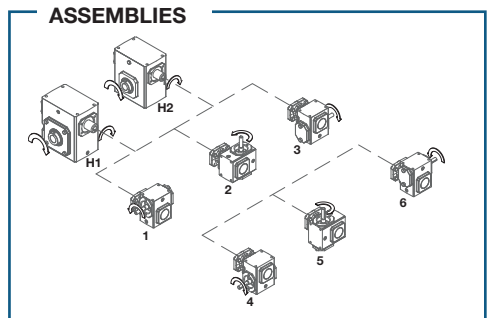
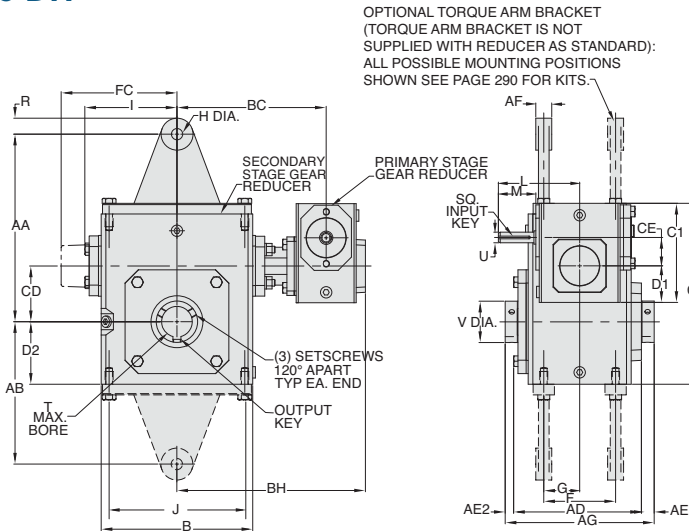
H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

Style DHM



H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

Style DH



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE DHMQ, DHM, DH DIMENSIONS (Inches)

Size	AA	AB	AD	AE1	AE2	AF	AG	B	BC	BH	C	CD	CE	C1	C2	D1	D2	F	FC▼	G	H	I	J	L	M	R	V	T MAX+ -0.000	U +0.000 -0.0015	Input Key*§	Output Key
GR813	4.19	2.97	3.90	0.53	0.32	0.75	4.75	3.80	5.32	7.16	5.99	1.33	1.33	4.66	4.66	1.72	1.72	2.00	N/A	1.00	0.53	2.61	3.25	3.82	1.76	0.50	1.00	0.625	.500	1/8 x 1.00	3/16 x 1.50
GR815	5.97	4.41	4.61	0.51	0.30	0.75	5.42	5.19	5.85	7.69	6.38	1.54	1.33	4.66	5.38	1.72	1.91	2.75	N/A	1.38	0.53	3.14	4.19	3.82	1.76	0.75	1.00	0.625	.500	1/8 x 1.00	3/16 x 1.50
GR818	6.19	4.56	4.73	0.49	0.28	0.75	5.50	5.19	5.94	7.79	6.75	1.75	1.33	4.66	5.75	1.72	2.06	2.75	N/A	1.38	0.53	3.24	4.19	3.82	1.76	0.75	1.44	1.000	.500	1/8 x 1.00	1/4 x 3.00
GR821	7.24	5.43	4.99	0.61	0.40	0.75	6.00	5.80	6.32	8.16	7.28	2.06	1.33	4.66	6.38	1.72	2.28	▲	N/A	1.44	0.53	3.61	▲	3.82	1.76	0.75	1.44	1.500	.500	1/8 x 1.00	3/8 x 3.00
GR824	7.69	5.75	5.18	0.51	0.31	0.75	6.00	6.12	6.44	8.29	7.81	2.38	1.33	4.66	6.94	1.72	2.50	2.88	N/A	1.44	0.53	3.77	5.00	3.82	1.76	0.75	1.94	1.500	.500	1/8 x 1.00	3/8 x 3.00
GR826	8.81	6.69	6.01	0.60	0.39	0.75	7.00	7.38	7.01	8.85	8.50	2.63	1.33	4.66	8.00	1.72	2.94	3.38	N/A	1.69	0.53	4.34	6.38	3.82	1.76	0.75	1.94	1.500	.500	1/8 x 1.00	3/8 x 3.00
GR830	10.63	8.25	6.53	0.60	0.36	0.75	7.50	8.12	7.86	10.06	9.94	3.00	1.75	5.38	8.88	2.06	3.25	4.00	N/A	2.00	0.53	4.84	7.00	4.35	1.76	0.88	2.51	2.188	.625	3/16 x 1.38	1/2 x 3.00
GR832	10.88	8.50	7.04	0.54	0.29	0.75	7.88	8.75	8.05	10.25	10.44	3.25	1.75	5.38	9.38	2.06	3.50	4.00	N/A	2.00	0.53	5.02	7.50	4.35	1.76	0.88	2.51	2.188	.625	3/16 x 1.38	1/2 x 3.00
GR842	11.94	9.44	7.53	0.63	0.34	0.75	8.50	10.25	9.18	11.57	12.78	4.25	2.06	6.38	11.38	2.28	4.44	5.00	N/A	2.50	0.53	6.10	8.50	4.82	1.76	0.75	2.75	2.188	.625	3/16 x 1.38	1/2 x 3.00
GR852	13.88	10.12	8.85	0.97	0.68	1.00	10.50	13.00	11.57	14.47	15.43	5.25	2.63	8.00	14.00	2.94	5.12	5.81	N/A	2.91	0.66	7.50	11.00	6.07	2.38	1.00	4.26	3.438	.750	3/16 x 1.63	7/8 x 3.44
GR860	15.00	11.50	10.52	0.52	0.52	0.38	11.50	14.50	13.30	16.70	18.38	6.00	3.25	9.38	16.50	3.50	6.50	6.38	10.24	3.19	0.66	N/A	12.75	6.76	2.38	0.69	4.18	3.438	.875	3/16 x 1.63	7/8 x 3.44
GR870	N/A	N/A	11.36	1.09	1.09	N/A	13.50	14.88	12.96	16.90	20.46	7.00	3.25	9.38	18.91	3.50	7.59	5.50	10.63	2.75	N/A	N/A	12.50	6.76	2.38	N/A	4.92	3.938	.875	3/16 x 1.75**	1 x 1/2**
GR880	N/A	N/A	12.48	1.03	1.03	N/A	14.50	17.00	13.94	18.19	23.79	8.00	4.25	11.38	20.96	4.44	8.86	6.50	11.93	3.25	N/A	N/A	14.25	9.57	3.47	N/A	5.55	4.438	1.250	1/4 X 3.00**	1 x 1/2**
GR8100	N/A	N/A	15.78	1.39	1.39	N/A	18.50	20.88	17.05	22.30	29.24	10.00	5.25	14.00	25.47	5.12	10.36	6.88	14.34	3.44	N/A	N/A	17.75	10.88	3.38	N/A	6.67	5.438	1.250	1/4 X 3.00**	1-1/4 x 5/8**

▲ See feature comparison chart.

FEATURE COMPARISON (821)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	(F)3.00" x (J)4.75" (F)2.88" x (J)5.00"	Identical	✓	✓	GRG GRL

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	48CZ	LM 56C/ 140TC	180TC/ 210TC	L1 250TC	LQ 48CZ/ 56C/140TC	180TC	LQ1 210TC	250TC	48CZ/ 56C/140TC	180TC	RQ 210TC	250TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR815	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR818	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR821*	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR824	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR826	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR830	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR832	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR842	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
GR852	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
GR860	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR870	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR880	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
GR8100	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF⊙
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)◆

Size	LQ1				D100LD/ D112MD	D132D	RQ					
	D63D	D71D	D80D	D90D			D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR815	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR818	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR821*	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR824	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR826	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR830	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR832	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR842	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
GR852	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
GR860	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR870	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR880	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
GR8100	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

- * Max bore dimensions shown. For additional bores available, refer to page 140.
- ** Key not provided with gear reducer. Keyway dimension shown.
- ◆ Keyway width by depth
- 48CZ not available
- ⊙ Style DH and DHM only.
- ⊕ Metric IEC B5 input flange options are available only on quill input styles.
- * Dimensions same for GRG and GRL Series

- ▼ Sizes 860-8100 have extended cap. Dimensions refer to cap location.
- Note: Torque arm bracket available separately. Refer to page 290 for kits. If a special bracket is required, refer to Style DMQ dimensions for mounting pad dimensions on top/bottom of reducer.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



GR Series Dimensions

Styles: DFHMQ, DFHM, DFH

CAST IRON
GR SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

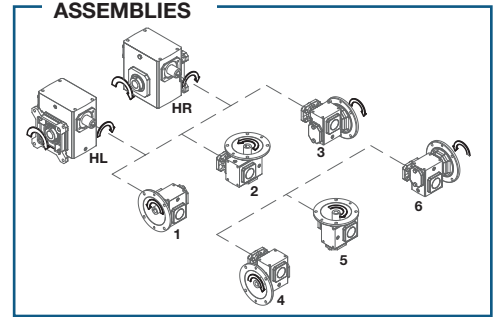
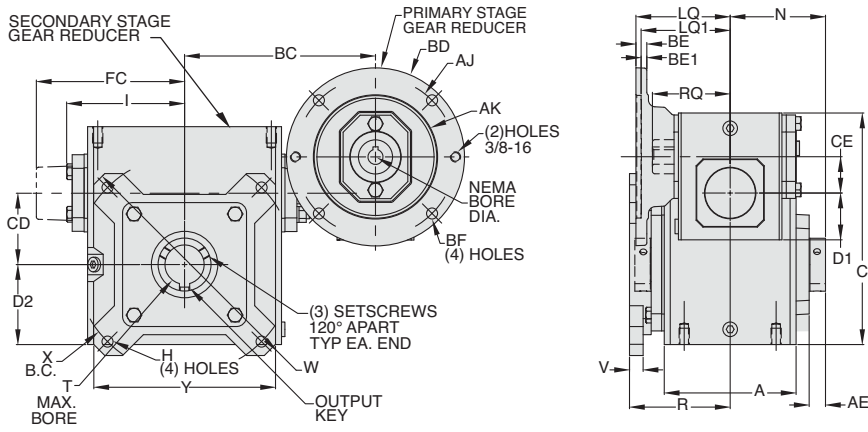
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

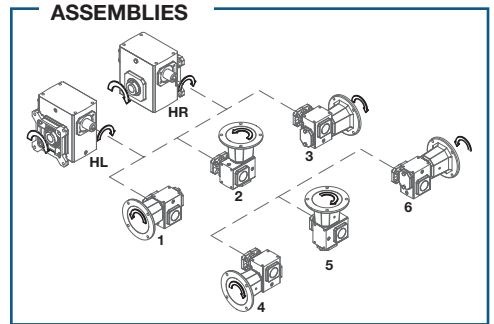
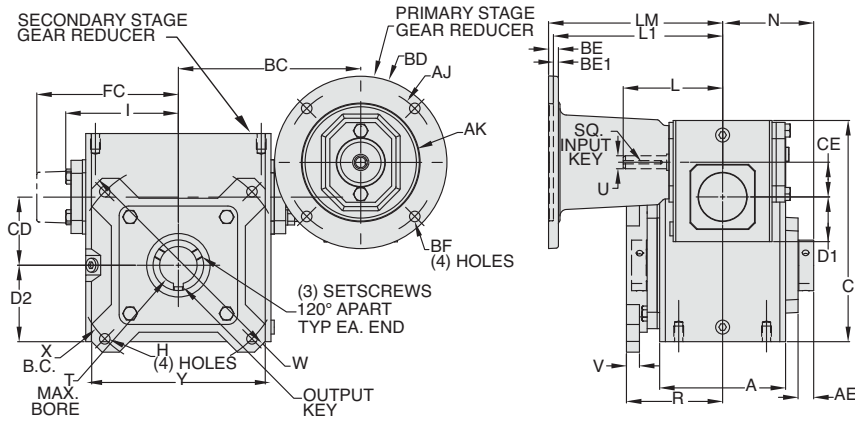
Ratio Multipliers

Accessories and
Additional Capabilities

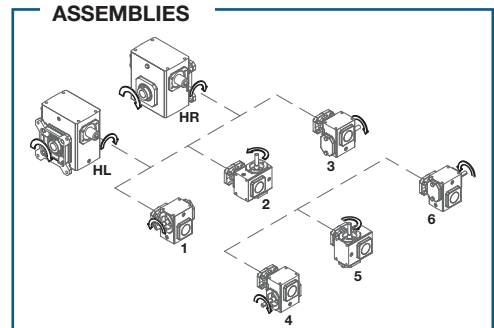
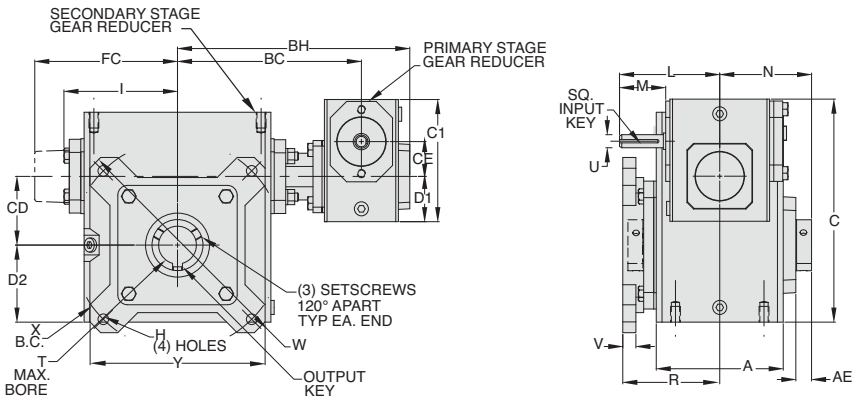
Style DFHMQ



Style DFHM



Style DFH



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DFHMQ, DFHM, DFH DIMENSIONS (Inches)

Styles: DFHMQ, DFHM, DFH

Size	A	AE	BC	BH	C	CD	CE	C1	D1	D2	FC▼	H	I	L	M	N	R	V	W	X	Y	T MAX+ -0.000 +0.0025	U +0.000 -0.0015	Input Key*:	Output Key
GR813	2.82	0.53	5.32	7.16	5.99	1.33	1.33	4.66	1.72	1.72	N/A	.34	2.61	3.82	1.76	2.38	2.52	0.38	5.92	5.00	4.50	0.625	.500	1/8 x 1.00	3/16 x 1.50
GR815	3.44	0.51	5.85	7.69	6.38	1.54	1.33	4.66	1.72	1.91	N/A	.34	3.14	3.82	1.76	2.71	2.87	0.38	5.88	5.00	4.50	0.625	.500	1/8 x 1.00	3/16 x 1.50
GR818	3.56	0.49	5.94	7.79	6.75	1.75	1.33	4.66	1.72	2.06	N/A	.34	3.24	3.82	1.76	2.75	3.18	0.38	6.64	5.88	5.00	1.000	.500	1/8 x 1.00	1/4 x 3.00
GR821	3.81	0.61	6.32	8.16	7.28	2.06	1.33	4.66	1.72	2.28	N/A	.41	3.61	3.82	1.76	3.00	3.69	0.44	7.88	7.00	5.99	1.500	.500	1/8 x 1.00	3/8 x 3.00
GR824	4.06	0.51	6.44	8.29	7.81	2.38	1.33	4.66	1.72	2.50	N/A	.41	3.77	3.82	1.76	3.00	3.73	0.44	8.39	7.50	6.27	1.500	.500	1/8 x 1.00	3/8 x 3.00
GR826	4.84	0.60	7.01	8.85	8.50	2.63	1.33	4.66	1.72	2.94	N/A	.41	4.34	3.82	1.76	3.50	3.70	0.50	8.88	8.00	6.67	1.500	.500	1/8 x 1.00	3/8 x 3.00
GR830	5.25	0.60	7.86	10.06	9.94	3.00	1.75	5.38	2.06	3.25	N/A	.41	4.84	4.35	1.76	3.75	3.78	0.50	9.89	9.00	7.37	2.188	.625	3/16 x 1.38	1/2 x 3.00
GR832	5.75	0.54	8.05	10.25	10.44	3.25	1.75	5.38	2.06	3.50	N/A	.41	5.02	4.35	1.76	3.94	4.03	0.50	9.89	9.00	7.37	2.188	.625	3/16 x 1.38	1/2 x 3.00
GR842	6.13	0.63	9.18	11.57	12.78	4.25	2.06	6.38	2.28	4.44	N/A	.56	6.10	4.82	1.76	4.25	4.56	0.62	12.95	11.50	9.65	2.188	.625	3/16 x 1.38	1/2 x 3.00
GR852	7.19	0.97	11.57	14.47	15.43	5.25	2.63	8.00	2.94	5.12	N/A	.69	7.50	6.07	2.38	5.25	5.62	0.75	15.50	14.00	11.75	3.438	.750	3/16 x 1.63	7/8 x 3.44
GR860	8.13	0.52	13.30	16.70	18.38	6.00	3.25	9.38	3.50	6.50	10.24	.69	N/A	6.76	2.38	5.75	7.26	0.75	18.00	15.63	14.00	3.438	.875	3/16 x 1.63	7/8 x 3.44
GR870	7.63	1.09	12.96	16.90	20.46	7.00	3.25	9.38	3.50	7.59	10.63	.78	N/A	6.76	2.38	6.75	7.45	0.75	21.00	18.38	15.63	3.938	.875	3/16 x 1.75**	1 x 1/2**
GR880	8.63	1.03	13.94	18.19	23.79	8.00	4.25	11.38	4.44	8.86	11.93	1.03	N/A	9.57	3.47	7.25	8.34	0.75	24.00	21.00	17.88	4.438	1.250	1/4 X 2.88**	1 x 1/2**
GR8100	9.53	1.39	17.05	22.30	29.24	10.00	5.25	14.00	5.12	10.36	14.34	1.03	N/A	10.88	3.38	9.25	9.07	1.00	29.00	25.00	21.19	5.438	1.250	1/4 X 3.00**	1-1/4 x 5/8**

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical◊	Identical	✓	✓	GRG GRL

◊ If Accessory kit is removed, dimensions will vary. NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 142-143 (DMQ, DM, D).

**Motor Mounting Dimensions
NEMA DIMENSIONS (Inches)**

Size	LM		L1		LQ		LQ1		RQ			
	48CZ	56C/ 140TC	180TC/ 210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR815	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR818	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR821*	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR824	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR826	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A	N/A
GR830	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR832	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR842	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
GR852	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
GR860	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR870	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR880	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
GR8100	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BFC
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)◆

Size	LQ1					RQ						
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR815	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR818	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR821*	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR824	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR826	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR830	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR832	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR842	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
GR852	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
GR860	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR870	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR880	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
GR8100	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BFTAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

- Max bore dimensions shown. For additional bores available, refer to page 140.
- ** Key not provided with gear reducer. Keyway dimension shown.
- ◆ Keyway width by depth
- 48CZ not available
- * Style DFH and DFHM only.

- ◆ Metric IEC B5 input flange options are available only on quill input styles.
- * Dimensions same for GRG and GRL Series
- ▼ Sizes 860-8100 have extended cap. Dimensions refer to cap location.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.



GR Series Dimensions

Styles: DFEMQ, DFEM, DFE



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

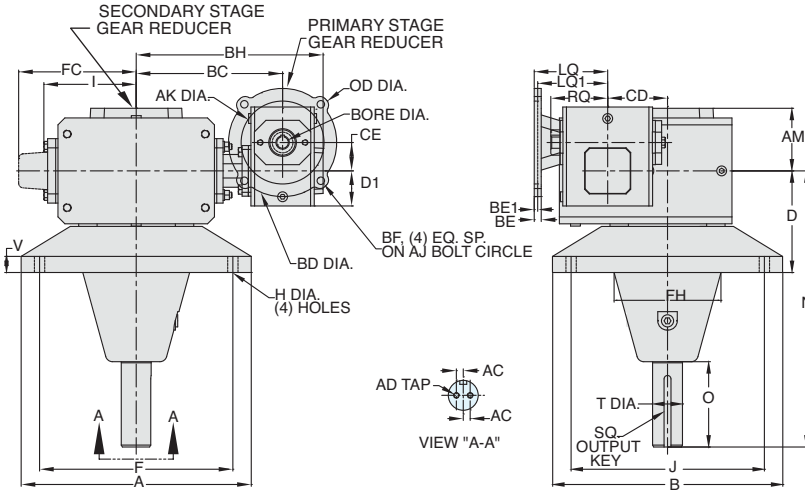
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

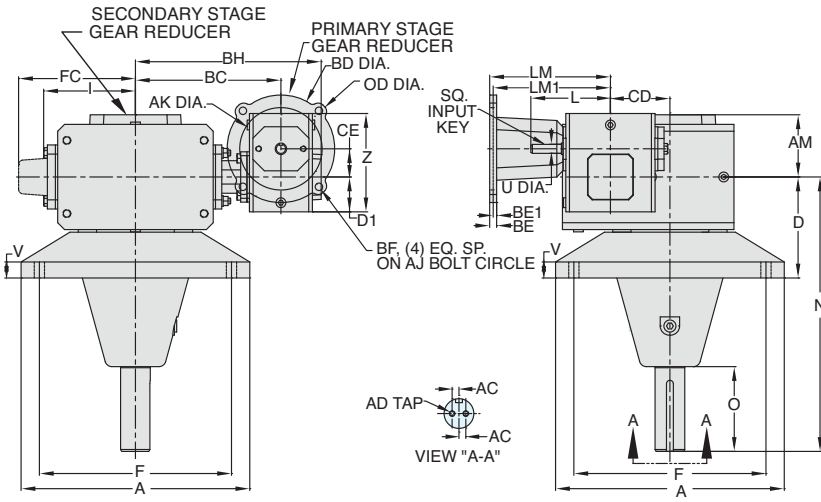
Ratio Multipliers

Accessories and
Additional Capabilities

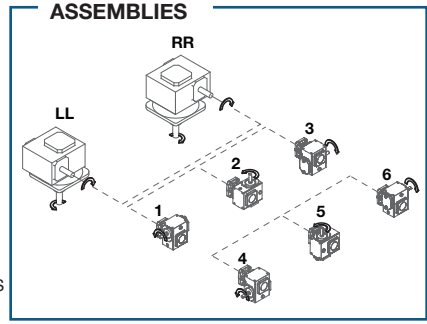
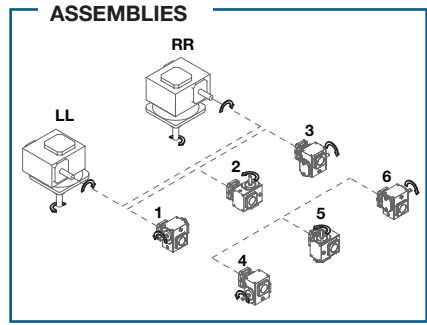
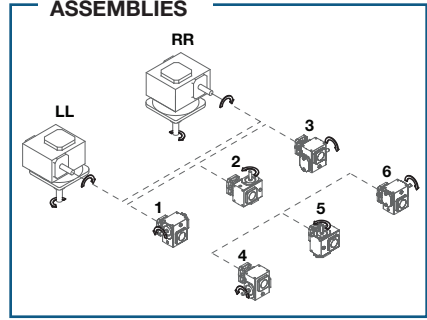
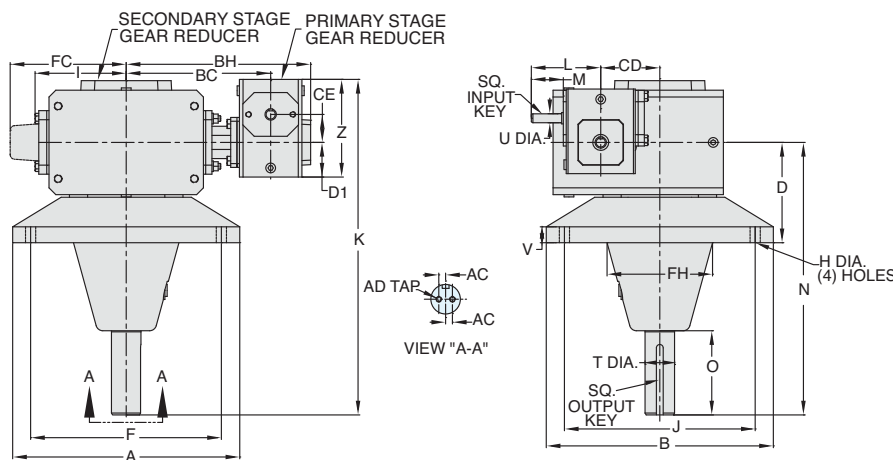
Style DFEMQ



Style DFEM



Style DFE



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DFEMQ, DFEM, DFE DIMENSIONS (Inches)

Size	A	AC	AD	AM	B	BC	BH	CD	CE	C1	D	D1	F	FC▼	FH
GR830	11.00	0.375	.31-18 UNC X 1.00 DP	3.15	11.00	7.86	10.06	3.00	1.75	5.38	4.60	2.06	9.00	N/A	5.12
GR832	12.50	0.375	.31-18 UNC X 1.00 DP	3.40	12.50	8.05	10.25	3.25	1.75	5.38	5.52	2.06	10.50	N/A	5.75
GR842	14.00	0.500	.38-16 UNC X 1.00 DP	3.62	14.00	9.18	11.57	4.25	2.06	6.38	5.74	2.28	12.00	N/A	6.75
GR852	16.00	0.750	.38-16 UNC X 1.00 DP	4.28	16.00	11.57	14.47	5.25	2.62	8.00	6.00	2.94	14.00	N/A	8.00
GR860	19.50	0.750	.38-16 UNC X 1.00 DP	5.28	19.50	13.30	16.70	6.00	3.25	9.38	7.00	3.50	17.00	10.24	9.50
GR870	22.00	1.000	.38-16 UNC X 1.00 DP	6.06	22.00	12.96	16.90	7.00	3.25	9.38	8.50	3.50	19.00	10.63	10.75
GR880	28.00	1.062	.62-11 UNC X 1.50 DP	6.22	28.00	13.94	18.19	8.00	4.25	11.38	10.00	4.44	24.00	11.93	13.75
GR8100	32.00	1.118	.62-11 UNC X 1.50 DP	7.94	32.00	17.05	22.30	10.00	5.25	14.00	12.50	5.12	28.00	14.34	17.00

Size	H	I	J	K	L	M	N	O ⁹	V	T	U	P*	Output Key*
									-0.0015	-0.0015	+0.000		
GR830	.56	4.84	9.00	17.85	4.35	1.76	14.38	4.96	0.78	1.438	.625	3/16 x 1.38	3/8 x 3.88
GR832	.56	5.02	10.50	18.47	4.35	1.76	15.00	4.63	0.88	1.438	.625	3/16 x 1.38	3/8 x 3.69
GR842	.69	6.10	12.00	20.59	4.82	1.76	16.50	5.91	1.00	1.688	.625	3/16 x 1.38	3/8 x 4.68
GR852	.81	7.50	14.00	21.56	6.07	2.38	16.50	5.62	1.25	2.188	.750	3/16 x 1.63	1/2 x 4.63
GR860	.88	N/A	17.00	28.36	6.76	2.38	22.50	7.63	1.50	2.438	.875	3/16 x 1.63	5/8 x 6.50
GR870	1.13	N/A	19.00	29.88	6.76	2.38	24.00	7.63	1.75	2.937	.875	3/16 x 1.75**	3/4 x 6.44
GR880	1.31	N/A	24.00	34.00	9.57	3.47	27.06	9.25	2.00	3.438	1.250	1/4 X 2.88**	7/8 x 8.00
GR8100	1.31	N/A	28.00	38.38	10.88	3.38	29.50	9.43	2.25	3.938	1.250	1/4 X 3.00**	1 x 7.75

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM		L1		LQ 48CZ/ 56C/140TC	180TC	LQ1 210TC	250TC	RQ			
	48CZ	56C/ 140TC	180TC/ 210TC	250TC					48CZ/ 56C/140TC	180TC	210TC	250TC
GR830	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR832	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A	N/A
GR842	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A	N/A
GR852	N/A	8.32	9.32	N/A	5.19■	5.62	N/A	N/A	4.82■	5.13	N/A	N/A
GR860	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR870	N/A	9.01	10.01	N/A	6.14■	6.34	6.75	N/A	5.51■	5.81	6.25	N/A
GR880	N/A	11.81	12.90	13.46	6.45■	7.21	7.21	7.77	6.04■	6.68	6.68	7.24
GR8100	N/A	13.21	14.30	14.86	7.85■	8.61	8.61	9.17	7.35■	7.98	7.98	8.54

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF⊙
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)*

Size	LQ1						RQ					
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/ D112MD	D132D
GR830	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR832	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR842	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
GR852	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
GR860	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR870	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR880	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
GR8100	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

** Key not provided with gear reducer. Keyway dimension shown.
◆ Keyway width by depth
■ 48CZ not available
* Style DFE and DFEM only.

◆ Metric IEC B5 input flange options are available only on quill input styles.
▼ Sizes 860-8100 have extended cap. Dimensions refer to cap location.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

⁹ "O" dimension is the minimum dimension to output or screw head on sizes GR860-GR8100



NH Series Dimensions

Styles: DMQ, DM, D

CAST IRON
NH SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

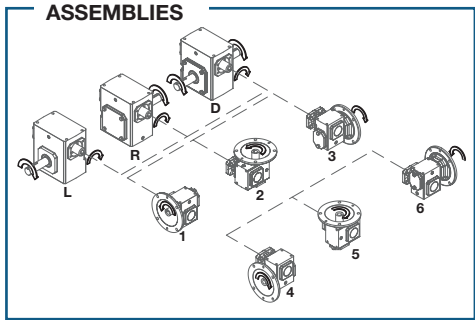
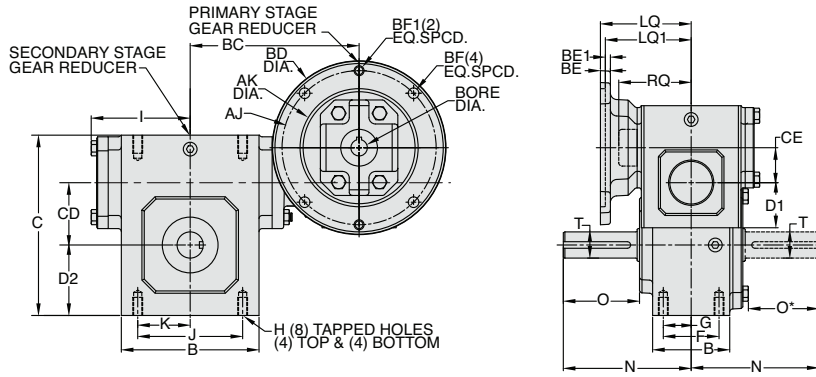
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

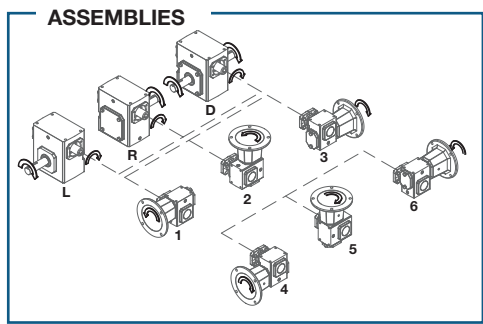
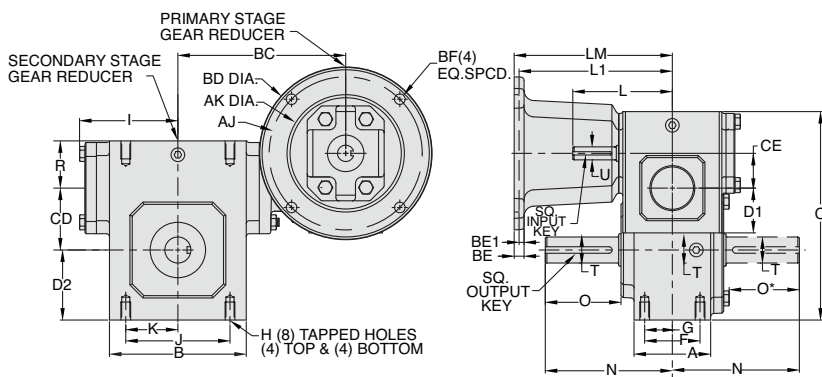
Ratio Multipliers

Accessories and
Additional Capabilities

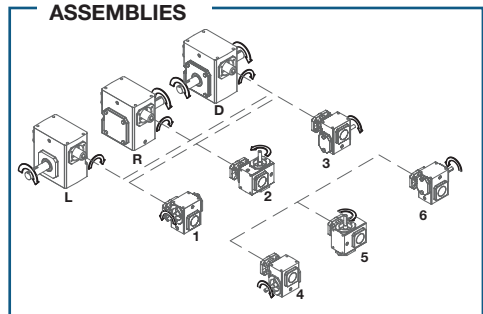
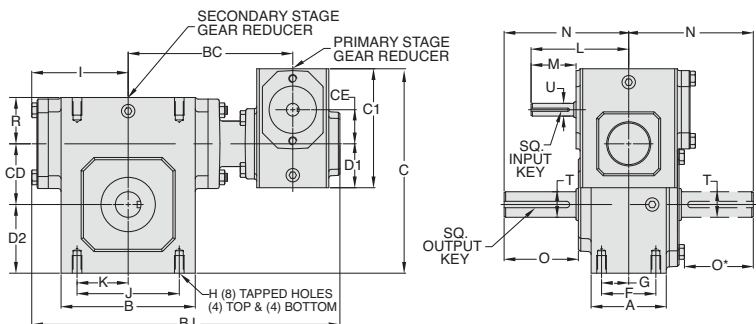
Style DMQ



Style DM



Style D



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DMQ, DM, D DIMENSIONS (Inches)

Size	A	B	BC	BJ	C	CD	CE	C1	D1	D2	F	G	H		I	J	K	L	M	N	O	O*	R	T +0.000 -0.0015	U +0.000 -0.0015	Input Key*:	Output Key
													Tap Size	Depth													
NH813	2.82	3.80	5.32	9.06	4.66	1.33	1.33	4.66	1.72	1.72	2.00	1.00	5/16-18 UNC	.50	2.61	3.25	1.63	3.82	1.76	4.00	2.16	1.94	1.61	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH815	2.57	4.06	5.85	9.72	5.03	1.54	1.33	4.66	1.72	1.88	1.88	0.94	5/16-18 UNC	.63	3.14	3.25	1.63	3.82	1.76	4.25	2.56	2.35	1.58	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH818	2.56	4.50	5.94	10.03	5.42	1.75	1.33	4.66	1.72	2.06	1.88	0.94	5/16-18 UNC	.63	3.24	3.75	1.88	3.82	1.76	4.75	2.94	2.73	1.63	1.000	0.500	1/8 X 1.00	1/4 X 1.75
NH821	2.50	4.50	6.32	10.41	5.98	2.06	1.33	4.66	1.72	2.31	1.88	0.94	5/16-18 UNC	.63	3.61	3.25	1.63	3.82	1.76	4.34	2.66	2.45	1.63	0.875	0.500	1/8 X 1.00	3/16 X 1.50
NH824	2.94	5.25	6.44	10.91	6.68	2.38	1.33	4.66	1.72	2.69	2.13	1.06	3/8-16 UNC	.69	3.77	4.00	2.00	3.82	1.76	4.88	2.91	2.69	1.81	1.000	0.500	1/8 X 1.00	1/4 X 1.75
NH826	2.88	5.75	7.01	11.73	7.18	2.63	1.33	4.66	1.72	2.94	2.13	1.06	3/8-16 UNC	.69	4.34	4.00	2.00	3.82	1.76	5.25	3.28	3.07	1.81	1.125	0.500	1/8 X 1.00	1/4 X 1.75
NH830	3.12	6.62	7.35	12.35	8.22	3.00	1.75	5.00	2.06	3.38	2.38	1.19	3/8-16 UNC	.75	4.84	4.63	2.31	4.35	1.76	5.77	3.56	3.31	1.87	1.250	0.625	3/16 X 1.38	1/4 X 1.75
NH832	4.44	8.00	7.53	13.22	9.28	3.25	1.75	5.00	2.06	4.19	3.50	1.75	1/2-13 UNC	1.00	5.02	7.00	3.50	4.35	1.76	7.03	4.24	3.99	2.62	1.500	0.625	3/16 X 1.38	3/8 X 2.25
NH842	4.75	9.75	8.47	15.03	10.38	4.25	2.06	6.00	2.31	4.50	3.75	1.88	1/2-13 UNC	1.00	6.10	7.50	3.75	4.82	1.76	7.50	3.88	3.59	2.75	1.750	0.625	3/16 X 1.38	3/8 X 2.25
NH852	6.19	11.00	10.64	18.11	11.94	5.25	2.63	7.38	2.94	4.88	4.50	2.25	5/8-11 UNC	1.25	7.50	9.00	4.50	6.07	2.38	9.00	4.72	4.47	2.56	2.000	0.750	3/16 X 1.63	1/2 X 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	48CZ	LM 56C/ 140TC	L1 180TC/ 210TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	RQ 48CZ/ 56C/140TC	180TC
NH813	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH815	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH818	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH821	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH824	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH826	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH830	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH832	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH842	6.63	7.07	N/A	4.46	N/A	4.06	N/A
NH852	N/A	8.32	9.32	5.19	5.62	4.82	5.13

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)*

Size	LQ1					RQ				
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D63D	D71D	D80D	D90D	D100LD/ D112MD
NH813	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH815	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH818	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH821	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH824	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH826	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH830	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH832	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH842	3.62	3.65	3.89	N/A	N/A	3.43	3.44	3.68	N/A	N/A
NH852	N/A	4.28	4.90	4.90	5.30	N/A	4.09	4.72	4.72	5.07

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237

- * Applies to double output shaft
- ◆ Keyway width by depth
- 48CZ not available
- ◇ Metric IEC B5 input flange options are available only on quill input styles.
- * Style D and DM only.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
DUF	DMQ
DUFC	DM
DU	D

Refer to page 123 for complete interchange guide for original Grove Gear OE Series.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR-MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



NH Series Dimensions

Styles: DTMQ, DTM, DT



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

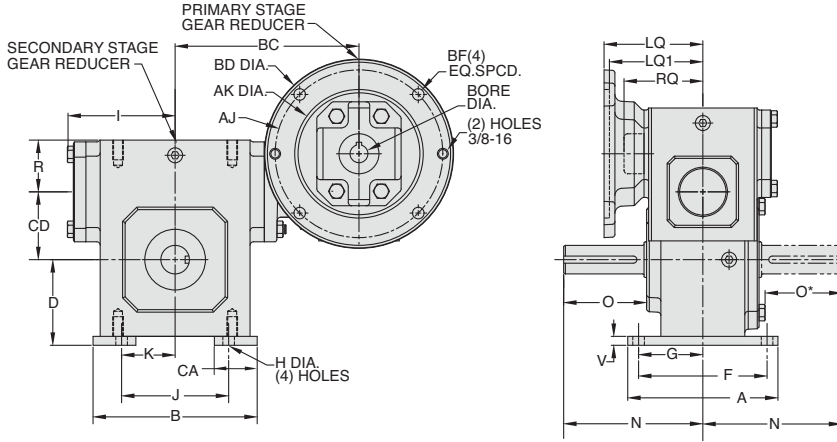
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

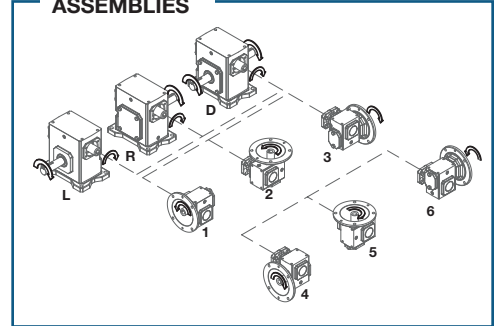
Ratio Multipliers

Accessories and
Additional Capabilities

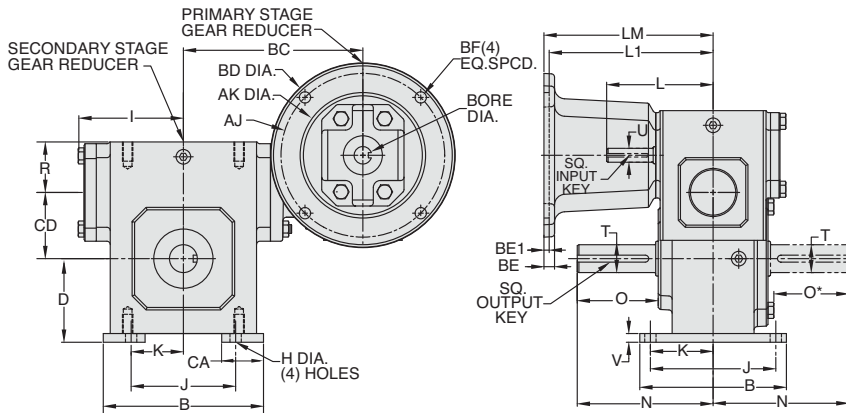
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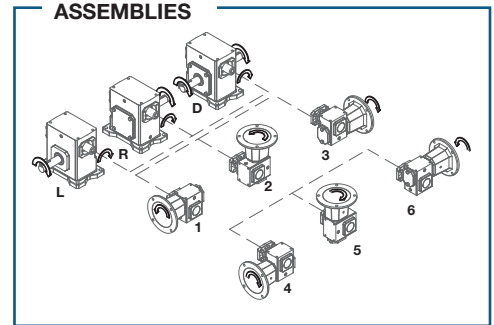
ASSEMBLIES



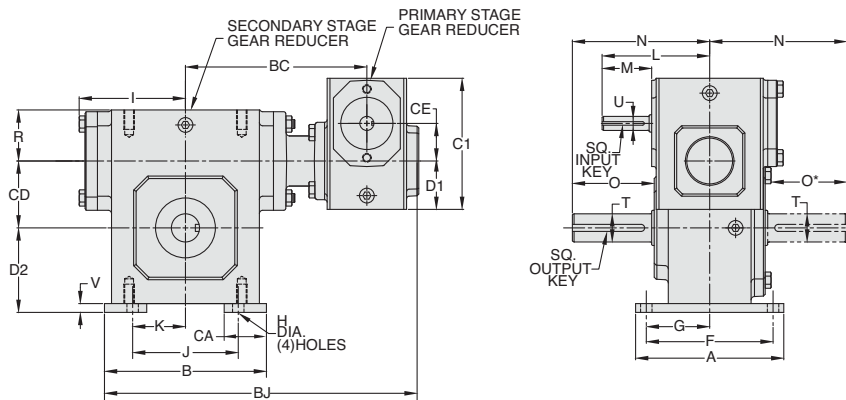
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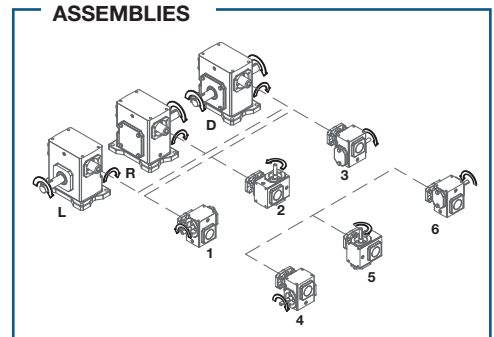
ASSEMBLIES



Style DT



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



NH Series Dimensions

Styles: DTMQ, DTM, DT



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR-MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE DTMQ, DTM, DT DIMENSIONS (Inches)

Size	A	B	BC	BJ	C	CA	CD	CE	C1	D1	D2	F	G	H	I	J	K	L	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key*‡	Output Key
NH813	4.00	5.01	5.32	9.67	4.97	1.50	1.33	1.33	4.66	1.72	2.03	3.25	1.63	0.28	2.61	4.25	2.13	3.82	1.76	4.00	2.16	1.94	1.61	0.31	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH815	5.25	5.19	5.85	10.29	5.34	1.50	1.54	1.33	4.66	1.72	2.19	4.50	2.25	0.34	3.14	4.19	2.09	3.82	1.76	4.25	2.56	2.35	1.58	0.31	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH818	4.62	5.89	5.94	10.73	5.80	1.88	1.75	1.33	4.66	1.72	2.44	3.50	1.75	0.41	3.24	4.63	2.31	3.82	1.76	4.75	2.94	2.73	1.63	0.38	1.000	0.500	1/8 X 1.00	1/4 X 1.75
NH821	5.25	5.19	6.32	10.76	6.29	1.50	2.06	1.33	4.66	1.72	2.63	4.50	2.25	0.34	3.61	4.19	2.09	3.82	1.76	4.34	2.66	2.45	1.63	0.31	0.875	0.500	1/8 X 1.00	3/16 X 1.50
NH824	5.25	5.75	6.44	11.16	6.99	1.50	2.38	1.33	4.66	1.72	3.00	4.50	2.25	0.41	3.77	3.75	1.88	3.82	1.76	4.88	2.91	2.69	1.81	0.31	1.000	0.500	1/8 X 1.00	1/4 X 1.75
NH826	6.13	6.51	7.01	12.11	7.49	2.00	2.63	1.33	4.66	1.72	3.25	4.13	2.06	0.41	4.34	4.75	2.38	3.82	1.76	5.25	3.28	3.07	1.81	0.31	1.125	0.500	1/8 X 1.00	1/4 X 1.75
NH830	6.13	7.74	7.35	12.91	8.22	2.25	3.00	1.75	5.00	2.06	3.69	4.13	2.06	0.41	4.84	6.00	3.00	4.35	1.76	5.77	3.56	3.31	1.87	0.31	1.250	0.625	3/16 X 1.38	1/4 X 1.75
NH832	7.50	9.25	7.53	13.85	9.28	2.50	3.25	1.76	5.00	2.06	4.56	6.50	3.25	0.41	5.02	7.75	3.88	4.35	1.76	7.03	4.24	3.99	2.62	0.38	1.500	0.625	3/16 X 1.38	3/8 X 2.25
NH842	6.75	10.99	8.47	15.65	10.88	2.50	4.25	2.06	6.00	2.31	5.00	5.75	2.88	0.56	6.10	9.75	4.88	4.82	1.76	7.50	3.88	3.59	2.75	0.50	1.750	0.625	3/16 X 1.38	3/8 X 2.25
NH852	8.25	13.24	10.64	19.23	13.07	3.00	5.25	2.63	7.38	2.94	6.00	7.00	3.50	0.69	7.50	12.00	6.00	6.07	2.38	9.00	4.72	4.47	2.56	1.13	2.000	0.750	3/16 X 1.63	1/2 X 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	48CZ	LM 56C/ 140TC	L1 180TC/ 210TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	RQ 48CZ/ 56C/140TC	180TC
NH813	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH815	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH818	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH821	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH824	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH826	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH830	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH832	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH842	6.63	7.07	N/A	4.46	N/A	4.06	N/A
NH852	N/A	8.32	9.32	5.19	5.62	4.82	5.13

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)*

Size	LQ1					RQ				
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D63D	D71D	D80D	D90D	D100LD/ D112MD
NH813	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH815	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH818	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH821	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH824	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH826	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH830	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH832	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH842	3.62	3.65	3.89	N/A	N/A	3.43	3.44	3.68	N/A	N/A
NH852	N/A	4.28	4.90	4.90	5.30	N/A	4.09	4.72	4.72	5.07

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237

- * Applies to double output shaft
- ◆ Keyway width by depth
- 48CZ not available
- ◇ Metric IEC B5 input flange options are available only on quill input styles.
- ※ Style DT and DTM only.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
DZF	DTMQ
DZFC	DTM
DZ	DT

Refer to page 123 for complete interchange guide for original Grove Gear OE Series.



NH Series Dimensions

Styles: DUMQ, DUM, DU



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

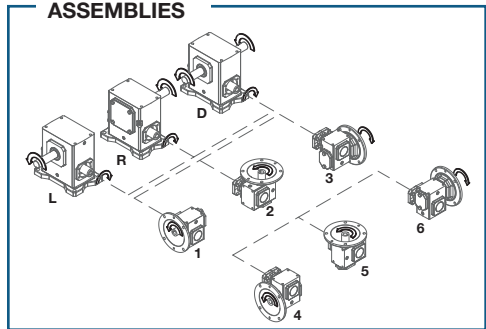
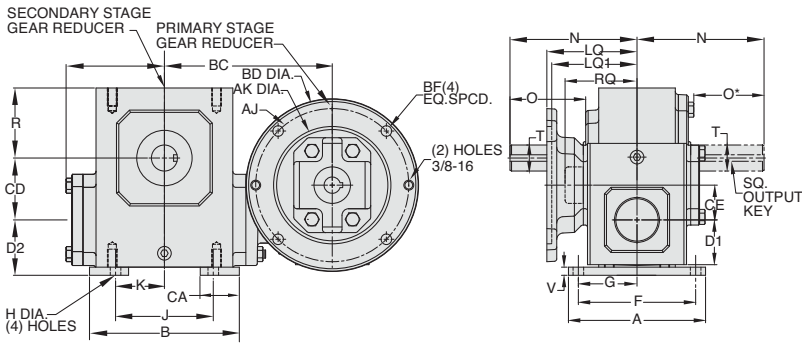
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

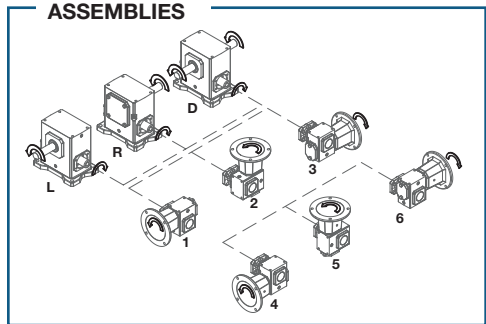
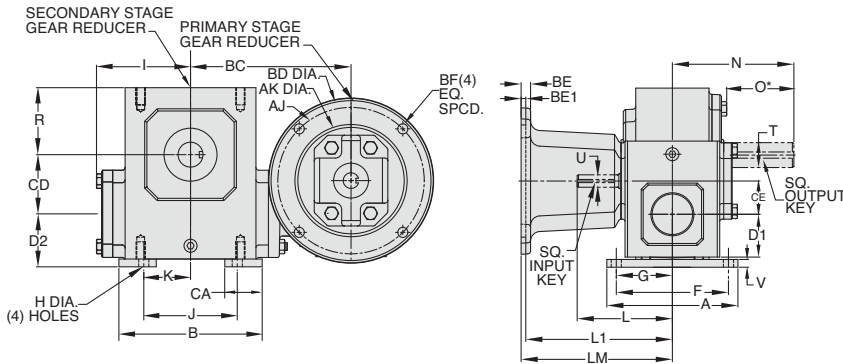
Ratio Multipliers

Accessories and
Additional Capabilities

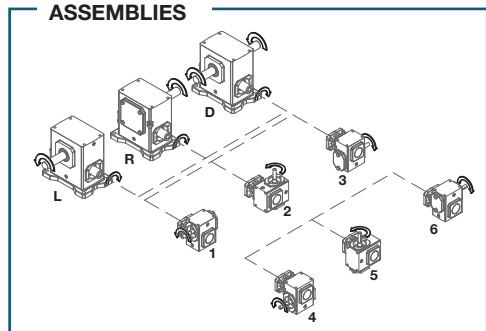
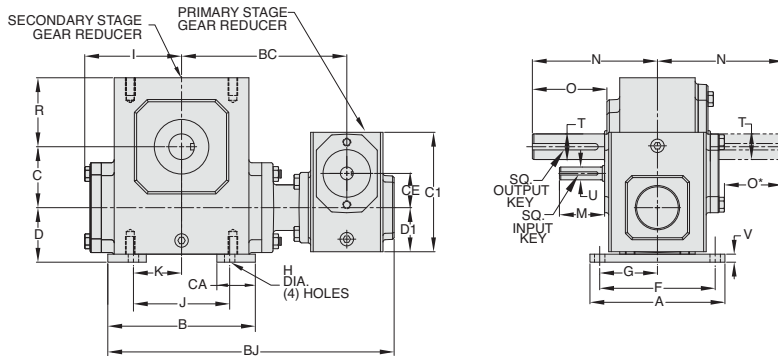
Style DUMQ



Style DUM



Style DU



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY
POSITIONS.



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR-MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE DUMQ, DUM, DU DIMENSIONS (Inches)

Size	A	B	BC	BJ	C	CA	CD	CE	C1	D1	D2	F	G	H	I	J	K	L	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key*	Output Key
NH813	4.00	5.01	5.32	9.67	4.97	1.50	1.33	1.33	4.66	1.72	1.92	3.25	1.63	0.28	2.61	4.25	2.13	3.82	1.76	4.00	2.16	1.94	1.72	0.31	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH815	5.25	5.19	5.85	10.29	5.34	1.50	1.54	1.33	4.66	1.72	1.90	4.50	2.25	0.34	3.14	4.19	2.09	3.82	1.76	4.25	2.56	2.35	1.88	0.31	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH818	4.62	5.89	5.94	10.73	5.80	1.88	1.75	1.33	4.66	1.72	2.00	3.50	1.75	0.41	3.24	4.63	2.31	3.82	1.76	4.75	2.94	2.73	2.06	0.38	1.000	0.500	1/8 X 1.00	1/4 X 1.75
NH821	5.25	5.19	6.32	10.76	6.29	1.50	2.06	1.33	4.66	1.72	1.94	4.50	2.25	0.34	3.61	4.19	2.09	3.82	1.76	4.34	2.66	2.45	2.31	0.31	0.875	0.500	1/8 X 1.00	3/16 X 1.50
NH824	5.25	5.75	6.44	11.16	6.99	1.50	2.38	1.33	4.66	1.72	2.13	4.50	2.25	0.41	3.77	3.75	1.88	3.82	1.76	4.88	2.91	2.69	2.69	0.31	1.000	0.500	1/8 X 1.00	1/4 X 1.75
NH826	6.13	6.51	7.01	12.11	7.49	2.00	2.63	1.33	4.66	1.72	2.13	4.13	2.06	0.41	4.34	4.75	2.38	3.82	1.76	5.25	3.28	3.07	2.94	0.31	1.125	0.500	1/8 X 1.00	1/4 X 1.75
NH830	6.13	7.74	7.35	12.91	8.22	2.25	3.00	1.75	5.00	2.06	2.19	4.13	2.06	0.41	4.84	6.00	3.00	4.35	1.76	5.77	3.56	3.31	3.38	0.31	1.250	0.625	3/16 X 1.38	1/4 X 1.75
NH832	7.50	9.25	7.53	13.85	9.28	2.50	3.25	1.75	5.00	2.06	3.00	6.50	3.25	0.41	5.02	7.75	3.88	4.35	1.76	7.03	4.24	3.99	4.19	0.38	1.500	0.625	3/16 X 1.38	3/8 X 2.25
NH842	6.75	10.99	8.47	15.65	10.88	2.50	4.25	2.06	6.00	2.31	3.25	5.75	2.88	0.56	6.10	9.75	4.88	4.82	1.76	7.50	3.88	3.59	4.50	0.50	1.750	0.625	3/16 X 1.38	3/8 X 2.25
NH852	8.25	13.24	10.64	19.23	13.07	3.00	5.25	2.63	7.38	2.94	3.69	7.00	3.50	0.69	7.50	12.00	6.00	6.07	2.38	9.00	4.72	4.47	4.88	1.13	2.000	0.750	3/16 X 1.63	1/2 X 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	48CZ	LM 56C/ 140TC	L1 180TC/ 210TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	RQ 48CZ/ 56C/140TC	180TC
NH813	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH815	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH818	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH821	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH824	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH826	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH830	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH832	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH842	6.63	7.07	N/A	4.46	N/A	4.06	N/A
NH852	N/A	8.32	9.32	5.19■	5.62	4.82■	5.13

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)*

Size	LQ1					RQ				
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D63D	D71D	D80D	D90D	D100LD/ D112MD
NH813	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH815	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH818	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH821	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH824	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH826	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH830	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH832	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH842	3.62	3.65	3.89	N/A	N/A	3.43	3.44	3.68	N/A	N/A
NH852	N/A	4.28	4.90	4.90	5.30	N/A	4.09	4.72	4.72	5.07

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
	115	95	117	10	11	4 X 2	M8 X 1.25	131
	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
	165	130	165	15	19	6 X 3	M10 X 1.50	184
	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
	215	180	216	18	28	8 X 3.5	M12 X 1.75	237

- * Applies to double output shaft
- ◆ Keyway width by depth
- 48CZ not available
- ◆ Metric IEC B5 input flange options are available only on quill input styles.
- * Style DU and DUM only.

WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
DUBF	DUMQ
DUBFC	DUM
DUB	DU

Refer to page 123 for complete interchange guide for original Grove Gear OE Series.

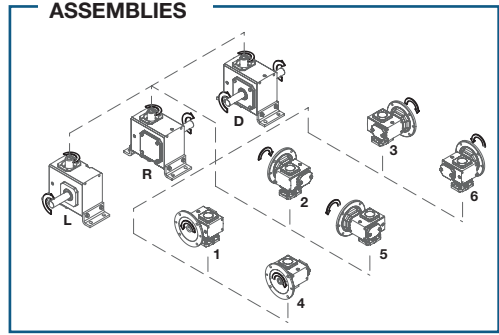
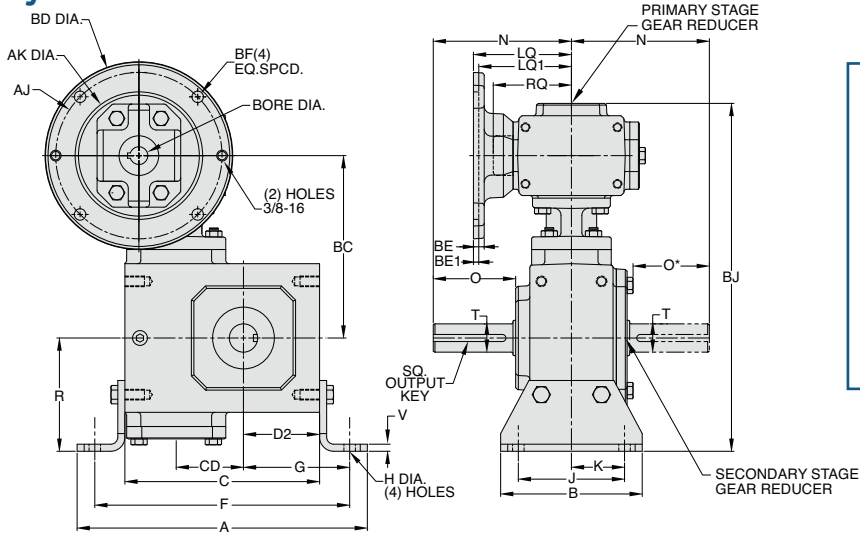


NH Series Dimensions

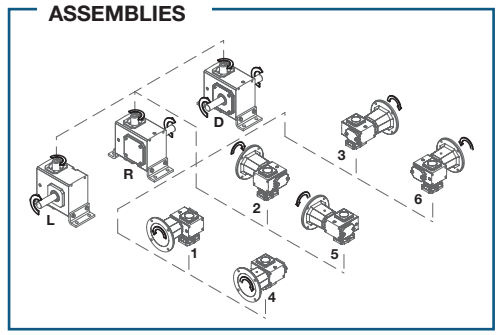
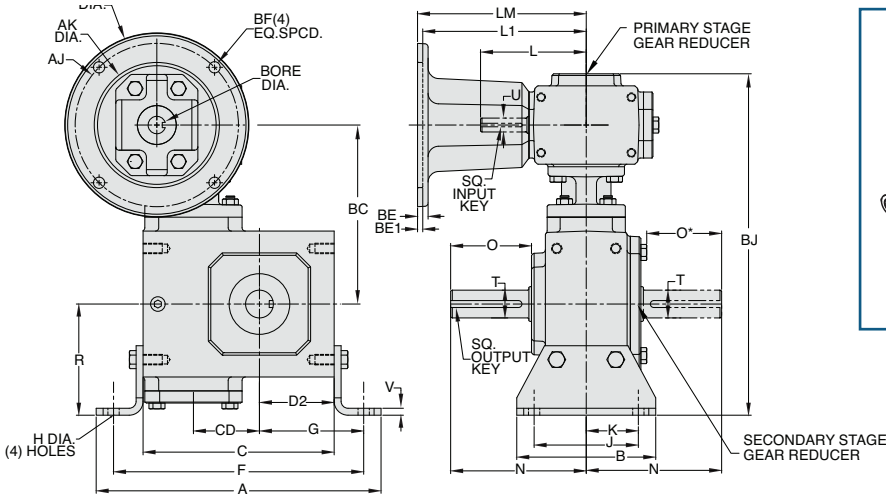
Styles: DJMQ, DJM, DJ

CAST IRON
NH SERIES

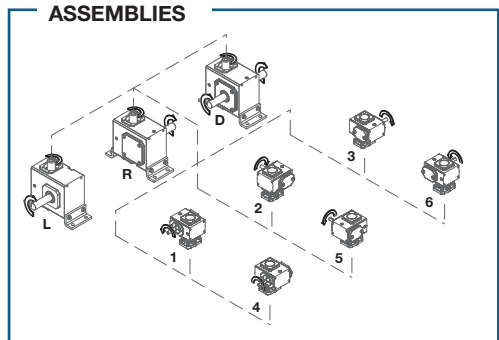
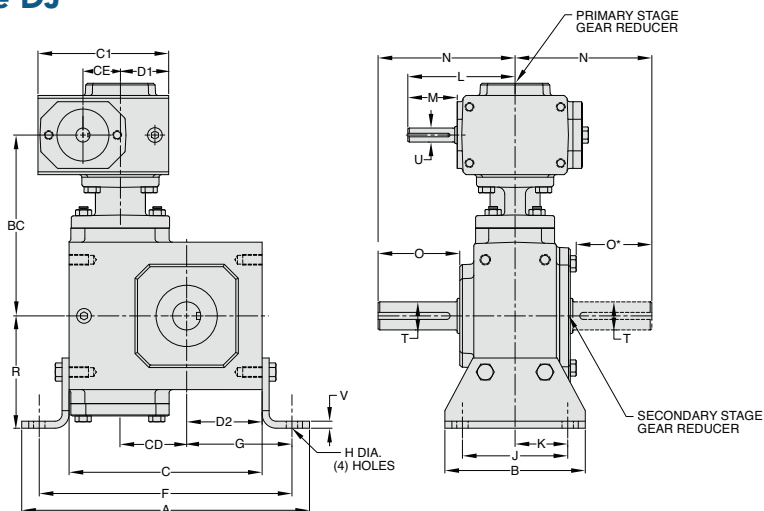
Style DJMQ



Style DJM



Style DJ



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Worm Gear Reducers
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



STYLE DJMQ, DJM, DJ DIMENSIONS (Inches)

Size	A	B	BC	BJ	C	CD	CE	C1	D1	D2	F	G	H	J	K	L	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key**	Output Key
NH813	7.42	2.75	5.32	10.10	4.66	1.33	1.33	4.66	1.72	1.72	6.42	2.60	0.38	2.00	1.00	3.82	1.76	4.00	2.16	1.94	2.94	0.25	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH815	8.06	3.75	5.85	11.44	5.00	1.54	1.33	4.66	1.72	1.88	7.06	2.91	0.34	2.75	1.38	3.82	1.76	4.25	2.56	2.35	3.75	0.25	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH818	8.50	3.75	5.94	11.78	5.44	1.75	1.33	4.66	1.72	2.06	7.50	3.09	0.34	2.75	1.38	3.82	1.76	4.75	2.94	2.73	4.00	0.25	1.000	0.500	1/8 X 1.00	1/4 X 1.75
NH821	9.06	3.75	6.32	11.91	6.00	2.06	1.33	4.66	1.72	2.31	8.06	3.34	0.34	2.75	1.38	3.82	1.76	4.34	2.66	2.45	3.75	0.25	0.875	0.500	1/8 X 1.00	3/16 X 1.50
NH824	9.96	5.00	6.44	12.72	6.88	2.38	1.33	4.66	1.72	2.69	8.70	3.60	0.41	3.75	1.88	3.82	1.76	4.88	2.91	2.69	4.44	0.25	1.000	0.500	1/8 X 1.00	1/4 X 1.75
NH826	10.46	5.00	7.01	13.29	7.38	2.63	1.33	4.66	1.72	2.94	9.20	3.85	0.41	3.75	1.88	3.82	1.76	5.25	3.28	3.07	4.44	0.25	1.125	0.500	1/8 X 1.00	1/4 X 1.75
NH830	12.01	5.25	7.35	13.98	8.22	3.00	1.75	5.00	2.06	3.38	10.75	4.63	0.41	4.00	2.00	4.35	1.76	5.77	3.56	3.31	4.94	0.31	1.250	0.625	3/16 X 1.38	1/4 X 1.75
NH832	14.00	6.25	7.53	14.47	9.28	3.25	1.75	5.00	2.06	4.19	12.50	5.41	0.53	5.00	2.50	4.35	1.76	7.03	4.24	3.99	5.25	0.31	1.500	0.625	3/16 X 1.38	3/8 X 2.25
NH842	16.50	6.75	8.47	16.65	11.50	4.25	2.06	6.00	2.31	4.50	15.00	6.25	0.69	5.00	2.50	4.82	1.76	7.50	3.88	3.59	6.50	0.50	1.750	0.625	3/16 X 1.38	3/8 X 2.25
NH852	17.69	7.20	10.64	20.36	12.69	5.25	2.63	7.38	2.94	4.88	16.31	6.69	0.69	5.81	2.91	6.07	2.38	9.00	4.72	4.47	7.75	0.50	2.000	0.750	3/16 X 1.63	1/2 X 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	48CZ	LM 56C/ 140TC	L1 180TC/ 210TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	RQ 48CZ/ 56C/140TC	RQ 180TC
NH813	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH815	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH818	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH821	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH824	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH826	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH830	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH832	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH842	6.63	7.07	N/A	4.46	N/A	4.06	N/A
NH852	N/A	8.32	9.32	5.19■	5.62	4.82■	5.13

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)*

Size	LQ1					RQ				
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D63D	D71D	D80D	D90D	D100LD/ D112MD
NH813	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH815	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH818	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH821	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH824	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH826	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH830	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH832	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH842	3.62	3.65	3.89	N/A	N/A	3.43	3.44	3.68	N/A	N/A
NH852	N/A	4.28	4.90	4.90	5.30	N/A	4.09	4.72	4.72	5.07

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
	115	95	117	10	11	4 X 2	M8 X 1.25	131
	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
	165	130	165	15	19	6 X 3	M10 X 1.50	184
	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
	215	180	216	18	28	8 X 3.5	M12 X 1.75	237

- * Applies to double output shaft
- ◆ Keyway width by depth
- 48CZ not available
- ◆ Metric IEC B5 input flange options are available only on quill input styles.
- * Style DJ and DJM only.

WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
DJF	DJMQ
DJFC	DJM
DJ	DJ

Refer to page 123 for complete interchange guide for original Grove Gear OE Series.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR-MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



NH Series Dimensions

Styles: DV_MQ, DV_M, DV_



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

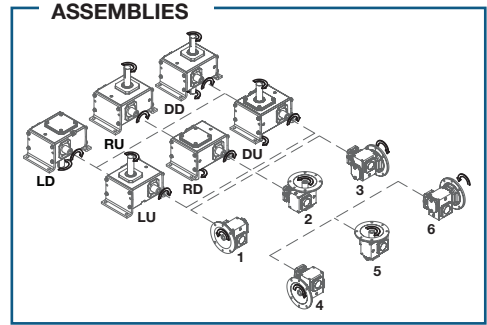
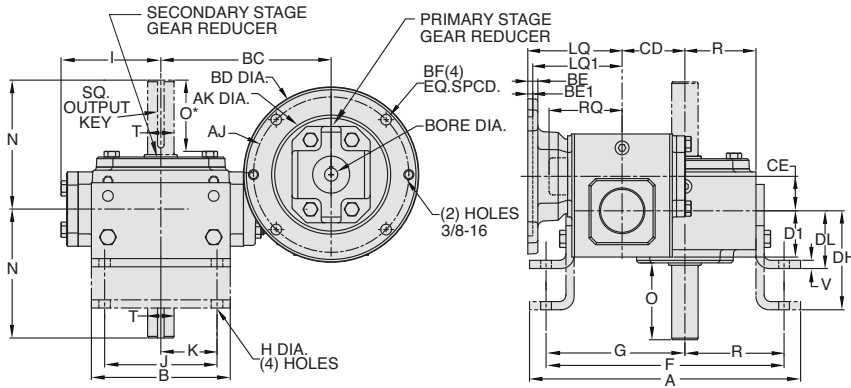
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

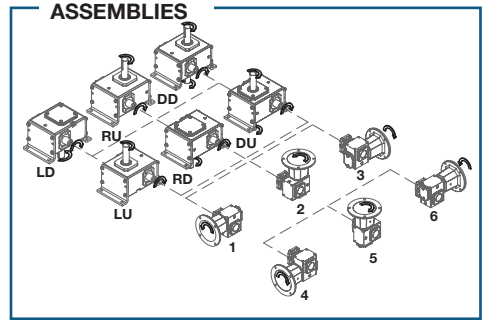
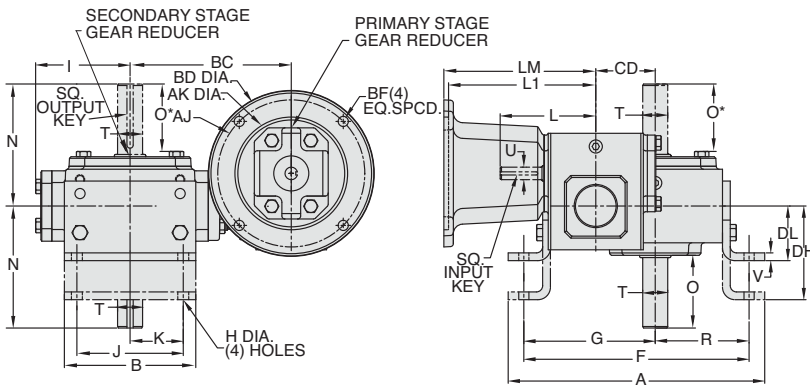
Ratio Multipliers

Accessories and
Additional Capabilities

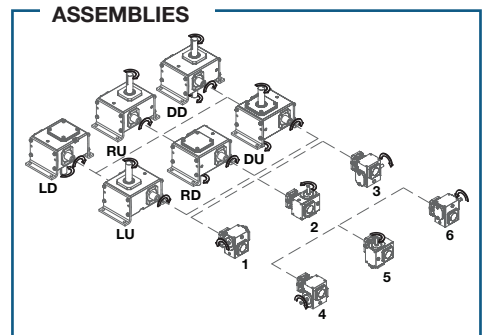
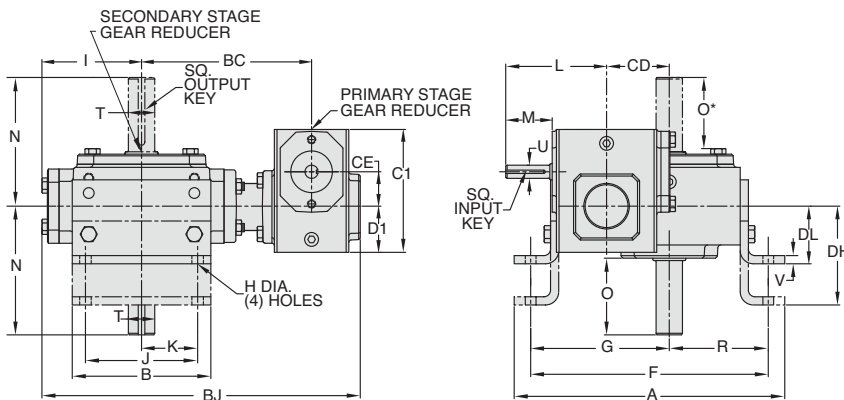
Style DV(L OR H)MQ



Style DV(L OR H)M



Style DV(L OR H)



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



NH Series Dimensions

Styles: DV_MQ, DV_M, DV_



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR-MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE DV_MQ, DV_M, DV_ DIMENSIONS (Inches)

Size	A	B	BC	BH	CD	CE	C1	D1	DL	DH	F	G	H	I	J	K	L	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key*§	Output Key
NH813	7.78	4.00	5.32	7.16	1.33	1.33	4.66	1.72	2.00	3.88	6.78	4.00	0.44	2.61	3.00	1.50	3.82	1.76	4.00	2.16	1.94	1.72	0.31	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH815	8.12	4.00	5.85	7.69	1.54	1.33	4.66	1.72	1.94	3.82	7.12	4.18	0.44	3.14	3.00	1.50	3.82	1.76	4.25	2.56	2.35	1.88	0.31	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH818	8.56	4.75	5.94	7.78	1.75	1.33	4.66	1.72	1.94	3.82	7.56	4.44	0.44	3.24	3.00	1.50	3.82	1.76	4.75	2.94	2.73	2.06	0.31	1.000	0.500	1/8 X 1.00	1/4 X 1.75
NH821	9.12	4.00	6.32	8.16	2.06	1.33	4.66	1.72	1.94	3.82	8.12	4.75	0.44	3.61	3.00	1.50	3.82	1.76	4.34	2.66	2.45	2.31	0.31	0.875	0.500	1/8 X 1.00	3/16 X 1.50
NH824	10.50	5.25	6.44	8.28	2.38	1.33	4.66	1.72	2.18	3.74	9.50	5.50	0.44	3.77	4.25	2.13	3.82	1.76	4.88	2.91	2.69	2.69	0.31	1.000	0.500	1/8 X 1.00	1/4 X 1.75
NH826	11.00	5.25	7.01	8.85	2.63	1.33	4.66	1.72	2.18	3.74	10.00	5.75	0.44	4.34	4.25	2.13	3.82	1.76	5.25	3.28	3.07	2.94	0.31	1.125	0.500	1/8 X 1.00	1/4 X 1.75
NH830	11.87	6.00	7.35	9.04	3.00	1.75	5.00	2.06	2.31	3.69	10.87	6.18	0.44	4.84	4.75	2.38	4.35	1.76	5.77	3.56	3.31	3.38	0.31	1.250	0.625	3/16 X 1.38	1/4 X 1.75
NH832	13.86	8.00	7.53	9.22	3.25	1.75	5.00	2.06	3.50	4.81	12.82	7.25	0.47	5.02	7.00	3.50	4.35	1.76	7.03	4.24	3.99	4.19	0.31	1.500	0.625	3/16 X 1.38	3/8 X 2.25
NH842	16.38	9.50	8.47	10.15	4.25	2.06	6.00	2.31	5.00	7.50	15.00	8.75	0.69	6.10	7.88	3.94	4.82	1.76	7.50	3.88	3.59	4.50	0.50	1.750	0.625	3/16 X 1.38	3/8 X 2.25
NH852	18.29	11.50	10.64	12.61	5.25	2.63	7.38	2.94	5.16	9.16	16.69	9.81	0.78	7.50	10.00	5.00	6.07	2.38	9.00	4.72	4.47	4.88	0.50	2.000	0.750	3/16 X 1.63	1/2 X 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM		L1 180TC/ 210TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	RQ	
	48CZ	56C/ 140TC				48CZ/ 56C/140TC	180TC
NH813	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH815	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH818	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH821	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH824	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH826	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH830	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH832	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH842	6.63	7.07	N/A	4.46	N/A	4.06	N/A
NH852	N/A	8.32	9.32	5.19■	5.62	4.82■	5.13

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)*

Size	LQ1					RQ				
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D63D	D71D	D80D	D90D	D100LD/ D112MD
NH813	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH815	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH818	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH821	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH824	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH826	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH830	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH832	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH842	3.62	3.65	3.89	N/A	N/A	3.43	3.44	3.68	N/A	N/A
NH852	N/A	4.28	4.90	5.30	N/A	4.09	4.72	4.72	4.72	5.07

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
	115	95	117	10	11	4 X 2	M8 X 1.25	131
	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
	165	130	165	15	19	6 X 3	M10 X 1.50	184
	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
	215	180	216	18	28	8 X 3.5	M12 X 1.75	237

- * Applies to double output shaft
- ◆ Keyway width by depth
- 48CZ not available
- ◇ Metric IEC B5 input flange options are available only on quill input styles.
- ※ Style DVL and DVLM only.

WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
DSLFL	DVLMQ
DSLFC	DVLM
DSL	DVL
DSHF	DVHMQ
DSHFC	DVHM
DSH	DVH

Refer to page 123 for complete interchange guide for original Grove Gear OE Series.



NH Series Dimensions

Styles: DFMQ, DFM, DF

CAST IRON
NH SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

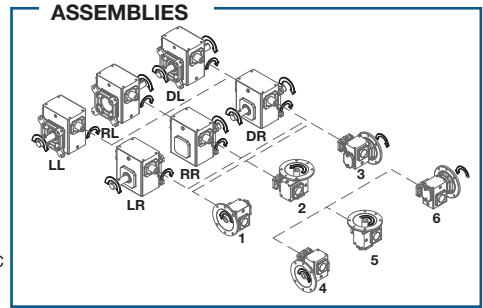
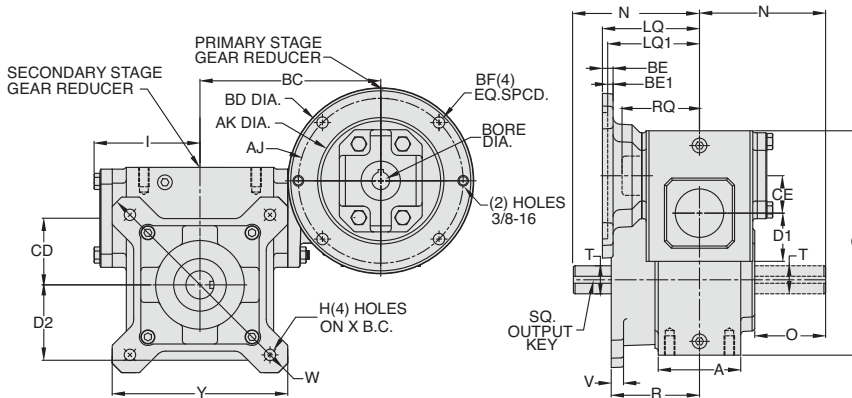
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

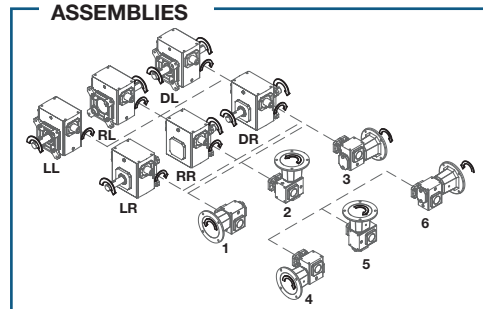
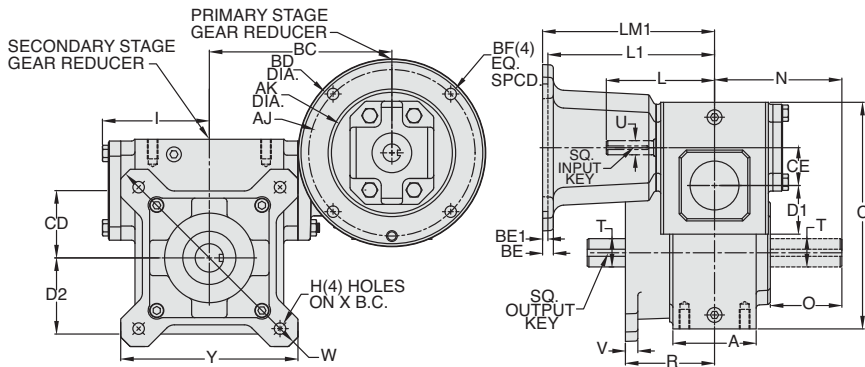
Ratio Multipliers

Accessories and
Additional Capabilities

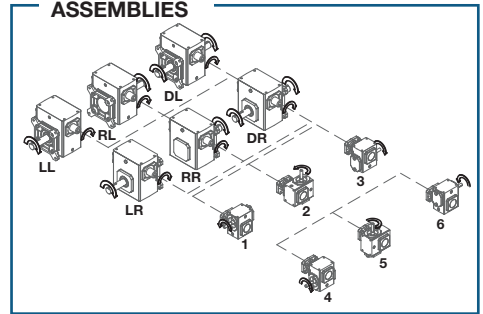
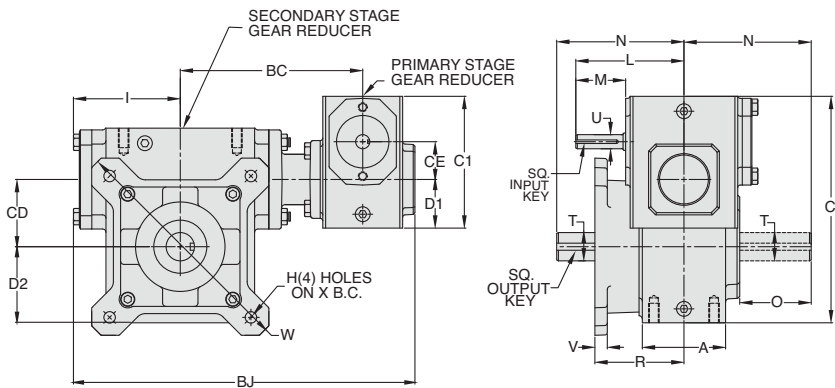
Style DFMQ



Style DFM



Style DF



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

Sizes 815-852 output flange must be mounted at
Factory on styles FMQ, FM, F.



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE DFMQ, DFM, DF DIMENSIONS (Inches)

Size	A	B	BC	BH	BL	C	CD	CE	C1	D1	D2	H	I	L	M	N	O*	R	V	W	X	Y	T +0.000 -0.0015	U +0.000 -0.0015	Input Key*	Output Key
NH813	2.82	3.80	5.32	7.16	0.38	4.66	1.33	1.33	4.66	1.72	1.72	0.34	2.61	3.82	1.76	4.00	1.94	2.52	0.25	5.92	5.00	4.50	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH815	2.57	4.06	5.85	7.69	0.38	5.03	1.54	1.33	4.66	1.72	1.88	0.34	3.14	3.82	1.76	4.25	2.35	3.50	0.25	6.79	5.88	5.12	0.750	0.500	1/8 X 1.00	3/16 X 1.50
NH818	2.56	4.50	5.94	7.78	0.38	5.42	1.75	1.33	4.66	1.72	2.06	0.34	3.24	3.82	1.76	4.75	2.73	2.73	0.25	6.64	5.88	5.00	1.000	0.500	1/8 X 1.00	1/4 X 1.75
NH821	2.50	4.50	6.32	8.16	0.38	5.98	2.06	1.33	4.66	1.72	2.31	0.34	3.61	3.82	1.76	4.34	2.45	3.51	0.25	7.37	6.25	5.56	0.875	0.500	1/8 X 1.00	3/16 X 1.50
NH824	2.94	5.25	6.44	8.28	0.44	6.68	2.38	1.33	4.66	1.72	2.69	0.34	3.77	3.82	1.76	4.88	2.69	3.47	0.25	8.29	7.06	6.24	1.000	0.500	1/8 X 1.00	1/4 X 1.75
NH826	2.88	5.75	7.01	8.85	0.50	7.18	2.63	1.33	4.66	1.72	2.94	0.34	4.34	3.82	1.76	5.25	3.07	3.56	0.25	8.90	7.63	6.68	1.125	0.500	1/8 X 1.00	1/4 X 1.75
NH830	3.12	6.62	7.35	9.04	0.50	8.22	3.00	1.75	5.00	2.06	3.38	0.41	4.84	4.35	1.76	5.77	3.31	3.69	0.31	9.50	8.63	7.34	1.250	0.625	3/16 X 1.38	1/4 X 1.75
NH832	4.44	8.00	7.53	9.22	0.56	9.28	3.25	1.75	5.00	2.06	4.19	0.53	5.02	4.35	1.76	7.03	3.99	5.00	0.31	11.84	10.63	9.00	1.500	0.625	3/16 X 1.38	3/8 X 2.25
NH842	4.75	9.75	8.47	10.15	0.62	10.38	4.25	2.06	6.00	2.31	4.50	0.56	6.10	4.82	1.76	7.50	3.59	4.50	0.50	12.95	11.50	9.66	1.750	0.625	3/16 X 1.38	3/8 X 2.25
NH852	6.19	11.00	10.64	12.61	0.75	11.94	5.25	2.63	7.38	2.94	4.88	0.69	7.50	6.07	2.38	9.00	4.47	5.56	0.50	15.50	14.00	11.76	2.000	0.750	3/16 X 1.63	1/2 X 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	48CZ	LM 56C/ 140TC	L1 180TC/ 210TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	RQ 48CZ/ 56C/140TC	180TC
NH813	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH815	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH818	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH821	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH824	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH826	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH830	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH832	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH842	6.63	7.07	N/A	4.46	N/A	4.06	N/A
NH852	N/A	8.32	9.32	5.19	5.62	4.82	5.13

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway♦	BF
	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)♦

Size	LQ1					RQ				
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D63D	D71D	D80D	D90D	D100LD/ D112MD
NH813	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH815	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH818	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH821	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH824	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH826	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH830	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH832	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH842	3.62	3.65	3.89	N/A	N/A	3.43	3.44	3.68	N/A	N/A
NH852	N/A	4.28	4.90	4.90	5.30	N/A	4.09	4.72	4.72	5.07

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway♦	BF TAP	OD
	115	95	117	10	11	4 X 2	M8 X 1.25	131
	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
	165	130	165	15	19	6 X 3	M10 X 1.50	184
	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
	215	180	216	18	28	8 X 3.5	M12 X 1.75	237

- * Applies to double output shaft
- ♦ Keyway width by depth
- 48CZ not available
- ♦ Metric IEC B5 input flange options are available only on quill input styles.
- ※ Style DF and DFM only.

WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
DKF & DVF	DFMQ
DKFC & DVFC	DFM
DK & DV	DF

Refer to page 123 for complete interchange guide for original Grove Gear OE Series.



NH Series Dimensions

Styles: DHMQ, DHM, DH

CAST IRON
NH SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

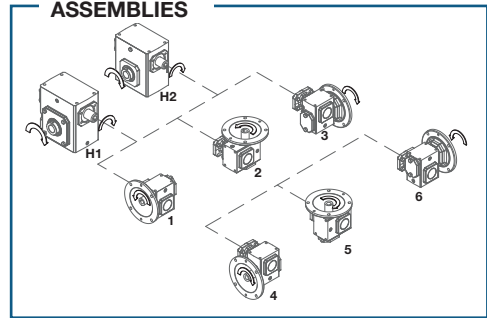
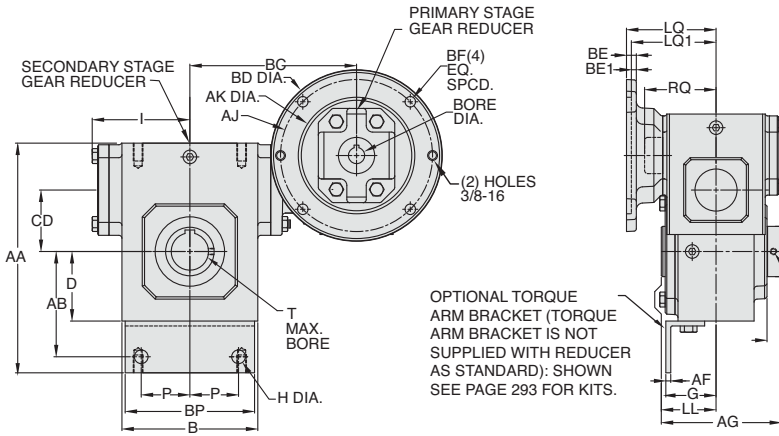
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

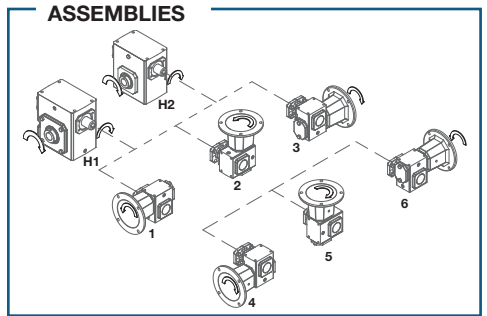
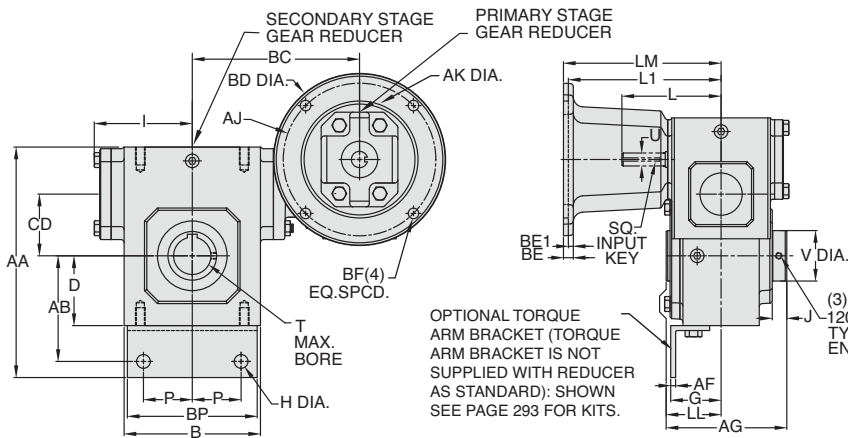
Style DHMQ



H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

(3) SETSCREWS
120° APART
TYP. ONE
END

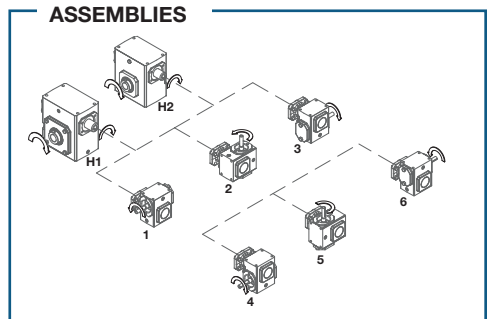
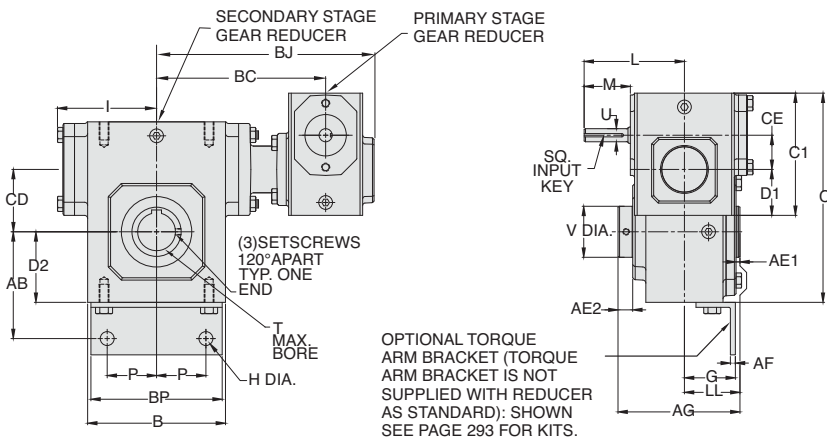
Style DHM



H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

(3) SETSCREWS
120° APART
TYP. ONE
END

Style DH



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE DHMQ, DHM, DH DIMENSIONS (Inches)

Size	AA	AB	AD	AE2	AF	AG	B	BC	BH	C	CD	CE	C1	D1	D2	G	H	I	L	LL	M	P*	V	T MAX+ -0.000 +0.0025	U +0.000 -0.0015	Input Key*‡	Output Key
NH813	6.66	3.10	3.90	0.53	0.19	4.75	3.80	5.32	7.16	4.66	1.33	1.33	4.66	1.72	1.72	1.88	0.53	2.61	3.82	2.38	1.76	1.38	1.00	0.625	0.500	1/8 X 1.00	3/16 x 1.50
NH815	7.00	3.26	3.59	0.51	0.19	4.08	4.06	5.85	7.69	5.03	1.54	1.33	4.66	1.72	1.88	1.82	0.53	3.14	3.82	1.88	1.76	1.38	1.00	0.625	0.500	1/8 X 1.00	3/16 x 1.50
NH818	7.44	3.44	3.83	0.56	0.19	4.29	4.50	5.94	7.78	5.42	1.75	1.33	4.66	1.72	2.06	1.82	0.53	3.24	3.82	1.98	1.76	1.38	1.44	1.000	0.500	1/8 X 1.00	1/4 x 3.00
NH821	8.00	3.69	3.57	0.85	0.19	4.65	4.50	6.32	8.16	5.98	2.06	1.33	4.66	1.72	2.31	1.82	0.53	3.61	3.82	2.12	1.76	1.38	1.94	1.500	0.500	1/8 X 1.00	3/8 x 3.00
NH824	8.88	4.07	4.16	0.56	0.19	4.65	5.25	6.44	8.28	6.68	2.38	1.33	4.66	1.72	2.69	1.94	0.53	3.77	3.82	2.12	1.76	1.88	1.94	1.500	0.500	1/8 X 1.00	3/8 x 3.00
NH826	9.38	4.32	4.15	0.56	0.19	4.65	5.75	7.01	8.85	7.18	2.63	1.33	4.66	1.72	2.94	1.94	0.53	4.34	3.82	2.12	1.76	1.88	1.94	1.500	0.500	1/8 X 1.00	3/8 x 3.00
NH830	10.25	4.76	4.67	0.56	0.25	5.16	6.62	7.35	9.04	8.22	3.00	1.75	5.00	2.06	3.38	2.32	0.53	4.84	4.35	2.38	1.76	2.38	2.51	2.188	0.625	3/16 X 1.38	1/2 x 3.00
NH832	12.06	5.57	5.83	0.57	0.25	6.31	8.00	7.53	9.22	9.28	3.25	1.75	5.00	2.06	4.19	2.87	0.53	5.02	4.35	2.95	1.76	3.51	2.51	2.188	0.625	3/16 X 1.38	1/2 x 3.00
NH842	14.00	6.38	7.53	0.63	0.38	8.50	9.75	8.47	10.15	10.38	4.25	2.06	6.00	2.31	4.50	3.26	0.53	6.10	4.82	4.25	1.76	3.69	2.75	2.188	0.625	3/16 X 1.38	1/2 x 3.00
NH852	15.19	6.76	8.81	0.97	0.38	10.50	11.00	10.64	12.61	11.94	5.25	2.63	7.38	2.94	4.88	3.63	0.53	7.50	6.07	5.25	2.38	4.62	4.26	3.438	0.750	3/16 X 1.63	7/8 x 3.44

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM		L1 180TC/ 210TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	RQ	
	48CZ	56C/ 140TC				48CZ/ 56C/140TC	180TC
NH813	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH815	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH818	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH821	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH824	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH826	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH830	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH832	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH842	6.63	7.07	N/A	4.46	N/A	4.06	N/A
NH852	N/A	8.32	9.32	5.19■	5.62	4.82■	5.13

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)*

Size	LQ1					RQ				
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D63D	D71D	D80D	D90D	D100LD/ D112MD
NH813	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH815	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH818	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH821	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH824	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH826	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH830	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH832	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH842	3.62	3.65	3.89	N/A	N/A	3.43	3.44	3.68	N/A	N/A
NH852	N/A	4.28	4.90	4.90	5.30	N/A	4.09	4.72	4.72	5.07

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
	115	95	117	10	11	4 X 2	M8 X 1.25	131
	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
	165	130	165	15	19	6 X 3	M10 X 1.50	184
	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
	215	180	216	18	28	8 X 3.5	M12 X 1.75	237

Note: Torque arm bracket available separately. Refer to page 293 for kits. If a special bracket is required, refer to Style DMQ dimensions for mounting pad dimensions on top/bottom of reducer.

- Max bore dimensions shown. For additional bores available, refer to page 140.
- ◆ Keyway width by depth
- 48CZ not available
- ◇ Metric IEC B5 input flange options are available only on quill input styles.
- * Style DH and DHM only.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
DYF	DHMQ
DYFC	DHM
DY	DH

Refer to page 123 for complete interchange guide for original Grove Gear OE Series..



NH Series Dimensions

Styles: DFHMQ, DFHM, DFH



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

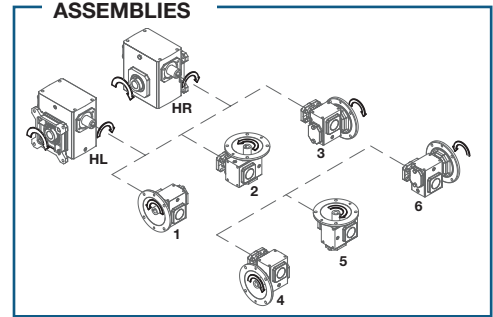
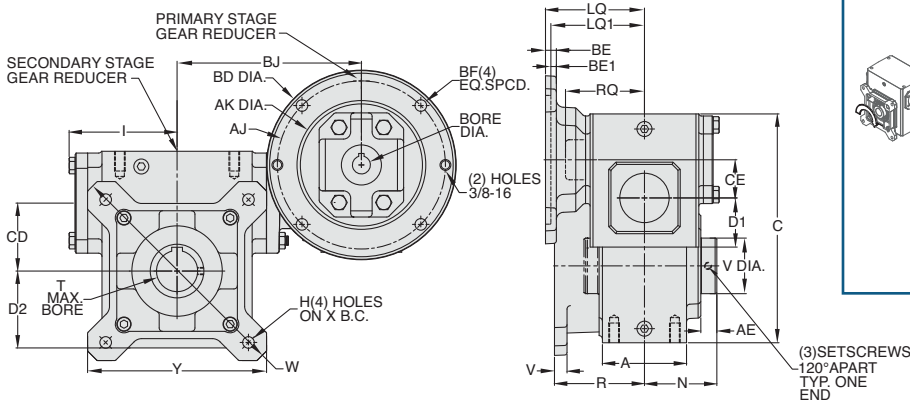
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

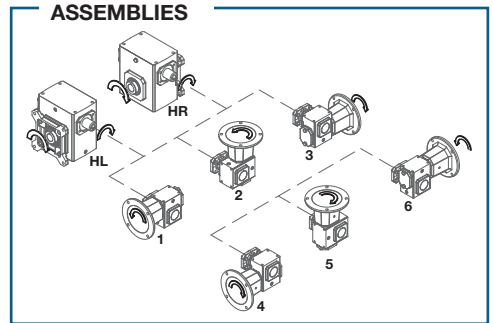
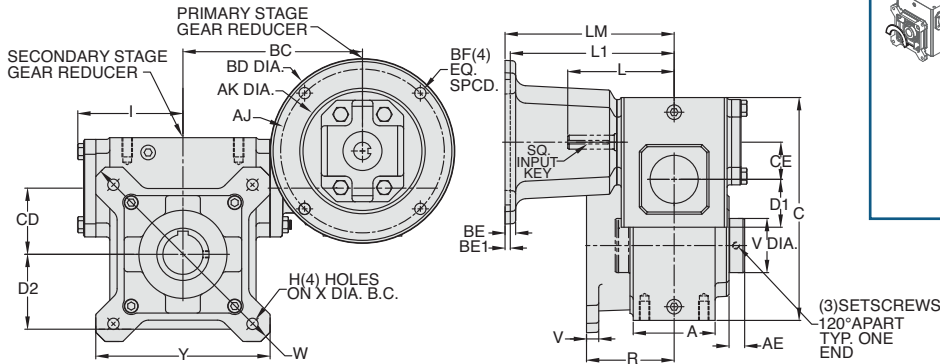
Ratio Multipliers

Accessories and
Additional Capabilities

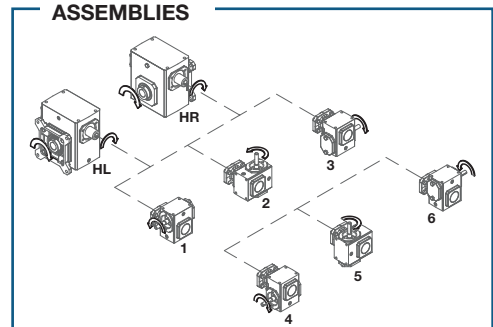
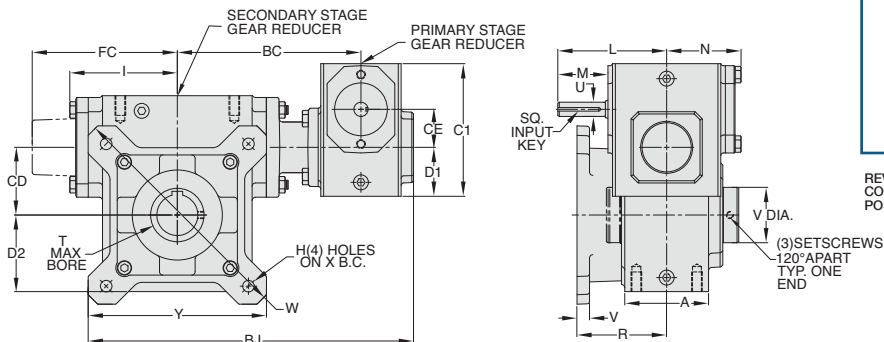
Style DFHMQ



Style DFHM



Style DFH



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR-MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE DFHMQ, DFHM, DFH DIMENSIONS (Inches)

Size	A	AE	B	BC	BH	BL	C	CD	CE	C1	D1	D2	H	I	L	M	N	R	V	W	X	Y	T MAX* -0.000 +0.0025	U +0.000 -0.0015	Input Key*‡	Output Key*
NH813	2.82	0.53	3.80	5.32	7.16	0.38	4.66	1.33	1.33	4.66	1.72	1.72	0.34	2.61	3.82	1.76	2.37	2.52	1.00	5.92	5.00	4.50	0.625	0.500	1/8 X 1.00	3/16 x 1.50
NH815	2.57	0.51	4.06	5.85	7.69	0.38	5.03	1.54	1.33	4.66	1.72	1.88	0.34	3.14	3.82	1.76	2.20	3.50	1.00	6.79	5.88	5.12	0.625	0.500	1/8 X 1.00	3/16 x 1.50
NH818	2.56	0.56	4.50	5.94	7.78	0.38	5.42	1.75	1.33	4.66	1.72	2.06	0.34	3.24	3.82	1.76	2.37	2.74	1.44	6.64	5.88	5.00	1.000	0.500	1/8 X 1.00	1/4 x 3.00
NH821	2.50	0.85	4.50	6.32	8.16	0.38	5.98	2.06	1.33	4.66	1.72	2.31	0.34	3.61	3.82	1.76	2.53	3.50	1.94	7.37	6.25	5.56	1.500	0.500	1/8 X 1.00	3/8 x 3.00
NH824	2.94	0.56	5.25	6.44	8.28	0.44	6.68	2.38	1.33	4.66	1.72	2.69	0.34	3.77	3.82	1.76	2.53	3.53	1.94	8.29	7.06	6.24	1.500	0.500	1/8 X 1.00	3/8 x 3.00
NH826	2.88	0.56	5.75	7.01	8.85	0.50	7.18	2.63	1.33	4.66	1.72	2.94	0.34	4.34	3.82	1.76	2.53	3.62	1.94	8.90	7.63	6.68	1.500	0.500	1/8 X 1.00	3/8 x 3.00
NH830	3.12	0.56	6.62	7.35	9.04	0.50	8.22	3.00	1.75	5.00	2.06	3.38	0.41	4.84	4.35	1.76	2.78	3.75	2.51	9.50	8.63	7.34	2.188	0.625	3/16 X 1.38	1/2 x 3.00
NH832	4.44	0.57	8.00	7.53	9.22	0.56	9.28	3.25	1.75	5.00	2.06	4.19	0.53	5.02	4.35	1.76	3.36	5.06	2.51	11.84	10.63	9.00	2.188	0.625	3/16 X 1.38	1/2 x 3.00
NH842	4.75	0.63	9.75	8.47	10.15	0.62	10.38	4.25	2.06	6.00	2.31	4.50	0.56	6.10	4.82	1.76	4.25	4.56	2.75	12.95	11.50	9.66	2.188	0.625	3/16 X 1.38	1/2 x 3.00
NH852	6.19	0.97	11.00	10.64	12.61	0.75	11.94	5.25	2.63	7.38	2.94	4.88	0.69	7.50	6.07	2.38	5.25	5.62	4.26	15.50	14.00	11.76	3.438	0.750	3/16 X 1.63	7/8 x 3.44

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	48CZ	LM 56C/ 140TC	L1 180TC/ 210TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	RQ 48CZ/ 56C/140TC	180TC
NH813	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH815	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH818	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH821	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH824	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH826	5.63	6.07	N/A	3.46	N/A	3.09	N/A
NH830	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH832	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH842	6.63	7.07	N/A	4.46	N/A	4.06	N/A
NH852	N/A	8.32	9.32	5.19■	5.62	4.82■	5.13

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)◆

Size	LQ1					RQ				
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D63D	D71D	D80D	D90D	D100LD/ D112MD
NH813	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH815	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH818	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH821	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH824	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH826	2.62	2.65	2.89	N/A	N/A	2.45	2.47	2.71	N/A	N/A
NH830	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH832	3.25	3.28	3.52	N/A	N/A	2.95	2.97	3.21	N/A	N/A
NH842	3.62	3.65	3.89	N/A	N/A	3.43	3.44	3.68	N/A	N/A
NH852	N/A	4.28	4.90	4.90	5.30	N/A	4.09	4.72	4.72	5.07

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
	115	95	117	10	11	4 X 2	M8 X 1.25	131
	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
	165	130	165	15	19	6 X 3	M10 X 1.50	184
	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
	215	180	216	18	28	8 X 3.5	M12 X 1.75	237

- ◆ Max bore dimensions shown. For additional bores available, refer to page 140.
- ◆ Keyway width by depth
- 48CZ not available
- ◆ Metric IEC B5 input flange options are available only on quill input styles.
- * Style DFH and DFHM only.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
DMF	DFHMQ
DMFC	DFHM
DM	DFH

Refer to page 123 for complete interchange guide for original Grove Gear OE Series.



NH Series Dimensions

Styles: DFEMQ, DFEM, DFE

CAST IRON
NH SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

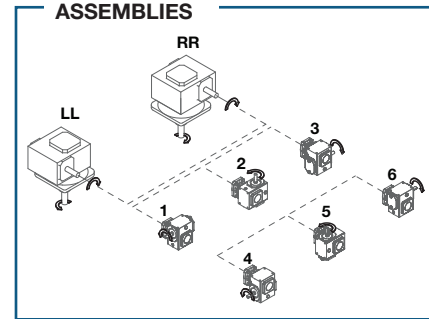
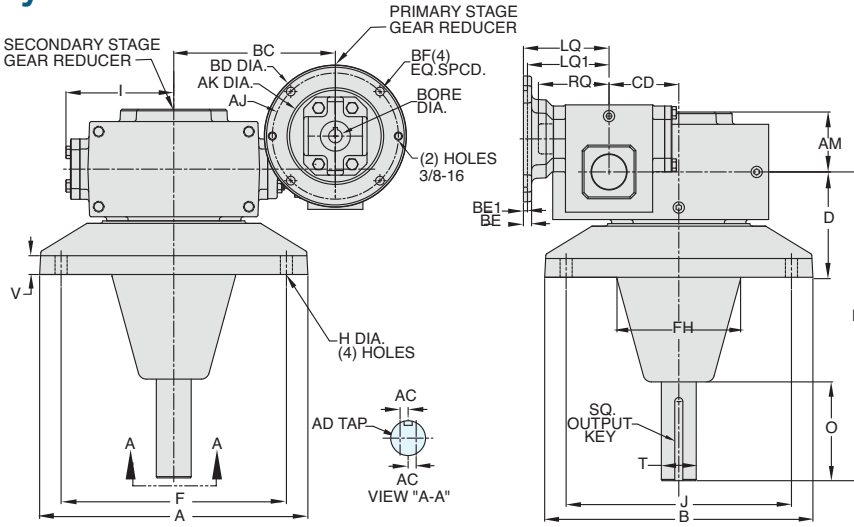
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

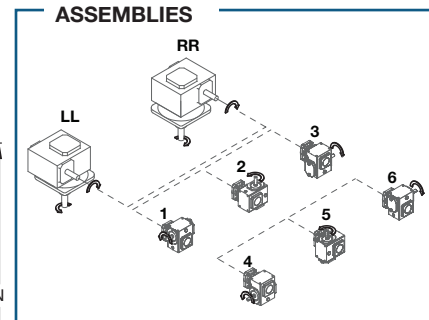
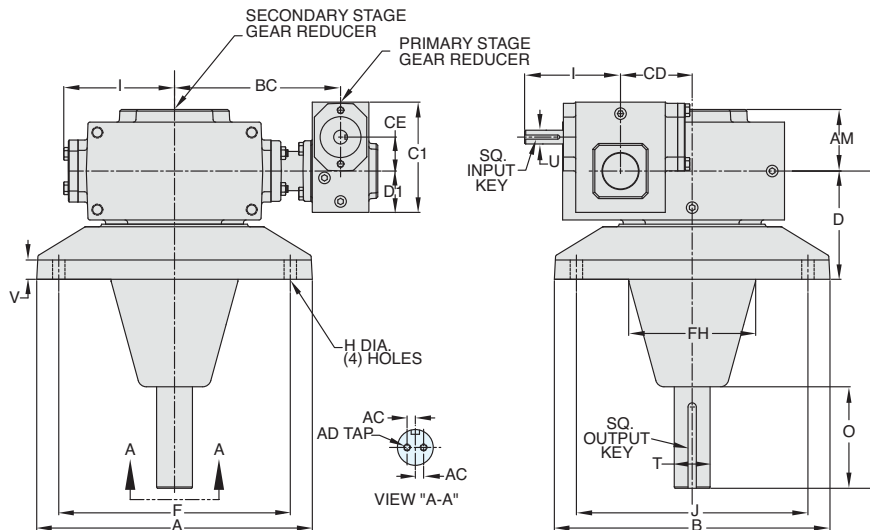
Ratio Multipliers

Accessories and
Additional Capabilities

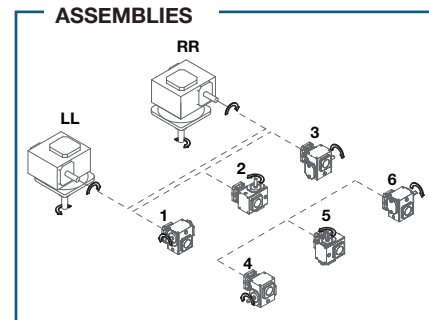
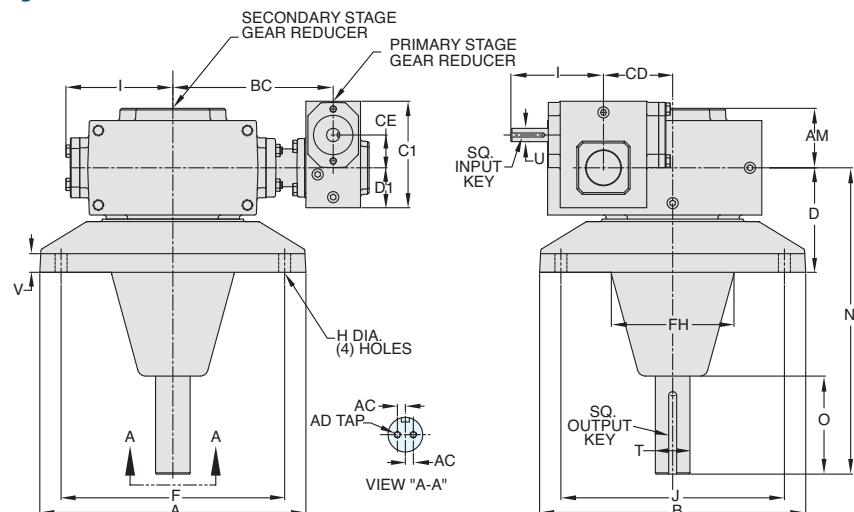
Style DFEMQ



Style DFEM



Style DFE



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



NH Series Dimensions

Styles: DFEMQ, DFEM, DFE



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR-MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE DFEMQ, DFEM, DFE DIMENSIONS (Inches)

Size	A	AC	AD	AM	B	BC	BH	CD	CE	C1	D	D1	F	FH
NH830	11.00	0.375	.31-18 UNC X 1.00 DP	2.22	11.00	7.35	9.04	3.00	1.75	5.00	3.67	2.06	9.00	5.12
NH832	12.50	0.375	.31-18 UNC X 1.00 DP	2.79	12.50	7.53	9.22	3.25	1.75	5.00	4.91	2.06	10.50	5.75
NH842	14.00	0.500	.38-16 UNC X 1.00 DP	3.62	14.00	8.47	10.15	4.25	2.06	6.00	5.74	2.31	12.00	6.75
NH852	16.00	0.750	.38-16 UNC X 1.00 DP	4.28	16.00	10.64	12.61	5.25	2.63	7.38	6.00	2.94	14.00	8.00

Size	H	I	J	K	L	M	N	O	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key**	P**
NH830	.56	4.84	9.00	16.27	4.35	1.76	2.78	4.66	0.78	1.438	.875	3/16 X 1.63	3/8 x 3.88
NH832	.56	5.02	10.50	17.51	4.35	1.76	3.36	4.63	0.88	1.625	.875	3/16 X 1.63	3/8 x 3.69
NH842	.69	6.10	12.00	19.94	4.82	1.76	4.25	5.66	1.00	1.688	1.25	1/4 X 2.50	3/8 x 4.68
NH852	.81	7.50	14.00	20.94	6.07	2.38	5.25	5.62	1.25	2.188	1.25	1/4 X 3.00	1/2 x 4.63

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	48CZ	LM 56C/ 140TC	L1 180TC/ 210TC	LQ 48CZ/ 56C/140TC	LQ1 180TC	48CZ/ 56C/140TC	RQ 180TC
NH830	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH832	6.76	6.70	N/A	4.09	N/A	3.59	N/A
NH842	6.63	7.07	N/A	4.46	N/A	4.06	N/A
NH852	N/A	8.32	9.32	5.19	5.62	4.82	5.13

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway♦	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)♦

Size	LQ1					RQ				
	D63D	D71D	D80D	D90D	D100LD/ D112MD	D63D	D71D	D80D	D90D	D100LD/ D112MD
NH830	3.15	3.18	3.42	N/A	N/A	2.98	3.00	3.24	N/A	N/A
NH832	3.15	3.18	3.42	N/A	N/A	2.98	3.00	3.24	N/A	N/A
NH842	3.62	3.65	3.89	N/A	N/A	3.43	3.44	3.68	N/A	N/A
NH852	N/A	4.28	4.90	4.90	5.30	N/A	4.09	4.72	4.72	5.07

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway♦	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/ D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237

- ** Key not provided with gear reducer. Keyway dimension shown.
- ♦ Keyway width by depth
- 48CZ not available
- ♦ Metric IEC B5 input flange options are available only on quill input styles.
- * Style DFE and DFEM only.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
DEF	DFEMQ
DEFC	DFEM
DE	DFE

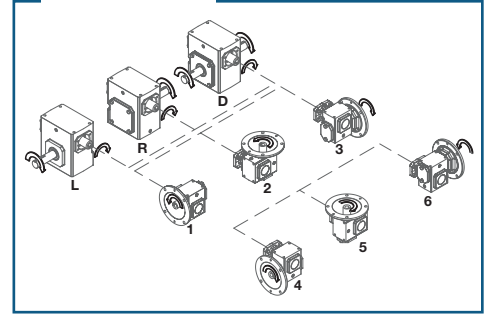
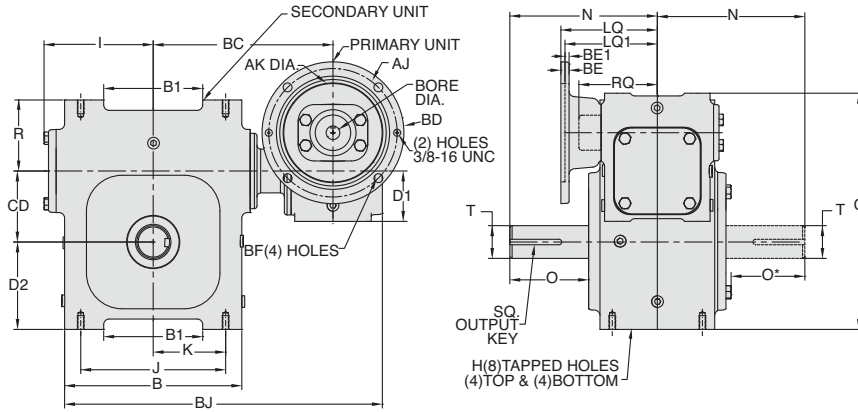
Refer to page 123 for complete interchange guide for original Grove Gear OE Series.

ELECTRA-GEAR

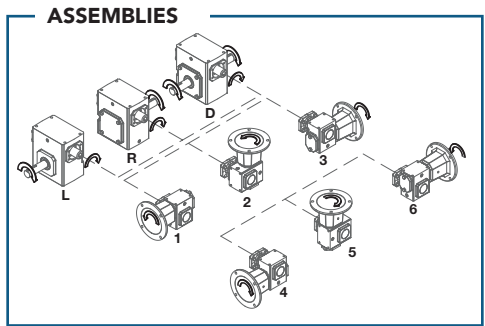
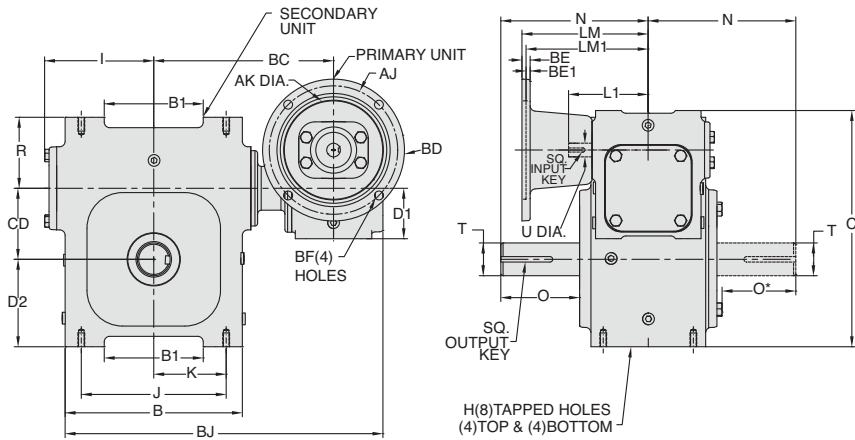
EL Series Dimensions

Styles: DMQ, DM, D

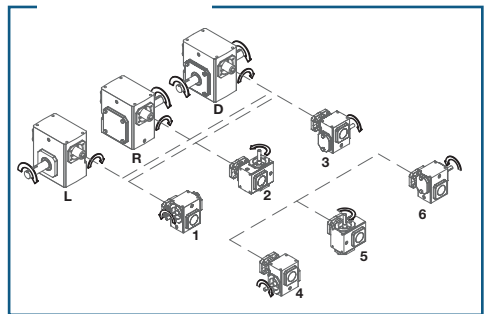
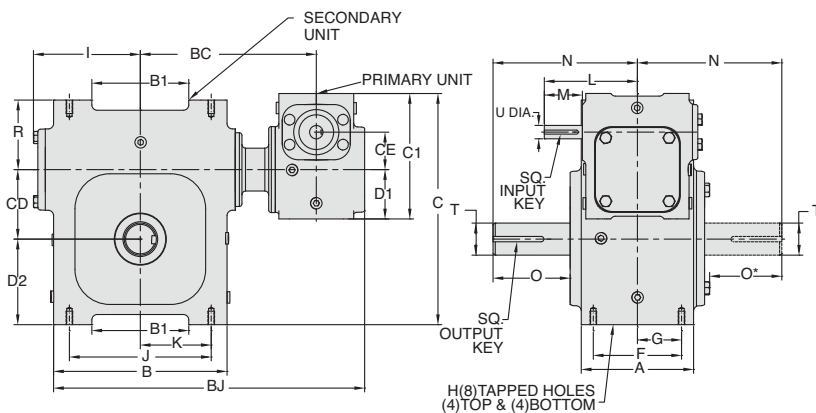
Style DMQ



Style DM



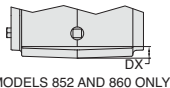
Style D



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY
POSITIONS.



SIDE VIEW



END VIEW

STYLE DMQ, DM, D DIMENSIONS (Inches)

Size	A	B	B1	BC	BJ	C	CD	CE	C1	D1	D2	DX	F	G	H		I
															Tap Size	Depth	
EL813	2.82	3.80	--	5.32	9.02	5.99	1.33	1.33	4.66	1.72	1.72	--	2.00	1.00	5/16-18	0.50	2.40
EL818	3.50	4.83	2.48	5.94	10.05	7.00	1.75	1.33	4.66	1.72	2.31	--	2.94	1.47	5/16-18	0.63	3.03
EL821	3.91	5.75	2.76	6.32	10.97	7.63	2.06	1.33	4.66	1.72	2.63	--	3.25	1.63	3/8-16	0.87	3.40
EL824	4.06	5.86	--	6.43	11.08	7.81	2.38	1.33	4.66	1.72	2.50	--	2.88	1.44	3/8-16	0.69	3.61
EL826	4.84	7.17	4.21	6.99	12.39	8.81	2.63	1.33	4.66	1.72	3.25	--	3.38	1.69	3/8-16	0.69	4.17
EL830	5.25	8.11	4.50	8.04	14.16	10.06	3.00	1.75	5.86	2.31	3.50	--	4.13	2.06	1/2-13	1.00	4.81
EL832	5.25	8.11	4.53	8.23	14.16	10.81	3.25	1.75	5.86	2.31	4.00	--	4.13	2.06	1/2-13	1.00	5.00
EL842	6.13	9.63	5.71	9.17	11.56	13.00	4.25	2.06	6.88	2.63	4.50	--	3.75	1.88	5/8-11	1.19	6.15
EL852	7.19	11.50	7.82	11.57	14.47	13.75	5.25	2.63	8.00	3.25	4.25	0.75	5.25	2.63	3/4-10	1.44	7.55
EL860	7.00	13.50	--	12.63	23.57	14.25	6.00	3.25	10.50	3.50	5.00	1.63	5.38	2.69	7/8-9	1.63	7.88

Size	J	K	L	M	N	O	O*	R	T +0.000 -0.0015	U +0.000 -0.0015	Input Key (Style D only)	Input Key (Style DM only)	Output Key
EL813	3.25	1.63	3.82	1.87	4.00	2.16	1.96	1.61	0.625	0.500	1/8 x 1.00	1/8 x 1.00	3/16 x 1.38
EL818	3.69	1.84	3.82	1.87	4.39	2.05	1.85	1.81	0.750	0.500	1/8 x 1.00	1/8 x 1.00	3/16 X 1.38
EL821	4.13	2.06	3.82	1.87	4.68	2.29	2.09	2.19	1.000	0.500	1/8 x 1.00	1/8 x 1.00	1/4 x 1.44
EL824	5.00	2.50	3.82	1.87	5.14	2.66	2.46	2.06	1.125	0.500	1/8 x 1.00	1/8 x 1.00	1/4 X 1.62
EL826	5.00	2.50	3.82	1.87	5.63	2.73	2.53	2.13	1.250	0.500	1/8 x 1.00	1/8 x 1.00	1/4 X 1.62
EL830	5.75	2.88	4.45	1.78	6.62	3.60	3.37	2.44	1.500	0.625	3/16 x 1.38	3/16 x .500	3/8 X 2.25
EL832	6.63	3.31	4.45	1.78	6.62	3.60	3.37	3.25	1.625	0.625	3/16 x 1.38	3/16 x .500	3/8 X 2.25
EL842	7.00	3.50	4.82	1.76	8.12	4.50	4.22	2.94	1.750	0.625	3/16 X 1.38	3/16 x .500	3/8 x 2.50
EL852	9.62	4.81	6.07	2.45	9.06	4.78	4.50	2.75	2.000	0.750	3/16 x 1.63	3/16 x .500	1/2 x 2.50
EL860	11.00	5.50	6.75	2.31	10.75	5.25	5.25	3.25	2.250	0.875	3/16 x 1.63	3/16 x .500	5/8 X 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM	LM1	L1	LQ	LQ1	RQ
	56C/140TC	180TC / 210TC	56C/140TC 180TC / 210TC	56C/140TC	180TC / 210TC	56C/140TC 180TC / 210TC
EL813	6.07	--	3.82	--	3.79	3.09
EL818	6.07	--	3.82	--	3.79	3.09
EL821	6.07	--	3.82	--	3.79	3.09
EL824	6.07	--	3.82	--	3.79	3.09
EL826	6.07	--	3.82	--	3.79	3.09
EL830	5.88	--	3.64	--	4.42	3.59
EL832	5.88	--	3.64	--	4.42	3.59
EL842	6.26	--	4.00	--	4.79	4.06
EL852	7.04	7.86	4.88	4.88	5.33	4.82
EL860	7.86	8.50	5.56	5.56	6.16	5.51

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

* Applies to double output shaft

◆ Keyway width by depth

※ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.



WARNING

For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

— EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
— See page 142 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
D_MSC or D_MLSC	DMQ
D_MC or D_MLC	DM
D_M or D_ML	D

Convert Style D to motorized coupling input using kits shown on page 294.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

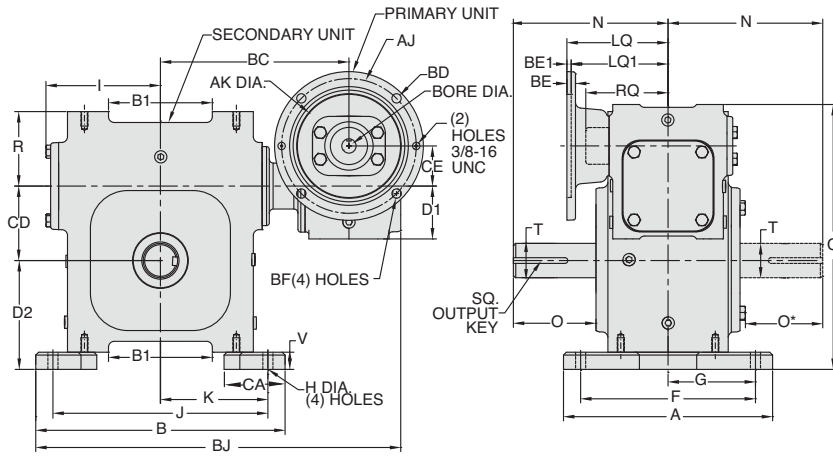
ELECTRA-GEAR

EL Series

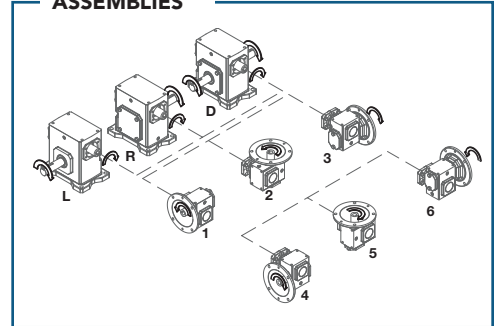
Dimensions

Styles: DTMQ, DTM, DT

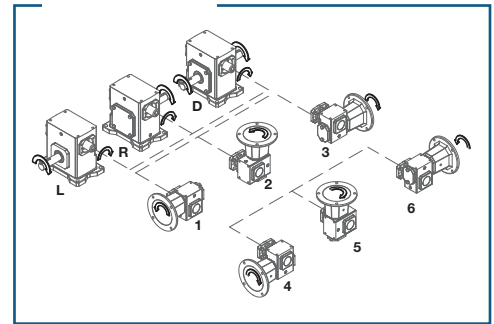
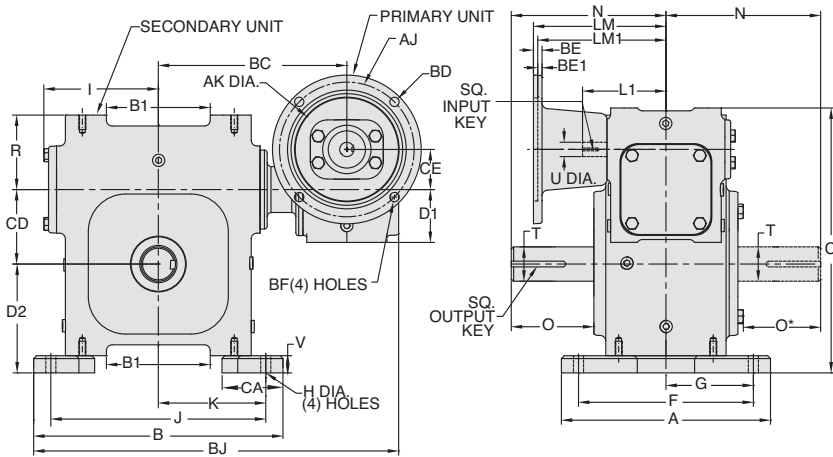
Style DTMQ



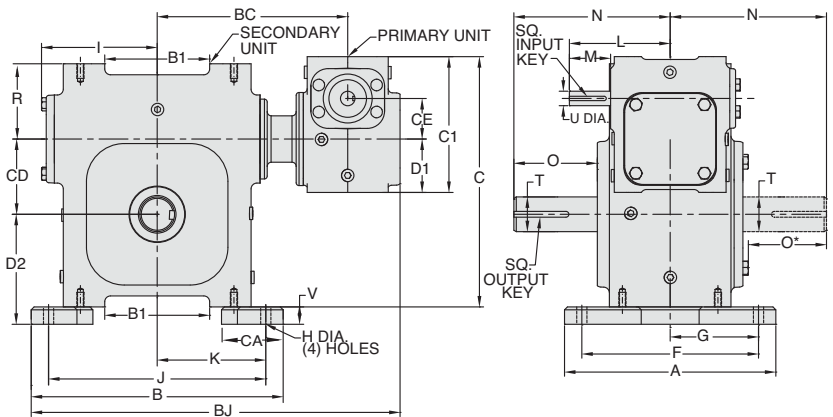
ASSEMBLIES



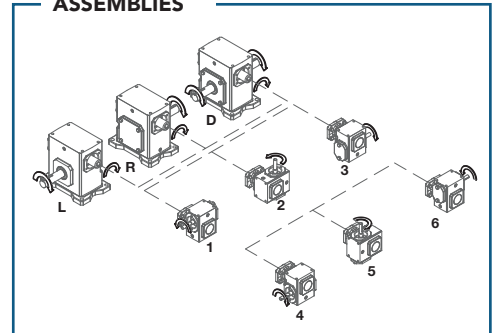
Style DTM



Style DT



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DTMQ, DTM, DT DIMENSIONS (Inches)

Size	A	B	BC	BJ	B1	C	CA	CD	CE	C1	D1	D2	F	G	H
EL813	4.06	5.13	5.32	9.73	--	6.52	1.56	1.33	1.33	4.66	1.72	1.72	3.31	1.66	0.34
EL818	5.19	6.06	5.94	10.82	2.48	7.56	2.06	1.75	1.33	4.66	1.72	2.31	4.38	2.19	0.38
EL821	6.63	7.25	6.32	11.79	2.76	8.26	2.40	2.06	1.33	4.66	1.72	2.63	5.38	2.69	0.44
EL824	6.38	7.69	6.43	12.11	--	8.56	2.59	2.38	1.33	4.66	1.72	2.50	4.88	2.44	0.47
EL826	6.63	8.13	6.99	12.90	4.21	9.50	2.81	2.63	1.33	4.66	1.72	3.25	5.38	2.69	0.50
EL830	9.00	9.88	8.04	15.24	4.50	10.81	3.69	3.00	1.75	5.86	2.31	3.50	7.50	3.75	0.56
EL832	9.13	10.88	8.23	15.93	4.53	11.56	3.69	3.25	1.75	5.86	2.31	4.00	7.63	3.82	0.56
EL842	10.00	10.50	9.17	16.68	5.71	14.25	3.38	4.25	2.06	6.88	2.63	4.50	8.00	4.00	0.81
EL852	10.75	12.13	11.57	19.98	7.82	15.25	2.50	5.25	2.63	8.00	3.25	4.25	8.75	4.38	0.81
EL860	11.75	13.50	12.63	22.44	--	17.50	4.35	6.00	3.25	10.50	3.50	5.00	9.50	4.75	0.94

Size	I	J	K	L	M	N	O	O*	R	T +0.000 -0.0015	U +0.000 -0.0015	V	Input Key (Style DT only)*	Input Key (Style DTM only)*	Output Key
EL813	2.40	4.38	2.19	3.82	1.87	4.00	2.16	1.96	1.61	0.625	0.500	0.53	1/8 x 1.00	1/8 x 1.00	3/16 x 1.38
EL818	3.03	5.25	2.63	3.82	1.87	4.39	2.05	1.85	1.81	0.750	0.500	0.56	1/8 x 1.00	1/8 x 1.00	3/16 X 1.38
EL821	3.40	6.00	3.00	3.82	1.87	4.68	2.29	2.09	2.19	1.000	0.500	0.63	1/8 x 1.00	1/8 x 1.00	1/4 x 1.44
EL824	3.61	6.19	3.09	3.82	1.87	5.14	2.66	2.46	2.06	1.125	0.500	0.75	1/8 x 1.00	1/8 x 1.00	1/4 X 1.62
EL826	4.17	6.88	3.44	3.82	1.87	5.63	2.73	2.53	2.13	1.250	0.500	0.69	1/8 x 1.00	1/8 x 1.00	1/4 X 1.62
EL830	4.81	8.38	4.19	4.45	1.78	6.62	3.60	3.37	2.44	1.500	0.625	0.75	3/16 x 1.38	3/16 x .500	3/8 X 2.25
EL832	5.00	9.38	4.69	4.45	1.78	6.62	3.60	3.37	3.25	1.625	0.625	0.75	3/16 x 1.38	3/16 x .500	3/8 X 2.25
EL842	6.15	8.50	4.25	4.82	1.76	8.12	4.50	4.22	2.94	1.750	0.625	1.25	3/16 X 1.38	3/16 x .500	3/8 x 2.50
EL852	7.55	9.75	4.88	6.07	2.45	9.06	4.78	4.50	2.75	2.000	0.750	1.50	3/16 x 1.63	3/16 x .500	1/2 x 2.50
EL860	7.88	10.50	5.25	6.75	2.31	10.75	5.25	5.25	3.25	2.250	0.875	1.75	3/16 x 1.63	3/16 x .500	5/8 X 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC	L1 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	RQ 180TC / 210TC
EL813	6.07	--	3.82	--	3.79	--	3.09	--
EL818	6.07	--	3.82	--	3.79	--	3.09	--
EL821	6.07	--	3.82	--	3.79	--	3.09	--
EL824	6.07	--	3.82	--	3.79	--	3.09	--
EL826	6.07	--	3.82	--	3.79	--	3.09	--
EL830	5.88	--	3.64	--	4.42	--	3.59	--
EL832	5.88	--	3.64	--	4.42	--	3.59	--
EL842	6.26	--	4.00	--	4.79	--	4.06	--
EL852	7.04	7.86	4.88	4.88	5.33	5.33	4.82	4.82
EL860	7.86	8.50	5.56	5.56	6.16	6.16	5.51	5.51

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway♦	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

- * Applies to double output shaft
- ♦ Keyway width by depth
- * Solid input shaft and C-faced coupling input reducers have different input shaft length and key.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

- EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
- See page 142 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
D_ASC or D_ALSC	DTMQ
D_AC or D_ALC	DTM
D_A or D_AL	DT

Convert Style DT to motorized coupling input using kits shown on page 294.

ELECTRA-GEAR

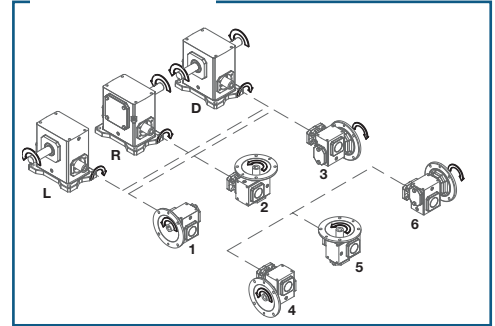
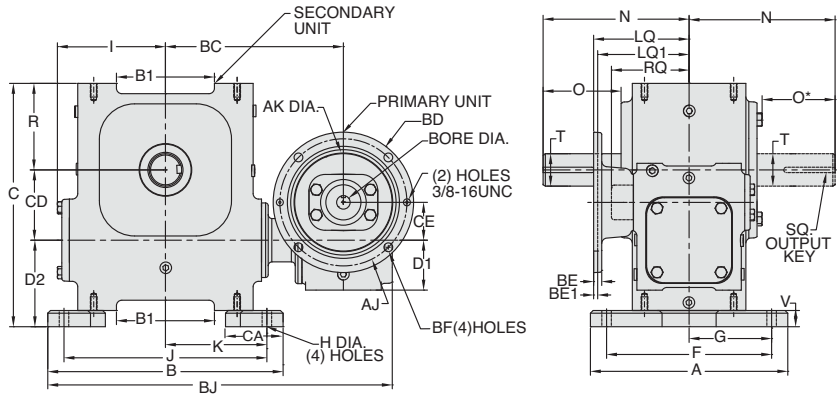
EL Series

Dimensions

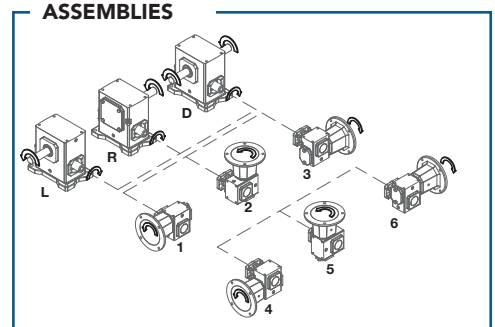
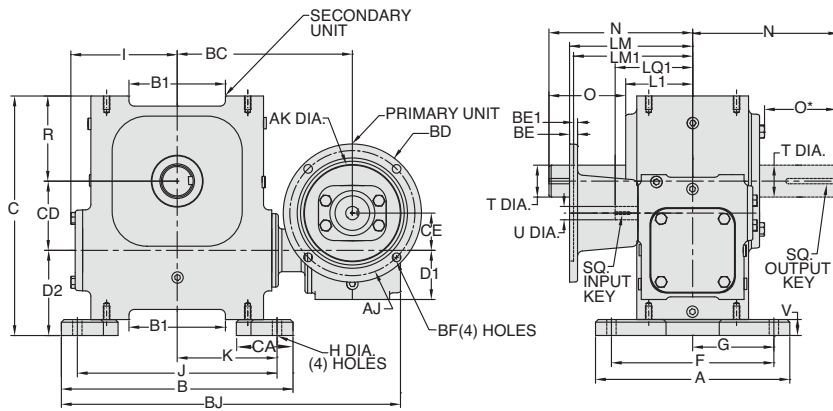
Styles: DUMQ, DUM, DU



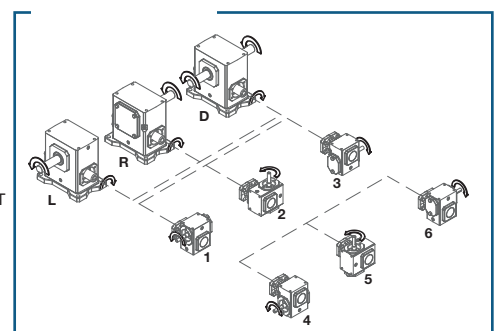
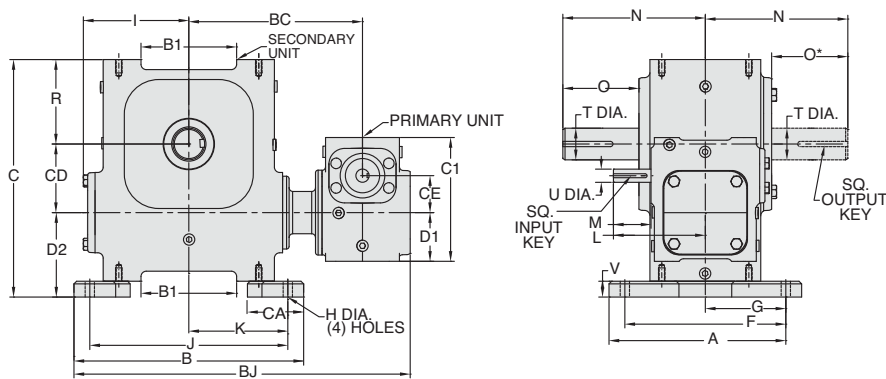
Style DUMQ



Style DUM



Style DU



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DUMQ, DUM, DU DIMENSIONS (Inches)

Size	A	B	BC	BJ	B1	C	CA	CD	CE	C1	D1	D2	F	G	H
EL813	4.06	5.13	5.32	9.73	--	5.19	1.56	1.33	1.33	4.66	1.72	1.72	3.31	1.66	0.34
EL818	5.19	6.06	5.94	10.82	2.48	6.42	2.15	1.75	1.33	4.66	1.72	2.31	4.38	2.19	0.38
EL821	6.63	7.25	6.32	11.79	2.76	7.51	2.66	2.06	1.33	4.66	1.72	2.63	5.38	2.69	0.44
EL824	6.38	7.69	6.43	12.11	--	7.63	2.59	2.38	1.33	4.66	1.72	2.50	4.88	2.44	0.47
EL826	6.63	8.13	6.99	12.90	4.21	8.69	2.81	2.63	1.33	4.66	1.72	3.25	5.38	2.69	0.50
EL830	9.00	9.88	8.04	15.24	4.50	9.69	3.69	3.00	1.75	5.86	2.31	3.50	7.50	3.75	0.56
EL832	9.13	10.88	8.23	15.93	4.53	11.25	3.69	3.25	1.75	5.86	2.31	4.00	7.63	3.82	0.56
EL842	10.00	10.50	9.17	16.68	5.71	12.94	3.38	4.25	2.06	6.88	2.63	4.50	8.00	4.00	0.81
EL852	10.75	12.13	11.57	19.89	7.82	13.75	2.50	5.25	2.63	8.00	3.25	4.25	8.75	4.38	0.81
EL860	11.75	13.50	12.63	22.44	--	16.00	4.35	6.00	3.25	10.50	3.50	5.00	9.50	4.75	0.94

Size	I	J	K	L	M	N	O	O*	R	T +0.000 -0.0015	U +0.000 -0.0015	V	Input Key (Style DU only):*	Input Key (Style DUM only):*	Output Key
EL813	2.40	4.38	2.19	3.82	1.87	4.00	2.16	1.96	1.72	0.625	0.500	0.53	1/8 x 1.00	1/8 x 1.00	3/16 x 1.38
EL818	3.03	5.25	2.63	3.82	1.87	4.39	2.05	1.85	2.30	0.750	0.500	0.56	1/8 x 1.00	1/8 x 1.00	3/16 X 1.38
EL821	3.40	6.00	3.00	3.82	1.87	4.68	2.29	2.09	2.63	1.000	0.500	0.63	1/8 x 1.00	1/8 x 1.00	1/4 x 1.44
EL824	3.61	6.19	3.09	3.82	1.87	5.14	2.66	2.46	2.50	1.125	0.500	0.75	1/8 x 1.00	1/8 x 1.00	1/4 X 1.62
EL826	4.17	6.88	3.44	3.82	1.87	5.63	2.73	2.53	3.25	1.250	0.500	0.69	1/8 x 1.00	1/8 x 1.00	1/4 X 1.62
EL830	4.81	8.38	4.19	4.45	1.78	6.62	3.60	3.37	3.50	1.500	0.625	0.75	3/16 x 1.38	3/16 x .500	3/8 X 2.25
EL832	5.00	9.38	4.69	4.45	1.78	6.62	3.60	3.37	4.00	1.625	0.625	0.75	3/16 x 1.38	3/16 x .500	3/8 X 2.25
EL842	6.15	8.50	4.25	4.82	1.76	8.12	4.50	4.22	4.19	1.750	0.625	1.25	3/16 X 1.38	3/16 x .500	3/8 x 2.50
EL852	7.55	9.75	4.88	6.07	2.45	9.06	4.78	4.50	4.25	2.000	0.750	1.50	3/16 x 1.63	3/16 x .500	1/2 x 2.50
EL860	7.88	10.50	5.25	6.75	2.31	10.75	5.25	5.25	5.00	2.250	0.875	1.75	3/16 x 1.63	3/16 x .500	5/8 X 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC 180TC / 210TC
EL813	6.07	--	3.82	--	3.79	--
EL818	6.07	--	3.82	--	3.79	--
EL821	6.07	--	3.82	--	3.79	--
EL824	6.07	--	3.82	--	3.79	--
EL826	6.07	--	3.82	--	3.79	--
EL830	5.88	--	3.64	--	4.42	--
EL832	5.88	--	3.64	--	4.42	--
EL842	6.26	--	4.00	--	4.79	--
EL852	7.04	7.86	4.88	4.88	5.33	5.33
EL860	7.86	8.50	5.56	5.56	6.16	6.16

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway♦	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

* Applies to double output shaft

♦ Keyway width by depth

※ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

— EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
— See page 142 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
NOT A STANDARD CATALOGED OPTION	DUMQ DUM DU

Convert Style DU to motorized coupling input using kits shown on page 294.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

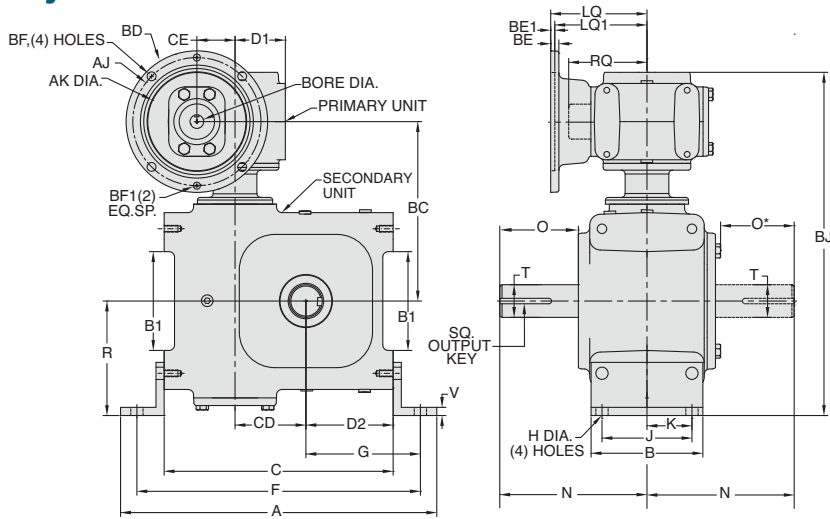
Accessories and
Additional Capabilities

ELECTRA-GEAR

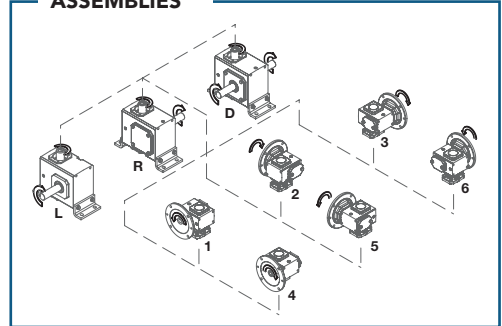
EL Series Dimensions

Styles: DJMQ, DJM, DJ

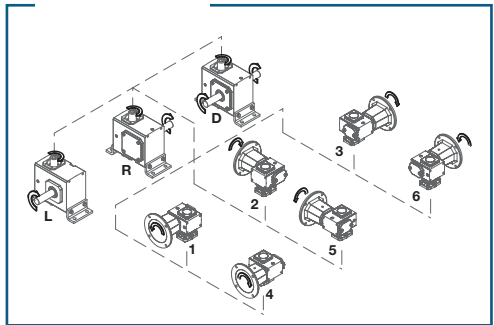
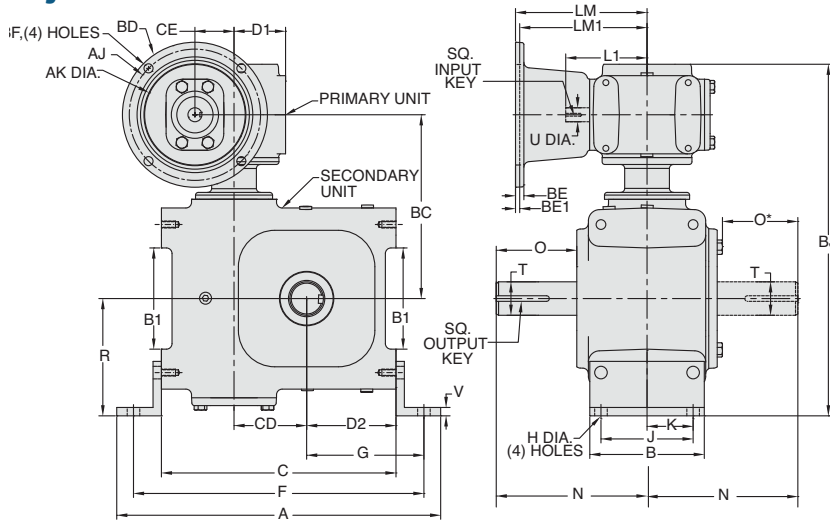
Style DJMQ



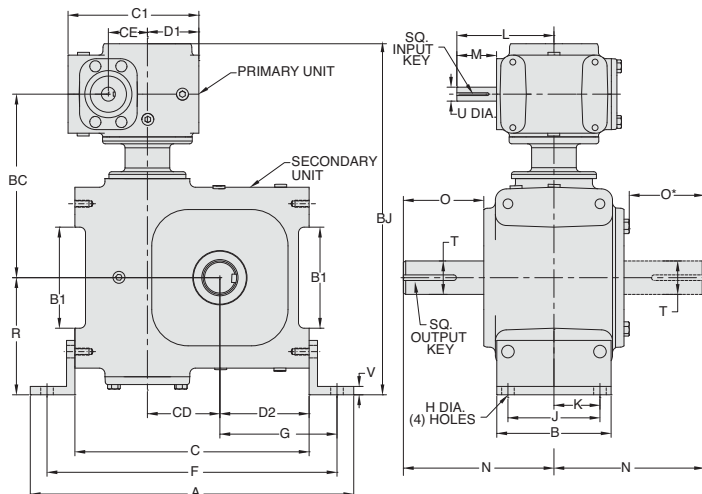
ASSEMBLIES



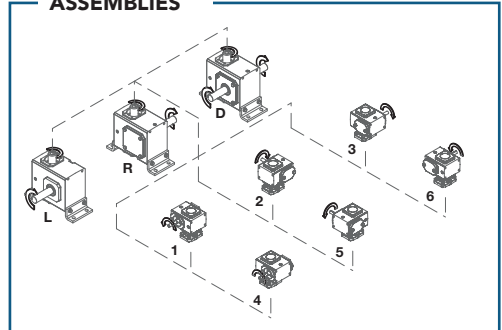
Style DJM



Style DJ



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DJMQ, DJM, DJ DIMENSIONS (Inches)

Size	A	B	B1	BC	BJ	C	CD	CE	C1	D1	D2	F	G	H	J	K
EL813	7.16	2.91	--	5.32	10.10	4.66	1.33	1.33	4.66	1.72	1.72	6.41	2.60	0.34	2.00	1.00
EL818	8.88	3.56	2.48	5.94	10.76	5.86	1.75	1.33	4.66	1.72	2.31	7.88	3.32	0.38	2.94	1.47
EL821	9.87	4.00	2.76	6.32	11.63	6.88	2.06	1.33	4.66	1.72	2.63	8.87	3.62	0.44	3.25	1.63
EL824	10.31	4.00	--	6.43	12.33	6.94	2.38	1.33	4.66	1.72	2.50	9.19	3.63	0.69	2.88	1.44
EL826	12.00	4.38	4.21	6.99	12.86	8.00	2.63	1.33	4.66	1.72	3.25	10.50	4.50	0.50	3.38	1.69
EL830	12.94	5.13	4.50	8.04	15.11	8.94	3.00	1.75	5.86	2.31	3.50	11.44	4.75	0.56	4.13	2.06
EL832	14.50	5.13	4.53	8.23	15.74	10.50	3.25	1.75	5.86	2.31	4.00	13.00	5.25	0.56	4.13	2.06
EL842	17.50	5.13	5.71	9.17	17.06	11.69	4.25	2.06	6.88	2.63	4.50	14.50	5.91	0.81	3.75	1.88
EL852	20.25	6.50	7.82	11.57	21.46	12.25	5.25	2.63	8.00	3.25	4.25	16.75	6.50	0.81	5.25	2.63
EL860	22.25	7.00	--	12.63	24.07	14.25	6.00	3.25	10.50	3.50	5.00	18.75	7.63	0.94	5.38	2.69

Size	L	M	N	O	O*	R	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key (Style DJ only)*:	Input Key (Style DJM only)*:	Output Key
EL813	3.82	1.87	4.00	2.16	1.96	2.94	0.19	0.625	0.500	1/8 x 1.00	1/8 x 1.00	3/16 x 1.38
EL818	3.82	1.87	4.39	2.05	1.85	2.97	0.38	0.750	0.500	1/8 x 1.00	1/8 x 1.00	3/16 X 1.38
EL821	3.82	1.87	4.68	2.29	2.09	3.47	0.38	1.000	0.500	1/8 x 1.00	1/8 x 1.00	1/4 x 1.44
EL824	3.82	1.87	5.14	2.66	2.46	4.06	0.31	1.125	0.500	1/8 x 1.00	1/8 x 1.00	1/4 X 1.62
EL826	3.82	1.87	5.63	2.73	2.53	4.03	0.31	1.250	0.500	1/8 x 1.00	1/8 x 1.00	1/4 X 1.62
EL830	4.45	1.78	6.62	3.60	3.37	4.81	0.25	1.500	0.625	3/16 x 1.38	3/16 x .500	3/8 X 2.25
EL832	4.45	1.78	6.62	3.60	3.37	5.25	0.38	1.625	0.625	3/16 x 1.38	3/16 x .500	3/8 X 2.25
EL842	4.82	1.76	8.12	4.50	4.22	5.63	0.50	1.750	0.625	3/16 X 1.38	3/16 x .500	3/8 x 2.50
EL852	6.07	2.45	9.06	4.78	4.50	7.63	0.50	2.000	0.750	3/16 x 1.63	3/16 x .500	1/2 x 2.50
EL860	6.75	2.31	10.75	5.25	5.25	8.38	0.63	2.250	0.875	3/16 x 1.63	3/16 x .500	5/8 X 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC	180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	180TC / 210TC
EL813	6.07	--	3.82	--	3.79	--	3.09	--
EL818	6.07	--	3.82	--	3.79	--	3.09	--
EL821	6.07	--	3.82	--	3.79	--	3.09	--
EL824	6.07	--	3.82	--	3.79	--	3.09	--
EL826	6.07	--	3.82	--	3.79	--	3.09	--
EL830	5.88	--	3.64	--	4.42	--	3.59	--
EL832	5.88	--	3.64	--	4.42	--	3.59	--
EL842	6.26	--	4.00	--	4.79	--	4.06	--
EL852	7.04	7.86	4.88	4.88	5.33	5.33	4.82	4.82
EL860	7.86	8.50	5.56	5.56	6.16	6.16	5.51	5.51

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

* Applies to double output shaft

◆ Keyway width by depth

※ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.



WARNING

For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

— EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
— See page 142 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
D_JBSC or D_JBLSC	DJMQ
D_JBC or D_JBLC	DJM
D_JB or D_JBL	DJ

Convert Style DJ to motorized coupling input using kits shown on page 294.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

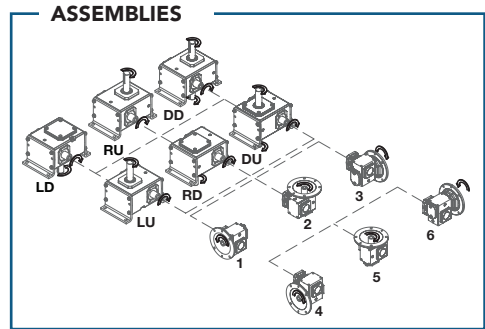
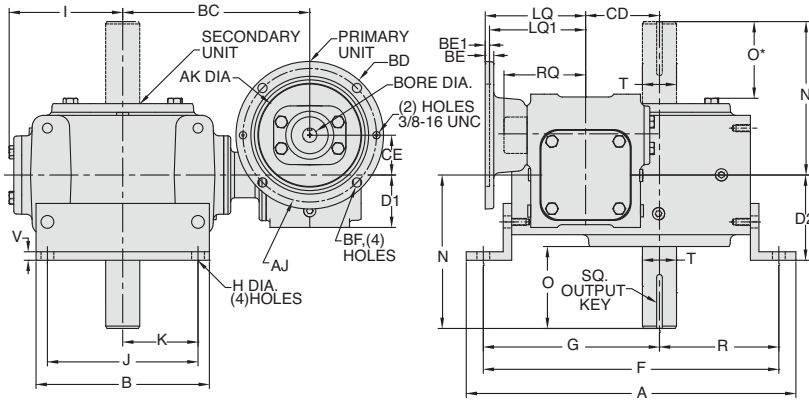
Accessories and
Additional Capabilities

ELECTRA-GEAR

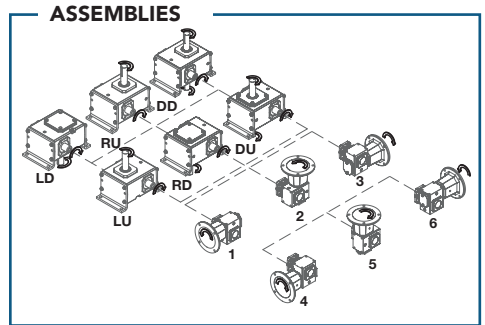
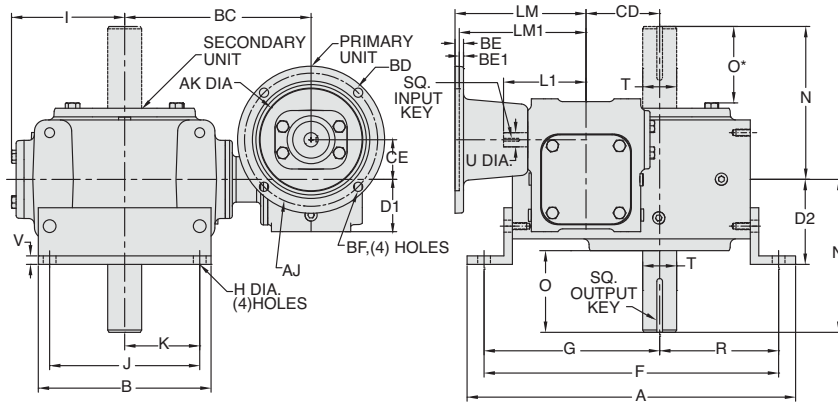
EL Series Dimensions

Styles: DVLMQ, DVLM, DVL

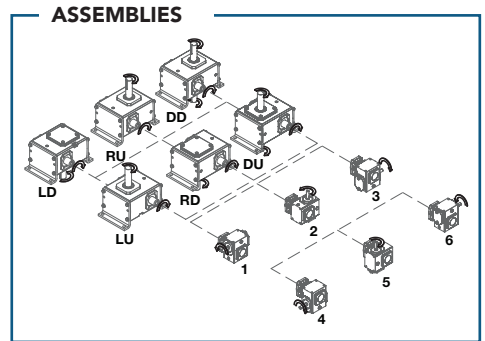
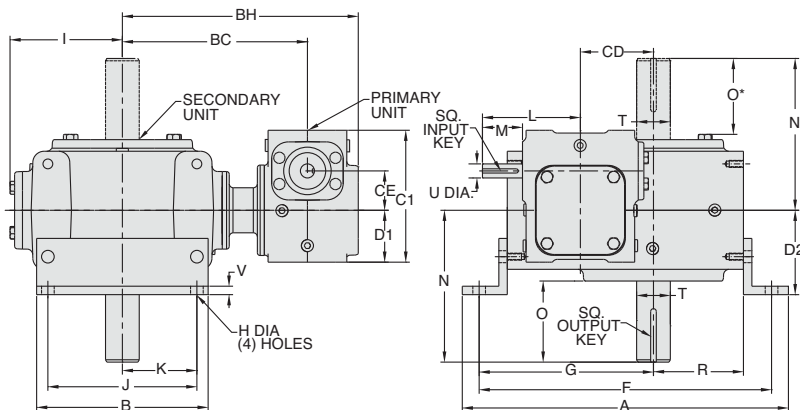
Style DVLMQ



Style DVLM



Style DVL



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DVLMQ, DVLM, DVL DIMENSIONS (Inches)

Size	A	B	BC	BH	CD	CE	C1	D1	D2	F	G	H	I	J	K	L
EL813	7.16	4.13	5.32	7.16	1.33	1.33	4.66	1.72	2.31	6.16	3.69	0.34	2.40	3.25	1.63	3.82
EL818	8.88	4.25	5.94	7.79	1.75	1.33	4.66	1.72	2.28	7.88	4.57	0.38	3.03	3.69	1.84	3.82
EL821	9.87	4.81	6.32	8.16	2.06	1.33	4.66	1.72	2.56	8.87	5.25	0.44	3.40	4.13	2.06	3.82
EL824	10.88	5.88	6.43	8.27	2.38	1.33	4.66	1.72	2.75	9.38	5.66	0.50	3.61	5.00	2.50	3.82
EL826	12.00	5.88	6.99	8.83	2.63	1.33	4.66	1.72	2.81	10.50	6.00	0.50	4.17	5.00	2.50	3.82
EL830	12.94	6.75	8.04	10.30	3.00	1.75	5.86	2.31	3.75	11.44	6.69	0.56	4.81	5.75	2.88	4.45
EL832	14.50	7.63	8.23	10.49	3.25	1.75	5.86	2.31	3.75	13.00	7.75	0.56	5.00	6.63	3.31	4.45
EL842	17.50	8.38	9.17	11.56	4.25	2.06	6.88	2.63	4.59	14.50	8.60	0.81	6.15	7.00	3.50	4.82
EL852	19.25	11.50	11.57	14.47	5.25	2.63	8.00	3.25	5.88	16.88	9.19	0.81	7.55	9.63	4.82	6.07
EL860	21.25	13.50	12.63	15.69	6.00	3.25	10.50	3.50	6.38	18.63	11.44	0.94	7.88	11.00	5.50	6.75

Size	M	N	O	O*	R	V	T +0.000 -0.0015	U -0.000 -0.0015	Input Key (Style DVL only)*:	Input Key (Style DVLM only)*:	Output Key
EL813	1.87	4.00	2.16	1.96	1.72	0.19	0.625	0.500	1/8 x 1.00	1/8 x 1.00	3/16 x 1.38
EL818	1.87	4.39	2.05	1.85	2.31	0.38	0.750	0.500	1/8 x 1.00	1/8 x 1.00	3/16 X 1.38
EL821	1.87	4.68	2.29	2.09	2.63	0.38	1.000	0.500	1/8 x 1.00	1/8 x 1.00	1/4 x 1.44
EL824	1.87	5.14	2.66	2.46	2.50	0.31	1.125	0.500	1/8 x 1.00	1/8 x 1.00	1/4 X 1.62
EL826	1.87	5.63	2.73	2.53	3.25	0.31	1.250	0.500	1/8 x 1.00	1/8 x 1.00	1/4 X 1.62
EL830	1.78	6.62	3.60	3.37	3.50	0.25	1.500	0.625	3/16 x 1.38	3/16 x .500	3/8 X 2.25
EL832	1.78	6.62	3.60	3.37	4.00	0.38	1.625	0.625	3/16 x 1.38	3/16 x .500	3/8 X 2.25
EL842	1.76	8.12	4.50	4.22	4.50	0.50	1.750	0.625	3/16 X 1.38	3/16 x .500	3/8 x 2.50
EL852	2.45	9.06	4.78	4.50	4.25	0.50	2.000	0.750	3/16 x 1.63	3/16 x .500	1/2 x 2.50
EL860	2.31	10.75	5.25	5.25	5.00	0.63	2.250	0.875	3/16 x 1.63	3/16 x .500	5/8 X 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC 180TC / 210TC	BF
EL813	6.07	--	3.82	--	3.79	--	3.09
EL818	6.07	--	3.82	--	3.79	--	3.09
EL821	6.07	--	3.82	--	3.79	--	3.09
EL824	6.07	--	3.82	--	3.79	--	3.09
EL826	6.07	--	3.82	--	3.79	--	3.09
EL830	5.88	--	3.64	--	4.42	--	3.59
EL832	5.88	--	3.64	--	4.42	--	3.59
EL842	6.26	--	4.00	--	4.79	--	4.06
EL852	7.04	7.86	4.88	4.88	5.33	5.33	4.82
EL860	7.86	8.50	5.56	5.56	6.16	6.16	5.51

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway♦	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

* Applies to double output shaft

♦ Keyway width by depth

* Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

— EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
— See page 142 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
D_BSC or D_BLSC	DVLMQ
D_BC or D_BLC	DVLM
D_B or D_BL	DVL

Convert Style DVL to motorized coupling input using kits shown on page 294.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

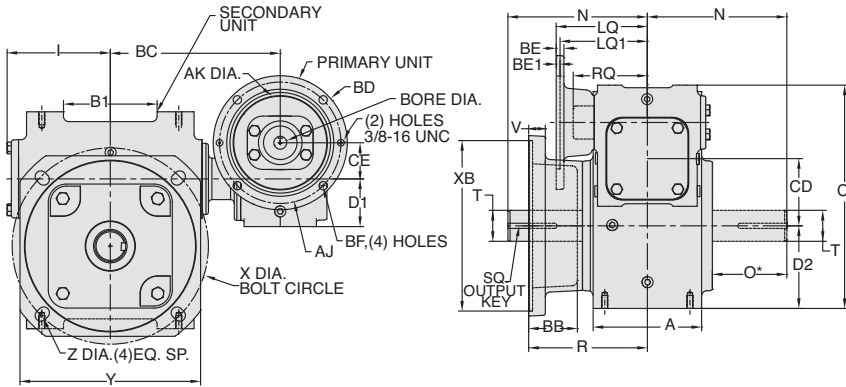
ELECTRA-GEAR

EL Series Dimensions

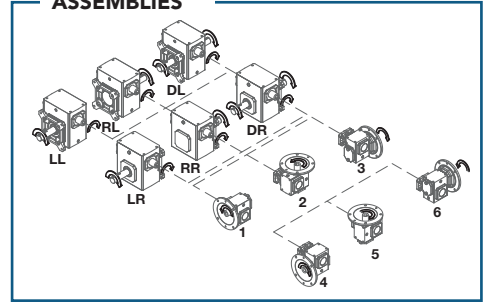
Styles: DFRMQ, DFRM, DFR



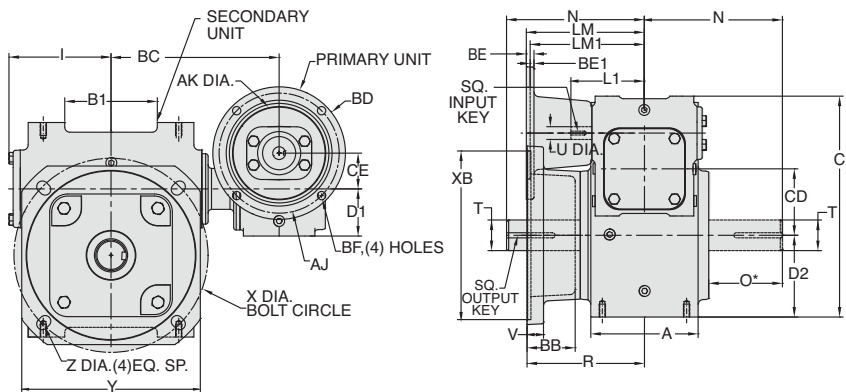
Style DFRMQ



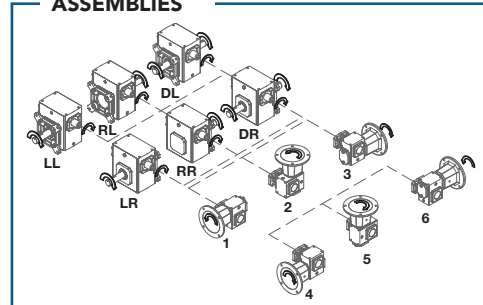
ASSEMBLIES



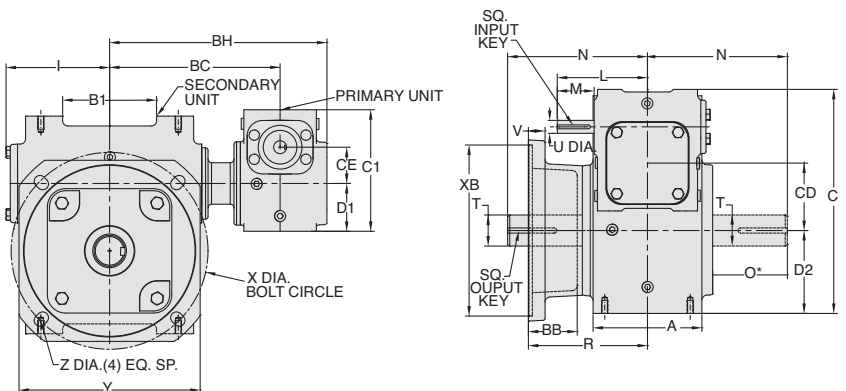
Style DFRM



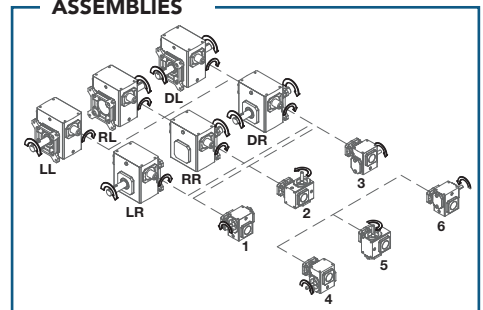
ASSEMBLIES



Style DFR



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DFRMQ, DFRM, DFR DIMENSIONS (Inches)

Size	A	BB	BC	BH	B1	C	CD	CE	C1	D1	D2	I	L	M	N	O*
EL818	3.50	1.27	5.94	7.79	2.48	7.00	1.75	1.33	4.66	1.72	2.31	3.03	3.82	1.87	4.39	1.85
EL821	3.91	1.51	6.32	8.16	2.76	7.63	2.06	1.33	4.66	1.72	2.63	3.40	3.82	1.87	4.68	2.09
EL824	4.06	1.35	6.43	8.27	--	7.81	2.38	1.33	4.66	1.72	2.50	3.61	3.82	1.87	5.14	2.46
EL826	4.84	1.35	6.99	8.83	4.21	8.81	2.63	1.33	4.66	1.72	3.25	4.17	3.82	1.87	5.63	2.53
EL830	5.25	2.36	8.04	10.30	4.50	10.06	3.00	1.75	5.86	2.31	3.50	4.81	4.45	1.78	6.62	3.37
EL832	5.25	2.54	8.23	10.49	4.53	10.81	3.25	1.75	5.86	2.31	4.00	5.00	4.45	1.78	6.62	3.37
EL842	6.13	2.06	9.17	11.56	5.71	13.00	4.25	2.06	6.88	2.63	4.50	6.15	4.82	1.76	8.12	4.22
EL852	7.19	1.18	11.57	14.47	7.82	13.75	5.25	2.63	8.00	3.25	4.25	7.55	6.07	2.45	9.06	4.50
EL860	7.00	0.25	12.63	15.69	--	14.25	6.00	3.25	10.50	3.50	5.00	7.88	6.75	2.31	10.75	5.25

Size	R	V	X	XB	Y	Z	T +0.000 -0.0015	U +0.000 -0.0015	Input Key (Style DF only)*	Input Key (Style DFM only)*	Output Key
EL818	3.53	0.38	3.13	-	4.00	0.34	0.750	0.500	1/8 x 1.00	1/8 x 1.00	3/16 X 1.38
EL821	4.25	0.50	6.88	6.00	6.49	0.44	1.000	0.500	1/8 x 1.00	1/8 x 1.00	1/4 x 1.44
EL824	4.15	0.63	7.75	6.50	6.99	0.50	1.125	0.500	1/8 x 1.00	1/8 x 1.00	1/4 X 1.62
EL826	4.56	0.63	7.75	6.50	6.99	0.50	1.250	0.500	1/8 x 1.00	1/8 x 1.00	1/4 X 1.62
EL830	5.75	0.81	9.125-9.500	8.25	8.74	0.56	1.500	0.625	3/16 x 1.38	3/16 x .500	3/8 X 2.25
EL832	5.94	0.81	9.125-.9500	8.25	8.74	0.56	1.625	0.625	3/16 x 1.38	3/16 x .500	3/8 X 2.25
EL842	6.06	0.75	10.75	9.75	11.00	0.69	1.750	0.625	3/16 x 1.38	3/16 x .500	3/8 x 2.50
EL852	5.75	0.69	12.75	11.50	14.24	0.81	2.000	0.750	3/16 x 1.63	3/16 x .500	1/2 x 2.50
EL860	7.25	1.00	15.25	13.00	17.00	0.81	2.250	0.875	3/16 x 1.63	3/16 x .500	5/8 X 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC	180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	180TC / 210TC
EL818	6.07	--	3.82	--	3.79	--	3.09	--
EL821	6.07	--	3.82	--	3.79	--	3.09	--
EL824	6.07	--	3.82	--	3.79	--	3.09	--
EL826	6.07	--	3.82	--	3.79	--	3.09	--
EL830	5.88	--	3.64	--	4.42	--	3.59	--
EL832	5.88	--	3.64	--	4.42	--	3.59	--
EL842	6.26	--	4.00	--	4.79	--	4.06	--
EL852	7.04	7.86	4.88	4.88	5.33	5.33	4.82	4.82
EL860	7.86	8.50	5.56	5.56	6.16	6.16	5.51	5.51

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

* Applies to double output shaft

◆ Keyway width by depth

* Solid input shaft and C-faced coupling input reducers have different input shaft length and key.



WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

— EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
— See page 142 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
NOT A	DFRMQ
STANDARD CATALOGED	DFRM
OPTION	DFR

NOTE: New styles are not a direct replacement to original ring base.

Convert Style DFR to motorized coupling input using kits shown on page 294.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

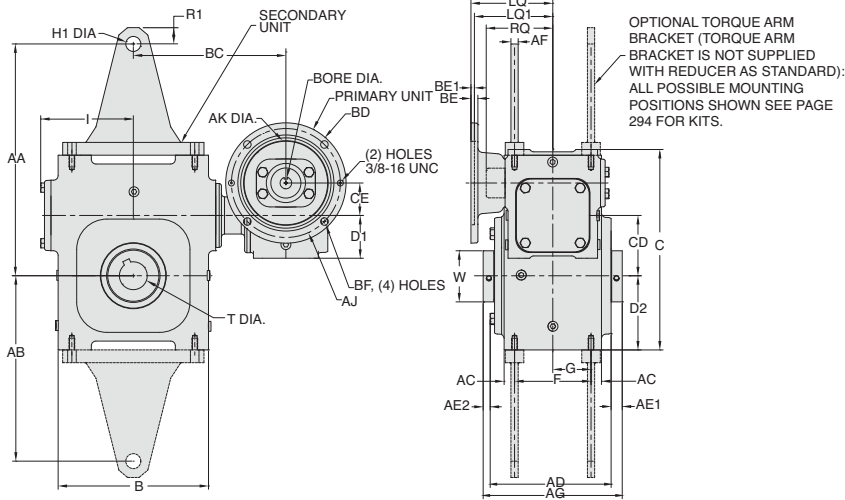
Accessories and
Additional Capabilities

ELECTRA-GEAR

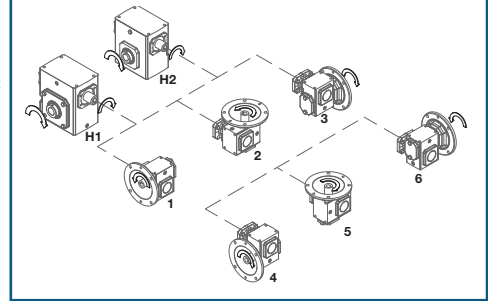
EL Series Dimensions

Styles: DHMQ, DHM, DH

Style DHMQ

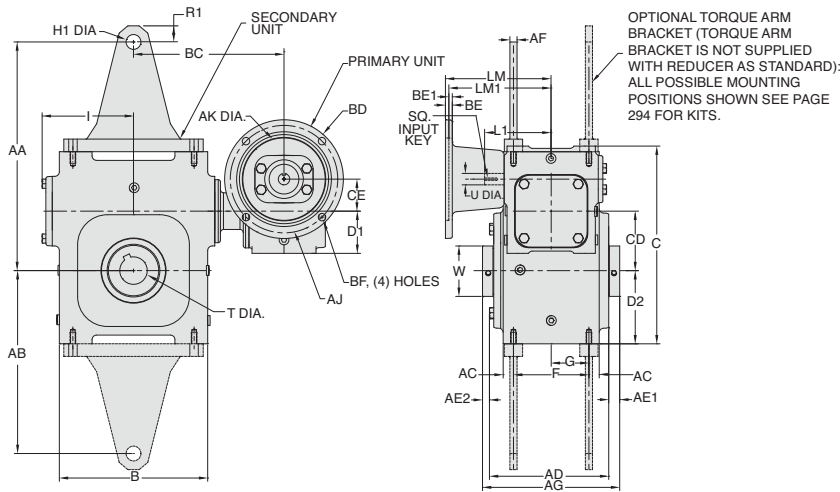


ASSEMBLIES

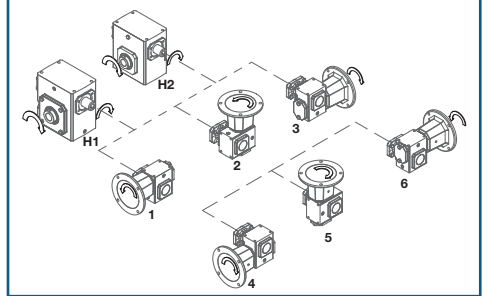


H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

Style DHM

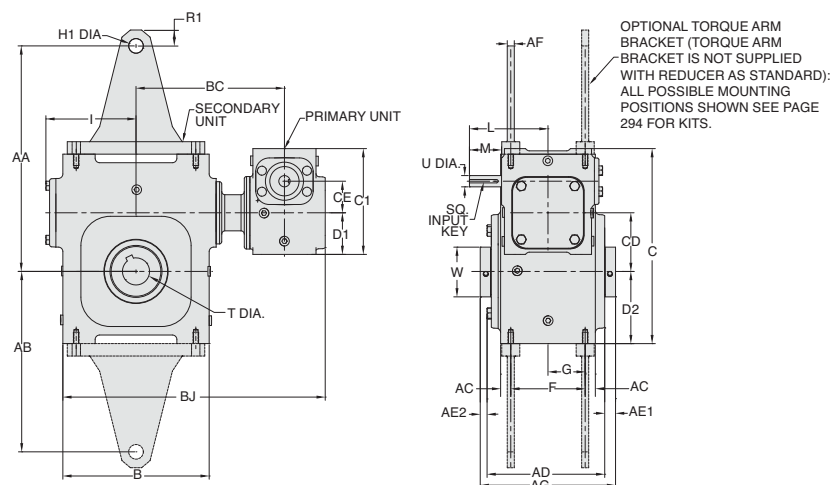


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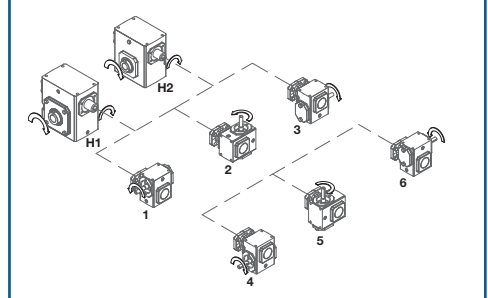


H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

Style DH



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

STYLE DHMQ, DHM, DH DIMENSIONS (Inches)

D2	Size	AA	AB	AC	AD	AE1	AE2	AF	AG	B	BC	C	CD	CE	C1	D1
EL813	--	--	0.41	3.89	0.58	0.26	--	4.75	3.80	5.32	5.99	1.33	1.33	4.66	1.72	1.72
EL818	6.25	5.00	0.28	4.72	0.49	0.29	0.69	5.50	4.83	5.94	7.00	1.75	1.33	4.66	1.72	2.31
EL821	7.63	6.00	0.33	4.98	0.60	0.42	0.69	6.00	5.75	6.32	7.63	2.06	1.33	4.66	1.72	2.63
EL824	7.81	5.87	0.59	5.17	1.02	0.81	0.69	6.00	5.86	6.43	7.81	2.38	1.33	4.66	1.72	2.50
EL826	8.50	7.00	0.73	6.00	0.60	0.40	0.69	7.00	7.17	6.99	8.81	2.63	1.33	4.66	1.72	3.25
EL830	9.94	8.00	0.56	6.52	0.60	0.38	0.69	7.50	8.11	8.04	10.06	3.00	1.75	5.86	2.31	3.50
EL832	12.50	10.00	0.56	6.52	0.60	0.38	0.69	7.50	8.11	8.23	10.81	3.25	1.75	5.86	2.31	4.00
EL842	14.69	12.00	1.19	7.52	0.63	0.35	0.69	8.50	9.63	9.17	13.00	4.25	2.06	6.88	2.63	4.50
EL852	17.75	14.00	0.97	8.84	0.97	0.69	0.81	10.50	11.50	11.57	15.50	5.25	2.63	8.00	3.25	4.25
EL860	20.25	16.00	0.81	11.00	0.81	0.81	0.81	10.38	13.50	12.63	14.25	6.00	3.25	10.50	3.50	5.00

Size	F	G	H1	I	L	M	R1	V	T MAX* -0.000 +0.0025	U +0.000 -0.0015	Input Key (Style DH only)*:	Input Key (Style DHM only)*:	Output Key
EL813	2.00	1.00	--	2.40	3.82	1.87	-	1.00	0.625	0.500	1/8 x 1.00	1/8 x 1.00	3/16 x 1.50
EL818	2.94	1.47	0.53	3.03	3.82	1.87	0.66	1.44	1.000	0.500	1/8 x 1.00	1/8 x 1.00	1/4 x 3.00
EL821	3.25	1.63	0.53	3.40	3.82	1.87	0.75	1.94	1.500*	0.500	1/8 x 1.00	1/8 x 1.00	3/8 x 3.00
EL824	2.88	1.44	0.53	3.61	3.82	1.87	0.75	1.94	1.500*	0.500	1/8 x 1.00	1/8 x 1.00	3/8 x 3.00
EL826	3.38	1.69	0.53	4.17	3.82	1.87	0.75	1.94	1.500*	0.500	1/8 x 1.00	1/8 x 1.00	3/8 x 3.00
EL830	4.13	2.06	0.53	4.81	4.45	1.78	0.81	2.76	2.188	0.625	3/16 x 1.38	3/16 x .500	1/2 x 3.00
EL832	4.13	2.06	0.53	5.00	4.45	1.78	0.88	2.76	2.188	0.625	3/16 x 1.38	3/16 x .500	1/2 x 3.00
EL842	3.75	1.88	0.53	6.15	4.82	1.76	0.88	2.76	2.188	0.625	3/16 X 1.38	3/16 x .500	1/2 x 3.00
EL852	5.25	2.63	0.66	7.55	6.07	2.45	1.13	4.26	3.438	0.750	3/16 x 1.63	3/16 x .500	7/8 x 4.00
EL860	5.38	2.69	0.66	7.88	6.75	2.31	1.13	3.74	3.438	0.875	3/16 x 1.63	3/16 x .500	7/8 x 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC 180TC / 210TC
EL813	6.07	--	3.82	--	3.79	--
EL818	6.07	--	3.82	--	3.79	--
EL821	6.07	--	3.82	--	3.79	--
EL824	6.07	--	3.82	--	3.79	--
EL826	6.07	--	3.82	--	3.79	--
EL830	5.88	--	3.64	--	4.42	--
EL832	5.88	--	3.64	--	4.42	--
EL842	6.26	--	4.00	--	4.79	--
EL852	7.04	7.86	4.88	4.88	5.33	5.33
EL860	7.86	8.50	5.56	5.56	6.16	6.16

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway♦	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

Note: Torque arm bracket available separately. Refer to page 294 for kits. If a special bracket is required, refer to Style DMQ dimensions for mounting pad dimensions on top/bottom of reducer.

- Max bore dimensions shown. For additional bores available, refer to page 140.
- ♦ Keyway width by depth
- * Solid input shaft and C-faced coupling input reducers have different input shaft length and key.

WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

INTEGRAL GEARMOTOR INPUTS AVAILABLE

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

- EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
- See page 142 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
D_MHSC	DHMQ
D_MHC	DHM
D_MH	DH

Convert Style DH to motorized coupling input using kits shown on page 294.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

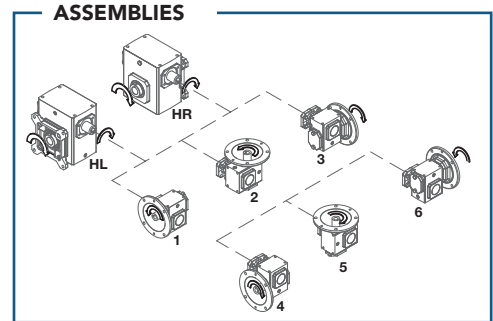
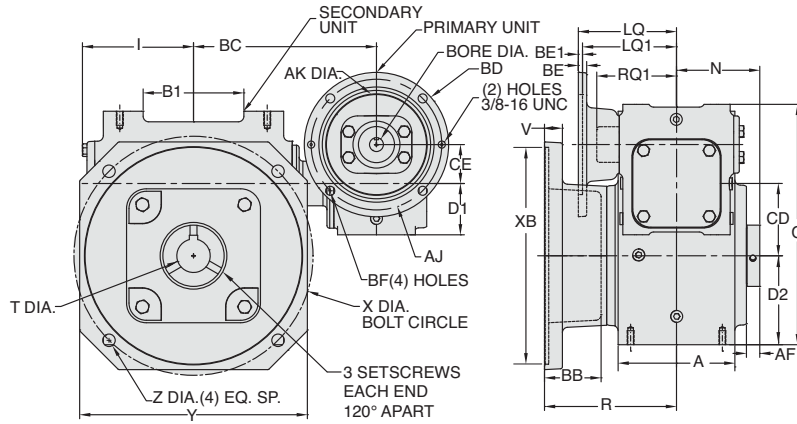
Accessories and
Additional Capabilities

ELECTRA-GEAR

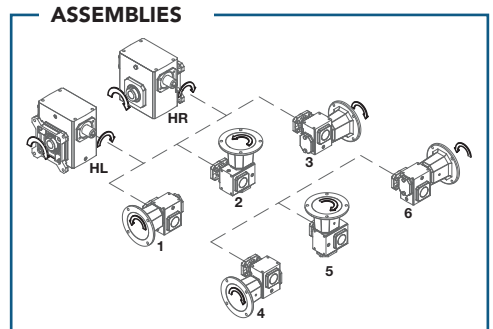
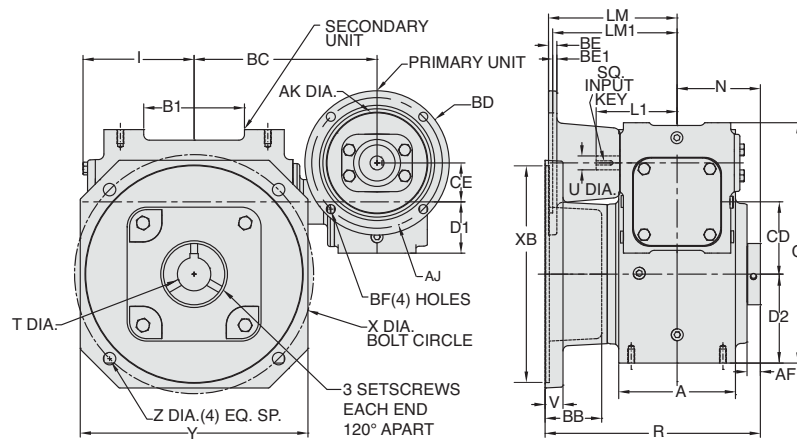
EL Series Dimensions

Styles: DFHM, DFHM, DFH

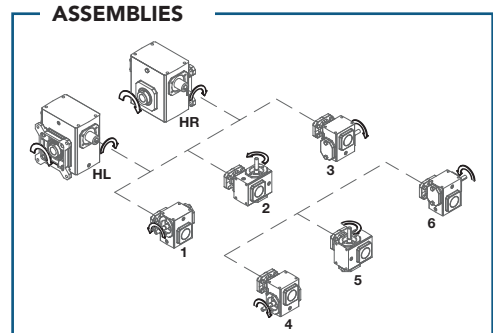
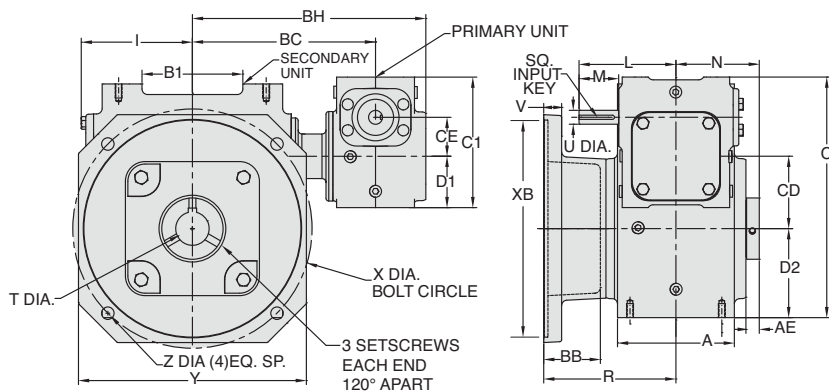
Style DFHM



Style DFHM



Style DFH



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DFHMQ, DFHM, DFH DIMENSIONS (Inches)

Size	A	AE	B1	BB	BC	BH	C	CD	CE	C1	D1	D2	I	L	M	N
EL818	3.50	0.49	2.48	1.27	5.94	7.79	7.00	1.75	1.33	4.66	1.72	1.72	3.03	3.82	1.87	2.75
EL821	3.91	0.60	2.76	1.51	6.32	8.16	7.63	2.06	1.33	4.66	1.72	2.31	3.40	3.82	1.87	2.99
EL824	4.06	1.05	--	1.35	6.43	8.27	7.81	2.38	1.33	4.66	1.72	2.63	3.61	3.82	1.87	3.51
EL826	4.84	0.60	4.21	1.35	6.99	8.83	8.81	2.63	1.33	4.66	1.72	2.50	4.17	3.82	1.87	3.19
EL830	5.25	0.60	4.50	2.36	8.04	10.30	10.06	3.00	1.75	5.86	2.31	3.25	4.81	4.45	1.78	3.75
EL832	5.25	0.60	4.53	2.54	8.23	10.49	10.81	3.25	1.75	5.86	2.31	3.50	5.00	4.45	1.78	3.75
EL842	6.13	0.63	5.71	2.06	9.17	11.56	13.00	4.25	2.06	6.88	2.63	4.00	6.15	4.82	1.76	4.25
EL852	7.19	0.97	7.82	1.18	11.57	14.47	15.50	5.25	2.63	8.00	3.25	4.50	7.55	6.07	2.45	5.25
EL860	7.00	0.81	--	0.25	12.63	15.69	14.25	6.00	3.25	10.50	3.50	4.25	7.88	6.75	2.31	5.19

Size	R	V	X	XB	Y	Z	T MAX* -0.000 +0.0025	U +0.000 -0.0015	Input Key (Style DFH only)*:	Input Key (Style DFHM only)*:	Output Key
EL818	3.53	0.38	3.13	-	4.00	0.34	1.000	0.500	1/8 x 1.00	1/8 x 1.00	1/4 x 3.00
EL821	4.25	0.50	6.88	6.00	6.49	0.44	1.500*	0.500	1/8 x 1.00	1/8 x 1.00	3/8 x 3.00
EL824	4.15	0.63	7.38	6.50	6.99	0.50	1.500*	0.500	1/8 x 1.00	1/8 x 1.00	3/8 x 3.00
EL826	4.56	0.63	7.38	6.50	6.99	0.50	1.500*	0.500	1/8 x 1.00	1/8 x 1.00	3/8 x 3.00
EL830	5.75	0.81	9.125-9.500	8.25	8.74	0.56	2.188	0.625	3/16 x 1.38	3/16 x .500	1/2 x 3.00
EL832	5.94	0.81	10.75	9.75	8.74	0.56	2.188	0.625	3/16 x 1.38	3/16 x .500	1/2 x 3.00
EL842	6.06	0.75	10.75	10.25	11.00	0.69	2.188	0.625	3/16 X 1.38	3/16 x .500	1/2 x 3.00
EL852	5.75	0.69	12.75	11.50	14.24	0.81	3.438	0.750	3/16 x 1.63	3/16 x .500	7/8 x 4.00
EL860	7.25	1.00	15.25	13.00	17.00	0.81	3.438	0.875	3/16 x 1.63	3/16 x .500	7/8 x 4.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	L1 56C/140TC | 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC | 180TC / 210TC
EL818	6.07	--	3.82	--	3.79	3.09
EL821	6.07	--	3.82	--	3.79	3.09
EL824	6.07	--	3.82	--	3.79	3.09
EL826	6.07	--	3.82	--	3.79	3.09
EL830	5.88	--	3.64	--	4.42	3.59
EL832	5.88	--	3.64	--	4.42	3.59
EL842	6.26	--	4.00	--	4.79	4.06
EL852	7.04	7.86	4.88	4.88	5.33	4.82
EL860	7.86	8.50	5.56	5.56	6.16	5.51

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway♦	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

- Max bore dimensions shown. For additional bores available, refer to page 140.
- ♦ Keyway width by depth

* Solid input shaft and C-faced coupling input reducers have different input shaft length and key.



WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

— Contact Factory for price and availability.

EL SERIES MOUNTING DIMENSIONS

- EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
- See page 142 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
D_RHSC	DFHMQ
D_RHC	DFHM
D_RH	DFH

Convert Style DFH to motorized coupling input using kits shown on page 294.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Model Number System

Double Reduction Helical-Worm



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

800 Series Gear Reducer Model Number Nomenclature

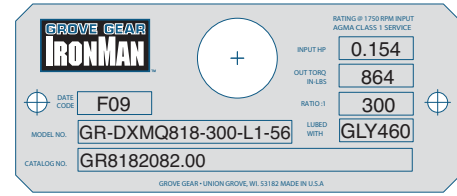
All new stock and custom 800 Series Grove Gear and Electra-Gear worm reducers are identified by a model number. The model number appears on the nameplate and describes pertinent features of the reducer. An example follows, along with a listing of the various letters and positions used.

NOTE: All reducers also have a catalog number—for example EL8130001 and GR8130001. Reducers and renewal parts should be ordered by catalog number. If a stock reducer has been Factory modified by the addition of an optional base for example, the modification number T818, for example, is stamped in the blank column of the nameplate. Accessories that are field installed will not be noted on the nameplate.

Catalog numbers 3000 and higher (for example, GR8133000 and NH8133000) are WASHGUARD® reducers for washdown service.

Catalog numbers 5000 (for example, GR8135000 and EL8135000) and higher are custom reducers manufactured for a specific application. The machinery or equipment manufacturer should be contacted for replacement reducers. Renewal parts can be ordered by catalog number.

TYPICAL NAMEPLATE (Grove Gear shown)



Series Code	Style	Size	Ratio	Output Shaft Orientation	Mounting Assembly	Motor Flange	Output Bore Code																																																																				
<p>SOLID OUTPUT SHAFT DXMQ – Motorized, Quill Input DXM – Motorized, Flexible Coupling Input DX – Non-Flanged</p> <p>HOLLOW OUTPUT SHAFT DXHMQ – Motorized, Quill Input DXHM – Motorized, Flexible Coupling Input DXH – Non-Flanged</p> <p>WASHGUARD STYLES W prefix; i.e. WDXMQ denotes WASHDOWN Reducer S prefix; i.e. SDXMQ denotes All-Stainless Steel Reducer</p> <p>GR - Grove Gear IRONMAN Cast Iron Reducers NH - Grove Gear IRONMAN Narrow Housing Cast Iron Reducers EL - Electra-Gear Aluminum Reducers GRG - Grove Gear Flexaline Interchange (Sizes 821, 826, 832) GRL - Leeson IRONMAN Interchange (Sizes 821, 826, 832)</p>	<p>See Selection Tables on pages 204-207, for all available ratios.</p> <p>800 SERIES CENTER DISTANCES</p> <table border="1"> <thead> <tr> <th>Size</th> <th>Center Distance (Inches)</th> </tr> </thead> <tbody> <tr><td>813</td><td>1.33</td></tr> <tr><td>815</td><td>1.54</td></tr> <tr><td>818</td><td>1.75</td></tr> <tr><td>821</td><td>2.06</td></tr> <tr><td>824</td><td>2.38</td></tr> <tr><td>826</td><td>2.62</td></tr> <tr><td>830</td><td>3.00</td></tr> <tr><td>832</td><td>3.25</td></tr> <tr><td>842</td><td>4.25</td></tr> <tr><td>852</td><td>5.25</td></tr> <tr><td>860</td><td>6.00</td></tr> <tr><td>870*</td><td>7.00</td></tr> <tr><td>880*</td><td>8.00</td></tr> <tr><td>8100*</td><td>10.00</td></tr> </tbody> </table> <p>* GR series only</p>	Size	Center Distance (Inches)	813	1.33	815	1.54	818	1.75	821	2.06	824	2.38	826	2.62	830	3.00	832	3.25	842	4.25	852	5.25	860	6.00	870*	7.00	880*	8.00	8100*	10.00	<p>Assembly numbers 1-6 are available. Refer to dimension layouts.</p> <p>L – Left-hand Output Shaft* R – Right-hand Output Shaft* D – Double Output Shaft H – Hollow Output Shaft * Viewed from drive end of reducer.</p>	<table border="1"> <thead> <tr> <th colspan="2">Input Code</th> <th>For Input Type</th> </tr> <tr> <th>Single Input</th> <th>Dual Input</th> <th></th> </tr> </thead> <tbody> <tr><td>blank</td><td>A</td><td>non-motorized</td></tr> <tr><td>48</td><td>48A</td><td>48CZ</td></tr> <tr><td>56</td><td>56A</td><td>56C</td></tr> <tr><td>140</td><td>140A</td><td>143-5TC</td></tr> <tr><td>180</td><td>180A</td><td>182-4TC</td></tr> <tr><td>210</td><td>210A</td><td>213-5TC</td></tr> <tr><td>250</td><td>250A</td><td>254-6TC</td></tr> <tr><td>63</td><td rowspan="5">Contact Grove Gear</td><td>D63D B5</td></tr> <tr><td>71</td><td>D71D B5</td></tr> <tr><td>80</td><td>D80D B5</td></tr> <tr><td>90</td><td>D90D B5</td></tr> <tr><td>110</td><td>D100LD/D112MD B5</td></tr> <tr><td>132</td><td></td><td>D132D</td></tr> </tbody> </table> <p>NEMA Input IEC Input</p>	Input Code		For Input Type	Single Input	Dual Input		blank	A	non-motorized	48	48A	48CZ	56	56A	56C	140	140A	143-5TC	180	180A	182-4TC	210	210A	213-5TC	250	250A	254-6TC	63	Contact Grove Gear	D63D B5	71	D71D B5	80	D80D B5	90	D90D B5	110	D100LD/D112MD B5	132		D132D	<p>Hollow Shaft Only See page 140.</p>
Size	Center Distance (Inches)																																																																										
813	1.33																																																																										
815	1.54																																																																										
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824	2.38																																																																										
826	2.62																																																																										
830	3.00																																																																										
832	3.25																																																																										
842	4.25																																																																										
852	5.25																																																																										
860	6.00																																																																										
870*	7.00																																																																										
880*	8.00																																																																										
8100*	10.00																																																																										
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180	180A	182-4TC																																																																									
210	210A	213-5TC																																																																									
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71		D71D B5																																																																									
80		D80D B5																																																																									
90		D90D B5																																																																									
110		D100LD/D112MD B5																																																																									
132		D132D																																																																									

Sample Model Numbers

Solid Output Shaft - GR Series

Cast iron, double reduction, 2.38" reducer with 56C motorized quill input, left-hand output shaft, 300:1 ratio.

GR	- DXMQ	824	- 300	- L1	- 56
Series	Style	Size	Ratio	Shaft Orientation	Input Type

Hollow Output Shaft - EL Series

Aluminum, double reduction, 1.75" reducer with 56C motorized quill input, 1.00" hollow output bore, 100:1 ratio.

EL	- DXHMQ	818	- 100	- H13	- 56	- 16
Series	Style	Size	Ratio	Shaft Orientation	Input Type	Output Bore Code



Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, stock styles DXMQ, DXM and DX can be field or Factory modified into a wide range of styles.*

**MOTORIZED
C-FLANGE
QUILL INPUT**

Style DXMQ



Ratings Pages: 204-207

Dimension Pages:
GR Series 212-213
NH Series 230-231

**Horizontal Base
Worm Over**

Style DXTMQ



Ratings Pages: 204-207

Dimension Pages:
GR Series 214-215
NH Series 232-233

**Vertical
Input Shaft**

Style DXJMQ



Ratings Pages: 204-207

Dimension Pages:
GR Series 218-219
NH Series Contact Factory

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

**MOTORIZED
C-FLANGE
FLEXIBLE
COUPLING INPUT**

Style DXM



Ratings Pages: 204-207

Dimension Pages:
GR Series 212-213
NH Series 230-231

Style DXTM



Ratings Pages: 204-207

Dimension Pages:
GR Series 214-215
NH Series 232-233

Style DXJM



Ratings Pages: 204-207

Dimension Pages:
GR Series 218-219
NH Series Contact Factory

Style DX



Ratings Pages: 204-207

Dimension Pages:
GR Series 212-213
NH Series 230-231

Style DXT



Ratings Pages: 204-207

Dimension Pages:
GR Series 214-215
NH Series 232-233

Style DXJ



Ratings Pages: 204-207

Dimension Pages:
GR Series 218-219
NH Series Contact Factory

**NON-FLANGED
INPUT**

*Additional accessories, options and assembly services are available, Contact Factory for details.



Cast Iron Solid Shaft Output Styles

CAST IRON
GR SERIES

CAST IRON
NH SERIES

Modified Stock Styles

**Vertical Output Shaft
High / Low Base**

Style DXV_MQ**



Ratings Pages: 204-207

Dimension Pages:
GR Series 220-221
NH Series Contact Factory

**Flange Mounted
Output Shaft**

Style DXFMQ



Ratings Pages: 204-207

Dimension Pages:
GR Series 222-223
NH Series Contact Factory

**Flange Mounted
Output Shaft**

Style DXFEMQ



Ratings Pages: 204-207

Dimension Pages:
GR Series 228-229
NH Series 238-239

**MOTORIZED
C-FLANGE
QUILL INPUT**

Style DXV_M**



Ratings Pages: 204-207

Dimension Pages:
GR Series 220-221
NH Series Contact Factory

Style DXFM



Ratings Pages: 204-207

Dimension Pages:
GR Series 222-223
NH Series Contact Factory

Style DXFEM



Ratings Pages: 204-207

Dimension Pages:
GR Series 228-229
NH Series 238-239

**MOTORIZED
C-FLANGE
FLEXIBLE
COUPLING INPUT**

Style DXV **



Ratings Pages: 204-207

Dimension Pages:
GR Series 220-221
NH Series Contact Factory

Style DXF



Ratings Pages: 204-207

Dimension Pages:
GR Series 222-223
NH Series Contact Factory

Style DXFE



Ratings Pages: 204-207

Dimension Pages:
GR Series 228-229
NH Series 238-239

**NON-FLANGED
INPUT**

** SPECIFY SHAFT UP OR DOWN FOR THESE STYLES.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, stock styles DXHMQ, DXHM and DXH can be field or Factory modified into a wide range of styles.

**MOTORIZED
C-FLANGE
QUILL INPUT**

Style DXHMQ



Ratings Pages: 204-207

Dimension Pages:
GR Series 224-225
NH Series 234-235



**Flange Mounted
Output Shaft**

Style DXFHMQ



Ratings Pages: 204-207

Dimension Pages:
GR Series 226-227
NH Series 236-237

**MOTORIZED
C-FLANGE
FLEXIBLE
COUPLING INPUT**

Style DXHM



Ratings Pages: 204-207

Dimension Pages:
GR Series 224-225
NH Series 234-235



Style DXFHM



Ratings Pages: 204-207

Dimension Pages:
GR Series 226-227
NH Series 236-237

**NON-FLANGED
INPUT**

Style DXH



Ratings Pages: 204-207

Dimension Pages:
GR Series 224-225
NH Series 234-235



Style DXFH



Ratings Pages: 204-207

Dimension Pages:
GR Series 226-227
NH Series 236-237

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

ELECTRA-GEAR

Aluminum Hollow Shaft Output Styles

Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, stock styles DXHMQ, DXHM and DXH can be field or Factory modified into a wide range of styles.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

**MOTORIZED
C-FLANGE
QUILL INPUT**

Style DXHMQ



Ratings Pages: 204-207

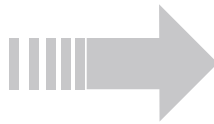
Dimension Pages:
EL Series 252-253

Style DXFHMQ



Ratings Pages: 204-207

Dimension Pages:
EL Series 254-255



**MOTORIZED
C-FLANGE
FLEXIBLE
COUPLING INPUT**

Style DXHM



Ratings Pages: 204-207

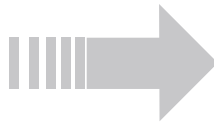
Dimension Pages:
EL Series 252-253

Style DXFHM



Ratings Pages: 204-207

Dimension Pages:
EL Series 254-255



Style DXH



Ratings Pages: 204-207

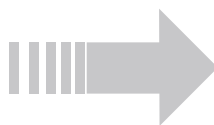
Dimension Pages:
EL Series 252-253

Style DXFH



Ratings Pages: 204-207

Dimension Pages:
EL Series 254-255



**NON-FLANGED
INPUT**

Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, stock styles DXMQ, DXM and DX can be field or Factory modified into a wide range of styles.

MOTORIZED
C-FLANGE
QUILL INPUT

Style DXMQ



Ratings Pages: 204-207

Dimension Pages:
EL Series 240-241

**Horizontal Base
Worm Over**

Style DXTMQ



Ratings Pages: 204-207

Dimension Pages:
EL Series 242-243

**Horizontal Base
Worm Under**

Style DXUMQ*



Ratings Pages: 204-207

Dimension Pages:
EL Series 244-245

MOTORIZED
C-FLANGE
FLEXIBLE
COUPLING INPUT

Style DXM



Ratings Pages: 204-207

Dimension Pages:
EL Series 240-241

Style DXTM



Ratings Pages: 204-207

Dimension Pages:
EL Series 242-243

Style DXUM*



Ratings Pages: 204-207

Dimension Pages:
EL Series 244-245

NON-FLANGED
INPUT

Style DX



Ratings Pages: 204-207

Dimension Pages:
EL Series 240-241

Style DXT



Ratings Pages: 204-207

Dimension Pages:
EL Series 242-243

Style DXU*



Ratings Pages: 204-207

Dimension Pages:
EL Series 244-245

Additional accessories, options and assembly services are available,
Contact Factory for details.

* Not a recommended mounting style. Consult Factory
for selection assistance.

ELECTRA-GEAR

Aluminum Solid Shaft Output Styles

Modified Stock Styles

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Vertical Input Shaft

Style DXJMQ



Ratings Pages: 204-207

Dimension Pages:
EL Series 246-247

Style DXJM



Ratings Pages: 204-207

Dimension Pages:
EL Series 246-247

Style DXJ



Ratings Pages: 204-207

Dimension Pages:
EL Series 246-247

Vertical Output Shaft Low Base

Style DXVLMQ



Ratings Pages: 204-207

Dimension Pages:
EL Series 248-249

Style DXVLM



Ratings Pages: 204-207

Dimension Pages:
EL Series 248-249

Style DXVL



Ratings Pages: 204-207

Dimension Pages:
EL Series 248-249

Flange Mounted Output Shaft

Style DXFRMQ



Ratings Pages: 204-207

Dimension Pages:
EL Series 250-251

Style DXFRM



Ratings Pages: 204-207

Dimension Pages:
EL Series 250-251

Style DXFR



Ratings Pages: 204-207

Dimension Pages:
EL Series 250-251

** SPECIFY SHAFT UP OR DOWN FOR THESE STYLES.

How to Use

Based on required output RPM and input motor horsepower, read across chart for the appropriate reducer size. As a rule of thumb, use 1.00 service factor chart for applications having uniform loads with up to 10 hours service duration per day. Use 1.25 service factor chart for longer service or shock loading. These charts are to be considered as guides only. Typically double reduction reducers are selected based on application torque, not necessarily HP. Refer to page 644 or contact Factory with specific application information. Series numbers correspond to center distances of secondary stage reducer, as shown in the chart below.

1.00 Service Factor

Nominal Ratio [♣]	Output RPM	Input Horsepower @ 1750 RPM																	
		1/8	1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	25	30	40
10	175.0	813	813	813	813	813	813	815	818	821	824	830	842	842	852	852	N/A	N/A	N/A
15	116.7	813	813	813	813	813	815	815	821	824	826	832	842	842	852	852	N/A	N/A	N/A
20	87.5	813	813	813	813	813	815	818	821	824	826	832	842	842	852	N/A	N/A	N/A	N/A
25	70.0	813	813	813	813	815	815	818	821	824	826	830*	842	842	852	870	880	880	880
30	58.3	813	813	813	813	815	815	818	821	824	826	830*	842	842	852	N/A	N/A	N/A	N/A
40	43.8	813	813	813	815	815	821	824	824	826	830	832	842	852	852	N/A	N/A	N/A	N/A
45	38.9	813	813	813	815	815	818	821	824	826	830	832	842	852	852	N/A	N/A	N/A	N/A
50	35.0	813	813	813	815	815	818	821	824	826	830	832	842	842	852	860	870	880	8100
60	29.2	813	813	815	815	821	824	824	826	830*	842	842	852	852	860	N/A	N/A	N/A	
75	23.3	813	813	815	815	821	824	826	830	832	842	842	852	852	870	880	8100	8100	
80	21.9	813	813	815	815	821	824	826	832	832**	842	852	860	N/A	N/A	N/A	N/A		
100	17.5	813	813	815	815	821	824	826	832	842	842	842	852	870	880	8100	8100		
125	14.0	813	815	815	821	824	826	830	832**	842	842	852	870	880	8100				
150	11.7	813	815	815	821	824	826	830*	842	842	852	860	880	8100	8100				
200	8.8	813	815	821	821	824	830*	832**	842	842	852	870	8100	8100					
250	7.0	815	815	821	824	826	830*	842	842	852	852	880	8100	8100					
300	5.8	815	815	821	824	830	832**	842	842	852	860	8100							
400	4.4	821	824	830	830	842	842	852	852	860									
500	3.5	826	830	832	842	842	852	852	860										
600	2.9	826	830	830	842	842	852	852	860										

1.25 Service Factor

Nominal Ratio [♣]	Output RPM	Input Horsepower @ 1750 RPM																	
		1/8	1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	25	30	
10	175.0	813	813	813	813	813	815	815	821	824	826	832	842	842	852	N/A	N/A	N/A	
15	116.7	813	813	813	813	813	815	815	821	824	824	830	842	842	852	852	N/A	N/A	N/A
20	87.5	813	813	813	813	813	815	818	821	824	826	830	842	842	852	N/A	N/A	N/A	N/A
25	70.0	813	813	813	815	815	821	824	826	830	832	842	852	870	870	880	8100	8100	
30	58.3	813	813	813	815	815	821	824	826	830	832	842	852	852	N/A	N/A	N/A	N/A	N/A
40	43.8	813	813	813	815	821	824	824	830	830*	842	842	852	N/A	N/A	N/A	N/A	N/A	N/A
45	38.9	813	813	813	815	821	824	824	830	830*	842	842	852	N/A	N/A	N/A	N/A	N/A	N/A
50	35.0	813	813	815	815	821	824	826	830	832	842	852	852	870	880	8100	8100	8100	
60	29.2	813	813	815	815	821	824	826	830	832**	842	852	860	N/A	N/A	N/A			
75	23.3	813	813	815	821	824	824	830	832	842	842	852	870	880	8100	8100			
80	21.9	813	813	815	821	824	824	830	832	842	842	852	N/A	N/A	N/A	N/A			
100	17.5	813	815	815	821	824	826	830*	832**	842	852	852	880	880	8100				
125	14.0	815	815	821	821	824	830	832	842	842	852	870	880	8100	8100				
150	11.7	815	815	821	824	826	830*	832	842	842	852	870	8100	8100					
200	8.8	815	818	821	824	826	832	842	842	852	860	870	8100	8100					
250	7.0	815	821	824	824	830*	832**	842	852	852	870	8100	8100						
300	5.8	815	821	824	826	830*	842	842	852	852	880	8100							
400	4.4	824	826	830	832	842	852	852	860										
500	3.5	830	830	842	842	852	852	860											
600	2.9	826	830	832	842	842	852	852											

Actual service factor may be greater than indicated. For actual service factors and maximum worm reducer ratings, refer to pages 204-207.

♣ Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements.

Refer to page 211 for exact ratio of helical primary stage and worm gear secondary stage.

* Size 832 must be used for NH Series for this selection.

** Size 842 must be used for NH Series for this selection.

indicates a selection where a smaller reducer (1 case size) can be used with redesigned product due to rating increase.

indicates a selection where a smaller reducer (2 case sizes) can be used with redesigned product due to rating increase.

Refer To Pages 522-581 for Series K Helical-Bevel right angle gear reducers for higher horsepower selections not covered here

Quick Selections

GR • NH • EL Series

1.50 Service Factor



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Nominal Ratio▲	Output RPM	Input Horsepower @ 1750 RPM															
		1/8	1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	25
10	175.0	813	813	813	813	813	815	818	824	824	830	842	842	852	N/A	N/A	N/A
15	116.7	813	813	813	813	815	818	821	824	826	830	842	842	852	N/A	N/A	N/A
20	87.5	813	813	813	813	815	818	821	824	826	832	842	852	852	N/A	N/A	N/A
25	70.0	813	813	813	815	818	824	824	824	826	830*	842	852	870	870	880	8100
30	58.3	813	813	813	815	818	821	824	824	826	830*	842	842	852	N/A	N/A	N/A
40	43.8	813	813	815	815	821	824	824	826	830	832	842	852	852	N/A	N/A	N/A
45	38.9	813	813	815	815	821	824	824	826	830*	832**	842	852	N/A	N/A	N/A	N/A
50	35.0	813	813	815	818	821	824	824	826	832	842	842	852	870	870	8100	8100
60	29.2	813	815	815	821	824	824	826	826	832	842	842	852	N/A	N/A	N/A	
75	23.3	813	815	818	821	824	824	826	830	832**	842	852	852	870	880	8100	
80	21.9	813	815	815	821	824	824	826	830*	842	842	852	860	N/A	N/A	N/A	
100	17.5	815	815	821	821	824	830	832	842	842	842	852	870	880	8100	8100	
125	14.0	815	815	821	824	826	830*	832**	842	842	852	860	870	8100	8100		
150	11.7	815	815	821	824	826	832	842	842	852	852	880	8100	8100			
200	8.8	815	821	824	824	830*	832**	842	852	852	870	8100	8100				
250	7.0	815	821	824	826	830*	842	842	852	852	880	8100					
300	5.8	815	821	824	830	832**	842	842	852	860	880						
400	4.4	826	830	830	842	842	852	852									
500	3.5	830	832	842	842	852	852	860									
600	2.9	830	830	842	842	852	852	860									

1.75 Service Factor

Nominal Ratio▲	Output RPM	Input Horsepower @ 1750 RPM															
		1/8	1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	
10	175.0	813	813	813	813	815	818	821	824	824	830*	842	842	852	N/A	N/A	
15	116.7	813	813	813	813	815	821	821	824	830	832	842	852	852	N/A	N/A	
20	87.5	813	813	813	815	818	821	824	826	830	832**	842	852	N/A	N/A	N/A	
25	70.0	813	813	815	815	821	824	824	830	842	842	852	870	870	880	8100	
30	58.3	813	813	815	815	821	824	824	830	832	842	852	852	N/A	N/A	N/A	
40	43.8	813	813	815	818	821	824	824	826	832	842	842	852	N/A	N/A	N/A	N/A
45	38.9	813	813	815	821	821	824	826	832	842	842	852	N/A	N/A	N/A	N/A	
50	35.0	813	813	818	821	824	826	830	832	842	842	852	870	880	8100	8100	
60	29.2	813	815	818	821	824	826	830	832**	842	852	852	N/A	N/A	N/A		
75	23.3	813	815	821	821	824	830	832	842	842	852	870	880	8100	8100		
80	21.9	813	815	821	824	824	830	832	842	842	852	N/A	N/A	N/A			
100	17.5	815	815	821	824	826	830*	832**	842	842	852	870	8100	8100			
125	14.0	815	818	821	824	830	832**	842	842	852	852	880	8100	8100			
150	11.7	815	821	824	824	830	832**	842	842	852	860	880	8100				
200	8.8	815	821	824	826	830*	842	842	852	852	880	8100					
250	7.0	821	821	824	830	832**	842	842	852	860	880	8100					
300	5.8	821	824	826	830*	832**	842	852	852	880	8100						
400	4.4	826	830	832	842	842	852	852	860								
500	3.5	830	842	842	852	852	860										
600	2.9	830	832	842	842	852	852	860									

2.00 Service Factor

Nominal Ratio▲	Output RPM	Input Horsepower @ 1750 RPM															
		1/8	1/6	1/4	1/3	1/2	3/4	1	1-1/2	2	3	5	7-1/2	10	15	20	
10	175.0	813	813	813	813	815	818	821	824	826	830*	842	852	852	N/A	N/A	
15	116.7	813	813	813	813	815	818	821	824	826	830	832	842	852	852	N/A	N/A
20	87.5	813	813	813	815	818	821	824	826	830*	842	842	852	852	N/A	N/A	N/A
25	70.0	813	813	815	818	821	824	824	826	830*	842	842	852	870	870	880	8100
30	58.3	813	813	815	815	821	824	824	826	830*	832**	842	852	N/A	N/A	N/A	
40	43.8	813	815	815	821	824	826	830	832	842	842	852	N/A	N/A	N/A	N/A	
45	38.9	813	815	815	821	824	826	830	832**	842	842	852	N/A	N/A	N/A	N/A	
50	35.0	813	815	821	821	824	826	830	842	842	852	860	870	880	8100		
60	29.2	815	815	821	821	824	826	830*	842	842	852	860	N/A	N/A			
75	23.3	815	815	821	824	826	830	832	842	842	852	870	880	8100			
80	21.9	815	815	821	824	826	830*	832**	842	842	852	N/A	N/A	N/A			
100	17.5	815	815	821	824	826	832	842	842	852	852	880	8100	8100			
125	14.0	815	821	824	824	830	832**	842	842	852	870	880	8100				
150	11.7	815	821	824	826	830*	842	842	852	852	870	8100	8100				
200	8.8	821	821	824	830	832**	842	842	852	860	880	8100					
250	7.0	821	824	826	830*	842	842	852	852	880	8100	8100					
300	5.8	821	824	830	832**	842	842	852	860	880	8100						
400	4.4	830	830	842	842	852	852	860									
500	3.5	832	842	842	852	852	860										
600	2.9	830	842	842	852	852	860										

Note: This chart is meant as a guide for reducer selections at specific motor horsepower. Actual service factor may be greater than indicated. For actual service factors and maximum worm reducer ratings, refer to pages 204-207.
 ▲ Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements.
 Refer to page 211 for exact ratio of helical primary stage and worm gear secondary stage.
 * Size 832 must be used for NH Series for this selection.
 ** Size 842 must be used for NH Series for this selection.

indicates a selection where a smaller reducer (1 case size) can be used with redesigned product due to rating increase.
 indicates a selection where a smaller reducer (2 case sizes) can be used with redesigned product due to rating increase.

"How To Use" Maximum Rating Tables

How To Use Maximum Rating Tables

Maximum Rating Tables for Double Reduction Gear Reducers are shown on pages 193-196.

BEFORE YOU START:

Identify the Service Factor of the application (see page 644).


Determine the actual input horsepower of the motor by multiplying the motor's nameplate horsepower by the Service Factor.

Determine the output speed (RPM) required at output shaft of reducer.

Identify the mounting style required by your application from the style charts shown on pages 195-200.

To select the proper gear reducer size, use the Maximum Rating Tables as shown:

1 Locate the Input RPM and Output RPM columns in the charts beginning on page 204. Scroll down the Input RPM column to locate a listing where the desired input speed corresponds to the output speed required in your application. This will establish your overall gear ratio. (Input RPM listings are rounded to the nearest hundred. Your actual input speed of 1750 can be correlated to 1800 with no material change in performance.)



Size 826 • 1.0 S.F.

Maximum Rating Tables
GR, NH & EL Series • All Stock Styles

	Size 821				Size 824				Size 826					
	Input HP	Output HP	Output TG (B-H)	Exact Total Ratio*	Input HP	Output HP	Output TG (B-H)	Exact Total Ratio*	Input HP	Output HP	Output TG (B-H)	Exact Total Ratio*		
10	1750	175.0	2.010	1.803	668	10.28	3.619	3.268	1177	10.00	3.952	3.589	1336	10.33
15	1750	116.7	1.796	1.577	878	15.42	2.708	2.403	1296	15.00	3.414	3.029	1636	15.00
20	1750	87.5	1.548	1.334	868	20.56	2.352	2.052	1478	20.00	3.016	2.633	1897	20.00
25	1750	70.0	1.030	0.874	806	25.66	1.812	1.562						
30	1750	56.3	1.189	0.984	1053	30.84	1.783	1.524						
40	1750	43.8	0.928	0.760	1093	40.00	1.401	1.165						
45	1750	36.9	0.909	0.733	1159	43.94	1.391	1.131						
50	1750	36.0	0.763	0.608	1120	51.11	1.171	0.955						
29.2		0.718	0.558	1204	60.00		1.100	0.863	1862	60.00	1.536	1.177	2488	60.00
23.3		0.598	0.446	1233	76.67		0.927	0.707	1810	75.00	1.182	0.911	2481	75.00
80	1750	21.9	0.518	0.357	1318	80.00	0.944	0.692	1991	80.00	1.197	0.898	2584	80.00
100	1750	17.5	0.523	0.356	1286	100.00	0.808	0.559	2011	100.00	1.012	0.736	2648	100.00
125	1750	14.0	0.441	0.285	1313	127.78	0.688	0.457	2059	125.00	0.859	0.588	2649	125.00
117.5	1750	11.7	0.360	0.229	1320	153.33	0.597	0.379	2045	150.00	0.751	0.488	2636	150.00
88.0	1750	8.8	0.334	0.179	1322	204.44	0.508	0.284	2048	200.00	0.633	0.369	2660	200.00
70.0	1750	7.0	0.288	0.140	1289	255.55	0.443	0.224	2021	250.00	0.544	0.289	2630	250.00
58.0	1750	5.8	0.369	0.126	1356	298.48	0.407	0.204	2110	287.28	0.477	0.233	2519	300.00
44.0	1750	4.4	0.100	0.048	710	413.36	0.176	0.062	1428	430.92	0.237	0.127	1664	450.00
35.0	1750	3.5	0.810	0.032	560	516.70	0.110	0.049	877	500.00	0.137	0.066	1000	500.00
23.0	1750	2.3	0.073	0.034	724	596.95	0.122	0.056	1164	574.58	0.154	0.071	1200	550.00

2 Move across the table to the Input HP columns until you find a rating that is equal to or greater than the actual input horsepower required. Once located, check the top of the table to identify the correct gear reducer size (818, 821, 824, etc.).

3 Identify the model number of the reducer by consulting page 194.

4 Check load capacities against the needs of your application. Do not exceed the overhung load (OHL) capacity or the thrust load (TL). Detailed instructions for calculating the actual overhung load are shown on page 644. If overhung and thrust loads will be applied simultaneously or if the load exceeds listed capacities, Contact Factory.

5 Verify physical dimensions using the dimensional drawings shown on pages 212-255.

* Actual ratio combination supplied by Factory may vary from above depending on application and manufacturing requirements. Refer to page 211 for exact ratio of helical primary stage and worm gear secondary stage.
 At speeds above 1750 input RPM, gear reducers may become thermally limited. For continuous operation, limit input HP to 1750 RPM input ratings shown. Contact Factory with application requirements if higher speeds are required.
 For input/output shaft overhung load and thrust load ratings, refer to pages 642-646.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Maximum Rating Tables

GR, NH & EL Series • All Stock Styles



Sizes 813, 815 and 818 • 1.0 S.F.

Nominal Ratio	Input RPM	Nominal Output RPM	Size 813				Size 815**				Size 818			
			Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio*	Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio*	Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio*
10	1750	175.0	0.767	0.679	252	10.28	1.265	1.123	416	10.28	1.702	1.524	564	10.28
15	1750	116.7	0.616	0.530	294	15.42	0.993	0.849	472	15.42	1.196	1.041	578	15.42
20	1750	87.5	0.505	0.420	311	20.56	0.838	0.691	511	20.56	1.000	0.853	632	20.56
25	1750	70.0	0.370	0.306	282	25.56	0.629	0.528	486	25.56	0.844	0.718	662	25.56
30	1750	58.3	0.399	0.311	345	30.84	0.665	0.510	566	30.84	0.770	0.623	692	30.84
40	1750	43.8	0.302	0.235	338	40.00	0.516	0.401	576	40.00	0.595	0.479	690	40.00
45	1750	38.9	0.306	0.229	363	43.94	0.519	0.385	609	43.94	0.590	0.463	732	43.94
50	1750	35.0	0.251	0.187	345	51.11	0.429	0.322	593	51.11	0.492	0.382	705	51.11
60	1750	29.2	0.244	0.174	375	60.00	0.418	0.295	638	60.00	0.469	0.352	760	60.00
75	1750	23.3	0.205	0.138	382	76.67	0.352	0.237	656	76.67	0.392	0.281	777	76.67
80	1750	21.9	0.215	0.140	404	80.00	0.392	0.254	731	80.00	0.402	0.282	812	80.00
100	1750	17.5	0.179	0.110	395	100.00	0.327	0.196	704	100.00	0.345	0.227	818	100.00
125	1750	14.0	0.153	0.087	403	127.78	0.280	0.157	723	127.78	0.292	0.181	833	127.78
150	1750	11.7	0.142	0.074	408	153.33	0.246	0.127	701	153.33	0.261	0.150	831	153.33
200	1750	8.8	0.124	0.056	413	204.44	0.228	0.102	753	204.44	0.221	0.113	831	204.44
250	1750	7.0	0.111	0.045	413	255.55	0.196	0.077	709	255.55	0.194	0.089	817	255.55
300	1750	5.8	0.102	0.039	421	298.48	0.188	0.072	777	298.48	0.179	0.079	849	298.48
400	1750	4.4	0.040	0.015	228	413.36	0.086	0.027	392	413.36	0.068	0.031	451	413.36
500	1750	3.5	0.030	0.010	180	516.70	0.063	0.017	308	516.70	0.046	0.019	348	516.70
600	1750	2.9	0.029	0.011	232	596.96	0.065	0.019	403	596.96	0.049	0.021	459	596.96

* Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements.

Refer to page 211 for exact ratio of helical primary stage and worm gear secondary stage.

** Size 815 is not available in EL Series.

At speeds above 1750 input RPM, gear reducers may become thermally limited. For continuous operation, limit input HP to 1750 RPM input ratings shown. Contact Factory with application requirements if higher speeds are required.

For input / output shaft overhung load and thrust load ratings, refer to pages 646-648.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



Sizes 821, 824 and 826 • 1.0 S.F.

Nominal Ratio	Input RPM	Nominal Output RPM	Size 821				Size 824				Size 826			
			Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio*	Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio*	Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio*
10	1750	175.0	2.010	1.803	668	10.28	3.619	3.268	1177	10.00	3.962	3.589	1336	10.33
15	1750	116.7	1.798	1.577	876	15.42	2.708	2.403	1298	15.00	3.414	3.029	1636	15.00
20	1750	87.5	1.548	1.334	988	20.56	2.352	2.052	1478	20.00	3.016	2.633	1897	20.00
25	1750	70.0	1.030	0.874	806	25.56	1.812	1.562	1406	25.00	2.337	2.025	1823	25.83
30	1750	58.3	1.189	0.984	1093	30.84	1.783	1.524	1598	29.13	2.299	1.968	2064	29.13
40	1750	43.8	0.926	0.760	1093	40.00	1.401	1.165	1676	40.00	1.812	1.510	2173	40.00
45	1750	38.9	0.909	0.733	1159	43.94	1.391	1.131	1778	43.70	1.784	1.464	2303	43.70
50	1750	35.0	0.765	0.608	1120	51.11	1.171	0.955	1721	50.00	1.517	1.242	2236	50.00
60	1750	29.2	0.719	0.558	1204	60.00	1.100	0.863	1862	60.00	1.506	1.177	2469	60.00
75	1750	23.3	0.598	0.446	1233	76.67	0.927	0.707	1910	75.00	1.182	0.911	2461	75.00
80	1750	21.9	0.518	0.357	1318	80.00	0.944	0.692	1991	80.00	1.197	0.898	2584	80.00
100	1750	17.5	0.523	0.358	1286	100.00	0.808	0.559	2011	100.00	1.012	0.736	2649	100.00
125	1750	14.0	0.441	0.285	1313	127.78	0.688	0.457	2059	125.00	0.859	0.588	2649	125.00
150	1750	11.7	0.390	0.239	1320	153.33	0.597	0.379	2045	150.00	0.751	0.488	2636	150.00
200	1750	8.8	0.334	0.179	1322	204.44	0.508	0.284	2048	200.00	0.633	0.369	2660	200.00
250	1750	7.0	0.288	0.140	1289	255.55	0.443	0.224	2021	250.00	0.544	0.289	2600	250.00
300	1750	5.8	0.269	0.126	1356	298.48	0.407	0.204	2110	287.28	0.477	0.233	2519	300.00
400	1750	4.4	0.100	0.048	710	413.36	0.176	0.092	1428	430.92	0.237	0.127	1964	430.92
500	1750	3.5	0.810	0.032	590	516.70	0.110	0.049	877	500.00	0.137	0.064	1157	500.00
600	1750	2.9	0.073	0.034	724	596.96	0.122	0.056	1164	574.56	0.154	0.075	1542	574.56

* Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements. Refer to page 211 for exact ratio of helical primary stage and worm gear secondary stage. At speeds above 1750 input RPM, gear reducers may become thermally limited. For continuous operation, limit input HP to 1750 RPM input ratings shown. Contact Factory with application requirements if higher speeds are required.

For input/ output shaft overhung load and thrust load ratings, refer to pages 647-648.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Maximum Rating Tables

GR, NH & EL Series • All Stock Styles



Sizes 830 & 832 • 1.0 S.F.

Nominal Ratio	Input RPM	Nominal Output RPM	Size GR830 & EL830				Size NH830				Size GR832 & EL832				Size NH832			
			Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio*	Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio*	Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio*	Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio*
10	1750	175.0	6.000	5.475	1972	10.00	5.080	4.570	1645	10.00	6.000	5.410	2011	10.33	6.000	5.410	2011	10.33
15	1750	116.7	4.857	4.376	2364	15.00	4.560	4.030	2180	15.00	6.000	5.407	2921	15.00	5.920	5.260	2839	15.00
20	1750	87.5	4.242	3.747	2699	20.00	3.970	3.450	2488	20.00	5.632	5.026	3620	20.00	5.190	4.560	3287	20.00
25	1750	70.0	3.000	2.642	2379	25.00	2.750	2.400	2157	25.00	3.000	2.669	2403	25.84	3.000	2.620	2360	25.84
30	1750	58.3	3.256	2.830	2968	29.13	2.930	2.560	2771	29.13	4.210	3.703	3884	29.13	3.850	3.410	3680	29.13
40	1750	43.8	2.574	2.187	3147	40.00	2.390	2.030	2924	40.00	3.427	2.953	4249	40.00	3.140	2.700	3894	40.00
45	1750	38.9	2.545	2.110	3320	43.70	2.230	1.870	3026	43.70	3.337	2.824	4442	43.70	2.970	2.500	4044	43.70
50	1750	35.0	2.157	1.805	3250	50.00	2.000	1.680	3020	50.00	2.870	2.441	4395	50.00	2.640	2.240	4028	50.00
60	1750	29.2	2.021	1.625	3507	60.00	1.820	1.470	3181	60.00	2.657	2.190	4727	60.00	2.440	1.980	4284	60.00
75	1750	23.3	1.702	1.338	3615	75.00	1.520	1.210	3279	75.00	2.238	1.811	4892	75.00	2.060	1.640	4434	75.00
80	1750	21.9	1.684	1.291	3714	80.00	1.430	1.100	3186	80.00	2.221	1.745	5023	80.00	1.890	1.470	4247	80.00
100	1750	17.5	1.441	1.049	3773	100.00	1.210	0.910	3284	100.00	1.872	1.409	5068	100.00	1.590	1.220	4385	100.00
125	1750	14.0	1.226	0.863	3886	125.00	1.030	0.750	3359	125.00	1.588	1.160	5224	125.00	1.300	0.958	4312	125.00
150	1750	11.7	1.074	0.716	3868	150.00	0.900	0.620	3362	150.00	1.392	0.970	5243	150.00	1.230	0.842	4547	150.00
200	1750	8.8	0.879	0.534	3844	200.00	0.730	0.450	3266	200.00	1.137	0.723	5208	200.00	0.951	0.606	4361	200.00
250	1750	7.0	0.766	0.424	3815	250.00	0.620	0.360	3226	250.00	0.971	0.570	5130	250.00	0.772	0.460	4141	250.00
300	1750	5.8	0.696	0.386	3989	300.00	0.530	0.280	3062	300.00	0.895	0.524	5412	287.28	0.639	0.358	3868	287.28
400	1750	4.4	0.400	0.200	3172	430.92	0.400	0.200	3172	430.92	0.483	0.258	4006	430.92	0.483	0.258	4006	430.92
500	1750	3.5	0.240	0.110	1157	500.00	0.240	0.110	1157	500.00	0.270	0.129	2326	500.00	0.270	0.129	2326	500.00
600	1750	2.9	0.270	0.130	3508	574.56	0.270	0.130	3508	574.56	0.307	0.150	3112	574.56	0.307	0.150	3112	574.56

* Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements. Refer to page 211 for exact ratio of helical primary stage and worm gear secondary stage. At speeds above 1750 input RPM, gear reducers may become thermally limited. For continuous operation, limit input HP to 1750 RPM input ratings shown. Contact Factory with application requirements if higher speeds are required.

For input/ output shaft overhung load and thrust load ratings, refer to pages 646-648.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

CAST IRON
GR SERIES

CAST IRON
NH SERIES

ALUMINUM
EL SERIES

Maximum Rating Tables

GR, NH & EL Series • All Stock Styles



Sizes 842, 852 and 860 • 1.0 S.F.

Nominal Ratio	Nominal Input RPM	Output RPM	Size 842				Size 852				Size 860**			
			Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio*	Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio*	Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio*
10	1750	175.0	13.43	12.469	4640	10.33	20.00	18.699	6902	10.25	20.00	18.74	6748	10.00
15	1750	116.7	11.93	10.934	5907	15.00	20.00	18.501	9994	15.00	20.00	18.54	10013	15.00
20	1750	87.5	10.76	9.770	7037	20.00	17.27	15.751	11345	20.00	18.67	17.08	12302	20.00
25	1750	70.0	7.471	6.797	6529	26.70	10.07	9.273	8835	26.48	10.07	9.32	8389	25.84
30	1750	58.3	8.056	7.120	7693	30.00	13.54	11.980	12944	30.00	14.41	12.80	13824	30.00
40	1750	43.8	6.701	5.950	8660	40.45	11.35	10.188	14828	40.45	11.35	10.24	14836	40.45
45	1750	38.9	6.293	5.480	8781	44.46	11.05	9.668	15492	44.46	11.99	10.54	16884	44.46
50	1750	35.0	5.568	4.881	9074	51.67	9.805	8.718	16208	51.67	10.07	9.02	16240	51.67
60	1750	29.2	5.061	4.340	9476	60.68	9.112	7.876	17195	60.68	9.82	8.39	17924	60.68
75	1750	23.3	4.121	3.527	9581	75.38	7.710	6.578	18345	77.51	8.21	6.78	18118	77.51
80	1750	21.9	4.277	3.525	10261	80.90	7.377	6.161	17934	80.86	8.22	6.93	20079	80.90
100	1750	17.5	3.575	2.884	10725	103.34	6.259	5.143	19122	103.34	6.89	5.60	20287	103.34
125	1750	14.0	2.989	2.318	10776	129.18	5.300	4.181	19432	129.18	5.71	4.55	22053	129.18
150	1750	11.7	2.685	2.078	11292	150.76	4.765	3.795	20618	150.76	5.32	4.29	23533	150.76
200	1750	8.8	2.099	1.449	10775	206.68	3.636	2.582	19198	206.68	3.93	2.83	21924	206.68
250	1750	7.0	1.765	1.139	10584	258.35	3.103	2.052	19075	258.35	3.32	2.23	21649	258.35
300	1750	5.8	1.618	1.043	11335	301.52	2.829	1.904	20687	301.52	3.13	2.15	23615	301.52
400	1750	4.4	0.781	0.417	6210	413.36	1.718	0.797	11864	413.36	2.19	1.08	16037	413.36
500	1750	3.5	0.526	0.257	4782	516.70	1.206	0.522	9707	516.70	1.56	0.69	12884	516.70
600	1750	2.9	0.588	0.298	6468	603.04	1.374	0.590	12810	603.04	1.75	0.80	17397	603.04

Sizes 870, 880 and 8100 • 1.0 S.F.

Nominal Ratio	Nominal Input RPM	Output RPM	Size 870***				Size 880***				Size 8100***			
			Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio	Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio	Input HP	Output HP	Output TQ (lb-in)	Exact Total Ratio
25	1750	70.0	19.60	18.10	17000	26.05	31.90	29.70	26900	25.23	42.10	39.30	36800	26.02
37.5	1750	46.7	18.60	16.90	22900	37.61	26.80	24.60	32300	36.43	42.10	39.00	52300	37.23
50	1750	35.0	15.20	13.70	24400	49.56	21.70	19.70	34100	48.00	37.80	34.60	61700	49.50
75	1750	23.3	11.20	9.74	26200	74.55	16.20	14.30	37100	72.21	28.40	25.20	67700	74.46
100	1750	17.5	8.95	7.41	27800	104.20	12.60	10.60	38600	100.92	22.30	19.00	71400	104.08
125	1750	14.0	7.56	6.14	27500	124.53	10.80	8.90	38600	120.61	18.90	15.80	70600	124.39
138	1750	12.7	6.90	5.84	29000	138.08	10.20	8.75	41200	130.65	17.80	15.40	79000	139.22
150	1750	11.7	6.26	4.95	26700	149.95	9.05	7.27	38000	145.23	15.80	13.00	69000	149.77
185	1750	9.5	5.52	4.43	30800	192.99	8.00	6.53	42900	182.61	14.20	11.70	83900	194.59
200	1750	8.8	5.06	3.70	27100	203.32	7.00	5.22	37000	196.92	12.40	9.46	69200	203.08
210	1750	8.3	4.90	4.07	30200	205.92	6.94	5.84	43200	205.78	12.60	10.70	80800	212.23
250	1750	7.0	3.77	3.25	28500	244.04	5.35	4.63	41100	246.38	10.10	8.81	77300	243.65
280	1750	6.3	3.98	3.09	32000	287.82	5.50	4.38	45300	287.62	10.10	8.13	86800	296.64
300	1750	5.8	3.31	2.23	24500	304.98	4.78	3.23	34300	295.38	7.15	5.69	62400	304.62

* Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements.
 ** Size 860 is only available in GR and EL Series
 *** Sizes 870, 880 and 8100 are only available in GR Series
 Refer to page 211 for exact ratio of helical primary stage and worm gear secondary stage.
 At speeds above 1750 input RPM, gear reducers may become thermally limited. For continuous operation, limit input HP to 1750 RPM input ratings shown. Contact Factory with application requirements if higher speeds are required.
 For input/output shaft overhung load and thrust load ratings, refer to pages 646-648.
 EL Series sizes 842-860 have cast iron primary. Contact Factory for dimensions.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



GR Series Weights



GR SERIES • DOUBLE REDUCTION HELICAL – WORM • APPROXIMATE WEIGHTS Δ (LBS.)

Reducer Style	Reducer Size													
	GR813	GR815	GR818	GR821	GR824	GR826	GR830	GR832	GR842	GR852	GR860	GR870	GR880	GR8100
Solid Output Shaft														
DXMQ	36	40	43	48	67	78	90	97	191	292	376	---	---	---
DXM	---	---	---	---	70	83	95	102	196	297	381	---	---	---
DX	---	---	---	---	65	76	88	95	187	288	372	510	770	1250
DXTMQ & DXUMQ	38	43	46	52	71	84	96	106	205	312	407	---	---	---
DXTM & DXUM	---	---	---	---	74	89	101	111	210	317	412	---	---	---
DXT & DXU	---	---	---	---	69	82	94	104	201	308	403	551	818	1326
DXJMQ	37	41	45	51	70	83	96	103	201	307	---	---	---	---
DXJM	---	---	---	---	73	88	101	108	206	312	---	---	---	---
DXJ	---	---	---	---	68	81	94	101	197	303	---	---	---	---
DXVLMQ & DXVHM	38	43	46	55	74	87	100	110	211	317	412	---	---	---
DXVLM & DXVHM	---	---	---	---	77	92	105	115	216	322	417	---	---	---
DXVL & DXVH	---	---	---	---	72	85	98	108	207	313	408	581	848	1403
DXFMQ	37	41	45	51	70	82	100	107	206	322	414	---	---	---
DXFM	---	---	---	---	73	87	105	112	211	327	419	---	---	---
DXF	---	---	---	---	68	80	98	105	202	318	410	540	788	1271
DXFEMQ	---	---	---	---	---	---	100	107	221	323	418	---	---	---
DXFEM	---	---	---	---	---	---	101	108	229	330	423	---	---	---
DXFE	---	---	---	---	---	---	96	103	211	308	408	671	968	1526
Hollow Output Shaft														
DXHMQ	37	40	44	49	69	77	91	99	194	292	376	---	---	---
DXHM	---	---	---	---	71	78	92	100	202	299	381	---	---	---
DXH	---	---	---	---	64	73	87	95	184	277	366	510	770	1250
DXFHM	38	41	46	52	72	81	101	109	209	322	414	---	---	---
DXFHM	---	---	---	---	74	82	102	110	217	329	419	---	---	---
DXFH	---	---	---	---	67	77	97	105	199	307	404	540	788	1271
DXBFHM	39	---	46	52	73	83	---	---	---	---	---	---	---	---
DXBFHM	---	---	---	---	75	84	---	---	---	---	---	---	---	---
DXBFH	---	---	---	---	68	79	---	---	---	---	---	---	---	---

Δ Weights include oil.

GR SERIES • ACCESSORIES • APPROXIMATE WEIGHTS (LBS.)

Accessory	Reducer Size													
	GR813	GR815	GR818	GR821	GR824	GR826	GR830	GR832	GR842	GR852	GR860	GR870	GR880	GR8100
T/U-Base	2	3	3	4	4	6	6	9	14	20	31	41	48	76
J-Base	1	1	2	3	3	5	6	6	10	15	---	---	---	---
VL/VH-Base	2	3	3	7	7	9	10	13	20	25	36	**	**	**
F-Flange (cast Iron)	1	1	2	3	3	4	10	10	15	30	38	**	**	**
BF-Flange (Steel)	2	---	2	3	4	6	---	---	---	---	---	---	---	---
R-Riser Block	---	7	7	9	9	12	15	31	24	15	---	---	---	---
Hollow Shaft Torque Arm Kit	5	5	5	5	5	5	5	5	5	8	8	---	---	---
Coupling Input C-Flange Kits														
48CZ, 56C, 140TC	7	7	7	7	8	8	11	11	14	16	---	---	---	---
180TC-210TC	---	---	---	---	11	11	11	11	16	18	22	30	30	---
250TC	---	---	---	---	---	---	---	28	30	30	32	34	36	---

** This accessory must be assembled at the Factory. It is not available as a kit for field installation.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

NH SERIES • DOUBLE REDUCTION HELICAL – WORM • APPROXIMATE WEIGHTS^Δ (LBS.)

Reducer Style	Reducer Size									
	NH813	NH815	NH818	NH821	NH824	NH826	NH830	NH832	NH842	NH852
Solid Output Shaft										
DXMQ	31	34	37	41	57	66	77	82	162	248
DXM	---	---	---	---	60	71	81	87	167	252
DX	---	---	---	---	55	65	75	81	159	245
DXTMQ & DXUMQ	33	37	40	45	61	72	83	91	176	268
DXTM & DXUM	---	---	---	---	64	77	87	96	181	272
DXT & DXU	---	---	---	---	59	71	81	90	173	265
DXJMQ	32	35	39	44	60	71	83	88	172	263
DXJM	---	---	---	---	63	76	87	93	177	267
DXJ	---	---	---	---	58	70	81	87	169	260
DXVLMQ & DXVHM	33	37	40	48	64	75	87	95	182	273
DXVLM & DXVHM	---	---	---	---	67	80	91	100	187	277
DXVL & DXVH	---	---	---	---	62	74	85	94	179	270
DXFMQ	32	35	39	44	60	70	87	92	177	278
DXFM	---	---	---	---	63	75	91	97	182	282
DXF	---	---	---	---	58	69	85	91	174	275
DXFEMQ	---	---	---	---	---	---	72	77	160	233
DXFEM	---	---	---	---	---	---	73	78	165	238
DXFE	---	---	---	---	---	---	69	74	152	223
Hollow Output Shaft										
DXHMQ	31	34	37	42	59	65	77	84	165	248
DXHM	---	---	---	---	60	66	78	85	172	254
DXH	---	---	---	---	54	62	74	81	156	235
DXFHM	32	35	39	45	62	69	87	94	180	278
DXFHM	---	---	---	---	63	70	88	95	187	284
DXFH	---	---	---	---	57	66	84	91	171	265

^Δ Weights include oil.

NH SERIES • ACCESSORIES • APPROXIMATE WEIGHTS (LBS.)

Accessory	Reducer Size									
	NH813	NH815	NH818	NH821	NH824	NH826	NH830	NH832	NH842	NH852
T/U-Base	2	3	3	4	4	6	6	9	14	20
J-Base	1	1	2	3	3	5	6	6	10	15
VL/VH-Base	2	3	3	7	7	9	10	13	20	25
F-Flange (cast Iron)	1	1	2	3	3	4	10	10	15	30
Hollow Shaft Torque Arm Kit	5	5	5	5	5	5	5	5	5	8
Coupling Input C-Flange Kits										
48CZ, 56C, 140TC	7	7	7	7	8	8	11	11	14	16
180TC-210TC	---	---	---	---	11	11	11	11	16	18
250TC	---	---	---	---	---	---	---	28	30	30

ELECTRA-GEAR



EL Series Weights

EL SERIES • DOUBLE REDUCTION HELICAL – WORM • APPROXIMATE WEIGHTS Δ (LBS.)

Reducer Style	Reducer Size									
	EL813	EL818	EL821	EL824	EL826	EL830	EL832	EL842+	EL852+	EL860+
Solid Output Shaft										
DXMQ	24	28	32	44	51	59	64	126	193	248
DXM	---	---	---	46	55	63	67	129	196	251
DX	---	---	---	43	50	58	63	123	190	246
DXTMQ & DXUMQ	25	30	35	47	55	65	72	133	201	258
DXTM & DXUM	---	---	---	49	59	69	75	136	204	261
DXT & DXU	---	---	---	46	54	64	71	130	198	256
DXJMQ	25	30	35	47	55	64	69	132	201	258
DXJM	---	---	---	49	59	68	72	135	204	261
DXJ	---	---	---	46	54	63	68	129	198	256
DXVLMQ	26	31	35	47	55	64	69	132	201	258
DXVLM	---	---	---	49	59	68	72	135	204	261
DXVL	---	---	---	46	54	63	68	129	198	256
DXFMQ	---	30	35	47	54	65	71	134	201	269
DXFM	---	---	---	49	58	69	74	137	204	272
DXF	---	---	---	46	53	64	70	131	198	267
Hollow Output Shaft										
DXHMQ	24	29	32	46	51	60	65	128	193	248
DXHM	---	---	---	47	51	61	66	133	197	251
DXH	---	---	---	42	48	57	63	121	183	242
DXFHMQ	---	31	35	49	54	66	72	136	201	269
DXFHM	---	---	---	50	54	67	73	141	205	272
DXFH	---	---	---	45	51	63	70	129	191	263

† Primary unit is cast iron. Contact Factory for dimensions.
 Δ Weights include oil.

EL SERIES • ACCESSORIES • APPROXIMATE WEIGHTS (LBS.)

Accessory	Reducer Size									
	EL813	EL818	EL821	EL824	EL826	EL830	EL832	EL842	EL852	EL860
ABC-Base	1	2	3	3	4	6	8	7	8	10
T/U-Base	1	2	3	3	4	6	8	7	8	10
J-Base	1	2	3	3	4	5	5	6	8	10
VL Base	2	3	3	3	4	5	5	6	8	10
FR and F-Flange	---	2	3	3	3	6	7	8	8	21
Hollow Shaft Torque Arm Kit	5	5	5	5	5	5	5	5	8	8
Coupling Input C-Flange Kits										
48CZ, 56C, 140TC	3	3	3	4	4	5	5	7	7	---
180TC-210TC	---	---	---	5	5	5	5	8	8	8
250TC	---	---	---	---	---	---	8	8	8	8

* Will not fit solid output shaft models.
 \otimes Will not fit hollow output shaft models.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD[®] Reducers
and GEAR+MOTOR[™]

Ratio Multipliers

Accessories and
Additional Capabilities



DOUBLE REDUCTION • HELICAL – WORM • EXACT RATIO COMBINATIONS

Total Ratio	GEAR REDUCER SIZE													
	813		815		818		821		824		826		830	
	P TX1	S 813	P TX1	S 815	P TX1	S 818	P TX1	S 821	P TX2	S 824	P TX2	S 826	P TX2	S 830
10	2.056	5	2.056	5	2.056	5	2.056	5	2.000	5	2.000	5.17	2.000	5
15	2.056	7.5	2.056	7.5	2.056	7.5	2.056	7.5	2.000	7.5	2.000	7.5	2.000	7.5
20	2.056	10	2.056	10	2.056	10	2.056	10	2.000	10	2.000	10	2.000	10
25	5.111	5	5.111	5	5.111	5	5.111	5	5.000	5	5.000	5.17	5.000	5
30	2.056	15	2.056	15	2.056	15	2.056	15	2.913	10	2.913	10	2.913	10
40	4.000	10	4.000	10	4.000	10	4.000	10	4.000	10	4.000	10	4.000	10
45	2.929	15	2.929	15	2.929	15	2.929	15	2.913	15	2.913	15	2.913	15
50	5.111	10	5.111	10	5.111	10	5.111	10	5.000	10	5.000	10	5.000	10
60	4.000	15	4.000	15	4.000	15	4.000	15	4.000	15	4.000	15	4.000	15
75	5.111	15	5.111	15	5.111	15	5.111	15	5.000	15	5.000	15	5.000	15
80	4.000	20	4.000	20	4.000	20	4.000	20	4.000	20	4.000	20	4.000	20
100	4.000	25	4.000	25	4.000	25	4.000	25	4.000	25	4.000	25	4.000	25
125	5.111	25	5.111	25	5.111	25	5.111	25	5.000	25	5.000	25	5.000	25
150	5.111	30	5.111	30	5.111	30	5.111	30	5.000	30	5.000	30	5.000	30
200	5.111	40	5.111	40	5.111	40	5.111	40	5.000	40	5.000	40	5.000	40
250	5.111	50	5.111	50	5.111	50	5.111	50	5.000	50	5.000	50	5.000	50
300	7.462	40	7.462	40	7.462	40	7.462	40	7.182	40	5.000	60	5.000	60
400	5.167	80	5.167	80	5.167	80	5.167	80	7.182	60	7.182	60	7.182	60
500	5.167	100	5.167	100	5.167	100	5.167	100	5.000	100	5.000	100	5.000	100
600	7.462	80	7.462	80	7.462	80	7.462	80	7.182	80	7.182	80	7.182	80

Total Ratio	GEAR REDUCER SIZE													
	832		842		852		860		870		880		8100	
	P TX2	S 832	P TX3	S 842	P TX3	S 852	P TX3	S 860	P HEL	S 870	P HEL	S 880	P HEL	S 8100
10	2.000	5.17	2.000	5.17	2.000	5.13	2.000	5	—	—	—	—	—	—
15	2.000	7.5	2.000	7.5	2.000	7.5	2.000	7.5	—	—	—	—	—	—
20	2.000	10	2.000	10	2.000	10	2.000	10	—	—	—	—	—	—
25	5.000	5.17	5.167	5.17	5.167	5.13	5.167	5	5.083	5.13	4.923	5.13	5.077	5.13
30	2.913	10	2.000	15	2.000	15	2.000	15	—	—	—	—	—	—
37.5	—	—	—	—	—	—	—	—	5.083	7.40	4.923	7.40	5.077	7.33
40	4.000	10	4.045	10	4.045	10	4.045	10	—	—	—	—	—	—
45	2.913	15	2.964	15	2.964	15	2.964	15	—	—	—	—	—	—
50	5.000	10	5.167	10	5.167	10	5.167	10	5.083	9.75	4.923	9.75	5.077	9.75
60	4.000	15	4.045	15	4.045	15	4.045	15	—	—	—	—	—	—
75	5.000	15	7.538	10	5.167	15	5.167	15	5.083	14.67	4.923	14.67	5.077	14.67
80	4.000	20	4.045	20	4.043	20	4.045	20	—	—	—	—	—	—
100	4.000	25	5.167	20	5.167	20	5.167	20	5.083	20.50	4.923	20.50	5.077	20.50
125	5.000	25	5.167	25	5.167	25	5.167	25	—	—	—	—	—	—
138	—	—	—	—	—	—	—	—	9.414	14.67	8.908	14.67	9.492	14.67
150	5.000	30	7.538	20	7.538	20	7.538	20	5.083	29.50	4.923	29.50	5.077	29.50
185	—	—	—	—	—	—	—	—	9.414	20.50	8.908	20.50	9.492	20.50
200	5.000	40	5.167	40	5.167	40	5.167	40	5.083	40.00	4.923	40.00	5.077	40.00
210	—	—	—	—	—	—	—	—	14.040	14.67	14.030	14.67	14.470	14.67
250	5.000	50	5.167	50	5.167	50	5.167	50	25.030	9.75	25.270	9.75	24.990	9.75
280	—	—	—	—	—	—	—	—	14.040	20.50	14.030	20.50	14.470	20.50
300	5.000	60	7.538	40	7.538	40	7.538	40	5.083	60.00	4.923	60.00	5.077	60.00
400	7.182	60	5.167	80	5.167	80	5.167	80	—	—	—	—	—	—
500	5.000	100	5.167	100	5.167	100	5.167	100	—	—	—	—	—	—
600	7.182	80	7.538	80	7.538	80	7.538	80	—	—	—	—	—	—

Note: Exact ratios are listed. P = Primary stage reducer ratio S = Secondary stage reducer ratio
 * Actual ratio combinations supplied by Factory may vary from above depending on application and manufacturing requirements.
 For exact total ratio of the double reduction package, multiply "P" by "S" ratio.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



GR Series Dimensions

Styles: DXMQ, DXM, DX

CAST IRON
GR SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

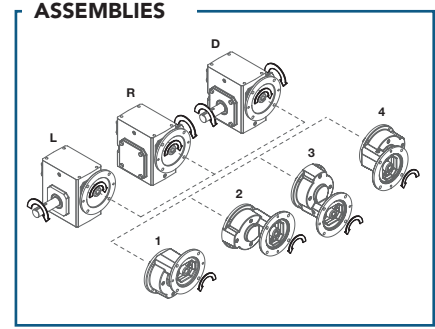
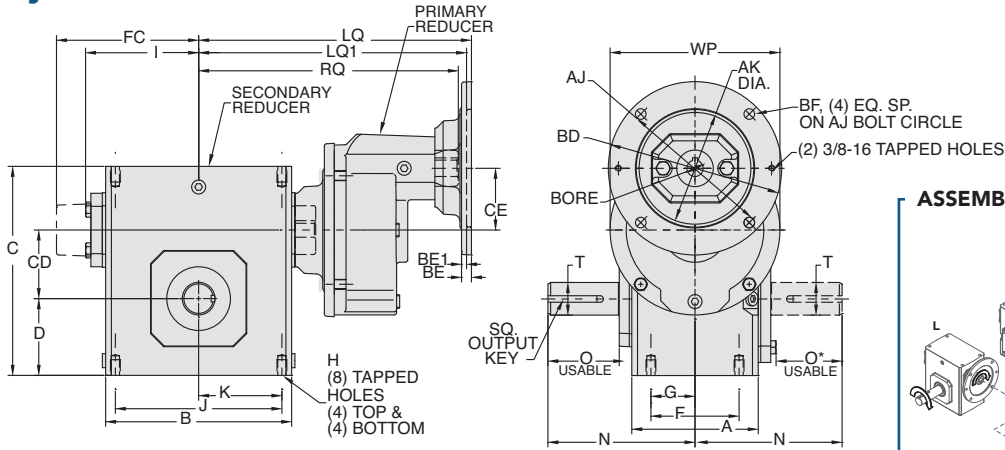
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

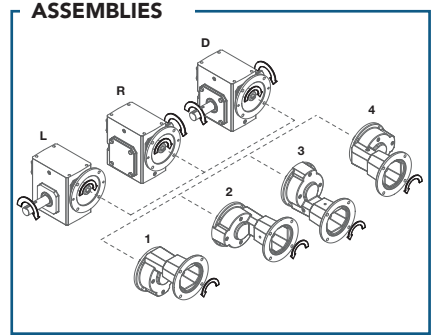
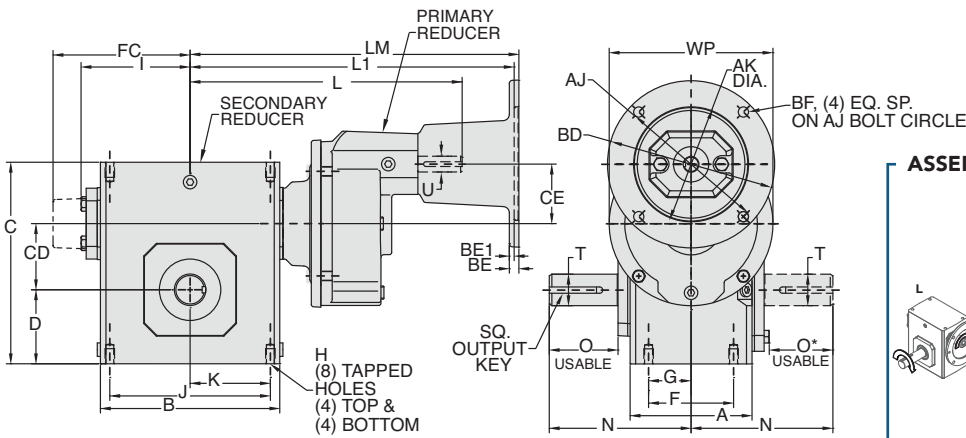
Ratio Multipliers

Accessories and
Additional Capabilities

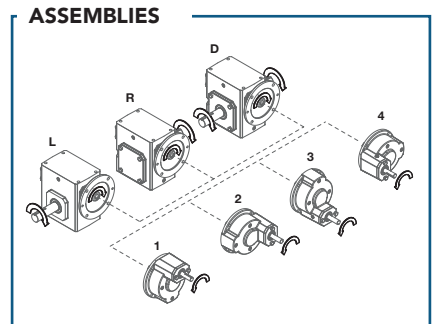
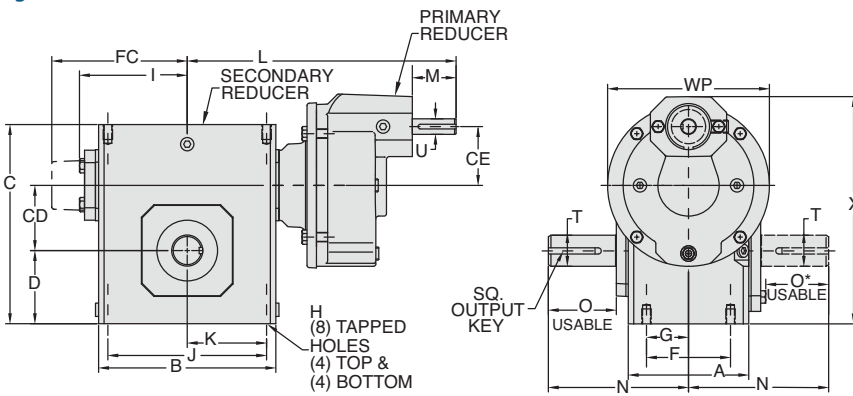
Style DXMQ



Style DXM



Style DX



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



STYLE DXMQ, DXM, DX DIMENSIONS (Inches)

Size	A	B	C	CD	CE	D	F	FC▼	G	H		I	J	K	L	M	N	O	O*	WP	X	T	U	Input Key**	Output Key
										Tap Size	Depth											+0.000 -0.0015	+0.000 -0.0015		
GR813	2.82	3.80	4.66	1.33	1.91	1.72	2.00	N/A	1.00	5/16-18 UNC	0.50	2.61	3.25	1.63	N/A	N/A	4.00	2.16	1.94	5.00	6.16	0.625	N/A	N/A	3/16 X 1.50
GR815	3.44	4.88	5.38	1.54	1.91	1.91	2.75	N/A	1.38	5/16-18 UNC	0.63	3.14	4.19	2.09	N/A	N/A	4.31	2.11	1.90	5.00	6.56	0.750	N/A	N/A	3/16 X 1.50
GR818	3.56	5.06	5.75	1.75	1.91	2.06	2.75	N/A	1.38	5/16-18 UNC	0.63	3.24	4.19	2.09	N/A	N/A	4.31	2.05	1.84	5.00	6.92	0.875	N/A	N/A	3/16 X 1.38
GR821	3.81	5.80	6.38	2.06	1.91	2.28	▲	N/A	1.44	3/8-16 UNC	0.63	3.61	▲	2.50	N/A	N/A	4.68	2.29	2.08	5.00	7.45	1.000	N/A	N/A	1/4 X 1.44
GR824	4.06	6.12	6.94	2.38	2.36	2.50	2.88	N/A	1.44	3/8-16 UNC	0.69	3.77	5.00	2.50	10.24	1.76	5.14	2.66	2.44	6.50	8.45	1.125	0.625	3/16 x 1.38	1/4 X 1.75
GR826	4.84	7.12	8.00	2.63	2.36	2.94	3.38	N/A	1.69	3/8-16 UNC	0.69	4.34	6.38	3.19	10.80	1.76	5.63	2.73	2.52	6.50	9.13	▲	0.625	3/16 x 1.38	1/4 X 1.75
GR830	5.25	8.12	8.88	3.00	2.36	3.25	4.00	N/A	2.00	7/16-14 UNC	0.88	4.84	7.00	3.50	11.56	3.61	6.75	3.60	3.36	6.50	9.82	1.250	0.625	3/16 x 1.38	1/4 X 1.75
GR832	5.75	8.50	9.38	3.25	2.36	3.50	4.00	N/A	2.00	7/16-14 UNC	0.88	5.02	7.50	3.75	11.75	3.61	7.06	3.66	3.42	6.50	10.32	▲	0.625	3/16 x 1.38	3/8 X 2.25
GR842	6.13	10.25	11.38	4.25	2.87	4.44	5.00	N/A	2.50	5/8-11 UNC	1.00	6.10	8.50	4.25	17.48	3.61	8.12	4.50	4.21	8.50	13.31	1.875	1.250	1/4 x 2.00	1/2 X 3.06
GR852	7.19	13.00	14.00	5.25	2.87	5.12	5.81	N/A	2.91	5/8-11 UNC	1.25	7.50	11.00	5.50	18.88	3.61	9.06	4.78	4.53	8.50	14.99	2.000	1.250	1/4 x 2.00	1/2 X 3.50
GR860	8.13	14.25	16.50	6.00	2.87	6.50	6.38	10.24	3.19	5/8-11 UNC	1.00	N/A	12.75	6.38	19.60	3.61	10.00	4.65	4.65	8.50	17.12	2.500	1.250	1/4 x 2.00	5/8 X 4.00
GR870★	7.63	14.88	18.91	7.00	3.49	7.59	5.50	10.63	2.75	1-8 UNC	1.56	N/A	12.50	6.25	19.68	2.50	11.76	5.65	5.65	10.36	21.84	2.750	1.125	1/4 x 2.25**	5/8 x 4.00**
GR880★	8.63	17.00	20.96	8.00	4.07	8.86	6.50	11.93	3.25	1-8 UNC	1.66	N/A	14.25	7.13	21.30	3.00	12.25	5.98	5.98	11.64	25.93	3.000	1.375	5/16 x 2.75**	3/4 x 4.50**
GR8100★	9.53	20.88	25.47	10.00	4.90	10.36	6.88	14.34	3.44	1-1/4 -7 UNC	2.04	N/A	17.75	8.88	25.78	3.50	14.75	6.76	6.76	13.85	31.35	3.750	1.500	3/8 x 3.25**	7/8 x 5.00**

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	(F)3.00" x (J)4.75"	Identical	Identical	✓		GRG
		(F)2.88" x (J)5.00"					GRL
826	1.250"	Identical	Identical	Identical	✓		GRG
	1.125"						GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✓		GRG
	1.375"		5/16 x 2.63				GRL

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/ 140TC	180TC/ 210TC	L1 250TC	LQ 48CZ/ 56C/140TC	180TC	LQ1 210TC	250TC	RQ			
								48CZ/ 56C/140TC	180TC	210TC	250TC
GR813	N/A	N/A	N/A	8.29	N/A	N/A	N/A	7.79	N/A	N/A	N/A
GR815	N/A	N/A	N/A	8.82	N/A	N/A	N/A	8.32	N/A	N/A	N/A
GR818	N/A	N/A	N/A	8.92	N/A	N/A	N/A	8.42	N/A	N/A	N/A
GR821*	N/A	N/A	N/A	9.29	N/A	N/A	N/A	8.79	N/A	N/A	N/A
GR824	12.49	N/A	N/A	9.88■	N/A	N/A	N/A	9.38■	N/A	N/A	N/A
GR826*	13.05	N/A	N/A	10.44■	N/A	N/A	N/A	9.94■	N/A	N/A	N/A
GR830	13.55	N/A	N/A	11.20■	N/A	N/A	N/A	10.70■	N/A	N/A	N/A
GR832*	13.74	N/A	N/A	11.39■	N/A	N/A	N/A	10.89■	N/A	N/A	N/A
GR842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	14.86
GR852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	16.26
GR860	N/A	22.78	22.78	N/A	17.09	17.09	17.65	N/A	16.58	16.58	16.98

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

- * Applies to double output shaft
- ** Key not provided with gear reducer. Keyway dimension shown.
- ◆ Keyway width by depth
- 48CZ not available
- ※ Style DX and DXM only
- ★ Sizes 870-8100 have an input shaft which is not aligned with centerline of primary stage reducer.

- ◆ Metric IEC B5 input flange options are available only on quill input styles
- ✳ Dimensions same for GRG and GRL Series
- ▼ Sizes 860-8100 have extended cap on input cover. Dimension FC is to back face of the cap.

⚠ WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

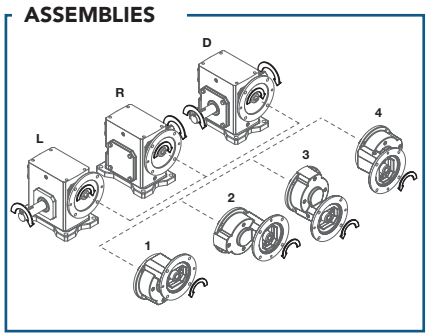
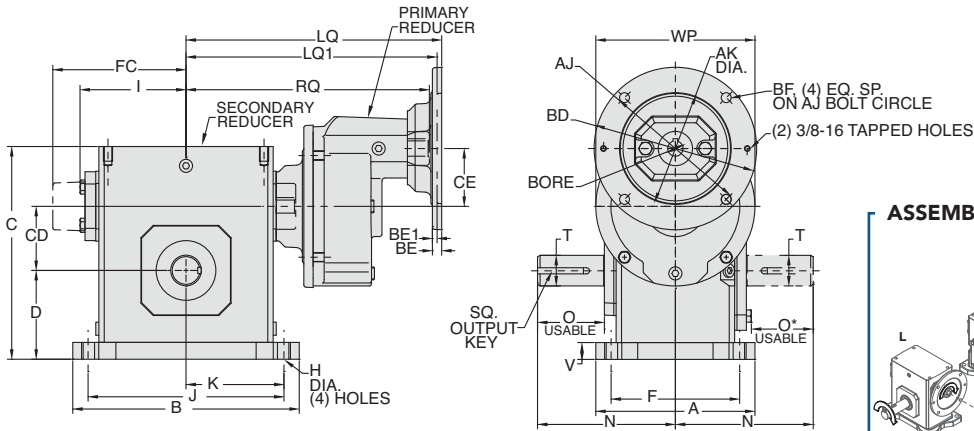


GR Series Dimensions

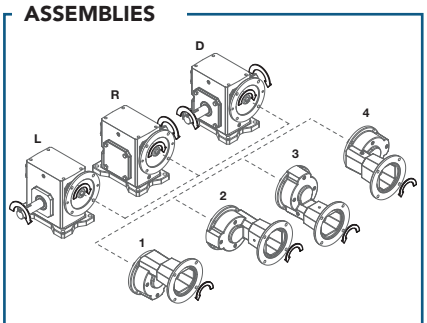
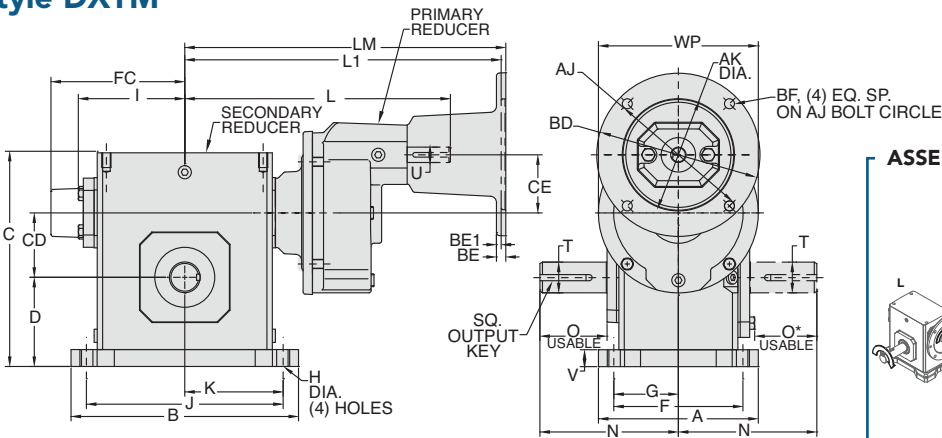
Styles: DXTMQ, DXTM, DXT

CAST IRON
GR SERIES

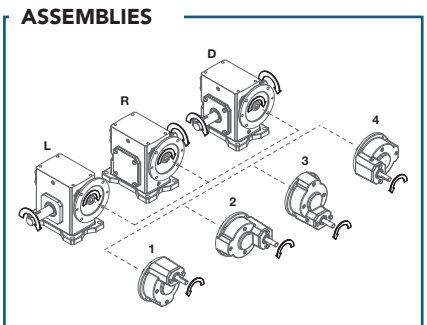
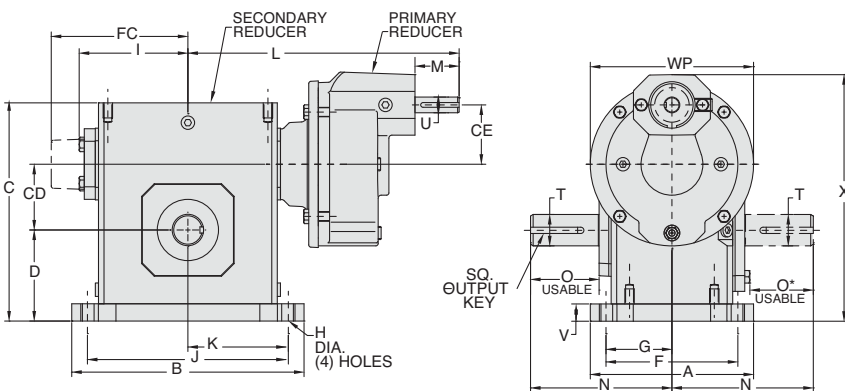
Style DXTMQ



Style DXTM



Style DXT



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



STYLE DXTMQ, DXTM, DXT DIMENSIONS (Inches)

Size	A	B	C	CD	CE	D	F	FC▼	G	H	I	J	K	L	M	N	O	O*	V	WP	X	T +0.000 -0.0015	U +0.000 -0.0015	Input Key*‡	Output Key
GR813	4.24	5.37	5.19	1.33	1.91	2.25	3.31	N/A	1.66	0.34	2.61	4.37	2.19	N/A	N/A	4.00	2.16	1.94	0.53	5.00	6.69	0.625	N/A	N/A	3/16 X 1.50
GR815	5.56	6.50	5.97	1.54	1.91	2.50	4.31	N/A	2.16	0.41	3.14	5.25	2.63	N/A	N/A	4.31	2.11	1.90	0.59	5.00	7.15	0.750	N/A	N/A	3/16 X 1.50
GR818	5.75	6.99	6.44	1.75	1.91	2.75	4.50	N/A	2.25	0.41	3.24	5.75	2.88	N/A	N/A	4.31	2.05	1.84	0.69	5.00	7.61	0.875	N/A	N/A	3/16 X 1.38
GR821	6.00	7.69	7.09	2.06	1.91	3.00	4.69	N/A	2.34	0.47	3.61	6.38	3.19	N/A	N/A	4.68	2.29	2.08	0.72	5.00	8.17	1.000	N/A	N/A	1/4 X 1.44
GR824	6.19	8.37	7.69	2.38	2.36	3.25	4.88	N/A	2.44	0.49	3.77	7.06	3.53	10.24	1.76	5.14	2.66	2.44	0.75	6.50	9.20	1.125	0.625	3/16 x 1.38	1/4 X 1.75
GR826	6.50	9.25	8.75	2.63	2.36	3.69	5.25	N/A	2.63	0.53	4.34	8.00	4.00	10.80	1.76	5.63	2.73	2.52	0.75	6.50	9.88	▲	0.625	3/16 x 1.38	1/4 X 1.75
GR830	7.50	10.00	9.63	3.00	2.36	4.00	5.88	N/A	2.94	0.53	4.84	8.44	4.22	11.56	3.61	6.75	3.60	3.36	0.75	6.50	10.57	1.250	0.625	3/16 x 1.38	1/4 X 1.75
GR832	7.75	11.12	10.25	3.25	2.36	4.38	6.13	N/A	3.06	0.53	5.02	9.50	4.75	11.75	3.61	7.06	3.66	3.42	0.81	6.50	11.20	▲	0.625	3/16 x 1.38	3/8 X 2.25
GR842	9.75	13.24	12.38	4.25	2.87	5.44	7.63	N/A	3.81	0.66	6.10	11.12	5.56	17.48	3.61	8.12	4.50	4.21	1.00	8.50	14.31	1.875	1.250	1/4 x 2.00	1/2 X 3.06
GR852	10.50	16.24	15.13	5.25	2.87	6.25	8.38	N/A	4.19	0.78	7.50	14.12	7.06	18.88	3.61	9.06	4.78	4.53	1.13	8.50	16.12	2.000	1.250	1/4 x 2.00	1/2 X 3.50
GR860	12.00	18.99	17.75	6.00	2.87	7.75	9.50	10.24	4.75	0.91	N/A	16.49	8.25	19.60	3.61	10.00	4.65	4.65	1.25	8.50	18.37	2.500	1.250	1/4 x 2.00	5/8 X 4.00
GR870★	13.38	15.38	20.33	7.00	3.49	9.00	11.25	10.63	5.63	1.13	N/A	13.00	6.50	19.68	2.50	11.76	5.65	5.65	1.42	10.36	23.25	2.750	1.125	1/4 x 2.25**	5/8 x 4.00**
GR880★	13.50	17.37	22.61	8.00	4.07	10.50	11.50	11.93	5.75	1.13	N/A	14.75	7.38	21.30	3.00	12.25	5.98	5.98	1.65	11.64	27.57	3.000	1.375	5/16 x 2.75**	3/4 x 4.50**
GR8100★	16.88	21.14	27.12	10.00	4.90	12.00	14.00	14.34	7.00	1.44	N/A	17.00	8.50	25.78	3.50	14.75	6.76	6.76	1.65	13.85	32.99	3.750	1.500	3/8 x 3.25**	7/8 x 5.00*

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical	Identical	Identical	✓	✓	GRG
							GRL
826	1.250"	Identical	Identical	Identical	✓	✓	GRG
	1.125"						GRL
832	1.500"	Identical	3/8 x 2.63 5/16 x 2.63	Identical	✓	✓	GRG
	1.375"						GRL

♠ If Accessory kit is removed, dimensions will vary. NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 212-213 (DXMQ, DXM, DX).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM	L1	250TC	LQ	180TC	LQ1	210TC	250TC	48CZ/	180TC	RQ	210TC	250TC
	56C/140TC			48CZ/56C/140TC									
GR813	N/A	N/A	N/A	8.29	N/A	N/A	N/A	N/A	7.79	N/A	N/A	N/A	N/A
GR815	N/A	N/A	N/A	8.82	N/A	N/A	N/A	N/A	8.32	N/A	N/A	N/A	N/A
GR818	N/A	N/A	N/A	8.92	N/A	N/A	N/A	N/A	8.42	N/A	N/A	N/A	N/A
GR821*	N/A	N/A	N/A	9.29	N/A	N/A	N/A	N/A	8.79	N/A	N/A	N/A	N/A
GR824	12.49	N/A	N/A	9.88■	N/A	N/A	N/A	N/A	9.38■	N/A	N/A	N/A	N/A
GR826*	13.05	N/A	N/A	10.44■	N/A	N/A	N/A	N/A	9.94■	N/A	N/A	N/A	N/A
GR830	13.55	N/A	N/A	11.20■	N/A	N/A	N/A	N/A	10.70■	N/A	N/A	N/A	N/A
GR832*	13.74	N/A	N/A	11.39■	N/A	N/A	N/A	N/A	10.89■	N/A	N/A	N/A	N/A
GR842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	14.86	14.86	14.86
GR852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	16.26	16.26	16.26
GR860	N/A	22.78	22.78	N/A	17.09	17.09	17.65	N/A	16.58	16.58	16.98	16.98	16.98

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

- * Applies to double output shaft
- ** Key not provided with gear reducer. Keyway dimension shown.
- ◆ Keyway width by depth
- 48CZ not available
- ※ Style DXT and DXTM only.
- ★ Sizes 870-8100 have an input shaft which is not aligned with centerline of primary stage reducer.

- ♣ Metric IEC B5 input flange options are available only on quill input styles.
- ✖ Dimensions same for GRG and GRL Series
- ▼ Sizes 860-8100 have extended cap on input cover. Dimension FC is to back face of the cap.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



GR Series Dimensions

Styles: DXUMQ, DXUM, DXU



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

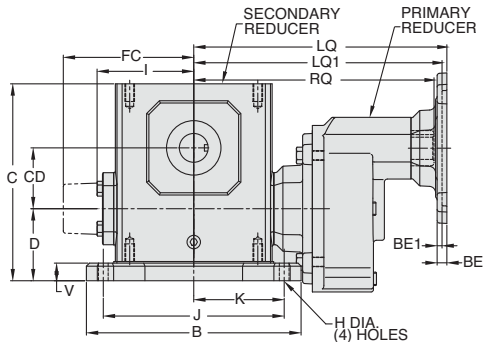
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

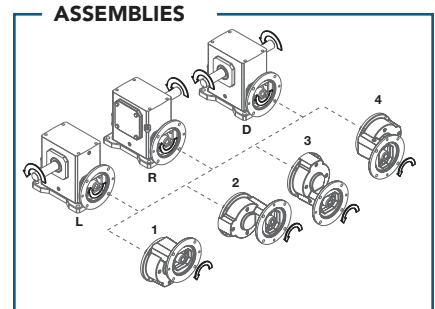
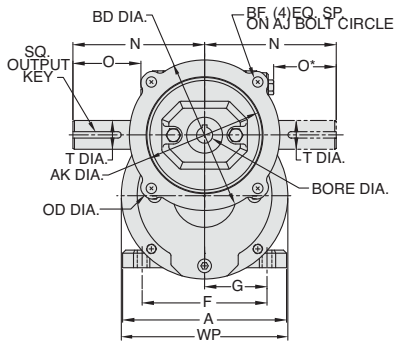
Ratio Multipliers

Accessories and
Additional Capabilities

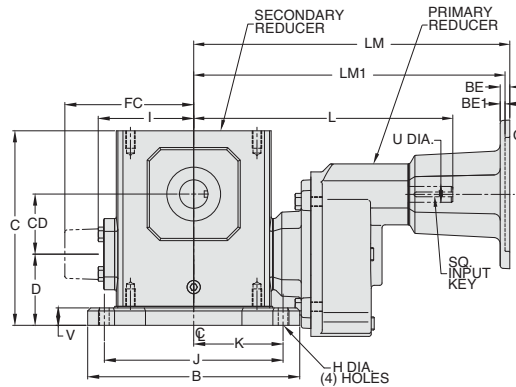
Style DXUMQ



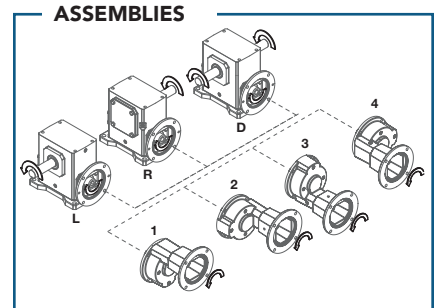
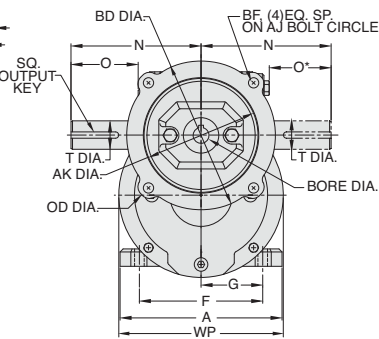
NOTE: PRIMARY MAY EXTEND BELOW BASE.



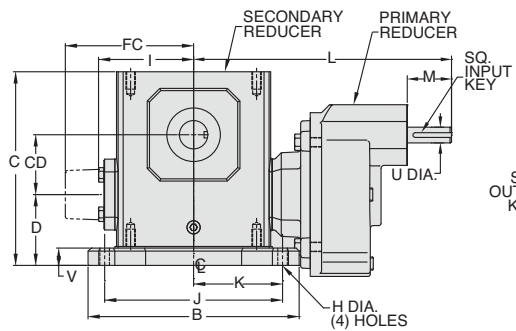
Style DXUM



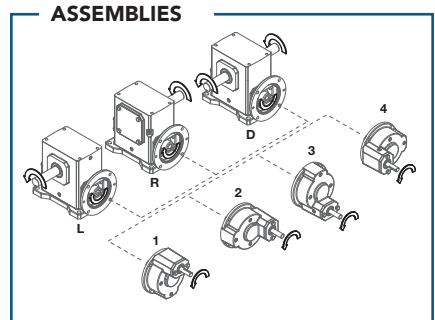
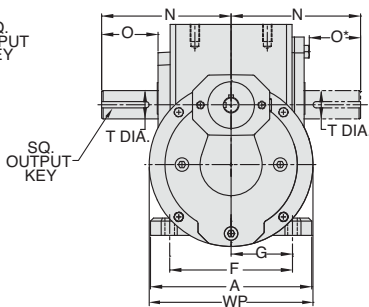
NOTE: PRIMARY MAY EXTEND BELOW BASE.



Style DXU



NOTE: PRIMARY MAY EXTEND BELOW BASE.



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



STYLE DXUMQ, DXUM, DXU DIMENSIONS (Inches)

Size	A	B	C±	CD	CE	D	F	FC▼	G	H	I	J	K	L	M	N	O	O*	V	WP	T +0.000 -0.0015	U +0.000 -0.0015	Input Key±	Output Key
GR813	4.24	5.37	5.19	1.33	1.91	2.14	3.31	N/A	1.66	.34	2.61	4.37	2.19	N/A	N/A	4.00	2.16	1.94	0.53	5.00	0.625	N/A	N/A	3/16 X 1.50
GR815	5.56	6.50	5.97	1.54	1.91	2.52	4.31	N/A	2.16	.41	3.14	5.25	2.63	N/A	N/A	4.31	2.11	1.90	0.59	5.00	0.750	N/A	N/A	3/16 X 1.50
GR818	5.75	6.99	6.44	1.75	1.91	2.63	4.50	N/A	2.25	.41	3.24	5.75	2.88	N/A	N/A	4.31	2.05	1.84	0.69	5.00	0.875	N/A	N/A	3/16 X 1.38
GR821	6.00	7.69	7.09	2.06	1.91	2.75	4.69	N/A	2.34	.47	3.61	6.38	3.19	N/A	N/A	4.68	2.29	2.08	0.72	5.00	1.000	N/A	N/A	1/4 X 1.44
GR824	6.19	8.37	7.69	2.38	2.36	2.81	4.88	N/A	2.44	.49	3.77	7.06	3.53	10.24	1.76	5.14	2.66	2.44	0.75	6.50	1.125	0.625	3/16 x 1.38	1/4 X 1.75
GR826	6.50	9.25	8.75	2.63	2.36	3.19	5.25	N/A	2.63	.53	4.34	8.00	4.00	10.80	1.76	5.63	2.73	2.52	0.75	6.50	▲	0.625	3/16 x 1.38	1/4 X 1.75
GR830	7.50	10.00	9.63	3.00	2.36	3.38	5.88	N/A	2.94	.53	4.84	8.44	4.22	11.56	3.61	6.75	3.60	3.36	0.75	6.50	1.250	0.625	3/16 x 1.38	1/4 X 1.75
GR832	7.75	11.12	10.25	3.25	2.36	3.50	6.13	N/A	3.06	.53	5.02	9.50	4.75	11.75	3.61	7.06	3.66	3.42	0.81	6.50	▲	0.625	3/16 x 1.38	3/8 X 2.25
GR842	9.75	13.24	12.38	4.25	2.87	3.69	7.63	N/A	3.81	.66	6.10	11.12	5.56	17.48	3.61	8.12	4.50	4.21	1.00	8.50	1.875	1.250	1/4 x 2.00	1/2 X 3.06
GR852	10.50	16.24	15.13	5.25	2.87	4.76	8.38	N/A	4.19	.78	7.50	14.12	7.06	18.88	3.61	9.06	4.78	4.53	1.13	8.50	2.000	1.250	1/4 x 2.00	1/2 X 3.50
GR860	12.00	18.99	17.75	6.00	2.87	5.25	9.50	10.24	4.75	.91	N/A	16.49	8.25	19.60	3.61	10.00	4.65	4.65	1.25	8.50	2.500	1.250	1/4 x 2.00	5/8 X 4.00
GR870★	13.38	15.38	20.33	7.00	3.49	5.74	11.25	10.63	5.63	1.13	N/A	13.00	6.50	19.68	2.50	11.76	5.65	5.65	1.42	10.36	2.750	1.125	1/4 x 2.25**	5/8 x 4.00**
GR880★	13.50	17.37	22.61	8.00	4.07	5.75	11.50	11.93	5.75	1.13	N/A	14.75	7.38	21.30	3.00	12.25	5.98	5.98	1.65	11.64	3.000	1.375	5/16 x 2.75**	3/4 x 4.50**
GR8100★	16.88	21.14	27.12	10.00	4.90	6.76	14.00	14.34	7.00	1.44	N/A	17.00	8.50	25.78	3.50	14.75	6.76	6.76	1.65	13.85	3.750	1.500	3/8 x 3.25**	7/8 x 5.00**

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical◊	Identical	Identical	✓	✓	GRG
							GRL
826	1.250"	Identical	Identical	Identical	✓	✓	GRG
	1.125"						GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✓	✓	GRG
	1.375"		5/16 x 2.63				GRL

◊ If Accessory kit is removed, dimensions will vary. NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 212-213 (DXMQ, DXM, DX).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	180TC/210TC	L1 250TC	LQ 48CZ/56C/140TC	180TC	LQ1 210TC	250TC	48CZ/56C/140TC	180TC	RQ 210TC	250TC
GR813	N/A	N/A	N/A	8.29	N/A	N/A	N/A	7.79	N/A	N/A	N/A
GR815	N/A	N/A	N/A	8.82	N/A	N/A	N/A	8.32	N/A	N/A	N/A
GR818	N/A	N/A	N/A	8.92	N/A	N/A	N/A	8.42	N/A	N/A	N/A
GR821*	N/A	N/A	N/A	9.29	N/A	N/A	N/A	8.79	N/A	N/A	N/A
GR824	12.49	N/A	N/A	9.88■	N/A	N/A	N/A	9.38■	N/A	N/A	N/A
GR826*	13.05	N/A	N/A	10.44■	N/A	N/A	N/A	9.94■	N/A	N/A	N/A
GR830	13.55	N/A	N/A	11.20■	N/A	N/A	N/A	10.70■	N/A	N/A	N/A
GR832*	13.74	N/A	N/A	11.39■	N/A	N/A	N/A	10.89■	N/A	N/A	N/A
GR842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	14.86
GR852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	16.26
GR860	N/A	22.78	22.78	N/A	17.09	17.09	17.65	N/A	16.58	16.58	16.98

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF⊕
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

- * Applies to double output shaft
- ** Key not provided with gear reducer. Keyway dimension shown.
- ◆ Keyway width by depth
- 48CZ not available
- ⊕ Style DXU and DXUM only.
- ★ Sizes 870-8100 have an input shaft which is not aligned with centerline of primary stage reducer.

- ⊕ Primary stage may extend below U-base.
- ★ Dimensions same for GRG and GRL Series
- ▼ Sizes 860-8100 have extended cap on input cover. Dimension FC is to back face of the cap.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

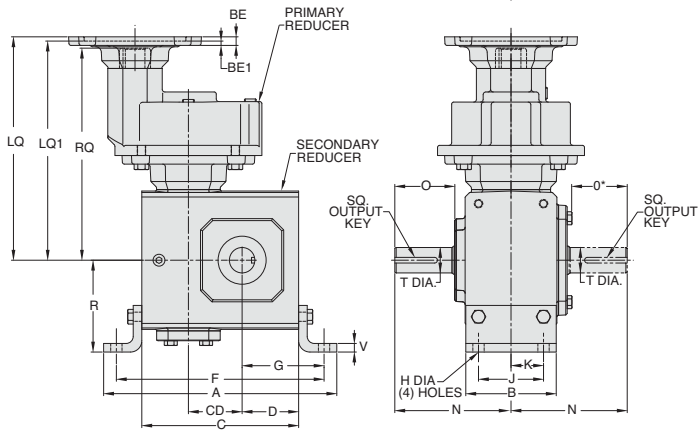
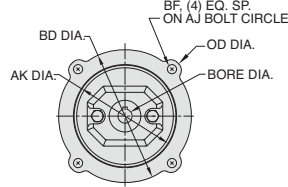


GR Series Dimensions

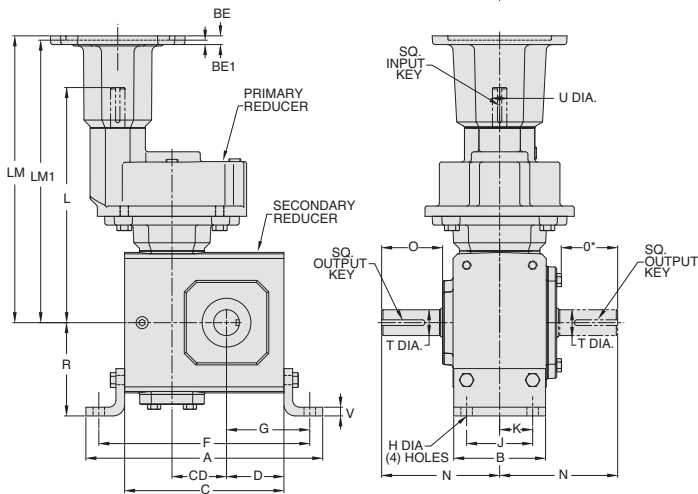
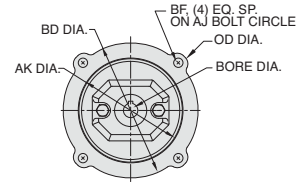
Styles: DXJMQ, DXJM, DXJ

CAST IRON
GR SERIES

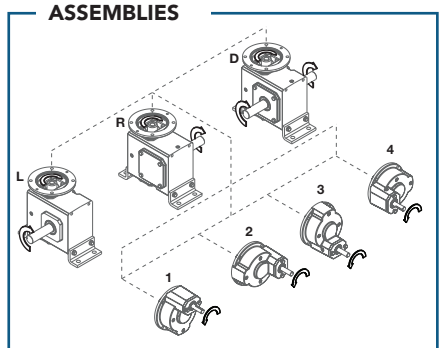
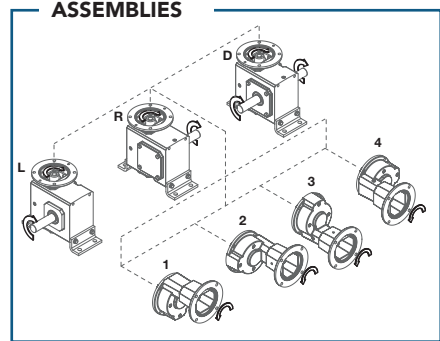
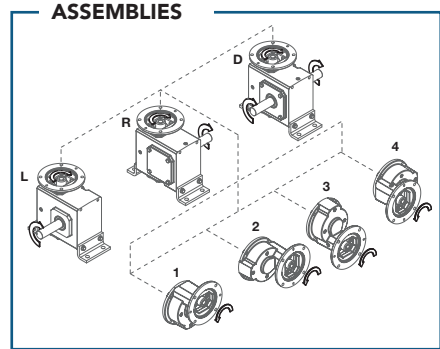
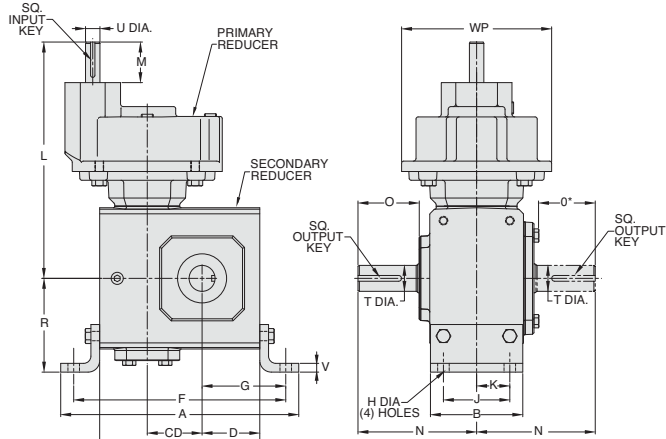
Style DXJMQ



Style DXJM



Style DXJ



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE DXJMQ, DXJM, DXJ DIMENSIONS (Inches)

Size	A	B	C	CD	CE	D	F	G	H	J	K	L	M	N	O	O*	R	V	WP	T +0.000 -0.0015	U +0.000 -0.0015	Input Key*	Output Key
GR813	7.42	2.75	4.66	1.33	1.91	1.72	6.42	2.60	.38	2.00	1.00	N/A	N/A	4.00	2.16	1.94	2.94	0.25	5.00	0.625	N/A	N/A	3/16 X 1.50
GR815	8.14	3.50	5.38	1.54	1.91	1.91	7.08	2.76	.44	2.75	1.38	N/A	N/A	4.31	2.11	1.90	3.50	0.25	5.00	0.750	N/A	N/A	3/16 X 1.50
GR818	8.51	3.50	5.75	1.75	1.91	2.06	7.45 - 7.63	3.00	.44 slot	2.50 - 2.75	1.25 - 1.38	N/A	N/A	4.31	2.05	1.84	3.50	0.25	5.00	0.875	N/A	N/A	3/16 X 1.38
GR821	9.76	4.00	6.38	2.06	1.91	2.28	8.63	3.40	.56 slot	2.63 - 2.75	1.31-1.38	N/A	N/A	4.68	2.29	2.08	4.01	0.38	5.00	1.000	N/A	N/A	1/4 X 1.44
GR824	10.31	4.00	6.94	2.38	2.36	2.50	9.19	3.63	.69	2.88	1.44	10.24	1.76	5.14	2.66	2.44	4.06	0.38	6.50	1.125	0.625	3/16 x 1.38	1/4 X 1.75
GR826	11.62	5.00	8.00	2.63	2.36	2.94	10.38	4.13	.56	3.38	1.69	10.80	1.76	5.63	2.73	2.52	5.00	0.38	6.50	▲	0.625	3/16 x 1.38	1/4 X 1.75
GR830	12.64	6.00	8.88	3.00	2.36	3.25	11.38	4.50	.56	3.88	1.94	11.56	3.61	6.75	3.60	3.36	5.62	0.38	6.50	1.250	0.625	3/16 x 1.38	1/4 X 1.75
GR832	13.14	6.00	9.38	3.25	2.36	3.50	11.88	4.75	.56	3.88	1.94	11.75	3.61	7.06	3.66	3.42	5.63	0.38	6.50	▲	0.625	3/16 x 1.38	3/8 X 2.25
GR842	16.38	7.00	11.38	4.25	2.87	4.44	14.88	6.19	.69	5.00	2.50	17.48	3.61	8.12	4.50	4.21	6.50	0.50	8.50	1.875	1.250	1/4 x 2.00	1/2 X 3.06
GR852	19.00	7.00	14.00	5.25	2.87	5.12	17.50	6.87	.69	5.81	2.91	18.88	3.61	9.06	4.78	4.53	7.75	0.50	8.50	2.000	1.250	1/4 x 2.00	1/2 X 3.50

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical	Identical	Identical	✓	✓	GRG
							GRL
826	1.250"	Identical	Identical	Identical	✓	✓	GRG
	1.125"						GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✓	✓	GRG
	1.375"		5/16 x 2.63				GRL

◊ If Accessory kit is removed, dimensions will vary.

NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 212-213 (DXMQ, DXM, DX).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/ 140TC	180TC/ 210TC	L1 250TC	LQ 48CZ/ 56C/140TC	180TC	LQ1 210TC	250TC	48CZ/ 56C/140TC	180TC	RQ 210TC	250TC
GR813	N/A	N/A	N/A	8.29	N/A	N/A	N/A	7.79	N/A	N/A	N/A
GR815	N/A	N/A	N/A	8.82	N/A	N/A	N/A	8.32	N/A	N/A	N/A
GR818	N/A	N/A	N/A	8.92	N/A	N/A	N/A	8.42	N/A	N/A	N/A
GR821*	N/A	N/A	N/A	9.29	N/A	N/A	N/A	8.79	N/A	N/A	N/A
GR824	12.49	N/A	N/A	9.88■	N/A	N/A	N/A	9.38■	N/A	N/A	N/A
GR826*	13.05	N/A	N/A	10.44■	N/A	N/A	N/A	9.94■	N/A	N/A	N/A
GR830	13.55	N/A	N/A	11.20■	N/A	N/A	N/A	10.70■	N/A	N/A	N/A
GR832*	13.74	N/A	N/A	11.39■	N/A	N/A	N/A	10.89■	N/A	N/A	N/A
GR842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	14.86
GR852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	16.26

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

- * Applies to double output shaft
- ◆ Keyway width by depth
- 48CZ not available
- ※ Style DXJ and DXJM only.

- ◆ Metric IEC B5 input flange options are available only on quill input styles.
- ※ Dimensions same for GRG and GRL Series



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.



GR Series Dimensions

Styles: DXV_MQ, DXV_M, DXV_

CAST IRON
GR SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

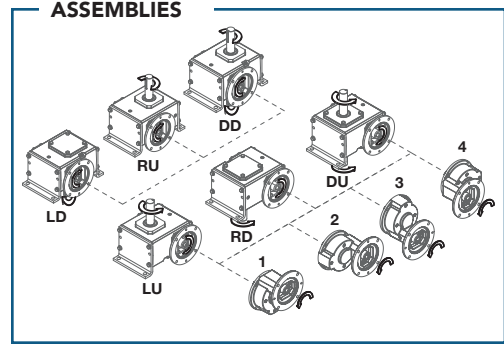
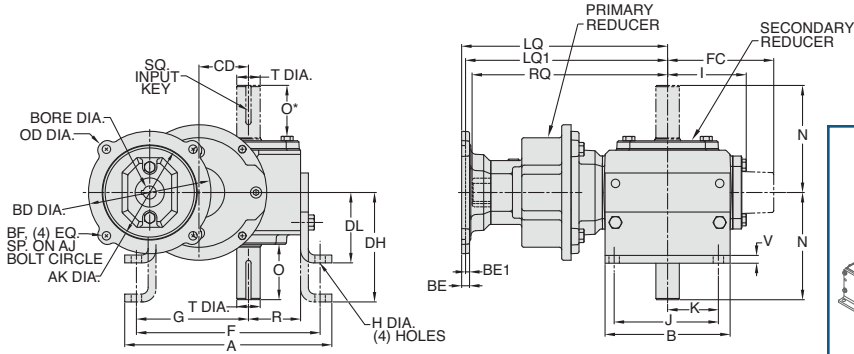
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

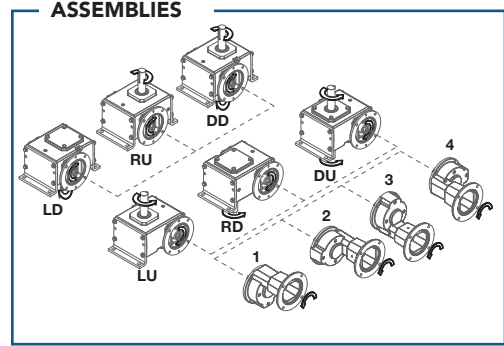
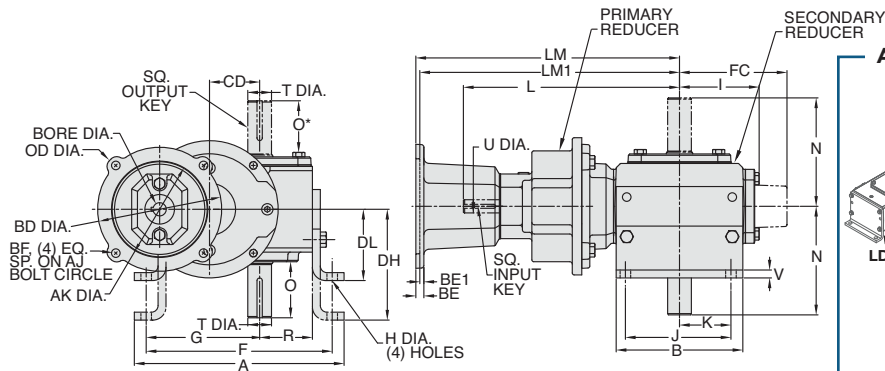
Ratio Multipliers

Accessories and
Additional Capabilities

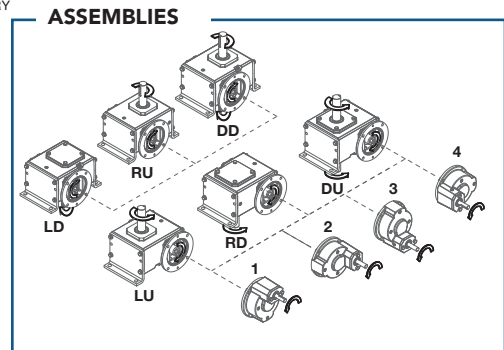
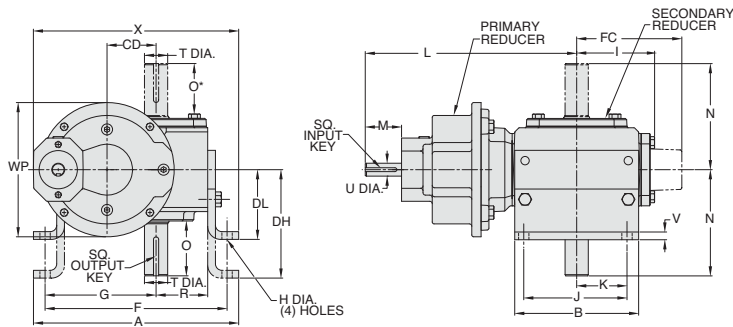
Style DXV (L or H) MQ



Style DXV (L or H) M



Style DXV (L or H)



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



STYLE DXV (L or H) MQ, DXV (L or H) M, DXV (L or H) DIMENSIONS (Inches)

Size	A	B	CD	CE	DL	DH	F	FC▼	G	H	I	J	K	L	M	N	O	O*	R	V	WP	X	T +0.000 -0.0015	U +0.000 -0.0015	Input Key**	Output Key
GR813	7.26	4.00	1.33	1.91	2.63	3.56	6.50	N/A	3.86	0.38	2.61	3.00	1.50	N/A	N/A	4.00	2.16	1.94	1.72	0.25	5.00	7.46	0.625	N/A	N/A	3/16 X 1.50
GR815	7.88	5.00	1.54	1.91	3.00	4.38	7.00	N/A	4.28	0.44	3.14	4.00	2.00	N/A	N/A	4.31	2.11	1.90	1.91	0.25	5.00	7.81	0.750	N/A	N/A	3/16 X 1.50
GR818	8.25	5.00	1.75	1.91	3.00	4.38	7.37	N/A	4.50	0.44	3.24	4.00	2.00	N/A	N/A	4.31	2.05	1.84	2.06	0.25	5.00	8.17	0.875	N/A	N/A	3/16 X 1.38
GR821	9.38	6.00	2.06	1.91	3.13	4.88	8.38	N/A	5.09	0.50	3.61	4.88	2.44	N/A	N/A	4.68	2.29	2.08	2.28	0.38	5.00	8.95	1.000	N/A	N/A	1/4 X 1.44
GR824	9.94	6.00	2.38	2.36	3.38	5.25	8.81	N/A	5.44	0.50	3.77	4.88	2.44	10.24	1.76	5.14	2.66	2.44	2.50	0.38	6.50	9.95	1.125	0.625	3/16 x 1.38	1/4 X 1.75
GR826	11.24	7.00	2.63	2.36	3.63	5.56	10.12	N/A	6.12	0.56	4.34	5.75	2.88	10.80	1.76	5.63	2.73	2.52	2.94	0.38	6.50	10.75	▲	0.625	3/16 x 1.38	1/4 X 1.75
GR830	12.50	8.00	3.00	2.36	3.94	5.88	11.13	N/A	6.75	0.56	4.84	6.00	3.00	11.56	3.61	6.75	3.60	3.36	3.25	0.38	6.50	11.63	1.250	0.625	3/16 x 1.38	1/4 X 1.75
GR832	13.00	8.50	3.25	2.36	4.69	6.25	11.88	N/A	7.13	0.56	5.02	6.13	3.06	11.75	3.61	7.06	3.66	3.42	3.50	0.38	6.50	12.13	▲	0.625	3/16 x 1.38	3/8 X 2.25
GR842	16.26	10.00	4.25	2.87	5.00	7.50	14.88	N/A	8.69	0.69	6.10	7.88	3.94	17.48	3.61	8.12	4.50	4.21	4.44	0.50	8.50	15.75	1.875	1.250	1/4 x 2.00	1/2 X 3.06
GR852	19.62	13.00	5.25	2.87	5.16	9.16	18.00	N/A	10.88	0.78	7.50	10.00	5.00	18.88	3.61	9.06	4.78	4.53	5.12	0.50	8.50	17.80	2.000	1.250	1/4 x 2.00	1/2 X 3.50
GR860	23.26	14.75	6.00	2.87	7.31	9.63	20.88	10.24	12.19	0.91	N/A	11.76	5.88	19.60	3.61	10.00	4.65	4.65	6.50	0.50	8.50	20.50	2.500	1.250	1/4 x 2.00	5/8 X 4.00
GR870★	26.91	14.88	7.00	3.49	7.00	N/A	23.99	10.63	13.87	1.13	N/A	12.50	6.25	19.68	2.50	11.76	5.65	5.65	7.59	0.75	10.36	25.84	2.750	1.125	1/4 x 2.25**	5/8 x 4.00**
GR880★	28.96	17.00	8.00	4.07	8.00	N/A	25.50	11.93	14.38	1.13	N/A	14.00	7.00	21.30	3.00	12.25	5.98	5.98	8.86	0.75	11.64	29.93	3.000	1.375	5/16 x 2.75**	3/4 x 4.50**
GR8100★	37.47	20.88	10.00	4.90	9.00	N/A	30.75	14.34	17.76	1.44	N/A	17.75	8.88	25.78	3.50	14.75	6.76	6.76	10.36	1.00	13.85	37.35	3.750	1.500	3/8 x 3.25**	7/8 x 5.00**

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical◊	Identical	Identical		GRL	GRG
826	1.250" 1.125"	Identical	Identical	Identical		GRL	GRG
832	1.500" 1.375"	Identical	3/8 x 2.63 5/16 x 2.63	Identical		GRL	GRG

◊ If Accessory kit is removed, dimensions will vary.

NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 212-213 (DXMQ, DXM, DX).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/ 140TC	180TC/ 210TC	L1 250TC	LQ 48CZ/ 56C/140TC	180TC	LQ1 210TC	250TC	48CZ/ 56C/140TC	180TC	RQ 210TC	250TC
GR813	N/A	N/A	N/A	8.29	N/A	N/A	N/A	7.79	N/A	N/A	N/A
GR815	N/A	N/A	N/A	8.82	N/A	N/A	N/A	8.32	N/A	N/A	N/A
GR818	N/A	N/A	N/A	8.92	N/A	N/A	N/A	8.42	N/A	N/A	N/A
GR821*	N/A	N/A	N/A	9.29	N/A	N/A	N/A	8.79	N/A	N/A	N/A
GR824	12.49	N/A	N/A	9.88■	N/A	N/A	N/A	9.38■	N/A	N/A	N/A
GR826*	13.05	N/A	N/A	10.44■	N/A	N/A	N/A	9.94■	N/A	N/A	N/A
GR830	13.55	N/A	N/A	11.20■	N/A	N/A	N/A	10.70■	N/A	N/A	N/A
GR832*	13.74	N/A	N/A	11.39■	N/A	N/A	N/A	10.89■	N/A	N/A	N/A
GR842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	14.86
GR852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	16.26
GR860	N/A	22.78	22.78	N/A	17.09	17.09	17.65	N/A	16.58	16.58	16.98

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

- * Applies to double output shaft
- ** Key not provided with gear reducer. Keyway dimension shown.
- ◆ Keyway width by depth
- 48CZ not available
- ★ Style DXV_ and DXV_M only.
- ★ Sizes 870-8100 have an input shaft which is not aligned with centerline of primary stage reducer.

- * Dimensions same for GRG and GRL Series
- ▼ Sizes 860-8100 have extended cap on input cover. Dimension FC is to back face of the cap.
- ⚠ **WARNING** For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



GR Series Dimensions

Styles: DXFMQ, DXFM, DXF

CAST IRON
GR SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

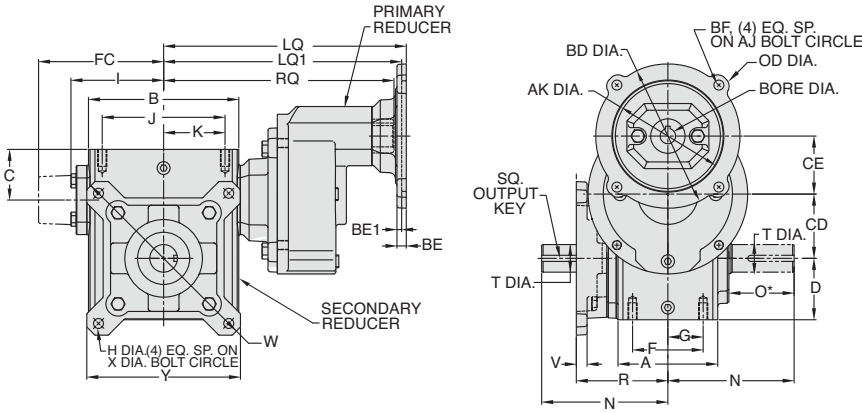
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

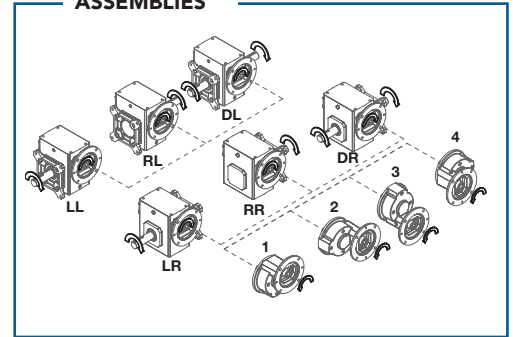
Ratio Multipliers

Accessories and
Additional Capabilities

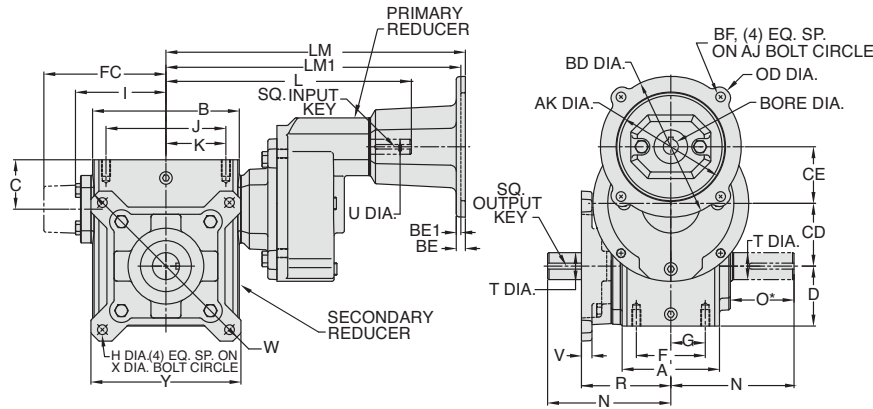
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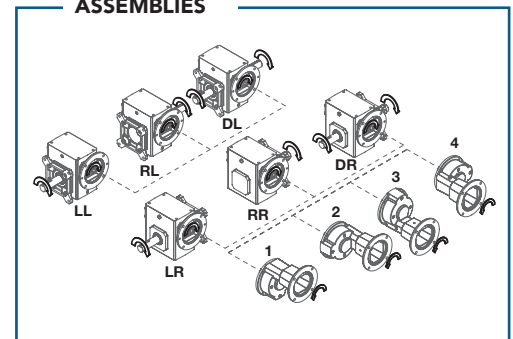
ASSEMBLIES



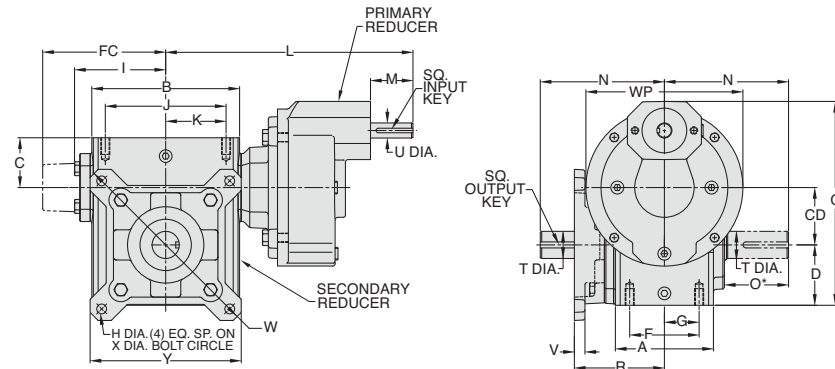
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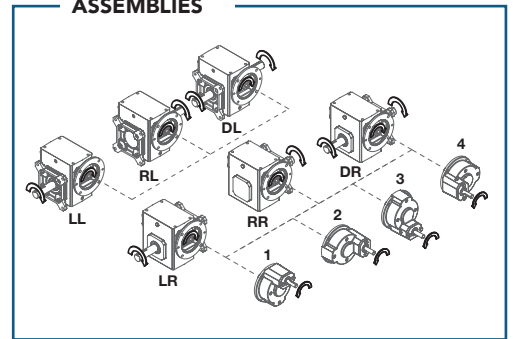
ASSEMBLIES



Style DXF



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

Sizes 815-8100 output flange must be mounted at Factory on styles FMQ, FM, F.



STYLE DXFMQ, DXFM, DXF DIMENSIONS (Inches)

Size	A	B	C	CD	CE	D	FC▼	H	I	L	M	N	O*	R	V	W	WP	X	XA	Y	T +0.000 -0.0015	U +0.000 -0.0015	Input Key※	Output Key
GR813	2.82	3.80	4.66	1.33	1.91	1.72	N/A	0.34	2.61	N/A	N/A	4.00	1.94	2.52	0.38	5.92	5.00	5.00	6.16	4.50	0.625	N/A	N/A	3/16 X 1.50
GR815	3.44	4.88	5.38	1.54	1.91	1.91	N/A	0.34	3.14	N/A	N/A	4.31	1.90	2.87	0.38	5.88	5.00	5.00	6.56	4.50	0.750	N/A	N/A	3/16 X 1.50
GR818	3.56	5.06	5.75	1.75	1.91	2.06	N/A	0.34	3.24	N/A	N/A	4.31	1.84	3.18	0.38	6.64	5.00	5.88	6.92	5.00	0.875	N/A	N/A	3/16 X 1.38
GR821	3.81	5.80	6.38	2.06	1.91	2.28	N/A	0.41	3.61	N/A	N/A	4.68	2.08	3.69	0.44	7.88	5.00	7.00	7.45	5.99	1.000	N/A	N/A	1/4 X 1.44
GR824	4.06	6.12	6.94	2.38	2.36	2.50	N/A	0.41	3.77	10.24	1.76	5.14	2.44	3.73	0.44	8.39	6.50	7.50	8.45	6.27	1.125	0.625	3/16 x 1.38	1/4 X 1.75
GR826	4.84	7.12	8.00	2.63	2.36	2.94	N/A	0.41	4.34	10.80	1.76	5.63	2.52	3.70	0.50	8.88	6.50	8.00	9.13	6.67	▲	0.625	3/16 x 1.38	1/4 X 1.75
GR830	5.25	8.12	8.88	3.00	2.36	3.25	N/A	0.41	4.84	11.56	3.61	6.75	3.36	3.78	0.50	9.89	6.50	9.00	9.82	7.37	▲	0.625	3/16 x 1.38	1/4 X 1.75
GR832	5.75	8.50	9.38	3.25	2.36	3.50	N/A	0.41	5.02	11.75	3.61	7.06	3.42	4.03	0.50	9.89	6.50	9.00	10.32	7.37	▲	0.625	3/16 x 1.38	3/8 X 2.25
GR842	6.13	10.25	11.38	4.25	2.87	4.44	N/A	0.56	6.10	17.48	3.61	8.12	4.21	4.56	0.62	12.95	8.50	11.50	13.31	9.65	1.875	1.250	1/4 x 2.00	1/2 X 3.06
GR852	7.19	13.00	14.00	5.25	2.87	5.12	N/A	0.69	7.50	18.88	3.61	9.06	4.53	5.62	0.75	15.50	8.50	14.00	14.99	11.75	2.000	1.250	1/4 x 2.00	1/2 X 3.50
GR860	8.13	14.25	16.50	6.00	2.87	6.50	10.24	0.69	N/A	19.60	3.61	10.00	4.65	7.26	0.75	18.00	8.50	15.63	17.12	14.00	2.500	1.250	1/4 x 2.00	5/8 X 4.00
GR870★	7.63	14.88	18.91	7.00	3.49	7.59	10.63	0.78	N/A	19.68	2.50	11.76	5.65	7.45	0.75	21.00	10.36	18.38	21.84	15.63	2.750	1.125	1/4 x 2.25**	5/8 x 4.00**
GR880★	8.63	17.00	20.96	8.00	4.07	8.86	11.93	1.03	N/A	21.30	3.00	12.25	5.98	8.34	0.75	24.00	11.64	21.00	25.93	17.88	3.000	1.375	5/16 x 2.75**	3/4 x 4.50**
GR8100★	9.53	20.88	25.47	10.00	4.90	10.36	14.34	1.03	N/A	25.78	3.50	14.75	6.76	9.07	1.00	29.00	13.85	25.00	31.35	21.19	3.750	1.500	3/8 x 3.25**	7/8 x 5.00**

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	Output Key Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical	Identical	Identical	✓	✓	GRG
							GRL
826	1.250"	Identical	Identical	Identical	✓	✓	GRG
	1.125"						GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✓	✓	GRG
	1.375"		5/16 x 2.63				GRL

◊ If Accessory kit is removed, dimensions will vary. NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 212-213 (DXMQ, DXM, DX).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/ 140TC	180TC/ 210TC	L1 250TC	LQ 48CZ/ 56C/140TC	180TC	LQ1 210TC	250TC	48CZ/ 56C/140TC	180TC	RQ 210TC	250TC
GR813	N/A	N/A	N/A	8.29	N/A	N/A	N/A	7.79	N/A	N/A	N/A
GR815	N/A	N/A	N/A	8.82	N/A	N/A	N/A	8.32	N/A	N/A	N/A
GR818	N/A	N/A	N/A	8.92	N/A	N/A	N/A	8.42	N/A	N/A	N/A
GR821*	N/A	N/A	N/A	9.29	N/A	N/A	N/A	8.79	N/A	N/A	N/A
GR824	12.49	N/A	N/A	9.88■	N/A	N/A	N/A	9.38■	N/A	N/A	N/A
GR826*	13.05	N/A	N/A	10.44■	N/A	N/A	N/A	9.94■	N/A	N/A	N/A
GR830	13.55	N/A	N/A	11.20■	N/A	N/A	N/A	10.70■	N/A	N/A	N/A
GR832*	13.74	N/A	N/A	11.39■	N/A	N/A	N/A	10.89■	N/A	N/A	N/A
GR842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	14.86
GR852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	16.26
GR860	N/A	22.78	22.78	N/A	17.09	17.09	17.65	N/A	16.58	16.58	16.98

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF⊗
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

- * Applies to double output shaft
- ** Key not provided with gear reducer. Keyway dimension shown.
- ◆ Keyway width by depth
- 48CZ not available
- ※ Style DXF and DXFM only.
- ★ Sizes 870-8100 have an input shaft which is not aligned with centerline of primary stage reducer.

- * Dimensions same for GRG and GRL Series
 - ▼ Sizes 860-8100 have extended cap on input cover. Dimension FC is to back face of the cap.
- WARNING** For safety, purchaser or user should provide protective guards around shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



GR Series Dimensions

Styles: DXHMQ, DXHM, DXH

CAST IRON
GR SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

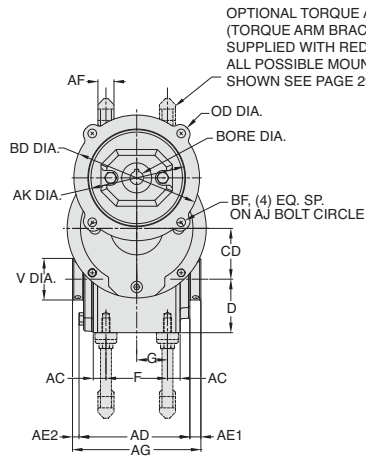
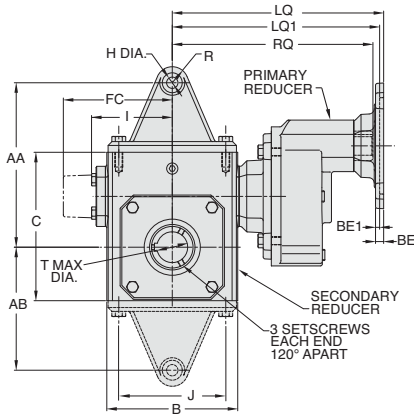
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

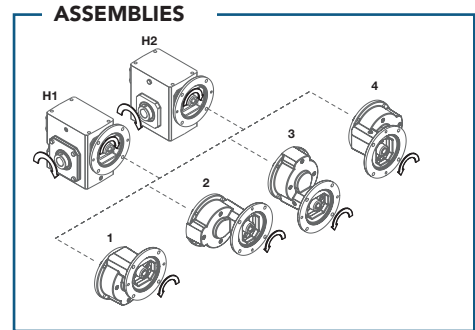
Ratio Multipliers

Accessories and
Additional Capabilities

Style DXHMQ

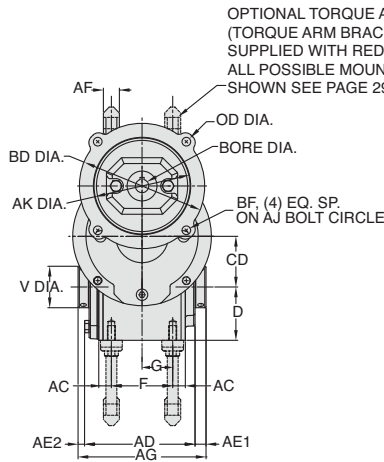
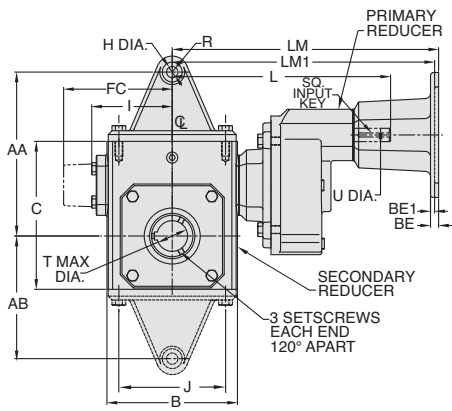


OPTIONAL TORQUE ARM BRACKET
(TORQUE ARM BRACKET IS NOT
SUPPLIED WITH REDUCER AS STANDARD);
ALL POSSIBLE MOUNTING POSITIONS
SHOWN SEE PAGE 290 FOR KITS.

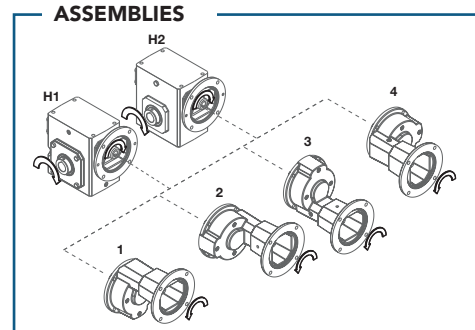


H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

Style DXHM

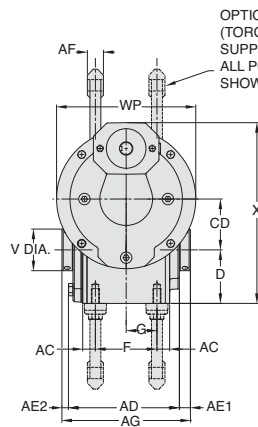
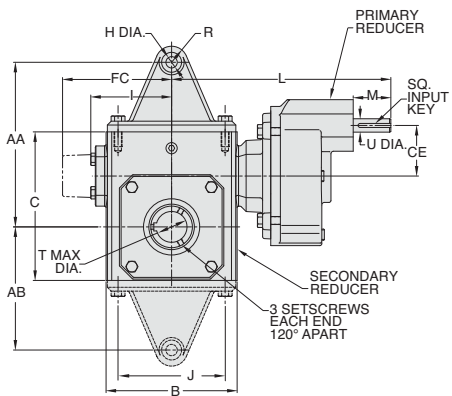


OPTIONAL TORQUE ARM BRACKET
(TORQUE ARM BRACKET IS NOT
SUPPLIED WITH REDUCER AS STANDARD);
ALL POSSIBLE MOUNTING POSITIONS
SHOWN SEE PAGE 290 FOR KITS.

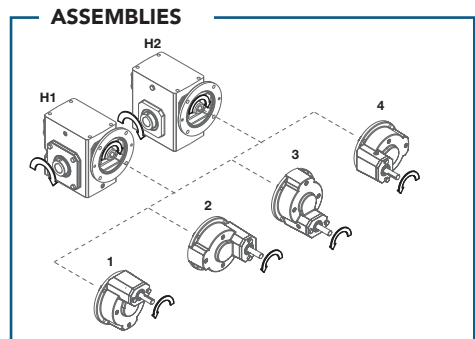


H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

Style DXH



OPTIONAL TORQUE ARM BRACKET
(TORQUE ARM BRACKET IS NOT
SUPPLIED WITH REDUCER AS STANDARD);
ALL POSSIBLE MOUNTING POSITIONS
SHOWN SEE PAGE 290 FOR KITS.



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY
POSITIONS.

H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE DXHMQ, DXHM, DXH DIMENSIONS (Inches)

Size	AA	AB	AC	AD	AE1	AE2	AF	AG	B	C	CD	CE	D	F	FC▼	G	H	I	J	L	M	R	V	WP	X	T MAX* -0.000 +0.0025	U +0.000 -0.0015	Input Key*†	Output Key
GR813	4.19	2.97	0.41	3.90	0.53	0.32	0.75	4.75	3.80	4.66	1.33	1.91	1.72	2.00	N/A	1.00	0.53	2.61	3.25	N/A	N/A	0.50	1.00	5.00	6.16	0.625	N/A	1/8 X 1.00	3/16 x 1.50
GR815	5.97	4.41	0.35	4.61	0.51	0.30	0.75	5.42	5.19	5.38	1.54	1.91	1.91	2.75	N/A	1.38	0.53	3.14	4.19	N/A	N/A	0.75	1.00	5.00	6.56	0.625	N/A	3/16 X 1.38	3/16 x 1.50
GR818	6.19	4.56	0.41	4.73	0.49	0.28	0.75	5.50	5.19	5.75	1.75	1.91	2.06	2.75	N/A	1.38	0.53	3.24	4.19	N/A	N/A	0.75	1.44	5.00	6.92	1.000	N/A	3/16 X 1.38	1/4 x 3.00
GR821	7.24	5.43	0.41	4.99	0.61	0.40	0.75	6.00	5.80	6.38	2.06	1.91	2.28	3.00	N/A	1.44	0.53	3.61	▲	N/A	N/A	0.75	1.44	5.00	7.45	1.500	N/A	3/16 X 1.38	3/8 x 3.00
GR824	7.69	5.75	0.59	5.18	0.51	0.31	0.75	6.00	6.12	6.94	2.38	2.36	2.50	2.88	N/A	1.44	0.53	3.77	5.00	10.24	1.76	0.75	1.94	6.50	8.45	1.500	.625	3/16 X 1.63	3/8 x 3.00
GR826	8.81	6.69	0.73	6.01	0.60	0.39	0.75	7.00	7.38	8.00	2.63	2.36	2.94	3.38	N/A	1.69	0.53	4.34	6.33	10.80	1.76	0.75	1.94	6.50	9.13	1.500	.625	3/16 X 1.63	3/8 x 3.00
GR830	10.63	8.25	0.63	6.53	0.60	0.36	0.75	7.50	8.12	8.88	3.00	2.36	3.25	4.00	N/A	2.00	0.53	4.84	7.00	11.56	3.61	0.88	2.51	6.50	9.82	2.188	.625	3/16 X 1.63	1/2 x 3.00
GR832	10.88	8.50	0.88	7.04	0.54	0.29	0.75	7.88	8.75	9.38	3.25	2.36	3.50	4.00	N/A	2.00	0.53	5.02	7.50	11.75	3.61	0.88	2.51	6.50	10.32	2.188	.625	3/16 X 1.63	1/2 x 3.00
GR842	11.94	9.44	0.56	7.53	0.63	0.34	0.75	8.50	10.25	11.38	4.25	2.87	4.44	5.00	N/A	2.50	0.53	6.10	8.50	17.48	3.61	0.75	2.75	8.50	13.31	2.188	1.250	1/4 X 2.50	1/2 x 3.00
GR852	13.88	10.12	0.69	8.85	0.97	0.68	1.00	10.50	13.00	14.00	5.25	2.87	5.12	5.81	N/A	2.91	0.66	7.50	11.00	18.88	3.61	1.00	4.26	8.50	14.99	3.438	1.250	1/4 X 3.00	7/8 x 3.44
GR860	15.00	11.50	0.88	10.52	0.52	0.52	0.38	11.50	14.50	16.50	6.00	2.87	6.50	6.38	10.24	3.19	0.66	N/A	12.75	19.60	3.61	0.69	4.18	8.50	17.12	3.438	1.250	3/8 X 3.00	7/8 x 3.44
GR870*	N/A	N/A	1.06	11.36	1.09	1.09	N/A	13.50	14.88	18.91	7.00	3.49	7.59	5.50	10.63	2.75	N/A	N/A	12.50	19.68	2.50	N/A	4.92	10.36	21.84	3.938	1.125	3/8 x 2.87**	1 x 1/2**
GR880*	N/A	N/A	1.06	12.48	1.03	1.03	N/A	14.50	17.00	20.96	8.00	4.07	8.86	6.50	11.93	3.25	N/A	N/A	14.25	21.30	3.00	N/A	5.55	11.64	25.93	4.438	1.375	1/2 x 2.81**	1 x 1/2**
GR8100*	N/A	N/A	1.33	15.78	1.39	1.39	N/A	18.50	20.88	25.47	10.00	4.90	10.36	6.88	14.34	3.44	N/A	N/A	17.75	25.78	3.50	N/A	6.67	13.85	31.35	5.438	1.500	1/2 x 3.69**	1-1/4 x 5/8**

▲ See feature comparison chart.

FEATURE COMPARISON (821)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	(F)3.00" x (J)4.75" (F)2.88" x (J)5.00"	Identical	✓	✓	GRG GRL

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM	L1	LQ	180TC	LQ1	250TC	48CZ/	180TC	RQ		
	56C/140TC								210TC	250TC	56C/140TC	210TC	250TC
GR813	N/A	N/A	8.29	N/A	N/A	N/A	7.79	N/A	N/A	N/A	
GR815	N/A	N/A	8.82	N/A	N/A	N/A	8.32	N/A	N/A	N/A	
GR818	N/A	N/A	8.92	N/A	N/A	N/A	8.42	N/A	N/A	N/A	
GR821*	N/A	N/A	9.29	N/A	N/A	N/A	8.79	N/A	N/A	N/A	
GR824	12.49	N/A	9.88■	N/A	N/A	N/A	9.38■	N/A	N/A	N/A	
GR826	13.05	N/A	10.44■	N/A	N/A	N/A	9.94■	N/A	N/A	N/A	
GR830	13.55	N/A	11.20■	N/A	N/A	N/A	10.70■	N/A	N/A	N/A	
GR832	13.74	N/A	11.39■	N/A	N/A	N/A	10.89■	N/A	N/A	N/A	
GR842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	
GR852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	
GR860	N/A	22.78	22.78	N/A	17.09	17.09	17.65	N/A	16.58	16.58	

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

NOTE: Sizes GR870-8100 torque arm not available.

- Max bore dimensions shown. For additional bores available, refer to page 140.
- ** Key not provided with gear reducer. Keyway dimension shown.
- ◆ Keyway width by depth
- 48CZ not available
- * Style DXH and DXHM only.
- * Sizes 870-8100 have an input shaft which is not aligned with centerline of primary stage reducer.
- ◇ Metric IEC B5 input flange options are available only on quill input styles.

* Dimensions same for GRG and GRL Series

▼ Sizes 860-8100 have extended cap on input cover. Dimension FC is to back face of the cap.

Torque arm bracket available separately. Refer to page 290 for kits. If a special bracket is required, refer to Style DXMQ dimensions for mounting pad dimensions on top/bottom of reducer.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.



GR Series Dimensions

Styles: DXFHM, DXFHM, DXFH

CAST IRON
GR SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

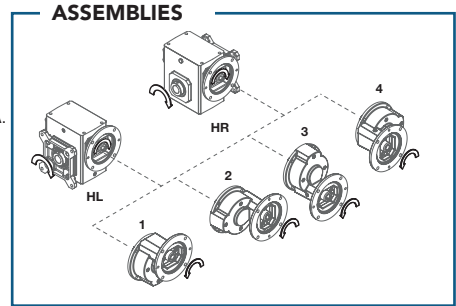
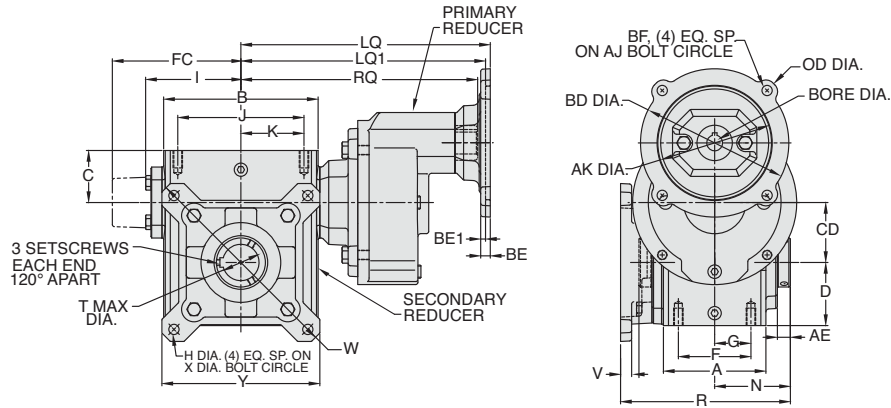
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

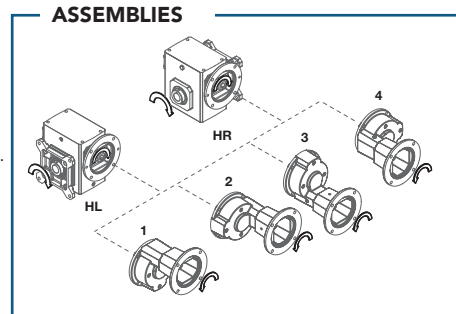
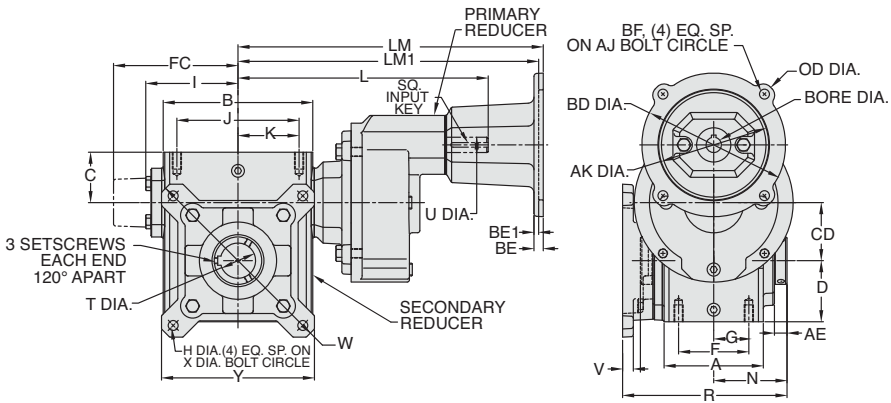
Ratio Multipliers

Accessories and
Additional Capabilities

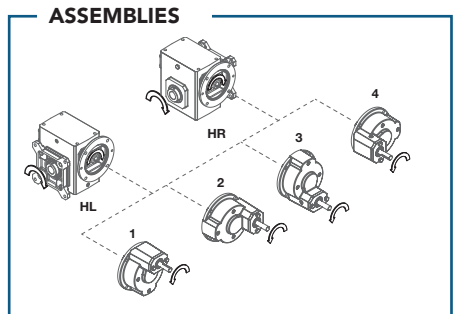
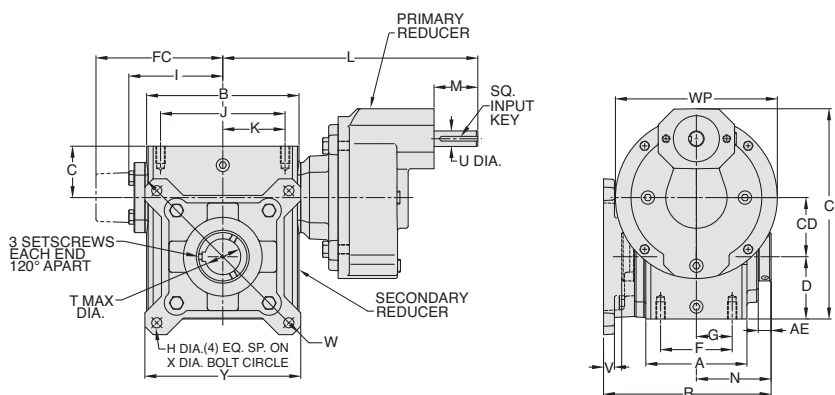
Style DXFHMQ



Style DXFHM



Style DXFH



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE DXFHMQ, DXFHM, DXFH DIMENSIONS (Inches)

Size	A	AE	B	C	CD	CE	D	FC▼	H	I	L	M	N	R	V	W	WP	X	XA	Y	T MAX* -0.000 +0.0025	U +0.000 -0.0015	Input Key※	Output Key
GR813	2.82	0.53	3.80	4.66	1.33	1.91	1.72	N/A	0.34	2.61	N/A	N/A	2.38	2.52	0.38	5.92	5.00	5.92	6.16	4.50	0.625	N/A	1/8 X 1.00	3/16 x 1.50
GR815	3.44	0.51	5.19	5.38	1.54	1.91	1.91	N/A	0.34	3.14	N/A	N/A	2.71	2.87	0.38	5.88	5.00	5.88	6.56	4.50	0.625	N/A	3/16 X 1.38	3/16 x 1.50
GR818	3.56	0.49	5.19	5.75	1.75	1.91	2.06	N/A	0.34	3.24	N/A	N/A	2.75	3.18	0.38	6.64	5.00	6.64	6.92	5.00	1.000	N/A	3/16 X 1.38	1/4 x 3.00
GR821	3.81	0.61	5.80	6.38	2.06	1.91	2.28	N/A	0.41	3.61	N/A	N/A	3.00	3.69	0.44	7.88	5.00	7.88	7.45	5.99	1.500	N/A	3/16 X 1.38	3/8 x 3.00
GR824	4.06	0.51	6.12	6.94	2.38	2.36	2.50	N/A	0.41	3.77	10.24	1.76	3.00	3.73	0.44	8.39	6.50	8.39	8.45	6.27	1.500	.625	3/16 X 1.63	3/8 x 3.00
GR826	4.84	0.60	7.38	8.00	2.63	2.36	2.94	N/A	0.41	4.34	10.80	1.76	3.50	3.70	0.50	8.88	6.50	8.88	9.13	6.67	1.500	.625	3/16 X 1.63	3/8 x 3.00
GR830	5.25	0.60	8.12	8.88	3.00	2.36	3.25	N/A	0.41	4.84	11.56	3.61	3.75	3.78	0.50	9.89	6.50	9.89	9.82	7.37	2.188	.625	3/16 X 1.63	1/2 x 3.00
GR832	5.75	0.54	8.75	9.38	3.25	2.36	3.50	N/A	0.41	5.02	11.75	3.61	3.94	4.03	0.50	9.89	6.50	9.89	10.32	7.37	2.188	.625	3/16 X 1.63	1/2 x 3.00
GR842	6.13	0.63	10.25	11.38	4.25	2.87	4.44	N/A	0.56	6.10	17.48	3.61	4.25	4.56	0.62	12.95	8.50	12.95	13.31	9.65	2.188	1.250	1/4 X 2.50	1/2 x 3.00
GR852	7.19	0.97	13.00	14.00	5.25	2.87	5.12	N/A	0.69	7.50	18.88	3.61	5.25	5.62	0.75	15.50	8.50	15.50	14.99	11.75	3.438	1.250	1/4 X 3.00	7/8 x 3.44
GR860	8.13	0.52	14.50	16.50	6.00	2.87	6.50	10.24	0.69	N/A	19.60	3.61	5.75	7.26	0.75	18.00	8.50	18.00	17.12	14.00	3.438	1.250	3/8 X 3.00	7/8 x 3.44
GR870	7.63	1.09	14.88	18.91	7.00	3.49	7.59	10.63	0.78	N/A	19.68	2.50	6.75	7.45	0.75	21.00	10.36	21.00	21.84	15.63	3.938	1.125	3/8 x 2.87**	1 x 1/2**
GR880	8.63	1.03	17.00	20.96	8.00	4.07	8.86	11.93	1.03	N/A	21.30	3.00	7.25	8.34	0.75	24.00	11.64	24.00	25.93	17.88	4.438	1.375	1/2 x 2.81**	1 x 1/2**
GR8100	9.53	1.39	20.88	25.47	10.00	4.90	10.36	14.34	1.03	N/A	25.78	3.50	9.25	9.07	1.00	29.00	13.85	29.00	31.35	21.19	5.438	1.500	1/2 x 3.69**	1-1/4 x 5/8**

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed?	Mounting Footprint Needed?	All Other Features	Grove Gear Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical ◊	Identical	✓	✓	GRG GRL

◊ If Accessory kit is removed, dimensions will vary.

NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages 212-213 (DXMQ, DXM, DX).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	L1			LQ			LQ1			RQ		
	LM 56C/ 140TC	180TC/ 210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC	48CZ/ 56C/140TC	180TC	210TC	250TC	
GR813	N/A	N/A	N/A	8.29	N/A	N/A	N/A	7.79	N/A	N/A	N/A	
GR815	N/A	N/A	N/A	8.82	N/A	N/A	N/A	8.32	N/A	N/A	N/A	
GR818	N/A	N/A	N/A	8.92	N/A	N/A	N/A	8.42	N/A	N/A	N/A	
GR821*	N/A	N/A	N/A	9.29	N/A	N/A	N/A	8.79	N/A	N/A	N/A	
GR824	12.49	N/A	N/A	9.88■	N/A	N/A	N/A	9.38■	N/A	N/A	N/A	
GR826	13.05	N/A	N/A	10.44■	N/A	N/A	N/A	9.94■	N/A	N/A	N/A	
GR830	13.55	N/A	N/A	11.20■	N/A	N/A	N/A	10.70■	N/A	N/A	N/A	
GR832	13.74	N/A	N/A	11.39■	N/A	N/A	N/A	10.89■	N/A	N/A	N/A	
GR842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	14.86	
GR852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	16.26	
GR860	N/A	22.78	22.78	N/A	17.09	17.09	17.65	N/A	16.58	16.58	16.98	

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

- Max bore dimensions shown. For additional bores available, refer to page 140.
- ** Key not provided with gear reducer. Keyway dimension shown.
- ◆ Keyway width by depth
- 48CZ not available
- ※ Style DXFH and DXFHM only.
- * Sizes 870-8100 have an input shaft which is not aligned with centerline of primary stage reducer.

- * Dimensions same for GRG and GRL Series
- ▼ Sizes 860-8100 have extended cap on input cover. Dimension FC is to back face of the cap.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.



GR Series Dimensions

Styles: DXFEMQ, DXFEM, DXFE

CAST IRON
GR SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

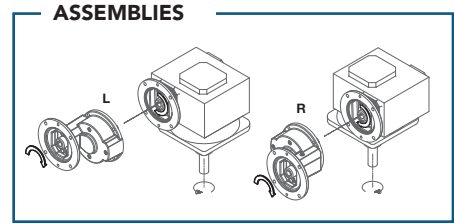
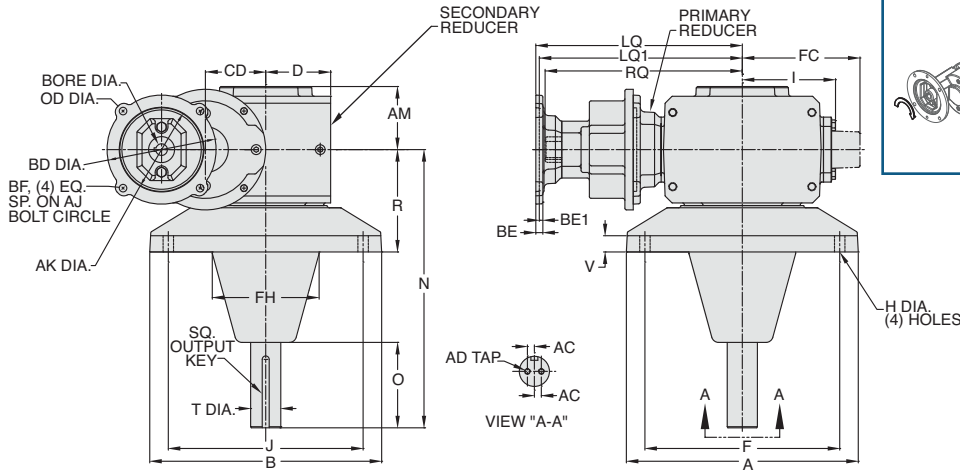
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

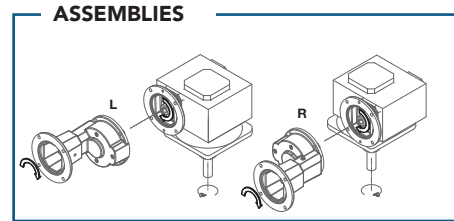
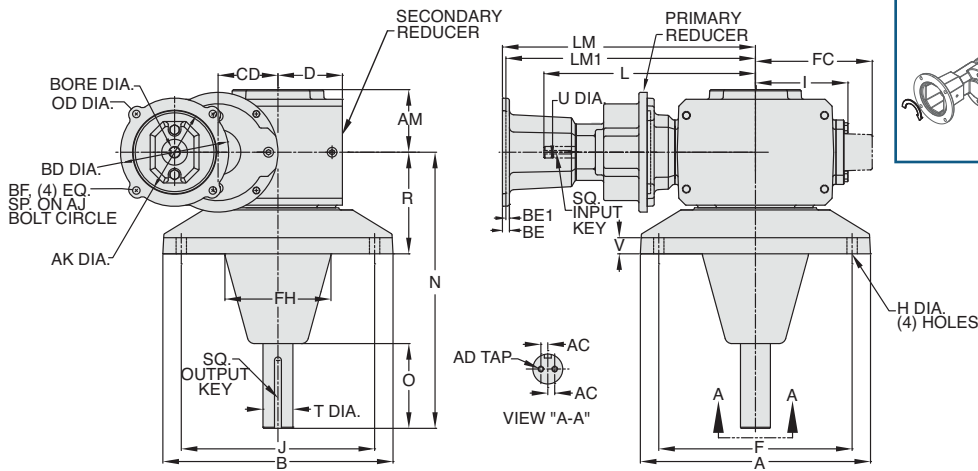
Ratio Multipliers

Accessories and
Additional Capabilities

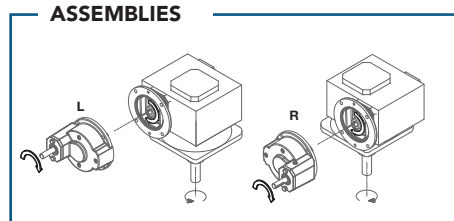
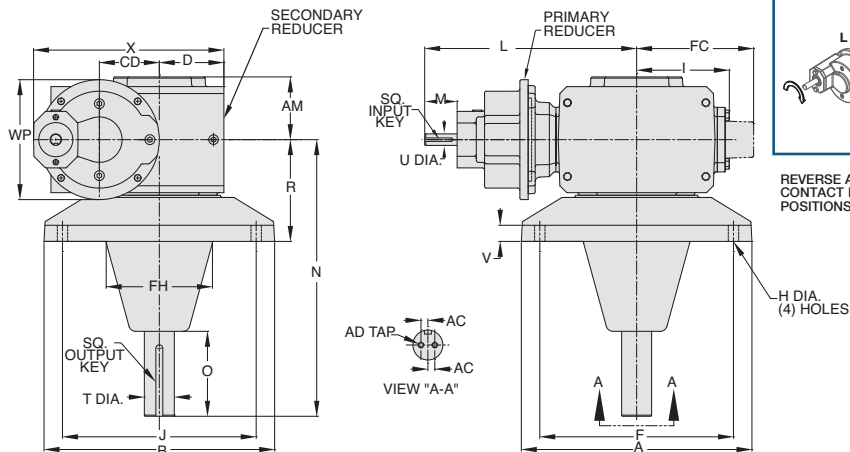
Style DXFEMQ



Style DXFEM



Style DXFE



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE DXFEMQ, DXFEM, DXFE DIMENSIONS (Inches)

Size	A	AC	AD	AM	B	CD	D	F	FC▼	FH	H
GR830	11.00	0.375	.31-18 UNC X 1.00 DP	3.15	11.00	3.00	4.60	9.00	N/A	5.12	0.56
GR832	12.50	0.375	.31-18 UNC X 1.00 DP	3.40	12.50	3.25	5.52	10.50	N/A	5.75	0.56
GR842	14.00	0.500	.38-16 UNC X 1.00 DP	3.62	14.00	4.25	5.74	12.00	N/A	6.75	0.69
GR852	16.00	0.750	.38-16 UNC X 1.00 DP	4.28	16.00	5.25	6.00	14.00	N/A	8.00	0.81
GR860	19.50	0.750	.38-16 UNC X 1.00 DP	5.28	19.50	6.00	7.00	17.00	10.24	9.50	0.88
GR870	22.00	1.000	.38-16 UNC X 1.00 DP	6.06	22.00	7.00	8.50	19.00	10.63	10.75	1.13
GR880	28.00	1.062	.62-11 UNC X 1.50 DP	6.22	28.00	8.00	10.00	24.00	11.93	13.75	1.31
GR8100	32.00	1.118	.62-11 UNC X 1.50 DP	7.94	32.00	10.00	12.50	28.00	14.34	17.00	1.31

Size	I	J	L	M	N	O ³	R	V	WP	X	T +0.000 -0.0015	U +0.000 -0.0015	Input Key*‡	P*‡
GR830	4.84	9.00	11.56	1.76	14.38	4.96	3.25	0.78	6.50	9.82	1.438	0.875	3/16 X 1.75	3/8 x 3.88
GR832	5.02	10.50	11.75	1.76	15.00	4.63	3.50	0.88	6.50	10.32	1.625	0.875	3/16 X 1.75	3/8 x 3.69
GR842	6.10	12.00	17.48	3.61	16.50	5.91	4.44	1.00	8.50	13.31	1.688	1.250	1/4 X 2.88	3/8 x 4.68
GR852	7.50	14.00	18.88	3.61	16.50	5.62	5.12	1.25	8.50	14.99	2.188	1.250	1/4 X 3.00	1/2 x 4.63
GR860	N/A	17.00	19.60	3.61	22.50	7.63	6.50	1.50	8.50	17.12	2.438	1.500	3/8 X 3.00	5/8 x 6.50
GR870	N/A	19.00	19.68	2.50	24.00	7.63	7.59	1.75	10.36	21.84	2.937	1.625	3/8 x 2.87**	3/4 x 6.44
GR880	N/A	24.00	21.30	3.00	27.06	9.25	8.86	2.00	11.64	25.93	3.438	1.875	1/2 x 2.81**	7/8 x 8.00
GR8100	N/A	28.00	25.78	3.50	29.50	9.43	10.36	2.25	13.85	31.35	3.938	2.250	1/2 x 3.69**	1 x 7.75

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/ 140TC	180TC/ 210TC	L1 250TC	LQ 48CZ/ 56C/140TC	180TC	LQ1 210TC	250TC	48CZ/ 56C/140TC	180TC	RQ 210TC	250TC
GR830	13.55	N/A	N/A	11.20■	N/A	N/A	N/A	10.70■	N/A	N/A	N/A
GR832	13.74	N/A	N/A	11.39■	N/A	N/A	N/A	10.89■	N/A	N/A	N/A
GR842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	14.86
GR852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	16.26
GR860	N/A	22.78	22.78	N/A	17.09	17.09	17.65	N/A	16.58	16.58	16.98

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

** Key not provided with gear reducer. Keyway dimension shown.

◆ Keyway width by depth

■ 48CZ not available

* Style DXFE and DXFEM only.

3 "O" dimension is the minimum dimension to output seal or screw head on sizes GR860-GR8100.

◆ Metric IEC B5 input flange options are available only on quill input styles.

▼ Sizes 860-8100 have extended cap on input cover. Dimension FC is to back face of the cap.



WARNING

For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.



NH Series Dimensions

Styles: DXMQ, DXM, DX



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

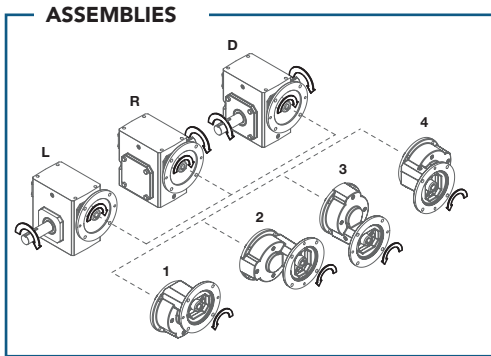
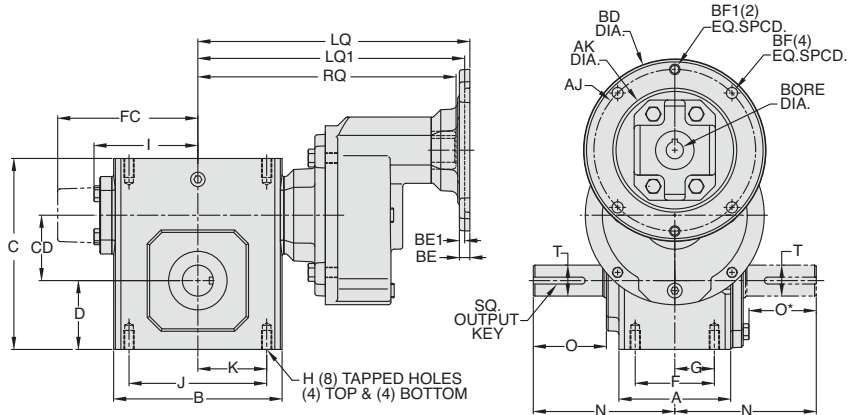
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

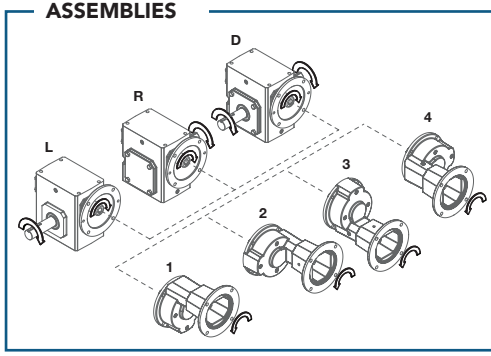
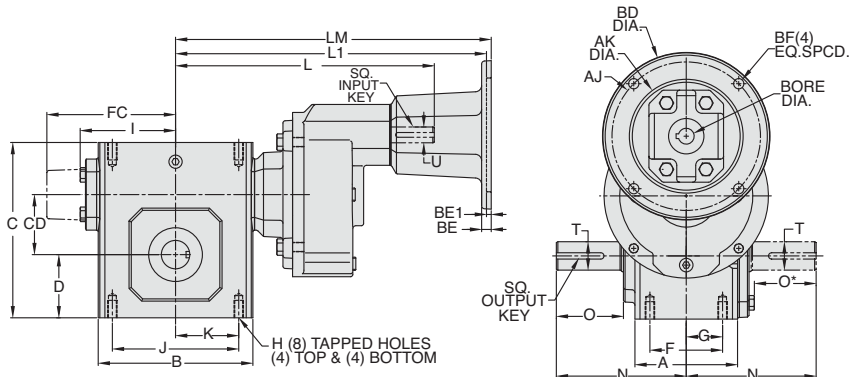
Ratio Multipliers

Accessories and
Additional Capabilities

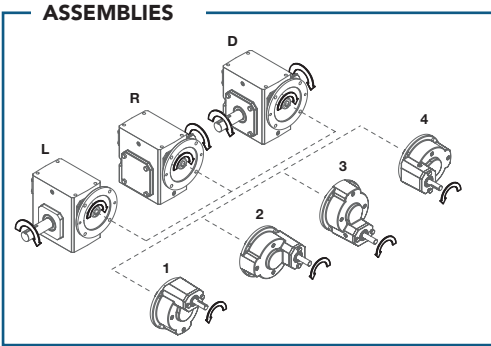
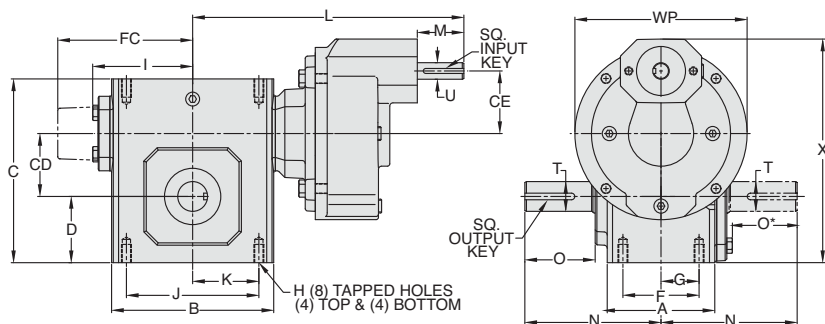
Style DXMQ



Style DXM



Style DX



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NH Series Dimensions

Styles: DXMQ, DXM, DX



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE DXMQ, DXM, DX DIMENSIONS (Inches)

Size	A	B	C	CD	CE	D	D1	E	F	G	H		I	J	K	L	M	N	O	O*	WP	X	T	U	Input Key**	Output Key
											Tap Size	Depth											+0.000 -0.0015	+0.000 -0.0015		
NH813	2.82	3.80	4.66	1.33	1.91	1.72	2.81	2.47	2.00	1.00	5/16-18 UNC	.50	2.61	3.25	1.63	N/A	N/A	4.00	2.16	1.94	5.00	6.16	0.750	N/A	N/A	3/16 X 1.50
NH815	2.57	4.06	5.00	1.54	1.91	1.88	2.81	2.47	1.88	0.94	5/16-18 UNC	.63	3.14	3.25	1.63	N/A	N/A	4.25	2.56	2.35	5.00	6.53	0.750	N/A	N/A	3/16 X 1.50
NH818	2.56	4.50	5.44	1.75	1.91	2.06	2.81	2.47	1.88	0.94	5/16-18 UNC	.63	3.24	3.75	1.88	N/A	N/A	4.75	2.94	2.73	5.00	6.92	1.000	N/A	N/A	1/4 X 1.75
NH821	2.50	4.50	6.00	2.06	1.91	2.31	2.81	2.47	1.88	0.94	5/16-18 UNC	.63	3.61	3.25	1.63	N/A	N/A	4.34	2.66	2.45	5.00	7.48	0.875	N/A	N/A	3/16 X 1.50
NH824	2.94	5.25	6.88	2.38	2.36	2.69	3.25	2.82	2.13	1.06	3/8-16 UNC	.69	3.77	4.00	2.00	5.51	2.38	4.88	2.91	2.69	6.50	8.64	1.000	0.625	3/16 X 1.63	1/4 X 1.75
NH826	2.88	5.75	7.38	2.63	2.36	2.94	3.25	2.82	2.13	1.06	3/8-16 UNC	.69	4.34	4.00	2.00	6.07	2.38	5.25	3.28	3.07	6.50	9.13	1.125	0.625	3/16 X 1.63	1/4 X 1.75
NH830	3.12	6.62	8.25	3.00	2.36	3.38	3.25	2.82	2.38	1.19	3/8-16 UNC	.75	4.84	4.63	2.31	6.57	2.38	5.77	3.56	3.31	6.50	9.95	1.250	0.625	3/16 X 1.63	1/4 X 1.75
NH832	4.44	8.00	10.06	3.25	2.36	4.19	3.25	2.82	3.50	1.75	1/2-13 UNC	1.00	5.02	7.00	3.50	6.76	2.38	7.03	4.24	3.99	6.50	11.01	1.500	0.625	3/16 X 1.63	3/8 X 2.25
NH842	4.75	9.75	11.50	4.25	2.87	4.50	4.25	4.03	3.75	1.88	1/2-13 UNC	1.00	6.10	7.50	3.75	9.57	3.47	7.50	3.88	3.59	8.50	13.37	1.750	1.250	1/4 X 2.50	3/8 X 2.25
NH852	6.19	11.00	12.69	5.25	2.87	4.88	4.25	4.03	4.50	2.25	5/8-11 UNC	1.25	7.50	9.00	4.50	10.88	3.38	9.00	4.72	4.47	8.50	14.75	2.000	1.250	1/4 X 3.00	1/2 X 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/ 140TC	180TC/ 210TC	L1 250TC	LQ 48CZ/ 56C/140TC	180TC	LQ1 210TC	250TC	48CZ/ 56C/140TC	RQ		
									180TC	210TC	250TC
NH813	N/A	N/A	N/A	8.29	N/A	N/A	N/A	7.79	N/A	N/A	N/A
NH815	N/A	N/A	N/A	8.82	N/A	N/A	N/A	8.32	N/A	N/A	N/A
NH818	N/A	N/A	N/A	8.92	N/A	N/A	N/A	8.42	N/A	N/A	N/A
NH821	N/A	N/A	N/A	9.29	N/A	N/A	N/A	8.79	N/A	N/A	N/A
NH824	12.49	N/A	N/A	9.88■	N/A	N/A	N/A	9.38■	N/A	N/A	N/A
NH826	13.05	N/A	N/A	10.44■	N/A	N/A	N/A	9.94■	N/A	N/A	N/A
NH830	13.55	N/A	N/A	10.94■	N/A	N/A	N/A	10.44■	N/A	N/A	N/A
NH832	13.74	N/A	N/A	11.13■	N/A	N/A	N/A	10.63■	N/A	N/A	N/A
NH842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	14.86
NH852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	16.26

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

* Applies to double output shaft

◆ Keyway width by depth

■ 48CZ not available

* Style D and DM only



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
HWUF	DXMQ
HWUFC	DXM
HWU	DX

Refer to page 123 for complete interchange guide for original Grove Gear OE Series products.



NH Series Dimensions

Styles: DXTMQ, DXTM, DXT



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

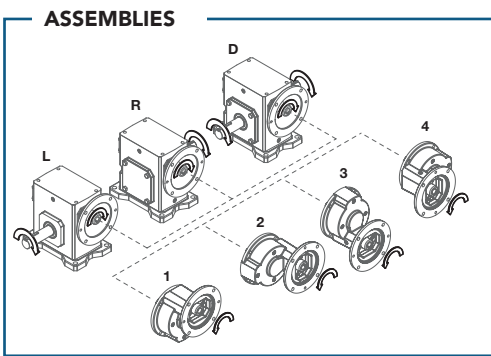
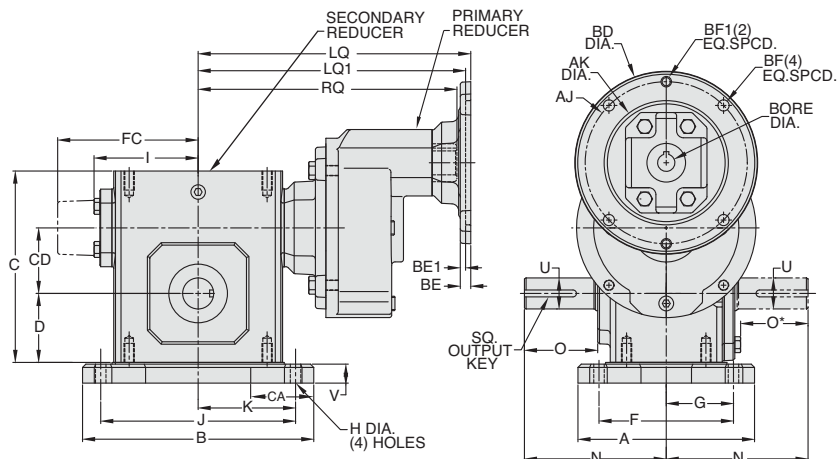
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
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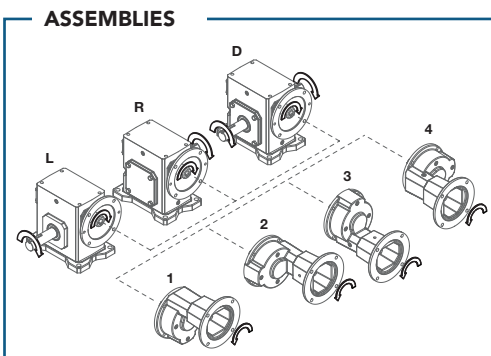
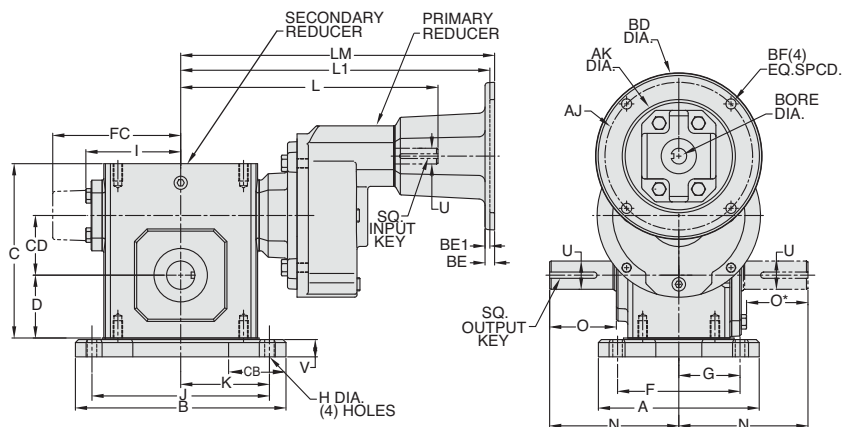
Ratio Multipliers

Accessories and
Additional Capabilities

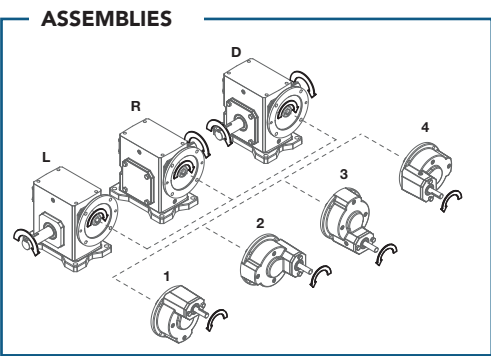
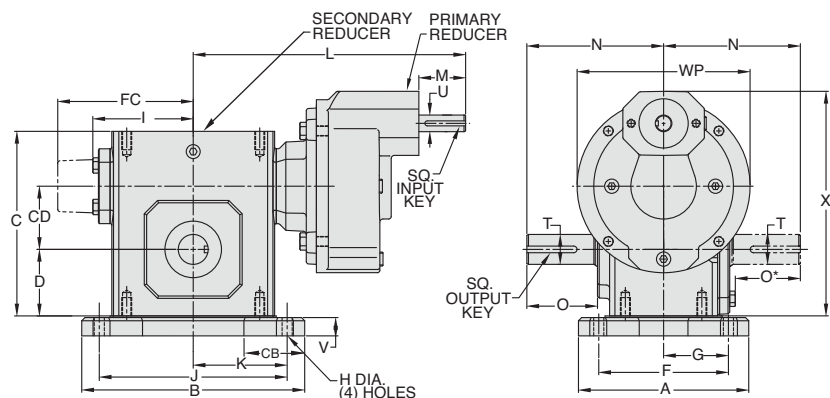
Style DXTMQ



Style DXTM



Style DXT



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NH Series Dimensions

Styles: DXTMQ, DXTM, DXT



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE DXTMQ, DXTM, DXT DIMENSIONS (Inches)

Size	A	B	C	CD	CA	CE	D	D1	E	F	G	H	I	J	K	L	M	N	O	O*	V	WP	X	T +0.000 -0.0015	U +0.000 -0.0015	Input Key*§	Output Key
NH813	4.00	5.01	4.97	1.33	1.50	1.91	1.72	2.81	2.47	3.25	1.63	0.28	2.61	4.25	2.13	N/A	N/A	4.00	2.16	1.94	0.31	5.00	6.47	0.750	N/A	N/A	3/16 X 1.50
NH815	5.25	5.19	5.31	1.54	1.50	1.91	1.88	2.81	2.47	4.50	2.25	0.34	3.14	4.19	2.09	N/A	N/A	4.25	2.56	2.35	0.31	5.00	6.84	0.750	N/A	N/A	3/16 X 1.50
NH818	4.62	5.89	5.82	1.75	1.88	1.91	2.06	2.81	2.47	3.50	1.75	0.41	3.24	4.63	2.31	N/A	N/A	4.75	2.94	2.73	0.38	5.00	7.30	1.000	N/A	N/A	1/4 X 1.75
NH821	5.25	5.19	6.31	2.06	1.50	1.91	2.31	2.81	2.47	4.50	2.25	0.34	3.61	4.19	2.09	N/A	N/A	4.34	2.66	2.45	0.31	5.00	7.79	0.875	N/A	N/A	3/16 X 1.50
NH824	5.25	5.75	7.19	2.38	1.50	2.36	2.69	3.25	2.82	4.50	2.25	0.41	3.77	3.75	1.88	5.51	2.38	4.88	2.91	2.69	0.31	6.50	8.95	1.000	0.625	3/16 X 1.63	1/4 X 1.75
NH826	6.13	6.51	7.69	2.63	2.00	2.36	2.94	3.25	2.82	4.13	2.06	0.41	4.34	4.75	2.38	6.07	2.38	5.25	3.28	3.07	0.31	6.50	9.44	1.125	0.625	3/16 X 1.63	1/4 X 1.75
NH830	6.13	7.74	8.56	3.00	2.25	2.36	3.38	3.25	2.82	4.13	2.06	0.41	4.84	6.00	3.00	6.57	2.38	5.77	3.56	3.31	0.31	6.50	10.26	1.250	0.625	3/16 X 1.63	1/4 X 1.75
NH832	7.50	9.25	10.44	3.25	2.50	2.36	4.19	3.25	2.82	6.50	3.25	0.41	5.02	7.75	3.88	6.76	2.38	7.03	4.24	3.99	0.38	6.50	11.39	1.500	0.625	3/16 X 1.63	3/8 X 2.25
NH842	6.75	10.99	12.00	4.25	2.50	2.87	4.50	4.25	4.03	5.75	2.88	0.56	6.10	9.75	4.88	9.57	3.47	7.50	3.88	3.59	0.50	8.50	13.87	1.750	1.250	1/4 X 2.50	3/8 X 2.25
NH852	8.25	13.24	13.82	5.25	3.00	2.87	4.88	4.25	4.03	7.00	3.50	0.69	7.50	12.00	6.00	10.88	3.38	9.00	4.72	4.47	1.13	8.50	15.88	2.000	1.250	1/4 X 3.00	1/2 X 2.50

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/ 140TC	180TC/ 210TC	L1 250TC	LQ 48CZ/ 56C/140TC	180TC	LQ1 210TC	250TC	48CZ/ 56C/140TC	180TC	RQ 210TC	250TC
NH813	N/A	N/A	N/A	8.29	N/A	N/A	N/A	7.79	N/A	N/A	N/A
NH815	N/A	N/A	N/A	8.82	N/A	N/A	N/A	8.32	N/A	N/A	N/A
NH818	N/A	N/A	N/A	8.92	N/A	N/A	N/A	8.42	N/A	N/A	N/A
NH821	N/A	N/A	N/A	9.29	N/A	N/A	N/A	8.79	N/A	N/A	N/A
NH824	12.49	N/A	N/A	9.88■	N/A	N/A	N/A	9.38■	N/A	N/A	N/A
NH826	13.05	N/A	N/A	10.44■	N/A	N/A	N/A	9.94■	N/A	N/A	N/A
NH830	13.55	N/A	N/A	10.94■	N/A	N/A	N/A	10.44■	N/A	N/A	N/A
NH832	13.74	N/A	N/A	11.13■	N/A	N/A	N/A	10.63■	N/A	N/A	N/A
NH842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	14.86
NH852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	16.26

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

- * Applies to double output shaft
- ◆ Keyway width by depth
- 48CZ not available
- * Style DXT and DXTM only



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
HWZF	DXTMQ
HWZFC	DXTM
HWZ	DXT

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NH Series Dimensions

Styles: DXHMQ, DXHM, DXH



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

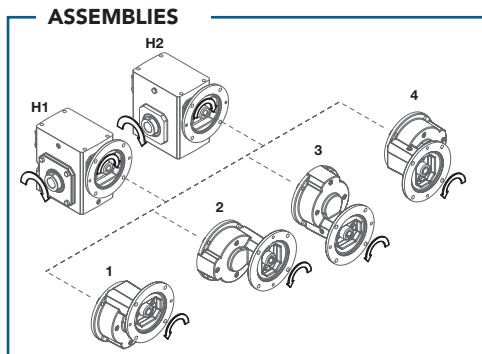
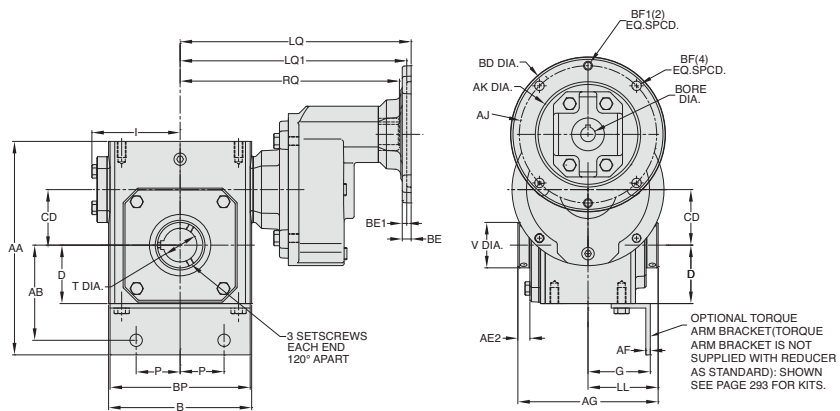
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

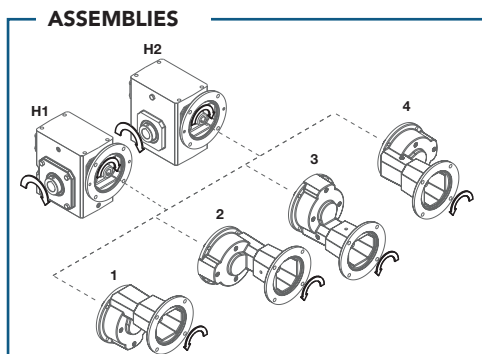
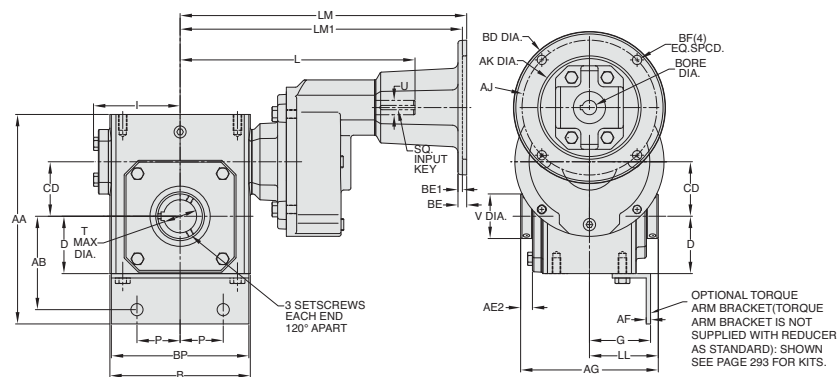
Accessories and
Additional Capabilities

Style DXHMQ



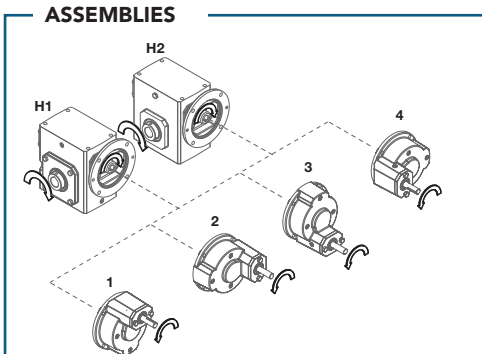
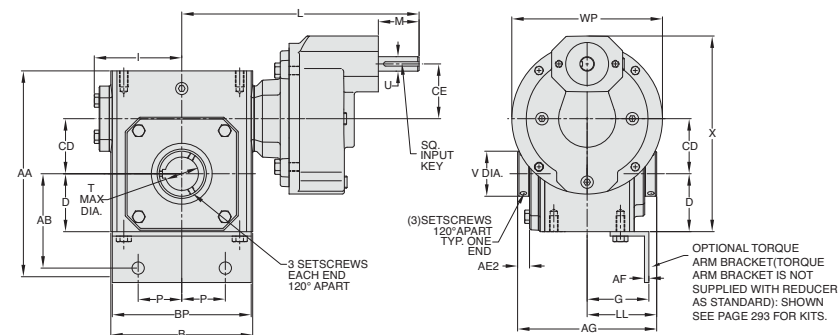
H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

Style DXHM



H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

Style DXH



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.



NH Series Dimensions

Styles: DXHMQ, DXHM, DXH



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE DXHMQ, DXHM, DXH DIMENSIONS (Inches)

Size	AA	AB	AD	AE2	AF	AG	B	C	CD	CE	D	D1	E	G	H	I	L	LL	M	P	V	WP	X	T MAX* -0.000 +0.0025	U +0.000 -0.0015	Input Key*:	Output Key*
NH813	6.66	3.10	3.90	0.53	0.19	4.75	3.80	4.66	1.33	1.91	1.72	2.81	2.47	1.88	0.53	2.61	N/A	2.38	N/A	1.38	1.00	5.00	6.47	0.625	N/A	1/8 X 1.00	3/16 x 1.50
NH815	7.00	3.26	3.59	0.51	0.19	4.08	4.06	5.00	1.54	1.91	1.88	2.81	2.47	1.82	0.53	3.14	N/A	1.88	N/A	1.38	1.00	5.00	6.84	0.625	N/A	3/16 X 1.38	3/16 x 1.50
NH818	7.44	3.44	3.83	0.56	0.19	4.29	4.50	5.44	1.75	1.91	2.06	2.81	2.47	1.82	0.53	3.24	N/A	1.98	N/A	1.38	1.44	5.00	7.30	1.000	N/A	3/16 X 1.38	1/4 x 3.00
NH821	8.00	3.69	3.57	0.85	0.19	4.65	4.50	6.00	2.06	1.91	2.31	2.81	2.47	1.82	0.53	3.61	N/A	2.12	N/A	1.38	1.94	5.00	7.79	1.500	N/A	3/16 X 1.38	3/8 x 3.00
NH824	8.88	4.07	4.16	0.56	0.19	4.65	5.25	6.88	2.38	2.36	2.69	3.25	2.82	1.94	0.53	3.77	5.51	2.12	2.38	1.88	1.94	6.50	8.95	1.500	0.625	3/16 X 1.63	3/8 x 3.00
NH826	9.38	4.32	4.15	0.56	0.19	4.65	5.75	7.38	2.63	2.36	2.94	3.25	2.82	1.94	0.53	4.34	6.07	2.12	2.38	1.88	1.94	6.50	9.44	1.500	0.625	3/16 X 1.63	3/8 x 3.00
NH830	10.25	4.76	4.67	0.56	0.25	5.16	6.62	8.25	3.00	2.36	3.38	3.25	2.82	2.32	0.53	4.84	6.57	2.38	2.38	2.38	2.51	6.50	10.26	2.188	0.625	3/16 X 1.63	1/2 x 3.00
NH832	12.06	5.57	5.83	0.57	0.25	6.31	8.00	10.06	3.25	2.36	4.19	3.25	2.82	2.87	0.53	5.02	6.76	2.95	2.38	3.51	2.51	6.50	11.39	2.188	0.625	3/16 X 1.63	1/2 x 3.00
NH842	14.00	6.38	7.53	0.63	0.38	8.50	9.75	11.50	4.25	2.87	4.50	4.25	4.03	3.26	0.53	6.10	9.57	4.25	3.47	3.69	2.75	8.50	13.87	2.188	1.250	1/4 X 2.50	1/2 x 3.00
NH852	15.19	6.76	8.81	0.97	0.38	10.50	11.00	12.69	5.25	2.87	4.88	4.25	4.03	3.63	0.53	7.50	10.88	5.25	3.38	4.62	4.26	8.50	15.88	3.438	1.250	1/4 X 3.00	7/8 x 3.44

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/ 140TC	180TC/ 210TC	L1 250TC	LQ 48CZ/ 56C/140TC	180TC	LQ1 210TC	250TC	48CZ/ 56C/140TC	180TC	RQ 210TC	250TC
NH813	N/A	N/A	N/A	8.29	N/A	N/A	N/A	7.79	N/A	N/A	N/A
NH815	N/A	N/A	N/A	8.82	N/A	N/A	N/A	8.32	N/A	N/A	N/A
NH818	N/A	N/A	N/A	8.92	N/A	N/A	N/A	8.42	N/A	N/A	N/A
NH821	N/A	N/A	N/A	9.29	N/A	N/A	N/A	8.79	N/A	N/A	N/A
NH824	12.49	N/A	N/A	9.88■	N/A	N/A	N/A	9.38■	N/A	N/A	N/A
NH826	13.05	N/A	N/A	10.44■	N/A	N/A	N/A	9.94■	N/A	N/A	N/A
NH830	13.55	N/A	N/A	10.94■	N/A	N/A	N/A	10.44■	N/A	N/A	N/A
NH832	13.74	N/A	N/A	11.13■	N/A	N/A	N/A	10.63■	N/A	N/A	N/A
NH842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	14.86
NH852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	16.26

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

- Max bore dimensions shown. For additional bores available, refer to page 140.
- ◆ Keyway width by depth
- 48CZ not available
- * Style DXH and DXHM only

Torque arm bracket available separately. Refer to page 293 for kits. If a special bracket is required, refer to Style DXMQ dimensions for mounting pad dimensions on top/bottom of reducer.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
HWYF	DXHMQ
HWYFC	DXHM
HWY	DXH

Refer to page 123 for complete interchange guide for original Grove Gear OE Series products.



NH Series Dimensions

Styles: DXFHM, DXFHM, DXFH



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

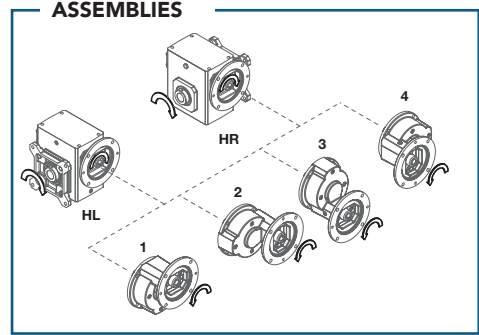
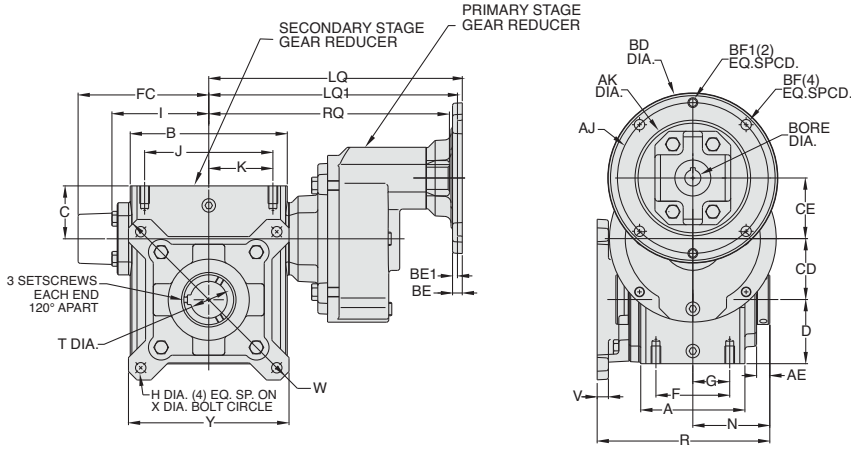
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

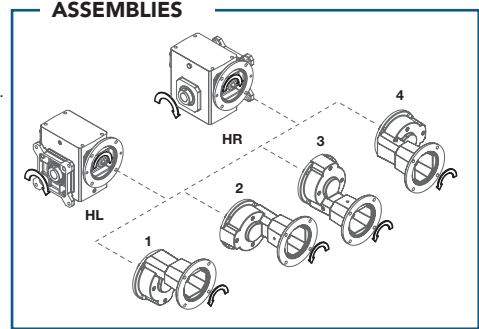
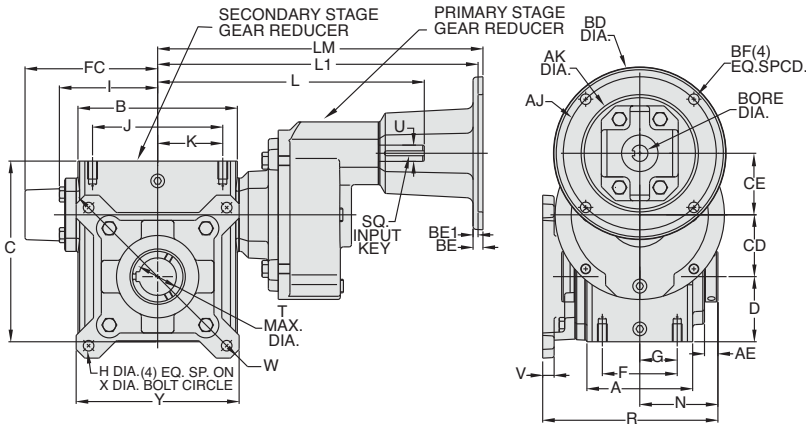
Ratio Multipliers

Accessories and
Additional Capabilities

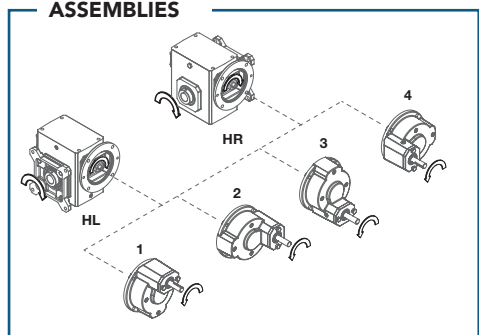
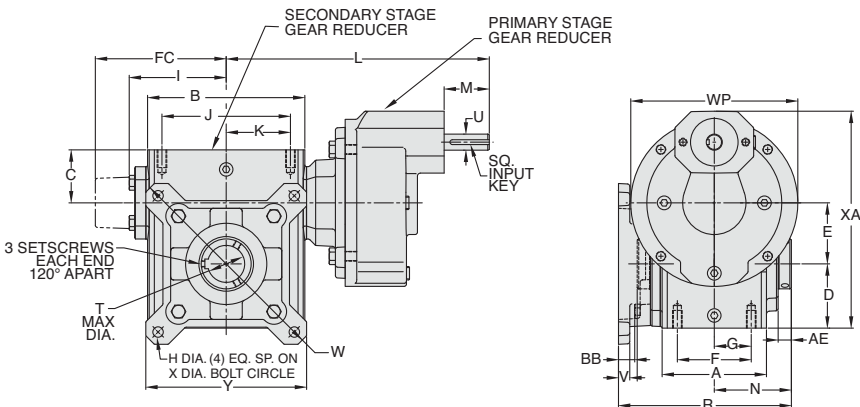
Style DXFHM



Style DXFHM



Style DXFH



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



NH Series Dimensions

Styles: DXFHMQ, DXFHM, DXFH



STYLE DXFHMQ, DXFHM, DXFH DIMENSIONS (Inches)

Size	A	AE	B	BL	C	CD	CE	D	D1	E	H	I	L	M	N	R	V	W	WP	X	XA	Y	T MAX -0.000 +0.0025	U +0.000 -0.0015	Input Key*	Output Key*
NH813	2.82	0.53	3.80	0.38	4.66	1.33	1.91	1.72	2.81	2.47	0.34	2.61	N/A	N/A	2.37	2.52	1.00	5.92	5.00	5.00	6.47	4.50	0.625	N/A	1/8 X 1.00	3/16 x 1.50
NH815	2.57	0.51	4.06	0.38	5.00	1.54	1.91	1.88	2.81	2.47	0.34	3.14	N/A	N/A	2.20	3.50	1.00	6.79	5.00	5.88	6.84	5.12	0.625	N/A	3/16 X 1.38	3/16 x 1.50
NH818	2.56	0.56	4.50	0.38	5.44	1.75	1.91	2.06	2.81	2.47	0.34	3.24	N/A	N/A	2.37	2.74	1.44	6.64	5.00	5.88	7.30	5.00	1.000	N/A	3/16 X 1.38	1/4 x 3.00
NH821	2.50	0.85	4.50	0.38	6.00	2.06	1.91	2.31	2.81	2.47	0.34	3.61	N/A	N/A	2.53	3.50	1.94	7.37	5.00	6.25	7.79	5.56	1.500	N/A	3/16 X 1.38	3/8 x 3.00
NH824	2.94	0.56	5.25	0.44	6.88	2.38	2.36	2.69	3.25	2.82	0.34	3.77	5.51	2.38	2.53	3.53	1.94	8.29	6.50	7.06	8.95	6.24	1.500	0.625	3/16 X 1.63	3/8 x 3.00
NH826	2.88	0.56	5.75	0.50	7.38	2.63	2.36	2.94	3.25	2.82	0.34	4.34	6.07	2.38	2.53	3.62	1.94	8.90	6.50	7.63	9.44	6.68	1.500	0.625	3/16 X 1.63	3/8 x 3.00
NH830	3.12	0.56	6.62	0.50	8.25	3.00	2.36	3.38	3.25	2.82	0.41	4.84	6.57	2.38	2.78	3.75	2.51	9.50	6.50	8.63	10.26	7.34	2.188	0.625	3/16 X 1.63	1/2 x 3.00
NH832	4.44	0.57	8.00	0.56	10.06	3.25	2.36	4.19	3.25	2.82	0.53	5.02	6.76	2.38	3.36	5.06	2.51	11.84	6.50	10.63	11.39	9.00	2.188	0.625	3/16 X 1.63	1/2 x 3.00
NH842	4.75	0.63	9.75	0.62	11.50	4.25	2.87	4.50	4.25	4.03	0.56	6.10	9.57	3.47	4.25	4.56	2.75	12.95	8.50	11.50	13.87	9.66	2.188	1.250	1/4 X 2.50	1/2 x 3.00
NH852	6.19	0.97	11.00	0.75	12.69	5.25	2.87	4.88	4.25	4.03	0.69	7.50	10.88	3.38	5.25	5.62	4.26	15.50	8.50	14.00	15.88	11.76	3.438	1.250	1/4 X 3.00	7/8 x 3.44

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/ 140TC	180TC/ 210TC	L1 250TC	LQ 48CZ/ 56C/140TC	180TC	LQ1 210TC	250TC	48CZ/ 56C/140TC	180TC	RQ 210TC	250TC
NH813	N/A	N/A	N/A	8.29	N/A	N/A	N/A	7.79	N/A	N/A	N/A
NH815	N/A	N/A	N/A	8.82	N/A	N/A	N/A	8.32	N/A	N/A	N/A
NH818	N/A	N/A	N/A	8.92	N/A	N/A	N/A	8.42	N/A	N/A	N/A
NH821	N/A	N/A	N/A	9.29	N/A	N/A	N/A	8.79	N/A	N/A	N/A
NH824	12.49	N/A	N/A	9.88■	N/A	N/A	N/A	9.38■	N/A	N/A	N/A
NH826	13.05	N/A	N/A	10.44■	N/A	N/A	N/A	9.94■	N/A	N/A	N/A
NH830	13.55	N/A	N/A	10.94■	N/A	N/A	N/A	10.44■	N/A	N/A	N/A
NH832	13.74	N/A	N/A	11.13■	N/A	N/A	N/A	10.63■	N/A	N/A	N/A
NH842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	14.86
NH852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	16.26

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

- Max bore dimensions shown. For additional bores available, refer to page 140.
- ◆ Keyway width by depth
- 48CZ not available
- ※ Style DXFH and DXFHM only



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
HWMF	DXFHMQ
HWMFC	DXFHM
HMY	DXFH

Refer to page 123 for complete interchange guide for original Grove Gear OE Series products.

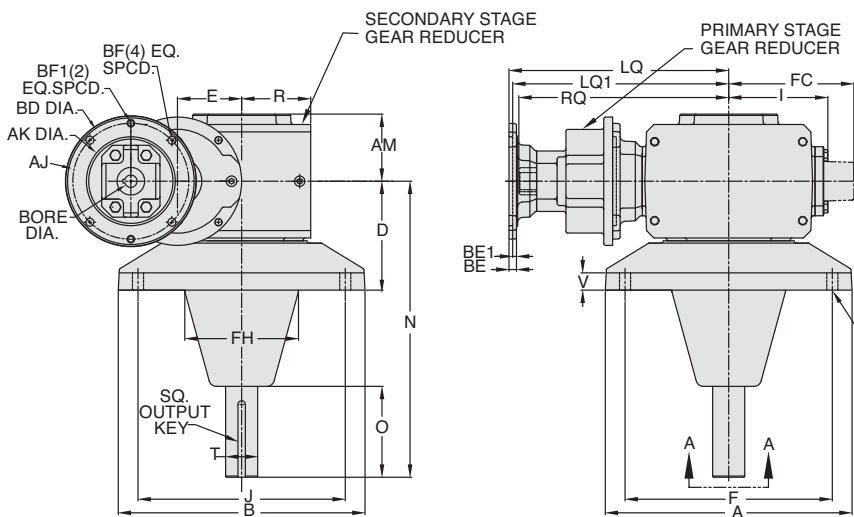


NH Series Dimensions

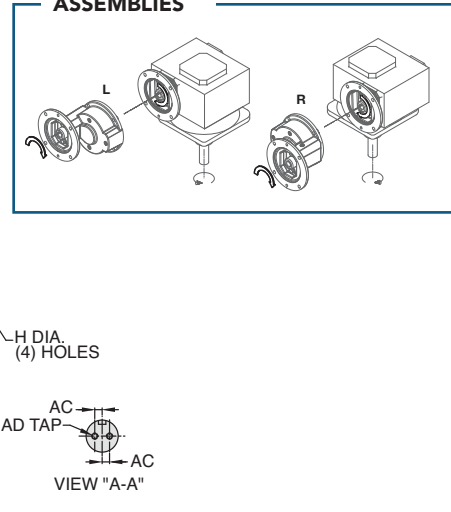
Styles: DXFEMQ, DXFEM, DXFE



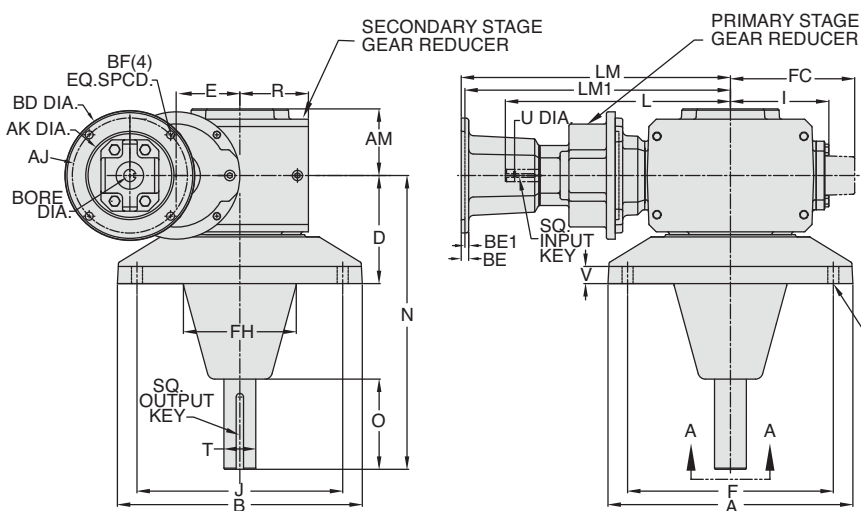
Style DXFEMQ



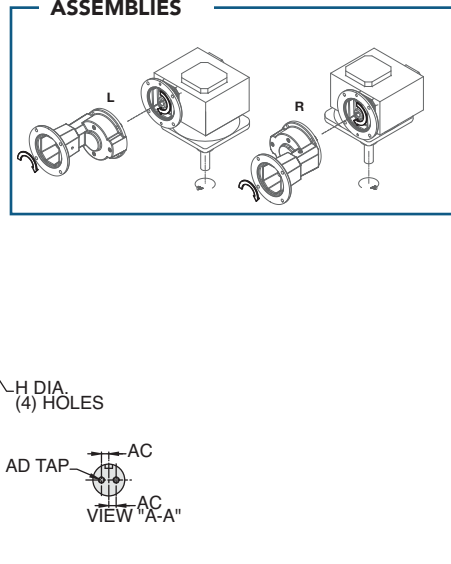
ASSEMBLIES



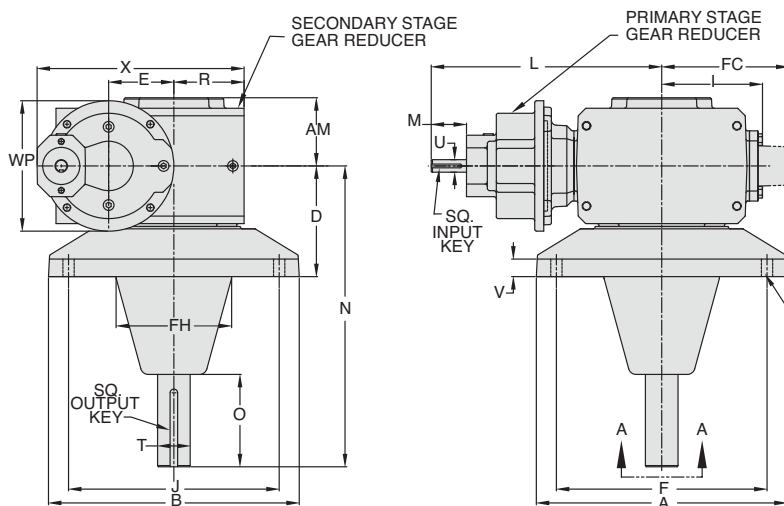
Style DXFEM



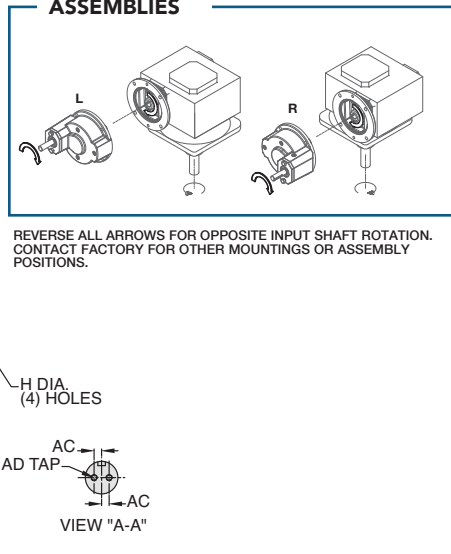
ASSEMBLIES



Style DXFE



ASSEMBLIES



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



NH Series Dimensions

Styles: DXFEMQ, DXFEM, DXFE



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE DXFHM, DXFHM, DXFH DIMENSIONS (Inches)

Size	A	AC	AD	AM	B	CD	D	F	FH	H	I	J	L	M	N	O	R	V	WP	X	T +0.000 -0.0015	U +0.000 -0.0015	Input Key*‡	P**
NH830	11.00	0.375	.31-18 UNC X 1.00 DP	2.22	11.00	3.00	3.67	9.00	5.12	.56	4.84	9.00	6.57	2.38	13.15	4.66	3.38	0.78	6.50	8.63	1.438	.625	3/16 X 1.63	3/8 x 3.88
NH832	12.50	0.375	.31-18 UNC X 1.00 DP	2.79	12.50	3.25	4.91	10.50	5.75	.56	5.02	10.50	6.76	2.38	14.39	4.63	4.19	0.88	6.50	10.63	1.625	.625	3/16 X 1.63	3/8 x 3.69
NH842	14.00	0.500	.38-16 UNC X 1.00 DP	3.62	14.00	4.25	5.74	12.00	6.75	.69	6.10	12.00	9.57	3.47	16.25	5.66	4.50	1.00	8.50	11.50	1.688	1.250	1/4 X 2.50	3/8 x 4.68
NH852	16.00	0.750	.38-16 UNC X 1.00 DP	4.28	16.00	5.25	6.00	14.00	8.00	.81	7.50	14.00	10.88	3.38	16.50	5.62	4.88	1.25	8.50	14.00	2.188	1.250	1/4 X 3.00	1/2 x 4.63

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/ 140TC	180TC/ 210TC	L1 250TC	LQ 48CZ/ 56C/140TC	180TC	LQ1 210TC	250TC	48CZ/ 56C/140TC	180TC	RQ 210TC	250TC
NH830	13.55	N/A	N/A	10.94■	N/A	N/A	N/A	10.44■	N/A	N/A	N/A
NH832	13.74	N/A	N/A	11.13■	N/A	N/A	N/A	10.63■	N/A	N/A	N/A
NH842	N/A	20.66	20.66	N/A	14.97	14.97	15.53	N/A	14.46	14.46	14.86
NH852	N/A	22.06	22.06	N/A	16.37	16.37	16.93	N/A	15.86	15.86	16.26

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

** Key not provided with gear reducer. Keyway dimension shown.

◆ Keyway width by depth

■ 48CZ not available

‡ Metric IEC B5 input flange options are available only on quill input styles.

* Style DXFE and DXFEM only



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

GROVE GEAR OE SERIES INTERCHANGE GUIDE

Grove Gear OE Series	Grove Gear IRONMAN NH Series
HWMF	DXFEMQ
HWMFC	DXFEM
HMY	DXFE

Refer to page 123 for complete interchange guide for original Grove Gear OE Series products.

ELECTRA-GEAR

EL Series Dimensions

Styles: DXMQ, DXM, DX



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

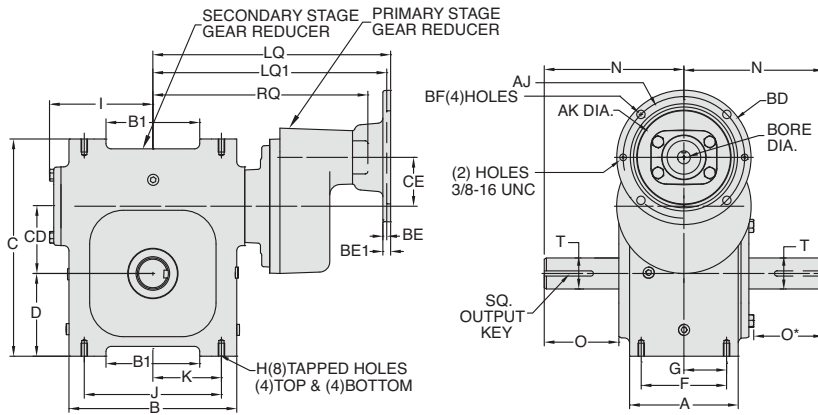
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

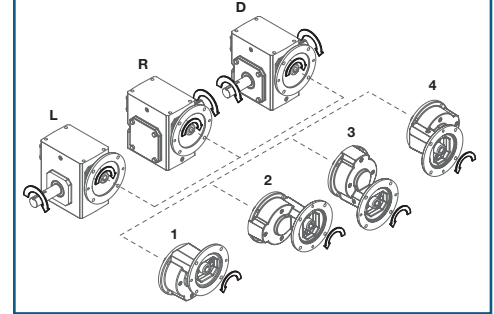
Ratio Multipliers

Accessories and
Additional Capabilities

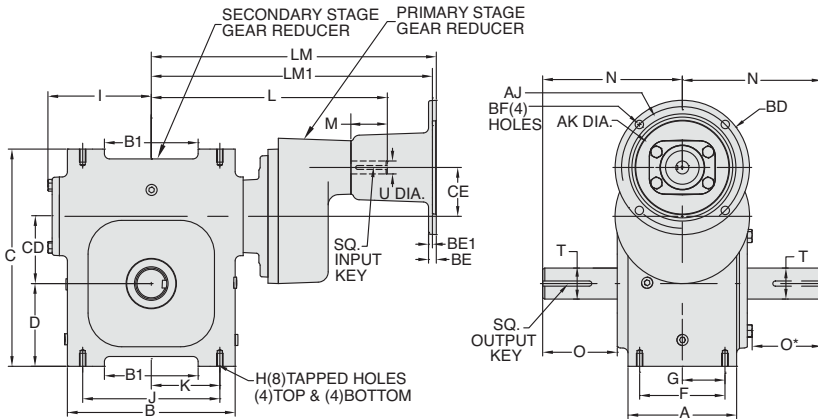
Style DXMQ



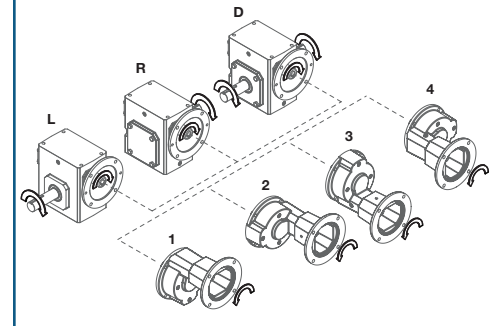
ASSEMBLIES



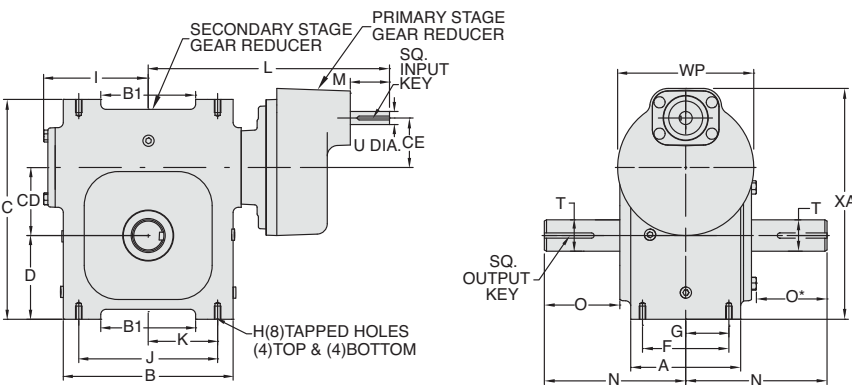
Style DXM



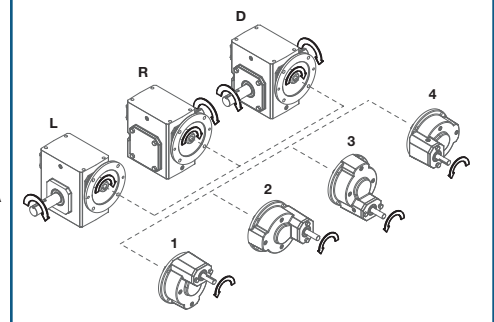
ASSEMBLIES



Style DX



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXMQ, DXM, DX DIMENSIONS (Inches)

Size	A	B	B1	C	CD	CE	D	DX	F	G	H		I	J	K	L	M
											Tap Size	Depth					
EL813	2.82	3.80	--	4.66	1.33	1.91	1.72	--	2.00	1.00	5/16-18	0.50	2.40	3.25	1.63	-	-
EL818	3.50	4.83	2.48	5.86	1.75	1.91	2.31	--	2.94	1.47	5/16-18	0.63	3.03	3.69	1.84	-	-
EL821	3.91	5.75	2.76	6.88	2.06	1.91	2.63	--	3.25	1.63	3/8-16	0.87	3.40	4.13	2.06	-	-
EL824	4.06	5.86	--	6.94	2.38	2.36	2.50	--	2.88	1.44	3/8-16	0.69	3.61	5.00	2.50	10.03	1.76
EL826	4.84	7.17	4.21	8.00	2.63	2.36	3.25	--	3.38	1.69	3/8-16	0.69	4.17	5.00	2.50	10.59	1.76
EL830	5.25	8.11	4.50	8.94	3.00	2.36	3.50	--	4.13	2.06	1/2-13	1.00	4.81	5.75	2.88	11.22	1.76
EL832	5.25	8.11	4.53	10.50	3.25	2.36	4.00	--	4.13	2.06	1/2-13	1.00	5.00	6.63	3.31	11.41	1.76

Size	N	O	O*	WP	XA	T +0.000 -0.0015	U +0.000 -0.0015	Input Key ※	Output Key
EL813	4.00	2.16	1.96	5.00	6.83	0.625	N/A	-	3/16 x 1.38
EL818	4.39	2.05	1.85	5.00	7.83	0.750	N/A	-	3/16 X 1.38
EL821	4.68	2.29	2.09	5.00	8.46	1.000	N/A	-	1/4 x 1.44
EL824	5.14	2.66	2.46	6.50	8.65	1.125	0.625	3/16 x 1.38	1/4 X 1.62
EL826	5.63	2.73	2.53	6.50	9.65	1.250	0.625	3/16 x 1.38	1/4 X 1.62
EL830	6.75	3.60	3.37	6.50	10.27	1.500	0.625	3/16 x 1.38	3/8 X 2.25
EL832	6.75	3.60	3.37	6.50	11.02	1.625	0.625	3/16 x 1.38	3/8 X 2.25

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM	LM1	LQ	LQ1	RQ	
	56C/140TC	180TC / 210TC	56C/140TC	180TC / 210TC	56C/140TC	180TC / 210TC
EL813	--	--	7.97	--	7.47	7.47
EL818	--	--	8.60	--	8.10	8.10
EL821	--	--	8.91	--	8.41	8.41
EL824	12.40	--	9.51	10.04	9.01	9.01
EL826	12.96	--	10.07	10.60	9.57	9.57
EL830	13.59	--	10.70	11.23	10.20	10.20
EL832	13.78	--	10.89	11.42	10.39	10.39

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway ♦	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

NOTE: Larger sizes available with cast iron primary - Contact Factory.

- * Applies to double output shaft
- ♦ Keyway width by depth
- ※ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

EL SERIES MOUNTING DIMENSIONS

- EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
- See page 212 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
H_MSC or H_MLSC	DXMQ
H_MC or H_MLC	DXM
H_M or H_ML	DX

Convert Style DX to motorized coupling input using kits shown on page 294.

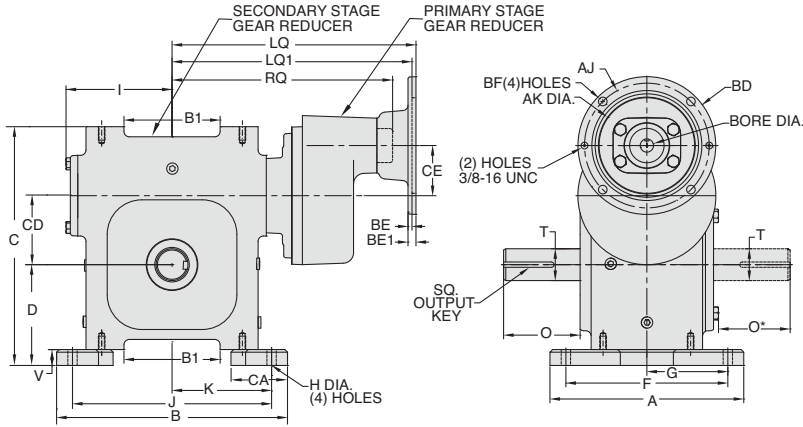
ELECTRA-GEAR

EL Series Dimensions

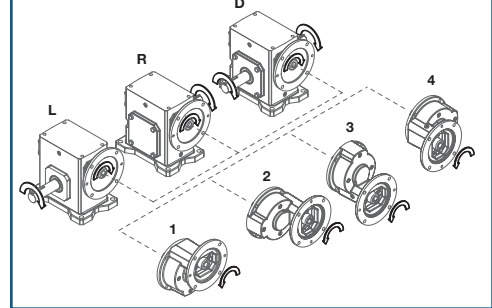
Styles: DXTMQ, DXTM, DXT



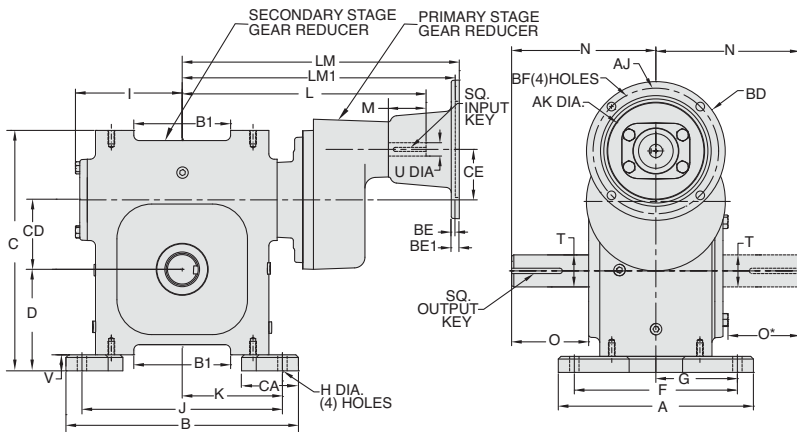
Style DXTMQ



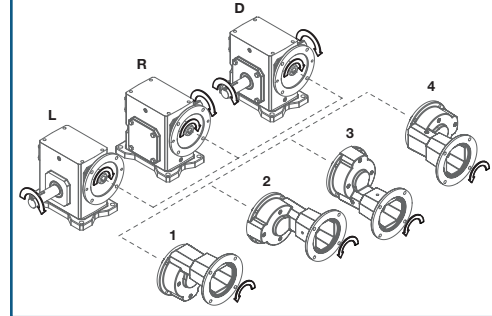
ASSEMBLIES



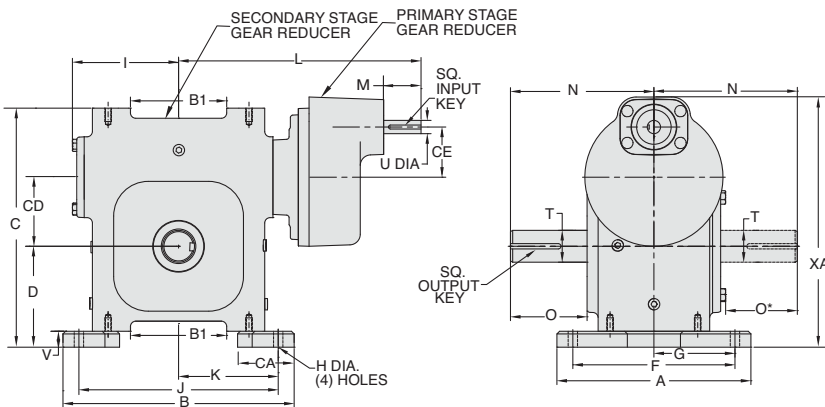
Style DXTM



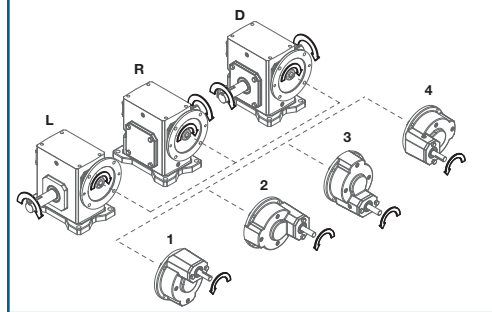
ASSEMBLIES



Style DXT



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXTMQ, DXTM, DXT DIMENSIONS (Inches)

Size	A	B	B1	C	CA	CD	CE	D	F	G	H	I	J	K	L	M
EL813	4.06	5.13	--	4.66	1.56	1.33	1.91	2.25	3.31	1.66	0.34	2.40	4.38	2.19	-	-
EL818	5.19	6.06	2.48	5.86	2.15	1.75	1.91	2.84	4.38	2.19	0.38	3.03	5.25	2.63	-	-
EL821	6.63	7.25	2.76	6.88	2.66	2.06	1.91	3.25	5.38	2.69	0.44	3.40	6.00	3.00	-	-
EL824	6.38	7.69	--	6.94	2.59	2.38	2.36	3.25	4.88	2.44	0.47	3.61	6.19	3.09	10.03	1.76
EL826	6.63	8.13	4.21	8.00	2.81	2.63	2.36	3.94	5.38	2.69	0.50	4.17	6.88	3.44	10.59	1.76
EL830	9.00	9.88	4.50	8.94	3.69	3.00	2.36	4.25	7.50	3.75	0.56	4.81	8.38	4.19	11.22	1.76
EL832	9.13	10.88	4.53	10.50	3.69	3.25	2.36	4.75	7.63	3.82	0.56	5.00	9.38	4.69	11.41	1.76

Size	N	O	O*	V	WP	XA	T +0.000 -0.0015	U +0.000 -0.0015	Input Key †	Output Key
EL813	4.00	2.16	1.96	0.53	5.00	7.36	0.625	N/A	-	3/16 x 1.38
EL818	4.39	2.05	1.85	0.56	5.00	8.39	0.750	N/A	-	3/16 X 1.38
EL821	4.68	2.29	2.09	0.63	5.00	9.09	1.000	N/A	-	1/4 x 1.44
EL824	5.14	2.66	2.46	0.75	6.50	9.40	1.125	0.625	3/16 x 1.38	1/4 X 1.62
EL826	5.63	2.73	2.53	0.69	6.50	10.34	1.250	0.625	3/16 x 1.38	1/4 X 1.62
EL830	6.75	3.60	3.37	0.75	6.50	11.02	1.500	0.625	3/16 x 1.38	3/8 X 2.25
EL832	6.75	3.60	3.37	0.75	6.50	11.77	1.625	0.625	3/16 x 1.38	3/8 X 2.25

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	56C/140TC	RQ 180TC / 210TC
EL813	--	--	7.97	--	7.47	7.47
EL818	--	--	8.60	--	8.10	8.10
EL821	--	--	8.91	--	8.41	8.41
EL824	12.40	--	9.51	10.04	9.01	9.01
EL826	12.96	--	10.07	10.60	9.57	9.57
EL830	13.59	--	10.70	11.23	10.20	10.20
EL832	13.78	--	10.89	11.42	10.39	10.39

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway †	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

NOTE: Larger sizes available with cast iron primary - Contact Factory.

* Applies to double output shaft

† Keyway width by depth

‡ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.



WARNING

For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

EL SERIES MOUNTING DIMENSIONS

- EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
- See page 212 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
H_ASC or H_ALSC	DXTMQ
H_AC or H_ALC	DXTM
H_A or H_AL	DXT

Convert Style DXT to motorized coupling input using kits shown on page 294.

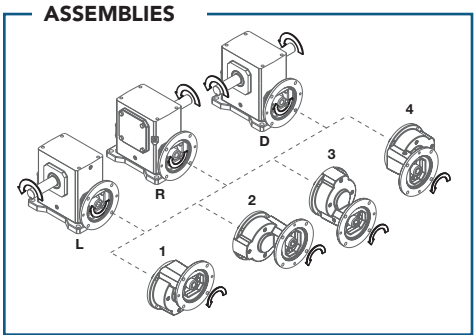
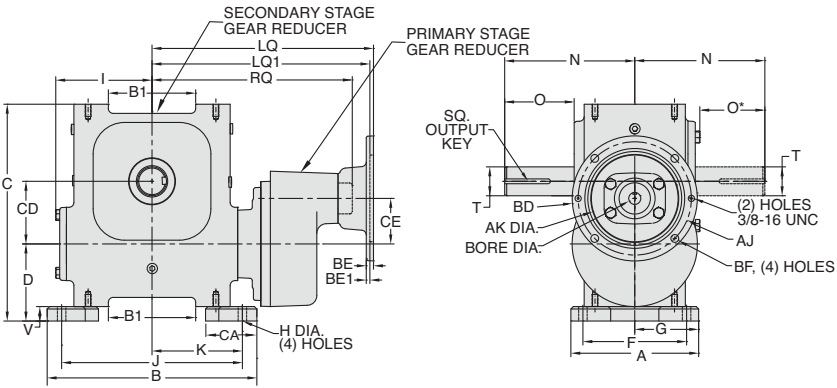
ELECTRA-GEAR



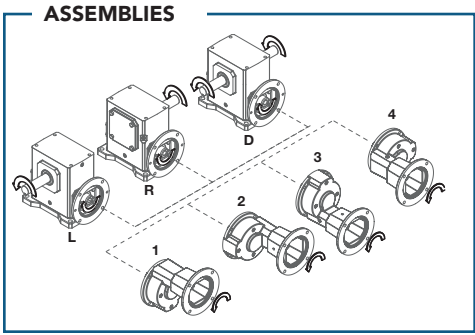
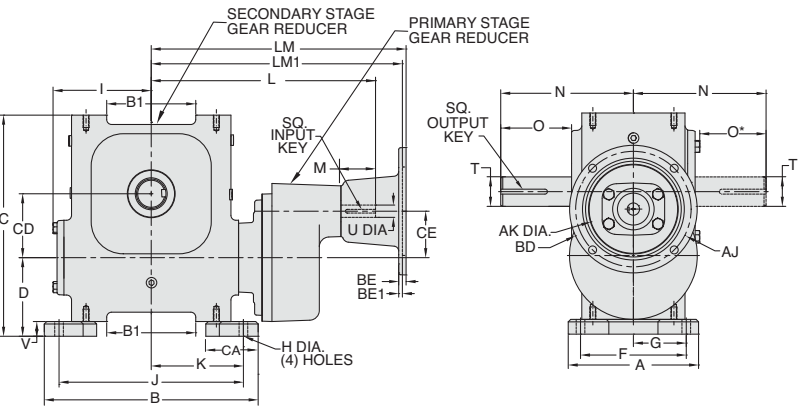
EL Series Dimensions

Styles: DXUMQ, DXUM, DXU

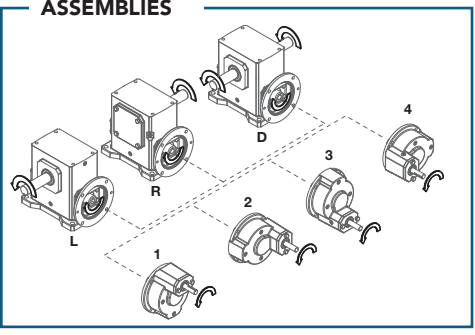
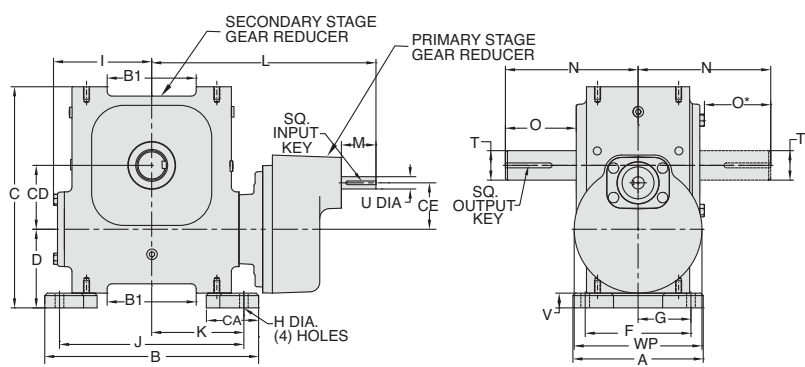
Style DXUMQ



Style DXUM



Style DXU



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE DXUMQ, DXUM, DXU DIMENSIONS (Inches)

Size	A	B	B1	C	CA	CD	CE	D	F	G	H	I	J	K	L	M
EL813	4.06	5.13	--	4.85	1.56	1.33	1.91	2.13	3.31	1.66	0.34	2.40	4.38	2.19	-	-
EL818	5.19	6.06	2.48	6.24	2.15	1.75	1.91	2.37	4.38	2.19	0.38	3.03	5.25	2.63	-	-
EL821	6.63	7.25	2.76	7.26	2.66	2.06	1.91	2.82	5.38	2.69	0.44	3.40	6.00	3.00	-	-
EL824	6.38	7.69	--	7.25	2.59	2.38	2.36	2.81	4.88	2.44	0.47	3.61	6.19	3.09	10.03	1.76
EL826	6.63	8.13	4.21	8.31	2.81	2.63	2.36	2.81	5.38	2.69	0.50	4.17	6.88	3.44	10.59	1.76
EL830	9.00	9.88	4.50	9.19	3.69	3.00	2.36	3.19	7.50	3.75	0.56	4.81	8.38	4.19	11.22	1.76
EL832	9.13	10.88	4.53	10.88	3.69	3.25	2.36	4.00	7.63	3.82	0.56	5.00	9.38	4.69	11.41	1.76

Size	N	O	O*	V	WP	T +0.000 -0.0015	U +0.000 -0.0015	Input Key ※	Output Key
EL813	4.00	2.16	1.96	0.53	5.00	0.625	N/A	-	3/16 x 1.38
EL818	4.39	2.05	1.85	0.56	5.00	0.750	N/A	-	3/16 X 1.38
EL821	4.68	2.29	2.09	0.63	5.00	1.000	N/A	-	1/4 x 1.44
EL824	5.14	2.66	2.46	0.75	6.50	1.125	0.625	3/16 x 1.38	1/4 X 1.62
EL826	5.63	2.73	2.53	0.69	6.50	1.250	0.625	3/16 x 1.38	1/4 X 1.62
EL830	6.75	3.60	3.37	0.75	6.50	1.500	0.625	3/16 x 1.38	3/8 X 2.25
EL832	6.75	3.60	3.37	0.75	6.50	1.625	0.625	3/16 x 1.38	3/8 X 2.25

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM	LM1	LQ	LQ1	RQ	
	56C/140TC	180TC / 210TC	56C/140TC	180TC / 210TC	56C/140TC	180TC / 210TC
EL813	--	--	7.97	--	7.47	7.47
EL818	--	--	8.60	--	8.10	8.10
EL821	--	--	8.91	--	8.41	8.41
EL824	12.40	--	9.51	10.04	9.01	9.01
EL826	12.96	--	10.07	10.60	9.57	9.57
EL830	13.59	--	10.70	11.23	10.20	10.20
EL832	13.78	--	10.89	11.42	10.39	10.39

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway ◆	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

NOTE: Larger sizes available with cast iron primary - Contact Factory.

- * Applies to double output shaft
- ◆ Keyway width by depth
- ※ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.



WARNING

For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

EL SERIES MOUNTING DIMENSIONS

- EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
- See page 212 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
NOT A	DXUMQ
STANDARD CATALOGED	DXUM
OPTION	DXU

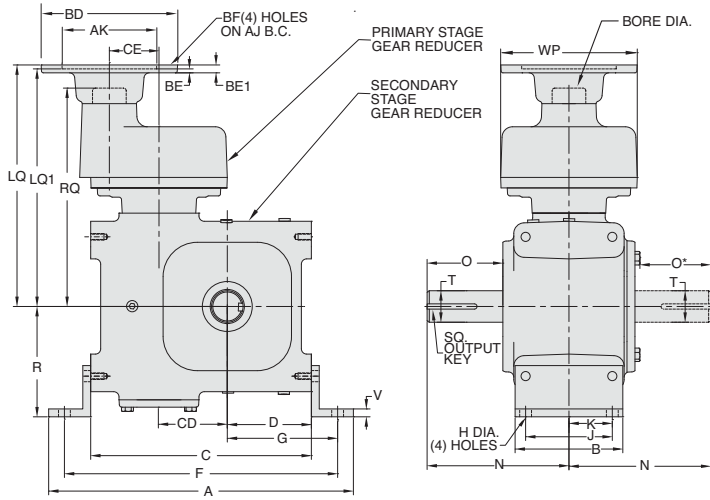
Convert Style DXU to motorized coupling input using kits shown on page 294.

ELECTRA-GEAR

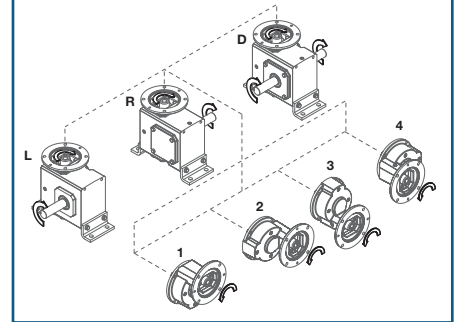
EL Series Dimensions

Styles: DXJMQ, DXJM, DXJ

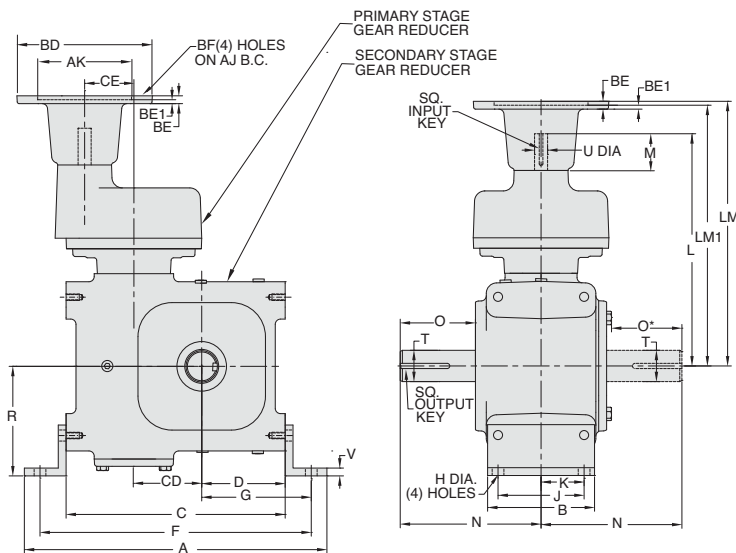
Style DXJMQ



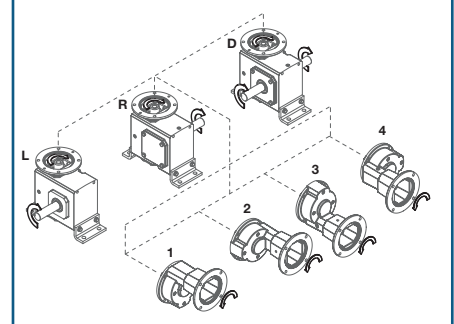
ASSEMBLIES



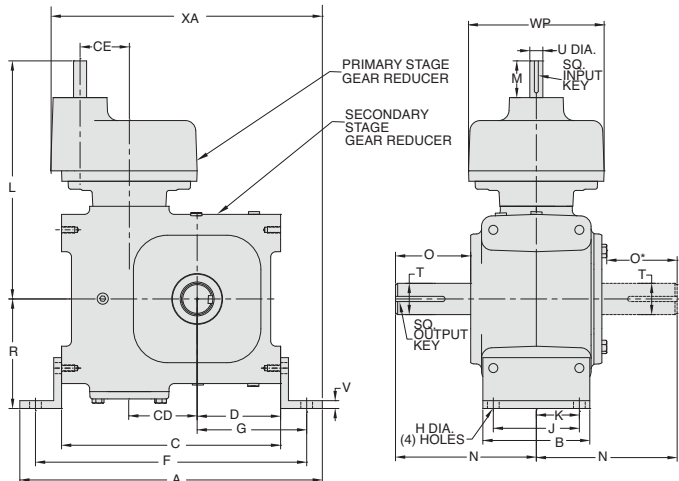
Style DXJM



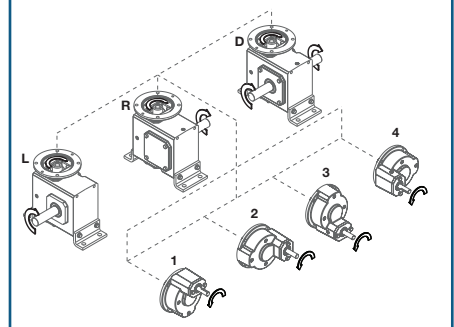
ASSEMBLIES



Style DXJ



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE DXJMQ, DXJM, DXJ DIMENSIONS (Inches)

Size	A	B	C	CD	CE	D	F	G	H	J	K	L	M
EL813	7.16	2.91	4.66	1.33	1.91	1.72	6.41	2.60	0.34	2.00	1.00	-	-
EL818	8.88	3.56	5.86	1.75	1.91	2.31	7.88	3.32	0.38	2.94	1.47	-	-
EL821	9.87	4.00	6.88	2.06	1.91	2.63	8.87	3.62	0.44	3.25	1.63	-	-
EL824	10.31	4.00	6.94	2.38	2.36	2.50	9.19	3.63	0.69	2.88	1.44	10.03	1.76
EL826	12.00	4.38	8.00	2.63	2.36	3.25	10.50	4.50	0.50	3.38	1.69	10.59	1.76
EL830	12.94	5.13	8.94	3.00	2.36	3.50	11.44	4.75	0.56	4.13	2.06	11.22	1.76
EL832	14.50	5.13	10.50	3.25	2.36	4.00	13.00	5.25	0.56	4.13	2.06	11.41	1.76

Size	N	O	O*	R	V	WP	XA	T +0.000 -0.0015	U +0.000 -0.0015	Input Key ※	Output Key
EL813	4.00	2.16	1.96	2.94	0.19	5.00	8.08	0.625	N/A	-	3/16 x 1.38
EL818	4.39	2.05	1.85	2.97	0.38	5.00	9.33	0.750	N/A	-	3/16 X 1.38
EL821	4.68	2.29	2.09	3.47	0.38	5.00	10.46	1.000	N/A	-	1/4 x 1.44
EL824	5.14	2.66	2.46	4.06	0.31	6.50	10.34	1.125	0.625	3/16 x 1.38	1/4 X 1.62
EL826	5.63	2.73	2.53	4.03	0.31	6.50	11.65	1.250	0.625	3/16 x 1.38	1/4 X 1.62
EL830	6.75	3.60	3.37	4.81	0.25	6.50	13.27	1.500	0.625	3/16 x 1.38	3/8 X 2.25
EL832	6.75	3.60	3.37	5.25	0.38	6.50	14.02	1.625	0.625	3/16 x 1.38	3/8 X 2.25

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM	LM1	LQ	LQ1	RQ	
	56C/140TC	180TC / 210TC	56C/140TC	180TC / 210TC	56C/140TC	180TC / 210TC
EL813	--	--	7.97	--	7.47	7.47
EL818	--	--	8.60	--	8.10	8.10
EL821	--	--	8.91	--	8.41	8.41
EL824	12.40	--	9.51	10.04	9.01	9.01
EL826	12.96	--	10.07	10.60	9.57	9.57
EL830	13.59	--	10.70	11.23	10.20	10.20
EL832	13.78	--	10.89	11.42	10.39	10.39

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

NOTE: Larger sizes available with cast iron primary - Contact Factory.

- * Applies to double output shaft
- ◆ Keyway width by depth
- ※ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

EL SERIES MOUNTING DIMENSIONS

- EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
- See page 212 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
H_JBSC or H_JBLSC	DXJMQ
H_JBC or H_JBC	DXJM
H_JB or H_JB	DXJ

Convert Style DXJ to motorized coupling input using kits shown on page 294.

ELECTRA-GEAR

EL Series Dimensions

Styles: DXVLMQ, DXVLM, DXVL
Style DXVLMQ



Single Reduction
Worm Gear Reducers

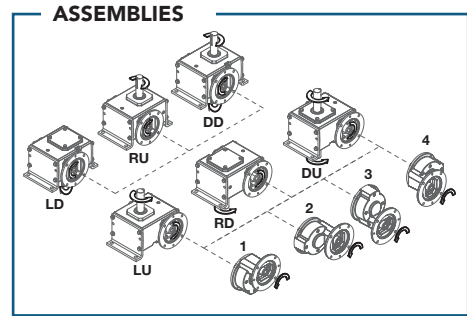
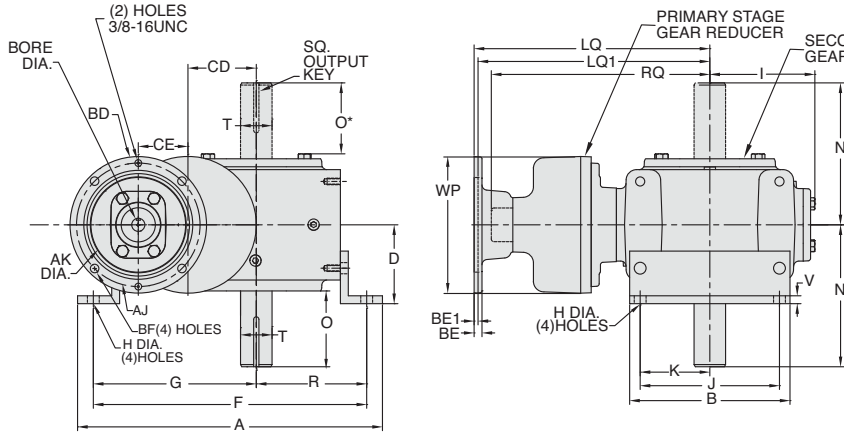
Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

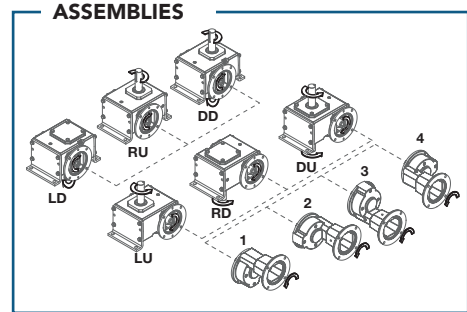
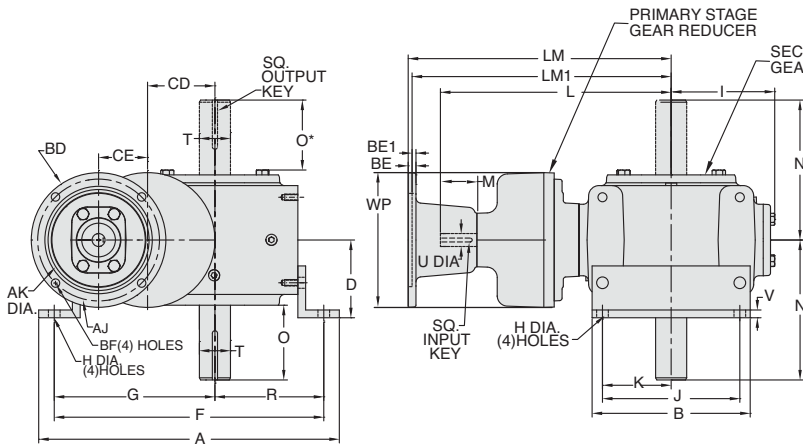
WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

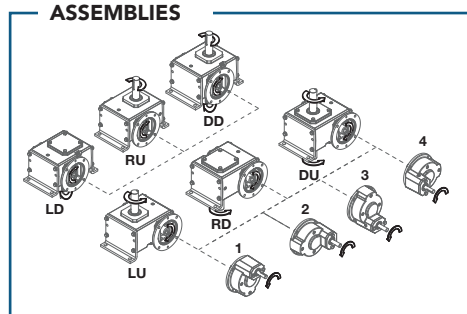
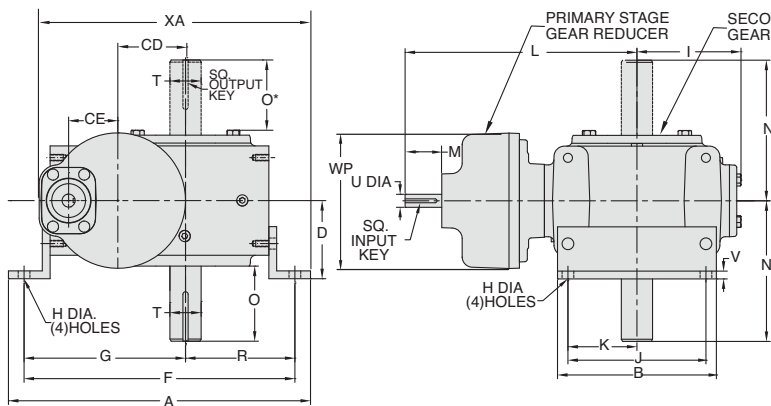
Accessories and
Additional Capabilities



Style DXVLM



Style DXVL



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXVLMQ, DXVLM, DXVL DIMENSIONS (Inches)

Size	A	B	CD	CE	D	F	G	H	I	J	K	L	M
EL813	7.16	4.13	1.33	1.91	2.31	6.16	3.69	0.34	2.40	3.25	1.63	-	-
EL818	8.88	4.25	1.75	1.91	2.28	7.88	4.57	0.38	3.03	3.69	1.84	-	-
EL821	9.87	4.81	2.06	1.91	2.56	8.87	5.25	0.44	3.40	4.13	2.06	-	-
EL824	10.88	5.88	2.38	2.36	2.75	9.38	5.66	0.50	3.61	5.00	2.50	10.03	1.76
EL826	12.00	5.88	2.63	2.36	2.81	10.50	6.00	0.50	4.17	5.00	2.50	10.59	1.76
EL830	12.94	6.75	3.00	2.36	3.75	11.44	6.69	0.56	4.81	5.75	2.88	11.22	1.76
EL832	14.50	7.63	3.25	2.36	3.75	13.00	7.75	0.56	5.00	6.63	3.31	11.41	1.76

Size	N	O	O*	R	V	WP	XA	T +0.000 -0.0015	U +0.000 -0.0015	Input Key ※	Output Key
EL813	4.00	2.16	1.96	1.72	0.19	5.00	8.08	0.625	N/A	-	3/16 x 1.38
EL818	4.39	2.05	1.85	2.31	0.38	5.00	9.33	0.750	N/A	-	3/16 X 1.38
EL821	4.68	2.29	2.09	2.63	0.38	5.00	9.96	1.000	N/A	-	1/4 x 1.44
EL824	5.14	2.66	2.46	2.50	0.31	6.50	10.65	1.125	0.625	3/16 x 1.38	1/4 X 1.62
EL826	5.63	2.73	2.53	3.25	0.31	6.50	11.65	1.250	0.625	3/16 x 1.38	1/4 X 1.62
EL830	6.75	3.60	3.37	3.50	0.25	6.50	12.27	1.500	0.625	3/16 x 1.38	3/8 X 2.25
EL832	6.75	3.60	3.37	4.00	0.38	6.50	14.52	1.625	0.625	3/16 x 1.38	3/8 X 2.25

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC / 180TC / 210TC	
EL813	--	--	7.97	--	7.47	7.47
EL818	--	--	8.60	--	8.10	8.10
EL821	--	--	8.91	--	8.41	8.41
EL824	12.40	--	9.51	10.04	9.01	9.01
EL826	12.96	--	10.07	10.60	9.57	9.57
EL830	13.59	--	10.70	11.23	10.20	10.20
EL832	13.78	--	10.89	11.42	10.39	10.39

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway ♦	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

NOTE: Larger sizes available with cast iron primary - Contact Factory.

- * Applies to double output shaft
- ♦ Keyway width by depth
- ※ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.



WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

EL SERIES MOUNTING DIMENSIONS

- EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
- See page 212 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
H_BSC or H_BLSC	DXVLMQ
H_BC or H_BLC	DXVLM
H_B or H_BL	DXVL

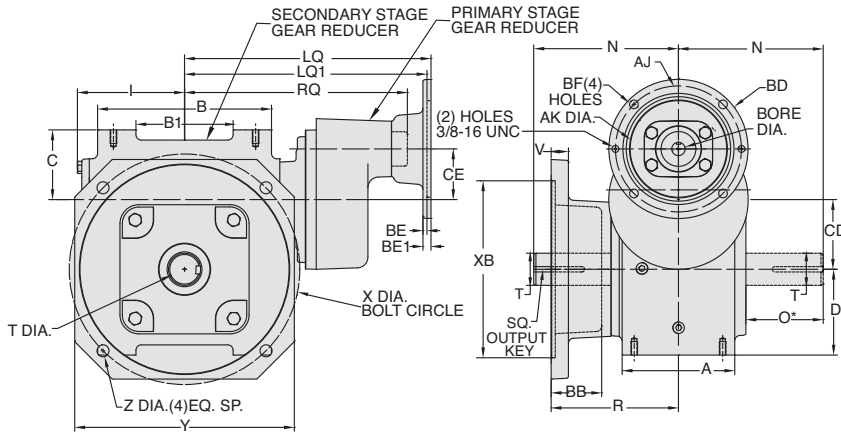
Convert Style DXVL to motorized coupling input using kits shown on page 294.

ELECTRA-GEAR

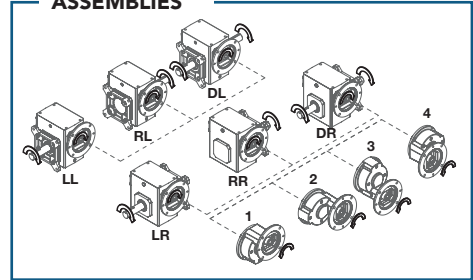
EL Series Dimensions

Styles: DXFRMQ, DXFRM, DXFR

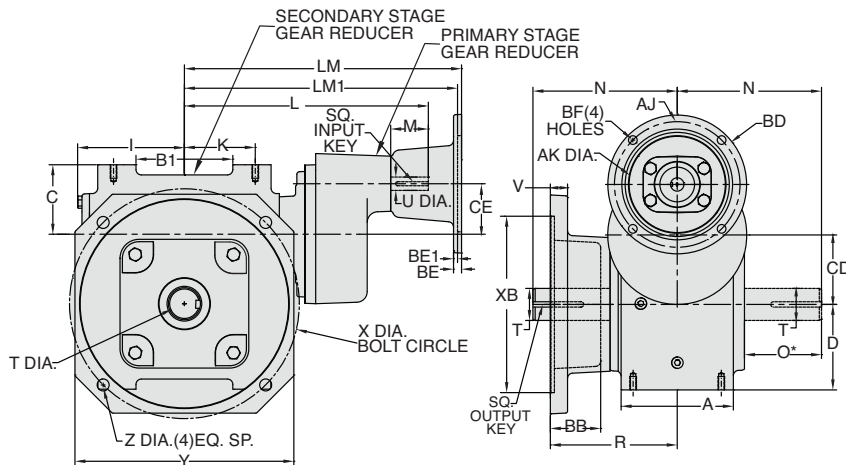
Style DXFRMQ



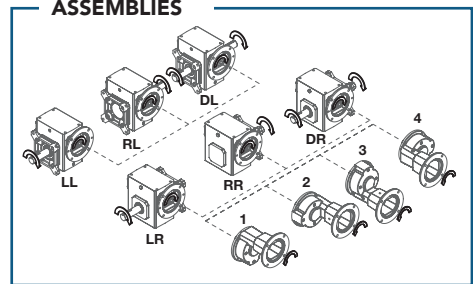
ASSEMBLIES



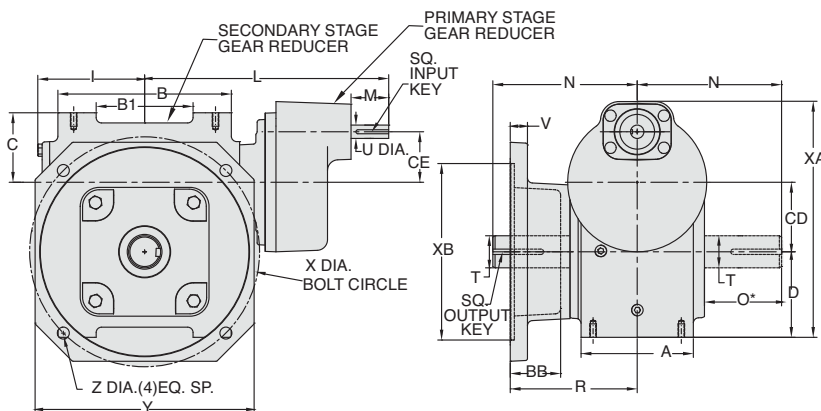
Style DXFRM



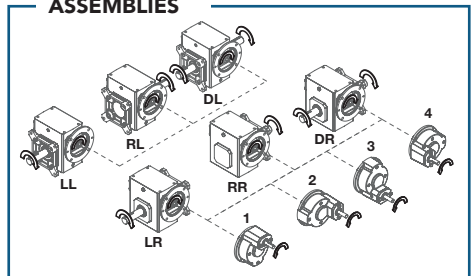
ASSEMBLIES



Style DXFR



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE DXFRMQ, DXFRM, DXFR DIMENSIONS (Inches)

Size	A	B	B1	BB	C	CD	CE	D	I	L	M	N	O*	R
EL818	3.50	4.83	2.48	1.27	1.81	1.75	1.91	2.31	3.03	-	-	4.39	1.85	3.53
EL821	3.91	5.75	2.76	1.51	2.19	2.06	1.91	2.63	3.40	-	-	4.68	2.09	4.25
EL824	4.06	5.86	--	1.35	2.06	2.38	2.36	2.50	3.61	10.03	1.76	5.14	2.46	4.15
EL826	4.84	7.17	4.21	1.35	2.12	2.63	2.36	3.25	4.17	10.59	1.76	5.63	2.53	4.56
EL830	5.25	8.11	4.50	2.36	2.44	3.00	2.36	3.50	4.81	11.22	1.76	6.75	3.37	5.75
EL832	5.25	8.11	4.53	2.54	3.25	3.25	2.36	4.00	5.00	11.41	1.76	6.75	3.37	5.94

Size	V	WP	X	XA	XB	Y	Z	T +0.000 -0.0015	U +0.000 -0.0015	Input Key ※	Output Key
EL818	0.38	5.00	3.13	7.83	-	4.10	0.34	0.750	N/A	-	3/16 X 1.38
EL821	0.50	5.00	6.88	8.46	6.00	6.49	0.44	1.000	N/A	-	1/4 x 1.44
EL824	0.63	6.50	7.75	8.65	6.50	6.99	0.50	1.125	0.625	3/16 x 1.38	1/4 X 1.62
EL826	0.63	6.50	7.75	9.65	6.50	6.99	0.50	1.250	0.625	3/16 x 1.38	1/4 X 1.62
EL830	0.81	6.50	9.13-9.50 ▲	10.27	8.25	8.74	0.56	1.500	0.625	3/16 x 1.38	3/8 X 2.25
EL832	0.81	6.50	9.13-9.50 ▲	11.02	8.25	8.74	0.56	1.625	0.625	3/16 x 1.38	3/8 X 2.25

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	RQ 180TC / 210TC
EL818	--	--	8.60	--	8.10	8.10
EL821	--	--	8.91	--	8.41	8.41
EL824	12.40	--	9.51	10.04	9.01	9.01
EL826	12.96	--	10.07	10.60	9.57	9.57
EL830	13.59	--	10.70	11.23	10.20	10.20
EL832	13.78	--	10.89	11.42	10.39	10.39

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

NOTE: Larger sizes available with cast iron primary - Contact Factory.

- * Applies to double output shaft
- ▲ Slotted holes
- ◆ Keyway width by depth
- ※ Solid input shaft and C-faced coupling input reducers have different input shaft length and key.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

EL SERIES MOUNTING DIMENSIONS

- EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
- See page 212 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
NOT A	DXFRMQ
STANDARD CATALOGED	DXFRM
OPTION	DXFR

NOTE: New styles are not a direct replacement to original ring base.

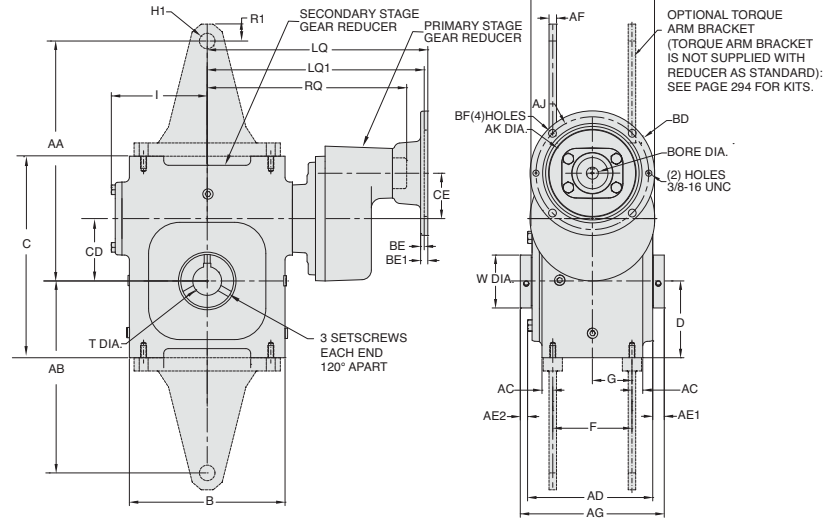
Convert Style DXFR to motorized coupling input using kits shown on page 294.

ELECTRA-GEAR

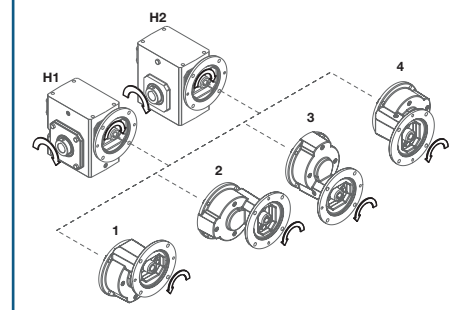
EL Series Dimensions

Styles: DXHMQ, DXHM, DXH

Style DXHMQ

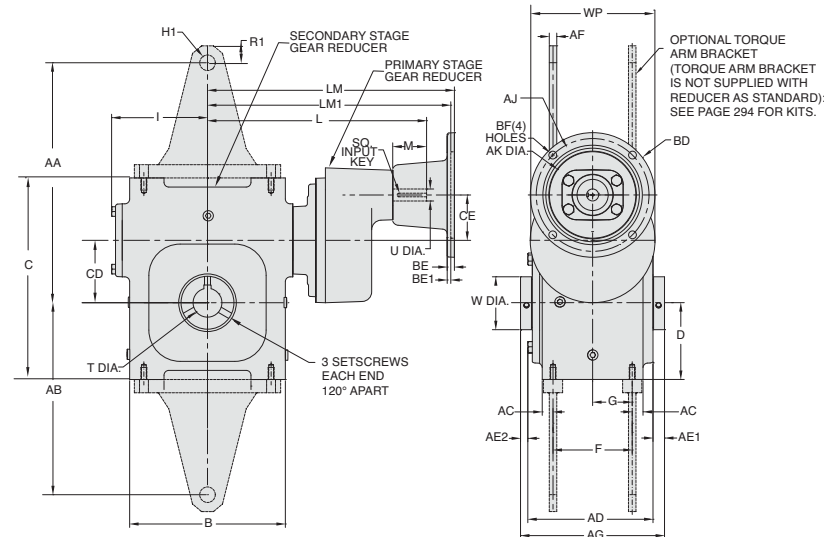


ASSEMBLIES

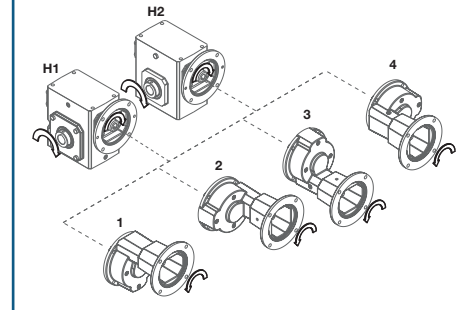


H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

Style DXHM

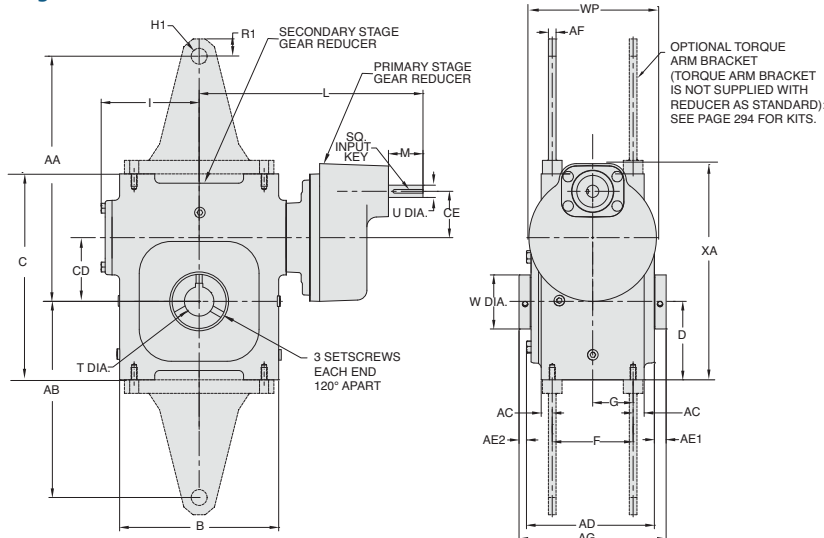


ASSEMBLIES

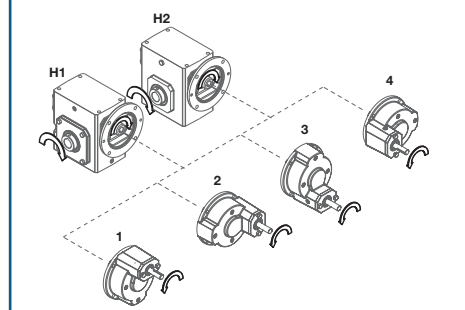


H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

Style DXH



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

H1 IS SUPPLIED AS STANDARD UNLESS OTHERWISE SPECIFIED.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE DXHMQ, DXHM, DXH DIMENSIONS (Inches)

Size	AA	AB	AC	AD	AE1	AE2	AF	AG	B	C	CD	CE	D	F	G	H1
EL813	--	--	0.41	3.89	0.58	0.26	--	4.73	3.80	4.66	1.33	1.91	1.72	2.00	1.00	--
EL818	6.25	5.00	0.28	4.72	0.49	0.29	0.69	5.50	4.83	5.86	1.75	1.91	2.31	2.94	1.47	0.53
EL821	7.63	6.00	0.33	4.98	0.60	0.42	0.69	6.00	5.75	6.88	2.06	1.91	2.63	3.25	1.63	0.53
EL824	7.81	5.87	0.59	5.17	1.02	0.81	0.69	7.00	5.86	6.94	2.38	2.36	2.50	2.88	1.44	0.53
EL826	8.50	7.00	0.73	6.00	0.60	0.40	0.69	7.00	7.17	8.00	2.63	2.36	3.25	3.38	1.69	0.53
EL830	9.94	8.00	0.56	6.52	0.60	0.38	0.69	7.50	8.11	8.94	3.00	2.36	3.50	4.13	2.06	0.53
EL832	12.50	10.00	0.56	6.52	0.60	0.38	0.69	7.50	8.11	10.50	3.25	2.36	4.00	4.13	2.06	0.53

Size	I	L	M	R1	W	WP	XA	T MAX+ -0.000 +0.0025	U +0.000 -0.0015	Input Key *	Output Key
EL813	2.40	-	-	-	1.00	5.00	6.83	0.625	N/A	-	3/16 x 1.50
EL818	3.03	-	-	0.66	1.44	5.00	7.83	1.000	N/A	-	1/4 x 3.00
EL821	3.40	-	-	0.75	1.94	5.00	8.46	1.500*	N/A	-	3/8 x 3.00
EL824	3.61	10.03	1.76	0.75	1.94	6.50	8.65	1.500*	0.625	3/16 x 1.38	3/8 x 3.00
EL826	4.17	10.59	1.76	0.75	1.94	6.50	9.65	1.500*	0.625	3/16 x 1.38	3/8 x 3.00
EL830	4.81	11.22	1.76	0.81	2.76	6.50	10.27	2.188	0.625	3/16 x 1.38	1/2 x 3.00
EL832	5.00	11.41	1.76	0.88	2.76	6.50	11.02	2.188	0.625	3/16 x 1.38	1/2 x 3.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM 56C/140TC	LM1 180TC / 210TC	LQ 56C/140TC	LQ1 180TC / 210TC	RQ 56C/140TC	RQ 180TC / 210TC
EL813	--	--	7.97	--	7.47	7.47
EL818	--	--	8.60	--	8.10	8.10
EL821	--	--	8.91	--	8.41	8.41
EL824	12.40	--	9.51	10.04	9.01	9.01
EL826	12.96	--	10.07	10.60	9.57	9.57
EL830	13.59	--	10.70	11.23	10.20	10.20
EL832	13.78	--	10.89	11.42	10.39	10.39

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway ♦	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

NOTE: Larger sizes available with cast iron primary - Contact Factory.

- Max bore dimensions shown. For additional bores available, refer to page 140.
- ♦ Keyway width by depth
- * Solid input shaft and C-faced coupling input reducers have different input shaft length and key.



WARNING For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

EL SERIES MOUNTING DIMENSIONS

- EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
- See page 212 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
H_MHSC	DXHMQ
H_MHC	DXHM
H_MH	DXH

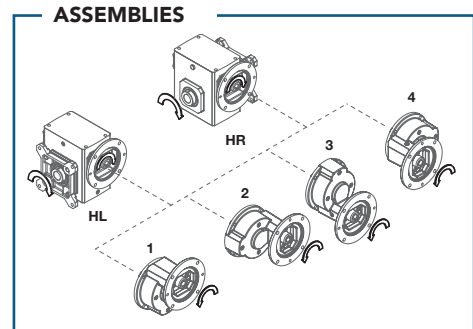
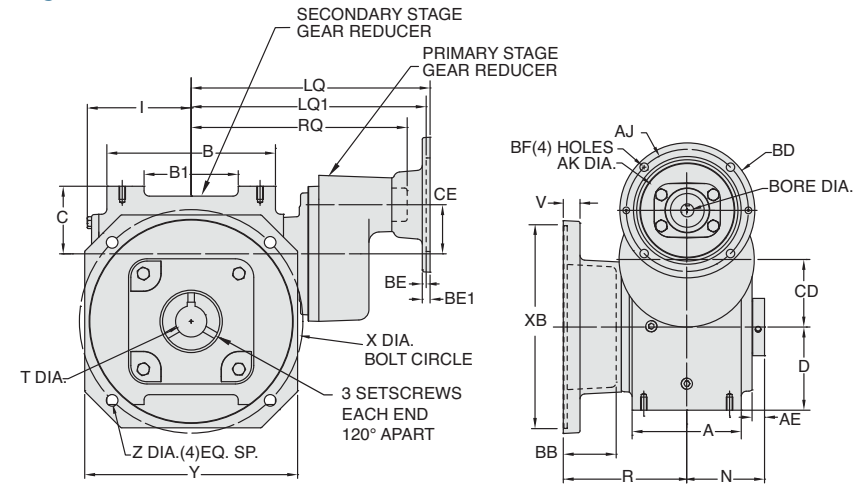
Convert Style DXH to motorized coupling input using kits shown on page 294.

ELECTRA-GEAR

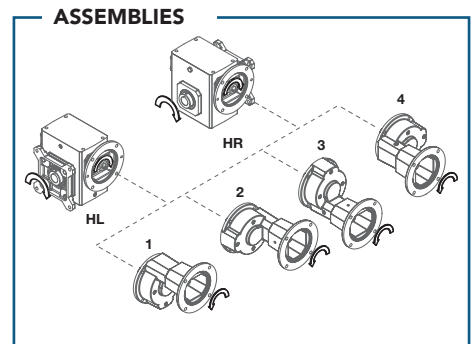
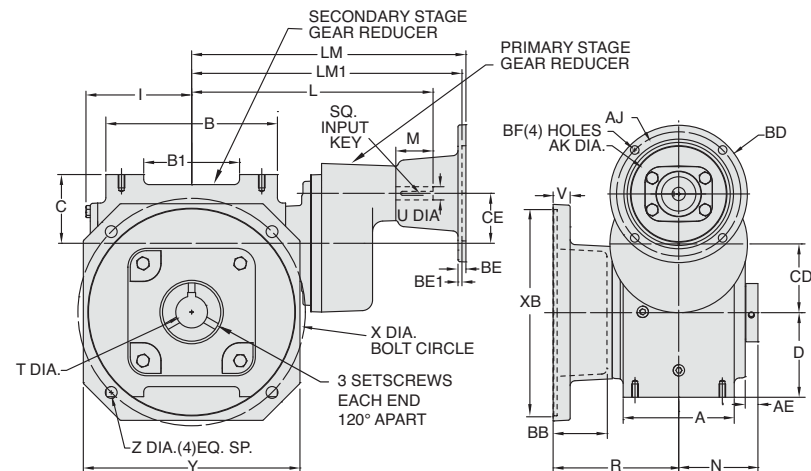
EL Series Dimensions

Styles: DXFHMQ, DXFHM, DXFH

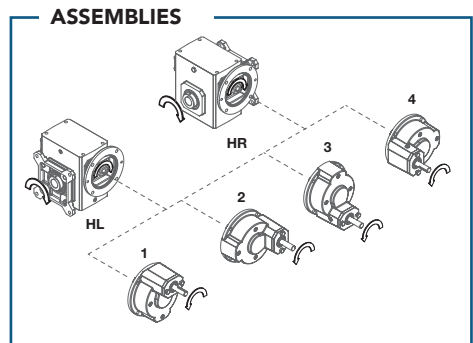
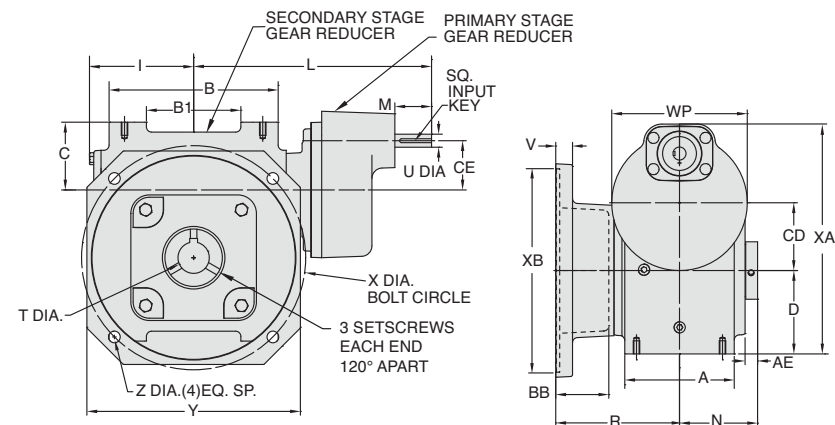
Style DXFHMQ



Style DXFHM



Style DXFH



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION.
CONTACT Factory FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE DXFHM, DXFH, DXFH DIMENSIONS (Inches)

Size	A	AE	B	BB	B1	C	CD	CE	D	I	L	M	N	R	V
EL818	3.50	0.49	4.83	1.27	2.48	1.81	1.75	1.91	2.31	3.03	-	-	2.75	3.53	0.38
EL821	3.91	0.60	5.75	1.51	2.76	2.19	2.06	1.91	2.63	3.40	-	-	2.99	4.25	0.50
EL824	4.06	1.05	5.86	1.35	--	2.06	2.38	2.36	2.50	3.61	10.03	1.76	3.51	4.15	0.63
EL826	4.84	0.60	7.17	1.35	4.21	2.12	2.63	2.36	3.25	4.17	10.59	1.76	3.19	4.56	0.63
EL830	5.25	0.60	8.11	2.36	4.50	2.44	3.00	2.36	3.50	4.81	11.22	1.76	3.75	5.75	0.81
EL832	5.25	0.60	8.11	2.54	4.53	3.25	3.25	2.36	4.00	5.00	11.41	1.76	3.75	5.94	0.81

Size	W	WP	X	XA	XB	Y	Z	T MAX -0.000 +0.0025	U +0.000 -0.0015	Input Key †	Output Key
EL818	1.44	5.00	3.13	7.83	-	4.00	0.34	1.000	N/A	-	1/4 x 3.00
EL821	1.94	5.00	6.88	8.46	6.00	6.49	0.44	1.500*	N/A	-	3/8 x 3.00
EL824	1.94	6.50	7.38	8.65	6.50	6.99	0.50	1.500*	0.625	3/16 x 1.38	3/8 x 3.00
EL826	1.94	6.50	7.38	9.65	6.50	6.99	0.50	1.500*	0.625	3/16 x 1.38	3/8 x 3.00
EL830	2.76	6.50	9.13-9.50 ▲	10.27	8.25	8.74	0.56	2.188	0.625	3/16 x 1.38	1/2 x 3.00
EL832	2.76	6.50	10.75	11.02	9.75	10.24	0.56	2.188	0.625	3/16 x 1.38	1/2 x 3.00

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM	LM1	LQ	LQ1	RQ	
	56C/140TC	180TC / 210TC	56C/140TC	180TC / 210TC	56C/140TC	180TC / 210TC
EL818	--	--	8.60	--	8.10	8.10
EL821	--	--	8.91	--	8.41	8.41
EL824	12.40	--	9.51	10.04	9.01	9.01
EL826	12.96	--	10.07	10.60	9.57	9.57
EL830	13.59	--	10.70	11.23	10.20	10.20
EL832	13.78	--	10.89	11.42	10.39	10.39

NEMA DIMENSIONS (Inches)

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway ◆	BF
56C	5.88	4.50	6.50	0.38	N/A	.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53

NOTE: Larger sizes available with cast iron primary - Contact Factory.

- Max bore dimensions shown. For additional bores available, refer to page 140.
- ▲ Slotted holes
- ◆ Keyway width by depth
- ※ Solid input shaft and C-faced coupling input reducers have same input shaft length and key.



For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon.

EL SERIES MOUNTING DIMENSIONS

- EL Series mounting dimensions are the same as the original ELECTRA-GEAR product with an option to match the industry standard dimensions of GR Series.
- See page 212 for GR Series dimensions.

ELECTRA-GEAR INTERCHANGE GUIDE

Original Style	New Style
H_RHSC	DXFHM
H_RHC	DXFH
H_RH	DXFH

Convert Style DXFH to motorized coupling input using kits shown on page 294.

WASHGUARD Gear Reducers & GEAR+MOTOR™

With gear reducers in epoxy painted cast iron, polished aluminum and stainless steel, Grove Gear offers a solution for any washdown application.

GOOD


CAST IRON WASHGUARD® GEAR REDUCERS

Grove Gear **IRONMAN WASHGUARD®** reducers are designed and built to withstand the rigors of high pressure washdown environments in food service and other wet or humid conditions. A white, food-grade epoxy finish provides superior durability in wet environments and resists caustic cleaning solutions. All standard cast iron products are available enhanced with WASHGUARD® features assuring trouble-free operation.

BETTER


ALUMINUM PLATINUM GEAR REDUCERS

EL Series PLATINUM aluminum gear reducers are a light weight, yet durable alternative for food processing and washguard environments featuring a smooth, polished and paint-free finish. They are available off-the-shelf or customized to your exact specifications. Available in worm gear reducers, ratio multipliers and small, helical-concentric reducers.

BEST


STAINLESS STEEL GEAR REDUCERS

Premium WASHGUARD® All-Stainless reducers offer superior corrosion protection. Our stainless steel housing, shaft, covers and external hardware offer an exceptionally long life. Each reducer comes with USDA H1 synthetic oil, eliminating the need for oil changes. Our premium stainless gear reducers are supplied with 316 grade stainless steel housing and covers. These premium reducers offer superior corrosion protection, and can withstand the harshest conditions. Available in worm gear reducers, ratio multipliers, helical-concentric and helical-bevel reducers.


**GEAR+
MOTOR™**

Stock GEAR+MOTOR™

Combining Grove Gear built tough, long lasting, energy efficient gear reducers with performance matched LEESON or Lincoln motors, you can maximize system efficiency and rely on unmatched product strength, precision and dependability.

REFER TO PAGES 258-259 FOR FEATURES

- Viton® double-lip seals - up to five times more durable than nitrile seals - provide added resistance to chemicals
- Patented Forsheda V-ring on output shaft provides extra protection from contaminants
- O-ring on “flat-faced” input flange provides a positive seal against moisture intrusion
- Food grade white epoxy paint
- Food-Grade Synthetic Lubricant, Mobil PAG 460 or equivalent, meets USDA Class H1 standards

GOOD

- Nine sizes available to 29 HP
- Available in single, double and triple reduction with ratios from 5:1 to 216,000:1
- Worm gear reducers and helical-worm gear reducers
- Clean, polished and paint-free finish
- Lightweight alternative to cast iron
- Lower cost alternative to stainless steel
- Superior corrosion resistance to painted cast iron
- Food-Grade Synthetic Lubricant, Mobil PAG 460 or equivalent, meets USDA Class H1 standards
- Stainless steel shafts and hardware

BETTER

- O-ring on face of input flange provides a positive seal against moisture intrusion
- Stainless steel output shaft
- Stainless steel hardware, including square-head pipe plugs to eliminate particle entrapment in vent locations
- Viton® double-lip shaft seals for superior resistance to chemicals common in washdown applications
- Food-Grade Synthetic Lubricant, Mobil PAG 460 or equivalent, meets USDA Class H1 standards
- Housing and covers are 300 series cast stainless steel to withstand extreme environments

BEST

Chemical Compatibility Summary

Material	Reaction Level to Material		
	Cast Iron	Aluminum	316 Stainless
Ammonia Anhydrous	D	B	A
Acetic Acid	D	B	B
Arsenic Acid	D	D	A
Barium Chloride	C	D	A
Barium Sulfate	B	B	B
Beer	D	A	A
Butter	D	A	A
Butyl Alcohol	A	B	C
Calcium Chloride	C	D	B
Carbonic Acid	D	B	A
Catsup	D	D	A
Citric Acid	D	C	A
Chlorine (Dry)	A	C	A
Detergents	N/A	B	A
Diethylene Glycol	A	B	A
Formaldehyde	D	A	A
Grape Juice	D	N/A	A
Lactic Acid	D	B	B
Mayonaise	D	A	A
Nitric Acid (50%)	D	D	A
Salad Dressing	D	B	A
Soap Solutions	A	C	A
Sodium Hydroxide (80%)	D	D	B
Sodium Hypochlorite (<20%)	D	D	C
Sodium Sulfide	A	C	B
Soy Sauce	D	A	A
Sulfuric Acid (<10%)	C	D	B
Sulfur Dioxide	N/A	C	A
Tannic Acid	C	C	A
Turpentine	A	C	B
Vegetable Juice	D	D	A
Vinegar	D	D	A
Water, Fresh	D	B	A
Water, Salt	D	B	B
Whey	N/A	B	A
Whiskey and Wines	D	C	A
Zinc Chloride	D	D	B
Zinc Sulfate	D	D	A

A = Excellent
B = Good, minor effect
C = Fair, moderate affect (not recommended for continuous use)
D = Severe effect, not recommended
 N/A = Information not available

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities





WASHGUARD® Gear Reducers Designed For Washdown Duty

WASHGUARD® Reducer Features

Grove Gear WASHGUARD® gear reducers are designed and built to withstand the rigors of high-pressure washdowns in nearly any severe environment, including: food service, chemical and poultry processing, car washes and more. Built on the foundation of Grove Gear's industrial-duty Grove Gear Ironman™ line, these reducers add exclusive WASHGUARD® All-Stainless features to ensure trouble-free operation.

Combine the gear reducer with a LEESON WASHGUARD® epoxy painted or All-Stainless motor for a Gear+Motor™ that boasts an unmatched ability to thrive under conditions that would quickly destroy most other motors and gear reducers.

WASHGUARD® housing options

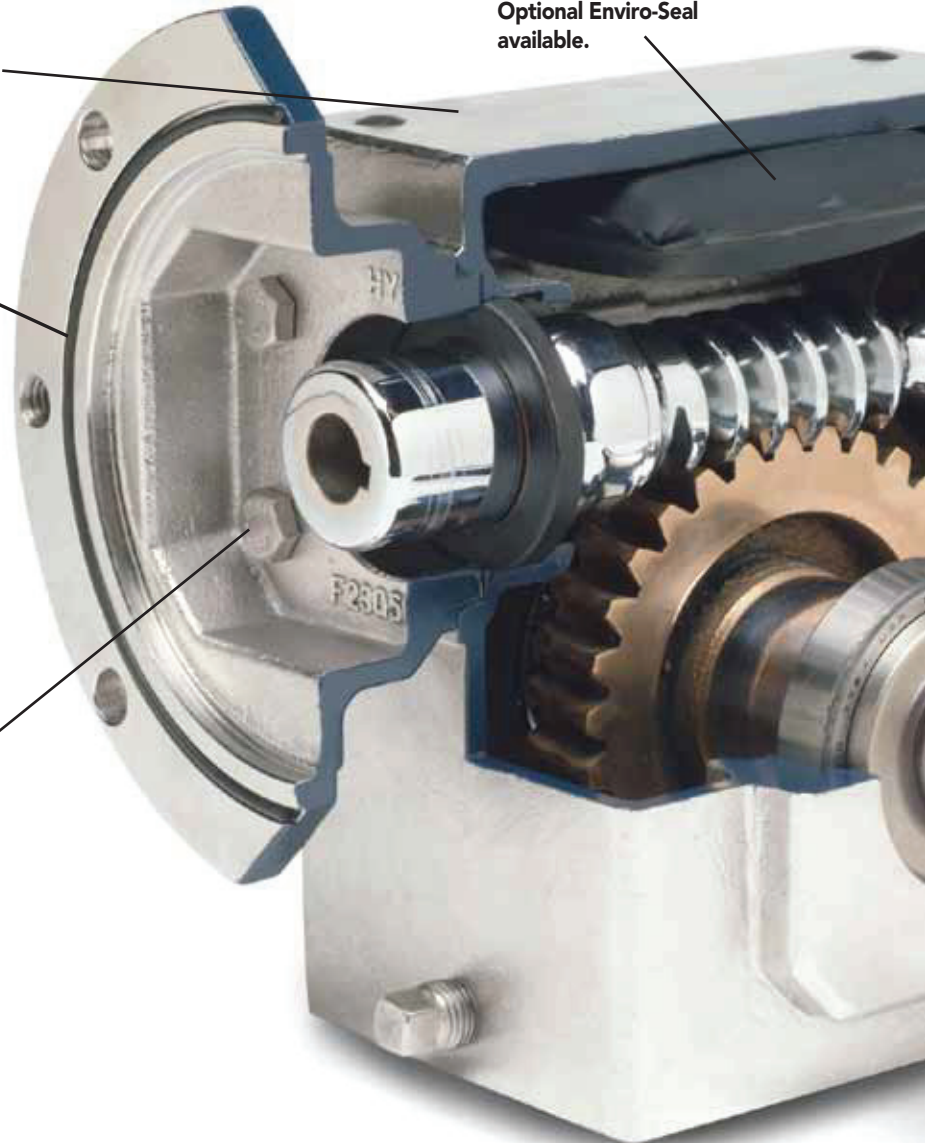
- Premium 316 grade stainless steel
- Polished aluminum
- Epoxy painted cast iron

O-ring on input flange provides a positive seal against moisture intrusion.

Optional Enviro-Seal available.

All features are found on All-Stainless Steel, PLATINUM aluminum and epoxy painted cast iron gear reducers.

Stainless steel assembly hardware resists corrosion from moisture and chemicals.



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



Food-Grade Synthetic Oil Mobil Glygoyle PAG 460 meets USDA Class H1 standards while providing superior mechanical/thermal performance and extended life.

O-ring seals on input and output covers eliminate gaskets, sealants and leaks.

Viton® double-lip seals and Viton® double-lip seals are up to five times more durable than nitrile seals and provide superior resistance to chemical corrosion in severe applications. (Stainless case output seals standard on All-Stainless reducers only.)

303 stainless steel output shaft is corrosion resistant for long life and ease of servicing (stainless steel hollow bores are standard for sizes 813-832 and available as an option for sizes 842-860).

Non-compressible stainless steel shims keep factory bearing settings constant.



WASHGUARD®

Combine WASHGUARD® white epoxy gear reducers and WASHGUARD® white epoxy motors.

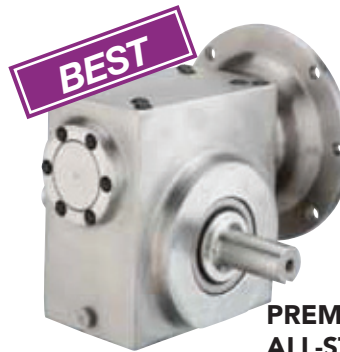
Enhanced performance in wet, humid areas.



PLATINUM WASHGUARD® with STAINLESS FRAME MOTOR

Combine PLATINUM polished aluminum reducers and paint-free stainless motors.

Superior, extended life in severe environments.



PREMIUM WASHGUARD® ALL-STAINLESS

Combine all-stainless reducers and motors to create a package suitable for nearly any severe duty application.

Maximum service in critically clean or corrosive environments.

Additional WASHGUARD® Products Available

- Ratio Multipliers
- Double reduction worm reducers
- Size 842-8100 worm reducers
- High efficiency products



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

WASHGUARD® Maximum Rating Tables



Size 813 • GR, EL Series

Style WBMQ

Style WHMQ



813 Series

Ratio	Input RPM	Output RPM ⁺	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Frame [▲]	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.
5	1750	350.0	1.248	1.158	209	56C	__8133001	__8133013	__8133025	__8133501.10
7.5	1750	233.3	1.025	0.933	252	56C	__8133002	__8133014	__8133026	__8133502.10
10	1750	175.0	0.823	0.729	263	56C	__8133003	__8133015	__8133027	__8133503.10
15	1750	116.7	0.642	0.541	292	56C	__8133004	__8133016	__8133028	__8133504.10
20	1750	87.5	0.551	0.445	320	56C	__8133005	__8133017	__8133029	__8133505.10
25	1750	70.0	0.445	0.344	309	56C	__8133006	__8133018	__8133030	__8133506.10
30	1750	58.3	0.395	0.290	314	56C	__8133007	__8133019	__8133031	__8133507.10
40	1750	43.8	0.329	0.223	322	56C	__8133008	__8133020	__8133032	__8133508.10
50	1750	35.0	0.285	0.182	327	56C	__8133009	__8133021	__8133033	__8133509.10
60	1750	29.2	0.246	0.145	313	56C	__8133010	__8133022	__8133034	__8133510.10
80	1750	21.9	0.121	0.064	183	56C	__8133011	__8133023	__8133035	__8133511.10
100	1750	17.5	0.084	0.040	143	56C	__8133012	__8133024	__8133036	__8133512.10

For input/ output shaft overhung load and thrust load ratings, refer to pages 645-647.

▲ Contact Factory for other motor flanges available.

+ For gear reducer ratings at other input speeds, refer to basic reducer selection tables on pages 32-33.

How To Build a Part Number For Size GR813, EL813

1. Select partial catalog number from the selection table 2. Replace leading “__” with series code (GR, EL)

Example:

GR Series Style WBMQ, 10:1 Left Hand Output, 56C
GR-WBMQ813-10-L-56
GR8133003

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Style WBMQ

Style WHMQ



815 Series

Ratio	Input RPM	Output RPM+	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Frame▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.
5	1750	350.0	1.939	1.794	323	56C	<u>8153001</u>	<u>8153013</u>	<u>8153025</u>	<u>8153501.10</u>
						140TC	<u>8153037</u>	<u>8153049</u>	<u>8153061</u>	<u>8153513.10</u>
7.5	1750	233.3	1.522	1.368	370	56C	<u>8153002</u>	<u>8153014</u>	<u>8153026</u>	<u>8153502.10</u>
						140TC	<u>8153038</u>	<u>8153050</u>	<u>8153062</u>	<u>8153514.10</u>
10	1750	175.0	1.279	1.116	402	56C	<u>8153003</u>	<u>8153015</u>	<u>8153027</u>	<u>8153503.10</u>
						140TC	<u>8153039</u>	<u>8153051</u>	<u>8153063</u>	<u>8153515.10</u>
15	1750	116.7	1.003	0.826	446	56C	<u>8153004</u>	<u>8153016</u>	<u>8153028</u>	<u>8153504.10</u>
						140TC	<u>8153040</u>	<u>8153052</u>	<u>8153064</u>	<u>8153516.10</u>
20	1750	87.5	0.919	0.719	518	56C	<u>8153005</u>	<u>8153017</u>	<u>8153029</u>	<u>8153505.10</u>
						140TC	<u>8153041</u>	<u>8153053</u>	<u>8153065</u>	<u>8153517.10</u>
25	1750	70.0	0.752	0.559	503	56C	<u>8153006</u>	<u>8153018</u>	<u>8153030</u>	<u>8153506.10</u>
30	1750	58.3	0.630	0.442	478	56C	<u>8153007</u>	<u>8153019</u>	<u>8153031</u>	<u>8153507.10</u>
40	1750	43.8	0.560	0.361	520	56C	<u>8153008</u>	<u>8153020</u>	<u>8153032</u>	<u>8153508.10</u>
50	1750	35.0	0.464	0.274	494	56C	<u>8153009</u>	<u>8153021</u>	<u>8153033</u>	<u>8153509.10</u>
60	1750	29.2	0.391	0.214	462	56C	<u>8153010</u>	<u>8153022</u>	<u>8153034</u>	<u>8153510.10</u>
80	1750	21.9	0.204	0.093	269	56C	<u>8153011</u>	<u>8153023</u>	<u>8153035</u>	<u>8153511.10</u>
100	1750	17.5	0.145	0.059	213	56C	<u>8153012</u>	<u>8153024</u>	<u>8153036</u>	<u>8153512.10</u>

For input/ output shaft overhung load and thrust load ratings, refer to pages 645-647.

** Size 815 is not available in EL Series.

▲ Contact Factory for other motor flanges available.

+ For gear reducer ratings at other input speeds, refer to basic reducer selection tables on pages 34-35.

How To Build a Part Number For Size GR815, EL815

1. Select partial catalog number from the selection table 2. Replace leading “_” with series code (GR)

Example:

GR Series Style WBMQ, 10:1 Left Hand Output, 56C
GR-WBMQ815-10-L-56
GR8153003

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

WASHGUARD® Maximum Rating Tables

Size 818 • GR, EL Series



Style WBMQ

Style WHMQ



818 Series

Ratio	Input RPM	Output RPM†	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Frame▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.
5	1750	350.0	2.600	2.422	436	56C	__8183001	__8183013	__8183025	__8183501.XX
						143-5TC	__8183037	__8183049	__8183061	__8183513.XX
7.5	1750	233.3	1.909	1.745	471	56C	__8183002	__8183014	__8183026	__8183502.XX
						143-5TC	__8183038	__8183050	__8183062	__8183514.XX
10	1750	175.0	1.625	1.466	528	56C	__8183003	__8183015	__8183027	__8183503.XX
						143-5TC	__8183038	__8183051	__8183063	__8183515.XX
15	1750	116.7	1.224	1.058	571	56C	__8183004	__8183016	__8183028	__8183504.XX
						143-5TC	__8183039	__8183051	__8183064	__8183516.XX
20	1750	87.5	1.046	0.875	630	56C	__8183005	__8183017	__8183029	__8183505.XX
						143-5TC	__8183040	__8183051	__8183065	__8183517.XX
25	1750	70.0	0.884	0.715	644	56C	__8183006	__8183018	__8183030	__818506.XX
30	1750	58.3	0.741	0.569	614	56C	__8183007	__8183019	__8183031	__8183507.XX
40	1750	43.8	0.609	0.440	634	56C	__8183008	__8183020	__8183032	__8183508.XX
50	1750	35.0	0.515	0.352	634	56C	__8183009	__8183021	__8183033	__8183509.XX
60	1750	29.2	0.449	0.288	623	56C	__8183010	__8183022	__8183034	__8183510.XX
80	1750	21.9	0.208	0.124	356	56C	__8183011	__8183023	__8183035	__8183511.XX
100	1750	17.5	0.141	0.077	277	56C	__8183012	__8183024	__8183036	__8183512.XX

For input/ output shaft overhung load and thrust load ratings, refer to pages 645-648.

▲ Contact Factory for other motor flanges available.

† For gear reducer ratings at other input speeds, refer to basic reducer selection tables on pages 36-37.

How To Build a Part Number For Size GR818, EL818

1. Select partial catalog number from the selection table 3. For Hollow output, replace "XX" suffix with bore code.
2. Replace leading "_" with series code (GR, EL)

Example:

GR Series Style WBMQ, 10:1 Left Hand Output, 56C

GR-WBMQ818-10-L-56

GR8183003

Available bore codes

Fraction Size	5/8"	11/16"	3/4"	7/8"	1"
Decimal Size	0.625	0.688	0.750	0.875	1.000
Output Bore Code	10	11	12	14	16

* Catalog numbers are for hollow output shaft reducers. When ordering, substitute the XX suffix with the required output bore code.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

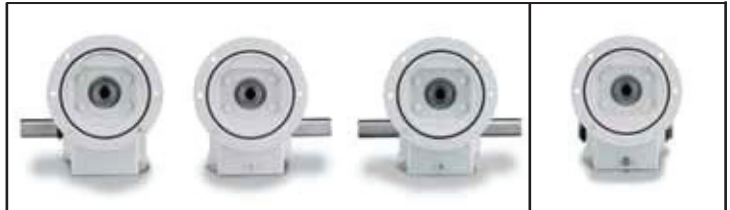
WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Style WBMQ

Style WHMQ



821 Series

Ratio	Input RPM	Output RPM+	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Frame▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*
5	1750	350.0	3.653	3.410	614	56C	<u>8213001</u>	<u>8213013</u>	<u>8213025</u>	<u>8213501.XX</u>
						143-5TC	<u>8213037</u>	<u>8213049</u>	<u>8213061</u>	<u>8213513.XX</u>
7.5	1750	233.3	2.793	2.562	692	56C	<u>8213002</u>	<u>8213014</u>	<u>8213026</u>	<u>8213502.XX</u>
						143-5TC	<u>8213038</u>	<u>8213050</u>	<u>8213062</u>	<u>8213514.XX</u>
10	1750	175.0	2.464	2.235	805	56C	<u>8213003</u>	<u>8213015</u>	<u>8213027</u>	<u>8213503.XX</u>
						143-5TC	<u>8213039</u>	<u>8213051</u>	<u>8213063</u>	<u>8213515.XX</u>
15	1750	116.7	1.887	1.661	897	56C	<u>8213004</u>	<u>8213016</u>	<u>8213028</u>	<u>8213504.XX</u>
						143-5TC	<u>8213040</u>	<u>8213052</u>	<u>8213064</u>	<u>8213516.XX</u>
20	1750	87.5	1.584	1.338	964	56C	<u>8213005</u>	<u>8213017</u>	<u>8213029</u>	<u>8213505.XX</u>
						143-5TC	<u>8213041</u>	<u>8213053</u>	<u>8213065</u>	<u>8213517.XX</u>
25	1750	70.0	1.333	1.094	985	56C	<u>8213006</u>	<u>8213018</u>	<u>8213030</u>	<u>8213506.XX</u>
						143-5TC	<u>8213042</u>	<u>8213054</u>	<u>8213066</u>	<u>8213518.XX</u>
30	1750	58.3	1.129	0.896	968	56C	<u>8213007</u>	<u>8213019</u>	<u>8213031</u>	<u>8213507.XX</u>
						143-5TC	<u>8213043</u>	<u>8213055</u>	<u>8213067</u>	<u>8213519.XX</u>
40	1750	43.8	0.916	0.674	971	56C	<u>8213008</u>	<u>8213020</u>	<u>8213032</u>	<u>8213508.XX</u>
						143-5TC	<u>8213044</u>	<u>8213056</u>	<u>8213068</u>	<u>8213520.XX</u>
50	1750	35.0	0.769	0.539	970	56C	<u>8213009</u>	<u>8213021</u>	<u>8213033</u>	<u>8213509.XX</u>
						143-5TC	<u>8213045</u>	<u>8213057</u>	<u>8213069</u>	<u>8213521.XX</u>
60	1750	29.2	0.674	0.435	940	56C	<u>8213010</u>	<u>8213022</u>	<u>8213034</u>	<u>8213510.XX</u>
						143-5TC	<u>8213046</u>	<u>8213058</u>	<u>8213070</u>	<u>8213522.XX</u>
80	1750	21.9	0.304	0.190	547	56C	<u>8213011</u>	<u>8213023</u>	<u>8213035</u>	<u>8213511.XX</u>
						143-5TC	<u>8213047</u>	<u>8213059</u>	<u>8213071</u>	<u>8213523.XX</u>
100	1750	17.5	0.217	0.122	439	56C	<u>8213012</u>	<u>8213024</u>	<u>8213036</u>	<u>8213512.XX</u>
						143-5TC	<u>8213048</u>	<u>8213060</u>	<u>8213072</u>	<u>8213524.XX</u>

For input/ output shaft overhung load and thrust load ratings, refer to pages 645-648.

▲ Contact Factory for other motor flanges available.

+ For gear reducer ratings at other input speeds, refer to basic reducer selection tables on pages 38-39.

How To Build a Part Number For Size GRG821, GRL821, EL821

1. Select partial catalog number from the selection table
2. Replace leading “_” with series code (GRG, GRL, EL)
3. For Hollow output, replace “XX” suffix with bore code.

Example:

GR Series Style WBMQ, 10:1 Left Hand Output, 56C
GRG-WBMQ821-10-L-56, GRG8213003

GRG = GROVE GEAR

- Direct replacement to Grove Gear Flexaline
- Mounting footprint 3.00” x 4.75”
- See pages 62-83 for dimensions



GRL = IRONMAN BY OHIO GEAR Interchange

- Direct replacement to LEESON IRONMAN & major brands.
- Mounting footprint 2.88” x 5.00”
- See pages 62-83 for dimensions

Available bore codes

Fraction Size	1”	1-1/8”	1-3/16”	1-1/4”	1-7/16”	1-1/2”
Decimal Size	1.000	1.125	1.188	1.250	1.438	1.500
Output Bore Code	16	18	19	20	23	24

* Catalog numbers are for hollow output shaft reducers. When ordering, substitute the XX suffix with the required output bore code.

Single Reduction Worm Gear Reducers
Double Reduction Worm - Worm Gear Reducers
Double Reduction Helical - Worm Gear Reducers
WASHGUARD® Reducers and GEAR+MOTOR™
Ratio Multipliers
Accessories and Additional Capabilities

WASHGUARD® Maximum Rating Tables



Size 824 • GR, EL Series

Style WBMQ

Style WHMQ



824 Series

Ratio	Input RPM	Output RPM†	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Frame▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*
5	1750	350.0	5.323	4.985	898	143-5TC	<u>8243037</u>	<u>8243049</u>	<u>8243061</u>	<u>8243513.XX</u>
7.5	1750	233.3	3.992	3.685	995	143-5TC	<u>8243038</u>	<u>8243050</u>	<u>8243062</u>	<u>8243514.XX</u>
10	1750	175.0	3.564	3.253	1172	143-5TC	<u>8243039</u>	<u>8243051</u>	<u>8243063</u>	<u>8243515.XX</u>
15	1750	116.7	2.765	2.439	1318	56C	<u>8243004</u>	<u>8243016</u>	<u>8243028</u>	<u>8243504.XX</u>
						143-5TC	<u>8243040</u>	<u>8243052</u>	<u>8243064</u>	<u>8243516.XX</u>
20	1750	87.5	2.326	1.972	1421	56C	<u>8243005</u>	<u>8243017</u>	<u>8243029</u>	<u>8243505.XX</u>
						143-5TC	<u>8243041</u>	<u>8243053</u>	<u>8243065</u>	<u>8243517.XX</u>
25	1750	70.0	1.967	1.615	1454	56C	<u>8243006</u>	<u>8243018</u>	<u>8243030</u>	<u>8243506.XX</u>
						143-5TC	<u>8243042</u>	<u>8243054</u>	<u>8243066</u>	<u>8243518.XX</u>
30	1750	58.3	1.653	1.317	1423	56C	<u>8243007</u>	<u>8243019</u>	<u>8243031</u>	<u>8243507.XX</u>
						143-5TC	<u>8243043</u>	<u>8243055</u>	<u>8243067</u>	<u>8243519.XX</u>
40	1750	43.8	1.342	0.994	1433	56C	<u>8243008</u>	<u>8243020</u>	<u>8243032</u>	<u>8243508.XX</u>
						143-5TC	<u>8243044</u>	<u>8243056</u>	<u>8243068</u>	<u>8243520.XX</u>
50	1750	35.0	1.137	0.795	1432	56C	<u>8243009</u>	<u>8243021</u>	<u>8243033</u>	<u>8243509.XX</u>
						143-5TC	<u>8243045</u>	<u>8243057</u>	<u>8243069</u>	<u>8243521.XX</u>
60	1750	29.2	0.967	0.656	1418	56C	<u>8243010</u>	<u>8243022</u>	<u>8243034</u>	<u>8243510.XX</u>
80	1750	21.9	0.455	0.288	830	56C	<u>8243011</u>	<u>8243023</u>	<u>8243035</u>	<u>8243511.XX</u>
100	1750	17.5	0.307	0.180	648	56C	<u>8243012</u>	<u>8243024</u>	<u>8243036</u>	<u>8243512.XX</u>

For input/ output shaft overhung load and thrust load ratings, refer to pages 645-648.

▲ Contact Factory for other motor flanges available.

† For gear reducer ratings at other input speeds, refer to basic reducer selection tables on pages 40-41.

How To Build a Part Number For Size GR824, EL824

1. Select partial catalog number from the selection table
2. Replace leading “_” with series code (GR, EL)
3. For Hollow output, replace “XX” suffix with bore code.

Example:

GR Series Style WBMQ, 10:1 Left Hand Output, 140TC
GR-WBMQ824-10-L-140, GR8243039

Available bore codes

Fraction Size	1"	1-1/8"	1-3/16"	1-1/4"	1-7/16"	1-1/2"
Decimal Size	1.000	1.125	1.188	1.250	1.438	1.500
Output Bore Code	16	18	19	20	23	24

* Catalog numbers are for hollow output shaft reducers.

When ordering, substitute the XX suffix with the required output bore code.

Style WBMQ

Style WHMQ



826 Series

Ratio	Input RPM	Output RPM+	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Frame▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*
5 <small>(5.17 actual)</small>	1750	350.0	6.693	6.276	1130	143-5TC	<u>8263037</u>	<u>8263049</u>	<u>8263061</u>	<u>8263513.XX</u>
7.5	1750	233.3	4.956	4.571	1235	143-5TC	<u>8263038</u>	<u>8263050</u>	<u>8263062</u>	<u>8263514.XX</u>
10	1750	175.0	4.492	4.097	1475	143-5TC	<u>8263039</u>	<u>8263051</u>	<u>8263063</u>	<u>8263515.XX</u>
15	1750	116.7	3.614	3.216	1737	143-5TC	<u>8263040</u>	<u>8263052</u>	<u>8263064</u>	<u>8263516.XX</u>
20	1750	87.5	2.965	2.549	1836	56C	<u>8263005</u>	<u>8263017</u>	<u>8263029</u>	<u>8263505.XX</u>
						143-5TC	<u>8263041</u>	<u>8263053</u>	<u>8263065</u>	<u>8263517.XX</u>
25	1750	70.0	2.487	2.076	1869	56C	<u>8263006</u>	<u>8263018</u>	<u>8263030</u>	<u>8263506.XX</u>
						143-5TC	<u>8263042</u>	<u>8263054</u>	<u>8263066</u>	<u>8263518.XX</u>
30	1750	58.3	2.145	1.743	1883	56C	<u>8263007</u>	<u>8263019</u>	<u>8263031</u>	<u>8263507.XX</u>
						143-5TC	<u>8263043</u>	<u>8263055</u>	<u>8263067</u>	<u>8263519.XX</u>
40	1750	43.8	1.695	1.287	1854	56C	<u>8263008</u>	<u>8263020</u>	<u>8263032</u>	<u>8263508.XX</u>
						143-5TC	<u>8263044</u>	<u>8263056</u>	<u>8263068</u>	<u>8263520.XX</u>
50	1750	35.0	1.420	1.023	1843	56C	<u>8263009</u>	<u>8263021</u>	<u>8263033</u>	<u>8263509.XX</u>
						143-5TC	<u>8263045</u>	<u>8263057</u>	<u>8263069</u>	<u>8263521.XX</u>
60	1750	29.2	1.216	0.835	1805	56C	<u>8263010</u>	<u>8263022</u>	<u>8263034</u>	<u>8263510.XX</u>
						143-5TC	<u>8263046</u>	<u>8263058</u>	<u>8263070</u>	<u>8263522.XX</u>
80	1750	21.9	0.577	0.379	1092	56C	<u>8263011</u>	<u>8263023</u>	<u>8263035</u>	<u>8263511.XX</u>
							<u>8263012</u>	<u>8263024</u>	<u>8263036</u>	<u>8263512.XX</u>

For input/ output shaft overhung load and thrust load ratings, refer to pages 645-648.

▲ Contact Factory for other motor flanges available.

+ For gear reducer ratings at other input speeds, refer to basic reducer selection tables on pages 42-43.

How To Build a Part Number For Size GR826, GRG826, GRL826, EL826

1. Select partial catalog number from the selection table
2. Replace leading “_” with series code (GR, GRG, GRL, EL)
3. For Hollow output, replace “XX” suffix with bore code.

Example:

GR Series Style WBMQ, 10:1 Left Hand Output, 140TC
GRG-WBMQ826-10-L-140, GRG8263039

GRG = GROVE GEAR

- Direct replacement to Grove Gear Flexaline
- 1-1/4” solid output shaft diameter
- For hollow bores, specify GRL Interchange
- Solid output shaft only



GRL = IRONMAN Interchange

- Direct replacement to LEESON IRON-MAN & major brands.
- Hollow shaft option available
- 1-1/8” solid output shaft diameter

Available bore codes

Fraction Size	1”	1-1/8”	1-3/16”	1-1/4”	1-7/16”	1-1/2”
Decimal Size	1.000	1.125	1.188	1.250	1.438	1.500
Output Bore Code	16	18	19	20	23	24

* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

WASHGUARD® Maximum Rating Tables

Size 830 • GR, EL Series



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR-MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Style WBMQ

Style WHMQ



830 Series

Ratio	Input RPM	Output RPM+	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Frame▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*
5	1750	350.0	9.093	8.573	1544	143-5TC	<u>8303037</u>	<u>8303049</u>	<u>8303061</u>	<u>8303513.XX</u>
7.5	1750	233.3	6.879	6.421	1734	143-5TC	<u>8303038</u>	<u>8303050</u>	<u>8303062</u>	<u>8303514.XX</u>
10	1750	175.0	6.151	5.655	2037	143-5TC	<u>8303039</u>	<u>8303051</u>	<u>8303063</u>	<u>8303515.XX</u>
15	1750	116.7	4.843	4.311	2329	143-5TC	<u>8303040</u>	<u>8303052</u>	<u>8303064</u>	<u>8303516.XX</u>
20	1750	87.5	3.947	3.407	2454	143-5TC	<u>8303041</u>	<u>8303053</u>	<u>8303065</u>	<u>8303517.XX</u>
25	1750	70.0	3.355	2.807	2527	143-5TC	<u>8303042</u>	<u>8303054</u>	<u>8303066</u>	<u>8303518.XX</u>
30	1750	58.3	2.879	2.332	2519	143-5TC	<u>8303043</u>	<u>8303055</u>	<u>8303067</u>	<u>8303519.XX</u>
40	1750	43.8	2.251	1.720	2477	56C 143-5TC	<u>8303008</u> <u>8303044</u>	<u>8303020</u> <u>8303056</u>	<u>8303032</u> <u>8303068</u>	<u>8303508.XX</u> <u>8303520.XX</u>
50	1750	35.0	1.915	1.383	2490	56C 143-5TC	<u>8303009</u> <u>8303045</u>	<u>8303021</u> <u>8303057</u>	<u>8303033</u> <u>8303069</u>	<u>8303509.XX</u> <u>8303521.XX</u>
60	1750	29.2	1.637	1.117	2413	56C 143-5TC	<u>8303010</u> <u>8303046</u>	<u>8303022</u> <u>8303058</u>	<u>8303034</u> <u>8303070</u>	<u>8303510.XX</u> <u>8303522.XX</u>
80	1750	21.9	0.895	0.585	1684	56C 143-5TC	<u>8303011</u> <u>8303047</u>	<u>8303023</u> <u>8303059</u>	<u>8303035</u> <u>8303071</u>	<u>8303511.XX</u> <u>8303523.XX</u>
100	1750	17.5	0.603	0.367	1321	56C	<u>8303012</u>	<u>8303024</u>	<u>8303036</u>	<u>8303512.XX</u>

For input/ output shaft overhung load and thrust load ratings, refer to pages 645-648.

▲ Contact Factory for other motor flanges available.

+ For gear reducer ratings at other input speeds, refer to basic reducer selection tables on pages 44-45.

How To Build a Part Number For Size GR830, EL830

1. Select partial catalog number from the selection table
2. Replace leading “_” with series code
3. For Hollow output, replace “XX” suffix with bore code.

Example:

GR Series Style WBMQ, 10:1 Left Hand Output, 140TC
GR-WBMQ830-10--140-L, GR8303039

Available bore codes

Fraction Size	1-3/16"	1-1/4"	1-7/16"	1-1/2"	1-5/8"	1-11/16"	1-3/4"	1-7/8"	1-15/16"	2"	2-3/16"
Decimal Size	1.188	1.250	1.438	1.250	1.500	1.625	1.750	1.875	1.938	2.000	2.188
Output Bore Code	19	20	23	24	26	27	28	30	31	32	35

* Catalog numbers are for hollow output shaft reducers.

When ordering, substitute the XX suffix with the required output bore code.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR-H-MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Style WBMQ

Style WHMQ



832 Series

Ratio	Input RPM	Output RPM†	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Frame▲	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.*
5 <small>(5.167 actual)</small>	1750	350.0	11.92	11.29	2033	143-5TC	<u>8323037</u>	<u>8323049</u>	<u>8323061</u>	<u>8323513.XX</u>
7.5	1750	233.3	8.863	8.264	2232	143-5TC	<u>8323038</u>	<u>8323050</u>	<u>8323062</u>	<u>8323514.XX</u>
10	1750	175.0	8.092	7.497	2700	143-5TC	<u>8323039</u>	<u>8323051</u>	<u>8323063</u>	<u>8323515.XX</u>
15	1750	116.7	6.127	5.516	2980	143-5TC	<u>8323040</u>	<u>8323052</u>	<u>8323064</u>	<u>8323516.XX</u>
20	1750	87.5	5.180	4.536	3267	143-5TC	<u>8323041</u>	<u>8323053</u>	<u>8323065</u>	<u>8323517.XX</u>
25	1750	70.0	4.373	3.732	3360	143-5TC	<u>8323042</u>	<u>8323054</u>	<u>8323066</u>	<u>8323518.XX</u>
30	1750	58.3	3.619	2.986	3226	143-5TC	<u>8323043</u>	<u>8323055</u>	<u>8323067</u>	<u>8323519.XX</u>
40	1750	43.8	2.926	2.293	3303	56C	<u>8323008</u>	<u>8323020</u>	<u>8323032</u>	<u>8323508.XX</u>
						143-5TC	<u>8323044</u>	<u>8323056</u>	<u>8323068</u>	<u>8323520.XX</u>
50	1750	35.0	2.462	1.841	3315	56C	<u>8323009</u>	<u>8323021</u>	<u>8323033</u>	<u>8323509.XX</u>
						143-5TC	<u>8323045</u>	<u>8323057</u>	<u>8323069</u>	<u>8323521.XX</u>
60	1750	29.2	2.114	1.515	3274	56C	<u>8323010</u>	<u>8323022</u>	<u>8323034</u>	<u>8323510.XX</u>
						143-5TC	<u>8323046</u>	<u>8323058</u>	<u>8323070</u>	<u>8323522.XX</u>
80	1750	21.9	1.030	0.695	2000	56C	<u>8323011</u>	<u>8323023</u>	<u>8323035</u>	<u>8323511.XX</u>
						143-5TC	<u>8323047</u>	<u>8323059</u>	<u>8323071</u>	<u>8323523.XX</u>
100	1750	17.5	0.691	0.435	1567	56C	<u>8323012</u>	<u>8323024</u>	<u>8323036</u>	<u>8323512.XX</u>

For input/ output shaft overhung load and thrust load ratings, refer to pages 645-648.

▲ Contact Factory for other motor flanges available.

† For gear reducer ratings at other input speeds, refer to basic reducer selection tables on pages 48-49.

How To Build a Part Number For Size GR832, GRG832, GRL832, EL832

1. Select partial catalog number from the selection table
2. Replace leading “_” with series code (GR, GRG, GRL, EL)
3. For Hollow output, replace “XX” suffix with bore code.

Example:

GR Style WBMQ, 10:1 Left Hand Output, 140TC
GRG-WBMQ832-10-L-140, GRG8323039

GRG = GROVE GEAR

- Direct replacement to Grove Gear Flexaline
- 1-1/2” solid output shaft diameter
- For hollow bores, specify GRL Interchange
- Solid output shaft only



GRL = IRONMAN BY OHIO GEAR Interchange

- Direct replacement to LEESON IRONMAN & major brands.
- Hollow shaft option available
- 1-3/8” solid output shaft diameter

Available bore codes

Fraction Size	1-3/16"	1-1/4"	1-7/16"	1-1/2"	1-5/8"	1-11/16"	1-3/4"	1-7/8"	1-15/16"	2"	2-3/16"
Decimal Size	1.188	1.250	1.438	1.500	1.625	1.688	1.750	1.875	1.938	2.000	2.188
Output Bore Code	19	20	23	24	26	27	28	30	31	32	35

* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

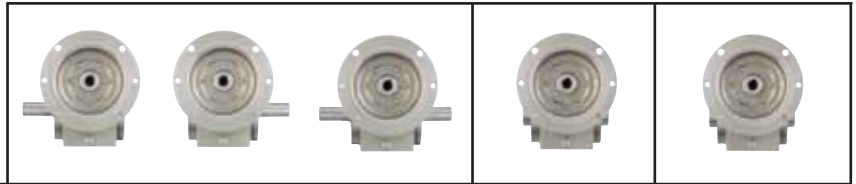
Stainless Steel Maximum Rating Tables

Size 813

Style SBMQ

Style SHMQ

Style SHMQ



813 Series

Ratio	Input		Output		Output Torque (lb-in)	NEMA C Input Frame	L Assembly Catalog No.	R Assembly Catalog No.	D Assembly Catalog No.	H1 Assembly Catalog No.*	H2 Assembly Catalog No.*
	RPM	RPM	HP	HP							
5	2500	500.0	1.528	1.429	180	56C	S133003700	S133004900	S133006100	S133045710	S133046910
	1750	350.0	1.248	1.158	209						
	1170	234.0	0.952	0.872	235						
	100	20.0	0.140	0.095	298						
7.5	2500	333.3	1.281	1.178	223	56C	S133003800	S133005000	S133006200	S133045810	S133047010
	1750	233.3	1.025	0.933	252						
	1170	156.0	0.770	0.689	278						
	870	116.0	0.615	0.540	293						
10	2500	250.0	1.016	0.912	230	56C	S133003900	S133005100	S133006300	S133045910	S133047110
	1750	175.0	0.823	0.729	263						
	1170	117.0	0.626	0.543	293						
	100	10.0	0.103	0.058	363						
15	2500	166.7	0.790	0.678	257	56C	S133004000	S133005200	S133006400	S133046010	S133047210
	1750	116.7	0.642	0.541	292						
	1170	78.0	0.491	0.402	325						
	100	6.7	0.090	0.042	401						
20	2500	125.0	0.681	0.562	283	56C	S133004100	S133005300	S133006500	S133046110	S133047310
	1750	87.5	0.551	0.445	320						
	1170	58.5	0.422	0.328	354						
	100	5.0	0.084	0.034	431						
25	2500	100.0	0.544	0.431	272	56C	S133004200	S133005400	S133006600	S133046210	S133047410
	1750	70.0	0.445	0.344	309						
	1170	46.8	0.344	0.255	344						
	100	4.0	0.074	0.027	423						
30	2500	83.3	0.481	0.364	276	56C	S133004300	S133005500	S133006700	S133046310	S133047510
	1750	58.3	0.395	0.290	314						
	1170	39.0	0.308	0.215	348						
	100	3.3	0.071	0.023	429						
40	2500	62.5	0.400	0.283	285	56C	S133004400	S133005600	S133006800	S133046410	S133047610
	1750	43.8	0.329	0.223	322						
	1170	29.3	0.258	0.165	355						
	100	2.5	0.066	0.017	432						
50	2500	50.0	0.346	0.232	292	56C	S133004500	S133005700	S133006900	S133046510	S133047710
	1750	35.0	0.285	0.182	327						
	1170	23.4	0.224	0.133	359						
	100	2.0	0.061	0.014	431						
60	2500	41.7	0.297	0.184	279	56C	S133004600	S133005800	S133007000	S133046610	S133047810
	1750	29.2	0.246	0.145	313						
	1170	19.5	0.195	0.107	345						
	100	1.7	0.058	0.011	415						
80	2500	31.3	0.144	0.081	163	56C	S133004700	S133005900	S133007100	S133046710	S133047910
	1750	21.9	0.121	0.064	183						
	1170	14.6	0.096	0.047	201						
	100	1.3	0.014	0.005	237						
100	2500	25.0	0.100	0.051	128	56C	S133004800	S133006000	S133007200	S133046810	S133048010
	1750	17.5	0.084	0.040	143						
	1170	11.7	0.067	0.029	156						
	100	1.0	0.010	0.003	184						

Consult Factory for other available styles and motor flanges.

Available bore codes

Fraction Size	5/8"
Decimal Size	0.625
Output Bore Code	10

* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR-MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

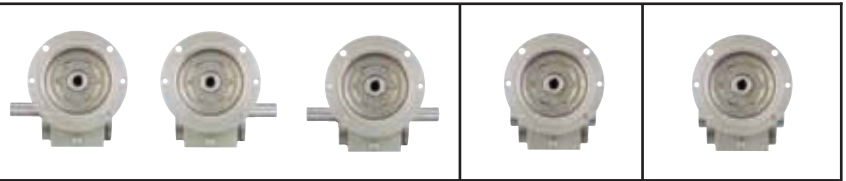
Stainless Steel Maximum Rating Tables

Size 815

Style SBMQ

Style SHMQ

Style SHMQ



815 Series

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Frame	L Assembly Catalog No.	R Assembly Catalog No.	D Assembly Catalog No.	H1 Assembly Catalog No.*	H2 Assembly Catalog No.*
5	2500	500.0	2.310	2.151	271	56C	S153003700	S153004900	S153006100	S153045710	S153046910
	1750	350.0	1.939	1.794	323						
	1170	234.0	1.537	1.408	379						
7.5	100	20.0	0.235	0.167	526	143-5TC	S153007300	S153008500	S153009700	S153048110	S153049310
	2500	333.3	1.785	1.619	306						
	1750	233.3	1.522	1.368	370						
10	100	13.3	0.196	0.125	591	143-5TC	S153007400	S153008600	S153009800	S153048210	S153049410
	2500	250.0	1.500	1.324	334						
	1750	175.0	1.279	1.116	402						
15	100	10.0	0.176	0.101	639	143-5TC	S153007500	S153008700	S153009900	S153048310	S153049510
	2500	166.7	1.174	0.982	371						
	1750	116.7	1.003	0.826	446						
20	100	6.7	0.155	0.075	706	143-5TC	S153007600	S153008800	S153010000	S153048410	S153049610
	2500	125.0	1.077	0.860	434						
	1750	87.5	0.919	0.719	518						
25	100	5.0	0.155	0.064	807	143-5TC	S153007700	S153008900	S153010100	S153048510	S153049710
	2500	100.0	0.881	0.670	422						
	1750	70.0	0.752	0.559	503						
30	100	4.0	0.137	0.049	775	143-5TC	S153007800	S153009000	S153010200	S153048610	S153049810
	2500	83.3	0.729	0.526	398						
	1750	58.3	0.630	0.442	478						
40	100	3.3	0.124	0.040	754	143-5TC	S153007900	S153009100	S153010300	S153048710	S153049910
	2500	62.5	0.649	0.432	435						
	1750	43.8	0.560	0.361	520						
50	100	2.5	0.122	0.032	808	143-5TC	S153008000	S153009200	S153010400	S153048810	S153050010
	2500	50.0	0.536	0.329	415						
	1750	35.0	0.464	0.274	494						
60	100	2.0	0.110	0.024	760	143-5TC	S153008100	S153009300	S153010500	S153048910	S153050110
	2500	41.7	0.451	0.257	389						
	1750	29.2	0.391	0.214	462						
80	100	1.7	0.099	0.019	707	143-5TC	S153008200	S153009400	S153010600	S153049010	S153050210
	2500	31.3	0.219	0.109	220						
	1750	21.9	0.204	0.093	269						
100	100	1.3	0.092	0.008	418	143-5TC	S153008300	S153009500	S153010700	S153049110	S153050310
	2500	25.0	0.155	0.069	175						
	1750	17.5	0.145	0.059	213						
	100	1.0	0.024	0.005	328	143-5TC	S153008400	S153009600	S153010800	S153049210	S153050410

Consult Factory for other available styles and motor flanges.

* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	5/8"
Decimal Size	0.625
Output Bore Code	10

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR-H-MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

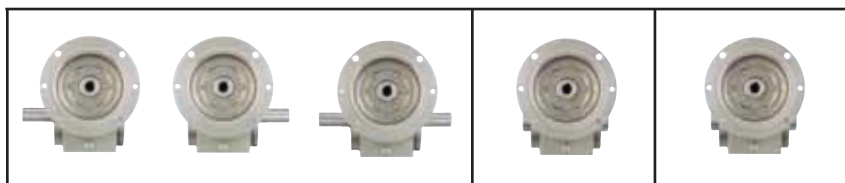
Stainless Steel Maximum Rating Tables

Size 818

Style SBMQ

Style SHMQ

Style SHMQ



818 Series

Ratio	Input		Output		Output Torque (lb-in)	NEMA C Input Frame	L Assembly Catalog No.	R Assembly Catalog No.	D Assembly Catalog No.	H1 Assembly Catalog No.*	H2 Assembly Catalog No.*
	RPM	RPM	HP	HP							
5	2500	500.0	3.095	2.900	366	56C	S183003700	S183004900	S183006100	S1830457XX	S1830469XX
	1750	350.0	2.600	2.422	436						
	1170	234.0	2.066	1.906	513						
7.5	100	20.0	0.312	0.228	717	143-5TC	S183007300	S183008500	S183009700	S1830481XX	S1830493XX
	2500	333.3	2.307	2.127	402						
	1750	233.3	1.909	1.745	471						
10	100	13.3	0.227	0.147	697	143-5TC	S183007400	S183008600	S183009800	S1830482XX	S1830494XX
	2500	250.0	1.996	1.820	459						
	1750	175.0	1.625	1.466	528						
15	1170	117.0	1.239	1.099	592	143-5TC	S183007500	S183008700	S183009900	S1830483XX	S1830495XX
	100	10.0	0.196	0.118	744						
	2500	166.7	1.485	1.301	492						
20	1750	116.7	1.224	1.058	571	143-5TC	S183007600	S183008800	S183010000	S1830484XX	S1830496XX
	1170	78.0	0.945	0.799	645						
	100	6.7	0.165	0.087	823						
25	2500	125.0	1.283	1.093	551	56C	S183004100	S183005300	S183006500	S1830461XX	S1830473XX
	1750	87.5	1.046	0.875	630						
	1170	58.5	0.803	0.652	702						
30	100	5.0	0.150	0.069	872	143-5TC	S183007700	S183008900	S183010100	S1830485XX	S1830497XX
	2500	100.0	1.088	0.900	567						
	1750	70.0	0.884	0.715	644						
40	1170	46.8	0.678	0.530	713	143-5TC	S183004200	S183005400	S183006600	S1830462XX	S1830474XX
	100	4.0	0.135	0.055	874						
	2500	83.3	0.892	0.702	531						
50	1750	58.3	0.741	0.569	614	143-5TC	S183007800	S183009000	S183010200	S1830486XX	S1830498XX
	1170	39.0	0.580	0.428	692						
	100	3.3	0.126	0.047	880						
60	2500	62.5	0.739	0.551	556	56C	S183004300	S183005500	S183006700	S1830463XX	S1830475XX
	1750	43.8	0.609	0.440	634						
	1170	29.3	0.476	0.328	706						
80	100	2.5	0.113	0.035	874	143-5TC	S183008000	S183009200	S183010400	S1830488XX	S1830500XX
	2500	50.0	0.625	0.444	559						
	1750	35.0	0.515	0.352	634						
100	1170	23.4	0.404	0.260	701	143-5TC	S183004500	S183005700	S183006900	S1830465XX	S1830477XX
	100	2.0	0.103	0.027	857						
	2500	41.7	0.542	0.363	550						
120	1750	29.2	0.449	0.288	623	56C	S183008100	S183009300	S183010500	S1830489XX	S1830501XX
	1170	19.5	0.354	0.213	689						
	100	1.7	0.097	0.022	842						
150	2500	31.3	0.247	0.156	314	56C	S183004600	S183005800	S183007000	S1830466XX	S1830478XX
	1750	21.9	0.208	0.124	356						
	1170	14.6	0.164	0.091	392						
200	100	1.3	0.023	0.009	470	143-5TC	S183008200	S183009400	S183010600	S1830490XX	S1830502XX
	2500	25.0	0.167	0.097	245						
	1750	17.5	0.141	0.077	277						
250	1170	11.7	0.111	0.057	304	143-5TC	S183008300	S183009500	S183010700	S1830491XX	S1830503XX
	100	1.0	0.016	0.006	362						

Consult Factory for other available styles and motor flanges.

Available bore codes

Fraction Size	5/8"	11/16"	3/4"	7/8"	1"
Decimal Size	0.625	0.688	0.750	0.875	1.000
Output Bore Code	10	11	12	14	16

* Catalog numbers are for hollow output shaft reducers.

When ordering, substitute the XX suffix with the required output bore code.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR-MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Stainless Steel Maximum Rating Tables

Size 821

821 Series

Ratio	Style SBMQ		Style SHMQ			NEMA C Input Frame	Output Torque (lb-in)	Image										
	Input RPM	Output RPM	Input HP	Output HP	Output HP			L Assembly Catalog No.	R Assembly Catalog No.	D Assembly Catalog No.	H1 Assembly Catalog No.*	H2 Assembly Catalog No.*						
5	2500	500.0	4.305	4.043	510	56C	510	143-5TC						S213003700	S213004900	S213006100	S2130457XX	S2130469XX
	1750	350.0	3.653	3.410	614									S213007300	S213008500	S213009700	S2130481XX	S2130493XX
	1170	234.0	2.873	2.657	716									S213003800	S213005000	S213006200	S2130458XX	S2130470XX
7.5	100	20.0	0.433	0.310	977	56C	977	143-5TC						S213007400	S213008600	S213009800	S2130482XX	S2130494XX
	2500	333.3	3.300	3.051	577									S213003900	S213005100	S213006300	S2130459XX	S2130471XX
	1750	233.3	2.793	2.562	692									S213007500	S213008700	S213009900	S2130483XX	S2130495XX
10	100	13.3	0.341	0.230	1089	56C	1089	143-5TC						S213004000	S213005200	S213006400	S2130460XX	S2130472XX
	2500	250.0	2.973	2.722	686									S213007600	S213008800	S213010000	S2130484XX	S2130496XX
	1750	175.0	2.464	2.235	805									S213004100	S213005300	S213006500	S2130461XX	S2130473XX
15	100	10.0	0.300	0.189	1192	56C	1192	143-5TC						S213007700	S213008900	S213010100	S2130485XX	S2130497XX
	2500	166.7	2.284	2.035	769									S213004200	S213005400	S213006600	S2130462XX	S2130474XX
	1750	116.7	1.887	1.661	897									S213007800	S213009000	S213010200	S2130486XX	S2130498XX
20	100	7.0	0.245	0.138	1309	56C	1309	143-5TC						S213004300	S213005500	S213006700	S2130463XX	S2130475XX
	2500	125.0	1.914	1.642	828									S213007900	S213009100	S213010300	S2130487XX	S2130499XX
	1750	87.5	1.584	1.338	964									S213004400	S213005600	S213006800	S2130464XX	S2130476XX
25	100	5.0	0.226	0.111	1397	56C	1397	143-5TC						S213008000	S213009200	S213010400	S2130488XX	S2130500XX
	2500	100.0	1.623	1.359	857									S213004500	S213005700	S213006900	S2130465XX	S2130477XX
	1750	70.0	1.333	1.094	985									S213008100	S213009300	S213010500	S2130489XX	S2130501XX
30	100	4.0	0.200	0.088	1386	56C	1386	143-5TC						S213004600	S213005800	S213007000	S2130466XX	S2130478XX
	2500	83.3	1.359	1.102	833									S213008200	S213009400	S213010600	S2130490XX	S2130502XX
	1750	58.3	1.129	0.896	968									S213004700	S213005900	S213007100	S2130467XX	S2130479XX
40	100	3.0	0.181	0.074	1399	56C	1399	143-5TC						S213004800	S213005000	S213006200	S2130468XX	S2130480XX
	2500	62.5	1.096	0.829	836									S213004900	S213005100	S213006300	S2130469XX	S2130481XX
	1750	43.8	0.916	0.674	971									S213008300	S213009500	S213010700	S2130491XX	S2130503XX
50	100	2.5	0.167	0.056	1401	56C	1401	143-5TC						S213004800	S213006000	S213007200	S2130468XX	S2130480XX
	2500	50.0	0.925	0.670	845									S213008400	S213009600	S213010800	S2130492XX	S2130504XX
	1750	35.0	0.769	0.539	970									S213004600	S213005800	S213007000	S2130466XX	S2130478XX
60	100	2.0	0.149	0.043	1359	56C	1359	143-5TC						S213008200	S213009400	S213010600	S2130490XX	S2130502XX
	2500	41.7	0.799	0.535	809									S213004700	S213005900	S213007100	S2130467XX	S2130479XX
	1750	29.2	0.674	0.435	940									S213008300	S213009500	S213010700	S2130491XX	S2130503XX
80	100	1.7	0.145	0.036	1354	56C	1354	143-5TC						S213004800	S213006000	S213007200	S2130468XX	S2130480XX
	2500	31.3	0.357	0.236	476									S213008400	S213009600	S213010800	S2130492XX	S2130504XX
	1750	21.9	0.304	0.190	547									S213004800	S213006000	S213007200	S2130468XX	S2130480XX
100	100	1.3	0.034	0.015	743	56C	743	143-5TC						S213004800	S213006000	S213007200	S2130468XX	S2130480XX
	2500	25.0	0.251	0.150	379									S213008400	S213009600	S213010800	S2130492XX	S2130504XX
	1750	17.5	0.217	0.122	439									S213004800	S213006000	S213007200	S2130468XX	S2130480XX
100	1.0	0.026	0.010	605	56C	605	143-5TC						S213008400	S213009600	S213010800	S2130492XX	S2130504XX	

Consult Factory for other available styles and motor flanges.

* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	1"	1-1/8"	1-3/16"	1-1/4"	1-7/16"
Decimal Size	1.000	1.125	1.188	1.250	1.438
Output Bore Code	16	18	19	20	23

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR-H-MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

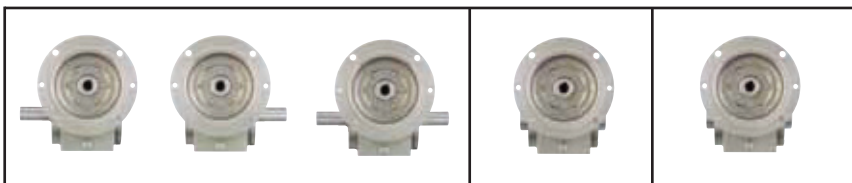
Stainless Steel Maximum Rating Tables

Size 824

Style SBMQ

Style SHMQ

Style SHMQ



824 Series

Ratio	Input		Output		Torque (lb-in)	NEMA C Input Frame	L Assembly Catalog No.	R Assembly Catalog No.	D Assembly Catalog No.	H1 Assembly Catalog No.*	H2 Assembly Catalog No.*
	RPM	RPM	HP	HP							
5	2500	500.0	6.322	5.950	750	143-5TC	S243003700	S243004900	S243006100	S2430457XX	S2430469XX
	1750	350.0	5.323	4.985	898	182-4TC					
	1170	234.0	4.280	3.976	1071						
	100	20.0	0.655	0.489	1540						
7.5	2500	333.3	4.739	4.401	832	143-5TC	S243003800	S243005000	S243006200	S2430458XX	S2430470XX
	1750	233.3	3.992	3.685	995	182-4TC					
	1170	156.0	3.204	2.929	1183						
	100	13.3	0.502	0.357	1689						
10	2500	250.0	4.199	3.862	974	143-5TC	S243003900	S243005100	S243006300	S2430459XX	S2430471XX
	1750	175.0	3.564	3.253	1172	182-4TC					
	1170	117.0	2.808	2.531	1364						
	100	10.0	0.442	0.295	1857						
15	2500	166.7	3.268	2.913	1102	56C	S243000400	S243001600	S243002800	S2430436XX	S2430448XX
	1750	116.7	2.765	2.439	1318	143-5TC					
	1170	78.0	2.178	1.888	1526						
	100	6.7	0.369	0.217	2056						
20	2500	125.0	2.750	2.365	1192	56C	S243000500	S243001700	S243002900	S2430437XX	S2430449XX
	1750	87.5	2.326	1.972	1421	143-5TC					
	1170	58.5	1.835	1.522	1640						
	100	5.0	0.337	0.174	2193						
25	2500	100.0	2.335	1.949	1228	56C	S243000600	S243001800	S243003000	S2430438XX	S2430450XX
	1750	70.0	1.967	1.615	1454	143-5TC					
	1170	46.8	1.551	1.239	1669						
	100	4.0	0.302	0.140	2205						
30	2500	83.3	1.945	1.579	1194	56C	S243000700	S243001900	S243003100	S2430439XX	S2430451XX
	1750	58.3	1.653	1.317	1423	143-5TC					
	1170	39.0	1.314	1.016	1642						
	100	3.3	0.270	0.116	2197						
40	2500	62.5	1.574	1.195	1205	56C	S243000800	S243002000	S243003200	S2430440XX	S2430452XX
	1750	43.8	1.342	0.994	1433	143-5TC					
	1170	29.3	1.074	0.766	1650						
	100	2.5	0.245	0.087	2198						
50	2500	50.0	1.335	0.961	1211	56C	S243000900	S243002100	S243003300	S2430441XX	S2430453XX
	1750	35.0	1.137	0.795	1432	143-5TC					
	1170	23.4	0.911	0.609	1641						
	100	2.0	0.224	0.069	2163						
60	2500	41.7	1.149	0.806	1219	56C	S243001000	S243002200	S243003400	S2430442XX	S2430454XX
	1750	29.2	0.967	0.656	1418	143-5TC					
	1170	19.5	0.770	0.496	1604						
	100	1.7	0.197	0.054	2054						
80	2500	31.3	0.520	0.348	701	56C	S243001100	S243002300	S243003500	S2430443XX	S2430455XX
	1750	21.9	0.455	0.288	830						
	1170	14.6	0.370	0.219	946						
	100	1.3	0.056	0.024	1202						
100	2500	25.0	0.351	0.219	551	56C	S243001200	S243002400	S243003600	S2430444XX	S2430456XX
	1750	17.5	0.307	0.180	648						
	1170	11.7	0.251	0.136	735						
	100	1.0	0.039	0.015	926						

Consult Factory for other available styles and motor flanges.

Available bore codes

Fraction Size	1"	1-1/8"	1-3/16"	1-1/4"	1-7/16"
Decimal Size	1.000	1.125	1.188	1.250	1.438
Output Bore Code	16	18	19	20	23

* Catalog numbers are for hollow output shaft reducers.

When ordering, substitute the XX suffix with the required output bore code.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR-MOTOR™






Ratio Multipliers

Accessories and
Additional Capabilities

Stainless Steel Maximum Rating Tables

Size 826

826 Series

							Style SBMQ			Style SHMQ	Style SHMQ
											
Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Frame	L Assembly Catalog No.	R Assembly Catalog No.	D Assembly Catalog No.	H1 Assembly Catalog No.*	H2 Assembly Catalog No.*
5	2500	500.0	7.946	7.486	944	143-5TC	S263003700	S263004900	S263006100	S2630457XX	S2630469XX
	1750	350.0	6.693	6.276	1130						
	(5.17 actual)	1170	234.0	5.439	5.061						
7.5	2500	333.3	5.877	5.453	1031	143-5TC	S263003800	S263005000	S263006200	S2630458XX	S2630470XX
	1750	233.3	4.956	4.571	1235						
	1170	156.0	4.018	3.671	1483						
10	2500	250.0	5.338	4.904	1236	143-5TC	S263003900	S263005100	S263006300	S2630459XX	S2630471XX
	1750	175.0	4.492	4.097	1475						
	1170	117.0	3.579	3.226	1738						
15	2500	166.7	4.316	3.881	1468	143-5TC	S263004000	S263005200	S263006400	S2630460XX	S2630472XX
	1750	116.7	3.614	3.216	1737						
	1170	78.0	2.821	2.468	1994						
20	2500	125.0	3.503	3.050	1538	56C	S263000500	S263001700	S263002900	S2630437XX	S2630449XX
	1750	87.5	2.965	2.549	1836						
	1170	58.5	2.339	1.970	2123						
25	2500	100.0	2.955	2.505	1579	56C	S263000600	S263001800	S263003000	S2630438XX	S2630450XX
	1750	70.0	2.487	2.076	1869						
	1170	46.8	1.957	1.594	2146						
30	2500	83.3	2.556	2.115	1600	56C	S263000700	S263001900	S263003100	S2630439XX	S2630451XX
	1750	58.3	2.145	1.743	1883						
	1170	39.0	1.687	1.332	2152						
40	2500	62.5	1.989	1.545	1558	56C	S263000800	S263002000	S263003200	S2630440XX	S2630452XX
	1750	43.8	1.695	1.287	1854						
	1170	29.3	1.354	0.993	2139						
50	2500	50.0	1.672	1.237	1560	56C	S263000900	S263002100	S263003300	S2630441XX	S2630453XX
	1750	35.0	1.420	1.023	1843						
	1170	23.4	1.135	0.784	2112						
60	2500	41.7	1.433	1.015	1536	56C	S263001000	S263002200	S263003400	S2630442XX	S2630454XX
	1750	29.2	1.216	0.835	1805						
	1170	19.5	0.973	0.637	2060						
80	2500	31.3	0.659	0.456	919	56C	S263001100	S263002300	S263003500	S2630443XX	S2630455XX
	1750	21.9	0.577	0.379	1092						
	1170	14.6	0.469	0.289	1247						
100	2500	25.0	0.441	0.286	721	56C	S263001200	S263002400	S263003600	S2630444XX	S2630456XX
	1750	17.5	0.386	0.236	851						
	1170	11.7	0.314	0.179	966						
	100	1.0	0.048	0.019	1222						

Consult Factory for other available styles and motor flanges.

* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

Available bore codes

Fraction Size	1"	1-1/8"	1-3/16"	1-1/4"	1-7/16"	1-1/2"
Decimal Size	1.000	1.125	1.188	1.250	1.438	1.500
Output Bore Code	16	18	19	20	23	24

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR-H-MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Stainless Steel Maximum Rating Tables

Size 832

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

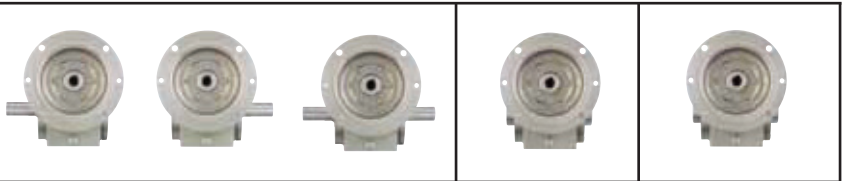
Ratio Multipliers

Accessories and
Additional Capabilities

Style SBMQ

Style SHMQ

Style SHMQ



832 Series

Ratio	Input		Output		Output Torque (lb-in)	NEMA C Input Frame	L Assembly Catalog No.	R Assembly Catalog No.	D Assembly Catalog No.	H1 Assembly Catalog No.*	H2 Assembly Catalog No.*
	RPM	RPM	HP	HP							
5	2500	500.0	10.56	10.03	1306	182-4TC	S323007300	S323008500	S323009700	S3230625XX	S3230637XX
	1750	350.0	9.135	8.611	1602						
	(5.17 actual)	1170	234.0	7.694	7.172							1995
7.5	100	20.0	1.289	1.097	3571	213-5TC	S323010900	S323012100	S323013300	S3230649XX	S3230661XX
	2500	333.3	9.053	8.527	1612						
	1750	233.3	7.844	7.317	1976						
	1170	156.0	6.642	6.114	2469						
10	100	13.3	1.136	0.949	4075	213-5TC	S323011000	S323012200	S323013400	S3230650XX	S3230662XX
	2500	250.0	8.232	7.701	1941						
	1750	175.0	7.034	6.507	2343						
	1170	117.0	5.974	5.446	2932						
15	100	10.0	0.857	0.704	4437	213-5TC	S323011100	S323012300	S323013500	S3230651XX	S3230663XX
	2500	166.7	6.161	5.603	2118						
	1750	116.7	5.277	4.724	2551						
	1170	78.0	4.531	3.971	3207						
20	100	6.7	0.682	0.518	4895	182-4TC	S323007600	S323008800	S323010000	S3230628XX	S3230640XX
	2500	125.0	4.836	4.306	2170						
	1750	87.5	4.188	3.658	2633						
	1170	58.5	3.547	3.020	3253						
25	100	5.0	0.528	0.381	4802	182-4TC	S323007700	S323008900	S323010100	S3230629XX	S3230641XX
	2500	100.0	3.977	3.468	2185						
	1750	70.0	3.465	2.953	2658						
	1170	46.8	2.914	2.413	3248						
30	100	4.0	0.434	0.298	4701	182-4TC	S323007800	S323009000	S323010200	S3230630XX	S3230642XX
	2500	83.3	3.452	2.903	2195						
	1750	58.3	3.003	2.454	2651						
	1170	39.0	2.604	2.052	3315						
40	100	3.3	0.425	0.265	5007	182-4TC	S323007900	S323009100	S323010300	S3230631XX	S3230643XX
	2500	62.5	2.669	2.157	2174						
	1750	43.8	2.348	1.834	2641						
	1170	29.3	2.019	1.509	3251						
50	100	2.5	0.330	0.189	4769	182-4TC	S323008000	S323009200	S323010400	S3230632XX	S3230644XX
	2500	50.0	2.152	1.674	2110						
	1750	35.0	1.907	1.426	2568						
	1170	23.4	1.634	1.163	3130						
60	100	2.0	0.270	0.143	4510	182-4TC	S323008100	S323009300	S323010500	S3230633XX	S3230645XX
	2500	41.7	1.764	1.323	2001						
	1750	29.2	1.573	1.128	2437						
	1170	19.5	1.346	0.913	2951						
80	100	1.7	0.225	0.111	4201	182-4TC	S323008200	S323009400	S323010600	S3230634XX	S3230646XX
	2500	31.3	1.122	0.796	1605						
	1750	21.9	1.030	0.695	2000						
	1170	14.6	0.869	0.551	2371						
100	100	1.3	0.143	0.064	3246	143-5TC	S323004700	S323005900	S323007100	S3230611XX	S3230623XX
	2500	25.0	0.754	0.503	1268						
	1750	17.5	0.691	0.435	1567						
	1170	11.7	0.584	0.343	1846						
	100	1.0	0.097	0.040	2496		S323001200	S323002400	S323003600	S3230588XX	S3230600XX

Consult Factory for other available styles and motor flanges.

Available bore codes

* Catalog numbers are for hollow output shaft reducers.
When ordering, substitute the XX suffix with the required output bore code.

Fraction Size	1-3/16"	1-1/4"	1-7/16"	1-1/2"	1-5/8"	1-11/16"	1-3/4"	1-15/16"	2"	2-3/16"
Decimal Size	1.188	1.250	1.438	1.500	1.625	1.688	1.75	1.938	2.000	2.188
Output Bore Code	19	20	23	24	26	27	28	31	32	35

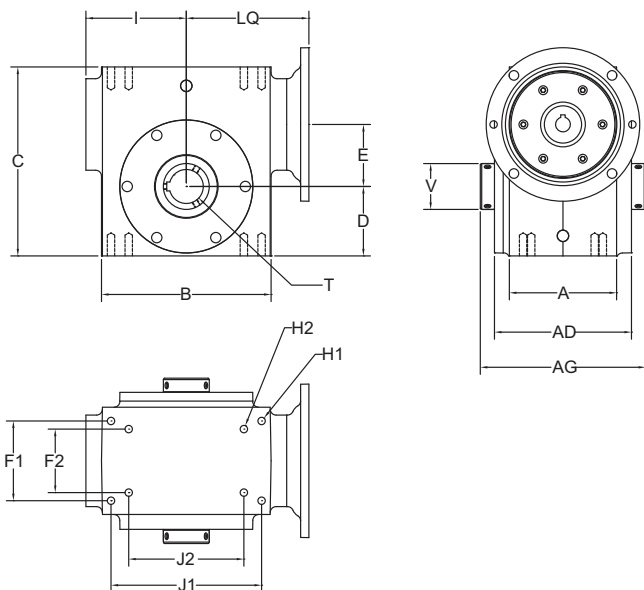
HMQ Style

	A	AD	B	C	D	E	F1	F2	H1	H2	I	J1	J2	LQ (56C)	LQ (180TC)	T MAX	T KWY	V	AG
813	2.82	3.69	3.80	4.66	1.72	1.333	2.00	N/A	5/16-18	N/A	2.38	3.25	N/A	3.48	N/A	0.625	3/16 x 3/32	1.00	4.75
815	3.44	4.40	4.88	5.38	1.91	1.540	2.75	N/A	5/16-18	N/A	2.91	4.19	N/A	4.01	N/A	0.625	3/16 x 3/32	1.00	5.42
818	3.32	4.40	5.06	5.75	2.06	1.750	2.75	1.63	5/16-18	1/4-20	3.01	4.19	3.13	4.11	N/A	1.000	1/4 x 1/8	1.44	5.50
821	3.60	4.78	5.80	6.38	2.28	2.063	3.00	2.00	5/16-18	5/16-18	3.38	4.75	4.00	4.48	N/A	1.500	3/8 x 3/16	1.94	6.00
824	4.06	4.97	6.12	6.94	2.50	2.375	2.88	N/A	3/8-16	N/A	3.69	5.00	N/A	4.63	5.24	1.500	3/8 x 3/16	1.94	6.00
826	4.54	5.80	7.25	8.00	2.94	2.625	3.38	2.69	3/8-16	3/8-16	4.25	6.38	4.88	5.19	5.80	1.500	3/8 x 3/16	1.94	7.00
832	5.45	6.80	8.50	9.38	3.50	3.250	4.00	2.75	7/16-14	1/2-13	4.94	7.50	6.25	5.88	6.49	2.188	1/2 x 1/4	2.75	7.88

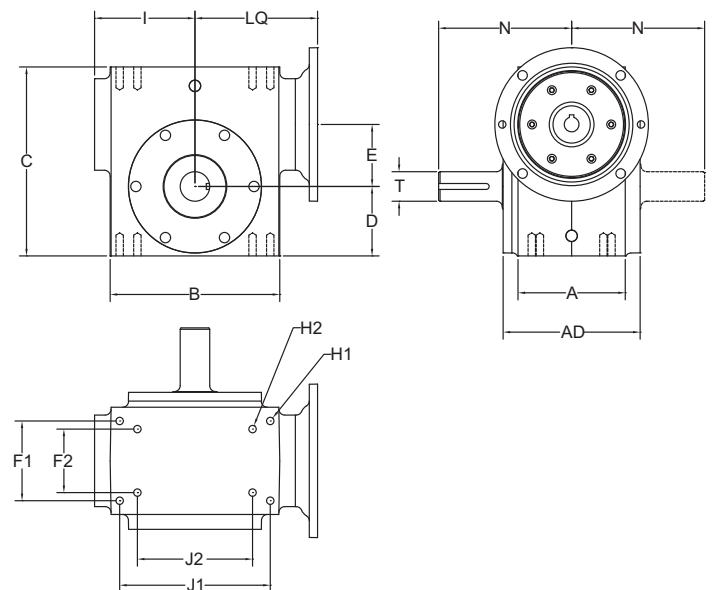
BMQ Style

	A	AD	B	C	D	E	F1	F2	H1	H2	I	J1	J2	LQ (56C)	LQ (180TC)	N	O/P Key	T
813	2.82	3.69	3.80	4.66	1.72	1.333	2.00	N/A	5/16-18	N/A	2.38	3.25	N/A	3.48	N/A	4.00	3/16 x 1.75	0.625
815	3.44	4.40	4.88	5.38	1.91	1.540	2.75	N/A	5/16-18	N/A	2.91	4.19	N/A	4.01	N/A	4.31	3/16 x 1.75	0.750
818	3.32	4.40	5.06	5.75	2.06	1.750	2.75	1.63	5/16-18	1/4-20	3.01	4.19	3.13	4.11	N/A	4.31	3/16 x 1.38	0.875
821	3.60	4.78	5.80	6.38	2.28	2.063	3.00	2.00	5/16-18	5/16-8	3.38	4.75	4.00	4.48	N/A	4.68	1/4 x 1.45	1.000
824	4.06	4.97	6.12	6.94	2.50	2.375	2.88	N/A	3/8-16	N/A	3.69	5.00	N/A	4.63	5.24	5.14	1/4 x 1.75	1.125
826	4.54	5.80	7.25	8.00	2.94	2.625	3.38	2.69	3/8-16	3/8-16	4.25	6.38	4.88	5.19	5.80	5.63	1/4 x 2.00	1.250
832	5.45	6.80	8.50	9.38	3.50	3.250	4.00	2.75	7/16-14	1/2-13	4.94	7.50	6.25	5.88	6.49	7.06	3/8 x 2.63	1.500

HMQ Style



BMQ Style



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

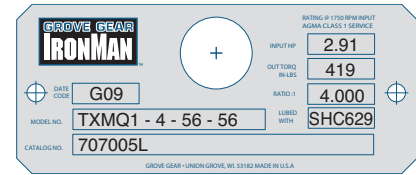
Ratio Multipliers

Accessories and
Additional Capabilities

Stock Ratio Multiplier Model Number System



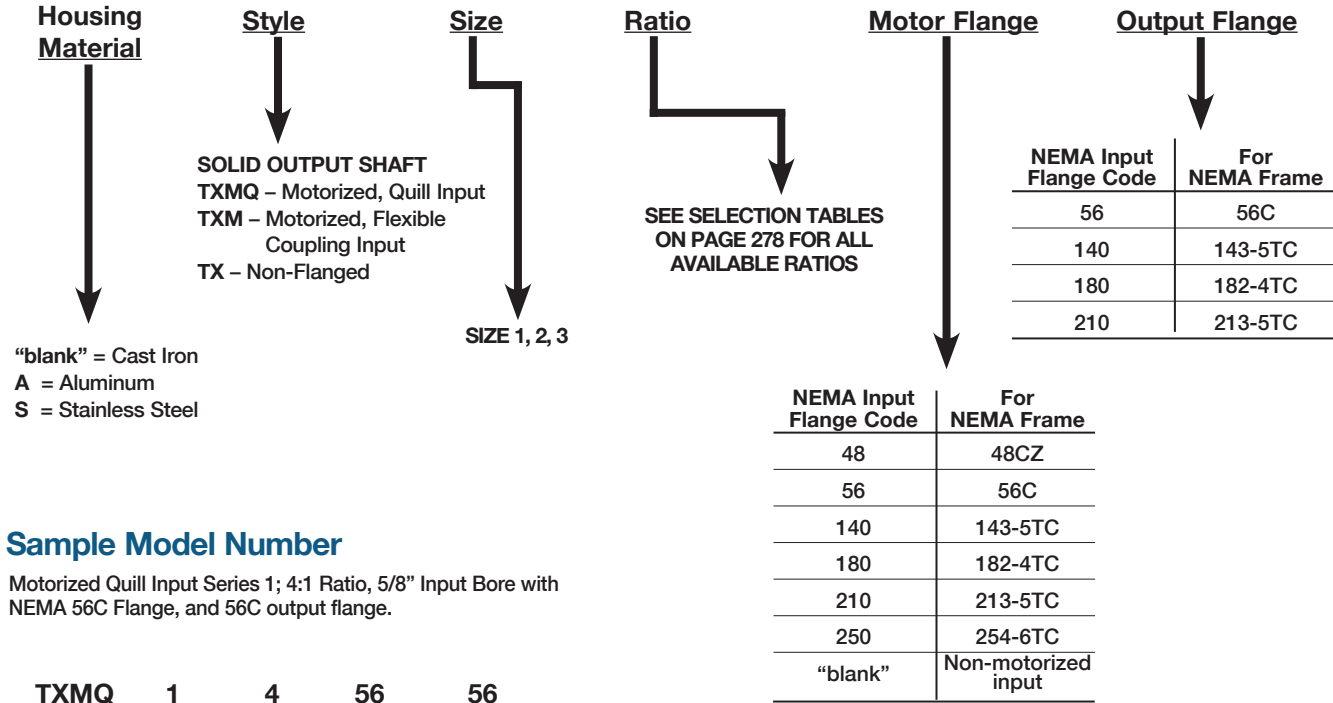
TYPICAL NAMEPLATE (Grove Gear shown)



Grove Gear 800 Series Ratio Multiplier Model Number Nomenclature

All stock and custom 800 series reducers are identified by a model number. The model number appears on the nameplate and describes pertinent features of the reducer. An example follows, along with a listing of the various letters and positions used.

NOTE: All ratio multipliers also have a catalog number—for example 707012L. Reducers and renewal parts should be ordered by catalog number. Accessories that are field installed will not be noted on the nameplate.



Sample Model Number

Motorized Quill Input Series 1; 4:1 Ratio, 5/8” Input Bore with NEMA 56C Flange, and 56C output flange.

TXMQ **1** **4** **56** **56**
Style Size Ratio Motor Input Flange Output Flange

ALL RATINGS SAME FOR CAST IRON, ALUMINUM, and STAINLESS STEEL RATIO MULTIPLIERS

Maximum Rating Tables Size 1

Exact Ratio	Input R.P.M.	Output R.P.M.	Input H.P.	Output H.P.	Output TQ. (lb-in.)	Overhung Load (lbs.)
2.056	1750	851	4.69	4.55	347	222
2.929	1750	598	3.64	3.53	384	265
4.000	1750	438	2.91	2.82	419	300
5.111	1750	342	2.33	2.26	428	300
7.462	1750	235	1.56	1.52	419	300

Size 2

Exact Ratio	Input R.P.M.	Output R.P.M.	Input H.P.	Output H.P.	Output TQ. (lb-in.)	Overhung Load 56C Output (lbs.)	Overhung Load 140TC Output (lbs.)
2.000	1750	875	6.00	5.88	424	358	358
2.913	1750	601	4.21	4.13	433	375	434
4.000	1750	438	3.63	3.55	511	375	455
5.000	1750	350	3.00	2.94	529	375	455
7.182	1750	244	2.62	2.57	664	375	455

Size 3

Exact Ratio	Input R.P.M.	Output R.P.M.	Input H.P.	Output H.P.	Output TQ. (lb-in.)	Overhung Load (lbs.)
2.000	1750	875	20.00	19.6	1412	900
2.964	1750	590	12.98	12.72	1357	900
4.045	1750	433	11.35	11.13	1621	900
5.167	1750	339	10.07	9.87	1836	900
7.538	1750	232	5.80	5.69	1544	900

Single Reduction Worm Gear Reducers

Double Reduction Worm - Worm Gear Reducers

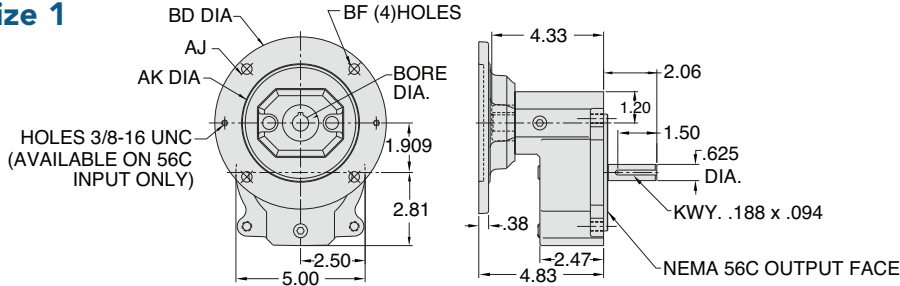
Double Reduction Helical - Worm Gear Reducers

WASHGUARD® Reducers and GEAR+MOTOR™

Ratio Multipliers

Accessories and Additional Capabilities

Size 1

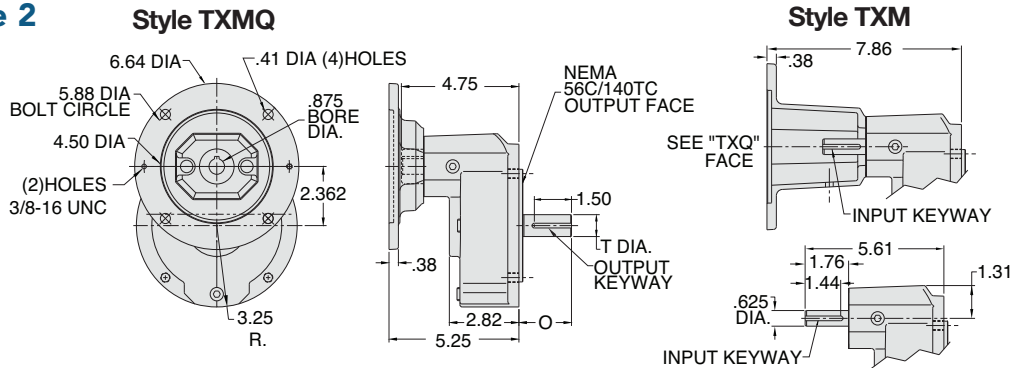


SIZE 1 DIMENSIONS (Inches)

Style	Frame Combinations (Input - Output)	AJ	AK	BD	BF	Input Bore	Input Keyway*	Weight (lbs.)
TXMQ	48CZ - 56C	3.75	3.00	4.36	0.28	.500	1/8 X 1/16	19
	56C - 56C	5.88	4.50	6.64	0.41	.625	3/16 X 3/32	19

* Keyway width by depth

Size 2

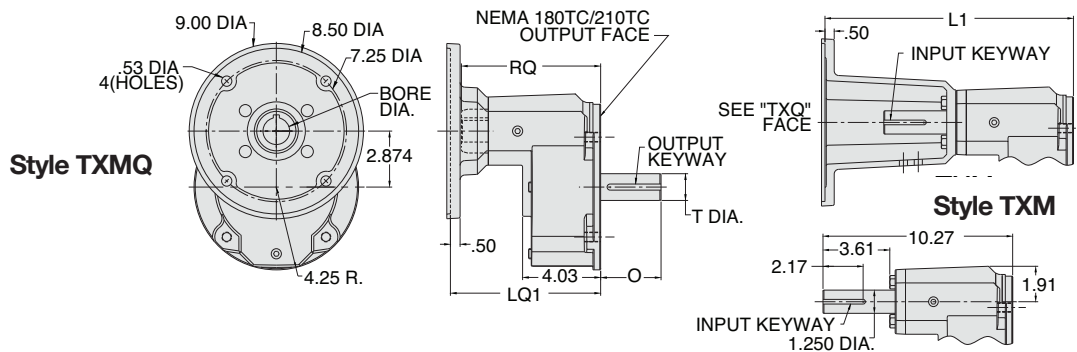


SIZE 2 DIMENSIONS (Inches)

Style	Frame Combinations (Input - Output)	Input Keyway*	O	T +0.000 -0.0015	Output Keyway*	Weight (lbs.)
TXMQ, TXM, TX	140TC - 56C	.188 x .094	2.06	0.625	.188 x .094	22
	140TC - 140TC	.188 x .094	2.13	0.875	.188 x .094	22

* Keyway width by depth

Size 3



SIZE 3 DIMENSIONS (Inches)

Style	Frame Combinations (Input - Output)	Input Bore	L1	LQ1	O	RQ	T +0.000 -0.0015	Input Keyway*	Output Keyway*	Weight (lbs.)
TXMQ, TXM, TX	180TC - 180TC	1.125	13.45	7.76	2.62	7.25	1.125	.250 x .125	.250 x .125 x 1.80	45
	210TC - 180TC	1.375	13.45	7.76	2.62	7.25	1.125	.312 x .156**	.250 x .125 x 1.80	45
	250TC - 180TC	1.625	14.01	8.32	2.62	7.65	1.125	.375 x .188**	.250 x .125 x 1.80	45
	180TC - 210TC	1.125	13.45	7.76	3.12	7.25	1.375	.250 x .125	.312 x .156 x 2.63	45
	210TC - 210TC	1.375	13.45	7.76	3.12	7.25	1.375	.312 x .156**	.312 x .156 x 2.63	45
	250TC - 210TC	1.625	14.01	8.32	3.12	7.65	1.375	.375 x .188**	.312 x .156 x 2.63	45

* Keyway width by depth

** Input keyway for styles TXM & TX is .250 x .125

Ratio Multiplier

Available Selections

Size 1 • Cast Iron

Exact Ratio	Style	Motor C-Flange	Output C-Flange	Catalog Number
2.056	TXMQ	48CZ	56C	707000L
		56C	56C	707001L
2.929	TXMQ	48CZ	56C	707002L
		56C	56C	707003L
4.000	TXMQ	48CZ	56C	707004L
		56C	56C	707005L
5.111	TXMQ	48CZ	56C	707006L
		56C	56C	707007L
7.462	TXMQ	48CZ	56C	707008L
		56C	56C	707009L

Size 2 • Cast Iron

Exact Ratio	Style	Motor C-Flange	Output C-Flange	Catalog Number
2.000	TXMQ	56C	56C	707010L
		56C	143-5TC	707011L
		143-5TC	56C	707012L
		143-5TC	143-5TC	707013L
	TXM	56C	56C	707014L
		56C	143-5TC	707015L
		56C	56C	707030L
		143-5TC	56C	707032L
	TX	143-5TC	143-5TC	707033L
		--	56C	707050L
		--	143-5TC	707051L
2.913	TXMQ	143-5TC	56C	707016L
		143-5TC	143-5TC	707017L
	TXM	56C	56C	707034L
		143-5TC	56C	707036L
	TX	143-5TC	143-5TC	707037L
		--	56C	707052L
	--	143-5TC	707053L	
4.000	TXMQ	56C	56C	707018L
		56C	143-5TC	707019L
		143-5TC	56C	707020L
	TXM	143-5TC	143-5TC	707021L
		56C	56C	707038L
		143-5TC	56C	707040L
	TX	143-5TC	143-5TC	707041L
		--	56C	707054L
	--	143-5TC	707055L	
5.000	TXMQ	56C	56C	707022L
		56C	143-5TC	707023L
		143-5TC	56C	707024L
		143-5TC	143-5TC	707025L
	TXM	56C	56C	707042L
		143-5TC	56C	707044L
		143-5TC	143-5TC	707045L
	TX	--	56C	707056L
--		143-5TC	707057L	
7.182	TXMQ	56C	56C	707026L
		56C	143-5TC	707027L
		143-5TC	56C	707028L
	TXM	143-5TC	143-5TC	707029L
		56C	143-5TC	707047L
		143-5TC	56C	707048L
	TX	143-5TC	143-5TC	707049L
		--	56C	707058L
	--	143-5TC	707059L	

Size 3 • Cast Iron

Exact Ratio	Style	Motor C-Flange	Output C-Flange	Catalog Number
2.000	TXMQ	182-4TC	182-4TC	707060L
		182-4TC	213-5TC	707061L
		213-5TC	213-5TC	707064L
		254-6TC	213-5TC	707067L
	TXM	182-4TC	182-4TC	707090L
		213-5TC	213-5TC	707094L
TX	--	213-5TC	707097L	
			707121L	
2.964	TXMQ	182-4TC	182-4TC	707069L
		182-4TC	213-5TC	707070L
		213-5TC	182-4TC	707072L
		213-5TC	213-5TC	707073L
	TXM	182-4TC	182-4TC	707099L
		182-4TC	213-5TC	707100L
		213-5TC	182-4TC	707102L
		213-5TC	213-5TC	707103L
TX	--	182-4TC	707123L	
	--	213-5TC	707124L	
4.045	TXMQ	182-4TC	182-4TC	707075L
		182-4TC	213-5TC	707076L
		213-5TC	182-4TC	707078L
		213-5TC	213-5TC	707079L
	TXM	182-4TC	182-4TC	707105L
		182-4TC	213-5TC	707106L
		213-5TC	182-4TC	707108L
		213-5TC	213-5TC	707109L
	TX	--	182-4TC	707126L
		--	213-5TC	707127L
5.167	TXMQ	182-4TC	182-4TC	707081L
		182-4TC	213-5TC	707082L
		213-5TC	182-4TC	707084L
	TXM	213-5TC	213-5TC	707085L
		182-4TC	182-4TC	707111L
		182-4TC	213-5TC	707112L
	TX	213-5TC	182-4TC	707114L
		213-5TC	213-5TC	707115L
TX	--	182-4TC	707129L	
	--	213-5TC	707130L	
7.538	TXMQ	182-4TC	182-4TC	707087L
	TXM	182-4TC	182-4TC	707117L
	TX	--	182-4TC	707132L

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

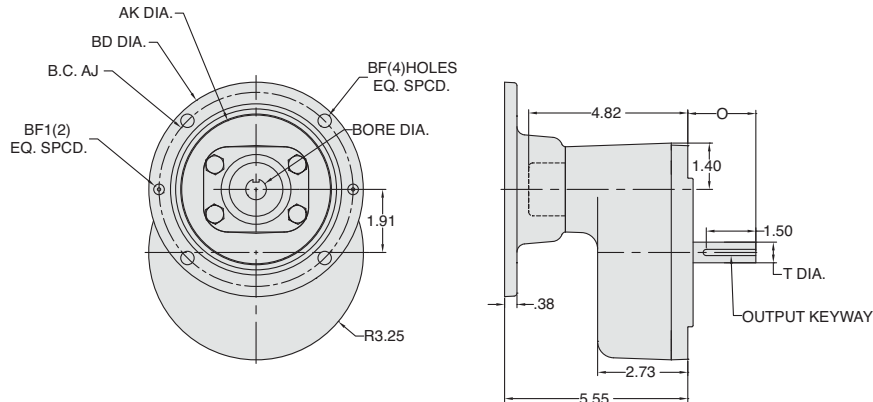
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

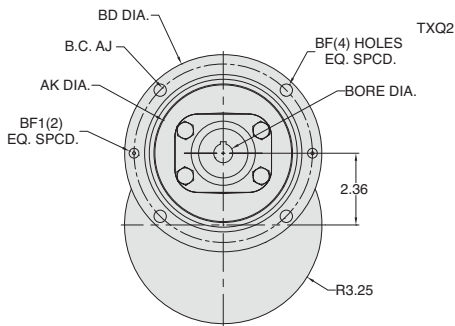
Aluminum Size 1



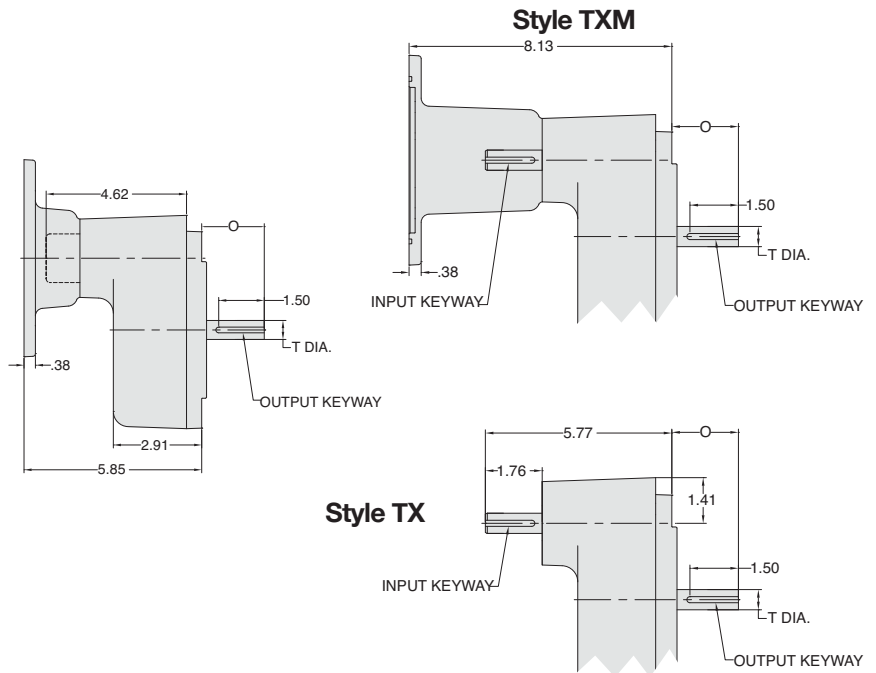
ALUMINUM SIZE 1 DIMENSIONS (Inches)

Style	Frame Combinations (Input - Output)	AJ	AK	BD	BF	BF1	O	T +0.000 -0.0015	Input Bore	Input Keyway	Output Keyway	Weight (lbs.)
TXMQ	48CZ - 56C	3.75	3.00	4.36	0.28	1/4-20 UNC	2.06	0.625	0.50	1/8 X 1/16	3/16 x 3/32	9.5
	56C - 56C	5.88	4.50	6.64	0.41	3/8-16 UNC	2.06	0.625	0.63	3/16 X 3/32	3/16 x 3/32	9.5

Aluminum Size 2



Style TXMQ



Style TX

ALUMINUM SIZE 2 DIMENSIONS (Inches)

Style	Frame Combinations (Input - Output)	AJ	AK	BD	BF	BF1	O	T +0.000 -0.0015	Input Bore	Input Keyway	Output Keyway	Weight (lbs.)
TXMQ, TXM TX	140TC-56C	5.88	4.50	6.64	0.41	3/8-16 UNC	2.06	0.625	0.875	3/16 X 3/32	3/16 x 3/32	11.5
	140TC-140TC	5.88	4.50	6.64	0.41	3/8-16 UNC	2.13	0.875	0.875	3/16 X 3/32	3/16 x 3/32	11.5

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Ratio Multiplier

Available Selections

Size 1 • Aluminum

Exact Ratio	Style	Motor C-Flange	Output C-Flange	Catalog Number
2.056	TXMQ	56C	56C	EL707001
2.929	TXMQ	56C	56C	EL707003
4.000	TXMQ	56C	56C	EL707005
5.111	TXMQ	56C	56C	EL707007
7.462	TXMQ	56C	56C	EL707009

Size 2 • Aluminum

Exact Ratio	Style	Motor C-Flange	Output C-Flange	Catalog Number
2.000	TXMQ	56C	56C	EL707010
		56C	140TC	EL707011
		140TC	56C	EL707012
		140TC	140TC	EL707013
	TXM	56C	56C	EL707030
		56C	140TC	EL707031
		140TC	56C	EL707032
		140TC	140TC	EL707033
		--	56C	EL707050
		--	140TC	EL707051
2.913	TXMQ	56C	56C	EL707014
		56C	140TC	EL707015
		140TC	56C	EL707016
		140TC	140TC	EL707017
	TXM	56C	56C	EL707034
		56C	140TC	EL707035
		140TC	56C	EL707036
		140TC	140TC	EL707037
		--	56C	EL707052
		--	140TC	EL707053
4.000	TXMQ	56C	56C	EL707018
		56C	140TC	EL707019
		140TC	56C	EL707020
		140TC	140TC	EL707021
	TXM	56C	140TC	EL707038
		140TC	56C	EL707040
		140TC	140TC	EL707041
		--	56C	EL707054
		--	140TC	EL707055
		5.000	TXMQ	56C
56C	140TC			EL707023
140TC	56C			EL707024
140TC	140TC			EL707025
TXM	56C		56C	EL707042
	56C		140TC	EL707043
	140TC		56C	EL707044
	140TC		140TC	EL707045
	--		56C	EL707056
	--		140TC	EL707057
7.182	TXMQ	56C	56C	EL707026
		56C	140TC	EL707027
		140TC	56C	EL707028
		140TC	140TC	EL707029
	TXM	56C	56C	EL707046
		56C	140TC	EL707047
		140TC	56C	EL707048
		140TC	140TC	EL707049
		--	56C	EL707058
		--	140TC	EL707059

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

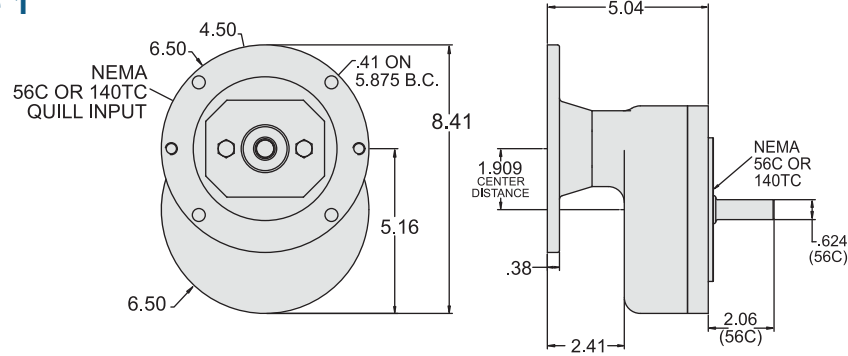
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Stainless Steel Size 1



STAINLESS STEEL SIZE 1 DIMENSIONS (Inches)

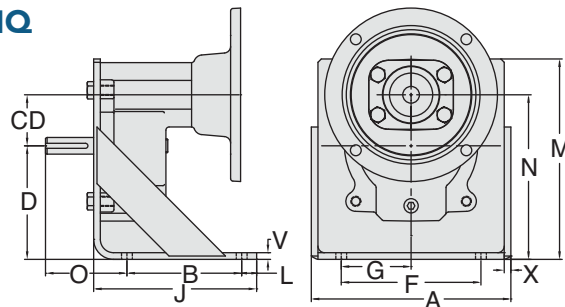
Style	Frame Combinations (Input - Output)	AJ	AK	BD	OD	BE	BE1	BF	Input Bore	Input Keyway**	Weight (lbs)
TXMQ	56C	5.88	4.50	5.88	6.64	0.38	N/A	0.41	0.625	3/16 x 3/32	22
	140TC	5.88	4.50	5.88	6.64	0.38	N/A	0.41	0.875	3/16 x 3/32	22

**keyway width by depth

Size 1 • Stainless Steel

Exact Ratio	Style	Motor C-Flange	Output C-Flange	Catalog Number
2.929	TXMQ	56C	56C	707702
		56C	140TC	707707
4.000	TXMQ	56C	56C	707703
		56C	140TC	707708
		140TC	140TC	707713
5.111	TXMQ	140TC	140TC	707718
		56C	56C	707704
		56C	140TC	707709
7.461	TXMQ	140TC	56C	707714
		140TC	140TC	707719
		56C	56C	707705
7.461	TXMQ	56C	140TC	707710
		140TC	56C	707715
		140TC	140TC	707720

Ratio Multiplier Foot Kit for Styles TBX, TBXM, TBXMQ



Size	Output	A	B	CD	D	F	G	H	J	X	L	M	N	O	V	X	Catalog Number	Weight (lbs)
1	56C	7.50	4.31	1.909	4.250	5.25	2.63	0.41	6.13	0.25	0.56	7.50	6.16	3.06	.25	.25	G185655	2.0
2	56C	7.50	4.31	2.362	4.250	5.25	2.63	0.41	6.13	0.25	0.56	7.50	6.16	3.06	.25	.25	G185656	2.5
	140TC	7.50	4.31	2.362	4.250	5.25	2.63	0.41	6.13	0.25	0.56	7.50	6.16	3.12	.25	.25		
3	180TC	9.50	5.25	2.874	5.000	7.00	3.50	0.53	7.38	0.25	0.63	9.44	7.88	3.88	.25	.25	G185657	3.0
	210TC	9.50	5.25	2.874	5.000	7.00	3.50	0.53	7.38	0.25	0.63	9.44	7.88	4.38	.25	.25		
	250TC	9.50	5.25	2.874	5.000	7.00	3.50	0.53	7.38	0.25	0.63	9.44	7.88	5.00	.25	.25		

NOTE: Foot kit is painted steel construction.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Ratio Multiplier

Parts List

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

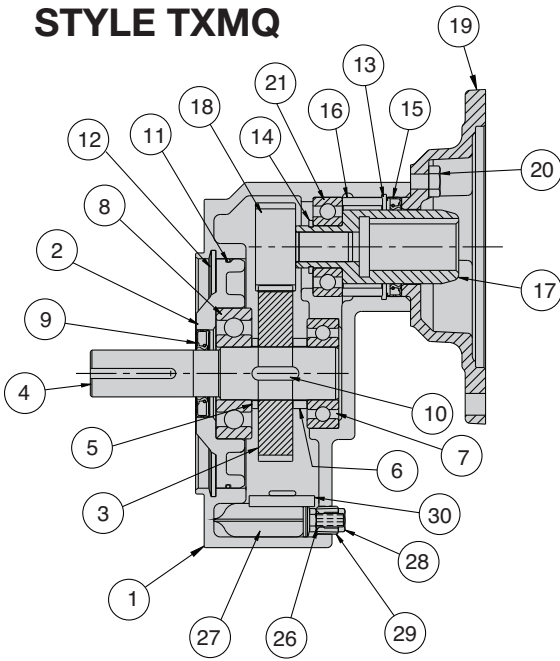
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

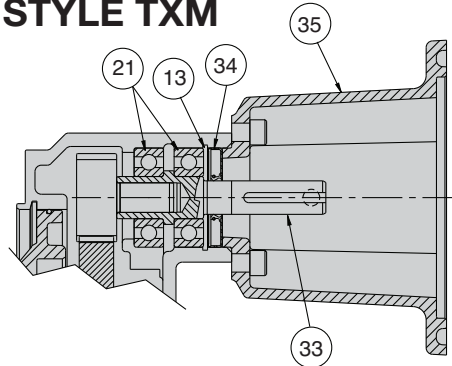
Ratio Multipliers

Accessories and
Additional Capabilities

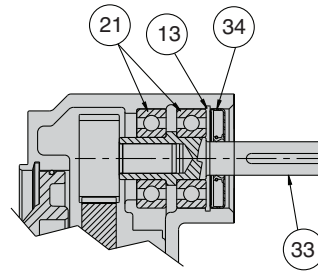
STYLE TXMQ



STYLE TXM



STYLE TX



STYLE TXQ

SIZE 1, 2 & 3 PARTS LIST;

ITEM #	DESCRIPTION
1	HOUSING
2	COVER, OUTPUT
3	GEAR, OUTPUT
4	OUTPUT SHAFT
5	SPACER, OUTPUT
6	SPACER, OUTPUT
7	BEARING, OUTPUT
8	BEARING, OUTPUT
9	SEAL, OUTPUT
10	KEY, OUTPUT
11	"O" RING, OUTPUT
12	SNAP RING, OUTPUT
13	SNAP RING, INPUT
14	SNAP RING, INPUT
15	SEAL, INPUT
16	SPACER, INPUT
17	QUILL, COUPLING
18	PINION, INPUT

ITEM #	DESCRIPTION
19	FLANGE, QUILL INPUT
20	BOLT, INPUT
21	BEARING, INPUT
26	"O" RING, ENVIROSEAL
27	ENVIROSEAL
28	NUT, INT. PRES. COMP.
29	PLUG, STEM
30	SPLASH GUARD

**Grove Gear
WASHGUARD®
Style Only**

STYLE TX & TXM
SIZE 2 & 3 PARTS LIST
(SOLID INPUT)

ITEM #	DESCRIPTION
33	SHAFT, INPUT
34	SEAL, INPUT
35	FLANGE, MOTOR (TXM ONLY)



State-of-the-Art Technical Expertise, Equipment & Support

From inexpensive designs to elaborate transmissions, miniature gearmotors to gearboxes rated for hundreds of horsepower, Grove Gear can solve the toughest transmission needs. Design, manufacturing, testing, documentation and quality are assured at Grove Gear.

DESIGN & ENGINEERING SUPPORT

- Full support of engineering team
- The latest in CAD Systems
- Current software helps engineers identify customer solutions

MANUFACTURING

- 200 qualified and highly trained employees
- The latest machine technology
- Lean manufacturing and six sigma focus
- 67 Machining Centers
- Turning
- Gear Cutting
- Grinding
- Milling
- Heat Treat
- Hardening, nitriding, carburizing

QUALITY & TESTING

- SPC Processes
- ISO Certified
- Sophisticated test laboratories insure each gear meets high quality standards
- Dedicated gear checking equipment
- Measuring instruments are regularly checked against calibrated and certified masters to maintain accuracy and reliability

AVAILABLE OPTIONS:

- Special Paint
- Custom Mounting Brackets/Bases
- Longer/Shorter Shaft Extensions
- Special Shaft Extension Diameters
- Cross-drilled Holes on Shafts
- Custom Ratios
- Stainless-Steel Hollow Output Shafts
- Reduced Backlash Designs



Single Reduction
Worm Gear Reducers



Double Reduction
Worm - Worm Gear Reducers



Double Reduction
Helical - Worm Gear Reducers



WASHGUARD® Reducers
and GEAR+MOTOR™



Ratio Multipliers



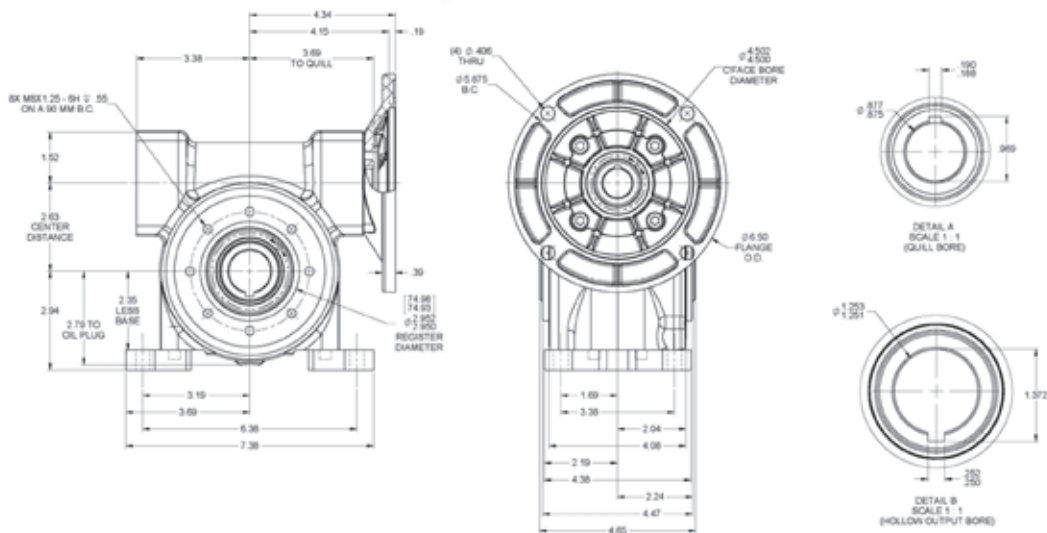
Accessories and
Additional Capabilities

Aluminum, Interchangeable & Modular

The Titan Aluminum Gear Reducer is now available from Grove Gear, the leader in industrial-duty gear reducers. This innovative product interchanges with traditional European brands like Bonfiglioli and Motovario. The product is manufactured in the United States for ordering and delivery ease. It is available in the standard design or modified to meet customer specifications.

This new product features a unique, modular design. The Titan Aluminum Gear Box offers the option of removable feet, plug-in shafts and adaptable mounting pattern. Simply start with a basic unit and select the appropriate modular features to create multiple combinations.

The Titan Gear Reducer offers all of the premium features customers have come to expect from Grove Gear, including Mobil PAG 460 lubricant, a bronze alloy worm gear and a robust steel alloy output shaft. Grove Gear has a commitment to superior design and precision manufacturing.



RATINGS

Ratio	Input RPM	Output RPM	Input HP	Output Torque (lb-in)
7.5	1750	233	5.24	1100
10	1750	175	4.19	1225
15	1750	117	2.85	1215
20	1750	88	2.24	1200
25	1750	70	1.92	1250
30	1750	58	1.58	1275
40	1750	44	1.31	1270
50	1750	35	1.05	1150
60	1750	29	0.95	1110

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Modular Design

The Titan Aluminum Gear Box offers the option of removable feet, plug-in shafts and adaptable mounting pattern.

Simply start with a basic unit and select the appropriate modular features to create multiple combinations.



Product Features

- 2.63" center distance
- Worm gear reducer
- 56C / 140TC quill input
- IEC or NEMA input
- Solid input available
- Dual input options available
- Inch or metric output
- 356-T6 sand cast aluminum housing
- Clean and paint-free design
- Lightweight design
- Interchanges to traditional European footprint
- Factory filled with Mobil PAG 460 lubricant
- Ventless, sealed-for-life design
- Modular design for flexibility
- Manufactured in the USA
- Washdown options available
- Available in standard design or modified to customer specifications
- Ideal for boat lifts, bulk feeders, conveyors, sports related equipment and car washes
- Available in Q2 2012 • Custom Ratios
- Stainless-Steel Hollow Output Shafts
- Reduced Backlash Designs

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

ELECTRA-GEAR Integral Gearmotor



Single Reduction
Worm Gear Reducers

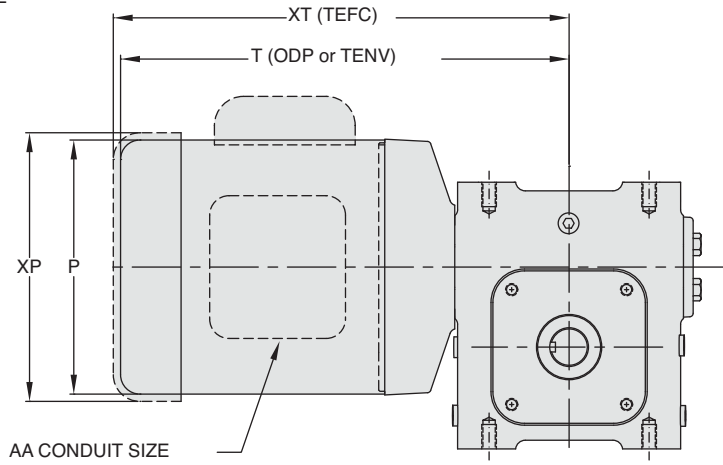
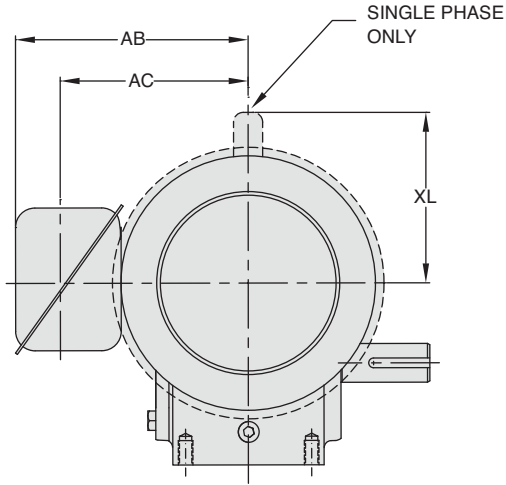
Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



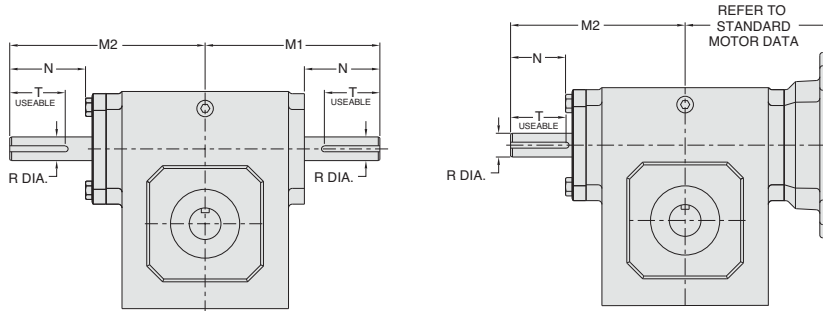
MOTOR DIMENSIONS

Motor Frame	P	AA	AB	AC	XL	XP
143-145TC	6.56	.75	6.12	4.60	5.19	7.26
183-184TC	8.25	.75	6.93	5.42	6.31	8.88
213-215TC	10.38	1.00	8.11	6.60	-	10.38

SINGLE REDUCTION DIMENSIONS (Inches)

Reducer Size	K143T		P143/5T		T143/5T		K182T		M182/4T		P182/4T		R182/4T		K213T		M215T	
	T	XT	T	XT	T	XT	T	XT	T	XT	T	XT	T	XT	T	XT	T	XT
818	11.19	12.41	12.68	13.91	14.18	15.41	-	-	-	-	-	-	-	-	-	-	-	-
821	11.68	12.91	13.18	14.41	14.68	15.91	13.15	14.80	14.15	15.80	15.21	16.87	16.44	18.12	-	-	-	-
826	12.24	13.47	13.74	14.97	15.24	16.47	13.71	15.36	14.71	16.36	15.77	17.43	17.02	18.68	-	-	-	-
830	12.81	14.03	14.31	15.53	15.81	17.03	14.27	15.93	15.27	16.93	16.33	17.99	17.21	18.87	15.99	17.78	17.49	19.28
832	13.24	14.47	14.74	15.97	16.24	17.47	14.71	16.36	15.71	17.36	16.77	18.43	17.65	19.30	16.43	18.21	17.93	19.71
842	14.16	15.38	15.66	16.88	17.16	18.37	15.37	17.03	16.37	18.03	17.44	19.09	18.67	20.34	17.03	18.82	18.53	20.32
852	-	-	-	-	-	-	16.94	18.59	17.94	19.59	19.00	20.66	20.25	21.91	19.03	20.82	20.53	22.32
860	-	-	-	-	-	-	17.56	19.22	18.56	20.22	19.63	21.28	20.88	22.53	19.66	21.44	21.16	22.94

Contact Factory for availability.
Dimensions shown are for reference only.



DUAL INPUT SHAFT EXTENSION DIMENSIONS

Unit	M1	M2	N	R	T**
813	3.82	4.37	1.76	.500	1/8 x 1.44
815	4.35	4.90	1.76	.625	3/16 x 1.50
818	4.45	5.00	1.76	.625	3/16 x 1.50
821	4.82	5.37	1.76	.625	3/16 x 1.50
824	5.51	6.15	2.38	.750	3/16 x 1.50
826	6.07	6.72	2.38	.750	3/16 x 1.50
830	6.57	7.22	2.38	.875	3/16 x 1.50
832	6.76	7.40	2.38	.875	3/16 x 1.50
842	9.57	9.57	3.47	1.250	1/4 x 2.88
852	10.88	10.88	3.38	1.250	1/4 x 3.00
860	11.78	14.55	3.41	1.500	3/8 x 3.00

**Keyway width by length

Specify complete model number when ordering reducer with dual input shaft. Catalog number assigned upon receipt of order.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Modified Stock Gear Reducers

Quick shipment is standard on all stock and modified stock gear reducers. A wide range of mounting styles are offered and are listed on the accompanying chart. Start with one of the stock reducer styles shown — add an accessory — and create a new mounting style.

STYLE T OR U
HORIZONTAL
BASE



(GR SERIES SHOWN)

STYLE J
VERTICAL INPUT
SHAFT BASE



(GR SERIES SHOWN)

STYLE VL OR VH
VERTICAL OUTPUT
SHAFT BASE



(GR SERIES SHOWN)

**MOTORIZED
C FLANGE
QUILL INPUT**



(Style BMQ Shown)

**MOTORIZED
C FLANGE FLEXIBLE
COUPLING INPUT**



(Style BM Shown)

NON-FLANGED



(Style B Shown)

Type	Stock Reducer Style	T Base Worm Over	U Base Worm Over	J Base	VL Low Base	VH High Base
Single Reduction Solid Shaft	BMQ	TMQ	UMQ *	JMQ	VLMQ	VHMQ
Single Reduction Hollow Shaft	HMQ	—	—	JHMQ	VLHMQ	VHHMQ
Double Reduction Solid Shaft	DMQ	DTMQ	DUMQ *	DJMQ	DVLMQ	DVHMQ
Double Reduction Hollow Shaft	DHMQ	—	—	DJHMQ	DVLHMQ	DVHHMQ
Single Reduction Solid Shaft	BM	TM	UM *	JM	VLM	VHM
Single Reduction Hollow Shaft	HM	—	—	JHM	VLHM	VHHM
Double Reduction Solid Shaft	DM	DTM	DUM *	DJM	DVLM	DVHM
Double Reduction Hollow Shaft	DHM	—	—	DJHM	DVLHM	DVHHM
Single Reduction Solid Shaft	B	T	U *	J	VL	VH
Single Reduction Hollow Shaft	H	—	—	JH	VLH	VHH
Double Reduction Solid Shaft	D	DT	DU *	DJ	DVL	DVH
Double Reduction Hollow Shaft	DH	—	—	DJH	DVLH	DVHH

* Not a recommended mounting style. Consult Factory for selection assistance.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

**STYLE F
OUTPUT
FLANGE**



(GR SERIES SHOWN)

**STYLE FR
OUTPUT
FLANGE**



(EL SERIES ONLY)

**STYLE BF
OUTPUT
FLANGE**



(GR SERIES ONLY)

**STYLE R
RISER
BLOCK**



(GR SERIES ONLY)

Free Mod-Squad™ Service Or Assemble It Yourself!

Any basic Grove Gear or Electra-Gear reducer is available on a quick-shipment basis with an accessory kit factory assembled by the Grove Gear Mod Squad™ - at no charge for the labor! Just pay for the basic reducer and accessory item. To order a modified reducer, specify the basic reducer model number or catalog number AND the Mod-Squad™ Service Number (see individual selection tables). Or assemble it yourself by ordering the appropriate basic reducer and accessory kit for the model needed.



Before ordering, check the dimensional information and models available in this catalog. Accessory kits for Grove Gear Series GR, GRL and GRG are not interchangeable to NH or EL series except where noted. EL Series accessory kits have unique dimensions and will not mount to any Grove Gear reducer without modification.

F Output Flange	FR Output Flange	BF Output Flange	R Riser Block
FMQ ●	FRMQ	BFMQ	RMQ
FHMQ	—	BFHMQ	—
DFMQ ●	DFRMQ	DBFMQ	—
DFHMQ	—	DBFHMQ	—
FM ●	FRM	BFM	RM
FHM	—	BFHM	—
DFM ●	DFRM	DBFM	—
DFHM	—	DBFHM	—
F ●	FR	BF	R
FH	—	BFH	—
DF ●	DFR	DBF	—
DFH	—	DBFH	—

● Not available in EL Series



Pages 290-291, 296 Standard Accessories
Page 298 WASHGUARD® Accessories



Pages 292-293, 296 Standard Accessories



Pages 294-295 Standard Accessories
Page 299 Platinum Accessories



Page 299 Standard Accessories



Modified Stock Gear Reducers

CAST IRON GR SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE T OR U HORIZONTAL BASE



Reducer Weight Size	Accessory Kit Only Catalog No.	Mod-Squad-Service Number		Weight (lbs)
		Style T	Style U	
GR813	G185000	T813GR	U813GR	2
GR815	G185120	T815GR	U815GR	3
GR818	G185005	T818GR	U818GR	3
GR821	G185010	T821GR	U821GR	4
GR824	G185015	T824GR	U824GR	4
GR826	G185020	T826GR	U826GR	6
GR830	G185121	T830GR	U830GR	6
GR832	G185025	T832GR	U832GR	9
GR842	G185030	T842GR	U842GR	14
GR852	G185035	T852GR	U852GR	20
GR860	G185040	T860GR	U860GR	31
GR870	G185189	T870GR	U870GR	41
GR880	G185190	T880GR	U880GR	48
GR8100	G185191	T8100GR	U8100GR	76

STYLE J VERTICAL INPUT BASE



Reducer Size	Accessory Kit Only Catalog No.	Mod-Squad-Service Number Style J	Weight (lbs)
GR815	G185122	J815GR	1
GR818	G185006	J818GR	2
GR821	G185011	J821GR	3
GR824	G185016	J824GR	3
GR826	G185021	J826GR	5
GR830	G185123	J830GR	6
GR832	G185124	J832GR	6
GR842	◆	◆	10
GR852	◆	◆	15

◆ J Brackets for sizes 842-852 require grease fittings in input covers and must be installed at Factory. Contact Factory for field replacement kits.

STYLE F OUTPUT FLANGE CAST IRON



Reducer Size	Accessory Kit Only Catalog No.	Mod-Squad-Service Number Style F ▼	Weight (lbs)
GR815	G185131**	F815GR	1
GR818	G185132**	F818GR	2
GR821	G185133**	F821GR	3
GR824	G185134**	F824GR	3
GR826	G185135**	F826GR	4
GR830	G185136**	F830GR	10
GR832	G185137**	F832GR	10
GR842	G185138**	F842GR	15
GR852	G185139**	F852GR	30
GR860	G185140**	F860GR	38
GR870	**	-	**
GR880	**	-	**
GR8100	**	-	**

** Output flange must be installed at Factory for all solid output shaft reducers (sizes 813-8100). Specify Mod-Squad Service Number for flange when ordering these reducers.

▼ Flange can only mount to "bolted cover side" of hollow reducer on sizes 813-852. Please specify correct mounting assembly with order. Refer to pages 74-75, for assembly positions. Must designate L (left) or R (right).

HOLLOW SHAFT TIE ROD KIT



(GR SERIES SHOWN)

Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
GR813 - 842	G185152	5
GR852 - 860	G185153	5

NOTE: Kit does not include Torque Arm Bracket that mounts to reducer. See "TORQUE ARM BRACKET" table.

TORQUE ARM BRACKET



Reducer Size	Accessory Kit Only Catalog No. ▲
GR813	G185450
GR815	G185451
GR818	G185451
GR821	G185452
GR824	G185453
GR826	G185454
GR830	G185455
GR832	G185457
GR842	G185458
GR852	G185459
GR860	G185460
GR870	--
GR880	--
GR8100	--

▲ Torque arm bracket mounts to hollow shaft reducer.

STYLE R RISER BLOCK



Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
GR815	G185141	7
GR818	G185142	7
GR821	G185143	9
GR824	G185144	9
GR826	G185145	12
GR830	G185146	15
GR832	G185147	31
GR842	G185148	24
GR852	G185149	15

NOTE: Mounting bolts are not included.

STYLE VL & VH VERTICAL OUTPUT BASE



Reducer Size	Accessory Kit Only Catalog No.	Mod-Squad-Service Number		Weight (lbs)
		Style VL	Style VH	
GR813	G185002	VL813GR**	VH813GR**	2
GR815	G185127	VL815GR**	VH815GR**	3
GR818	G185007	VL818GR**	VH818GR**	3
GR821	G185012	VL821GR**	VH821GR**	7
GR824	G185017	VL824GR**	VH824GR**	7
GR826	G185022	VL826GR**	VH826GR**	9
GR830	G185128	VL830GR**	VH830GR**	10
GR832	G185027	VL832GR**	VH832GR**	13
GR842	■	■	■	20
GR852	■	■	■	25
GR860	■	■	■	36
GR870	■	■	--	71
GR880	■	■	--	78
GR8100	■	■	--	156

■ VL & VH bases for sizes 842-8100 require grease retainer and zerk fittings in output covers and must be installed at Factory. Contact Factory for field replacement kits.

** Must designate D or U.



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

BM STYLE INPUT FLANGE KITS**



Reducer Size	NEMA Input Frame Size					
	48CZ	56C	143-5TC	182-4TC	213-5TC	254-6TC
GR813	G185161	G185090	--	--	--	--
GR815	G185162	G185163	G185164	--	--	--
GR818	G185165	G185091	G185092	--	--	--
GR821	G185166	G185093	G185094	--	--	--
GR824	--	G185095	G185096	G185097	--	--
GR826	--	G185098	G185099	G185100	--	--
GR830	--	G185167	G185168	G185169	--	--
GR832	--	G185101	G185102	G185103	G185170	--
GR842	--	G185171	G185104	G185105	G185106	G185172
GR852	--	--	G185173	G185107	G185108	G185109
GR860	--	--	--	G185174	G185110	G185111

** All kits include flexible coupling.

DOUBLE REDUCTION ADAPTOR KITS



Reducer Size	Accessory Kit Only Catalog No.	Primary Unit Size	Secondary Unit Quill Size	Weight (lbs.)
GR813 - GR821	G185150	813	56C	3

Note: Sizes 824-8100 must be assembled at Factory.

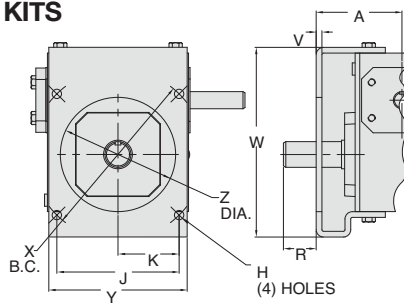
HOLLOW OUTPUT SHAFT PROTECTIVE COVERS

Series	Accessory Kit Only Catalog No.
GR818	G185154.00
GR821-GR826	G185155.00
GR830-GR832	G185156.00



This protective cap mounts to integral output cover side of reducer and covers the unused output bore for single extension or hollow output shaft assemblies. Cover will not mount to bolted cover side of reducer. Check OSHA requirements and review installation manual to assure all safety requirements of gear reducer installation are met.

BF STYLE OUTPUT FLANGE KITS



Style BF Output Flange Kits

Series	A	H	J	K	R	V	W	X	Y	Z
813	3.00	0.34	3.54	1.77	1.00	0.19	5.55	5.00	4.25	3.62
818	3.50	0.34	4.16	2.08	0.81	0.19	6.66	5.88	4.81	4.06
821	3.75	0.41	4.60	2.30	0.93	0.19	7.47	6.50	5.75	4.50
824	3.72	0.41	5.30	2.65	1.37	0.25	8.30	7.50	6.00	5.00
826	4.06	0.41	5.66	2.83	1.57	0.25	9.25	8.00	7.18	6.00

Style BF Output Flange - Steel

Series	Accessory Kit Only Catalog No.	Mod-Squad-Service Number Style BF	Weight (lbs)
GR813	G185004	BF813GR	6
GR818	G185009	BF818GR	6
GRL821	G185014	BF821GR	10
GR824	G185019	BF824GR	10
GR826	G185024	BF826GR	13

Must designate L (left) or R (right).





Modified Stock Gear Reducers



STYLE T OR U HORIZONTAL BASE



Reducer Size	Accessory Kit Only Catalog No.	Mod-Squad-Service Number		Weight (lbs)
		Style T	Style U	
NH813	G185200	T813NH	U813NH	2
NH815	G185201	T815NH	U815NH	3
NH818	G185202	T818NH	U818NH	3
NH821	G185203	T821NH	U821NH	4
NH824	G185204	T824NH	U824NH	4
NH826	G185205	T826NH	U826NH	6
NH830	G185206	T830NH	U830NH	6
NH832	G185207	T832NH	U832NH	9
NH842	G185208	T842NH	U842NH	14
NH852	G185209	T852NH	U852NH	20

STYLE J VERTICAL INPUT BASE



Reducer Size	Accessory Kit Only Catalog No.	Mod-Squad-Service Number Style J	Weight (lbs)
NH815	G185211	J815NH	1
NH818	G185212	J818NH	2
NH821	G185213	J821NH	3
NH824	G185214	J824NH	3
NH826	G185215	J826NH	5
NH830	G185216	J830NH	6
NH832	G185217	J832NH	6
NH842	◆	◆	10
NH852	◆	◆	15

◆ J Brackets for sizes 842-852 require NH grease fittings in input covers and must be installed at Factory. Contact Factory for field replacement kits.

STYLE F OUTPUT FLANGE



Reducer Size	Accessory Kit Only Catalog No.	Mod-Squad-Service Number Style F ▼	Weight (lbs)
NH815	G185229**	F815NH	1
NH818	G185230**	F818NH	2
NH821	G185231**	F821NH	3
NH824	G185232**	F824NH	3
NH826	G185233**	F826NH	4
NH830	G185234**	F830NH	10
NH832	G185235**	F832NH	10
NH842	G185236**	F842NH	15
NH852	G185237**	F852NH	30

** Output flange must be installed at Factory for all solid output shaft reducers (sizes 813-852). Specify Mod-Squad Service Number for flange when ordering these reducers.

▼ Flange can only mount to "bolted cover side" of hollow reducers. Please specify correct mounting assembly with order. Refer to pages 94-95, for assembly positions. Must designate L (left) or R (right).

STYLE VL & VH VERTICAL OUTPUT BASE



Reducer Size	Accessory Kit Only Catalog No.	Mod-Squad-Service Number		Weight (lbs)
		Style VL	Style VH	
NH813	G185220	VL813NH**	VH813NH**	2
NH815	G185221	VL815NH**	VH815NH**	3
NH818	G185222	VL818NH**	VH818NH**	3
NH821	G185223	VL821NH**	VH821NH**	7
NH824	G185224	VL824NH**	VH824NH**	7
NH826	G185225	VL826NH**	VH826NH**	9
NH830	G185226	VL830NH**	VH830NH**	10
NH832	G185227	VL832NH**	VH832NH**	13
NH842	■	■	■	20
NH852	■	■	■	25

■ VL & VH bases for sizes 842-852 require grease retainer and zerk fittings in output covers and must be installed at Factory. Contact Factory for field replacement kits.

** Must designate D or U.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities



BM STYLE INPUT FLANGE KITS**



Reducer Size	NEMA Input Frame Size					
	48CZ	56C	143-5TC	182-4TC	213-5TC	254-6TC
NH813	G185161	G185090	--	--	--	--
NH815	G185162	G185163	G185164	--	--	--
NH818	G185165	G185091	G185092	--	--	--
NH821	G185166	G185093	G185094	--	--	--
NH824	--	G185095	G185096	G185097	--	--
NH826	--	G185098	G185099	G185100	--	--
NH830	--	G185112	G185113	G185114	G185115	--
NH832	--	G185112	G185113	G185114	G185115	--
NH842	--	G185171	G185104	G185105	G185106	G185172
NH852	--	--	G185173	G185107	G185108	G185109

** All kits include flexible coupling.

DOUBLE REDUCTION ADAPTOR KITS



Reducer Size	Accessory Kit Only Catalog No.	Primary Unit Size	Secondary Unit Quill Size	Weight (lbs.)
NH813 - NH821	G185238	813	56C	3

Note: Sizes 824-8100 must be assembled at Factory.

HOLLOW OUTPUT SHAFT PROTECTIVE COVERS

Series	Accessory Kit Only Catalog No.
NH818	G185154.00
NH821-NH826	G185155.00
NH830-NH832	G185156.00



This protective cap mounts to integral output cover side of reducer and covers the unused output bore for single extension or hollow output shaft assemblies. Cover will not mount to bolted cover side of reducer. Check OSHA requirements and review installation manual to assure all safety requirements of gear reducer installation are met.

HOLLOW SHAFT TIE ROD KIT



(GR SERIES SHOWN)

Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
NH813-842	G185152	5
NH852	G185153	5

NOTE: Kit does not include Torque Arm Bracket that mounts to reducer. See "TORQUE ARM BRACKET" table.

TORQUE ARM BRACKET



Reducer Size	Accessory Kit Only Catalog No. ▲
NH813	G185450
NH815	G185464
NH818	G185464
NH821	G185465
NH824	G185466
NH826	G185467
NH830	G185468
NH832	G185469
NH842	G185470
NH852	G185471

▲ Torque arm bracket mounts to hollow shaft reducer.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

ELECTRA-GEAR Modified Stock Gear Reducers



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

STYLE T OR U HORIZONTAL BASE



Reducer Weight Size	Accessory Kit Only Catalog No.	Mod-Squad-Service Number		(lbs)
		Style T	Style U	
EL813	G185260	T813EL	U813EL	1
EL818	G185261	T818EL	U818EL	2
EL821	G185262	T821EL	U821EL	3
EL824	G185263	T824EL	U824EL	3
EL826	G185264	T826EL	U826EL	4
EL830	G185265	T830EL	U830EL	6
EL832	G185266	T832EL	U832EL	8
EL842	G185267	T842EL	U842EL	7
EL852	G185268	T852EL	U852EL	8
EL860	G185269	T860EL	U860UL	10

STYLE J VERTICAL INPUT BASE



(WHITE EPOXY)

Reducer Size	Accessory Kit Only Catalog No.	Mod-Squad-Service Number Style J	Weight (lbs)
EL813	G185270	J813EL	1
EL818	G185271	J818EL	2
EL821	G185272	J821EL	3
EL824	G185273	J824EL	3
EL826	G185274	J826EL	4
EL830	G185275	J830EL	5
EL832	G185276	J832EL	5
EL842	◆	◆	6
EL852	◆	◆	8
EL860	◆	◆	10

◆ J Brackets for sizes 842-852 require grease fittings in input covers and must be installed at Factory. Contact Factory for field replacement kits.

STYLE VL VERTICAL OUTPUT BASE



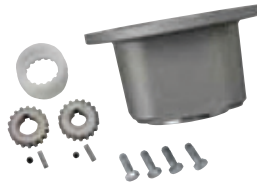
(WHITE EPOXY)

Reducer Size	Accessory Kit Only Catalog No.	Mod-Squad-Service Number Style VL	Weight (lbs)
EL813	G185278	VL813EL**	2
EL818	G185279	VL818EL**	3
EL821	G185280	VL821EL**	3
EL824	G185281	VL824EL**	3
EL826	G185282	VL826EL**	4
EL830	G185283	VL830EL**	5
EL832	G185284	VL832EL**	5
EL842	■	VL842EL**	6
EL852	■	VL852EL**	8
EL860	■	VL860EL**	10

■ VL bases for sizes 842-852 require grease fittings in output covers and must be installed at Factory. Contact Factory for field replacement kits.

** Must designate D or U.

BM STYLE INPUT FLANGE KITS**



Reducer Size	NEMA Input Frame Size				
	56C	140TC	180TC	210TC	250TC
EL813	G185501	G185511	-	-	-
EL818	G185502	G185512	-	-	-
EL821	G185502	G185512	-	-	-
EL842	G185503	G185513	G185523	G185573	G185583
EL852	G185503	G185513	G185523	G185573	G185583

** All kits include flexible coupling

DOUBLE REDUCTION ADAPTOR KITS



Reducer Size	Accessory Kit Only Catalog No.	Primary Unit Size	Secondary Unit Quill Size	Weight (lbs.)
EL813 - EL821	G185296	813	56C	2

Note: Sizes 824-8100 must be assembled at Factory.

HOLLOW SHAFT TIE ROD KIT



(GR SERIES SHOWN)

Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
EL813-842	G185152	5
EL852-860	G185153	5

NOTE: Kit does not include Torque Arm Bracket that mounts to reducer. See "TORQUE ARM BRACKET" table.

TORQUE ARM BRACKET



Reducer Size	Accessory Kit Only Catalog No.
EL813	-
EL818	G185480
EL821	G185481
EL824	G185472
EL826	G185473
EL830	G185474
EL832	G185475
EL842	G185476
EL852	G185477
EL860	G185478

▲ Torque arm bracket mounts to hollow shaft reducer.

STYLE F & FR OUTPUT FLANGE KITS

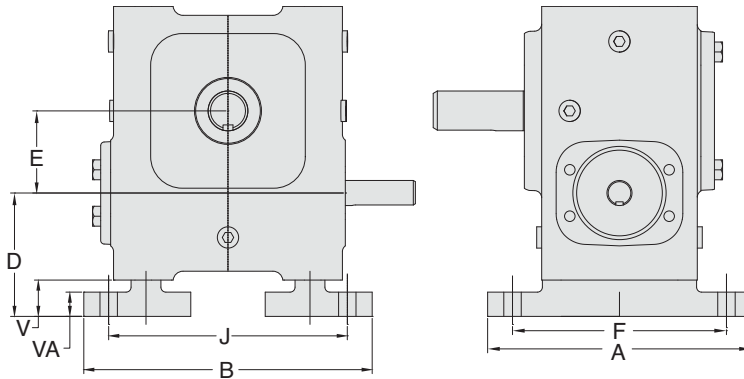


Reducer Size	Accessory Kit Only Catalog No.	Mod-Squad Service Number	Accessory Kit Only Catalog No.	Mod-Squad Service Number	Weight (lbs)
Style F - Hollow Output Flange		Style FR - Solid Output Flange			
EL818	G185287	F818EL	G185298	FR818EL	2
EL821	G185288	F821EL	G185299	FR821EL	3
EL824	G185289	F824EL	G185300	FR824EL	3
EL826	G185289	F826EL	G185300	FR826EL	3
EL830	G185291	F830EL	G185302	FR830EL	6
EL832	G185291	F832EL	G185303	FR832EL	7
EL842	G185293	F842EL	G185304	FR842EL	8
EL852	G185294	F852EL	G185295	FR852EL	8
EL860	+	+	+	+	21

+ Output flange must be installed at Factory.

"ABC" Base Kit

"ABC" base can be mounted on top or bottom of reducer. Please specify mounting position with order.



ABC BASE DIMENSIONS

Size	A	B	CD	D	F	J	V	VA	Accessory Kit Only Catalog No.	Weight (lbs)
818	5.19	4.50	1.75	3.67	4.38	3.69	1.36	0.55	G185620	2
821	6.63	7.25	2.06	3.24	5.38	6.00	0.92	0.61	G185621	3
826	6.63	8.12	2.63	3.93	5.38	6.87	1.06	0.68	G185622	4
830	9.00	9.87	3.00	4.24	7.50	8.37	1.31	0.74	G185623	6
832	9.13	10.88	3.25	4.74	7.63	9.38	0.74	0.74	G185624	8
842	10.00	10.50	4.25	5.73	8.00	8.50	1.23	1.23	G185625	7
852	10.75	12.12	5.25	5.73	8.75	9.74	1.48	1.48	G185626	8
860	11.75	13.50	6.00	6.73	9.50	11.50	1.73	1.73	G185627	10

Foot kit can be mounted on top or bottom of reducer

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

Modified Stock Gear Reducer Accessories

CAST IRON
GR SERIES

CAST IRON
NH SERIES

ALUMINUM
EL SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

BLUE TOUCH-UP PAINT

Container Size	Catalog No.
16 oz can	G185404



WORM GEAR OIL

Container Size	Catalog No.
Quart	G185405



CAUTION

This oil is standard in all Grove Gear (GR and NH Series) and Electra-Gear (EL Series) worm reducers. It is a synthetic Polyglycol (PAG) blend, only intended for use in worm gear reducers and cannot be mixed with any other oil type.

NEMA C-FACE QUILL INPUT BUSHINGS



Frame Conversion	Input Quill Bore Size (inch)	Accessory Kit Only Catalog #
180TC to 140TC	1-1/8 to 7/8	G175230
180TC to 56C	1-1/8 to 5/8	G175229
140TC to 56C	7/8 to 5/8	G175228

Note: Bushing allows multiple NEMA frame motors to mount to a single gearbox by reducing the input quill shaft diameter as noted. Application may also require a different input flange size. Bushings are not intended for use in output bores.

ONE-WAY POPPET VENT



Reducer Size	Accessory Kit Only Catalog No.
813	G185407
815	
818	
821	
824	
826	
830	
832	
842	
852	G185408
860	
870	G185409
880	
8100	G185410

Note: Standard vent is two-way design. Poppet vent is a one-way design, reducing chance of oil vapors escaping into environment. For ultimate protection, refer to the Enviroseal design.

OIL LEVEL SIGHT GLASS PLUG



Reducer Size	Accessory Kit Only Catalog No.
813	G185411
815	
818	
821	
824	
826	
830	
832	
842	
852	G185412
860	
870	G185413
880	
8100	G185414

Note: Sight Gage is used to visually check if oil level of gearbox is above or below proper level.



Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories and
Additional Capabilities

INPUT COUPLING KITS* • SERIES GR • NH • EL

Reducer Size	NEMA Input Frame Size											
	48CZ		56C		140TC		180TC		210TC		250TC	
	Part Number	Style	Part Number	Style	Part Number	Style	Part Number	Style	Part Number	Style	Part Number	Style
813	041239	S88	040929	S88	040931	S88	--	--	--	--	--	--
815 - 821	040929	S88	040932	S88	040934	S88	--	--	--	--	--	--
824 - 826	--	--	040933	S88	040935	S88	040937	S138	--	--	--	--
830 - 832	--	--	040934	S88	040936	S88	040938	S138	040939	S138	--	--
842 - 852	--	--	012230	S138	012231	S138	041067	S138	040941	S138	012410	M300
860	--	--	--	--	--	--	013205	L110	013206	L110	013207	L150
870	--	--	--	--	--	--	014468	L110	014469	L110	014470	M300
880	--	--	--	--	--	--	--	--	014471	L150	014472	M400

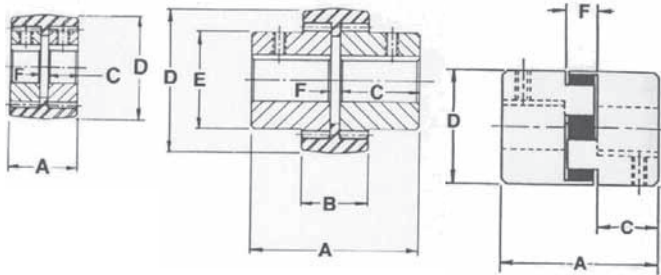
* Coupling kits include 2 coupling halves, flexible sleeve/element and retaining hardware. All couplings are keyed, not splined.

COUPLING DIMENSIONS - INCHES

STYLE "S 88"

STYLE "S 138"

STYLE "L"



DIMENSIONS

Model	A	B	C	D	E	F	Available Sizes
S88	1.25	--	.56	1.88	--	.12	3/8, 1/2, 5/8, 3/4, 7/8
S138	3.36	1.25	1.62	2.88	2.00	.12	5/8, 3/4, 7/8, 1, 1-1/8, 1-1/4, 1-3/8, 1-1/2, 1-5/8, 1-7/8
L-070	2.00	--	.75	1.36	--	.50	3/8, 1/2, 5/8
L-150	4.50	--	1.75	3.75	--	1.00	1-1/4, 1-3/8, 1-5/8, 1-7/8

RATINGS - HP

Model	RPM					
	100	600	900	1200	1800	3600
S88	.20	1.2	1.8	2.4	3.6	7.2
S138	.60	3.6	5.4	7.2	10.8	21.6
L-070	--	--	--	.72	1.08	2.16
L-150	--	--	--	20.4	30.6	61.2

Enviro-Seal



Note: Enviroseal is standard on all WASHGUARD® / PLATINUM reducers in this catalog.

Note: By adding the "Enviroseal" feature to any standard GR Series reducer, the original "Grove Gold" features are duplicated. This feature can be added to any GR, NH or EL Series worm reducer or ratio multiplier for a "Sealed-For-Life" ventless design. Specify "Enviroseal Option" with order.

INPUT COUPLING SLEEVES • SERIES GR • NH • EL**

Reducer Size	NEMA Input Frame Size					
	48CZ	56C	143-5TC	182-4TC	213-5TC	254-6TC
813	040699	040699	040699	--	--	--
815 - 821	040699	040699	040699	--	--	--
824 - 826	--	040699	040699	040792	--	--
830 - 832	--	040699	040699	040792	040792	--
842 - 852	--	040792	040792	040792	040792	095555B
860	--	--	--	013205	013205	095521
870	--	--	--	013205	013205	095555B
880	--	--	--	--	095521	095561B

** Includes coupling sleeve only. For complete 3-piece coupling kit, refer to Input Coupling Kits.



Stock WASHGUARD® Gear Reducer Accessories



Single Reduction
Worm Gear Reducers

WASHGUARD® STYLE T OR U HORIZONTAL BASE



WASHGUARD® STYLE J VERTICAL INPUT BASE



WASHGUARD® HOLLOW SHAFT TIE ROD KIT



Double Reduction
Worm - Worm Gear Reducers

Reducer Weight Size	Accessory Kit Only Catalog No.	Mod-Squad-Service Number		(lbs)
		Style T	Style U	
GR813	G185045	WT813GR	WU813GR	2
GR815	G185180	WT815GR	WU815GR	3
GR818	G185046	WT818GR	WU818GR	3
GR821	G185047	WT821GR	WU821GR	4
GR824	G185048	WT824GR	WU824GR	4
GR826	G185049	WT826GR	WU826GR	6
GR830	G185181	WT830GR	WU830GR	6
GR832	G185182	WT832GR	WU832GR	9

Reducer Size	Accessory Kit Only Catalog No.	Mod-Squad-Service Number Style J	Weight (lbs)
GR813	G185054	WJ813GR	1
GR815	G185183	WJ815GR	1
GR818	G185055	WJ818GR	2
GR821	G185056	WJ821GR	3
GR824	G185057	WJ824GR	3
GR826	G185058	WJ826GR	5
GR830	G185184	WJ830GR	6
GR832	G185185	WJ832GR	6

Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
GR813-842	G185088	5
GR852-860	G185089	5

NOTE: Kit does not include Torque Arm Bracket that mounts to reducer. See "TORQUE ARM BRACKET" table.

Double Reduction
Helical - Worm Gear Reducers

Contact Factory for larger sizes

WASHGUARD® STYLE VL & VH VERTICAL OUTPUT BASE



WASHGUARD® STYLE F OUTPUT FLANGE



WASHGUARD® TORQUE ARM BRACKET



WASHGUARD® Reducers
and GEAR+MOTOR™

Reducer Weight Size	Accessory Kit Only Catalog No.	Mod-Squad-Service Number		(lbs)
		Style VL	Style VH	
GR813	G185063	WVL813GR**	WVH813GR**	2
GR815	G185186	WVL815GR**	WVH815GR**	3
GR818	G185064	WVL818GR**	WVH818GR**	3
GR821	G185065	WVL821GR**	WVH821GR**	7
GR824	G185066	WVL824GR**	WVH824GR**	7
GR826	G185067	WVL826GR**	WVH826GR**	9
GR830	G185187	WVL830GR**	WVH830GR**	10
GR832	G185188	WVL832GR**	WVH832GR**	13

Reducer Size	Accessory Kit Only Catalog No.	Mod-Squad-Service Number Style F ▼	Weight (lbs)
GR813	G185307	WF813GR	1
GR815	G185308	WF815GR	1
GR818	G185309	WF818GR	2
GR821	G185310	WF821GR	3
GR824	G185311	WF824GR	3
GR826	G185312	WF826GR	4
GR830	G185313	WF830GR	10
GR832	G185314	WF832GR	10

Reducer Size	Accessory Kit Only Catalog No. ▲
GR813	G185630
GR815	G185632
GR818	G185632
GR821	G185633
GR824	G185634
GR826	G185635
GR830	G185636
GR832	G185637

* Style VL and VH mountings use the same base with a different assembly position.

** Must designate D or U.

Contact Factory for larger sizes

▼ Flange can only mount to "bolted cover side" of hollow reducer on sizes 813-852. Please specify correct mounting assembly with order. Refer to pages 74-75, for assembly positions. Must designate L (left) or R (right).

▲ Torque arm bracket mounts to hollow shaft reducer.

Ratio Multipliers

WASHGUARD® HOLLOW OUTPUT SHAFT PROTECTIVE COVERS

Reducer Size	Accessory Kit Only Catalog No.
GR818	Contact Factory
GR821	
GR824	
GR826	



This protective cap mounts to integral output cover side of reducer and covers the unused output bore for single extension or hollow output shaft assemblies. Cover will not mount to bolted cover side of reducer. Check OSHA requirements and review installation manual to assure all safety requirements of gear reducer installation are met.

WASHGUARD® STYLE BF OUTPUT FLANGE



Reducer Size	Accessory Kit Only Catalog No.	Mod-Squad-Service Number Style VH	Weight (lbs)
GR813	G185081	WBF813GR	2
GR818	G185082	WBF818GR	2
GR821	G185083	WBF821GR	3
GR824	G185084	WBF824GR	4
GR826	G185085	WBF826GR	6

Must designate L (left) or R (right).

Accessories and
Additional Capabilities



All **PLATINUM** bases and flanges are polished aluminum

ELECTRA-GEAR

Stock Platinum Gear Reducer Accessories

PLATINUM SERIES STYLE T OR U HORIZONTAL BASE



PLATINUM SERIES STYLE J VERTICAL INPUT BASE*



PLATINUM SERIES STYLE VL VERTICAL OUTPUT BASE*



Reducer Size	Accessory Kit Only Catalog No.	Mod-Squad-Service Number		Weight (lbs)
		Style T	Style U	
EL813	G185260P	WT813EL	WU813EL	1
EL818	G185261P	WT818EL	WU818EL	2
EL821	G185262P	WT821EL	WU821EL	3
EL824	G185263P	WT824EL	WU824EL	3
EL826	G185264P	WT826EL	WU826EL	4
EL830	G185265P	WT830EL	WU830EL	6
EL832	G185266P	WT832EL	WU832EL	8

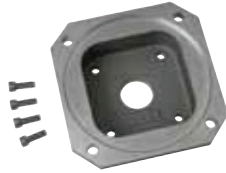
Reducer Size	Accessory* Kit Only Catalog No.	Mod-Squad-Service Number Style J	Weight (lbs)
EL818	G185271	J818EL	2
EL821	G185272	J821EL	3
EL824	G185273	J824EL	3
EL826	G185274	J826EL	4
EL830	G185275	J830EL	5
EL832	G185276	J832EL	5

Reducer Size	Accessory Kit Only Catalog No.	Mod-Squad-Service Number Style VL	Weight (lbs)
EL818	G185279	VL818EL**	3
EL821	G185280	VL821EL**	3
EL824	G185281	VL824EL**	3
EL826	G185282	VL826EL**	4
EL830	G185283	VL830EL**	6
EL832	G185284	VL832EL**	7

* Painted white epoxy.

* Painted white epoxy.
** Must designate D or V.

STYLE F & FR OUTPUT FLANGE KITS



Reducer Size	Accessory Kit Only Catalog No.	Mod-Squad Service Number	Accessory Kit Only Catalog No.	Mod-Squad Service Number	Weight (lbs)
EL813	—	—	—	—	—
EL818	G185287P	WF818EL	G185298P	WFR818EL	2
EL821	G185288P	WF821EL	G185299P	WFR821EL	3
EL824	G185289P	WF824EL	G185300P	WFR824EL	3
EL826	G185289P	WF826EL	G185300P	WFR826EL	3
EL830	G185291P	WF830EL	G185302P	WFR830EL	6
EL832	G185291P	WF832EL	G185303P	WFR832EL	7

HOLLOW SHAFT TIE ROD KIT



(GR SERIES SHOWN)

Reducer Size	Accessory Kit Only Catalog No.	Weight (lbs)
EL813-842	G185088	5
EL852-860	G185089	5

NOTE: Kit does not include Torque Arm Bracket that mounts to reducer. See "TORQUE ARM BRACKET" table.

TORQUE ARM BRACKET



Reducer Size	Accessory Kit Only Catalog No.
EL813	G185479
EL818	G185480
EL821	G185481
EL824	G185472
EL826	G185473
EL830	G185474
EL832	G185475

▲ Torque arm bracket mounts to hollow shaft reducer.

Single Reduction Worm Gear Reducers

Double Reduction Worm - Worm Gear Reducers

Double Reduction Helical - Worm Gear Reducers

WASHGUARD® Reducers and GEAR+MOTOR™

Ratio Multipliers

Accessories and Additional Capabilities



STAINLESS STEEL ONE-WAY POPPET VENT

Reducer Size	Accessory Kit Only Catalog No.
GR813	G183407
GR815	
GR818	
GR821	
GR824	
GR826	
GR832	

Note: Standard vent is two-way design. Poppet vent is a one-way design, reducing chance of oil vapors escaping into environment. For ultimate protection, refer to the Enviroseal design.

STAINLESS STEEL STYLE T OR U HORIZONTAL BASE



Stainless Steel Style T or U Horizontal Base • GR Series

Series	Accessory Kit Only Catalog No.	Mod-Squad-Service Number		Weight (lbs)
		Style T	Style U	
GR813	G185350	ST813	SU813	2
GR815	G185351	ST815	SU815	3
GR818	G185352	ST818	SU818	3
GR821	G185353	ST821	SU821	4
GR824	G185354	ST824	SU824	4
GR826	G185355	ST826	SU826	6
GR830	—	—	—	—
GR832	G185356	ST832	SU832	9

Stock Stainless Steel Gear Reducer Accessories

STAINLESS STEEL STYLE F OUTPUT FLANGE



Stainless Steel Style F Output Flange • GR Series

Series	Accessory Kit Only Catalog No.	Mod-Squad-Service Number Style F ▼	Weight (lbs)
GR813	G185357	SF813	1
GR815	G185358	SF815	1
GR818	G185359	SF818	2
GR821	G185360	SF821	3
GR824	G185361	SF824	3
GR826	G185362	SF826	4
GR830	—	—	—
GR832	G185363	SF832	10

▼ Flange can only mount to "bolted cover side" of hollow reducer on sizes 813-852. Please specify correct mounting assembly with order. Refer to pages 74-75, for assembly positions. Must designate L (left) or R (right).

Bravo! An Alternative For Machine

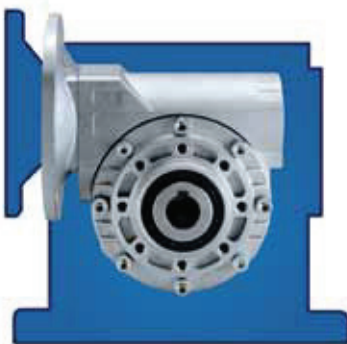
Vent Free Design.** No breather or vents to leak! Factory lubricated for life with premium synthetic Mobil Glygoyle 460 (PAG) lubricant with an operation range of -25°F to +220°F (-32°C to +104°C).

Single-piece aluminum alloy housing is vacuum impregnated with Resinol RT (MIL-STD 276) for protection and sealing. No secondary finish required but readily accepts paint. Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing.

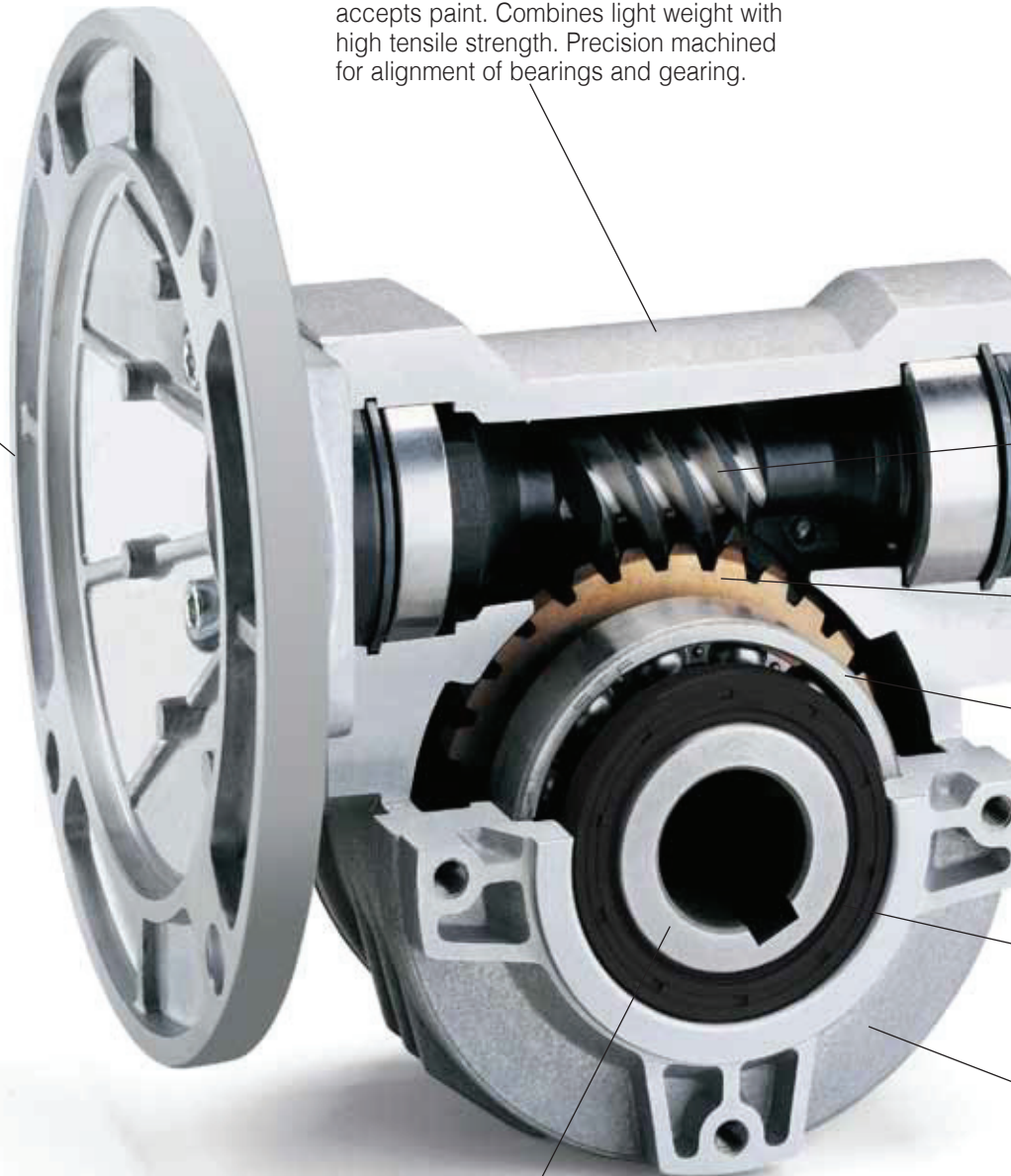
NEMA C flange with quill input accepts 56C, 143-5TC and 182-4TC motor frames.

or

B5 & B14 IEC metric flange options with quill input accepts D56, D63, D71, D80, D90, D100 and D112 motor frames.



Bravo®, up to two-thirds lighter and one-third smaller than cast iron reducer of similar center distance!



Hollow output shaft mounting is standard at no extra cost. Reduces total drive envelope size, weight and cost. Solid shaft single and double output is available.

Designers



Oversized bearings support positively-retained, high speed shaft for higher shock load capacity — ideal for frequent starting and reversing applications. Premium, Nitrile® high temperature seals each end.

Single-piece alloy steel input shaft and worm shaft. High helix angle worm is case-hardened (Rc 58-60), ground, teeth are profiled and radiused, for noise reduction and enhanced efficiency.

Bronze alloy worm gear is centrifugally cast onto an iron hub for maximum strength, lubricity and superior life.

Oversized bearings for radial load capability and maximum hollow output shaft diameters.

Premium, high-temperature Nitrile® output seals.

Impregnated and machined bearing caps with exterior machined surfaces mate to a variety of mounting accessories. Extra-deep thread engagement provided for greater support strength. Zinc plated hardware. No need to remove bearing covers to mount/change accessory kits.

** 512 Series is filled with synthetic oil or equivalent. Operating temperature range of 512 Series is +5°F to +220°F (-15°C to +104°C)

Start with one of four basic units...

Motorized HMQ



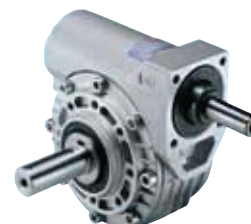
Motorized BMQ



Non-Motorized H



Non-Motorized B



and add mounting accessories...

Reaction Arm R



Horizontal T Base



FL Flange (Long)



F Flange (Short)

To create thousands of gear and GEAR+MOTOR™ combinations



www.grovegear.com

GROVE GEAR

Single Reduction Reducers
BRAVO®

Double Reduction
BRAVO® Worm - Worm

Double Reduction
BRAVO® Helical - Worm

Accessory Kits
BRAVO®

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

BRAVO[®] Single Reduction Reducers

BRAVO[®] Worm - Worm Double Reduction

BRAVO[®] Helical - Worm Double Reduction

BRAVO[®] Accessory Kits

High Efficiency Helical - Inline Gear Reducers

High Efficiency Helical - Worm Gear Reducers

Hollow Output Shaft Mounted

HMQ

MOTORIZED
QUILL INPUT



Ratings: Pages 306-310
Dimensions: Page 312

RHMQ



Ratings: Pages 306-310
Dimensions: Page 314

FHMQ



Ratings: Pages 306-310
Dimensions: Page 316

H

NON-
MOTORIZED
SOLID INPUT
SHAFT



Ratings: Pages 306-310
Dimensions: Page 312

RH



Ratings: Pages 306-310
Dimensions: Page 314

FH



Ratings: Pages 306-310
Dimensions: Page 316

SOLID OUTPUT SHAFT

BMQ

MOTORIZED
QUILL INPUT



Ratings: Pages 306-310
Dimensions: Page 313

RMQ



(❖Non-Standard Option)

Ratings: Pages 306-310
Dimensions: Page 315

FMQ



Ratings: Pages 306-310
Dimensions: Page 317

B

NON-
MOTORIZED
SOLID INPUT
SHAFT



Ratings: Pages 306-310
Dimensions: Page 313

R



(❖Non-Standard Option)

Ratings: Pages 306-310
Dimensions: Page 315

F



Ratings: Pages 306-310
Dimensions: Page 317

MOUNTING ACCESSORIES

Select the appropriate mounting accessories from this wide variety of options.

❖ Non-Standard Option assemblies may be useful in certain applications. Please contact Factory with application details.



**REACTION
ARM R**



**F FLANGE
(SHORT FLANGE)**

FLHMQ



Ratings: Pages 306-310
Dimensions: Page 318

THMQ



(❖Non-Standard Option)
Ratings: Pages 306-310
Dimensions: Page 320

UHMQ



(❖Non-Standard Option)
Ratings: Pages 306-310
Dimensions: Page 322

JHMQ



(❖Non-Standard Option)
Ratings: Pages 306-310
Dimensions: Page 324

FLH



Ratings: Pages 306-310
Dimensions: Page 318

TH



(❖Non-Standard Option)
Ratings: Pages 306-310
Dimensions: Page 320

UH



(❖Non-Standard Option)
Ratings: Pages 306-310
Dimensions: Page 322

JH



(❖Non-Standard Option)
Ratings: Pages 306-310
Dimensions: Page 324

FLMQ



Ratings: Pages 306-310
Dimensions: Page 319

TMQ



Ratings: Pages 306-310
Dimensions: Page 321

UMQ



(❖Non-Standard Option)
Ratings: Pages 306-310
Dimensions: Page 323

JMQ



Ratings: Pages 306-310
Dimensions: Page 325

FL



Ratings: Pages 306-310
Dimensions: Page 319

T



Ratings: Pages 306-310
Dimensions: Page 321

U



(❖Non-Standard Option)
Ratings: Pages 306-310
Dimensions: Page 323

J



Ratings: Pages 306-310
Dimensions: Page 325



FL FLANGE
(LONG FLANGE)



HORIZONTAL BASE
(WORM OVER ASSEMBLY)



HORIZONTAL BASE
(WORM UNDER ASSEMBLY)



HORIZONTAL BASE
(VERTICAL INPUT SHAFT)

Grove Gear 500 Series Gear Reducer Model Number Nomenclature

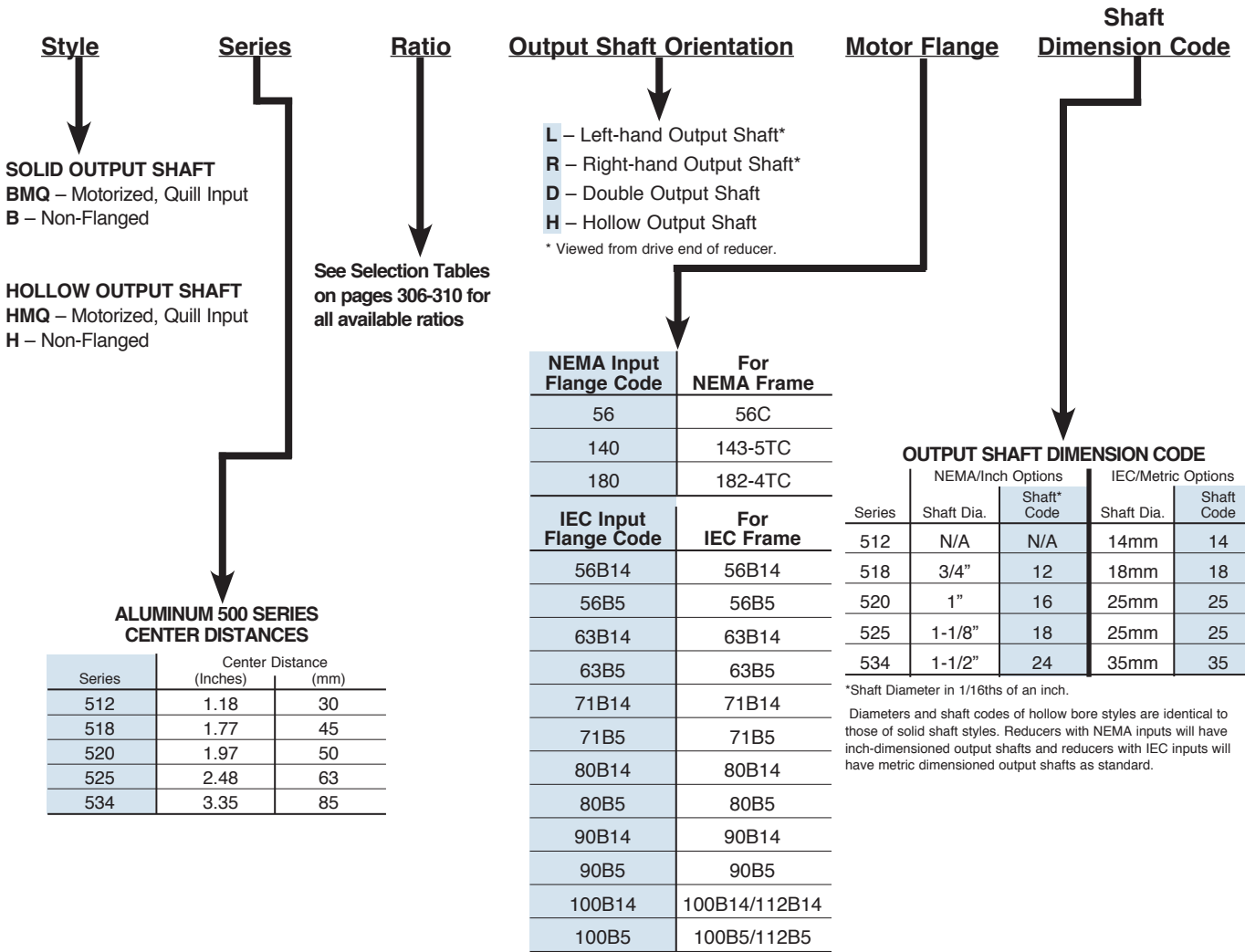
All stock and custom 500 series reducers are identified by a model number. The model number appears on the nameplate and describes pertinent features of the reducer. An example follows, along with a listing of the various letters and positions used.

NOTE: All reducers also have a catalog number—for example W5180001. Reducers and renewal parts should be ordered by catalog number. If a stock reducer has been factory modified by the addition of an optional base for example, the modification number T518, for example, is stamped in the blank column of the nameplate. Accessories that are field installed will not be noted on the nameplate.

Catalog numbers 5000 (for example, W5185000) and higher are custom reducers manufactured for a specific application. The machinery or equipment manufacturer should be contacted for replacement reducers. Renewal parts can be ordered from Grove Gear by catalog number.

TYPICAL NAMEPLATE

GROVE GEAR			
MAX INPUT HP @ 1750 RPM	1.49	OUTPUT TORQUE (IN-LBS)	595
DESC.	HMQ52014H5616	RATIO	14:1
CATALOG NO.		DATE CODE	A04
GROVE GEAR UNION GROVE, WI 53182		MOD	



Sample Model Number

Solid Shaft

Motorized Quill Input, Single Reduction Reducer, 1.77" Center Distance, 14:1 Ratio, Left Hand Output Shaft, and 5/8" Input Bore with NEMA 56C Flange.

BMQ	518	14	L	56	12
Style	Series	Ratio	Mounting Assembly	Motor Input Flange	Shaft Code

Hollow Shaft

Motorized Quill Input, Single Reduction Reducer, 1.77" Center Distance, 14:1 Ratio, 3/4" Hollow Output Shaft, and 5/8" Input Bore with NEMA 56C Flange.

HMQ	518	14	H	56	12
Style	Series	Ratio	Mounting Assembly	Motor Input Flange	Shaft Code

"HOW TO USE" Maximum Rating Tables



How To Use Maximum Rating Tables

Maximum Rating Tables for Single Reduction Gear Reducers are shown on pages 306-310.

BEFORE YOU START:

Identify the Service Factor of the application (see page 644).

Determine the actual input horsepower of the motor by multiplying the motor's nameplate horsepower by the Service Factor.

Determine the output speed (RPM) required at output shaft of reducer.

Identify the mounting style required by your application from the style charts shown on pages 302-303. Note the basic mounting style (BMQ, HMQ, etc.).

To select the proper gear reducer size, use the Maximum Rating Tables as shown:

Maximum Rating Tables 518 Series • All Styles

Style BMQ

Style HMQ

4 Select motor frame size.

	Style BMQ		Style HMQ		
	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.	
7	1750 250	1.378	1.103	278	56C
	1150 164	0.950	0.760	292	
10	1750 175	0.981	0.775	279	56C
	1150 115	0.679	0.536	294	
14	1750 125	0.871	0.670	338	56C
	1150 82	0.602	0.463	356	
21	1750 83	0.796	0.533	405	56C
	1150 55	0.555	0.372	426	
28	1750 63	0.631	0.410	410	56C
	1150 47	0.494	0.321	431	
37	1750 47	0.490	0.309	414	56C
	1150 31	0.340	0.214	436	
46	1750 38	0.397	0.234	388	56C
	1150 25	0.274	0.162	408	
60	1750 29	0.363	0.203	442	56C
	1150 19.2	0.250	0.140	465	
70	1750 25.0	0.204	0.110	278	56C
	1150 16.4	0.137	0.074	292	
102	1750 17.2	0.144	0.070	261	56C
	1150 11.3	0.098	0.048	275	

5 Identify catalog number of the basic reducer by continuing to the right.

6 Verify physical dimensions using the dimensional drawings shown on page 312.

3 Move across the table to the Input HP column until you find a rating that is equal to or greater than the actual input horsepower required. Once located, check the top of the table to identify the correct gear reducer size (512, 518, 520, etc.).

2 Locate the Input RPM and Output RPM columns on the left side of the table. Scroll down the Input RPM column to locate a listing where the desired input speed corresponds to the output speed required in your application. (Input RPM listings are rounded to the nearest hundred. Your actual input speed of 1750 can be correlated to 1800 with no material change in performance.)

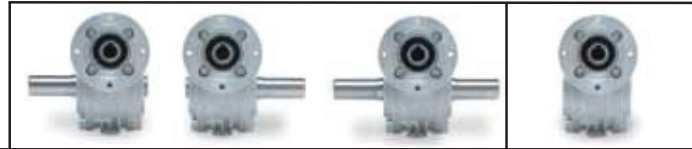
1 Find the appropriate Maximum Rating Tables pages for your basic mounting style. The tables begin on page 306.

* Contact Factory for metric IEC input flange options available.

- Single Reduction Reducers
- BRAVO® Worm - Worm Double Reduction
- BRAVO® Helical - Worm Double Reduction
- BRAVO® Worm - V Double Reduction
- BRAVO® Helical - Worm Double Reduction
- High Efficiency Helical - In-line Gear Reducers
- High Efficiency Helical - Worm Gear Reducers

Style BMQ

Style HMQ



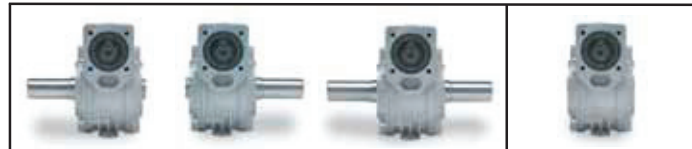
512 Series • Style BMQ & HMQ • 1.0 S.F.

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	IEC Metric Input Flange*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.
7	1750	250	0.764	0.611	154	56B14	W5120025	W5120033	W5120041	W5120081
	1150	164	0.528	0.422	162	63B14	W5120049	W5120057	W5120065	W5120089
10	1750	165	0.510	0.398	152	56B14	W5120026	W5120034	W5120042	W5120082
	1150	108	0.353	0.275	160	63B14	W5120050	W5120058	W5120066	W5120090
15	1750	117	0.441	0.322	174	56B14	W5120027	W5120035	W5120043	W5120083
	1150	77	0.305	0.223	183	63B14	W5120051	W5120059	W5120067	W5120091
20	1750	92	0.386	0.270	185	56B14	W5120028	W5120036	W5120044	W5120084
	1150	61	0.268	0.187	195	63B14	W5120052	W5120060	W5120068	W5120092
30	1750	58	0.299	0.185	200	56B14	W5120029	W5120037	W5120045	W5120085
	1150	38	0.206	0.128	210	63B14	W5120053	W5120061	W5120069	W5120093
39	1750	45	0.246	0.140	197	56B14	W5120030	W5120038	W5120046	W5120086
	1150	29	0.170	0.097	207	63B14	W5120054	W5120062	W5120070	W5120094
61	1750	29	0.168	0.084	184	56B14	W5120031	W5120039	W5120047	W5120087
	1150	18.9	0.116	0.058	194	63B14	W5120055	W5120063	W5120071	W5120095
80	1750	21.9	0.106	0.051	146	56B14	W5120032	W5120040	W5120048	W5120088
	1150	14.4	0.073	0.035	154	63B14	W5120056	W5120064	W5120072	W5120096

* Contact Factory for other metric IEC input flange options available.

Style B

Style H



512 Series • Style B & H • 1.0 S.F.

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.
7	1750	250	0.764	0.611	154		Contact Factory		Contact Factory
	1150	164	0.528	0.422	162		Contact Factory		Contact Factory
10	1750	165	0.510	0.398	152		Contact Factory		Contact Factory
	1150	108	0.353	0.275	160		Contact Factory		Contact Factory
15	1750	117	0.441	0.322	174		Contact Factory		Contact Factory
	1150	77	0.305	0.223	183		Contact Factory		Contact Factory
20	1750	92	0.386	0.270	185		Contact Factory		Contact Factory
	1150	61	0.268	0.187	195		Contact Factory		Contact Factory
30	1750	58	0.299	0.185	200		Contact Factory		Contact Factory
	1150	38	0.206	0.128	210		Contact Factory		Contact Factory
39	1750	45	0.246	0.140	197		Contact Factory		Contact Factory
	1150	29	0.170	0.097	207		Contact Factory		Contact Factory
61	1750	29	0.168	0.084	184		Contact Factory		Contact Factory
	1150	18.9	0.116	0.058	194		Contact Factory		Contact Factory
80	1750	21.9	0.106	0.051	146		Contact Factory		Contact Factory
	1150	14.4	0.073	0.035	154		Contact Factory		Contact Factory

Maximum Rating Tables

518 Series • All Styles



Single Reduction Reducers

Bravo® Worm - Worm Double Reduction

Bravo® Helical - Worm Double Reduction

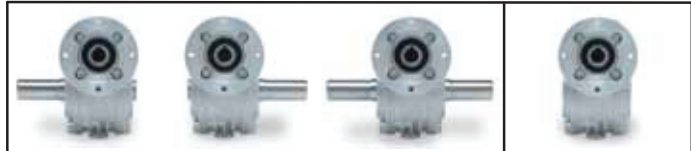
Bravo® Accessory Kits

High Efficiency Helical - Inline Gear Reducers

High Efficiency Helical - Worm Gear Reducers

Style BMQ

Style HMQ



518 Series • Style BMQ & HMQ • 1.0 S.F.

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Flange*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.
7	1750	250	1.378	1.103	278	56C	W5180031	W5180041	W5180051	W5180071
	1150	164	0.950	0.760	292					
10	1750	175	0.981	0.775	279	56C	W5180032	W5180042	W5180052	W5180072
	1150	115	0.679	0.536	294					
14	1750	125	0.871	0.670	338	56C	W5180033	W5180043	W5180053	W5180073
	1150	82	0.602	0.463	356					
21	1750	83	0.796	0.533	405	56C	W5180034	W5180044	W5180054	W5180074
	1150	55	0.555	0.372	426					
28	1750	63	0.631	0.410	410	56C	W5180035	W5180045	W5180055	W5180075
	1150	47	0.494	0.321	431					
37	1750	47	0.490	0.309	414	56C	W5180036	W5180046	W5180056	W5180076
	1150	31	0.340	0.214	436					
46	1750	38	0.397	0.234	388	56C	W5180037	W5180047	W5180057	W5180077
	1150	25	0.274	0.162	408					
60	1750	29	0.363	0.203	442	56C	W5180038	W5180048	W5180058	W5180078
	1150	19.2	0.250	0.140	465					
70	1750	25.0	0.204	0.110	278	56C	W5180039	W5180049	W5180059	W5180079
	1150	16.4	0.137	0.074	292					
102	1750	17.2	0.144	0.070	261	56C	W5180040	W5180050	W5180060	W5180080
	1150	11.3	0.098	0.048	275					

* Contact Factory for metric IEC input flange options available.

Style B

Style H



518 Series • Style B & H • 1.0 S.F.

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.
7	1750	250	1.378	1.103	278	W5180001	W5180011	W5180021	W5180061
	1150	164	0.950	0.760	292				
10	1750	175	0.981	0.775	279	W5180002	W5180012	W5180022	W5180062
	1150	115	0.679	0.536	294				
14	1750	125	0.871	0.670	338	W5180003	W5180013	W5180023	W5180063
	1150	82	0.602	0.463	356				
21	1750	83	0.796	0.533	405	W5180004	W5180014	W5180024	W5180064
	1150	55	0.555	0.372	426				
28	1750	63	0.631	0.410	410	W5180005	W5180015	W5180025	W5180065
	1150	47	0.494	0.321	431				
37	1750	47	0.490	0.309	414	W5180006	W5180016	W5180026	W5180066
	1150	31	0.340	0.214	436				
46	1750	38	0.397	0.234	388	W5180007	W5180017	W5180027	W5180067
	1150	25	0.274	0.162	408				
60	1750	29	0.363	0.203	442	W5180008	W5180018	W5180028	W5180068
	150	19.2	0.250	0.140	465				
70	1750	25.0	0.204	0.110	278	W5180009	W5180019	W5180029	W5180069
	1150	16.4	0.137	0.074	292				
102	1750	17.2	0.144	0.070	261	W5180010	W5180020	W5180030	W5180070
	1150	11.3	0.098	0.048	275				

BRAVO[®]
Single Reduction Reducers

BRAVO[®] Worm - Worm
Double Reduction

BRAVO[®] Helical - Worm
Double Reduction

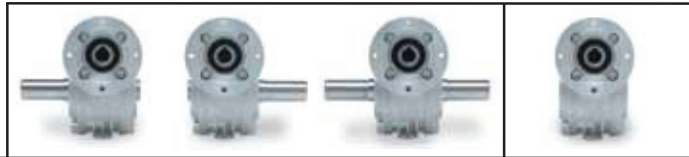
BRAVO[®] Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

Style BMQ

Style HMQ



520 Series • Style BMQ & HMQ • 1.0 S.F.

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Flange*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.
7	1750	250	2.472	2.027	511	56C	W5200034	W5200045	W5200056	W5200078
	1150	164	1.707	1.400	538					
10	1750	175	1.961	1.569	565	56C	W5200035	W5200046	W5200057	W5200079
	1150	115	1.355	1.084	594					
14	1750	125	1.494	1.180	595	56C	W5200036	W5200047	W5200058	W5200080
	1150	82	1.031	0.814	626					
18	1750	97	1.196	0.897	583	56C	W5200037	W5200048	W5200059	W5200081
	1150	64	0.830	0.622	613					
26	1750	67	0.889	0.613	577	56C	W5200038	W5200049	W5200060	W5200082
	1150	44	0.614	0.424	607					
36	1750	49	0.684	0.472	607	56C	W5200039	W5200050	W5200061	W5200083
	1150	32	0.470	0.324	639					
43	1750	41	0.604	0.399	613	56C	W5200040	W5200051	W5200062	W5200084
	1150	27	0.419	0.276	645					
60	1750	29	0.486	0.282	613	56C	W5200041	W5200052	W5200063	W5200085
	1150	19.2	0.335	0.194	645					
68	1750	25.7	0.420	0.239	580	56C	W5200042	W5200053	W5200064	W5200086
	1150	16.9	0.289	0.165	610					
80	1750	21.9	0.368	0.199	569	56C	W5200043	W5200054	W5200065	W5200087
	1150	14.4	0.246	0.133	599					
100	1750	17.5	0.295	0.147	516	56C	W5200044	W5200055	W5200066	W5200088
	1150	11.5	0.207	0.103	543					

* Contact Factory for metric IEC input flange options available.

Style B

Style H



520 Series • Style B & H • 1.0 S.F.

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.
7	1750	250	2.472	2.027	511	W5200001	W5200012	W5200023	W5200067
	1150	164	1.707	1.400	538				
10	1750	175	1.961	1.569	565	W5200002	W5200013	W5200024	W5200068
	1150	115	1.355	1.084	594				
14	1750	125	1.494	1.180	595	W5200003	W5200014	W5200025	W5200069
	1150	82	1.031	0.814	626				
18	1750	97	1.196	0.897	583	W5200004	W5200015	W5200026	W5200070
	1150	64	0.830	0.622	613				
26	1750	67	0.889	0.613	577	W5200005	W5200016	W5200027	W5200071
	1150	44	0.614	0.424	607				
36	1750	49	0.684	0.472	607	W5200006	W5200017	W5200028	W5200072
	1150	32	0.470	0.324	639				
43	1750	41	0.604	0.399	613	W5200007	W5200018	W5200029	W5200073
	1150	27	0.419	0.276	645				
60	1750	29	0.486	0.282	613	W5200008	W5200019	W5200030	W5200074
	1150	19.2	0.335	0.194	645				
68	1750	25.7	0.420	0.239	580	W5200009	W5200020	W5200031	W5200075
	1150	16.9	0.289	0.165	610				
80	1750	21.9	0.368	0.199	569	W5200010	W5200021	W5200032	W5200076
	1150	14.4	0.246	0.133	599				
100	1750	17.5	0.295	0.147	516	W5200011	W5200022	W5200033	W5200077
	1150	11.5	0.207	0.103	543				

Maximum Rating Tables

525 Series • All Styles



Single Reduction Reducers

Bravo® Worm - Worm Double Reduction

Bravo® Helical - Worm Double Reduction

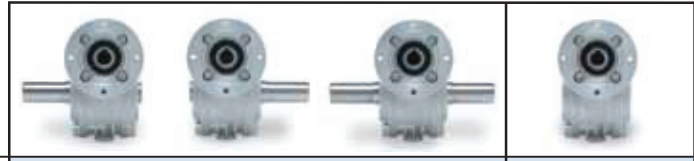
Bravo® Accessory Kits

High Efficiency Helical - In-line Gear Reducers

High Efficiency Helical - Worm Gear Reducers

Style BMQ

Style HMQ



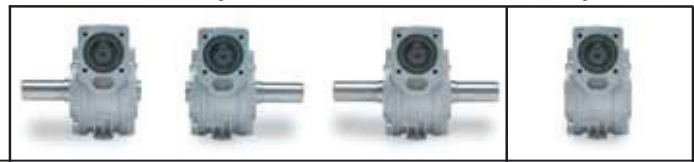
525 Series • Style BMQ & HMQ • 1.0 S.F.

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Flange*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.
7	1750	250	5.24	4.35	1097	56C	W5250034	W5250045	W5250056	W5250111
	1150	164	3.62	3.01	1155	140TC	W5250067	W5250078	W5250089	W5250122
10	1750	175	4.19	3.39	1222	56C	W5250035	W5250046	W5250057	W5250112
	1150	115	2.90	2.35	1287	140TC	W5250068	W5250079	W5250090	W5250123
15	1750	117	2.85	2.25	1214	56C	W5250036	W5250047	W5250058	W5250113
	1150	77	1.98	1.56	1278	140TC	W5250069	W5250080	W5250091	W5250124
19	1750	92	2.24	1.75	1197	56C	W5250037	W5250048	W5250059	W5250114
	1150	61	1.56	1.22	1260	140TC	W5250070	W5250081	W5250092	W5250125
24	1750	73	1.92	1.44	1246	56C	W5250038	W5250049	W5250060	W5250115
	1150	48	1.33	1.00	1312	140TC	W5250071	W5250082	W5250093	W5250126
30	1750	58	1.58	1.17	1274	56C	W5250039	W5250050	W5250061	W5250116
	1150	38	1.09	0.81	1341	140TC	W5250072	W5250083	W5250094	W5250127
36	1750	49	1.46	1.00	1281	56C	W5250040	W5250051	W5250062	W5250117
	1150	32	1.01	0.68	1349	140TC	W5250073	W5250084	W5250095	W5250128
45	1750	39	1.11	0.73	1182	56C	W5250041	W5250052	W5250063	W5250118
	1150	25.6	0.78	0.51	1244	140TC	W5250074	W5250085	W5250096	W5250129
67	1750	26.1	0.73	0.44	1069	56C	W5250042	W5250053	W5250064	W5250119
	1150	17.2	0.51	0.30	1125	140TC	W5250075	W5250086	W5250097	W5250130
80	1750	21.9	0.63	0.36	1034	56C	W5250043	W5250054	W5250065	W5250120
	1150	14.4	0.42	0.24	1089	140TC	W5250076	W5250087	W5250098	W5250131
94	1750	18.6	0.51	0.26	878	56C	W5250044	W5250055	W5250066	W5250121
	1150	12.2	0.34	0.18	924	140TC	W5250077	W5250088	W5250099	W5250132

* Contact Factory for metric IEC input flange options available.

Style B

Style H



525 Series • Style B & H • 1.0 S.F.

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.
7	1750	250	5.24	4.35	1097	W5250001	W5250012	W5250023	W5250100
	1150	164	3.62	3.01	1155				
10	1750	175	4.19	3.39	1222	W5250002	W5250013	W5250024	W5250101
	1150	115	2.90	2.35	1287				
15	1750	117	2.85	2.25	1214	W5250003	W5250014	W5250025	W5250102
	1150	77	1.98	1.56	1278				
19	1750	92	2.24	1.75	1197	W5250004	W5250015	W5250026	W5250103
	1150	61	1.56	1.22	1260				
24	1750	73	1.92	1.44	1246	W5250005	W5250016	W5250027	W5250104
	1150	48	1.33	1.00	1312				
30	1750	58	1.58	1.17	1274	W5250006	W5250017	W5250028	W5250105
	1150	38	1.09	0.81	1341				
36	1750	49	1.46	1.00	1281	W5250007	W5250018	W5250029	W5250106
	1150	32	1.01	0.68	1349				
45	1750	39	1.11	0.73	1182	W5250008	W5250019	W5250030	W5250107
	1150	25.6	0.78	0.51	1244				
67	1750	26.1	0.73	0.44	1069	W5250009	W5250020	W5250031	W5250108
	1150	17.2	0.51	0.30	1125				
80	1750	21.9	0.63	0.36	1034	W5250010	W5250021	W5250032	W5250109
	1150	14.4	0.42	0.24	1089				
94	1750	18.6	0.51	0.26	878	W5250011	W5250022	W5250033	W5250110
	1150	12.2	0.34	0.18	924				

Style BMQ

Style HMQ



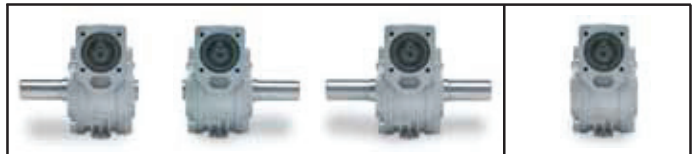
534 Series • BMQ & HMQ • 1.0 S.F.

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	NEMA C Input Flange*	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.
7	1750	250	8.26	7.27	1832	180TC	W5340109	W5340121	W5340133	W5340181
	1150	164	5.70	5.02	1929					
10	1750	175	7.62	6.10	2196	140TC	W5340074	W5340086	W5340098	W5340170
	1150	115	5.27	4.22	2312	180TC	W5340110	W5340122	W5340134	W5340182
14	1750	125	5.91	4.61	2323	140TC	W5340075	W5340087	W5340099	W5340171
	1150	82	4.08	3.18	2446	180TC	W5340111	W5340123	W5340135	W5340183
20	1750	88	3.91	3.09	2212	140TC	W5340076	W5340088	W5340100	W5340172
	1150	58	2.71	2.14	2329	180TC	W5340112	W5340124	W5340136	W5340184
28	1750	63	3.37	2.53	2528	140TC	W5340078	W5340090	W5340102	W5340174
	1150	41	2.31	1.73	2661	180TC	W5340114	W5340126	W5340138	W5340186
38	1750	46	2.34	1.66	2279	56C	W5340043	W5340055	W5340067	W5340163
	1150	30	1.61	1.14	2399	140TC	W5340079	W5340091	W5340103	W5340175
52	1750	34	1.82	1.20	2229	56C	W5340045	W5340057	W5340069	W5340165
	1150	22.1	1.24	0.82	2347	140TC	W5340081	W5340093	W5340105	W5340177
67	1750	26.1	1.56	1.01	2458	56C	W5340046	W5340058	W5340070	W5340166
	1150	17.2	1.07	0.70	2588	140TC	W5340082	W5340094	W5340106	W5340178
96	1750	18.2	0.99	0.52	1735	56C	W5340048	W5340060	W5340072	W5340168
	1150	12.0	0.66	0.35	1827	140TC	W5340084	W5340096	W5340108	W5340180

* Contact Factory for additional NEMA and metric IEC input flange options available.

Style B

Style H



534 Series • Styles B & H • 1.0 S.F.

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)	Left Hand Catalog No.	Right Hand Catalog No.	Double Extension Catalog No.	Hollow Output Catalog No.
7	1750	250	8.26	7.27	1832	W5340001	W5340013	W5340025	W5340145
	1150	164	5.70	5.02	1929				
10	1750	175	7.62	6.10	2196	W5340002	W5340014	W5340026	W5340146
	1150	115	5.27	4.22	2312				
14	1750	125	5.91	4.61	2323	W5340003	W5340015	W5340027	W5340147
	1150	82	4.08	3.18	2446				
20	1750	88	3.91	3.09	2212	W5340004	W5340016	W5340028	W5340148
	1150	58	2.71	2.14	2329				
28	1750	63	3.37	2.53	2528	W5340006	W5340018	W5340030	W5340150
	1150	41	2.31	1.73	2661				
38	1750	46	2.34	1.66	2279	W5340007	W5340019	W5340031	W5340151
	1150	30	1.61	1.14	2399				
52	1750	34	1.82	1.20	2229	W5340009	W5340021	W5340033	W5340153
	1150	22.1	1.24	0.82	2347				
67	1750	26.1	1.56	1.01	2458	W5340010	W5340022	W5340034	W5340154
	1150	17.2	1.07	0.70	2588				
96	1750	18.2	0.99	0.52	1735	W5340012	W5340024	W5340036	W5340156
	1150	12.0	0.66	0.35	1827				

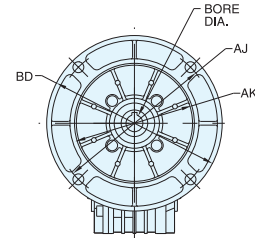
SINGLE REDUCTION • APPROXIMATE WEIGHTS^Δ (LBS.)

Reducer Style	Reducer Size					Reducer Style	Reducer Size				
	512	518	520	525	534		512	518	520	525	534
Solid Output Shaft Models						Hollow Output Shaft Models					
BMQ	3	7	9	14	29	HMQ	3	6	7	12	24
B	3	6	9	14	27	H	3	5	7	12	22
TMQ, UMQ, JMQ	5	9	11	17	34	THMQ, UHMQ	5	8	9	15	29
T, U, J	5	8	11	17	32	JHMQ	5	7	9	15	27
						TH, UH, JH	5	7	9	15	27
FMQ, RMQ	4	8	10	16	32	FHMQ, RHMQ	4	7	8	14	27
F, R	4	7	10	16	30	FH, RH	4	6	8	14	25
FLMQ	4	9	11	17	34	FLHMQ	4	8	9	15	29
FL	4	8	11	17	32	FLH	4	7	9	15	27

^ΔWeights include grease and oil.

REDUCER ACCESSORIES • APPROXIMATE WEIGHTS (LBS.)

Accessory	Reducer Size				
	512	518	520	525	534
T/U - Base	2	2	2	3	5
J - Base	2	2	2	3	5
F - Flange	1	1	1	2	3
FL - Flange	1	2	2	3	5
R - Reaction Arm	1	1	1	2	3



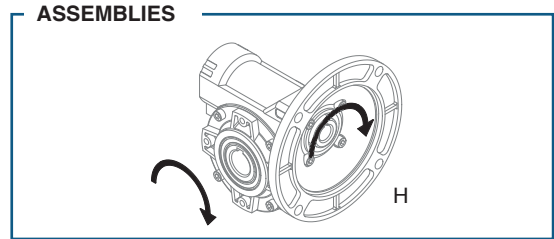
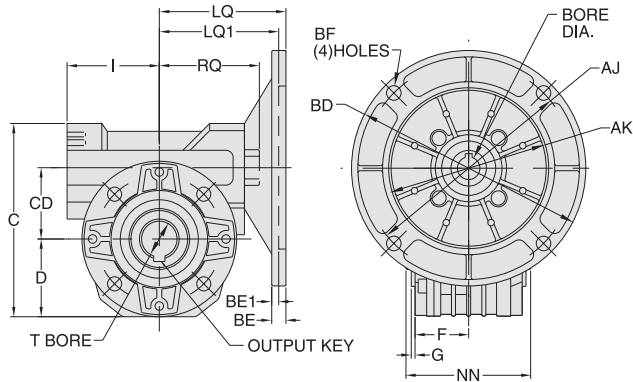
SINGLE REDUCTION • MOTOR FRAME COMBINATIONS

Reducer Size	NEMA or IEC Frame Size	Dimensions - Inches (MM)				Available Ratios													
		AK	AJ	BD	Bore Dia.	10.6	15	19	30	39	61	80							
512	IEC 56B5	3.15 (80)	3.94 (100)	4.72 (120)	(9)	■	■	■	■	■	■	■							
	IEC 56B14	1.97 (50)	2.56 (65)	3.15 (80)	(9)	■	■	■	■	■	■	■							
	IEC 63B5	3.74 (95)	4.53 (115)	5.51 (140)	(11)	■	■	■	■	■	■	■							
	IEC 63B14	2.36 (60)	2.95 (75)	3.54 (90)	(11)	■	■	■	■	■	■	■							
518	NEMA 56C	4.50	5.88	6.50	0.625	■	■	■	■	■	■	■							
	IEC 56B14	1.97 (50)	2.56 (65)	3.15 (80)	(9)	■	■	■	■	■	■	■							
	IEC 63B5	3.74 (95)	4.53 (115)	5.51 (140)	(11)	■	■	■	■	■	■	■							
	IEC 63B14	2.36 (60)	2.95 (75)	3.54 (90)	(11)	■	■	■	■	■	■	■							
	IEC 71B5	4.33 (110)	5.12 (130)	6.30 (160)	(14)	■	■	■	■	■	■	■							
	IEC 71B14	2.76 (70)	3.35 (85)	4.13 (105)	(14)	■	■	■	■	■	■	■							
520	NEMA 56C	4.50	5.88	6.50	0.625	■	■	■	■	■	■	■							
	IEC 56B14	1.97 (50)	2.56 (65)	3.15 (80)	(9)	■	■	■	■	■	■	■							
	IEC 63B5	3.74 (95)	4.53 (115)	5.51 (140)	(11)	■	■	■	■	■	■	■							
	IEC 63B14	2.36 (60)	2.95 (75)	3.54 (90)	(11)	■	■	■	■	■	■	■							
	IEC 71B5	4.33 (110)	5.12 (130)	6.30 (160)	(14)	■	■	■	■	■	■	■							
	IEC 71B14	2.76 (70)	3.35 (85)	4.13 (105)	(14)	■	■	■	■	■	■	■							
	IEC 80B5	5.12 (130)	6.50 (165)	7.87 (200)	(19)	■	■	■	■	■	■	■							
	IEC 80B14	3.15 (80)	3.94 (100)	4.72 (120)	(19)	■	■	■	■	■	■	■							
525	NEMA 56C	4.50	5.88	6.50	0.625	■	■	■	■	■	■	■							
	NEMA 140TC	4.50	5.88	6.50	0.875	■	■	■	■	■	■	■							
	IEC 63B5	3.74 (95)	4.53 (115)	5.51 (140)	(11)	■	■	■	■	■	■	■							
	IEC 71B5	4.33 (110)	5.12 (130)	6.30 (160)	(14)	■	■	■	■	■	■	■							
	IEC 71B14	2.76 (70)	3.35 (85)	4.13 (105)	(14)	■	■	■	■	■	■	■							
	IEC 80B5	5.12 (130)	6.50 (165)	7.87 (200)	(19)	■	■	■	■	■	■	■							
	IEC 80B14	3.15 (80)	3.94 (100)	4.72 (120)	(19)	■	■	■	■	■	■	■							
	IEC 90B5	5.12 (130)	6.50 (165)	7.87 (200)	(24)	■	■	■	■	■	■	■							
534	NEMA 56C	4.50	5.88	6.50	0.625	■	■	■	■	■	■	■							
	NEMA 140TC	4.50	5.88	6.50	0.875	■	■	■	■	■	■	■							
	NEMA 180TC	8.50	7.25	9.00	1.125	■	■	■	■	■	■	■							
	IEC 71B5	4.33 (110)	5.12 (130)	6.30 (160)	(14)	■	■	■	■	■	■	■							
	IEC 80B5	5.12 (130)	6.50 (165)	7.87 (200)	(19)	■	■	■	■	■	■	■							
	IEC 80B14	3.15 (80)	3.94 (100)	4.72 (120)	(19)	■	■	■	■	■	■	■							
	IEC 90B5	5.12 (130)	6.50 (165)	7.87 (200)	(24)	■	■	■	■	■	■	■							
	IEC 90B14	3.74 (95)	4.53 (115)	5.51 (140)	(24)	■	■	■	■	■	■	■							
	IEC 100/112 B5	7.09 (180)	8.46 (215)	9.84 (250)	(28)	■	■	■	■	■	■	■							
	IEC 100/112 B14	4.33 (110)	5.12 (130)	6.30 (160)	(28)	■	■	■	■	■	■	■							

* Reducer selections are available. Refer to dimensional pages for additional dimensions and special conditions for flange mounting hole alignment.

■ Reducer selections are available. A bushing will be provided with reducer to achieve input bore diameter shown. Refer to dimensional pages for additional dimensions and special conditions for flange mounting hole alignment.

Style HMQ



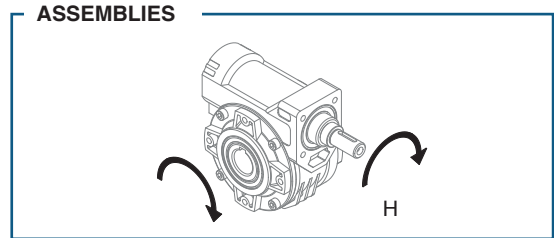
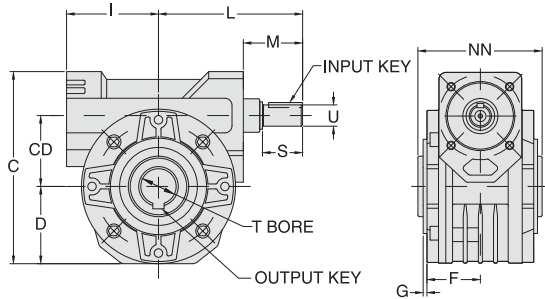
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE HMQ DIMENSIONS - Inches (MM)

Series	C	CD	D	F	G	I	LQ* 56/140	LQ1* 180	NN	RQ	T* +0.0015 -0.0000	OUTPUT KEY*
512	3.54	1.18	1.54	1.18	0.08	1.81	*	N/A	2.16	2.21	(14) ●	(5) ●
518	4.76	1.77	1.93	1.38	0.08	2.16	3.33	N/A	2.56	2.60	0.750	3/16 X 1.00
520	5.33	1.97	2.15	1.50	0.12	2.56	3.51	N/A	3.19	2.83	1.000	1/4 X 1.62
525	6.69	2.48	2.76	1.77	0.19	3.11	4.08	N/A	4.72	3.58	1.125	1/4 X 2.00
534	9.15	3.35	3.72	2.52	0.14	3.86	4.83	5.35	5.31	4.33	1.500	3/8 X 2.00

● Dimension is in MM. Key is not provided with metric reducer options as standard.
Metric bore tolerance is H7.
* Metric options are available. Refer to dimensions on opposite page.
Contact Factory for availability of metric options.

Style H



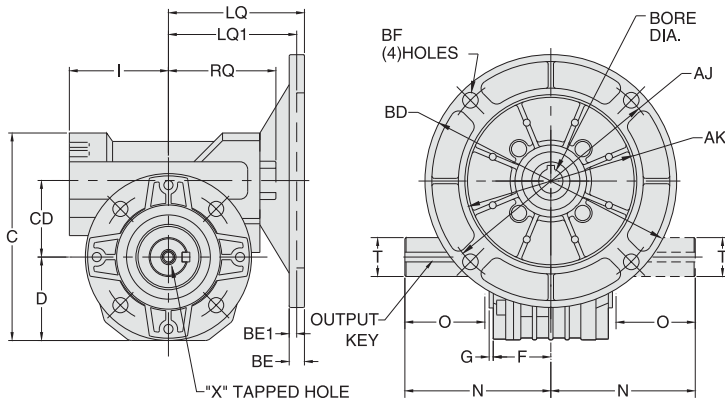
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE H DIMENSIONS** - Inches

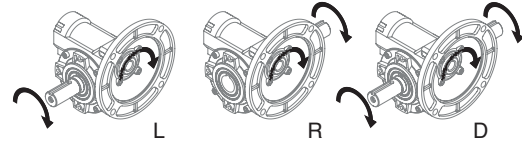
Series	C	CD	D	F	G	I	L	M	NN	S	T +0.0015 -0.0000	U +0.000 -0.001	INPUT KEY	OUTPUT KEY
518	4.76	1.77	1.93	1.38	0.08	2.16	3.86	1.67	2.56	1.18	0.750	0.625	3/16 X 1.00	3/16 X 1.00
520	5.33	1.97	2.15	1.50	0.12	2.56	4.11	1.74	3.19	1.18	1.000	0.625	3/16 X 1.00	1/4 X 1.62
525	6.69	2.48	2.76	1.77	0.19	3.11	5.43	2.24	4.72	1.75	1.125	0.750	3/16 x 1.50	1/4 X 2.00
534	9.15	3.35	3.72	2.52	0.14	3.86	6.38	2.52	5.31	1.75	1.500	0.875	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

Style BMQ



ASSEMBLIES



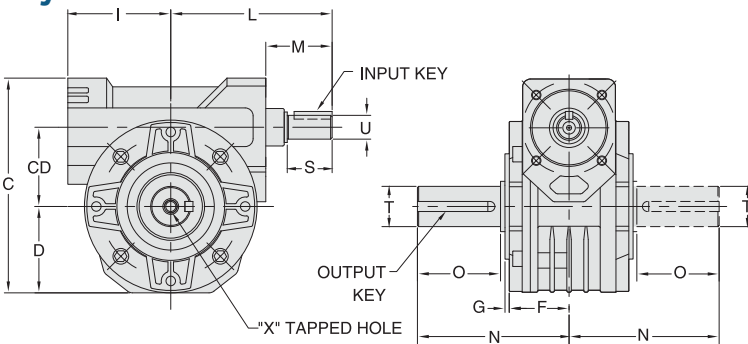
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE BMQ DIMENSIONS - Inches (MM)

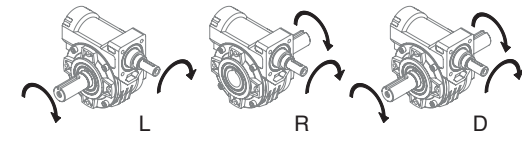
Series	C	CD	D	F	G	I	LQ* 56/140	LQ1* 180	N	O*	RQ	T* +0.000 -0.001	X		OUTPUT KEY*
													Tap Size	Depth	
512	3.54	1.18	1.54	1.18	0.08	1.81	*	N/A	2.48	1.01	2.21	1.000	5/16-18 UNC	0.75	1/4 X 1.62
518	4.76	1.77	1.93	1.38	0.08	2.16	3.33	N/A	2.97	1.26	2.60	0.750	1/4-20 UNC	0.62	3/16 x 1.00
520	5.33	1.97	2.15	1.50	0.12	2.56	3.51	N/A	3.94	2.05	2.83	1.000	5/16-18 UNC	0.75	1/4 X 1.62
525	6.69	2.48	2.76	1.77	0.19	3.11	4.08	N/A	4.85	2.36	3.58	1.125	5/16-18 UNC	0.75	1/4 X 2.00
534	9.15	3.35	3.72	2.52	0.14	3.86	4.83	5.35	5.55	2.36	4.33	1.500	5/16-18 UNC	0.75	3/8 X 2.00

* Dimension is in MM. Key is not provided with metric reducer options as standard. Metric shaft diameter tolerance is -0.005/-0.020. Series 512 is available with an inch dimensioned output shaft. Contact Factory for details.
* Metric options are available. Refer to dimensions below. Contact Factory for availability of metric options.

Style B



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE B DIMENSIONS** - Inches

Series	C	CD	D	F	G	I	L	M	N	O	S	T +0.000 -0.001	U +0.000 -0.001	X		INPUT KEY	OUTPUT KEY
														Tap Size	Depth		
518	4.76	1.77	1.93	1.38	0.08	2.16	3.86	1.67	2.97	1.26	1.18	0.750	0.625	1/4-20 UNC	0.62	3/16 X 1.00	3/16 X 1.00
520	5.33	1.97	2.15	1.50	0.12	2.56	4.11	1.74	3.94	2.05	1.18	1.000	0.625	5/16-18 UNC	0.75	3/16 X 1.00	1/4 X 1.62
525	6.69	2.48	2.76	1.77	0.19	3.11	5.43	2.24	4.85	2.36	1.75	1.125	0.750	5/16-18 UNC	0.75	3/16 x 1.50	1/4 X 2.00
534	9.15	3.35	3.72	2.52	0.14	3.86	6.38	2.52	5.55	2.36	1.75	1.500	0.875	5/16-18 UNC	0.75	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BE1	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	N/A	0.41	0.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	N/A	0.41	0.875	3/16 x 3/32
180TC	7.25	8.50	9.00	N/A	0.50	0.53	1.125	1/4 x 1/8

OPTIONAL METRIC DIMENSIONS◊ - MM

IEC Frame	B5					B14◊					Input Bore Dia	Input Keyway▲
	AJ	AK	BD	BE	BF	AJ	AK	BD	BE	BF◊		
D56D	100	80	120	10	7	65◊	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75◊	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85◊	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100◊	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5
D100LD■	215	180	250	13	14	130	110	160	10	9	28	8 x 3.5

OPTIONAL METRIC DIMENSIONS◊ - MM

Series	LQ1◊						T ✓	O	N	Output Keyway
	IEC B5 & B14 Options									
	D56D	D63D	D71D	D80D	D90D	D100LD■	(standard for metric units)			
512	62.5◊	62.5	N/A	N/A	N/A	N/A	14	25	63	5
518	74◊	74◊	74	N/A	N/A	N/A	18	32	75	6
520	81.5◊	81.5◊	81.5	81.5	N/A	N/A	25	52	100	8
525	N/A	99.5◊	99.5◊	99.5◊	99.5	N/A	25	60	123	8
534	N/A	N/A	124◊	124	124	124	35	60	141	10

◊ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.

▲ Keyway width by depth

◊ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows: D56D(All), D63D(Series 518 & 520), D71D & D80D(Series 525)

◆ Dimensions are maximum (B5 and B14 options)

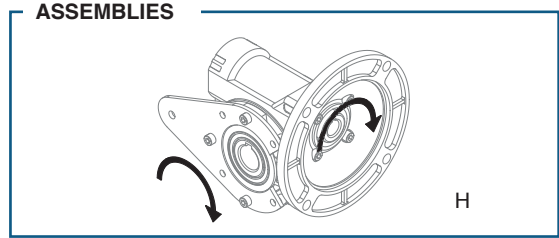
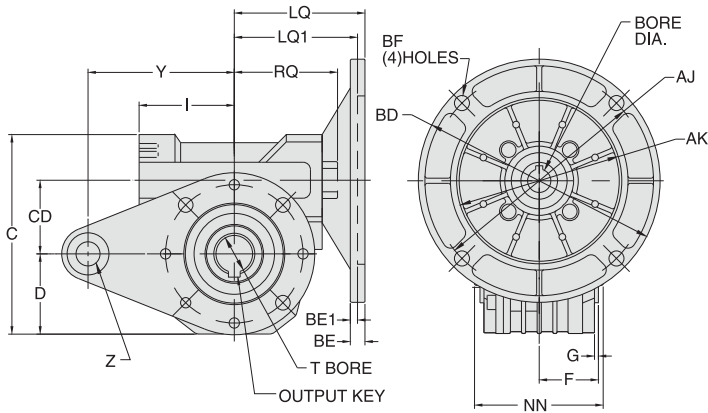
◊ B14 option not available

□ B5 Option not available

■ Also applies to frame size D112MD

✓ Solid metric output shaft diameter tolerance is -0.005/-0.020. Hollow bore tolerance is H7.

Style RHMQ



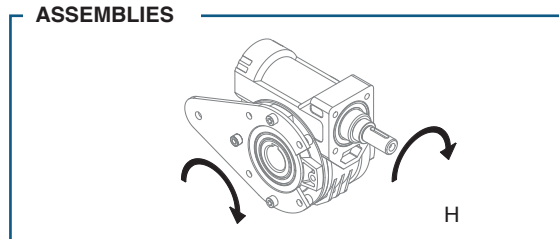
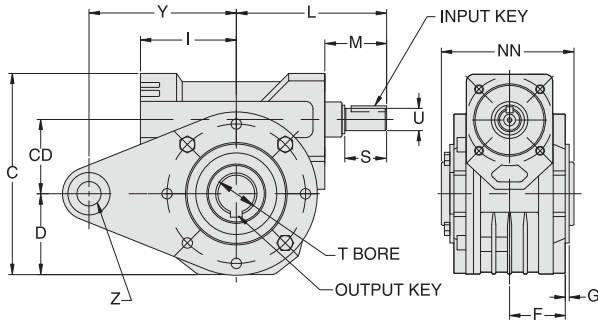
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE RHMQ DIMENSIONS - Inches (MM)

Series	C	CD	D	F	G	I	LQ* 56/140	LQ1* 180	NN	RQ	T* +0.0015 -0.0000	Y	Z	OUTPUT KEY*
512	3.54	1.18	1.54	1.18	0.08	1.81	*	N/A	2.16	2.21	(14)●	3.94	0.315	(5)●
518	4.76	1.77	1.93	1.38	0.08	2.16	3.33	N/A	2.56	2.60	0.750	3.94	0.315	3/16 X 1.00
520	5.33	1.97	2.15	1.50	0.12	2.56	3.51	N/A	3.19	2.83	1.000	3.94	0.315	1/4 X 1.62
525	6.69	2.48	2.76	1.77	0.19	3.11	4.08	N/A	4.72	3.58	1.125	5.91	0.394	1/4 X 2.00
534	9.15	3.35	3.72	2.52	0.14	3.86	4.83	5.35	5.31	4.33	1.500	7.87	0.787	3/8 X 2.00

● Dimension is in MM. Key is not provided with metric reducer options as standard. Metric bore tolerance is H7.
* Metric options are available. Refer to dimensions on opposite page. Contact Factory for availability of metric options.

Style RH



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

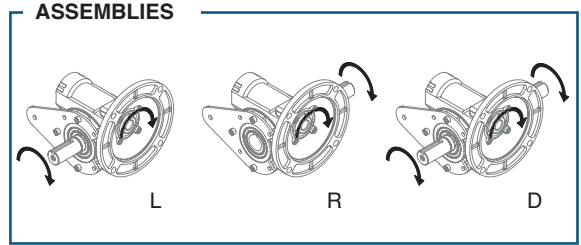
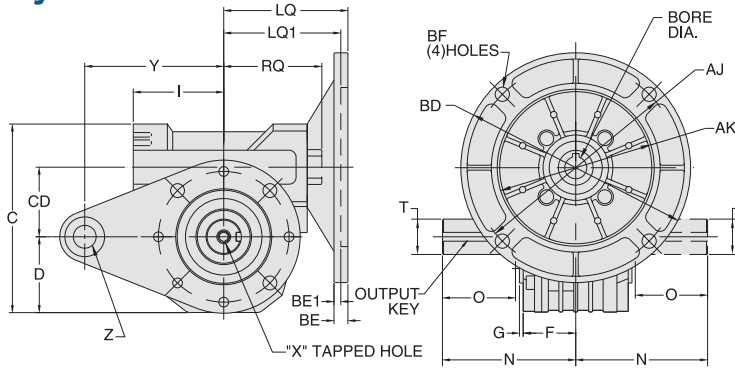
STYLE RH DIMENSIONS** - Inches

Series	C	CD	D	F	G	I	L	M	NN	S	T +0.0015 -0.0000	U +0.000 -0.001	Y	Z	INPUT KEY	OUTPUT KEY
518	4.76	1.77	1.93	1.38	0.08	2.16	3.86	1.67	2.56	1.18	0.750	0.625	3.94	0.315	3/16 X 1.00	3/16 X 1.00
520	5.33	1.97	2.15	1.50	0.12	2.56	4.11	1.74	3.19	1.18	1.000	0.625	3.94	0.315	3/16 X 1.00	1/4 X 1.62
525	6.69	2.48	2.76	1.77	0.19	3.11	5.43	2.24	4.72	1.75	1.125	0.750	5.91	0.394	3/16 x 1.50	1/4 X 2.00
534	9.15	3.35	3.72	2.52	0.14	3.86	6.38	2.52	5.31	1.75	1.500	0.875	7.87	0.787	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

REFER TO PAGE 364 FOR DETAILED DIMENSIONS OF REACTION ARM.

Style RMQ



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

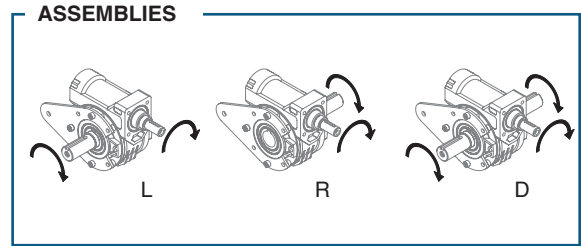
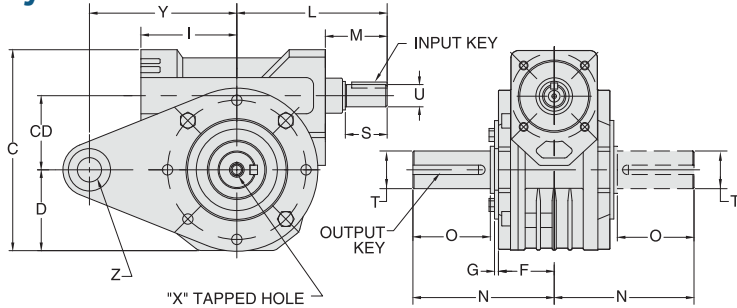
STYLE RMQ DIMENSIONS - Inches (MM)

Series	C	CD	D	F	G	I	LQ* 56/140	LQ1* 180	N	O*	RQ	T* +0.000 -0.001	X		Y	Z	OUTPUT KEY*
													Tap Size	Depth			
512	3.54	1.18	1.54	1.18	0.08	1.81	*	N/A	2.48	1.01	2.21	(14)★	N/A	N/A	3.94	0.315	(5)★
518	4.76	1.77	1.93	1.38	0.08	2.16	3.33	N/A	2.97	1.26	2.60	0.750	1/4-20 UNC	0.62	3.94	0.315	3/16 x 1.00
520	5.33	1.97	2.15	1.50	0.12	2.56	3.51	N/A	3.94	2.05	2.83	1.000	5/16-18 UNC	0.75	3.94	0.315	1/4 X 1.62
525	6.69	2.48	2.76	1.77	0.19	3.11	4.08	N/A	4.85	2.36	3.58	1.125	5/16-18 UNC	0.75	5.91	0.394	1/4 X 2.00
534	9.15	3.35	3.72	2.52	0.14	3.86	4.83	5.35	5.55	2.36	4.33	1.500	5/16-18 UNC	0.75	7.87	0.787	3/8 X 2.00

★ Dimension is in MM. Key is not provided with metric reducer options as standard. Metric shaft diameter tolerance is -0.005/-0.020. Series 512 is available with an inch dimensioned output shaft. Contact Factory for details.

* Metric options are available. Refer to dimensions below. Contact Factory for availability of metric options.

Style R



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE R DIMENSIONS - Inches**

Series	C	CD	D	F	G	I	L	M	N	O	S	T +0.000 -0.001	U +0.000 -0.001	X		Y	Z	INPUT KEY	OUTPUT KEY
														Tap Size	Depth				
518	4.76	1.77	1.93	1.38	0.08	2.16	3.86	1.67	2.97	1.26	1.18	0.750	0.625	1/4-20 UNC	0.62	3.94	0.315	3/16 X 1.00	3/16 X 1.00
520	5.33	1.97	2.15	1.50	0.12	2.56	4.11	1.74	3.94	2.05	1.18	1.000	0.625	5/16-18 UNC	0.75	3.94	0.315	3/16 X 1.00	1/4 X 1.62
525	6.69	2.48	2.76	1.77	0.19	3.11	5.43	2.24	4.85	2.36	1.75	1.125	0.750	5/16-18 UNC	0.75	5.91	0.394	3/16 x 1.50	1/4 X 2.00
534	9.15	3.35	3.72	2.52	0.14	3.86	6.38	2.52	5.55	2.36	1.75	1.500	0.875	5/16-18 UNC	0.75	7.87	0.787	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BE1	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	N/A	0.41	0.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	N/A	0.41	0.875	3/16 x 3/32
180TC	7.25	8.50	9.00	N/A	0.50	0.53	1.125	1/4 x 1/8

OPTIONAL METRIC DIMENSIONS◊ - MM

Series	LQ1♦						T ✓	O (standard for metric units)	N	Output Keyway
	IEC B5 & B14 Options									
	D56D	D63D	D71D	D80D	D90D	D100LD■				
512	62.5♦	62.5	N/A	N/A	N/A	N/A	14	25	63	5
518	74♦□	74♦	74	N/A	N/A	N/A	18	32	75	6
520	81.5♦□	81.5♦	81.5	81.5	N/A	N/A	25	52	100	8
525	N/A	99.5♦	99.5♦	99.5♦	99.5	N/A	25	60	123	8
534	N/A	N/A	124♦	124	124	124	35	60	141	10

♦ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.

▲ Keyway width by depth

♦ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows: D56D(All), D63D(Series 518 & 520), D71D & D80D(Series 525)

♦ Dimensions are maximum (B5 and B14 options)

♦ B14 option not available

□ B5 Option not available

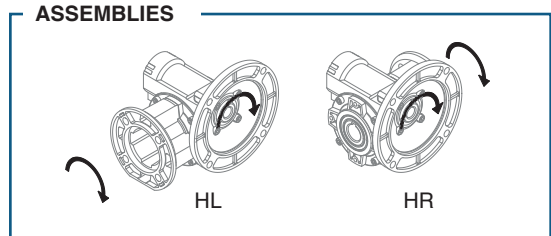
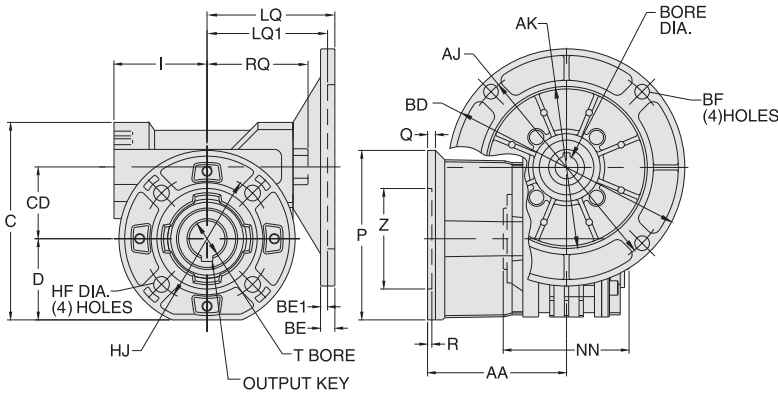
■ Also applies to frame size D112MD

✓ Solid metric output shaft diameter tolerance is -0.005/-0.020. Hollow bore tolerance is H7.

OPTIONAL METRIC DIMENSIONS◊ - MM

IEC Frame	B5					B14♦					Input Bore Dia	Input Keyway▲
	AJ	AK	BD	BE	BF	AJ	AK	BD	BE	BF		
D56D	100	80	120	10	7	65♦	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75♦	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85♦	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100♦	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5
D100LD■	215	180	250	13	14	130	110	160	10	9	28	8 x 3.5

Style FHMQ



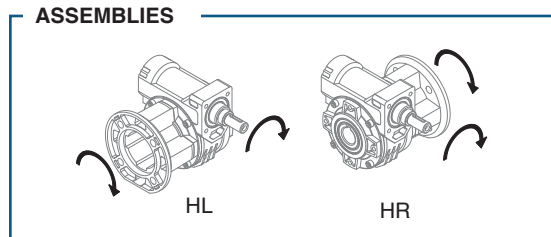
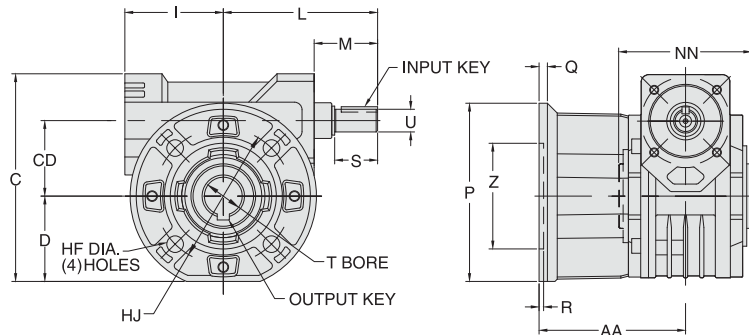
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE FHMQ DIMENSIONS - Inches (MM)

Series	AA	C	CD	D	HF	HJ	I	LQ* 56/140	LQ1* 180	NN	P	Q	R	RQ +0.0015 -0.0000	T*	Z	OUTPUT KEY*
512	1.99	3.54	1.18	1.54	0.276	2.68	1.81	*	N/A	2.16	3.15	0.24	0.236	2.21	(14)_	1.968	(5)_
518	2.38	4.76	1.77	1.93	0.335	3.43	2.16	3.33	N/A	2.56	4.33	0.35	0.354	2.60	0.750	2.362	3/16 X 1.00
520	3.35	5.33	1.97	2.15	0.413	3.54	2.56	3.51	N/A	3.19	4.84	0.47	0.354	2.83	1.000	2.756	1/4 X 1.62
525	3.39	6.69	2.48	2.76	0.413	5.91	3.11	4.08	N/A	4.72	6.89	0.51	0.276	3.58	1.125	4.528	1/4 X 2.00
534	4.25	9.15	3.35	3.72	0.512	6.93	3.86	4.83	5.35	5.31	8.07	0.63	0.197	4.33	1.500	5.984	3/8 X 2.00

● Dimension is in MM. Key is not provided with metric reducer options as standard.
Metric bore tolerance is H7.
* Metric options are available. Refer to dimensions on opposite page.
Contact Factory for availability of metric options.

Style FH



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE FH DIMENSIONS** - Inches

Series	AA	C	CD	D	HF	HJ	I	L	M	NN	P	Q	R	S +0.0015 -0.0000	T +0.000 -0.001	U	Z	INPUT KEY	OUTPUT KEY
518	2.38	4.76	1.77	1.93	0.335	3.43	2.16	3.86	1.67	2.56	4.33	0.35	0.354	1.18	0.750	0.625	2.362	3/16 X 1.00	3/16 X 1.00
520	3.35	5.33	1.97	2.15	0.413	3.54	2.56	4.11	1.74	3.19	4.84	0.47	0.354	1.18	1.000	0.625	2.756	3/16 X 1.00	1/4 X 1.62
525	3.39	6.69	2.48	2.76	0.413	5.91	3.11	5.43	2.24	4.72	6.89	0.51	0.276	1.75	1.125	0.750	4.528	3/16 x 1.50	1/4 X 2.00
534	4.25	9.15	3.35	3.72	0.512	6.93	3.86	6.38	2.52	5.31	8.07	0.63	0.197	1.75	1.500	0.875	5.984	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

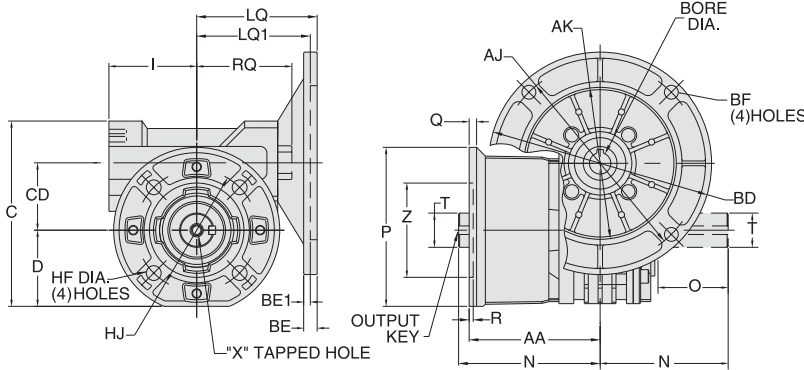
BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

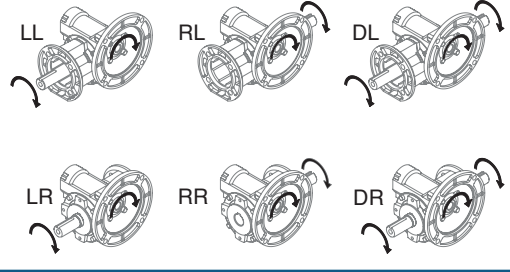
High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

Style FMQ



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

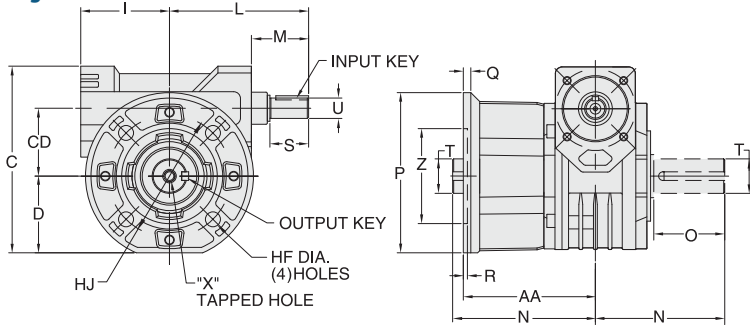
STYLE FMQ DIMENSIONS - Inches (MM)

Series	AA	C	CD	D	I	HF	HJ	LQ* 56/140	LQ1* 180	N	O*	P	Q	R	RQ	T* +0.000 -0.001	X		Z	OUTPUT KEY*
																	Tap Size	Depth		
512	1.99	3.54	1.18	1.54	1.81	0.276	2.68	*	N/A	2.48	1.01	3.15	0.24	0.236	2.21	(14)★	N/A	N/A	1.968	(5)★
518	2.38	4.76	1.77	1.93	2.16	0.335	3.43	3.33	N/A	2.97	1.26	4.33	0.35	0.354	2.60	0.750	1/4-20 UNC	0.62	2.362	3/16 x 1.00
520	3.35	5.33	1.97	2.15	2.56	0.413	3.54	3.51	N/A	3.94	2.05	4.84	0.47	0.354	2.83	1.000	5/16-18 UNC	0.75	2.756	1/4 X 1.62
525	3.39	6.69	2.48	2.76	3.11	0.413	5.91	4.08	N/A	4.85	2.36	6.89	0.51	0.276	3.58	1.125	5/16-18 UNC	0.75	4.528	1/4 X 2.00
534	4.25	9.15	3.35	3.72	3.86	0.512	6.93	4.83	5.35	5.55	2.36	8.07	0.63	0.197	4.33	1.500	5/16-18 UNC	0.75	5.984	3/8 X 2.00

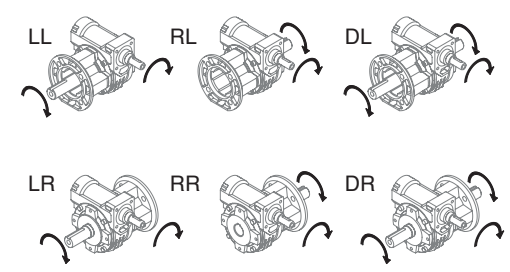
★ Dimension is in MM. Key is not provided with metric reducer options as standard. Metric shaft diameter tolerance is -0.005/-0.020. Series 512 is available with an inch dimensioned output shaft. Contact Factory for details.

* Metric options are available. Refer to dimensions below. Contact Factory for availability of metric options.

Style F



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE F DIMENSIONS** - Inches

Series	AA	C	CD	D	HF	HJ	I	L	M	N	O	P	Q	R	S +0.000 -0.001	T +0.000 -0.001	U	X		Z	INPUT KEY	OUTPUT KEY
																		Tap Size	Depth			
518	2.38	4.76	1.77	1.93	0.335	3.43	2.16	3.86	1.67	2.97	1.26	4.33	0.35	0.354	1.18	0.750	0.625	1/4-20 UNC	0.62	2.362	3/16 X 1.00	3/16 X 1.00
520	3.35	5.33	1.97	2.15	0.413	3.54	2.56	4.11	1.74	3.94	2.05	4.84	0.47	0.354	1.18	1.000	0.625	5/16-18 UNC	0.75	2.756	3/16 X 1.00	1/4 X 1.62
525	3.39	6.69	2.48	2.76	0.413	5.91	3.11	5.43	2.24	4.85	2.36	6.89	0.51	0.276	1.75	1.125	0.750	5/16-18 UNC	0.75	4.528	3/16 x 1.50	1/4 X 2.00
534	4.25	9.15	3.35	3.72	0.512	6.93	3.86	6.38	2.52	5.55	2.36	8.07	0.63	0.197	1.75	1.500	0.875	5/16-18 UNC	0.75	5.984	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BE1	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	N/A	0.41	0.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	N/A	0.41	0.875	3/16 x 3/32
180TC	7.25	8.50	9.00	N/A	0.50	0.53	1.125	1/4 x 1/8

OPTIONAL METRIC DIMENSIONS◊ - MM

Series	LQ1◆ IEC B5 & B14 Options						T ✓	O	N	Output Keyway
	D56D	D63D	D71D	D80D	D90D	D100LD■				
512	62.5◆	62.5	N/A	N/A	N/A	N/A	14	25	63	5
518	74◆□	74◆	74	N/A	N/A	N/A	18	32	75	6
520	81.5◆□	81.5◆	81.5	81.5	N/A	N/A	25	52	100	8
525	N/A	99.5◆	99.5◆	99.5◆	99.5	N/A	25	60	123	8
534	N/A	N/A	124◆	124	124	124	35	60	141	10

◆ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.

▲ Keyway width by depth

□ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows:D56D(All), D63D(Series 518 & 520), D71D & D80D(Series 525)

◆ Dimensions are maximum (B5 and B14 options)

◇ B14 option not available

■ B5 Option not available

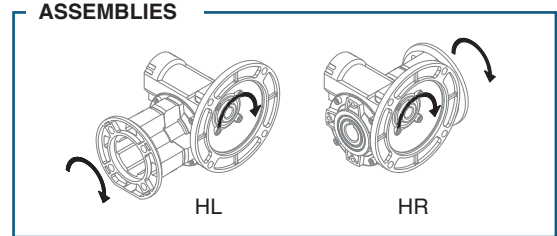
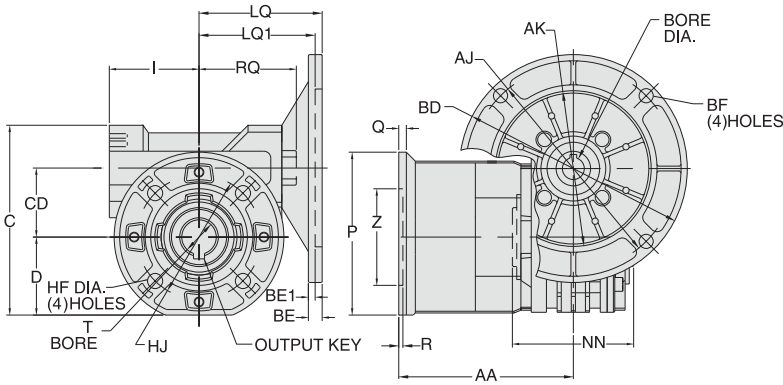
□ Also applies to frame size D121MD

✓ Solid metric output shaft diameter tolerance is -0.005/-0.020. Hollow bore tolerance is H7.

OPTIONAL METRIC DIMENSIONS◊ - MM

IEC Frame	B5					B14◆					Input Bore Dia	Input Keyway▲
	AJ	AK	BD	BE	BF	AJ	AK	BD	BE	BF◆		
D56D	100	80	120	10	7	65◆	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75◆	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85◆	70	105	8	6.5	14	5 x 2.5
D80D	160	130	200	12	11	100◆	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5
D100LD■	215	180	250	13	14	130	110	160	10	9	28	8 x 3.5

Style FLHMQ



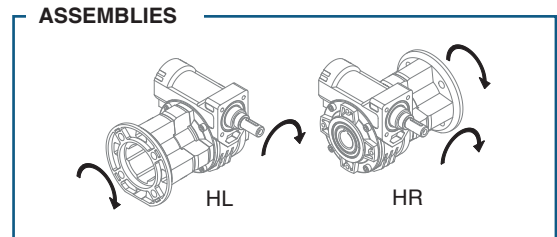
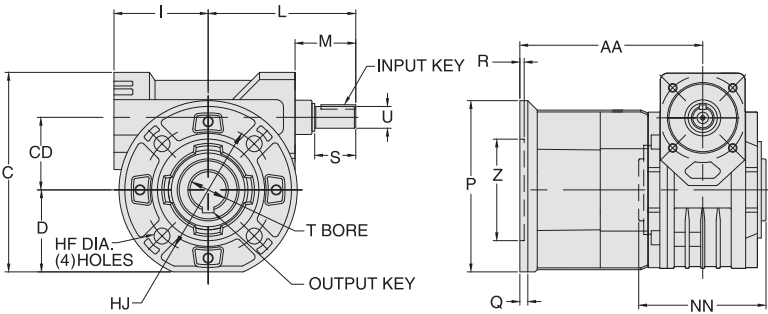
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE FLHMQ DIMENSIONS - Inches (MM)

Series	AA	C	CD	D	HF	HJ	I	LQ* 56/140	LQ1* 180	NN	P	Q	R	RQ	T* +0.0015 -0.0000	Z	OUTPUT KEY*
512	2.19	3.54	1.18	1.54	0.335	3.43	1.81	*	N/A	2.16	4.33	0.24	0.236	2.21	(14)●	2.362	(5)●
518	3.56	4.76	1.77	1.93	0.335	3.43	2.16	3.33	N/A	2.56	4.33	0.35	0.354	2.60	0.750	2.362	3/16 X 1.00
520	4.51	5.33	1.97	2.15	0.413	3.54	2.56	3.51	N/A	3.19	4.84	0.47	0.354	2.83	1.000	2.756	1/4 X 1.62
525	4.57	6.69	2.48	2.76	0.413	5.91	3.11	4.08	N/A	4.72	6.89	0.51	0.276	3.58	1.125	4.528	1/4 X 2.00
534	5.85	9.15	3.35	3.72	0.512	6.93	3.86	4.83	5.35	5.31	8.07	0.63	0.197	4.33	1.500	5.984	3/8 X 2.00

● Dimension is in MM. Key is not provided with metric reducer options as standard.
Metric bore tolerance is H7.
* Metric options are available. Refer to dimensions on opposite page.
Contact Factory for availability of metric options.

Style FLH



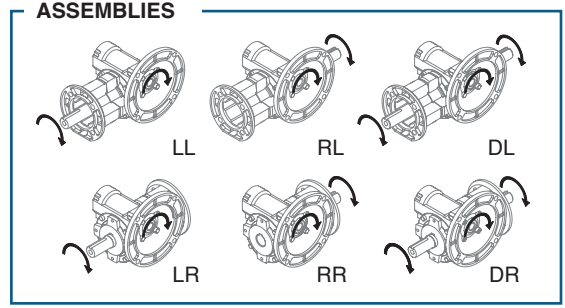
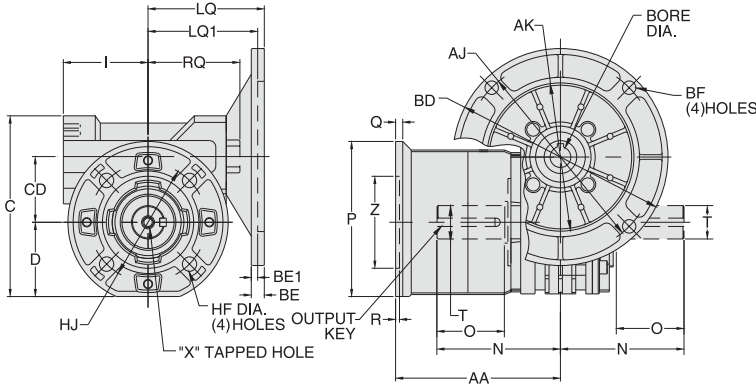
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE FLH DIMENSIONS** - Inches

Series	AA	C	CD	D	HF	HJ	I	L	M	NN	P	Q	R	S +0.0015 -0.0000	T +0.000 -0.001	U	Z	INPUT KEY	OUTPUT KEY
518	3.56	4.76	1.77	1.93	0.335	3.43	2.16	3.86	1.67	2.56	4.33	0.35	0.354	1.18	0.750	0.625	2.362	3/16 X 1.00	3/16 X 1.00
520	4.51	5.33	1.97	2.15	0.413	3.54	2.56	4.11	1.74	3.19	4.84	0.47	0.354	1.18	1.000	0.625	2.756	3/16 X 1.00	1/4 X 1.62
525	4.57	6.69	2.48	2.76	0.413	5.91	3.11	5.43	2.24	4.72	6.89	0.51	0.276	1.75	1.125	0.750	4.528	3/16 X 1.50	1/4 X 2.00
534	5.85	9.15	3.35	3.72	0.512	6.93	3.86	6.38	2.52	5.31	8.07	0.63	0.197	1.75	1.500	0.875	5.984	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

Style FLMQ



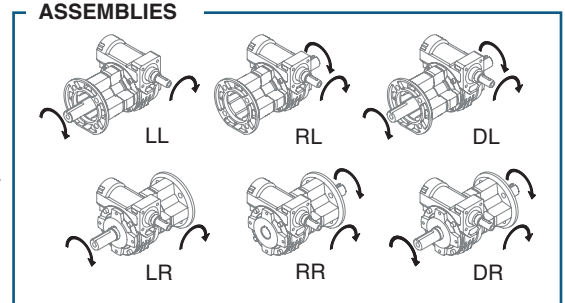
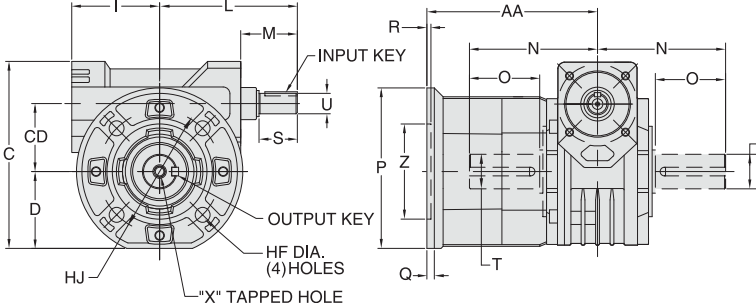
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE FLMQ DIMENSIONS - Inches (MM)

Series	AA	C	CD	D	I	HF	HJ	LQ* 56/140	LQ1* 180	N	O*	P	Q	R	RQ	T* +0.000 -0.001	X		Z	OUTPUT KEY*
																	Tap Size	Depth		
512	2.19	3.54	1.18	1.54	1.81	0.335	3.43	*	N/A	2.48	1.01	4.33	0.24	0.236	2.21	(14)★	N/A	N/A	2.362	(5)★
518	3.56	4.76	1.77	1.93	2.16	0.335	3.43	3.33	N/A	2.97	1.26	4.33	0.35	0.354	2.60	0.750	1/4-20 UNC	0.62	2.362	3/16 x 1.00
520	4.51	5.33	1.97	2.15	2.56	0.413	3.54	3.51	N/A	3.94	2.05	4.84	0.47	0.354	2.83	1.000	5/16-18 UNC	0.75	2.756	1/4 X 1.62
525	4.57	6.69	2.48	2.76	3.11	0.413	5.91	4.08	N/A	4.85	2.36	6.89	0.51	0.276	3.58	1.125	5/16-18 UNC	0.75	4.528	1/4 X 2.00
534	5.85	9.15	3.35	3.72	3.86	0.512	6.93	4.83	5.35	5.55	2.36	8.07	0.63	0.197	4.33	1.500	5/16-18 UNC	0.75	5.984	3/8 X 2.00

★ Dimension is in MM. Key is not provided with metric reducer options as standard. Metric shaft diameter tolerance is -0.005/-0.020. Series 512 is available with an inch dimensioned output shaft. Contact Factory for details.
* Metric options are available. Refer to dimensions below. Contact Factory for availability of metric options.

Style FL



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE FL DIMENSIONS** - Inches

Series	AA	C	CD	D	HF	HJ	I	L	M	N	O	P	Q	R	S	T +0.000 -0.001	U +0.000 -0.001	X		Z	INPUT KEY	OUTPUT KEY
																		Tap Size	Depth			
518	3.56	4.76	1.77	1.93	0.335	3.43	2.16	3.86	1.67	2.97	1.26	4.33	0.35	0.354	1.18	0.750	0.625	1/4-20 UNC	0.62	2.362	3/16 X 1.00	3/16 X 1.00
520	4.51	5.33	1.97	2.15	0.413	3.54	2.56	4.11	1.74	3.94	2.05	4.84	0.47	0.354	1.18	1.000	0.625	5/16-18 UNC	0.75	2.756	3/16 X 1.00	1/4 X 1.62
525	4.57	6.69	2.48	2.76	0.413	5.91	3.11	5.43	2.24	4.85	2.36	6.89	0.51	0.276	1.75	1.125	0.750	5/16-18 UNC	0.75	4.528	3/16 x 1.50	1/4 X 2.00
534	5.85	9.15	3.35	3.72	0.512	6.93	3.86	6.38	2.52	5.55	2.36	8.07	0.63	0.197	1.75	1.500	0.875	5/16-18 UNC	0.75	5.984	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BE1	BF	Input Bore Dia	Input Keyway▲
5.88	4.50	6.50	0.38	N/A	0.41	0.625	16 x 3/32	5.88 4.50
6.500.38	N/A	0.41	0.875	16 x 3/32	27.25	8.50	9.00	N/A
0.500.53	1.125	1/4 x 1/8						

OPTIONAL METRIC DIMENSIONS - MM

Series	LQ1◆					T / (standard for metric units)	O	N	Output Keyway	
	IEC B5 & B14 Options									
	D56D	D63D	D71D	D80D	D90D	D100LD■				
512	62.5◆	62.5	N/A	N/A	N/A	N/A	14	25	63	5
518	74◆□	74◆	74	N/A	N/A	N/A	18	32	75	6
520	81.5◆□	81.5◆	81.5	81.5	N/A	N/A	25	52	100	8
525	N/A	99.5◆	99.5◆	99.5◆	99.5	N/A	25	60	123	8
534	N/A	N/A	124◆	124	124	124	35	60	141	10

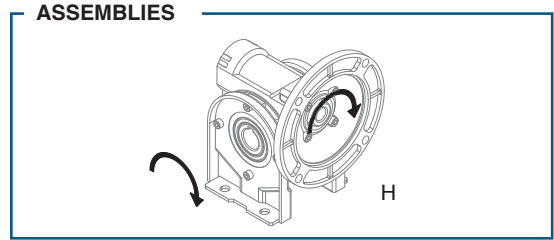
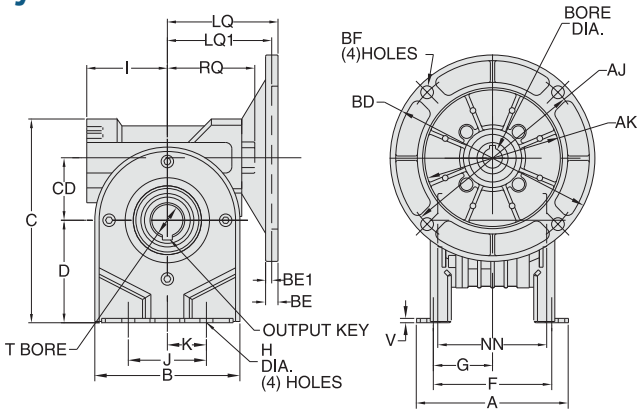
◆ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.

- ▲ Keyway width by depth
- ◆ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows: D56D(All), D63D(Series 518 & 520), D71D & D80D(Series 525)
- ◆ Dimensions are maximum (B5 and B14 options)
- ◇ B14 option not available
- B5 Option not available
- ◆ Also applies to frame size D112MD
- Solid metric output shaft diameter tolerance is -0.005/-0.020. Hollow bore tolerance is H7.

OPTIONAL METRIC DIMENSIONS - MM

IEC Frame	B5					B14◆					Input Bore Dia	Input Keyway▲
	AJ	AK	BD	BE	BF	AJ	AK	BD	BE	BF◆		
D56D	100	80	120	10	7	65◆	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75◆	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85◆	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100◆	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5
D100LD■	215	180	250	13	14	130	110	160	10	9	28	8 x 3.5

Style THMQ



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

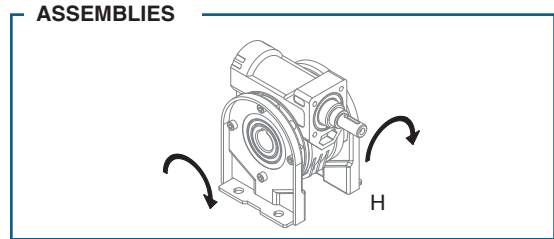
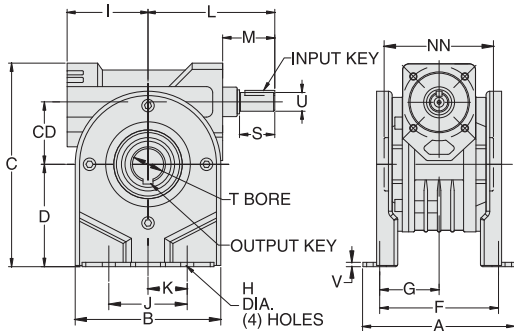
STYLE THMQ DIMENSIONS - Inches (MM)

Series	A	B	C	CD	D	F	G	H	I	J	K	LQ* 56/140	LQ1* 180	NN	RQ	T* +0.0015 -0.0000	V	OUTPUT KEY*
512	3.43	3.07	4.17	1.18	2.17	2.60	1.30	0.256	1.81	1.97	0.99	*	N/A	2.16	2.21	(14)●	0.12	(5)●
518	3.94	3.86	5.67	1.77	2.83	3.17	1.59	0.413	2.16	1.97	0.99	3.33	N/A	2.56	2.60	0.750	0.12	3/16 X 1.00
520	4.84	4.45	6.42	1.97	3.23	3.94	1.97	0.413	2.56	2.48	1.24	3.51	N/A	3.19	2.83	1.000	0.14	1/4 X 1.62
525	5.67	5.24	7.87	2.48	3.94	4.35	2.18	0.413	3.11	3.74	1.87	4.08	N/A	4.72	3.58	1.125	0.16	1/4 X 2.00
534	7.17	7.09	11.02	3.35	5.59	5.71	2.86	0.413	3.86	5.51	2.76	4.83	5.35	5.31	4.33	1.500	0.20	3/8 X 2.00

● Dimension is in MM. Key is not provided with metric reducer options as standard. Metric bore tolerance is H7.

* Metric options are available. Refer to dimensions on opposite page. Contact Factory for availability of metric options.

Style TH



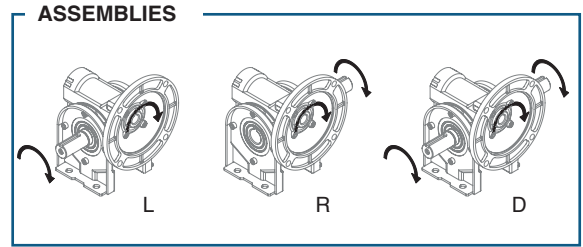
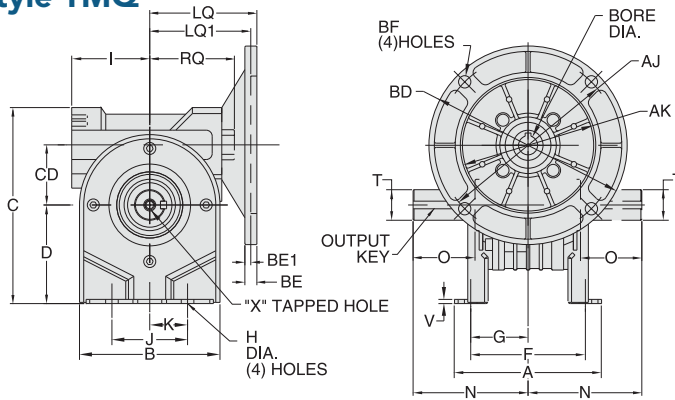
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE TH DIMENSIONS** - Inches

Series	A	B	C	CD	D	F	G	H	I	J	K	L	M	NN	S	T +0.0015 -0.0000	U +0.000 -0.001	V	INPUT KEY	OUTPUT KEY
518	3.94	3.86	5.67	1.77	2.83	3.17	1.59	0.413	2.16	1.97	0.99	3.86	1.67	2.56	1.18	0.750	0.625	0.12	3/16 X 1.00	3/16 X 1.00
520	4.84	4.45	6.42	1.97	3.23	3.94	1.97	0.413	2.56	2.48	1.24	4.11	1.74	3.19	1.18	1.000	0.625	0.14	3/16 X 1.00	1/4 X 1.62
525	5.67	5.24	7.87	2.48	3.94	4.35	2.18	0.413	3.11	3.74	1.87	5.43	2.24	4.72	1.75	1.125	0.750	0.16	3/16 x 1.50	1/4 X 2.00
534	7.17	7.09	11.02	3.35	5.59	5.71	2.86	0.413	3.86	5.51	2.76	6.38	2.52	5.31	1.75	1.500	0.875	0.20	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

Style TMQ

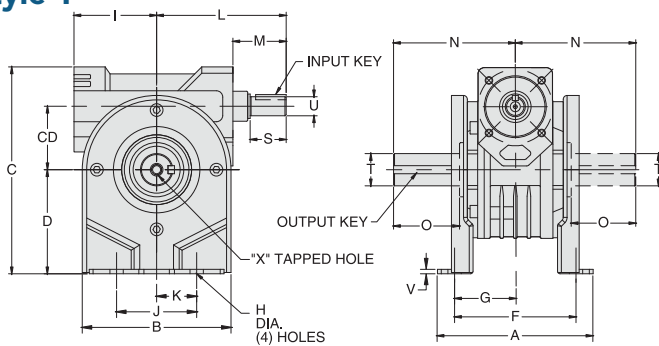


REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

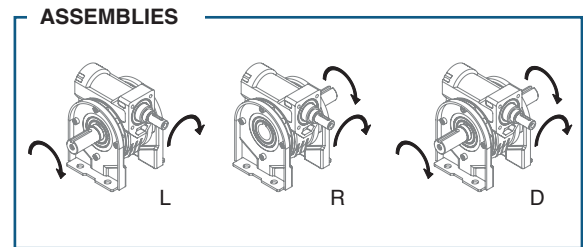
STYLE TMQ DIMENSIONS - Inches (MM)

Series	A	B	C	CD	D	F	G	H	I	J	K	LQ* 56/140	LQ1* 180	N	O	RQ	T* +0.001 -0.001	V	X		OUTPUT KEY*
																			Tap Size	Depth	
512	3.43	3.07	4.17	1.18	2.17	2.60	1.30	0.256	1.81	1.97	0.99	*	N/A	2.48	1.01	2.21	(14)★	0.12	N/A	N/A	(5)★
518	3.94	3.86	5.67	1.77	2.83	3.17	1.59	0.413	2.16	1.97	0.99	3.33	N/A	2.97	1.26	2.60	0.750	0.12	1/4-20 UNC	0.62	3/16 X 1.00
520	4.84	4.45	6.42	1.97	3.23	3.94	1.97	0.413	2.56	2.48	1.24	3.51	N/A	3.94	2.05	2.83	1.000	0.14	5/16-18 UNC	0.75	1/4 X 1.62
525	5.67	5.24	7.87	2.48	3.94	4.35	2.18	0.413	3.11	3.74	1.87	4.08	N/A	4.85	2.36	3.58	1.125	0.16	5/16-18 UNC	0.75	1/4 X 2.00
534	7.17	7.09	11.02	3.35	5.59	5.71	2.86	0.413	3.86	5.51	2.76	4.83	5.35	5.55	2.36	4.33	1.500	0.20	5/16-18 UNC	0.75	3/8 X 2.00

Style T



★ Dimension is in MM. Key is not provided with metric reducer options as standard. Metric shaft diameter tolerance is -0.005/-0.020. Series 512 is available with an inch dimensioned output shaft. Contact Factory for details.
* Metric options are available. Refer to dimensions below. Contact Factory for availability of metric options.



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE T DIMENSIONS** - Inches

Series	A	B	C	CD	D	F	G	H	I	J	K	L	M	N	O	S +0.000 -0.001	T +0.000 -0.001	U	V	X		INPUT KEY	OUTPUT KEY
																				Tap Size	Depth		
518	3.94	3.86	5.67	1.77	2.83	3.17	1.59	0.413	2.16	1.97	0.99	3.86	1.67	2.97	1.26	1.18	0.750	0.625	0.12	1/4-20 UNC	0.62	3/16 X 1.00	3/16 X 1.00
520	4.84	4.45	6.42	1.97	3.23	3.94	1.97	0.413	2.56	2.48	1.24	4.11	1.74	3.94	2.05	1.18	1.000	0.625	0.14	5/16-18 UNC	0.75	3/16 X 1.00	1/4 X 1.62
525	5.67	5.24	7.87	2.48	3.94	4.35	2.18	0.413	3.11	3.74	1.87	5.43	2.24	4.85	2.36	1.75	1.125	0.750	0.16	5/16-18 UNC	0.75	3/16 x 1.50	1/4 X 2.00
534	7.17	7.09	11.02	3.35	5.59	5.71	2.86	0.413	3.86	5.51	2.76	6.38	2.52	5.55	2.36	1.75	1.500	0.875	0.20	5/16-18 UNC	0.75	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BE1	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	N/A	0.41	0.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	N/A	0.41	0.875	3/16 x 3/32
180TC	7.25	8.50	9.00	N/A	0.50	0.53	1.125	1/4 x 1/8

OPTIONAL METRIC DIMENSIONS[⊖] - MM

Series	LQ1◆						T /	O	N	Output Keyway
	IEC B5 & B14 Options									
	D56D	D63D	D71D	D80D	D90D	D100LD■	(standard for metric units)			
512	62.5◆	62.5	N/A	N/A	N/A	N/A	14	25	63	5
518	74◆□	74◆	74	N/A	N/A	N/A	18	32	75	6
520	81.5◆□	81.5◆	81.5	81.5	N/A	N/A	25	52	100	8
525	N/A	99.5◆	99.5◆	99.5◆	99.5	N/A	25	60	123	8
534	N/A	N/A	124◆	124	124	124	35	60	141	10

OPTIONAL METRIC DIMENSIONS[⊖] - MM

IEC Frame	B5					B14◆					Input Bore Dia	Input Keyway▲
	AJ	AK	BD	BE	BF	AJ	AK	BD	BE	BF◆		
D56D	100	80	120	10	7	65◆	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75◆	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85◆	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100◆	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5
D100LD■	215	180	250	13	14	130	110	160	10	9	28	8 x 3.5

⊖ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.

▲ Keyway width by depth

◆ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows: D56D(All), D63D(Series 518 & 520), D71D & D80D(Series 525)

◆ Dimensions are maximum (B5 and B14 options)

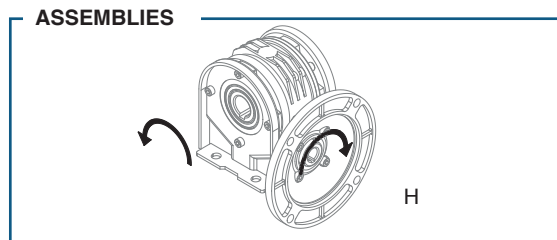
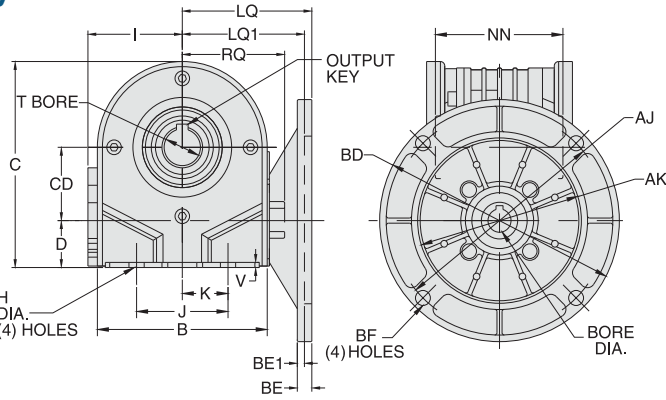
◆ B14 option not available

□ B5 Option not available

◆ Also applies to frame size D112MD

✓ Solid metric output shaft diameter tolerance is -0.005/-0.020. Hollow bore tolerance is H7.

Style UHMQ



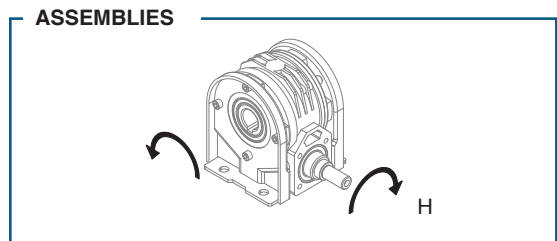
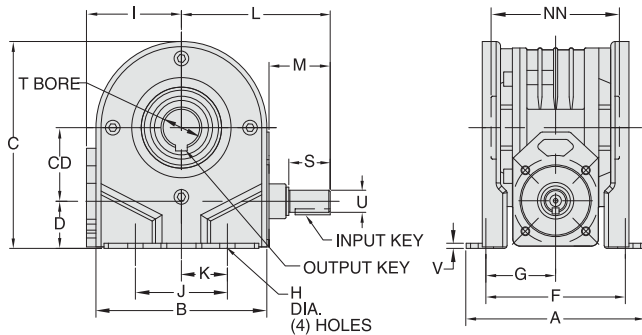
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE UHMQ DIMENSIONS - Inches (MM)

Series	A [^]	B	C	CD	D	F [^]	G [^]	H	I	J	K	LQ* 56/140	LQ1* 180	NN	RQ	T* +0.0015 -0.0000	V	OUTPUT KEY*
512	3.43	3.07	3.70	1.18	0.98	2.60	1.30	0.256	1.81	1.97	0.99	*	N/A	2.16	2.21	(14)●	0.12	(5)●
518	3.94	3.86	4.76	1.77	1.06	3.17	1.59	0.413	2.16	1.97	0.99	3.33	N/A	2.56	2.60	0.750	0.12	3/16 X 1.00
520	4.84	4.45	5.45	1.97	1.26	3.94	1.97	0.413	2.56	2.48	1.24	3.51	N/A	3.19	2.83	1.000	0.14	1/4 X 1.62
525	5.67	5.24	6.69	2.48	1.45	4.35	2.18	0.413	3.11	3.74	1.87	4.08	N/A	4.72	3.58	1.125	0.16	1/4 X 2.00
534	7.17	7.09	9.31	3.35	2.24	5.71	2.86	0.413	3.86	5.51	2.76	4.83	5.35	5.31	4.33	1.500	0.20	3/8 X 2.00

● Dimension is in MM. Key is not provided with metric reducer options as standard.
 Metric bore tolerance is H7.
 * Metric options are available. Refer to dimensions on opposite page.
 Contact Factory for availability of metric options.
[^] Refer to style UH for reference to this dimension.

Style UH



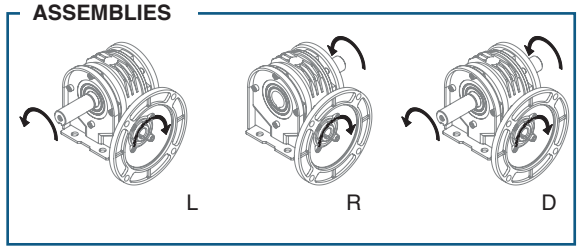
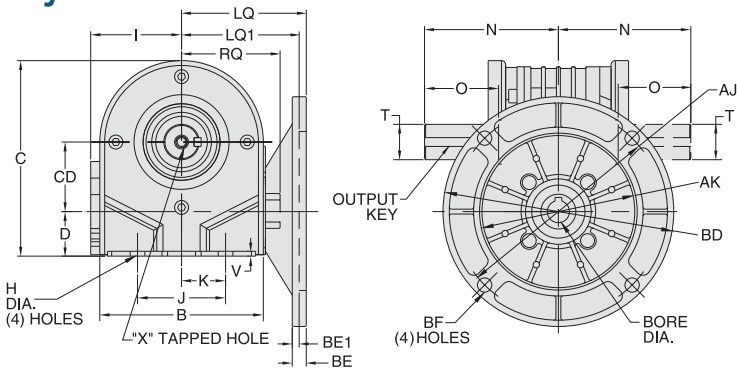
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE UH DIMENSIONS** - Inches

Series	A	B	C	CD	D	F	G	H	I	J	K	L	M	NN	S	T +0.0015 -0.0000	U +0.000 -0.001	V	INPUT KEY	OUTPUT KEY
518	3.94	3.86	4.76	1.77	1.06	3.17	1.59	0.413	2.16	1.97	0.99	3.86	1.67	2.56	1.18	0.750	0.625	0.12	3/16 X 1.00	3/16 X 1.00
520	4.84	4.45	5.45	1.97	1.26	3.94	1.97	0.413	2.56	2.48	1.24	4.11	1.74	3.19	1.18	1.000	0.625	0.14	3/16 X 1.00	1/4 X 1.62
525	5.67	5.24	6.69	2.48	1.45	4.35	2.18	0.413	3.11	3.74	1.87	5.43	2.24	4.72	1.75	1.125	0.750	0.16	3/16 X 1.50	1/4 X 2.00
534	7.17	7.09	9.31	3.35	2.24	5.71	2.86	0.413	3.86	5.51	2.76	6.38	2.52	5.31	1.75	1.500	0.875	0.20	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

Style UMQ



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE UMQ DIMENSIONS - Inches (MM)

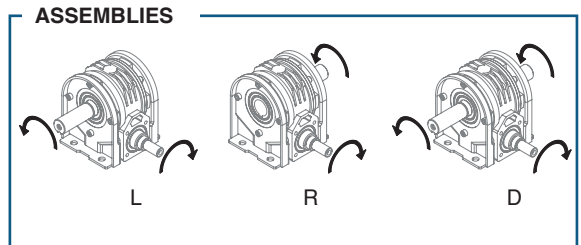
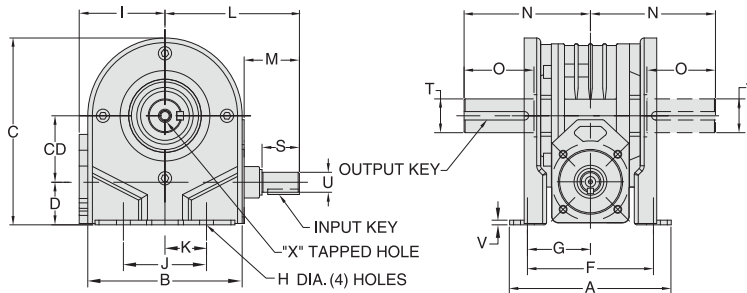
Series	A ^A	B	C	CD	D	F ^A	G ^A	H	I	J	K	LQ* 56/140	LQ1* 180	N	O	RQ	T* +0.000 -0.001	V	X		OUTPUT KEY*
																			Tap Size	Depth	
512	3.43	3.07	3.70	1.18	0.98	2.60	1.30	0.256	1.81	1.97	0.99	*	N/A	2.48	1.01	2.21	(14)★	0.12	N/A	N/A	(5)★
518	3.94	3.86	4.76	1.77	1.06	3.17	1.59	0.413	2.16	1.97	0.99	3.33	N/A	2.97	1.26	2.60	0.750	0.12	1/4-20 UNC	0.62	3/16 X 1.00
520	4.84	4.45	5.45	1.97	1.26	3.94	1.97	0.413	2.56	2.48	1.24	3.51	N/A	3.94	2.05	2.83	1.000	0.14	5/16-18 UNC	0.75	1/4 X 1.62
525	5.67	5.24	6.69	2.48	1.45	4.35	2.18	0.413	3.11	3.74	1.87	4.08	N/A	4.85	2.36	3.58	1.125	0.16	5/16-18 UNC	0.75	1/4 X 2.00
534	7.17	7.09	9.31	3.35	2.24	5.71	2.86	0.413	3.86	5.51	2.76	4.83	5.35	5.55	2.36	4.33	1.500	0.20	5/16-18 UNC	0.75	3/8 X 2.00

★ Dimension is in MM. Key is not provided with metric reducer options as standard. Metric shaft diameter tolerance is -0.005/-0.020. Series 512 is available with an inch dimensioned output shaft. Contact Factory for details.

* Metric options are available. Refer to dimensions below. Contact Factory for availability of metric options.

^A Refer to style U for reference to this dimension.

Style U



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE U DIMENSIONS** - Inches

Series	A	B	C	CD	D	F	G	H	I	J	K	L	M	N	O	S	T +0.000 -0.001	U +0.000 -0.001	V	X		INPUT KEY	OUTPUT KEY
																				Tap Size	Depth		
518	3.94	3.86	4.76	1.77	1.06	3.17	1.59	0.413	2.16	1.97	0.99	3.86	1.67	2.97	1.26	1.18	0.750	0.625	0.12	1/4-20 UNC	0.62	3/16 X 1.00	3/16 X 1.00
520	4.84	4.45	5.45	1.97	1.26	3.94	1.97	0.413	2.56	2.48	1.24	4.11	1.74	3.94	2.05	1.18	1.000	0.625	0.14	5/16-18 UNC	0.75	3/16 X 1.00	1/4 X 1.62
525	5.67	5.24	6.69	2.48	1.45	4.35	2.18	0.413	3.11	3.74	1.87	5.43	2.24	4.85	2.36	1.75	1.125	0.750	0.16	5/16-18 UNC	0.75	3/16 x 1.50	1/4 X 2.00
534	7.17	7.09	9.31	3.35	2.24	5.71	2.86	0.413	3.86	5.51	2.76	6.38	2.52	5.55	2.36	1.75	1.500	0.875	0.20	5/16-18 UNC	0.75	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BE1	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	N/A	0.41	0.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	N/A	0.41	0.875	3/16 x 3/32
180TC	7.25	8.50	9.00	N/A	0.50	0.53	1.125	1/4 x 1/8

OPTIONAL METRIC DIMENSIONS[⊖] - MM

Series	LQ1 [◆] IEC B5 & B14 Options					T ✓ (standard for metric units)	O	N	Output Keyway
	D56D	D63D	D71D	D80D	D100LD [■]				
512	62.5 [⊖]	62.5	N/A	N/A	N/A	14	25	63	5
518	74 [⊖]	74 [⊖]	74	N/A	N/A	18	32	75	6
520	81.5 [⊖]	81.5 [⊖]	81.5	81.5	N/A	25	52	100	8
525	N/A	99.5 [⊖]	99.5 [⊖]	99.5 [⊖]	99.5	25	60	123	8
534	N/A	N/A	124 [⊖]	124	124	35	60	141	10

⊖ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.

▲ Keyway width by depth

◆ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows: D56D(All), D63D(Series 518 & 520), D71D & D80D(Series 525)

◆ Dimensions are maximum (B5 and B14 options)

⊖ B14 option not available

■ B5 Option not available

◆ Also applies to frame size D112MD

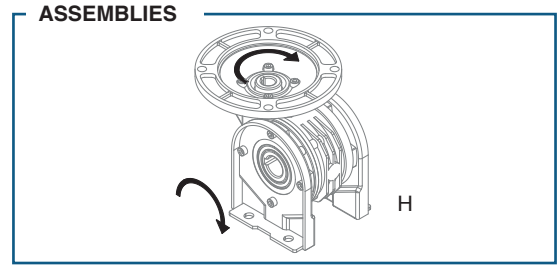
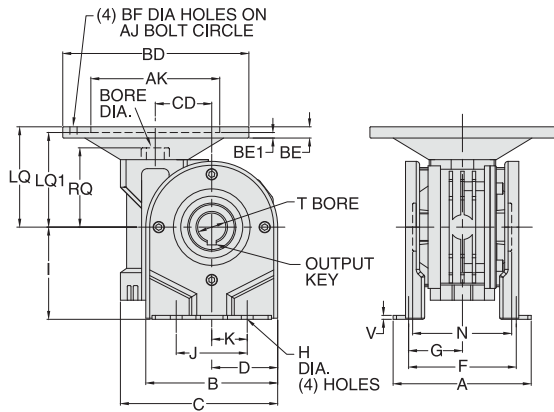
✓ Solid metric output shaft diameter tolerance is -0.005/-0.020.

Hollow bore tolerance is H7.

OPTIONAL METRIC DIMENSIONS[⊖] - MM

IEC Frame	B5					B14 [◆]					Input Bore Dia	Input Keyway▲
	AJ	AK	BD	BE	BF	AJ	AK	BD	BE	BF [⊖]		
D56D	100	80	120	10	7	65 [⊖]	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75 [⊖]	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85 [⊖]	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100 [⊖]	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5
D100LD [■]	215	180	250	13	14	130	110	160	10	9	28	8 x 3.5

Style JHMQ



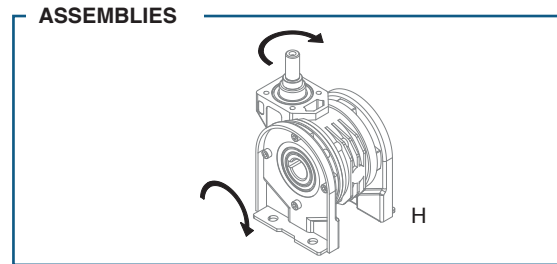
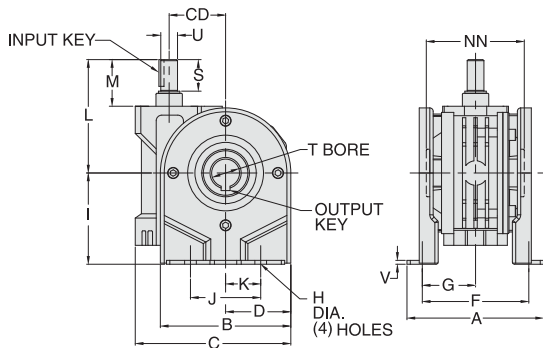
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE JHMQ DIMENSIONS - Inches (MM)

Series	A	B	C	CD	D	F	G	H	I	J	K	LQ* 56/140	LQ1* 180	NN	RQ	T* +0.0015 -0.0000	V	OUTPUT KEY*
512	3.43	3.07	3.54	1.18	1.54	2.60	1.30	0.256	2.16	1.97	0.99	*	N/A	2.16	2.21	(14)●	0.12	(5)●
518	3.94	3.86	4.76	1.77	1.93	3.17	1.59	0.413	2.83	1.97	0.99	3.33	N/A	2.56	2.60	0.750	0.12	3/16 X 1.00
520	4.84	4.45	5.45	1.97	2.23	3.94	1.97	0.413	3.22	2.48	1.24	3.51	N/A	3.19	2.83	1.000	0.14	1/4 X 1.62
525	5.67	5.24	6.69	2.48	2.76	4.35	2.18	0.413	3.94	3.74	1.87	4.08	N/A	4.72	3.58	1.125	0.16	1/4 X 2.00
534	7.17	7.09	9.15	3.35	3.72	5.71	2.86	0.413	5.59	5.51	2.76	4.83	5.35	5.31	4.33	1.500	0.20	3/8 X 2.00

● Dimension is in MM. Key is not provided with metric reducer options as standard.
Metric bore tolerance is H7.
* Metric options are available. Refer to dimensions on opposite page.
Contact Factory for availability of metric options.

Style JH



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE JH DIMENSIONS** - Inches

Series	A	B	C	CD	D	F	G	H	I	J	K	L	M	NN	S	T +0.0015 -0.0000	U +0.000 -0.001	V	INPUT KEY	OUTPUT KEY
518	3.94	3.86	4.76	1.77	1.93	3.17	1.59	0.413	2.83	1.97	0.99	3.86	1.67	2.56	1.18	0.750	0.625	0.12	3/16 X 1.00	3/16 X 1.00
520	4.84	4.45	5.45	1.97	2.23	3.94	1.97	0.413	3.22	2.48	1.24	4.11	1.74	3.19	1.18	1.000	0.625	0.14	3/16 X 1.00	1/4 X 1.62
525	5.67	5.24	6.69	2.48	2.76	4.35	2.18	0.413	3.94	3.74	1.87	5.43	2.24	4.72	1.75	1.125	0.750	0.16	3/16 x 1.50	1/4 X 2.00
534	7.17	7.09	9.15	3.35	3.72	5.71	2.86	0.413	5.59	5.51	2.76	6.38	2.52	5.31	1.75	1.500	0.875	0.20	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

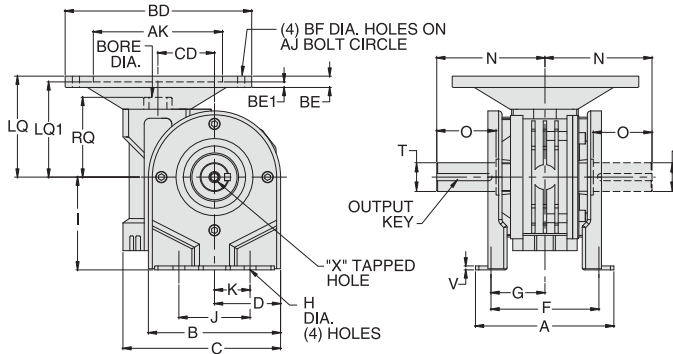
BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

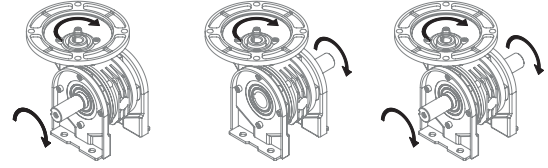
High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

Style JMQ



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

Single Reduction Reducers
BRAVO®

Double Reduction
BRAVO® Worm - Worm

Double Reduction
BRAVO® Helical - Worm

Accessory Kits
BRAVO®

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

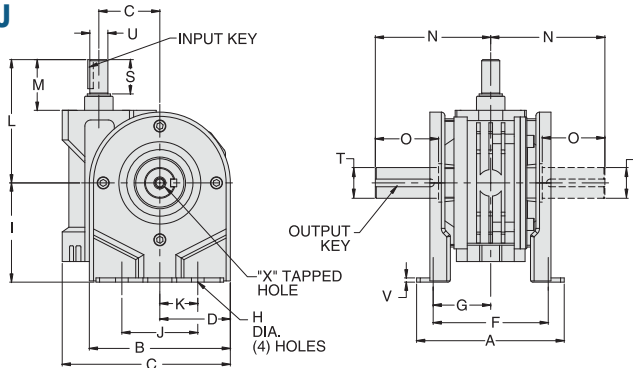
STYLE JMQ DIMENSIONS - Inches (MM)

Series	A	B	C	CD	D	F	G	H	I	J	K	LQ ¹ 56/140	LQ1 ¹ 180	N	O	RQ	T [*] +0.000 -0.001	V	X		OUTPUT KEY [*]
																			Tap Size	Depth	
512	3.43	3.07	3.54	1.18	1.54	2.60	1.30	0.256	2.16	1.97	0.99	*	N/A	2.48	1.01	2.21	(14)★	0.12	N/A	N/A	(5)★
518	3.94	3.86	4.76	1.77	1.93	3.17	1.59	0.413	2.83	1.97	0.99	3.33	N/A	2.97	1.26	2.60	0.750	0.12	1/4-20 UNC	0.62	3/16 X 1.00
520	4.84	4.45	5.45	1.97	2.23	3.94	1.97	0.413	3.22	2.48	1.24	3.51	N/A	3.94	2.05	2.83	1.000	0.14	5/16-18 UNC	0.75	1/4 X 1.62
525	5.67	5.24	6.69	2.48	2.76	4.35	2.18	0.413	3.94	3.74	1.87	4.08	N/A	4.85	2.36	3.58	1.125	0.16	5/16-18 UNC	0.75	1/4 X 2.00
534	7.17	7.09	9.15	3.35	3.72	5.71	2.86	0.413	5.59	5.51	2.76	4.83	5.35	5.55	2.36	4.33	1.500	0.20	5/16-18 UNC	0.75	3/8 X 2.00

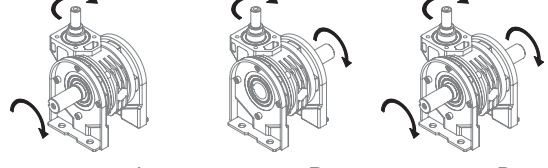
★ Dimension is in MM. Key is not provided with metric reducer options as standard. Metric shaft diameter tolerance is -0.005/-0.020. Series 512 is available with an inch dimensioned output shaft. Contact Factory for details.

* Metric options are available. Refer to dimensions below. Contact Factory for availability of metric options.

Style J



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE J DIMENSIONS** - Inches

Series	A	B	C	CD	D	F	G	H	I	J	K	L	M	N	O	S	T +0.000 -0.001	U +0.000 -0.001	V	X		INPUT KEY	OUTPUT KEY
																				Tap Size	Depth		
518	3.94	3.86	4.76	1.77	1.93	3.17	1.59	0.413	2.83	1.97	0.99	3.86	1.67	2.97	1.26	1.18	0.750	0.625	0.12	1/4-20 UNC	0.62	3/16 X 1.00	3/16 X 1.00
520	4.84	4.45	5.45	1.97	2.23	3.94	1.97	0.413	3.22	2.48	1.24	4.11	1.74	3.94	2.05	1.18	1.000	0.625	0.14	5/16-18 UNC	0.75	3/16 X 1.00	1/4 X 1.62
525	5.67	5.24	6.69	2.48	2.76	4.35	2.18	0.413	3.94	3.74	1.87	5.43	2.24	4.85	2.36	1.75	1.125	0.750	0.16	5/16-18 UNC	0.75	3/16 x 1.50	1/4 X 2.00
534	7.17	7.09	9.15	3.35	3.72	5.71	2.86	0.413	5.59	5.51	2.76	6.38	2.52	5.55	2.36	1.75	1.500	0.875	0.20	5/16-18 UNC	0.75	3/16 X 1.50	3/8 X 2.00

** Series 512 is available in this style. Contact Factory for details

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BE1	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	N/A	0.41	0.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	N/A	0.41	0.875	3/16 x 3/32
180TC	7.25	8.50	9.00	N/A	0.50	0.53	1.125	1/4 x 1/8

OPTIONAL METRIC DIMENSIONS[◊] - MM

Series	LQ1 [◆]						T ✓	O	N	Output Keyway
	IEC B5 & B14 Options									
	D56D	D63D	D71D	D80D	D90D	D100LD■	(standard for metric units)			
512	62.5 [◆]	62.5	N/A	N/A	N/A	N/A	14	25	63	5
518	74 [◆]	74 [◆]	74	N/A	N/A	N/A	18	32	75	6
520	81.5 [◆]	81.5 [◆]	81.5	81.5	N/A	N/A	25	52	100	8
525	N/A	99.5 [◆]	99.5 [◆]	99.5 [◆]	99.5	N/A	25	60	123	8
534	N/A	N/A	124 [◆]	124	124	124	35	60	141	10

◆ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.

▲ Keyway width by depth

◆ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows: D56D(All), D63D(Series 518 & 520), D71D & D80D(Series 525)

◆ Dimensions are maximum (B5 and B14 options)

◆ B14 option not available

◆ B5 Option not available

◆ Also applies to frame size D112MD

✓ Solid metric output shaft diameter tolerance is -0.005/-0.020. Hollow bore tolerance is H7.

OPTIONAL METRIC DIMENSIONS[◊] - MM

IEC Frame	B5					B14 [◆]					Input Bore Dia	Input Keyway▲
	AJ	AK	BD	BE	BF	AJ	AK	BD	BE	BF [◆]		
D56D	100	80	120	10	7	65 [◆]	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75 [◆]	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85 [◆]	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100 [◆]	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5
D100LD■	215	180	250	13	14	130	110	160	10	9	28	8 x 3.5

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

Hollow Output Shaft Mounted

MOTORIZED
QUILL INPUT

DHMQ



DRHMQ



DFHMQ



Ratings: Pages 329-330
Dimensions: Page 332

Ratings: Pages 329-330
Dimensions: Page 364

Ratings: Pages 329-330
Dimensions: Page 334

NON-
MOTORIZED
SOLID INPUT
SHAFT

DH



DRH



DFH



Ratings: Pages 329-330
Dimensions: Page 332

Ratings: Pages 329-330
Dimensions: Page 364

Ratings: Pages 329-330
Dimensions: Page 334

Solid Output Shaft

MOTORIZED
QUILL INPUT

DMQ



DRMQ



DFMQ



Ratings: Pages 329-330
Dimensions: Page 333

(❖Non-Standard Option)
Ratings: Pages 329-330
Dimensions: Page 364

Ratings: Pages 329-330
Dimensions: Page 335

NON-
MOTORIZED
SOLID INPUT
SHAFT

D



DR



DF



Ratings: Pages 329-330
Dimensions: Page 333

(❖Non-Standard Option)
Ratings: Pages 329-330
Dimensions: Page 364

Ratings: Pages 329-330
Dimensions: Page 335

Mounting Accessories

Select the appropriate mounting accessories from this wide variety of options.

❖ Non-Standard Option assemblies may be useful in certain applications. Please contact Factory with application details.



**REACTION
ARM R**



**F FLANGE
(SHORT FLANGE)**

DFLHMQ



Ratings: Pages 329-330
Dimensions: Page 336

DTHMQ



(❖Non-Standard Option)
Ratings: Pages 329-330
Dimensions: Page 338

DUHMQ



(❖Non-Standard Option)
Ratings: Pages 329-330
Dimensions: Page 340

DJHMQ



(❖Non-Standard Option)
Ratings: Pages 329-330
Dimensions: Page 342

DFLH



Ratings: Pages 329-330
Dimensions: Page 336

DTH



(❖Non-Standard Option)
Ratings: Pages 329-330
Dimensions: Page 338

DUH



(❖Non-Standard Option)
Ratings: Pages 329-330
Dimensions: Page 340

DJH



(❖Non-Standard Option)
Ratings: Pages 329-330
Dimensions: Page 342

DFLMQ



Ratings: Pages 329-330
Dimensions: Page 337

DTMQ



Ratings: Pages 329-330
Dimensions: Page 339

DUMQ



Ratings: Pages 329-330
Dimensions: Page 341

DJMQ



Ratings: Pages 329-330
Dimensions: Page 343

DFL



Ratings: Pages 329-330
Dimensions: Page 337

DT



Ratings: Pages 329-330
Dimensions: Page 339

DU



Ratings: Pages 329-330
Dimensions: Page 341

DJ



Ratings: Pages 329-330
Dimensions: Page 343



FL FLANGE
(LONG FLANGE)



HORIZONTAL BASE
(WORM OVER ASSEMBLY)



HORIZONTAL BASE
(WORM UNDER ASSEMBLY)



HORIZONTAL BASE
(VERTICAL INPUT SHAFT)

Grove Gear 500 Series Gear Reducer Model Number Nomenclature

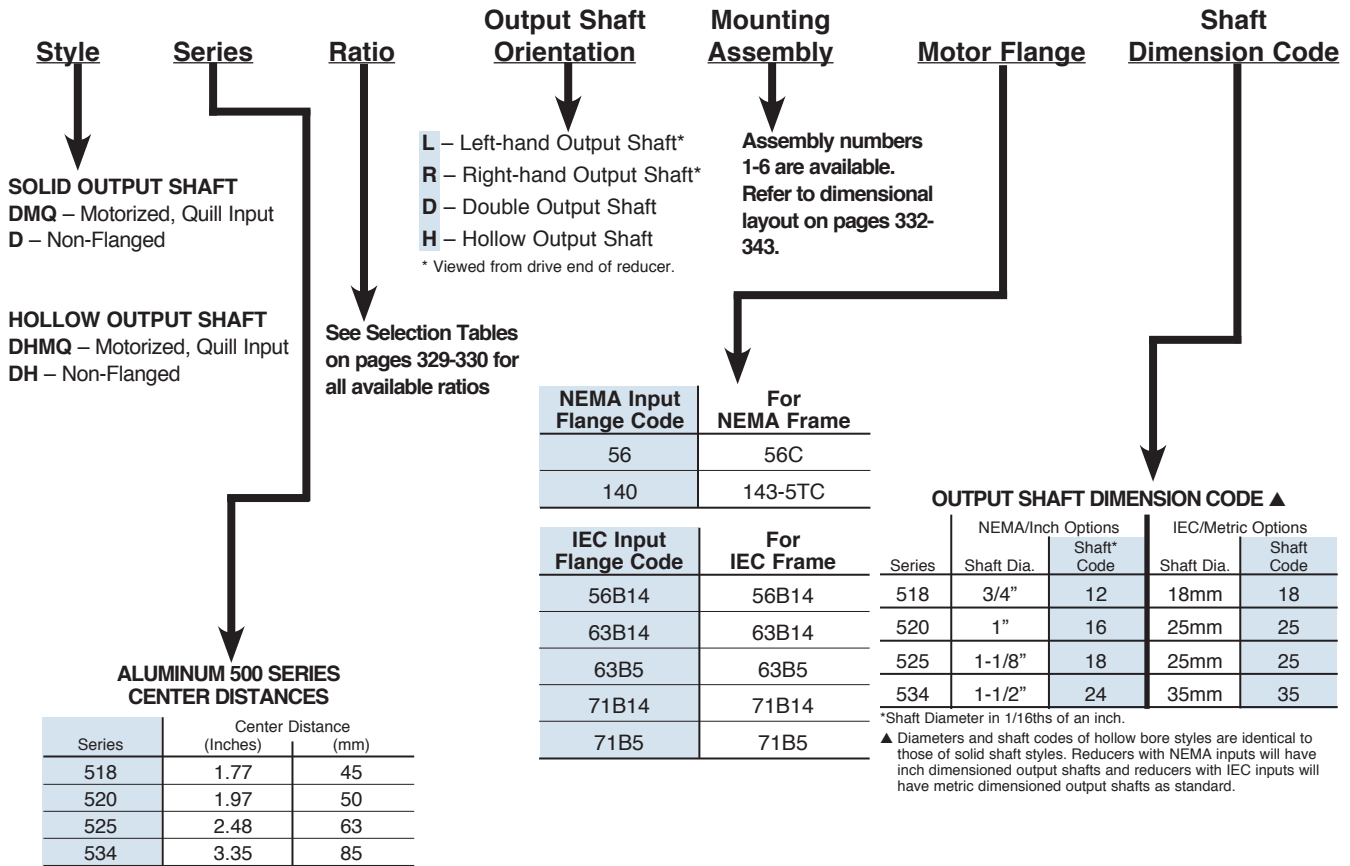
All stock and custom 500 series reducers are identified by a model number. The model number appears on the nameplate and describes pertinent features of the reducer. An example follows, along with a listing of the various letters and positions used.

NOTE: All reducers also have a catalog number—for example W5180001. Reducers and renewal parts should be ordered by catalog number. If a stock reducer has been factory modified by the addition of an optional base for example, the modification number T518, for example, is stamped in the blank column of the nameplate. Accessories that are field installed will not be noted on the nameplate.

Catalog numbers 5000 (for example, W5185000) and higher are custom reducers manufactured for a specific application. The machinery or equipment manufacturer should be contacted for replacement reducers. Renewal parts can be ordered from Grove Gear by catalog number.

TYPICAL NAMEPLATE

GROVE GEAR			
MAX INPUT HP @ 1750 RPM	.246	OUTPUT TORQUE (IN-LBS)	460
DESC.	DMQ51898L5612	RATIO	98:1
CATALOG NO.		DATE CODE	A04
GROVE GEAR UNION GROVE, WI 53182		MOD	



Sample Model Number

Solid Shaft

Motorized Quill Input, Double Reduction Reducer, 1.77" Center Distance, 3600:1 Ratio, Left Hand Output Shaft, Parallel Input & Output Shafts and 5/8" Input Bore with NEMA 56C Flange.

DMQ	518	3600	L	1	56	12
Style	Series	Ratio	Output Shaft	Mounting Assembly	Motor Input	Shaft Code

Hollow Shaft

Motorized Quill Input, Double Reduction Reducer, 1.77" Center Distance, 3600:1 Ratio, 3/4" Hollow Output Shaft, Parallel Input & Output Shafts and 5/8" Input Bore with NEMA 56C Flange.

DHMQ	518	3600	H	1	56	12
Style	Series	Ratio	Output Shaft	Mounting Assembly	Motor Input Flange	Shaft Code

Maximum Rating Tables

518 & 520 Series • All Stock Styles



518 Series • 1.0 S.F.

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)
70	1750	25.00	0.332	0.182	460
	1150	16.43	0.230	0.126	485
98	1750	17.86	0.246	0.130	460
	1150	11.73	0.170	0.090	485
147	1750	11.90	0.190	0.095	504
	1150	7.82	0.132	0.066	531
210	1750	8.33	0.139	0.067	504
	1150	5.48	0.096	0.046	531
294	1750	5.95	0.106	0.048	504
	1150	3.91	0.073	0.033	531
441	1750	3.97	0.088	0.032	504
	1150	2.61	0.061	0.022	531
588	1750	2.98	0.072	0.024	504
	1150	1.96	0.050	0.017	531
777	1750	2.25	0.060	0.018	504
	1150	1.48	0.042	0.012	531
966	1750	1.81	0.054	0.014	504
	1150	1.19	0.037	0.010	531
1288	1750	1.36	0.045	0.011	504
	1150	0.893	0.031	0.008	531
1702	1750	1.03	0.037	0.008	504
	1150	0.676	0.026	0.006	531
2220	1750	0.788	0.030	0.006	504
	1150	0.518	0.021	0.004	531
3600	1750	0.486	0.018	0.004	460
	1150	0.319	0.012	0.002	485

520 Series • 1.0 S.F.

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)
70	1750	25.00	0.573	0.309	780
	1150	16.43	0.396	0.214	821
98	1750	17.86	0.425	0.221	780
	1150	11.73	0.294	0.153	821
140	1750	12.50	0.305	0.158	799
	1150	8.21	0.211	0.110	841
182	1750	9.62	0.259	0.122	799
	1150	6.32	0.179	0.084	841
260	1750	6.73	0.198	0.085	799
	1150	4.42	0.137	0.059	841
364	1750	4.81	0.145	0.061	799
	1150	3.16	0.100	0.042	841
546	1750	3.21	0.107	0.041	799
	1150	2.11	0.074	0.028	841
676	1750	2.59	0.091	0.033	799
	1150	1.70	0.063	0.023	841
962	1750	1.82	0.072	0.023	799
	1150	1.20	0.050	0.016	841
1260	1750	1.39	0.065	0.018	799
	1150	0.913	0.045	0.012	841
1591	1750	1.10	0.056	0.014	799
	1150	0.723	0.039	0.010	841
2220	1750	0.788	0.045	0.009	757
	1150	0.518	0.031	0.007	797
3600	1750	0.486	0.028	0.006	757
	1150	0.319	0.019	0.004	797

WHEN ORDERING DOUBLE REDUCTION REDUCERS, SPECIFY COMPLETE MODEL NUMBER AS SHOWN ON PAGE 328.

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

BRAVO® Maximum Rating Tables

ALUMINUM GEAR REDUCERS

525 & 534 Series • All Stock Styles



525 Series • 1.0 S.F.

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)
70	1750	25.00	1.396	0.768	1935
	1150	16.43	0.966	0.531	2037
105	1750	16.67	0.948	0.512	1935
	1150	10.95	0.655	0.354	2037
150	1750	11.67	0.689	0.358	1935
	1150	7.67	0.477	0.248	2037
210	1750	8.33	0.556	0.256	1935
	1150	5.48	0.385	0.177	2037
300	1750	5.83	0.426	0.179	1935
	1150	3.83	0.295	0.124	2037
420	1750	4.17	0.328	0.128	1935
	1150	2.74	0.227	0.089	2037
630	1750	2.78	0.259	0.085	1935
	1150	1.83	0.179	0.059	2037
840	1750	2.08	0.206	0.064	1935
	1150	1.37	0.143	0.044	2037
1110	1750	1.58	0.162	0.049	1935
	1150	1.04	0.112	0.034	2037
1380	1750	1.27	0.139	0.039	1935
	1150	0.833	0.096	0.027	2037
1800	1750	0.972	0.115	0.030	1935
	1150	0.639	0.079	0.021	2037
2160	1750	0.810	0.096	0.025	1935
	1150	0.532	0.066	0.017	2037
4020	1750	0.435	0.064	0.013	1935
	1150	0.286	0.044	0.009	2037

534 Series • 1.0 S.F.

Ratio	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)
70	1750	25.00	1.577	0.899	2266
	1150	16.43	1.091	0.622	2386
98	1750	17.86	1.127	0.642	2266
	1150	11.73	0.779	0.444	2386
140	1750	12.50	0.920	0.534	2690
	1150	8.21	0.636	0.369	2832
196	1750	8.93	0.733	0.381	2690
	1150	5.87	0.507	0.264	2832
280	1750	6.25	0.798	0.375	3784
	1150	4.11	0.553	0.260	3983
392	1750	4.46	0.609	0.268	3784
	1150	2.93	0.421	0.185	3983
588	1750	2.98	0.484	0.179	3784
	1150	1.96	0.335	0.124	3983
784	1750	2.23	0.394	0.134	3784
	1150	1.47	0.273	0.093	3983
1036	1750	1.69	0.307	0.101	3784
	1150	1.11	0.213	0.070	3983
1288	1750	1.36	0.272	0.082	3784
	1150	0.893	0.188	0.056	3983
1680	1750	1.04	0.181	0.053	3186
	1150	0.685	0.126	0.036	3354
2280	1750	0.768	0.144	0.039	3186
	1150	0.504	0.099	0.027	3354
3120	1750	0.561	0.113	0.028	3186
	1150	0.369	0.079	0.020	3354

WHEN ORDERING DOUBLE REDUCTION REDUCERS, SPECIFY COMPLETE MODEL NUMBER AS SHOWN ON PAGE 328.

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

DOUBLE REDUCTION • APPROXIMATE WEIGHTSΔ (LBS.)

Reducer Style	Reducer Size				Reducer Style	Reducer Size			
	518	520	525	534		518	520	525	534
Solid Output Shaft Models					Hollow Output Shaft Models				
DMQ	13	15	20	35	DHMQ	12	13	18	30
D	12	15	20	33	DH	11	13	18	28
DTMQ, DUMQ	15	17	23	40	DTHMQ, DUHMQ	14	15	21	35
DT, DU	14	17	23	38	DTH, DUH	13	15	21	33
DJMQ	15	17	23	40	DJHMQ	14	15	21	35
DJ	14	17	23	38	DJH	13	15	21	33
DFMQ	14	16	22	38	DFHMQ	13	14	20	33
DF	13	16	22	36	DFH	12	14	20	31
DFLMQ	15	17	23	40	DFLHMQ	14	15	21	35
DFL	14	17	23	38	DFLH	13	15	21	33
DRMQ	14	16	22	38	DRHMQ	13	14	20	33
DR	13	16	22	36	DRH	12	14	20	31

Δ Weights include grease and oil.

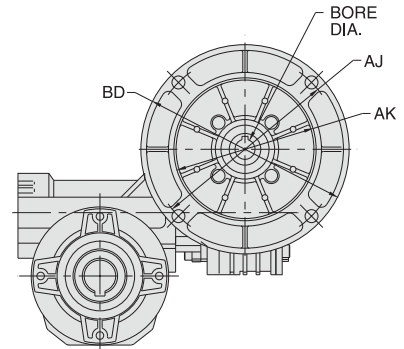
REDUCER ACCESSORIES • APPROXIMATE WEIGHTS (LBS.)

Accessory	Reducer Size			
	518	520	525	534
T/U - Base	2	2	3	5
J - Base	2	2	3	5
F - Flange	1	1	2	3
FL - Flange	2	2	3	5
R - Reaction Arm	1	1	2	3

DOUBLE REDUCTION • MOTOR FRAME COMBINATIONS

NEMA or IEC Frame Size	Dimensions - Inches (MM)				Reducer Size			
	AK	AJ	BD	Bore Dia.	518	520	525	534
NEMA 56C	4.50	5.88	6.50	0.625	●	●	●	●
IEC 56B14	1.97 (50)	2.56 (65)	3.15 (80)	(9)	■	■	■	■
IEC 63B5	3.74 (95)	4.53 (115)	5.51 (140)	(11)	■	■	■	■
IEC 63B14	2.36 (60)	2.95 (75)	3.54 (90)	(11)	●	●	●	●
IEC 71B5	4.33 (110)	5.12 (130)	6.30 (160)	(14)	●	●	●	●
IEC 71B14	2.76 (70)	3.35 (85)	4.13 (105)	(14)	●	●	●	●

- Reducer selections are available. Refer to dimensional pages for additional dimensions and special conditions for flange mounting hole alignment.
- Reducer selections are available. A bushing will be provided with reducer to achieve input bore diameter shown. Refer to dimensional pages for additional dimensions and special conditions for flange mounting hole alignment.



DOUBLE REDUCTION • WORM-WORM • EXACT RATIO COMBINATIONS

518			520		
TOTAL RATIO	P 518	S 518	TOTAL RATIO	P 518	S 520
70	7	10	70	7	10
98	7	14	98	7	14
147	21	7	140	10	14
210	21	10	182	7	26
294	21	14	260	10	26
441	21	21	364	14	26
588	21	28	546	21	26
777	21	37	676	26	26
966	46	21	962	37	26
1288	46	28	1260	21	60
1702	46	37	1591	37	43
2220	60	37	2220	37	60
3600	60	60	3600	60	60

525			534		
TOTAL RATIO	P 518	S 525	TOTAL RATIO	P 518	S 534
70	7	10	70	7	10
105	7	15	98	7	14
150	10	15	140	7	20
210	7	30	196	7	28
300	10	30	280	10	28
420	14	30	392	14	28
630	21	30	588	14	42
840	28	30	784	28	28
1110	37	30	1036	37	28
1380	46	30	1288	46	28
1800	60	30	1680	60	28
2160	60	36	2280	60	38
4020	67	60	3120	60	52

P = Primary stage reducer ratio
S = Secondary stage reducer ratio

Single Reduction Reducers
BRAVO®

Double Reduction
BRAVO® Worm - Worm

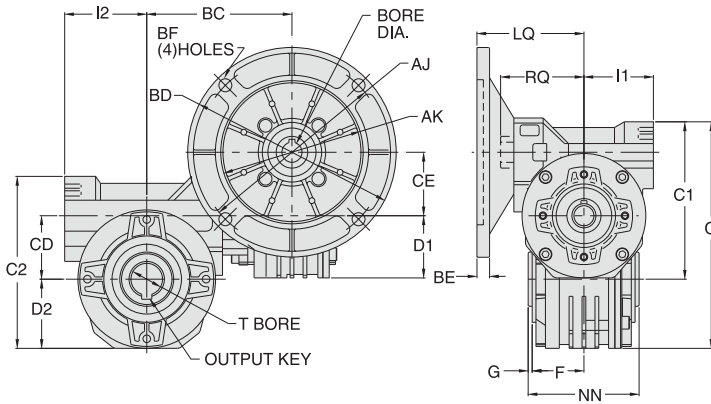
Double Reduction
BRAVO® Helical - Worm

BRAVO® Accessory Kits

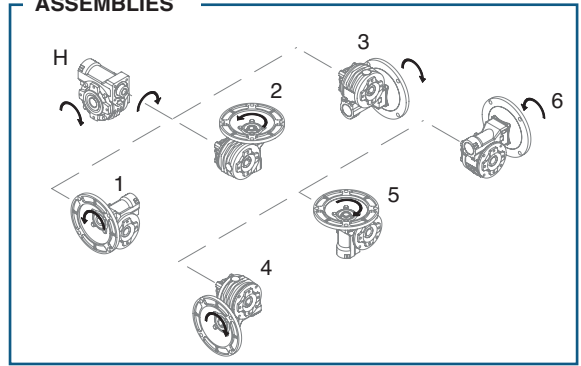
High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

Style DHMQ



ASSEMBLIES



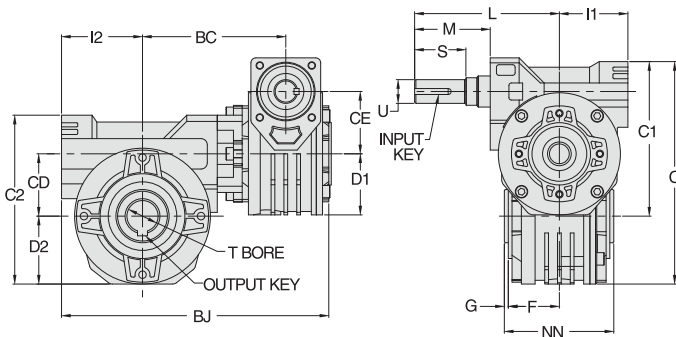
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DHMQ DIMENSIONS - Inches

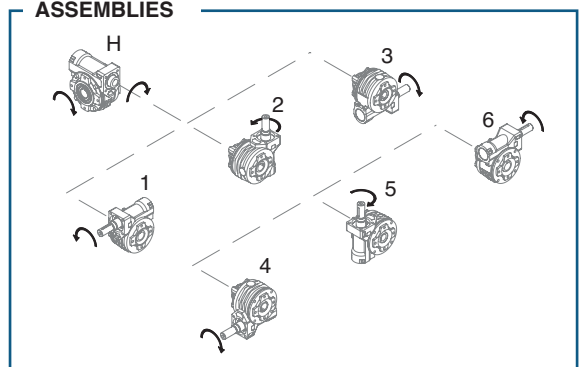
Series	BC	C	C1	C2	CD	CE	D1	D2	F	G	I1	I2	LQ* 56C	NN	RQ	T* +0.0015 -0.0000	OUTPUT KEY*
518	4.35	6.42	4.76	4.76	1.77	1.77	1.93	1.93	1.38	0.08	2.16	2.16	3.33	2.56	2.60	0.750	3/16 X 1.00
520	4.53	7.30	4.76	5.33	1.97	1.77	1.93	2.15	1.50	0.12	2.16	2.56	3.33	3.19	2.60	1.000	1/4 X 1.62
525	5.75	9.17	4.76	6.69	2.48	1.77	1.93	2.76	1.77	0.19	2.16	3.11	3.33	4.72	2.60	1.125	1/4 X 2.00
534	6.76	12.00	4.76	9.15	3.35	1.77	1.93	3.72	2.52	0.14	2.16	3.86	3.33	5.31	2.60	1.500	3/8 X 2.00

* Metric options are available. Refer to dimensions on opposite page. Contact Factory for availability of metric options.

Style DH



ASSEMBLIES

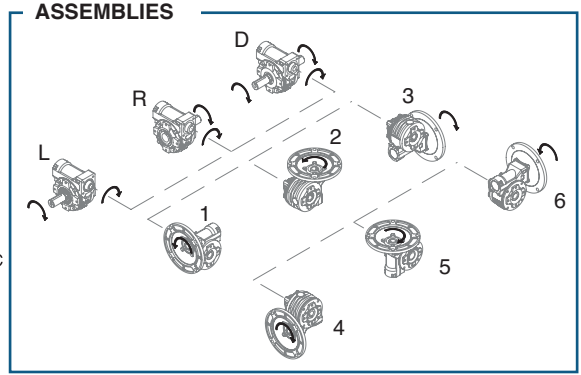
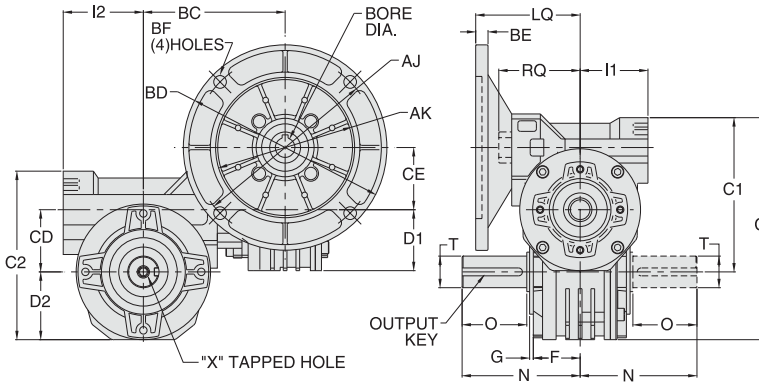


REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DH DIMENSIONS - Inches

Series	BC	BJ	C	C1	C2	CD	CE	D1	D2	F	G	I1	I2	L	M	NN	S	T +0.0015 -0.0000	U +0.000 -0.001	INPUT KEY	OUTPUT KEY
518	4.35	7.90	6.42	4.76	4.76	1.77	1.77	1.93	1.93	1.38	0.08	2.16	2.16	3.86	1.67	2.56	1.18	0.750	0.625	3/16 X 1.00	3/16 X 1.00
520	4.53	8.47	7.30	4.76	5.33	1.97	1.77	1.93	2.15	1.50	0.12	2.16	2.56	3.86	1.67	3.19	1.18	1.000	0.625	3/16 X 1.00	1/4 X 1.62
525	5.75	10.24	9.17	4.76	6.69	2.48	1.77	1.93	2.76	1.77	0.19	2.16	3.11	3.86	1.67	4.72	1.18	1.125	0.625	3/16 X 1.00	1/4 X 2.00
534	6.76	12.01	12.00	4.76	9.15	3.35	1.77	1.93	3.72	2.52	0.14	2.16	3.86	3.86	1.67	5.31	1.18	1.500	0.625	3/16 X 1.00	3/8 X 2.00

Style DMQ



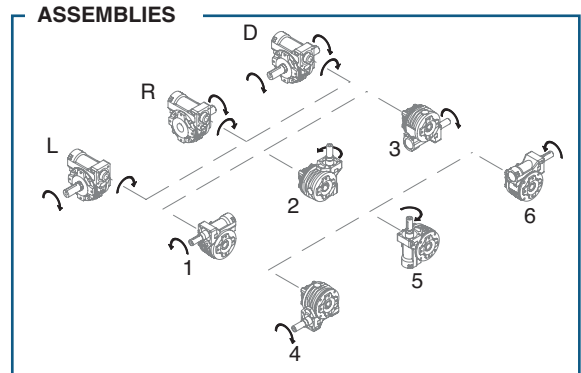
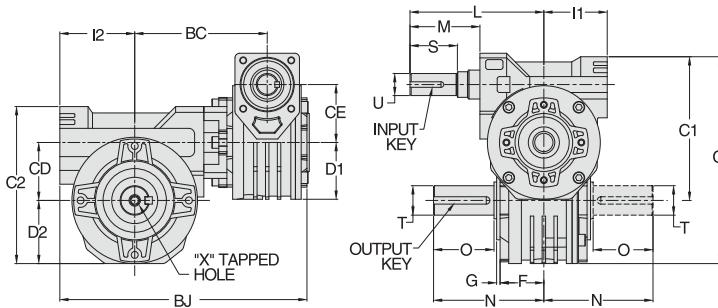
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DMQ DIMENSIONS - Inches

Series	BC	C	C1	C2	CD	CE	D1	D2	F	G	I1	I2	LQ* 56C	N	O*	RQ	T* +0.000 -0.001	X		OUTPUT KEY*
																		Tap Size	Depth	
518	4.35	6.42	4.76	4.76	1.77	1.77	1.93	1.93	1.38	0.08	2.16	2.16	3.33	2.97	1.26	2.60	0.750	1/4-20 UNC	0.62	3/16 x 1.00
520	4.53	7.30	4.76	5.33	1.97	1.77	1.93	2.15	1.50	0.12	2.16	2.56	3.33	3.94	2.05	2.60	1.000	5/16-18 UNC	0.75	1/4 X 1.62
525	5.75	9.17	4.76	6.69	2.48	1.77	1.93	2.76	1.77	0.19	2.16	3.11	3.33	4.85	2.36	2.60	1.125	5/16-18 UNC	0.75	1/4 X 2.00
534	6.76	12.00	4.76	9.15	3.35	1.77	1.93	3.72	2.52	0.14	2.16	3.86	3.33	5.55	2.36	2.60	1.500	5/16-18 UNC	0.75	3/8 X 2.00

* Metric options are available. Refer to dimensions below. Contact Factory for availability of metric options.

Style D



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE D DIMENSIONS - Inches

Series	BC	BJ	C	C1	C2	CD	CE	D1	D2	F	G	I1	I2	L	M	N	O	S	T +0.000 -0.001	U +0.000 -0.001	X		INPUT KEY	OUTPUT KEY
																					Tap Size	Depth		
518	4.35	7.90	6.42	4.76	4.76	1.77	1.77	1.93	1.93	1.38	0.08	2.16	2.16	3.86	1.67	2.97	1.26	1.18	0.750	0.625	1/4-20 UNC	0.62	3/16 X 1.00	3/16 X 1.00
520	4.53	8.47	7.30	4.76	5.33	1.97	1.77	1.93	2.15	1.50	0.12	2.16	2.56	3.86	1.67	3.94	2.05	1.18	1.000	0.625	5/16-18 UNC	0.75	3/16 X 1.00	1/4 X 1.62
525	5.75	10.24	9.17	4.76	6.69	2.48	1.77	1.93	2.76	1.77	0.19	2.16	3.11	3.86	1.67	4.85	2.36	1.18	1.125	0.625	5/16-18 UNC	0.75	3/16 X 1.00	1/4 X 2.00
534	6.76	12.01	12.00	4.76	9.15	3.35	1.77	1.93	3.72	2.52	0.14	2.16	3.86	3.86	1.67	5.55	2.36	1.18	1.500	0.625	5/16-18 UNC	0.75	3/16 X 1.00	3/8 X 2.00

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	0.41	0.625	3/16 x 3/32

OPTIONAL METRIC DIMENSIONS - MM

Series	LQ♦			T H7	O	N	Output Keyway
	IEC B5 & B14 Options						
	D56D■	D63D	D71D				
518	74*	74*	74	18	32	75	6
520	74*	74*	74	25	52	100	8
525	74*	74*	74	25	60	123	8
534	74*	74*	74	35	60	141	10

♦ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.

▲ Keyway width by depth

♦ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows: D56D(A11), D63D(A11)

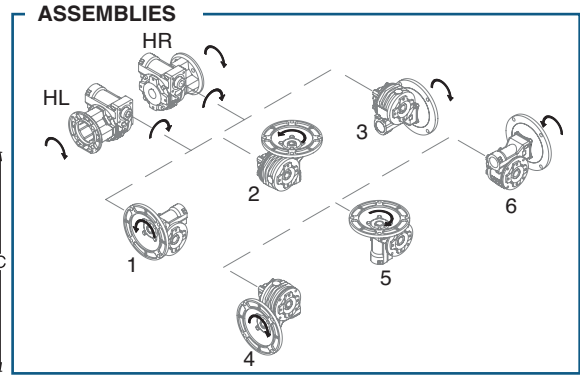
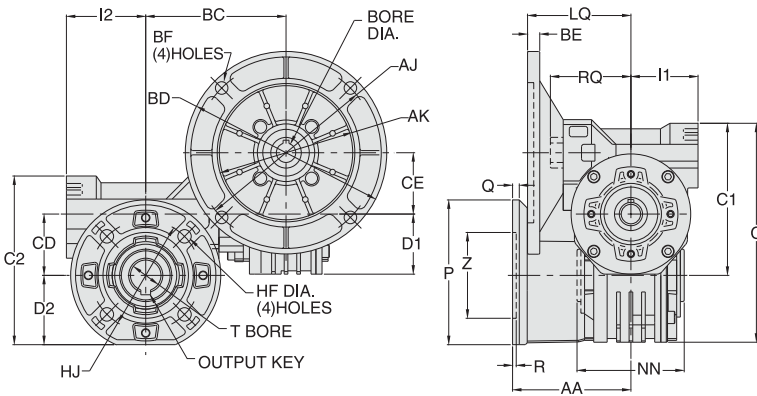
♦ Dimensions are maximum (B5 and B14 options)

■ B5 Option not available

OPTIONAL METRIC DIMENSIONS - MM

IEC Frame	B5					B14♦					Input Bore Dia	Input Keyway▲
	AJ	AK	BD	BE	BF	AJ	AK	BD	BE	BF♦		
D56D	N/A	N/A	N/A	N/A	N/A	65*	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75*	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85*	70	105	8	6.5	14	5 x 2.5

Style DFHMQ



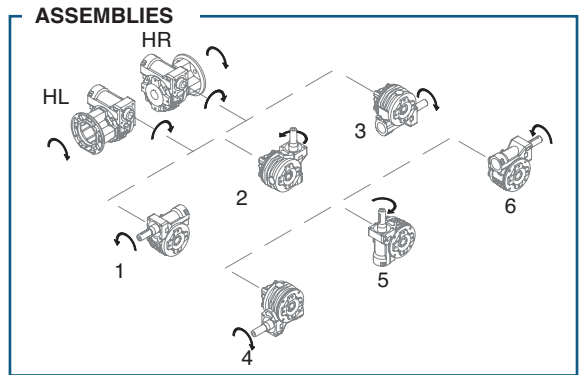
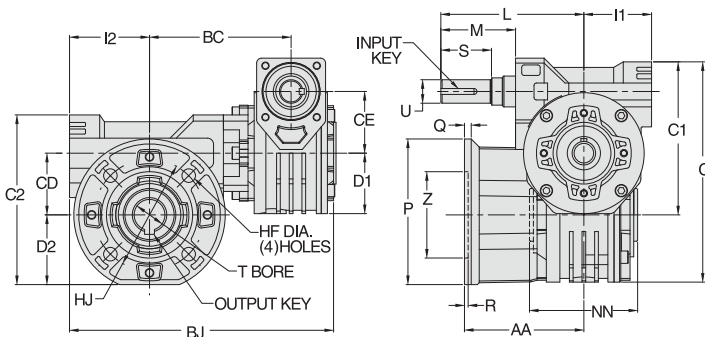
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DFHMQ DIMENSIONS - Inches

Series	AA	BC	C	C1	C2	CD	CE	D1	D2	HF	HJ	I1	I2	LQ* 56C	MN	P	Q	R	RQ	T* +0.0015 -0.0000	Z	OUTPUT KEY*
518	2.38	4.35	6.42	4.76	4.76	1.77	1.77	1.93	1.93	0.335	3.43	2.16	2.16	3.33	2.56	4.33	0.35	0.354	2.60	0.750	2.362	3/16 X 1.00
520	3.35	4.53	7.30	4.76	5.33	1.97	1.77	1.93	2.15	0.413	3.54	2.16	2.56	3.33	3.19	4.84	0.47	0.354	2.60	1.000	2.756	1/4 X 1.62
525	3.39	5.75	9.17	4.76	6.69	2.48	1.77	1.93	2.76	0.413	5.91	2.16	3.11	3.33	4.72	6.89	0.51	0.276	2.60	1.125	4.528	1/4 X 2.00
534	4.25	6.76	12.00	4.76	9.15	3.35	1.77	1.93	3.72	0.512	6.93	2.16	3.86	3.33	5.31	8.07	0.63	0.197	2.60	1.500	5.984	3/8 X 2.00

* Metric options are available. Refer to dimensions on opposite page. Contact Factory for availability of metric options.

Style DFH

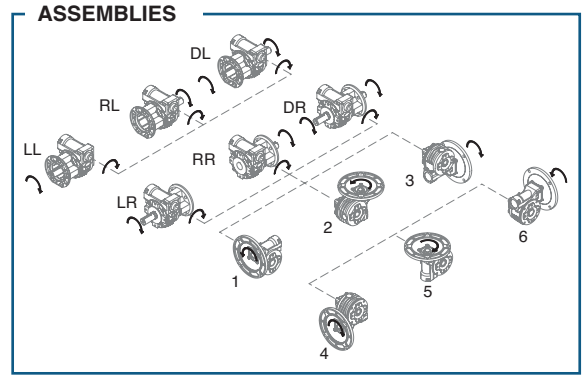
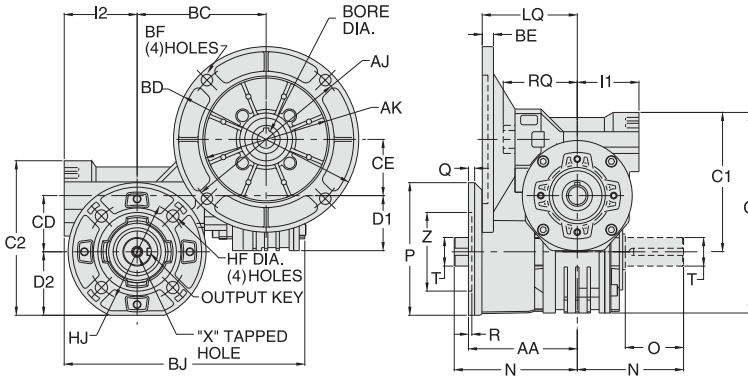


REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DFH DIMENSIONS - Inches

Series	AA	BC	BJ	C	C1	C2	CD	CE	D1	D2	HF	HJ	I1	I2	L	M	NN	P	Q	R	S	T +0.0015 -0.0000	U +0.000 -0.001	Z	INPUT KEY	OUTPUT KEY
518	2.38	4.35	7.90	6.42	4.76	4.76	1.77	1.77	1.93	1.93	0.335	3.43	2.16	2.16	3.86	1.67	2.56	4.33	0.35	0.354	1.18	0.750	0.625	2.362	3/16 X 1.00	3/16 X 1.00
520	3.35	4.53	8.47	7.30	4.76	5.33	1.97	1.77	1.93	2.15	0.413	3.54	2.16	2.56	3.86	1.67	3.19	4.84	0.47	0.354	1.18	1.000	0.625	2.756	3/16 X 1.00	1/4 X 1.62
525	3.39	5.75	10.24	9.17	4.76	6.69	2.48	1.77	1.93	2.76	0.413	5.91	2.16	3.11	3.86	1.67	4.72	6.89	0.51	0.276	1.18	1.125	0.625	4.528	3/16 X 1.00	1/4 X 2.00
534	4.25	6.76	12.01	12.00	4.76	9.15	3.35	1.77	1.93	3.72	0.512	6.93	2.16	3.86	3.86	1.67	5.31	8.07	0.63	0.197	1.18	1.500	0.625	5.984	3/16 X 1.00	3/8 X 2.00

Style DFMQ



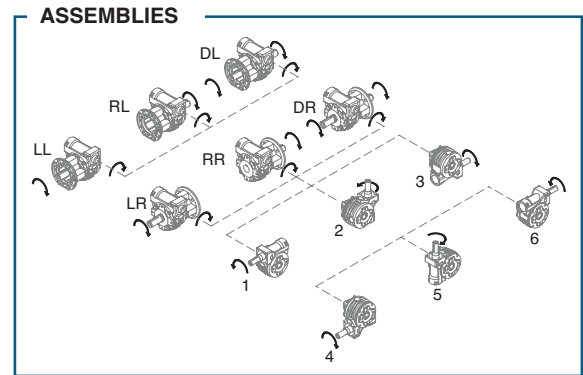
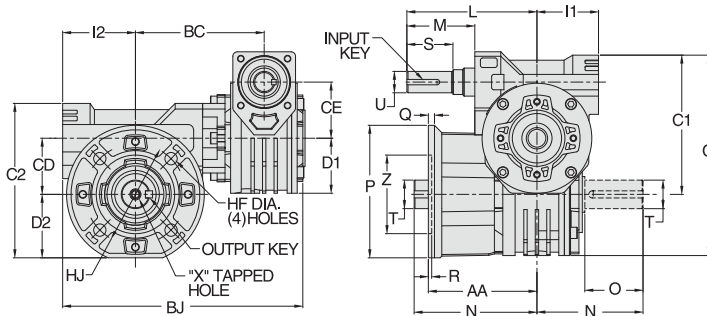
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DFMQ DIMENSIONS - Inches

Series	AA	BC	C	C1	C2	CD	CE	D1	D2	HF	HJ	I1	I2	LQ* 56C	N	O*	P	Q	R	RQ	T* +0.000 -0.001	X		Z	OUTPUT KEY*
																						Tap Size	Depth		
518	2.38	4.35	6.42	4.76	4.76	1.77	1.77	1.93	1.93	0.335	3.43	2.16	2.16	3.33	2.97	1.26	4.33	0.35	0.354	2.60	0.750	1/4-20 UNC	0.62	2.362	3/16 x 1.00
520	3.35	4.53	7.30	4.76	5.33	1.97	1.77	1.93	2.15	0.413	3.54	2.16	2.56	3.33	3.94	2.05	4.84	0.47	0.354	2.60	1.000	5/16-18 UNC	0.75	2.756	1/4 X 1.62
525	3.39	5.75	9.17	4.76	6.69	2.48	1.77	1.93	2.76	0.413	5.91	2.16	3.11	3.33	4.85	2.36	6.89	0.51	0.276	2.60	1.125	5/16-18 UNC	0.75	4.528	1/4 X 2.00
534	4.25	6.76	12.00	4.76	9.15	3.35	1.77	1.93	3.72	0.512	6.93	2.16	3.86	3.33	5.55	2.36	8.07	0.63	0.197	2.60	1.500	5/16-18 UNC	0.75	5.984	3/8 X 2.00

* Metric options are available. Refer to dimensions below. Contact Factory for availability of metric options.

Style DF



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DF DIMENSIONS - Inches

Series	AA	BC	BJ	C	C1	C2	CD	CE	D1	D2	HF	HJ	I1	I2	L	M	N	O	P	Q	R	S	T +0.000 -0.001	U +0.000 -0.001	X		Z	INPUT KEY	OUTPUT KEY
																									Tap Size	Depth			
518	2.38	4.35	7.90	6.42	4.76	4.76	1.77	1.77	1.93	1.93	0.335	3.43	2.16	2.16	3.86	1.67	2.97	1.26	4.33	0.35	0.354	1.18	0.750	0.625	1/4-20 UNC	0.62	2.362	3/16 X 1.00	3/16 X 1.00
520	3.35	4.53	8.47	7.30	4.76	5.33	1.97	1.77	1.93	2.15	0.413	3.54	2.16	2.56	3.86	1.67	3.94	2.05	4.84	0.47	0.354	1.18	1.000	0.625	5/16-18 UNC	0.75	2.756	3/16 X 1.00	1/4 X 1.62
525	3.39	5.75	10.24	9.17	4.76	6.69	2.48	1.77	1.93	2.76	0.413	5.91	2.16	3.11	3.86	1.67	4.85	2.36	6.89	0.51	0.276	1.18	1.125	0.625	5/16-18 UNC	0.75	4.528	3/16 X 1.00	1/4 X 2.00
534	4.25	6.76	12.01	12.00	4.76	9.15	3.35	1.77	1.93	3.72	0.512	6.93	2.16	3.86	3.86	1.67	5.55	2.36	8.07	0.63	0.197	1.18	1.500	0.625	5/16-18 UNC	0.75	5.984	3/16 X 1.00	3/8 X 2.00

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	0.41	0.625	3/16 x 3/32

OPTIONAL METRIC DIMENSIONS - MM

Series	LQ♦			T H7	O	N	Output Keyway
	IEC B5 & B14 Options	D56D■	D63D					D71D
518	74♦	74♦	74	18	32	75	6
520	74♦	74♦	74	25	52	100	8
525	74♦	74♦	74	25	60	123	8
534	74♦	74♦	74	35	60	141	10

OPTIONAL METRIC DIMENSIONS - MM

IEC Frame	B5					B14♦					Input Bore Dia	Input Keyway▲
	AJ	AK	BD	BE	BF	AJ	AK	BD	BE	BF♦		
D56D	N/A	N/A	N/A	N/A	N/A	65♦	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75♦	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85♦	70	105	8	6.5	14	5 x 2.5

♦ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.

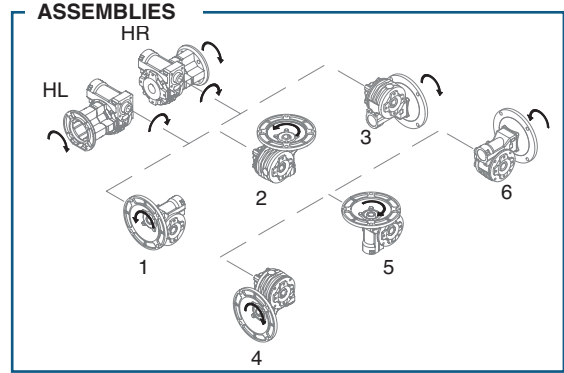
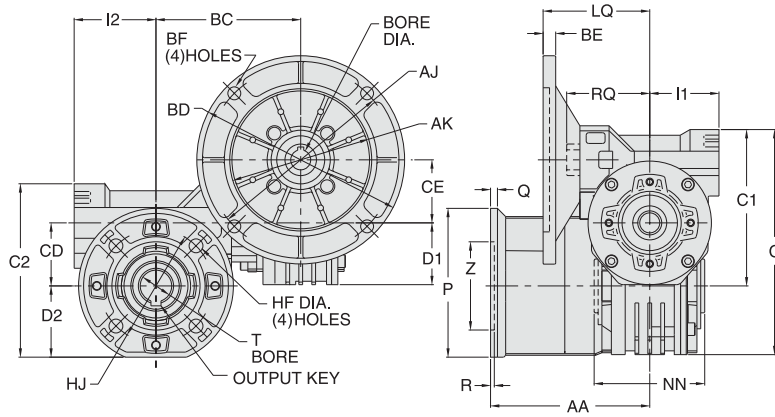
▲ Keyway width by depth

♦ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows: D56D(All), D63D(All)

♦ Dimensions are maximum (B5 and B14 options)

■ B5 Option not available

Style DFLHMQ



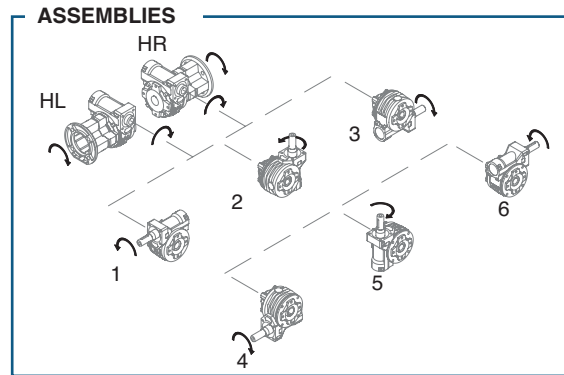
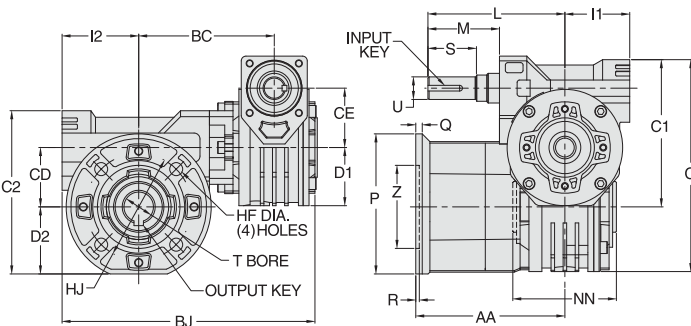
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DFLHMQ DIMENSIONS - Inches

Series	AA	BC	C	C1	C2	CD	CE	D1	D2	HF	HJ	I1	I2	LQ* 56C	NN	P	Q	R	RQ	T* +0.0015 -0.0000	Z	OUTPUT KEY*
518	3.56	4.35	6.42	4.76	4.76	1.77	1.77	1.93	1.93	0.335	3.43	2.16	2.16	3.33	2.56	4.33	0.35	0.354	2.60	0.750	2.362	3/16 X 1.00
520	4.51	4.53	7.30	4.76	5.33	1.97	1.77	1.93	2.15	0.413	3.54	2.16	2.56	3.33	3.19	4.84	0.47	0.354	2.60	1.000	2.756	1/4 X 1.62
525	4.57	5.75	9.17	4.76	6.69	2.48	1.77	1.93	2.76	0.413	5.91	2.16	3.11	3.33	4.72	6.89	0.51	0.276	2.60	1.125	4.528	1/4 X 2.00
534	5.85	6.76	12.00	4.76	9.15	3.35	1.77	1.93	3.72	0.512	6.93	2.16	3.86	3.33	5.31	8.07	0.63	0.197	2.60	1.500	5.984	3/8 X 2.00

* Metric options are available. Refer to dimensions on opposite page. Contact Factory for availability of metric options.

Style DFLH

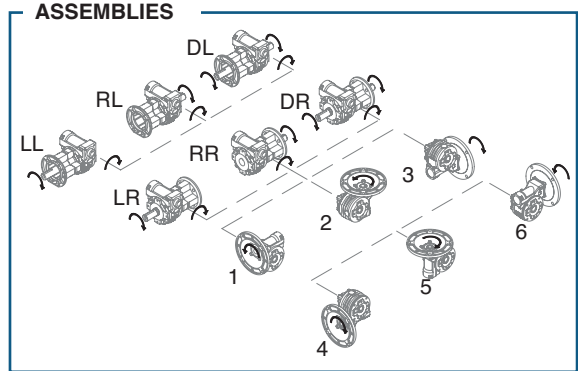
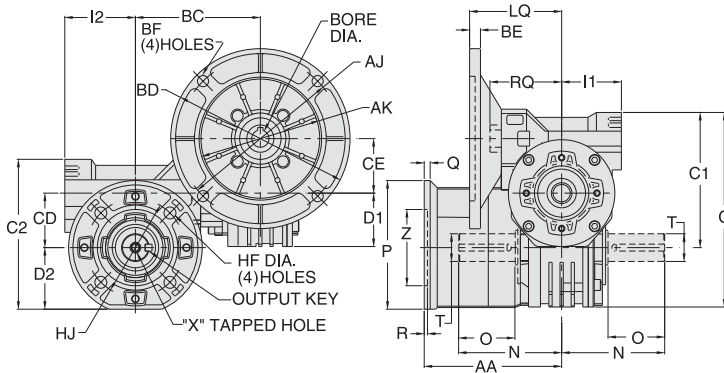


REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DFLH DIMENSIONS - Inches

Series	AA	BC	BJ	C	C1	C2	CD	CE	D1	D2	HF	HJ	I1	I2	L	M	NN	P	Q	R	S	T +0.0015 -0.0000	U +0.000 -0.001	Z	INPUT KEY	OUTPUT KEY
518	3.56	4.35	7.90	6.42	4.76	4.76	1.77	1.77	1.93	1.93	0.335	3.43	2.16	2.16	3.86	1.67	2.56	4.33	0.35	0.354	1.18	0.750	0.625	2.362	3/16 X 1.00	3/16 X 1.00
520	4.51	4.53	8.47	7.30	4.76	5.33	1.97	1.77	1.93	2.15	0.413	3.54	2.16	2.56	3.86	1.67	3.19	4.84	0.47	0.354	1.18	1.000	0.625	2.756	3/16 X 1.00	1/4 X 1.62
525	4.57	5.75	10.24	9.17	4.76	6.69	2.48	1.77	1.93	2.76	0.413	5.91	2.16	3.11	3.86	1.67	4.72	6.89	0.51	0.276	1.18	1.125	0.625	4.528	3/16 X 1.00	1/4 X 2.00
534	5.85	6.76	12.01	12.00	4.76	9.15	3.35	1.77	1.93	3.72	0.512	6.93	2.16	3.86	3.86	1.67	5.31	8.07	0.63	0.197	1.18	1.500	0.625	5.984	3/16 X 1.00	3/8 X 2.00

Style DFLMQ



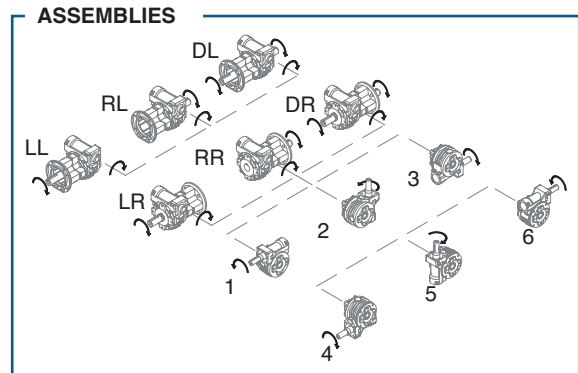
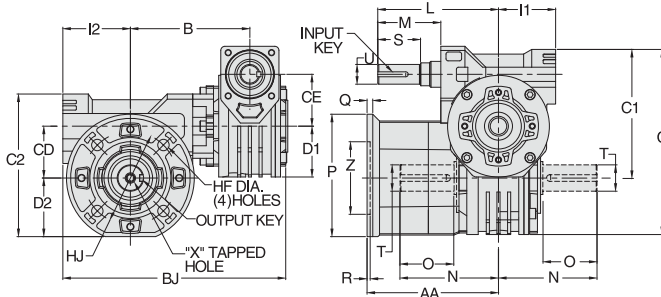
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DFLMQ DIMENSIONS - Inches

Series	AA	BC	C	C1	C2	CD	CE	D1	D2	HF	HJ	I1	I2	LQ* 56C	N	O*	P	Q	R	RQ	T* +0.000 -0.001	X		Z	OUTPUT KEY*
																						Tap Size	Depth		
518	3.56	4.35	6.42	4.76	4.76	1.77	1.77	1.93	1.93	0.335	3.43	2.16	2.16	3.33	2.97	1.26	4.33	0.35	0.354	2.60	0.750	1/4-20 UNC	0.62	2.362	3/16 x 1.00
520	4.51	4.53	7.30	4.76	5.33	1.97	1.77	1.93	2.15	0.413	3.54	2.16	2.56	3.33	3.94	2.05	4.84	0.47	0.354	2.60	1.000	5/16-18 UNC	0.75	2.756	1/4 X 1.62
525	4.57	5.75	9.17	4.76	6.69	2.48	1.77	1.93	2.76	0.413	5.91	2.16	3.11	3.33	4.85	2.36	6.89	0.51	0.276	2.60	1.125	5/16-18 UNC	0.75	4.528	1/4 X 2.00
534	5.85	6.76	12.00	4.76	9.15	3.35	1.77	1.93	3.72	0.512	6.93	2.16	3.86	3.33	5.55	2.36	8.07	0.63	0.197	2.60	1.500	5/16-18 UNC	0.75	5.984	3/8 X 2.00

* Metric options are available. Refer to dimensions below. Contact Factory for availability of metric options.

Style DFL



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DFL DIMENSIONS - Inches

Series	AA	BC	BJ	C	C1	C2	CD	CE	D1	D2	HF	HJ	I1	I2	L	M	N	O	P	Q	R	S	T +0.000 -0.001	U +0.000 -0.001	X		Z	INPUT KEY	OUTPUT KEY
																									Tap Size	Depth			
518	3.56	4.35	7.90	6.42	4.76	4.76	1.77	1.77	1.93	1.93	0.335	3.43	2.16	2.16	3.86	1.67	2.97	1.26	4.33	0.35	0.354	1.18	0.750	0.625	1/4-20 UNC	0.62	2.362	3/16 X 1.00	3/16 X 1.00
520	4.51	4.53	8.47	7.30	4.76	5.33	1.97	1.77	1.93	2.15	0.413	3.54	2.16	2.56	3.86	1.67	3.94	2.05	4.84	0.47	0.354	1.18	1.000	0.625	5/16-18 UNC	0.75	2.756	3/16 X 1.00	1/4 X 1.62
525	4.57	5.75	10.24	9.17	4.76	6.69	2.48	1.77	1.93	2.76	0.413	5.91	2.16	3.11	3.86	1.67	4.85	2.36	6.89	0.51	0.276	1.18	1.125	0.625	5/16-18 UNC	0.75	4.528	3/16 X 1.00	1/4 X 2.00
534	5.85	6.76	12.01	12.00	4.76	9.15	3.35	1.77	1.93	3.72	0.512	6.93	2.16	3.86	3.86	1.67	5.55	2.36	8.07	0.63	0.197	1.18	1.500	0.625	5/16-18 UNC	0.75	5.984	3/16 X 1.00	3/8 X 2.00

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	0.41	0.625	3/16 x 3/32

OPTIONAL METRIC DIMENSIONS* - MM

Series	LQ*			T H7	O	N	Output Keyway
	IEC B5 & B14 Options D56D■ D63D	D71D	(standard for metric units)				
518	74*	74*	74	18	32	75	6
520	74*	74*	74	25	52	100	8
525	74*	74*	74	25	60	123	8
534	74*	74*	74	35	60	141	10

OPTIONAL METRIC DIMENSIONS* - MM

IEC Frame	B5					B14*					Input Bore Dia	Input Keyway▲
	AJ	AK	BD	BE	BF	AJ	AK	BD	BE	BF*		
D56D	N/A	N/A	N/A	N/A	N/A	65*	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75*	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85*	70	105	8	6.5	14	5 x 2.5

* Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.

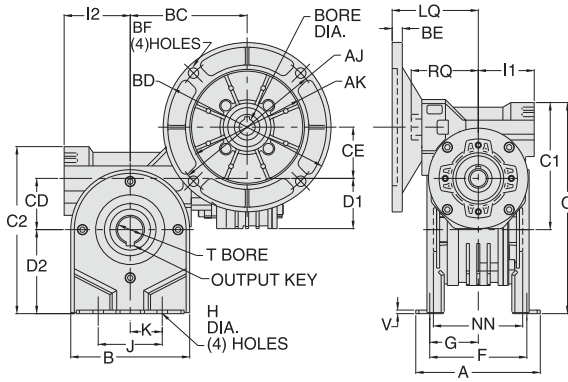
▲ Keyway width by depth

◆ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows: D56D(All), D63D(All)

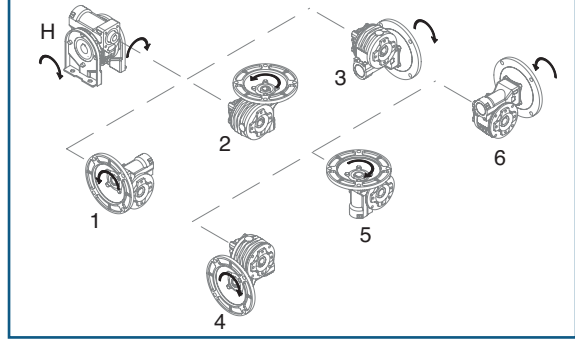
◆ Dimensions are maximum (B5 and B14 options)

■ B5 Option not available

Style DTHMQ



ASSEMBLIES



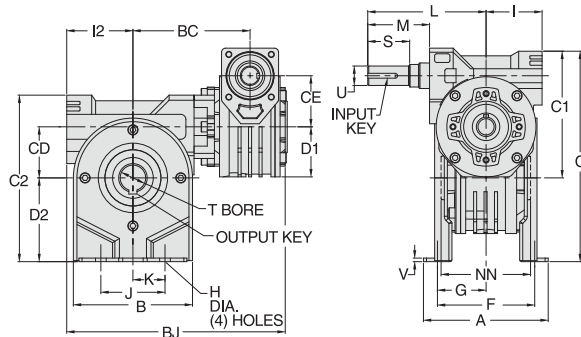
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DTHMQ DIMENSIONS - Inches

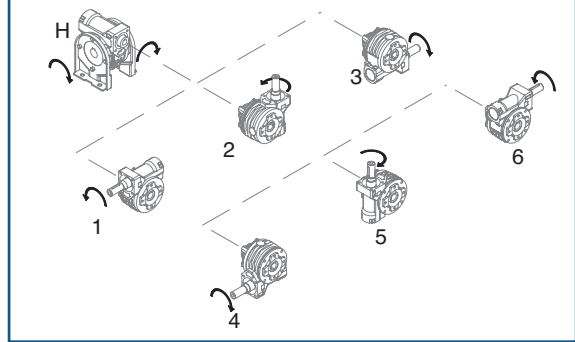
Series	A	B	BC	C	C1	C2	CD	CE	D1	D2	F	G	H	I1	I2	J	K	LQ* 56C	NN	RQ	T* +0.0015 -0.0000	V	OUTPUT KEY*
518	3.94	3.86	4.35	7.32	4.76	5.67	1.77	1.77	1.93	2.83	3.17	1.59	0.413	2.16	2.16	1.97	0.99	3.33	2.56	2.60	0.750	0.12	3/16 X 1.00
520	4.84	4.45	4.53	8.38	4.76	6.42	1.97	1.77	1.93	3.23	3.94	1.97	0.413	2.16	2.56	2.48	1.24	3.33	3.19	2.60	1.000	0.14	1/4 X 1.62
525	5.67	5.24	5.75	10.35	4.76	7.87	2.48	1.77	1.93	3.94	4.35	2.18	0.413	2.16	3.11	3.74	1.87	3.33	4.72	2.60	1.125	0.16	1/4 X 2.00
534	7.17	7.09	6.76	13.86	4.76	11.02	3.35	1.77	1.93	5.59	5.71	2.86	0.413	2.16	3.86	5.51	2.76	3.33	5.31	2.60	1.500	0.20	3/8 X 2.00

* Metric options are available. Refer to dimensions on opposite page. Contact Factory for availability of metric options.

Style DTH



ASSEMBLIES

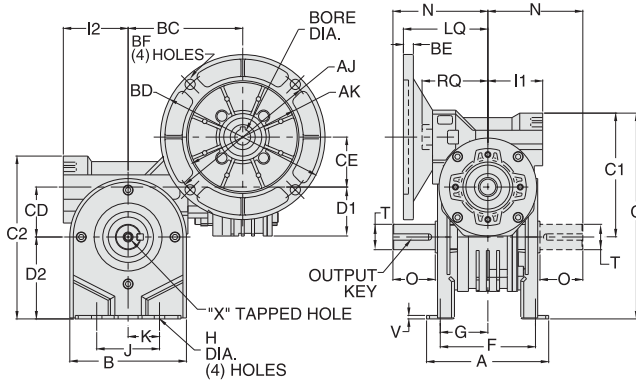


REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

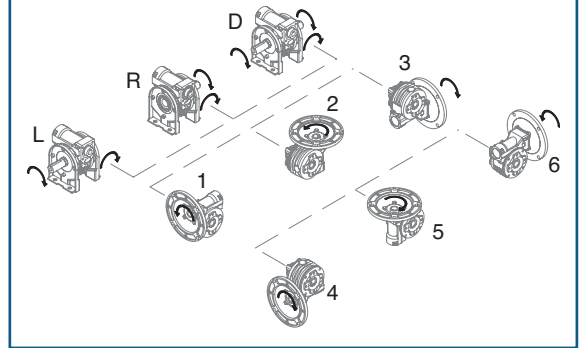
STYLE DTH DIMENSIONS - Inches

Series	A	B	BC	BJ	C	C1	C2	CD	CE	D1	D2	F	G	H	I1	I2	J	K	L	M	NN	S	T +0.0015 -0.0000	U +0.000 -0.001	V	INPUT KEY	OUTPUT KEY
518	3.94	3.86	4.35	7.90	7.32	4.76	5.67	1.77	1.77	1.93	2.83	3.17	1.59	0.413	2.16	2.16	1.97	0.99	3.86	1.67	2.56	1.18	0.750	0.625	0.12	3/16 X 1.00	3/16 X 1.00
520	4.84	4.45	4.53	8.47	8.38	4.76	6.42	1.97	1.77	1.93	3.23	3.94	1.97	0.413	2.16	2.56	2.48	1.24	3.86	1.67	3.19	1.18	1.000	0.625	0.14	3/16 X 1.00	1/4 X 1.62
525	5.67	5.24	5.75	10.24	10.35	4.76	7.87	2.48	1.77	1.93	3.94	4.35	2.18	0.413	2.16	3.11	3.74	1.87	3.86	1.67	4.72	1.18	1.125	0.625	0.16	3/16 X 1.00	1/4 X 2.00
534	7.17	7.09	6.76	12.01	13.86	4.76	11.02	3.35	1.77	1.93	5.59	5.71	2.86	0.413	2.16	3.86	5.51	2.76	3.86	1.67	5.31	1.18	1.500	0.625	0.20	3/16 X 1.00	3/8 X 2.00

Style DTMQ



ASSEMBLIES



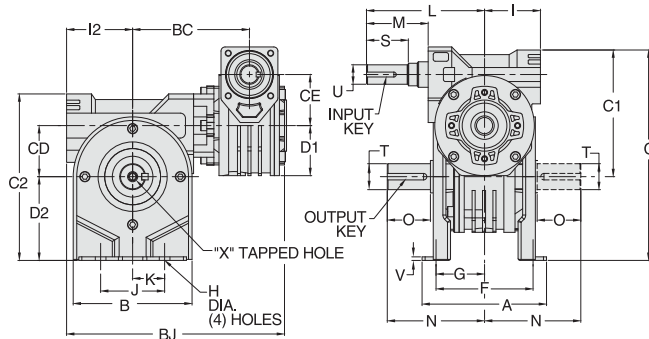
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DTMQ DIMENSIONS - Inches

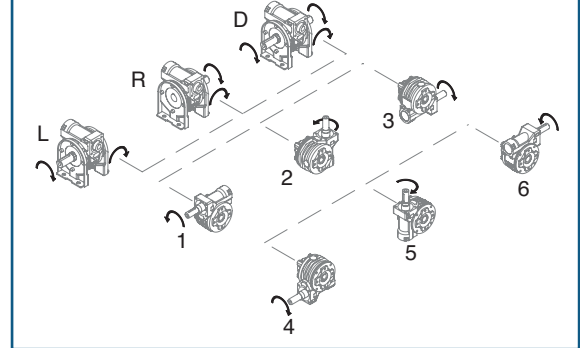
Series	A	B	BC	C	C1	C2	CD	CE	D1	D2	F	G	H	I1	I2	J	K	LQ* 56C	N	O*	RQ	T* +0.000 -0.001	V	X		OUTPUT KEY*
																								Tap Size	Depth	
518	3.94	3.86	4.35	7.32	4.76	5.67	1.77	1.77	1.93	2.83	3.17	1.59	0.413	2.16	2.16	1.97	0.99	3.33	2.97	1.26	2.60	0.750	0.12	1/4-20 UNC	0.62	3/16 x 1.00
520	4.84	4.45	4.53	8.38	4.76	6.42	1.97	1.77	1.93	3.23	3.94	1.97	0.413	2.16	2.56	2.48	1.24	3.33	3.94	2.05	2.60	1.000	0.14	5/16-18 UNC	0.75	1/4 X 1.62
525	5.67	5.24	5.75	10.35	4.76	7.87	2.48	1.77	1.93	3.94	4.35	2.18	0.413	2.16	3.11	3.74	1.87	3.33	4.85	2.36	2.60	1.125	0.16	5/16-18 UNC	0.75	1/4 X 2.00
534	7.17	7.09	6.76	13.86	4.76	11.02	3.35	1.77	1.93	5.59	5.71	2.86	0.413	2.16	3.86	5.51	2.76	3.33	5.55	2.36	2.60	1.500	0.20	5/16-18 UNC	0.75	3/8 X 2.00

* Metric options are available. Refer to dimensions below. Contact Factory for availability of metric options.

Style DT



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DT DIMENSIONS - Inches

Series	A	B	BC	BJ	C	C1	C2	CD	CE	D1	D2	F	G	H	I1	I2	J	K	L	M	N	O	S	T +0.000 -0.001	U +0.000 -0.001	V	X		INPUT KEY	OUTPUT KEY
																											Tap Size	Depth		
518	3.94	3.86	4.35	7.90	7.32	4.76	5.67	1.77	1.77	1.93	2.83	3.17	1.59	0.413	2.16	2.16	1.97	0.99	3.86	1.67	2.97	1.26	1.18	0.750	0.625	0.12	1/4-20 UNC	0.62	3/16 X 1.00	3/16 X 1.00
520	4.84	4.45	4.53	8.47	8.38	4.76	6.42	1.97	1.77	1.93	3.23	3.94	1.97	0.413	2.16	2.56	2.48	1.24	3.86	1.67	3.94	2.05	1.18	1.000	0.625	0.14	5/16-18 UNC	0.75	3/16 X 1.00	1/4 X 1.62
525	5.67	5.24	5.75	10.24	10.35	4.76	7.87	2.48	1.77	1.93	3.94	4.35	2.18	0.413	2.16	3.11	3.74	1.87	3.86	1.67	4.85	2.36	1.18	1.125	0.625	0.16	5/16-18 UNC	0.75	3/16 X 1.00	1/4 X 2.00
534	7.17	7.09	6.76	12.01	13.86	4.76	11.02	3.35	1.77	1.93	5.59	5.71	2.86	0.413	2.16	3.86	5.51	2.76	3.86	1.67	5.55	2.36	1.18	1.500	0.625	0.20	5/16-18 UNC	0.75	3/16 X 1.00	3/8 X 2.00

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	0.41	0.625	3/16 x 3/32

OPTIONAL METRIC DIMENSIONS - MM

Series	LQ♦			T H7	O	N	Output Keyway
	IEC B5 & B14 Options D56D■ D63D D71D						
518	74♦	74♦	74	18	32	75	6
520	74♦	74♦	74	25	52	100	8
525	74♦	74♦	74	25	60	123	8
534	74♦	74♦	74	35	60	141	10

♦ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.

▲ Keyway width by depth

♦ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows: D56D(All), D63D(All)

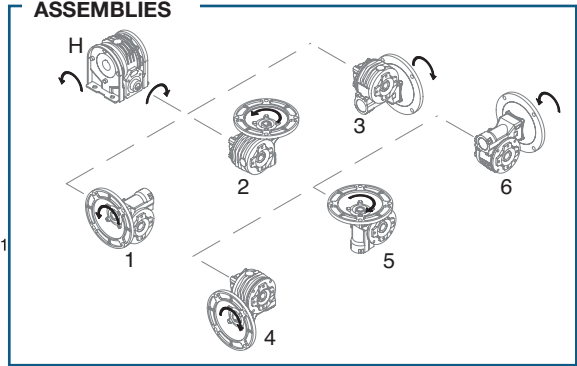
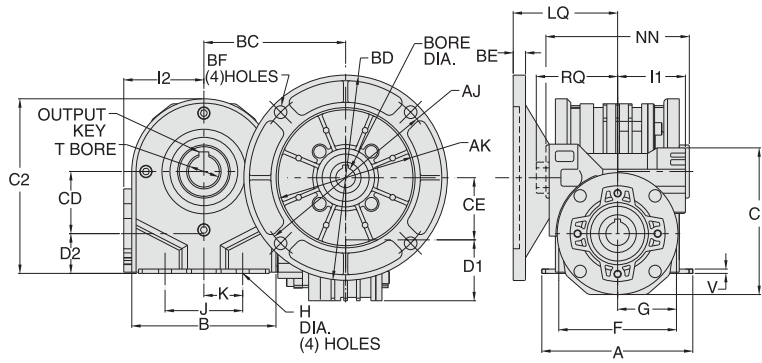
♦ Dimensions are maximum (B5 and B14 options)

■ B5 Option not available

OPTIONAL METRIC DIMENSIONS - MM

IEC Frame	B5					B14♦					Input Bore Dia	Input Keyway▲
	AJ	AK	BD	BE	BF	AJ	AK	BD	BE	BF♦		
D56D	N/A	N/A	N/A	N/A	N/A	65♦	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75♦	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85♦	70	105	8	6.5	14	5 x 2.5

Style DUHMQ



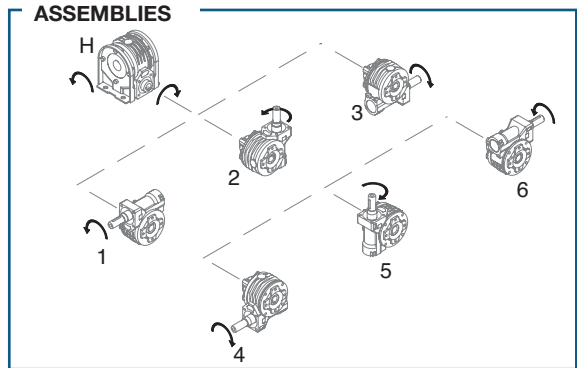
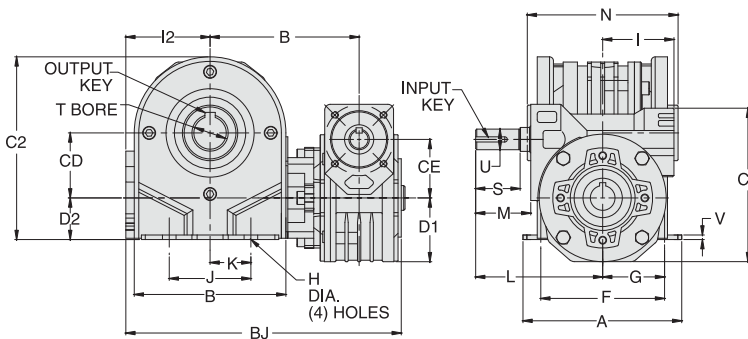
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DUHMQ DIMENSIONS - Inches

Series	A	B	BC	C1	C2	CD	CE	D1	D2	F	G	H	I1	I2	J	K	LQ* 56C	NN	RQ	T* +0.0015 -0.0000	V	OUTPUT KEY*
518	3.94	3.86	4.35	4.76	4.76	1.77	1.77	1.93	1.06	3.17	1.59	0.413	2.16	2.16	1.97	0.99	3.33	2.56	2.60	0.750	0.12	3/16 X 1.00
520	4.84	4.45	4.53	4.76	5.45	1.97	1.77	1.93	1.26	3.94	1.97	0.413	2.16	2.56	2.48	1.24	3.33	3.19	2.60	1.000	0.14	1/4 X 1.62
525	5.67	5.24	5.75	4.76	6.69	2.48	1.77	1.93	1.45	4.35	2.18	0.413	2.16	3.11	3.74	1.87	3.33	4.72	2.60	1.125	0.16	1/4 X 2.00
534	7.17	7.09	6.76	4.76	9.31	3.35	1.77	1.93	2.24	5.71	2.86	0.413	2.16	3.86	5.51	2.76	3.33	5.31	2.60	1.500	0.20	3/8 X 2.00

* Metric options are available. Refer to dimensions on opposite page. Contact Factory for availability of metric options.

Style DUH



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DUH DIMENSIONS - Inches

Series	A	B	BC	BJ	C1	C2	CD	CE	D1	D2	F	G	H	I1	I2	J	K	L	M	NN	S	T +0.0015 -0.0000	U +0.000 -0.001	V	INPUT KEY	OUTPUT KEY
518	3.94	3.86	4.35	7.90	4.76	4.76	1.77	1.77	1.93	1.06	3.17	1.59	0.413	2.16	2.16	1.97	0.99	3.86	1.67	2.56	1.18	0.750	0.625	0.12	3/16 X 1.00	3/16 X 1.00
520	4.84	4.45	4.53	8.47	4.76	5.45	1.97	1.77	1.93	1.26	3.94	1.97	0.413	2.16	2.56	2.48	3.86	1.67	3.19	1.18	1.000	0.625	0.14	3/16 X 1.00	1/4 X 1.62	
525	5.67	5.24	5.75	10.24	4.76	6.69	2.48	1.77	1.93	1.45	4.35	2.18	0.413	2.16	3.11	3.74	1.87	3.86	1.67	4.72	1.18	1.125	0.625	0.16	3/16 X 1.00	1/4 X 2.00
534	7.17	7.09	6.76	12.01	4.76	9.31	3.35	1.77	1.93	2.24	5.71	2.86	0.413	2.16	3.86	5.51	2.76	3.86	1.67	5.31	1.18	1.500	0.625	0.20	3/16 X 1.00	3/8 X 2.00

Single Reduction Reducers

Double Reduction

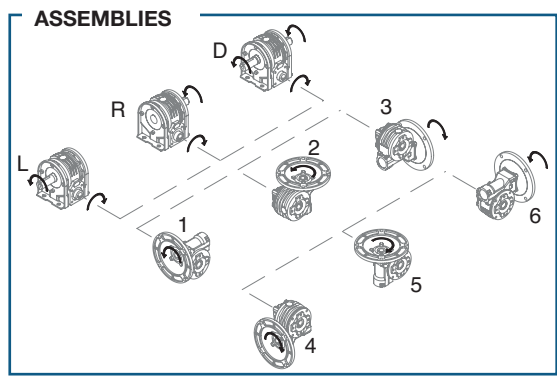
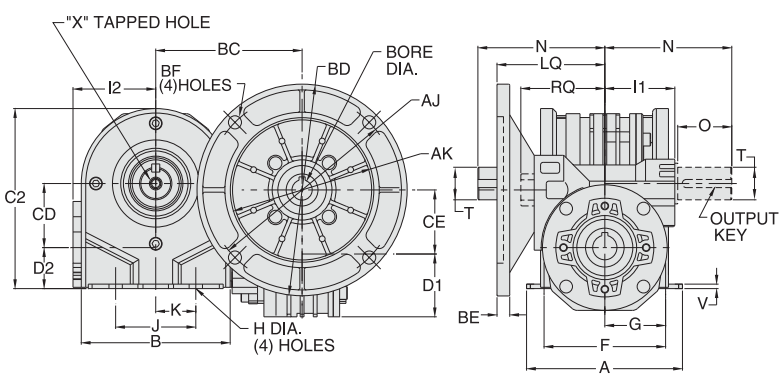
Double Reduction

Accessory Kits

High Efficiency Helical - In-line Gear Reducers

High Efficiency Helical - Worm Gear Reducers

Style DUMQ



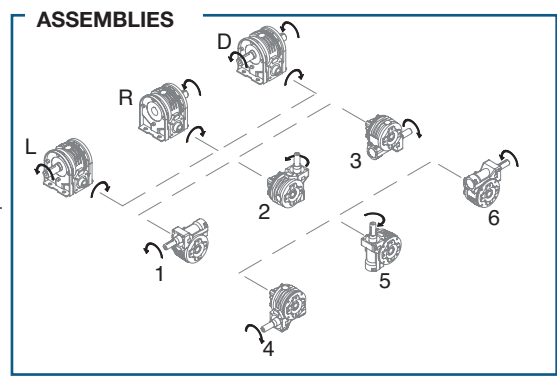
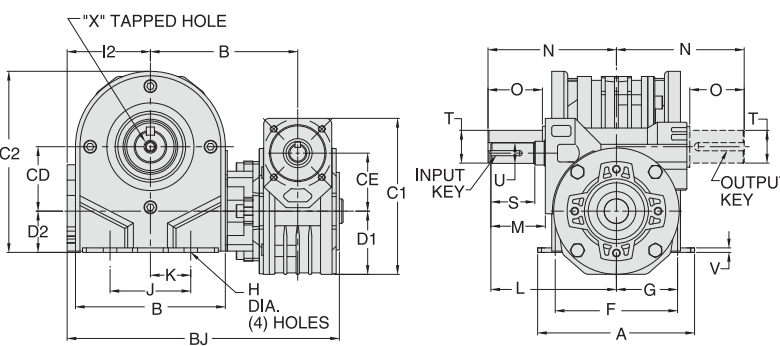
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DUMQ DIMENSIONS - Inches

Series	A	B	BC	C2	CD	CE	D1	D2	F	G	H	I1	I2	J	K	LQ* 56C	N	O*	RQ	T* +0.000 -0.001	V	X		OUTPUT KEY*
																						Tap Size	Depth	
518	3.94	3.86	4.35	4.76	1.77	1.77	1.93	1.06	3.17	1.59	0.413	2.16	2.16	1.97	0.99	3.33	2.97	1.26	2.60	0.750	0.12	1/4-20 UNC	0.62	3/16 x 1.00
520	4.84	4.45	4.53	5.45	1.97	1.77	1.93	1.26	3.94	1.97	0.413	2.16	2.56	2.48	1.24	3.33	3.94	2.05	2.60	1.000	0.14	5/16-18 UNC	0.75	1/4 X 1.62
525	5.67	5.24	5.75	6.69	2.48	1.77	1.93	1.45	4.35	2.18	0.413	2.16	3.11	3.74	1.87	3.33	4.85	2.36	2.60	1.125	0.16	5/16-18 UNC	0.75	1/4 X 2.00
534	7.17	7.09	6.76	9.31	3.35	1.77	1.93	2.24	5.71	2.86	0.413	2.16	3.86	5.51	2.76	3.33	5.55	2.36	2.60	1.500	0.20	5/16-18 UNC	0.75	3/8 X 2.00

* Metric options are available. Refer to dimensions below. Contact Factory for availability of metric options.

Style DU



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DU DIMENSIONS - Inches

Series	A	B	BC	BJ	C1	C2	CD	CE	D1	D2	F	G	H	I2	J	K	L	M	N	O	S	T +0.000 -0.001	U +0.000 -0.001	V	X		INPUT KEY	OUTPUT KEY
																									Tap Size	Depth		
518	3.94	3.86	4.35	7.90	4.76	4.76	1.77	1.77	1.93	1.06	3.17	1.59	0.413	2.16	1.97	0.99	3.86	1.67	2.97	1.26	1.18	0.750	0.625	0.12	1/4-20 UNC	0.62	3/16 X 1.00	3/16 X 1.00
520	4.84	4.45	4.53	8.47	4.76	5.45	1.97	1.77	1.93	1.26	3.94	1.97	0.413	2.56	2.48	1.24	3.86	1.67	3.94	2.05	1.18	1.000	0.625	0.14	5/16-18 UNC	0.75	3/16 X 1.00	1/4 X 1.62
525	5.67	5.24	5.75	10.24	4.76	6.69	2.48	1.77	1.93	1.45	4.35	2.18	0.413	3.11	3.74	1.87	3.86	1.67	4.85	2.36	1.18	1.125	0.625	0.16	5/16-18 UNC	0.75	3/16 X 1.00	1/4 X 2.00
534	7.17	7.09	6.76	12.01	4.76	9.31	3.35	1.77	1.93	2.24	5.71	2.86	0.413	3.86	5.51	2.76	3.86	1.67	5.55	2.36	1.18	1.500	0.625	0.20	5/16-18 UNC	0.75	3/16 X 1.00	3/8 X 2.00

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	0.41	0.625	3/16 x 3/32

OPTIONAL METRIC DIMENSIONS[Ⓞ] - MM

Series	LQ [◆]			T H7	O	N	Output Keyway
	IEC B5 & B14 Options						
	D56D■	D63D	D71D				
518	74 [◆]	74 [◆]	74	18	32	75	6
520	74 [◆]	74 [◆]	74	25	52	100	8
525	74 [◆]	74 [◆]	74	25	60	123	8
534	74 [◆]	74 [◆]	74	35	60	141	10

Ⓞ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.

▲ Keyway width by depth

◆ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows: D56D(All), D63D(All)

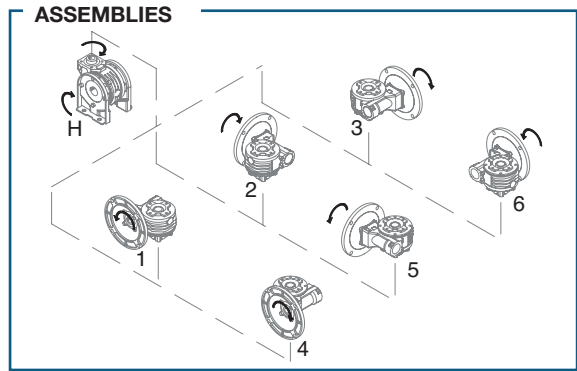
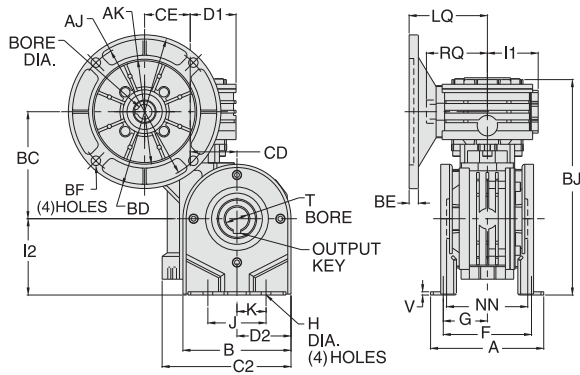
◆ Dimensions are maximum (B5 and B14 options)

■ B5 Option not available

OPTIONAL METRIC DIMENSIONS[Ⓞ] - MM

IEC Frame	B5					B14 [◆]					Input Bore Dia	Input Keyway▲
	AJ	AK	BD	BE	BF	AJ	AK	BD	BE	BF [◆]		
D56D	N/A	N/A	N/A	N/A	N/A	65 [◆]	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75 [◆]	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85 [◆]	70	105	8	6.5	11	5 x 2.5

Style DJHMQ



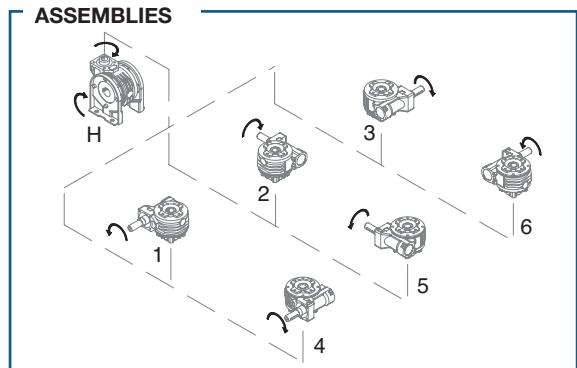
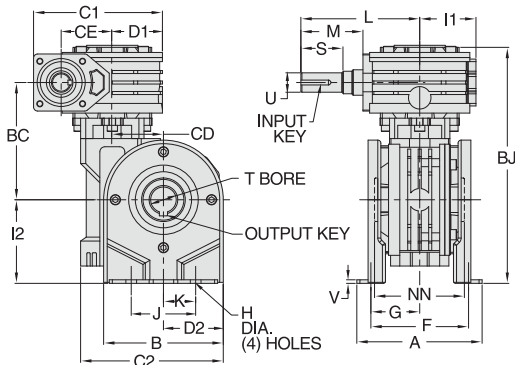
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DJHMQ DIMENSIONS - Inches

Series	A	B	BC	BJ	C2	CD	CE	D1	D2	F	G	H	I1	I2	J	K	LQ* 56C	NN	RQ	T* +0.0015 -0.0000	V	OUTPUT KEY*
518	3.94	3.86	4.35	8.57	4.76	1.77	1.77	1.93	1.93	3.17	1.59	0.413	2.16	2.83	1.97	0.99	3.33	2.56	2.60	0.750	0.12	3/16 X 1.00
520	4.84	4.45	4.53	9.13	5.33	1.97	1.77	1.93	2.15	3.94	1.97	0.413	2.16	3.22	2.48	1.24	3.33	3.19	2.60	1.000	0.14	1/4 X 1.62
525	5.67	5.24	5.75	11.07	6.69	2.48	1.77	1.93	2.76	4.35	2.18	0.413	2.16	3.94	3.74	1.87	3.33	4.72	2.60	1.125	0.16	1/4 X 2.00
534	7.17	7.09	6.76	13.74	9.15	3.35	1.77	1.93	3.72	5.71	2.86	0.413	2.16	5.59	5.51	2.76	3.33	5.31	2.60	1.500	0.20	3/8 X 2.00

* Metric options are available. Refer to dimensions on opposite page. Contact Factory for availability of metric options.

Style DJH



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DJH DIMENSIONS - Inches

Series	A	B	BC	BJ	C1	C2	CD	CE	D1	D2	F	G	H	I1	I2	J	K	L	M	NN	S	T +0.0015 -0.0000	U +0.000 -0.001	V	INPUT KEY	OUTPUT KEY
518	3.94	3.86	4.35	8.57	4.76	4.76	1.77	1.77	1.93	1.93	3.17	1.59	0.413	2.16	2.16	1.97	0.99	3.86	1.67	2.56	1.18	0.750	0.625	0.12	3/16 X 1.00	3/16 X 1.00
520	4.84	4.45	4.53	9.13	4.76	5.33	1.97	1.77	1.93	2.15	3.94	1.97	0.413	2.16	2.56	2.48	1.24	3.86	1.67	3.19	1.18	1.000	0.625	0.14	3/16 X 1.00	1/4 X 1.62
525	5.67	5.24	5.75	11.07	4.76	6.69	2.48	1.77	1.93	2.76	4.35	2.18	0.413	2.16	3.11	3.74	1.87	3.86	1.67	4.72	1.18	1.125	0.625	0.16	3/16 X 1.00	1/4 X 2.00
534	7.17	7.09	6.76	13.74	4.76	9.15	3.35	1.77	1.93	3.72	5.71	2.86	0.413	2.16	3.86	5.51	2.76	3.86	1.67	5.31	1.18	1.500	0.625	0.20	3/16 X 1.00	3/8 X 2.00

Single Reduction Reducers

Bravo® Worm - Worm Double Reduction

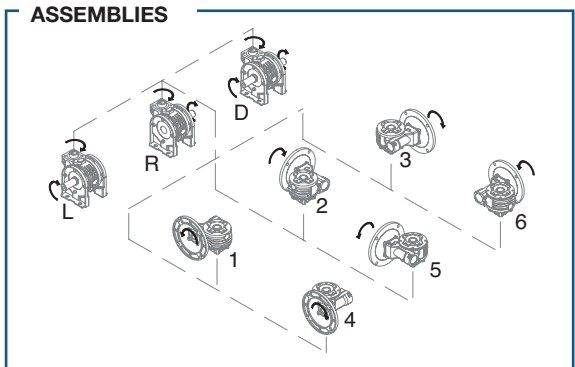
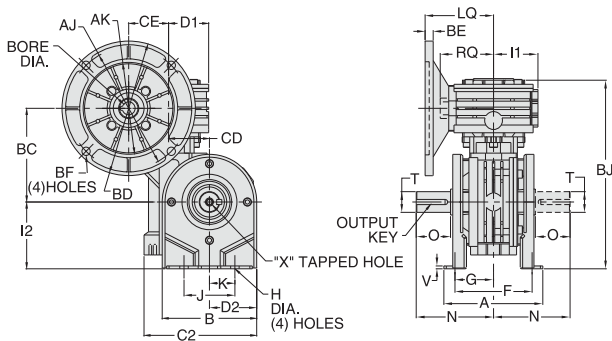
Bravo® Helical - Worm Double Reduction

Bravo® Accessory Kits

High Efficiency Helical - In-line Gear Reducers

High Efficiency Helical - Worm Gear Reducers

Style DJMQ



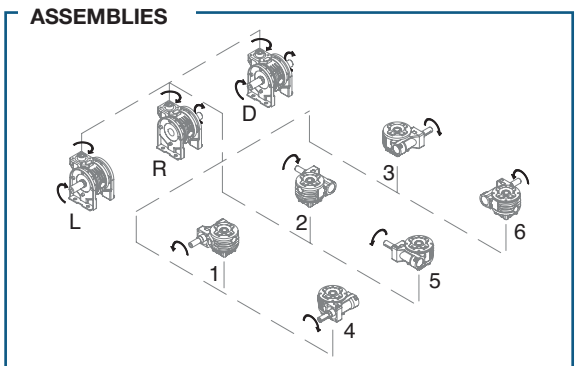
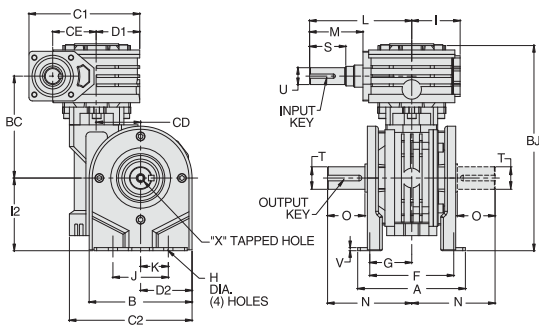
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DJMQ DIMENSIONS - Inches

Series	A	B	BC	BJ	C2	CD	CE	D1	D2	F	G	H	I1	I2	J	K	LQ* 56C	N	O*	RQ	T* +0.000 -0.001	V	X		OUTPUT KEY*	
																							Tap Size	Depth		
518	3.94	3.86	4.35	8.57	4.76	1.77	1.77	1.93	1.93	3.17	1.59	0.413	2.16	2.83	1.97	0.99	3.33	2.97	1.26	2.60	0.750	0.12	1/4-20 UNC	0.62	3/16 x 1.00	
520	4.84	4.45	4.53	9.13	5.33	1.97	1.77	1.93	2.15	3.94	1.97	0.413	2.16	3.22	2.48	1.24	3.33	3.94	2.05	2.60	1.000	0.14	5/16-18 UNC	0.75	1/4 X 1.62	
525	5.67	5.24	5.75	11.07	6.69	2.48	1.77	1.93	2.76	4.35	2.18	0.413	2.16	3.94	3.74	1.87	3.33	4.85	2.36	2.60	1.125	0.16	5/16-18 UNC	0.75	1/4 X 2.00	
534	7.17	7.09	6.76	13.74	9.15	3.35	1.77	1.93	3.72	5.71	2.86	0.413	2.16	5.59	5.51	2.76	3.33	5.55	2.36	2.60	1.500	0.20	5/16-18 UNC	0.75	3/8 X 2.00	

* Metric options are available. Refer to dimensions below. Contact Factory for availability of metric options.

Style DJ



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DJ DIMENSIONS - Inches

Series	A	B	BC	BJ	C1	C2	CD	CE	D1	D2	F	G	H	I1	I2	J	K	L	M	N	O	S	T +0.000 -0.001	U +0.000 -0.001	V	X		INPUT KEY	OUTPUT KEY
																							Tap Size	Depth					
518	3.94	3.86	4.35	8.57	4.76	4.76	1.77	1.77	1.93	1.93	3.17	1.59	0.413	2.16	2.83	1.97	0.99	3.86	1.67	2.97	1.26	1.18	0.750	0.625	0.12	1/4-20 UNC	0.62	3/16 X 1.00	3/16 X 1.00
520	4.84	4.45	4.53	9.13	4.76	5.33	1.97	1.77	1.93	2.15	3.94	1.97	0.413	2.16	3.22	2.48	1.24	3.86	1.67	3.94	2.05	1.18	1.000	0.625	0.14	5/16-18 UNC	0.75	3/16 X 1.00	1/4 X 1.62
525	5.67	5.24	5.75	11.07	4.76	6.69	2.48	1.77	1.93	2.76	4.35	2.18	0.413	2.16	3.94	3.74	1.87	3.86	1.67	4.85	2.36	1.18	1.125	0.625	0.16	5/16-18 UNC	0.75	3/16 X 1.00	1/4 X 2.00
534	7.17	7.09	6.76	13.74	4.76	9.15	3.35	1.77	1.93	3.72	5.71	2.86	0.413	2.16	5.59	5.51	2.76	3.86	1.67	5.55	2.36	1.18	1.500	0.625	0.20	5/16-18 UNC	0.75	3/16 X 1.00	3/8 X 2.00

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	0.41	0.625	3/16 x 3/32

OPTIONAL METRIC DIMENSIONS - MM

Series	LQ♦			T H7	O	N	Output Keyway
	IEC B5 & B14 Options	D56D■	D63D					D71D
518	74♦	74♦	74	18	32	75	6
520	74♦	74♦	74	25	52	100	8
525	74♦	74♦	74	25	60	123	8
534	74♦	74♦	74	35	60	141	10

OPTIONAL METRIC DIMENSIONS - MM

IEC Frame	B5					B14♦					Input Bore Dia	Input Keyway▲
	AJ	AK	BD	BE	BF	AJ	AK	BD	BE	BF		
D56D	N/A	N/A	N/A	N/A	N/A	65♦	50	80	7	6.5	9	3 x 1.5
D63D	115	95	140	11	9	75♦	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85♦	70	105	8	6.5	14	5 x 2.5

♦ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.
▲ Keyway width by depth
♦ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows: D56D(All), D63D(All)
♦ Dimensions are maximum (B5 and B14 options)
■ B5 Option not available

Hollow Output Shaft Mounted

BRAVO[®] Single Reduction Reducers

BRAVO[®] Worm - Worm Double Reduction

BRAVO[®] Helical - Worm Double Reduction

MOTORIZED QUILL INPUT

DXHMQ



DXRHMQ



DXFHMQ



Ratings: Pages 347-348
Dimensions: Page 350

Ratings: Pages 347-348
Dimensions: Page 364

Ratings: Pages 347-348
Dimensions: Page 352

NON-MOTORIZED SOLID INPUT SHAFT

DXH



DXRH



DXFH



Ratings: Pages 347-348
Dimensions: Page 350

Ratings: Pages 347-348
Dimensions: Page 364

Ratings: Pages 347-348
Dimensions: Page 352

Solid Output Shaft

BRAVO[®] Accessory Kits

MOTORIZED QUILL INPUT

DXMQ



DXRMQ



(Non-Standard Option)

DXFMQ



Ratings: Pages 347-348
Dimensions: Page 351

Ratings: Pages 347-348
Dimensions: Page 364

Ratings: Pages 347-348
Dimensions: Page 353

NON-MOTORIZED SOLID INPUT SHAFT

DX



DXR



(Non-Standard Option)

DXF



Ratings: Pages 347-348
Dimensions: Page 351

Ratings: Pages 347-348
Dimensions: Page 364

Ratings: Pages 347-348
Dimensions: Page 353

Mounting Accessories

Select the appropriate mounting accessories from this wide variety of options.

Non-Standard Option assemblies may be useful in certain applications. Please contact Factory with application details.



REACTION ARM R



F FLANGE (SHORT FLANGE)

High Efficiency Helical - Worm Gear Reducers

Single Reduction Reducers
BRAVO®

Double Reduction
BRAVO® Worm - Worm

Double Reduction
BRAVO® Helical - Worm

Accessory Kits
BRAVO®

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

DXFLHMQ



Ratings: Pages 347-348
Dimensions: Page 354

DXTHMQ



(❖Non-Standard Option)
Ratings: Pages 347-348
Dimensions: Page 356

DXUHMQ



(❖Non-Standard Option)
Ratings: Pages 347-348
Dimensions: Page 358

DXJHMQ



(❖Non-Standard Option)
Ratings: Pages 347-348
Dimensions: Page 360

DXFLH



Ratings: Pages 347-348
Dimensions: Page 354

DXTH



(❖Non-Standard Option)
Ratings: Pages 347-348
Dimensions: Page 356

DXUH



(❖Non-Standard Option)
Ratings: Pages 347-348
Dimensions: Page 358

DXJH



(❖Non-Standard Option)
Ratings: Pages 347-348
Dimensions: Page 360

DXFLMQ



Ratings: Pages 347-348
Dimensions: Page 355

DXTMQ



Ratings: Pages 347-348
Dimensions: Page 357

DXUMQ



Ratings: Pages 347-348
Dimensions: Page 359

DXJMQ



Ratings: Pages 347-348
Dimensions: Page 361

DXFL



Ratings: Pages 347-348
Dimensions: Page 355

DXT



Ratings: Pages 347-348
Dimensions: Page 357

DXU



Ratings: Pages 347-348
Dimensions: Page 359

DXJ



Ratings: Pages 347-348
Dimensions: Page 361



FL FLANGE
(LONG FLANGE)



HORIZONTAL BASE
(WORM OVER ASSEMBLY)



HORIZONTAL BASE
(WORM UNDER ASSEMBLY)



HORIZONTAL BASE
(VERTICAL INPUT SHAFT)

Bravo® Double Reduction • Helical - Worm Model Number System

BRAVO® Single Reduction Reducers

BRAVO® Worm - Worm Double Reduction

BRAVO® Helical - Worm Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline Gear Reducers

High Efficiency Helical - Worm Gear Reducers

Grove Gear 500 Series Gear Reducer Model Number Nomenclature

All stock and custom 500 series reducers are identified by a model number. The model number appears on the nameplate and describes pertinent features of the reducer. An example follows, along with a listing of the various letters and positions used.

NOTE: All reducers also have a catalog number—for example W5180001. Reducers and renewal parts should be ordered by catalog number. If a stock reducer has been factory modified by the addition of an optional base for example, the modification number T518, for example, is stamped in the blank column of the nameplate. Accessories that are field installed will not be noted on the nameplate.

Catalog numbers 5000 (for example, W5185000) and higher are custom reducers manufactured for a specific application. The machinery or equipment manufacturer should be contacted for replacement reducers. Renewal parts can be ordered from Grove Gear by catalog number.

TYPICAL NAMEPLATE

GROVE GEAR			
MAX INPUT HP @ 1750 RPM	0.100	OUTPUT TORQUE (IN-LBS)	420
DESC.	DXMQ518258L5612		RATIO 258
CATALOG NO.			DATE CODE A04
GROVE GEAR UNION GROVE, WI 53182		MOD	

Style **Series** **Ratio** **Output Shaft Orientation** **Motor Flange** **Shaft Dimension Code**

SOLID OUTPUT SHAFT
DXMQ – Motorized, Quill Input
DX – Non-Flanged

HOLLOW OUTPUT SHAFT
DXHMQ – Motorized, Quill Input
DXH – Non-Flanged

See Selection Tables on pages 347-348 for all available ratios

- L** – Left-hand Output Shaft*
 - R** – Right-hand Output Shaft*
 - D** – Double Output Shaft
 - H** – Hollow Output Shaft
- * Viewed from drive end of reducer.

OUTPUT SHAFT DIMENSION CODE ▲

Series	NEMA/Inch Options		IEC/Metric Options	
	Shaft Dia.	Shaft* Code	Shaft Dia.	Shaft Code
518	3/4"	12	18mm	18
520	1"	16	25mm	25
525	1-1/8"	18	25mm	25
534	1-1/2"	24	35mm	35

*Shaft Diameter in 1/16ths of an inch.

▲ Diameters and shaft codes of hollow bore styles are identical to those of solid shaft styles. Reducers with NEMA inputs will have inch dimensioned output shafts and reducers with IEC inputs will have metric dimensioned output shafts as standard.

ALUMINUM 500 SERIES CENTER DISTANCES

Series	Center Distance	
	(Inches)	(mm)
518	1.77	45
520	1.97	50
525	2.48	63
534	3.35	85

NEMA Input Flange Code	For NEMA Frame
56	56C
140	143-5TC

IEC Input Flange Code	For IEC Frame
63B14	63B14
63B5	63B5
71B14	71B14
71B5	71B5
80B14	80B14
80B5	80B5
90B14	90B14
90B5	90B5

Sample Model Number

Solid Shaft

Motorized Quill Input, Double Reduction Reducer, 1.77" Center Distance, 258:1 Ratio, Left Hand Output Shaft, and 5/8" Input Bore with NEMA 56C Flange.

DXMQ	518	258	L	56	12
Style	Series	Ratio	Output Shaft	Motor Input	Shaft Code

Hollow Shaft

Motorized Quill Input, Double Reduction Reducer, 1.77" Center Distance, 258:1 Ratio, 3/4" Hollow Output Shaft, and 5/8" Input Bore with NEMA 56C Flange.

DXHMQ	518	258	H	56	12
Style	Series	Ratio	Output Shaft	Motor Input Flange	Shaft Code

Maximum Rating Tables

518 & 520 Series • All Stock Styles



518 Series • 1.0 S.F.

Exact Ratio*	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)
30.1	1750	58.1	0.523	0.387	420
	1150	38.2	0.363	0.269	443
43	1750	40.7	0.377	0.271	420
	1150	26.7	0.261	0.188	443
60.2	1750	29.07	0.323	0.194	420
	1150	19.10	0.224	0.134	443
90.3	1750	19.38	0.227	0.129	420
	1150	12.74	0.157	0.090	443
120.4	1750	14.53	0.183	0.097	420
	1150	9.55	0.127	0.067	443
159.1	1750	11.00	0.150	0.073	420
	1150	7.23	0.104	0.051	443
197.8	1750	8.85	0.125	0.059	420
	1150	5.81	0.087	0.041	443
258	1750	6.78	0.100	0.045	420
	1150	4.46	0.070	0.031	443
301	1750	5.81	0.068	0.027	294
	1150	3.82	0.047	0.019	310
438.6	1750	3.99	0.052	0.019	294
	1150	2.62	0.036	0.013	310

* Contact Factory for additional ratio options available.

520 Series • 1.0 S.F.

Exact Ratio*	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)
30.1	1750	58.1	0.714	0.543	589
	1150	38.2	0.494	0.376	620
43	1750	40.7	0.507	0.380	589
	1150	26.7	0.350	0.263	620
60.2	1750	29.1	0.394	0.272	589
	1150	19.1	0.272	0.188	620
77.4	1750	22.61	0.396	0.241	673
	1150	14.86	0.274	0.167	708
111.8	1750	15.65	0.274	0.167	673
	1150	10.29	0.189	0.116	708
154.8	1750	11.30	0.215	0.121	673
	1150	7.43	0.149	0.083	708
184.9	1750	9.46	0.180	0.088	589
	1150	6.22	0.125	0.061	620
258	1750	6.78	0.135	0.063	589
	1150	4.46	0.093	0.044	620
292.4	1750	5.98	0.109	0.048	504
	1150	3.93	0.075	0.033	531
344	1750	5.09	0.068	0.027	336
	1150	3.34	0.047	0.019	354
430	1750	4.07	0.060	0.022	336
	1150	2.67	0.042	0.015	354

* Contact Factory for additional ratio options available.

WHEN ORDERING DOUBLE REDUCTION REDUCERS, SPECIFY COMPLETE MODEL NUMBER AS SHOWN ON PAGE 346.

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



525 Series • 1.0 S.F.

Exact Ratio*	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)
29.5	1750	59.4	1.767	1.307	1387
	1150	39.0	1.221	0.903	1460
37.2	1750	47.0	1.417	1.034	1387
	1150	30.9	0.981	0.716	1460
46.5	1750	37.6	1.340	0.938	1572
	1150	24.7	0.927	0.649	1655
55.8	1750	31.4	1.224	0.783	1572
	1150	20.6	0.845	0.541	1655
69.8	1750	25.09	1.026	0.626	1572
	1150	16.49	0.710	0.433	1655
87.8	1750	19.94	0.731	0.526	1664
	1150	13.10	0.506	0.364	1752
110.9	1750	15.78	0.595	0.417	1664
	1150	10.37	0.412	0.288	1752
138.6	1750	12.63	0.505	0.333	1664
	1150	8.30	0.350	0.231	1752
166.3	1750	10.52	0.463	0.278	1664
	1150	6.91	0.320	0.192	1752
207.9	1750	8.42	0.359	0.198	1480
	1150	5.53	0.249	0.137	1558
309.5	1750	5.65	0.260	0.133	1480
	1150	3.72	0.180	0.092	1558
369.6	1750	4.73	0.236	0.111	1480
	1150	3.11	0.164	0.077	1558
434.3	1750	4.03	0.166	0.070	1093
	1150	2.65	0.115	0.048	1151

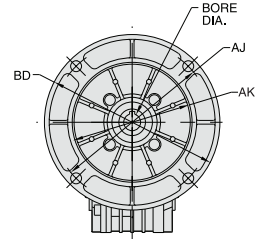
* Contact Factory for additional ratio options available.

534 Series • 1.0 S.F.

Exact Ratio*	Input RPM	Output RPM	Input HP	Output HP	Output Torque (lb-in)
32.3	1750	54.1	3.207	2.309	2690
	1150	35.6	2.221	1.599	2831
46.2	1750	37.9	2.311	1.618	2690
	1150	24.9	1.598	1.118	2831
58.9	1750	29.7	2.247	1.506	3195
	1150	19.5	1.553	1.041	3363
80.6	1750	21.71	1.804	1.101	3195
	1150	14.27	1.248	0.761	3363
103.9	1750	16.85	1.311	0.787	2943
	1150	11.07	0.907	0.544	3098
129.4	1750	13.53	1.053	0.632	2943
	1150	8.89	0.728	0.437	3098
175.6	1750	9.97	0.844	0.532	3363
	1150	6.55	0.584	0.368	3540
240.2	1750	7.28	0.696	0.369	3195
	1150	4.79	0.482	0.256	3363
309.5	1750	5.65	0.551	0.286	3195
	1150	3.72	0.382	0.198	3363
422.1	1750	4.15	0.373	0.194	2943
	1150	2.72	0.257	0.134	3098
443.5	1750	3.95	0.351	0.158	2522
	1150	2.59	0.242	0.109	2653
604.8	1750	2.89	0.289	0.116	2522
	1150	1.90	0.200	0.080	2653

* Contact Factory for additional ratio options available.

WHEN ORDERING DOUBLE REDUCTION REDUCERS, SPECIFY COMPLETE MODEL NUMBER AS SHOWN ON PAGE 346.



Single Reduction Reducers
BRAVO[®]

DOUBLE REDUCTION • HELICAL/WORM • MOTOR FRAME COMBINATIONS

Reducer Size	NEMA or IEC Frame Size	Dimensions - Inches (MM)				Available Ratios												
		AK	AJ	BD	Bore Dia.	30.1	43	60.2	90.3	120.4	159.1	197.8	258	301	438.6			
518	NEMA 56C	4.50	5.88	6.50	0.625	.	.	.	.	.	.	.	.	.	.
	IEC 63B5	3.74 (95)	4.53 (115)	5.51 (140)	(11)	■	■	■	■	■	■	■	■	■	■			
	IEC 63B14	2.36 (60)	2.95 (75)	3.54 (90)	(11)	■	■	■	■	■	■	■	■	■	■			
	IEC 71B5	4.33 (110)	5.12 (130)	6.30 (160)	(14)	.	.	.	.	.	.	.	.	.	.
	IEC 71B14	2.76 (70)	3.35 (85)	4.13 (105)	(14)	.	.	.	.	.	.	.	.	.	.
520	NEMA 56C	4.50	5.88	6.50	0.625	30.1	43	60.2	77.4	111.8	154.8	184.9	258	292.4	344	430		
	IEC 63B5	3.74 (95)	4.53 (115)	5.51 (140)	(11)	■	■	■	■	■	■	■	■	■	■	■		
	IEC 63B14	2.36 (60)	2.95 (75)	3.54 (90)	(11)	■	■	■	■	■	■	■	■	■	■	■		
	IEC 71B5	4.33 (110)	5.12 (130)	6.30 (160)	(14)	.	.	.	.	.	.	.	.	.	.	.
	IEC 71B14	2.76 (70)	3.35 (85)	4.13 (105)	(14)	.	.	.	.	.	.	.	.	.	.	.
525	NEMA 56C	4.50	5.88	6.50	0.625	29.5	37.2	46.5	55.8	69.8	87.8	110.9	138.6	166.3	207.9	309.5	369.6	434.3
	NEMA 140TC	4.50	5.88	6.50	0.875	.	.	.	.	.	.	.	.	.	.	.	.	.
	IEC 63B5	3.74 (95)	4.53 (115)	5.51 (140)	(11)	■	■	■	■	■	■	■	■	■	■	■	■	■
	IEC 63B14	2.36 (60)	2.95 (75)	3.54 (90)	(11)	■	■	■	■	■	■	■	■	■	■	■	■	■
	IEC 71B5	4.33 (110)	5.12 (130)	6.30 (160)	(14)	■	■	■	■	■	■	■	■	■	■	■	■	■
	IEC 71B14	2.76 (70)	3.35 (85)	4.13 (105)	(14)	■	■	■	■	■	■	■	■	■	■	■	■	■
	IEC 80B5	5.12 (130)	6.50 (165)	7.87 (200)	(19)	■	■	■	■	■	■	■	■	■	■	■	■	■
	IEC 80B14	3.15 (80)	3.94 (100)	4.72 (120)	(19)	■	■	■	■	■	■	■	■	■	■	■	■	■
	IEC 90B5	5.12 (130)	6.50 (165)	7.87 (200)	(24)	.	.	.	.	.	.	.	.	.	.	.	.	.
	IEC 90B14	3.74 (95)	4.53 (115)	5.51 (140)	(24)	.	.	.	.	.	.	.	.	.	.	.	.	.
534	NEMA 56C	4.50	5.88	6.50	0.625	32.3	46.2	58.9	80.6	103.9	129.4	175.6	240.2	309.5	422.1	443.5	604.8	
	NEMA 140TC	4.50	5.88	6.50	0.875	■	■	■	■	■	■	■	■	■	■	■	■	
	IEC 63B5	3.74 (95)	4.53 (115)	5.51 (140)	(11)	.	.	.	.	.	.	.	.	.	.	.	.
	IEC 71B5	4.33 (110)	5.12 (130)	6.30 (160)	(14)	■	■	■	■	■	■	■	■	■	■	■	■	
	IEC 71B14	2.76 (70)	3.35 (85)	4.13 (105)	(14)	■	■	■	■	■	■	■	■	■	■	■	■	
	IEC 80B5	5.12 (130)	6.50 (165)	7.87 (200)	(19)	■	■	■	■	■	■	■	■	■	■	■	■	
	IEC 80B14	3.15 (80)	3.94 (100)	4.72 (120)	(19)	■	■	■	■	■	■	■	■	■	■	■	■	
	IEC 90B5	5.12 (130)	6.50 (165)	7.87 (200)	(24)	.	.	.	.	.	.	.	.	.	.	.	.
	IEC 90B14	3.74 (95)	4.53 (115)	5.51 (140)	(24)	.	.	.	.	.	.	.	.	.	.	.	.

Double Reduction
BRAVO[®] Worm - Worm

Double Reduction
BRAVO[®] Helical - Worm

BRAVO[®] Accessory Kits

* Reducer selections are available. Refer to dimensional pages for additional dimensions and special conditions for flange mounting hole alignment.

■ Reducer selections are available. A bushing will be provided with reducer to achieve input bore diameter shown. Refer to dimensional pages for additional dimensions and special conditions for flange mounting hole alignment.

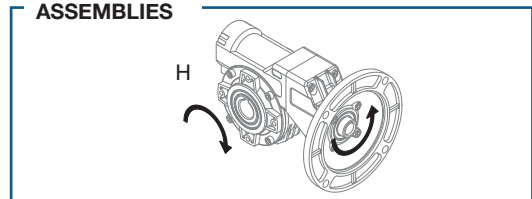
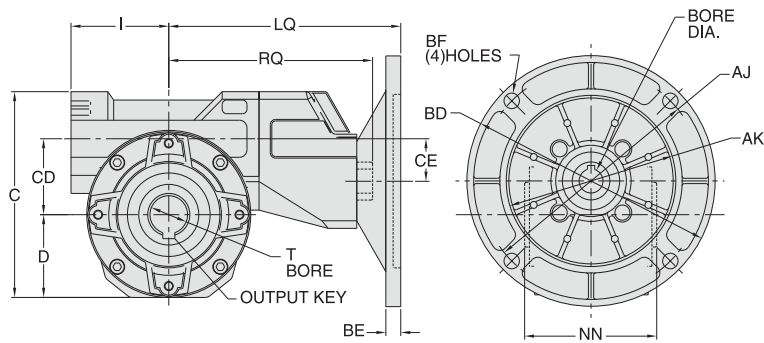
DOUBLE REDUCTION • HELICAL/WORM • EXACT RATIO COMBINATIONS

518			520			525			534		
TOTAL RATIO	P HELICAL	S 518	TOTAL RATIO	P HELICAL	S 520	TOTAL RATIO	P HELICAL	S 525	TOTAL RATIO	P HELICAL	S 534
30.1	4.3	7	30.1	4.3	7	29.5	1.55	19	32.3	4.62	7
43	4.3	10	43	4.3	10	37.2	1.55	24	46.2	4.62	10
60.2	4.3	14	60.2	4.3	14	46.5	1.55	30	58.9	1.55	38
90.3	4.3	21	77.4	4.3	18	55.8	1.55	36	80.6	1.55	52
120.4	4.3	28	111.8	4.3	26	69.8	1.55	45	103.9	1.55	67
159.1	4.3	37	154.8	4.3	36	87.8	4.62	19	129.4	4.62	28
197.8	4.3	46	184.9	4.3	43	110.9	4.62	24	175.6	4.62	38
258	4.3	60	258	4.3	60	138.6	4.62	30	240.2	4.62	52
301	4.3	70	292.4	4.3	68	166.3	4.62	36	309.5	4.62	67
438.6	4.3	102	344	4.3	80	207.9	4.62	45	422.1	6.3	67
			430	4.3	100	309.5	4.62	67	443.5	4.62	96
						369.6	4.62	80	604.8	6.3	96
						434.3	4.62	94			

High Efficiency Helical - Inline Gear Reducers

High Efficiency Helical - Worm Gear Reducers

Style DXHMQ



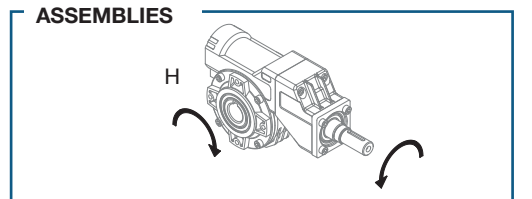
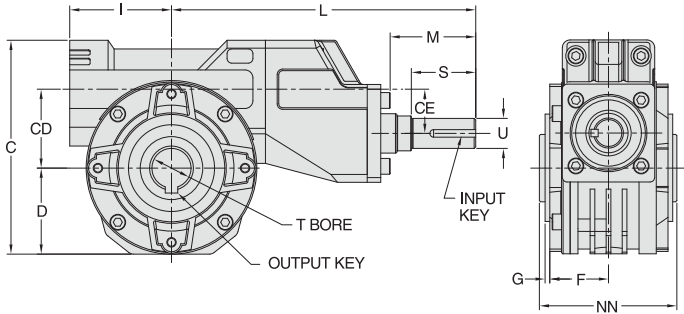
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXHMQ DIMENSIONS - Inches

Series	C	CD	CE	D	F [^]	G [^]	I	LQ* 56/140	NN	RQ	T* +0.0015 -0.0000	OUTPUT KEY*
518	4.76	1.77	1.10	1.93	1.38	0.08	2.16	6.23	2.56	5.59	0.750	3/16 X 1.00
520	5.33	1.97	1.10	2.15	1.50	0.12	2.56	6.41	3.19	5.77	1.000	1/4 X 1.62
525	6.69	2.48	1.50	2.76	1.77	0.19	3.11	7.17	4.72	6.49	1.125	1/4 X 2.00
534	9.15	3.35	1.50	3.72	2.52	0.14	3.86	7.84	5.31	7.42	1.500	3/8 X 2.00

* Metric options are available. Refer to dimensions on opposite page. Contact Factory for availability of metric options.
[^] Refer to Style DXH for reference to this dimension.

Style DXH



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXH DIMENSIONS - Inches

Series	C	CD	CE	D	F	G	I	L	M	NN	S	T +0.0015 -0.0000	U +0.000 -0.001	INPUT KEY	OUTPUT KEY
518	4.76	1.77	1.10	1.93	1.38	0.08	2.16	6.65	1.65	2.56	1.42	0.750	0.625	3/16 X 1.12	3/16 X 1.00
520	5.33	1.97	1.10	2.15	1.50	0.12	2.56	6.83	1.83	3.19	1.42	1.000	0.625	3/16 X 1.12	1/4 X 1.62
525	6.69	2.48	1.50	2.76	1.77	0.19	3.11	8.54	2.00	4.72	1.65	1.125	0.750	3/16 X 1.50	1/4 X 2.00
534	9.15	3.35	1.50	3.72	2.52	0.14	3.86	9.21	2.65	5.31	1.65	1.500	0.750	3/16 X 1.50	3/8 X 2.00

BRAVO[®] Single Reduction Reducers

BRAVO[®] Worm - Worm Double Reduction

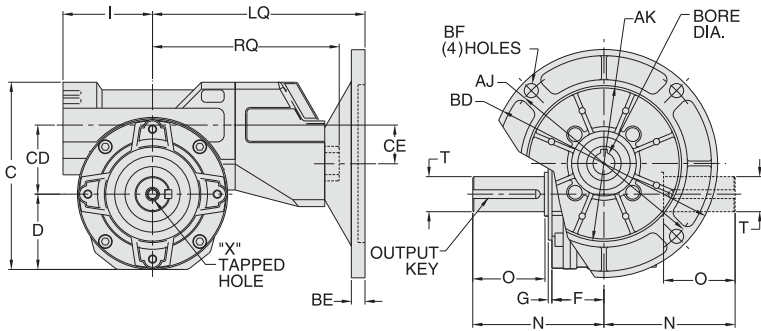
BRAVO[®] Helical - Worm Double Reduction

BRAVO[®] Accessory Kits

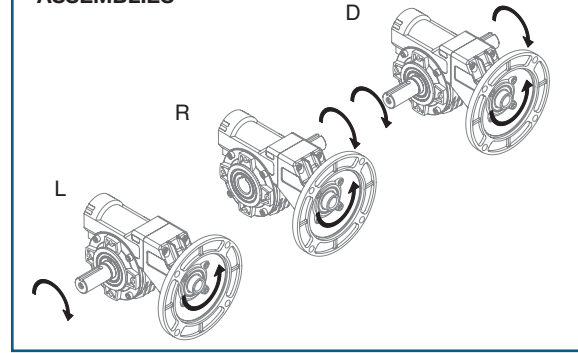
High Efficiency Helical - Inline Gear Reducers

High Efficiency Helical - Worm Gear Reducers

Style DXMQ



ASSEMBLIES



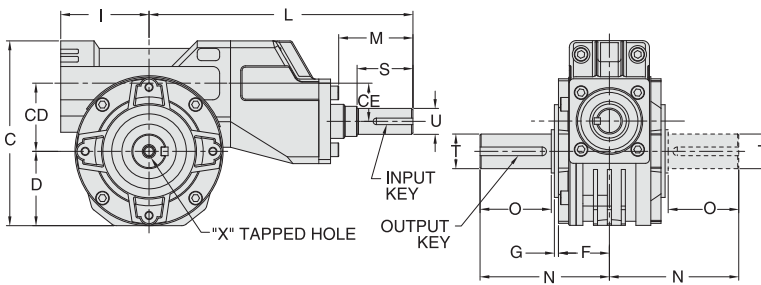
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXMQ DIMENSIONS - Inches

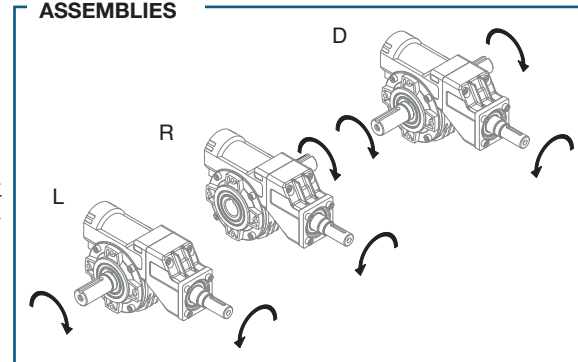
Series	C	CD	CE	D	F	G	I	LQ* 56/140	N	O*	RQ	T* +0.000 -0.001	X		OUTPUT KEY*
													Tap Size	Depth	
518	4.76	1.77	1.10	1.93	1.38	0.08	2.16	6.23	2.97	1.26	5.59	0.750	1/4-20 UNC	0.62	3/16 x 1.00
520	5.33	1.97	1.10	2.15	1.50	0.12	2.56	6.41	3.94	2.05	5.77	1.000	5/16-18 UNC	0.75	1/4 X 1.62
525	6.69	2.48	1.50	2.76	1.77	0.19	3.11	7.17	4.85	2.36	6.49	1.125	5/16-18 UNC	0.75	1/4 X 2.00
534	9.15	3.35	1.50	3.72	2.52	0.14	3.86	7.84	5.55	2.36	7.42	1.500	5/16-18 UNC	0.75	3/8 X 2.00

* Metric options are available. Refer to dimensions below. Contact Factory for availability of metric options.

Style DX



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DX DIMENSIONS - Inches

Series	C	CD	CE	D	F	G	I	L	M	N	O	S	T +0.000 -0.001	U +0.000 -0.001	X		INPUT KEY	OUTPUT KEY
															Tap Size	Depth		
518	4.76	1.77	1.10	1.93	1.38	0.08	2.16	6.65	1.65	2.97	1.26	1.42	0.750	0.625	1/4-20 UNC	0.62	3/16 X 1.12	3/16 X 1.00
520	5.33	1.97	1.10	2.15	1.50	0.12	2.56	6.83	1.83	3.94	2.05	1.42	1.000	0.625	5/16-18 UNC	0.75	3/16 X 1.12	1/4 X 1.62
525	6.69	2.48	1.50	2.76	1.77	0.19	3.11	8.54	2.00	4.85	2.36	1.65	1.125	0.750	5/16-18 UNC	0.75	3/16 X 1.50	1/4 X 2.00
534	9.15	3.35	1.50	3.72	2.52	0.14	3.86	9.21	2.65	5.55	2.36	1.65	1.500	0.750	5/16-18 UNC	0.75	3/16 X 1.50	3/8 X 2.00

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	0.41	.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	0.41	.875	3/16 x 3/32

OPTIONAL METRIC DIMENSIONS[⊖] - MM

Series	LQ*				T H7	O	N	Output Keyway
	IEC B5 & B14 Options							
	D63D	D71D	D80D	D90D				
518	136	136	N/A	N/A	18	32	75	6
520	141	141	N/A	N/A	25	52	100	8
525	179	179	179	179	25	60	123	8
534	197	197	197	197	35	60	141	10

OPTIONAL METRIC DIMENSIONS[⊖] - MM

IEC Frame	B5					B14 [⊖]					Input Bore Dia	Input Keyway▲
	AJ	AK	BD	BE	BF	AJ	AK	BD	BE	BF [⊖]		
D63D	115	95	140	11	9	75 [⊖]	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85 [⊖]	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100 [⊖]	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5

⊖ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.

▲ Keyway width by depth

⊖ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows:
D63D(All), D71D & D80D(Series 525 & 534)

⊖ Dimensions are maximum (B5 and B14 options)

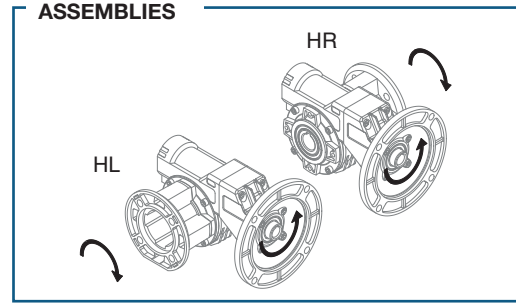
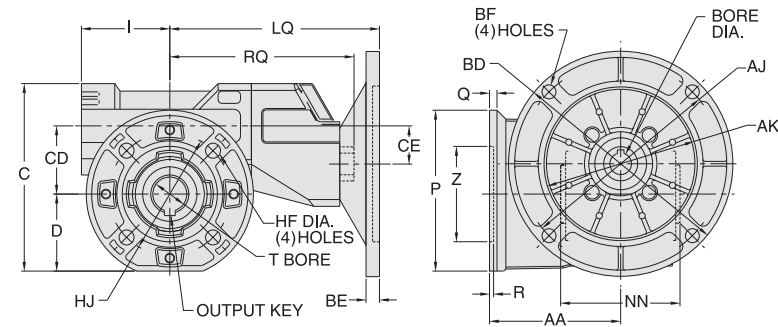
■ B14 Option not available

Style DXFHMQ

BRAVO[®] Single Reduction Reducers

BRAVO[®] Worm - Worm Double Reduction

BRAVO[®] Helical - Worm Double Reduction



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXFHMQ DIMENSIONS - Inches

Series	AA	C	CD	CE	D	HF	HJ	I	LQ* 56/140	NN	P	Q	R	RQ	T* +0.0015 -0.0000	Z	OUTPUT KEY*
518	2.38	4.76	1.77	1.10	1.93	0.335	3.43	2.16	6.23	2.56	4.33	0.35	0.354	5.59	0.750	2.362	3/16 X 1.00
520	3.35	5.33	1.97	1.10	2.15	0.413	3.54	2.56	6.41	3.19	4.84	0.47	0.354	5.77	1.000	2.756	1/4 X 1.62
525	3.39	6.69	2.48	1.50	2.76	0.413	5.91	3.11	7.17	4.72	6.89	0.51	0.276	6.49	1.125	4.528	1/4 X 2.00
534	4.25	9.15	3.35	1.50	3.72	0.512	6.93	3.86	7.84	5.31	8.07	0.63	0.197	7.42	1.500	5.984	3/8 X 2.00

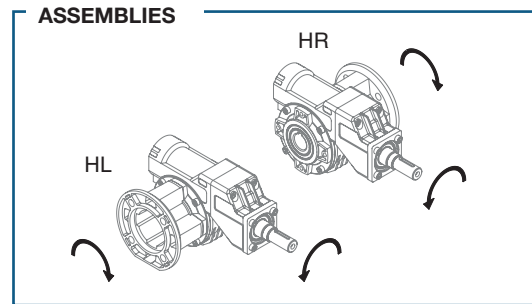
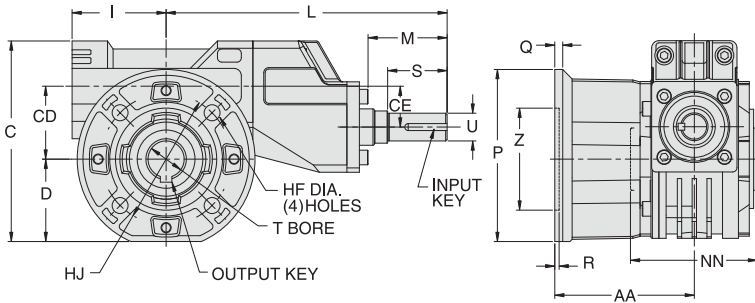
* Metric options are available. Refer to dimensions on opposite page. Contact Factory for availability of metric options.

Style DXFH

BRAVO[®] Accessory Kits

High Efficiency Helical - In-line Gear Reducers

High Efficiency Helical - Worm Gear Reducers

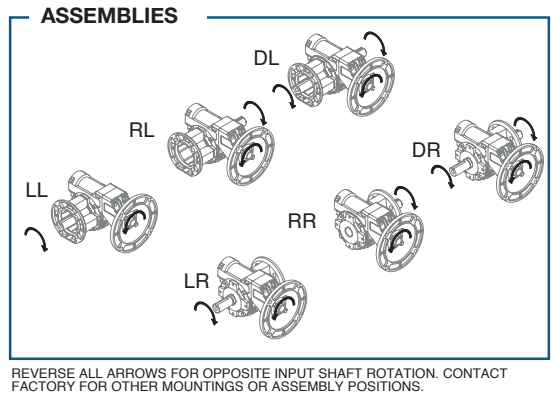
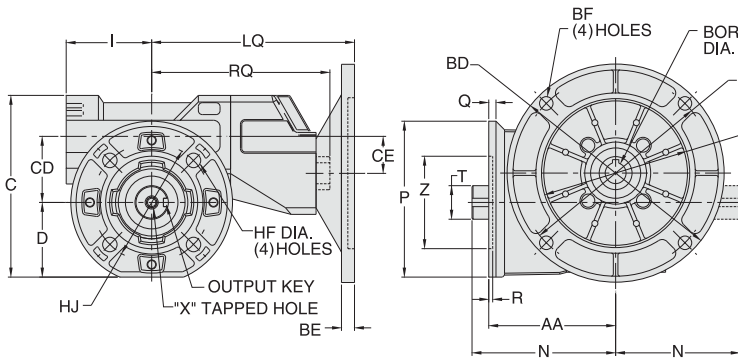


REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXFH DIMENSIONS - Inches

Series	AA	C	CD	CE	D	HF	HJ	I	L	M	NN	P	Q	R	S	T +0.0015 -0.0000	U +0.000 -0.001	Z	INPUT KEY	OUTPUT KEY
518	2.38	4.76	1.77	1.10	1.93	0.335	3.43	2.16	6.65	1.65	2.56	4.33	0.35	0.354	1.42	0.750	0.625	2.362	3/16 X 1.12	3/16 X 1.00
520	3.35	5.33	1.97	1.10	2.15	0.413	3.54	2.56	6.83	1.83	3.19	4.84	0.47	0.354	1.42	1.000	0.625	2.756	3/16 X 1.12	1/4 X 1.62
525	3.39	6.69	2.48	1.50	2.76	0.413	5.91	3.11	8.54	2.00	4.72	6.89	0.51	0.276	1.65	1.125	0.750	4.528	3/16 X 1.50	1/4 X 2.00
534	4.25	9.15	3.35	1.50	3.72	0.512	6.93	3.86	9.21	2.65	5.31	8.07	0.63	0.197	1.65	1.500	0.750	5.984	3/16 X 1.50	3/8 X 2.00

Style DXFMQ

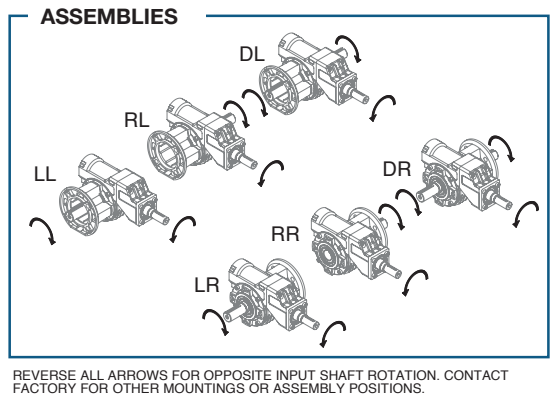
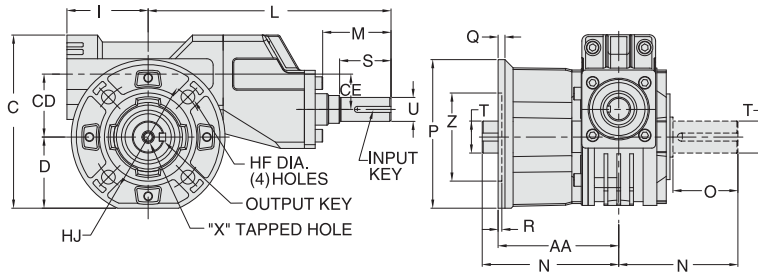


STYLE DXFMQ DIMENSIONS - Inches

Series	AA	C	CD	CE	D	HF	HJ	I	LQ* 56/140	N	O*	P	Q	R	RQ	T* +0.000 -0.001	X		Z	OUTPUT KEY*
																	Tap Size	Depth		
518	2.38	4.76	1.77	1.10	1.93	0.335	3.43	2.16	6.23	2.97	1.26	4.33	0.35	0.354	5.59	0.750	1/4-20 UNC	0.62	2.362	3/16 x 1.00
520	3.35	5.33	1.97	1.10	2.15	0.413	3.54	2.56	6.41	3.94	2.05	4.84	0.47	0.354	5.77	1.000	5/16-18 UNC	0.75	2.756	1/4 X 1.62
525	3.39	6.69	2.48	1.50	2.76	0.413	5.91	3.11	7.17	4.85	2.36	6.89	0.51	0.276	6.49	1.125	5/16-18 UNC	0.75	4.528	1/4 X 2.00
534	4.25	9.15	3.35	1.50	3.72	0.512	6.93	3.86	7.84	5.55	2.36	8.07	0.63	0.197	7.42	1.500	5/16-18 UNC	0.75	5.984	3/8 X 2.00

* Metric options are available. Refer to dimensions below. Contact Factory for availability of metric options.

Style DXF



STYLE DXF DIMENSIONS - Inches

Series	AA	C	CD	CE	D	HF	HJ	I	L	M	N	O	P	Q	R	S	T +0.000 -0.001	U +0.000 -0.001	X		Z	INPUT KEY	OUTPUT KEY
																			Tap Size	Depth			
518	2.38	4.76	1.77	1.10	1.93	0.335	3.43	2.16	6.65	1.65	2.97	1.26	4.33	0.35	0.354	1.42	0.750	0.625	1/4-20 UNC	0.62	2.362	3/16 X 1.12	3/16 X 1.00
520	3.35	5.33	1.97	1.10	2.15	0.413	3.54	2.56	6.83	1.83	3.94	2.05	4.84	0.47	0.354	1.42	1.000	0.625	5/16-18 UNC	0.75	2.756	3/16 X 1.12	1/4 X 1.62
525	3.39	6.69	2.48	1.50	2.76	0.413	5.91	3.11	8.54	2.00	4.85	2.36	6.89	0.51	0.276	1.65	1.125	0.750	5/16-18 UNC	0.75	4.528	3/16 X 1.50	1/4 X 2.00
534	4.25	9.15	3.35	1.50	3.72	0.512	6.93	3.86	9.21	2.65	5.55	2.36	8.07	0.63	0.197	1.65	1.500	0.750	5/16-18 UNC	0.75	5.984	3/16 X 1.50	3/8 X 2.00

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	0.41	.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	0.41	.875	3/16 x 3/32

OPTIONAL METRIC DIMENSIONS° - MM

Series	LQ*				T H7	O	N	Output Keyway
	IEC B5 & B14 Options							
	D63D	D71D	D80D	D90D				
518	136	136	N/A	N/A	18	32	75	6
520	141	141	N/A	N/A	25	52	100	8
525	179	179	179	179	25	60	123	8
534	197	197	197	197	35	60	141	10

OPTIONAL METRIC DIMENSIONS° - MM

IEC Frame	B5					B14					Input Bore Dia	Input Keyway▲
	AJ	AK	BD	BE	BF	AJ	AK	BD	BE	BF		
D63D	115	95	140	11	9	75	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5

° Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.

▲ Keyway width by depth

♦ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows:
D63D(AI), D71D & D80D(Series 525 & 534)

♦ Dimensions are maximum (B5 and B14 options)

■ B14 Option not available

Single Reduction Reducers

Double Reduction

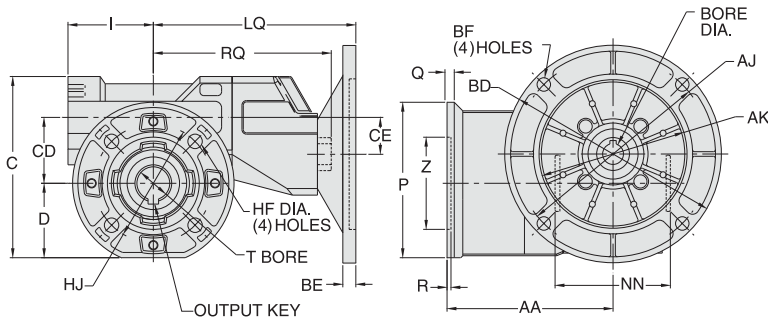
Helical - Worm

Accessory Kits

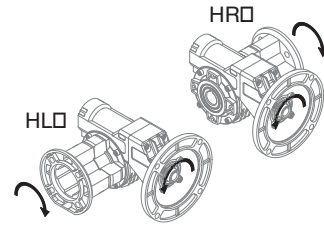
High Efficiency Helical - In-line Gear Reducers

High Efficiency Helical - Worm Gear Reducers

Style DXFLHMQ



ASSEMBLIES



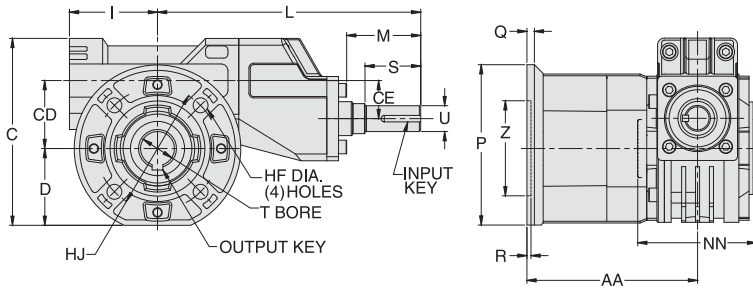
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXFLHMQ DIMENSIONS - Inches

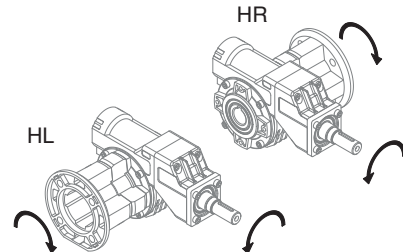
Series	AA	C	CD	CE	D	HF	HJ	I	LQ* 56/140	NN	P	Q	R	RQ	T* +0.0015 -0.0000	Z	OUTPUT KEY*
518	3.56	4.76	1.77	1.10	1.93	0.335	3.43	2.16	6.23	2.56	4.33	0.35	0.354	5.59	0.750	2.362	3/16 X 1.00
520	4.51	5.33	1.97	1.10	2.15	0.413	3.54	2.56	6.41	3.19	4.84	0.47	0.354	5.77	1.000	2.756	1/4 X 1.62
525	4.57	6.69	2.48	1.50	2.76	0.413	5.91	3.11	7.17	4.72	6.89	0.51	0.276	6.49	1.125	4.528	1/4 X 2.00
534	5.85	9.15	3.35	1.50	3.72	0.512	6.93	3.86	7.84	5.31	8.07	0.63	0.197	7.42	1.500	5.984	3/8 X 2.00

* Metric options are available. Refer to dimensions on opposite page. Contact Factory for availability of metric options.

Style DXFLH



ASSEMBLIES

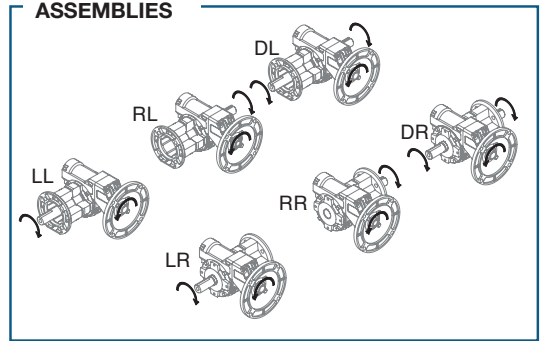
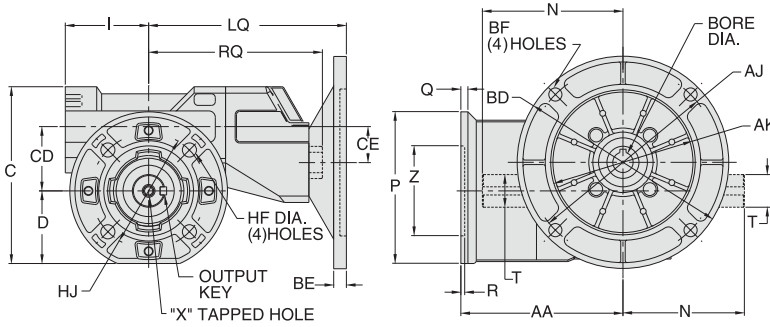


REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXFLH DIMENSIONS - Inches

Series	AA	C	CD	CE	D	HF	HJ	I	L	M	NN	P	Q	R	S	T +0.0015 -0.0000	U +0.000 -0.001	Z	INPUT KEY	OUTPUT KEY
518	3.56	4.76	1.77	1.10	1.93	0.335	3.43	2.16	6.65	1.65	2.56	4.33	0.35	0.354	1.42	0.750	0.625	2.362	3/16 X 1.12	3/16 X 1.00
520	4.51	5.33	1.97	1.10	2.15	0.413	3.54	2.56	6.83	1.83	3.19	4.84	0.47	0.354	1.42	1.000	0.625	2.756	3/16 X 1.12	1/4 X 1.62
525	4.57	6.69	2.48	1.50	2.76	0.413	5.91	3.11	8.54	2.00	4.72	6.89	0.51	0.276	1.65	1.125	0.750	4.528	3/16 X 1.50	1/4 X 2.00
534	5.85	9.15	3.35	1.50	3.72	0.512	6.93	3.86	9.21	2.65	5.31	8.07	0.63	0.197	1.65	1.500	0.750	5.984	3/16 X 1.50	3/8 X 2.00

Style DXFLMQ



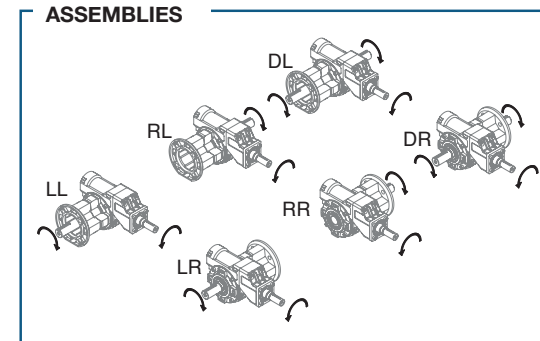
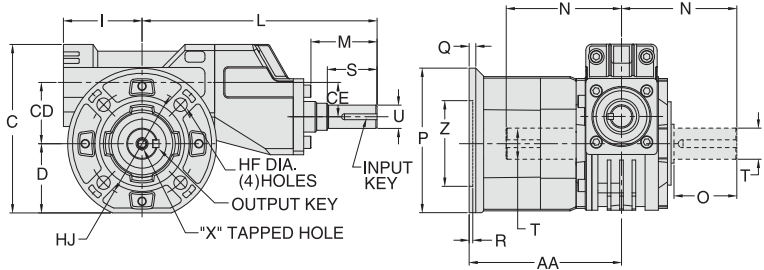
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXFLMQ DIMENSIONS - Inches

Series	AA	C	CD	CE	D	HF	HJ	I	LQ* 56/140	N	O*	P	Q	R	RQ	T* +0.000 -0.001	X		Z	OUTPUT KEY*
																	Tap Size	Depth		
518	3.56	4.76	1.77	1.10	1.93	0.335	3.43	2.16	6.23	2.97	1.26	4.33	0.35	0.354	5.59	0.750	1/4-20 UNC	0.62	2.362	3/16 x 1.00
520	4.51	5.33	1.97	1.10	2.15	0.413	3.54	2.56	6.41	3.94	2.05	4.84	0.47	0.354	5.77	1.000	5/16-18 UNC	0.75	2.756	1/4 X 1.62
525	4.57	6.69	2.48	1.50	2.76	0.413	5.91	3.11	7.17	4.85	2.36	6.89	0.51	0.276	6.49	1.125	5/16-18 UNC	0.75	4.528	1/4 X 2.00
534	5.85	9.15	3.35	1.50	3.72	0.512	6.93	3.86	7.84	5.55	2.36	8.07	0.63	0.197	7.42	1.500	5/16-18 UNC	0.75	5.984	3/8 X 2.00

* Metric options are available. Refer to dimensions below. Contact Factory for availability of metric options.

Style DXFL



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXFL DIMENSIONS - Inches

Series	AA	C	CD	CE	D	HF	HJ	I	L	M	N	O	P	Q	R	S	T +0.000 -0.001	U +0.000 -0.001	X		Z	INPUT KEY	OUTPUT KEY
																			Tap Size	Depth			
518	3.56	4.76	1.77	1.10	1.93	0.335	3.43	2.16	6.65	1.65	2.97	1.26	4.33	0.35	0.354	1.42	0.750	0.625	1/4-20 UNC	0.62	2.362	3/16 X 1.12	3/16 X 1.00
520	4.51	5.33	1.97	1.10	2.15	0.413	3.54	2.56	6.83	1.83	3.94	2.05	4.84	0.47	0.354	1.42	1.000	0.625	5/16-18 UNC	0.75	2.756	3/16 X 1.12	1/4 X 1.62
525	4.57	6.69	2.48	1.50	2.76	0.413	5.91	3.11	8.54	2.00	4.85	2.36	6.89	0.51	0.276	1.65	1.125	0.750	5/16-18 UNC	0.75	4.528	3/16 X 1.50	1/4 X 2.00
534	5.85	9.15	3.35	1.50	3.72	0.512	6.93	3.86	9.21	2.65	5.55	2.36	8.07	0.63	0.197	1.65	1.500	0.750	5/16-18 UNC	0.75	5.984	3/16 X 1.50	3/8 X 2.00

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	0.41	.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	0.41	.875	3/16 x 3/32

OPTIONAL METRIC DIMENSIONS° - MM

Series	LQ*				T H7	O	N	Output Keyway
	IEC B5 & B14 Options							
	D63D	D71D	D80D	D90D				
518	136	136	N/A	N/A	18	32	75	6
520	141	141	N/A	N/A	25	52	100	8
525	179	179	179	179	25	60	123	8
534	197	197	197	197	35	60	141	10

OPTIONAL METRIC DIMENSIONS° - MM

IEC Frame	B5					B14					Input Bore Dia	Input Keyway▲
	AJ	AK	BD	BE	BF	AJ	AK	BE	BF			
D63D	115	95	140	11	9	75	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5

° Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.

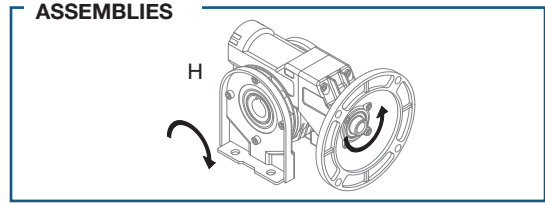
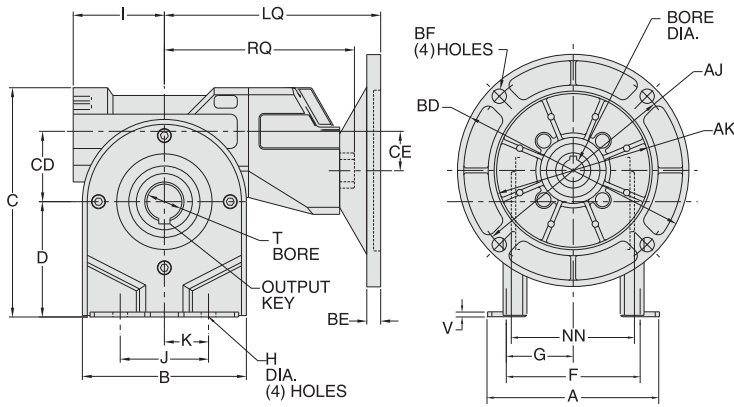
▲ Keyway width by depth

♦ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows:
D63D(All), D71D & D80D(Series 525 & 534)

♦ Dimensions are maximum (B5 and B14 options)

■ B14 Option not available

Style DXTHMQ



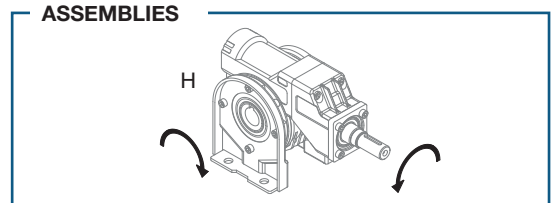
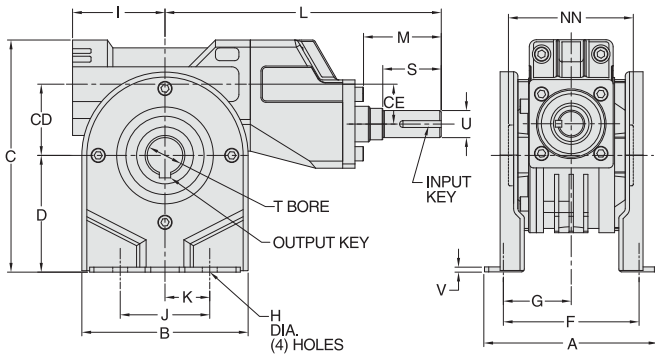
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXTHMQ DIMENSIONS - Inches

Series	A	B	C	CD	CE	D	F	G	H	I	J	K	LQ* 56/140	NN	RQ	T* +0.0015 -0.0000	V	OUTPUT KEY*
518	3.94	3.86	5.67	1.77	1.10	2.83	3.17	1.59	0.413	2.16	1.97	0.99	6.23	2.56	5.59	0.750	0.12	3/16 X 1.00
520	4.84	4.45	6.42	1.97	1.10	3.23	3.94	1.97	0.413	2.56	2.48	1.24	6.41	3.19	5.77	1.000	0.14	1/4 X 1.62
525	5.67	5.24	7.87	2.48	1.50	3.94	4.35	2.18	0.413	3.11	3.74	1.87	7.17	4.72	6.49	1.125	0.16	1/4 X 2.00
534	7.17	7.09	11.02	3.35	1.50	5.59	5.71	2.86	0.413	3.86	5.51	2.76	7.84	5.31	7.42	1.500	0.20	3/8 X 2.00

* Metric options are available. Refer to dimensions on opposite page. Contact Factory for availability of metric options.

Style DXTH

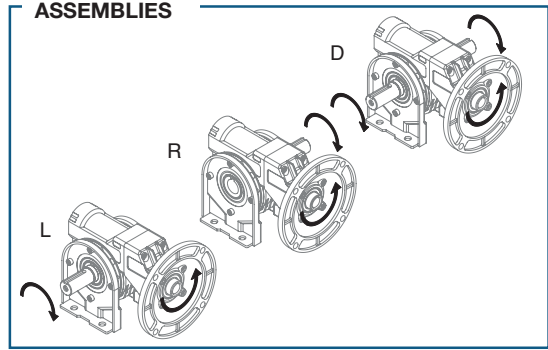
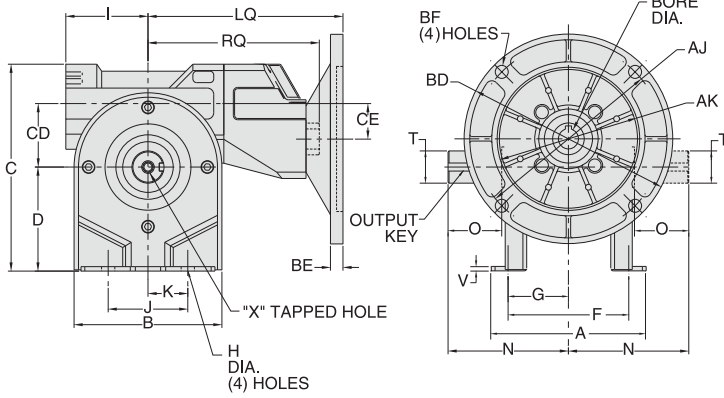


REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXTH DIMENSIONS - Inches

Series	A	B	C	CD	CE	D	F	G	H	I	J	K	L	M	NN	S	T +0.0015 -0.0000	U +0.000 -0.001	V	INPUT KEY	OUTPUT KEY
518	3.94	3.86	5.67	1.77	1.10	2.83	3.17	1.59	0.413	2.16	1.97	0.99	6.65	1.65	2.56	1.42	0.750	0.625	0.12	3/16 X 1.12	3/16 X 1.00
520	4.84	4.45	6.42	1.97	1.10	3.23	3.94	1.97	0.413	2.56	2.48	1.24	6.83	1.83	3.19	1.42	1.000	0.625	0.14	3/16 X 1.12	1/4 X 1.62
525	5.67	5.24	7.87	2.48	1.50	3.94	4.35	2.18	0.413	3.11	3.74	1.87	8.54	2.00	4.72	1.65	1.125	0.750	0.16	3/16 X 1.50	1/4 X 2.00
534	7.17	7.09	11.02	3.35	1.50	5.59	5.71	2.86	0.413	3.86	5.51	2.76	9.21	2.65	5.31	1.65	1.500	0.750	0.20	3/16 X 1.50	3/8 X 2.00

Style DXTMQ



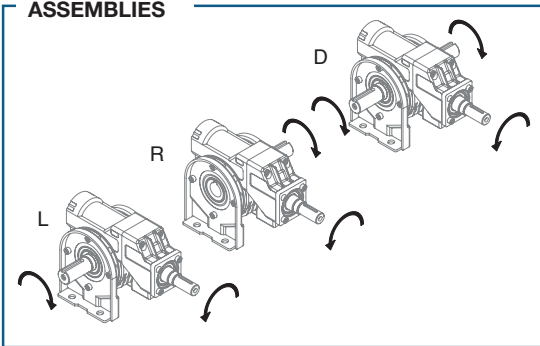
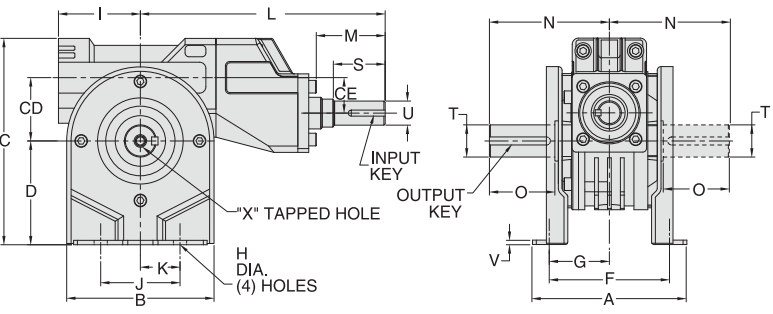
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXTMQ DIMENSIONS - Inches

Series	A	B	C	CD	CE	D	F	G	H	I	J	K	LQ* 56/140	N	O*	RQ	T* +0.000 -0.001	V	X		OUTPUT KEY*
																			Tap Size	Depth	
518	3.94	3.86	5.67	1.77	1.10	2.83	3.17	1.59	0.413	2.16	1.97	0.99	6.23	2.97	1.26	5.59	0.750	0.12	1/4-20 UNC	0.62	3/16 x 1.00
520	4.84	4.45	6.42	1.97	1.10	3.23	3.94	1.97	0.413	2.56	2.48	1.24	6.41	3.94	2.05	5.77	1.000	0.14	5/16-18 UNC	0.75	1/4 X 1.62
525	5.67	5.24	7.87	2.48	1.50	3.94	4.35	2.18	0.413	3.11	3.74	1.87	7.17	4.85	2.36	6.49	1.125	0.16	5/16-18 UNC	0.75	1/4 X 2.00
534	7.17	7.09	11.02	3.35	1.50	5.59	5.71	2.86	0.413	3.86	5.51	2.76	7.84	5.55	2.36	7.42	1.500	0.20	5/16-18 UNC	0.75	3/8 X 2.00

* Metric options are available. Refer to dimensions below. Contact Factory for availability of metric options.

Style DXT



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXT DIMENSIONS - Inches

Series	A	B	C	CD	CE	D	F	G	H	I	J	K	L	M	N	O	S	T +0.000 -0.001	U +0.000 -0.001	V	X		INPUT KEY	OUTPUT KEY
																					Tap Size	Depth		
518	3.94	3.86	5.67	1.77	1.10	2.83	3.17	1.59	0.413	2.16	1.97	0.99	6.65	1.65	2.97	1.26	1.42	0.750	0.625	0.12	1/4-20 UNC	0.62	3/16 X 1.12	3/16 X 1.00
520	4.84	4.45	6.42	1.97	1.10	3.23	3.94	1.97	0.413	2.56	2.48	1.24	6.83	1.83	3.94	2.05	1.42	1.000	0.625	0.14	5/16-18 UNC	0.75	3/16 X 1.12	1/4 X 1.62
525	5.67	5.24	7.87	2.48	1.50	3.94	4.35	2.18	0.413	3.11	3.74	1.87	8.54	2.00	4.85	2.36	1.65	1.125	0.750	0.16	5/16-18 UNC	0.75	3/16 X 1.50	1/4 X 2.00
534	7.17	7.09	11.02	3.35	1.50	5.59	5.71	2.86	0.413	3.86	5.51	2.76	9.21	2.65	5.55	2.36	1.65	1.500	0.750	0.20	5/16-18 UNC	0.75	3/16 X 1.50	3/8 X 2.00

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	0.41	.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	0.41	.875	3/16 x 3/32

OPTIONAL METRIC DIMENSIONS - MM

Series	LQ*				T H7	O (standard for metric units)	N (standard for metric units)	Output Keyway
	IEC B5 & B14 Options							
	D63D	D71D	D80D	D90D				
518	136 ♦	136	N/A	N/A	18	32	75	6
520	141 ♦	141	N/A	N/A	25	52	100	8
525	179 ♦	179 ♦	179	179	25	60	123	8
534	197 ■	197 ♦	197 ♦	197	35	60	141	10

OPTIONAL METRIC DIMENSIONS - MM

IEC Frame	B5					B14♦					Input Bore Dia	Input Keyway▲
	AJ	AK	BD	BE	BF	AJ	AK	BD	BE	BF♦		
D63D	115	95	140	11	9	75♦	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85♦	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100♦	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5

♦ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.
▲ Keyway width by depth
♦ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows:
D63D(All), D71D & D80D(Series 525 & 534)
♦ Dimensions are maximum (B5 and B14 options)
■ B14 Option not available

Single Reduction Reducers
BRAVO®

Double Reduction
BRAVO® Worm - Worm

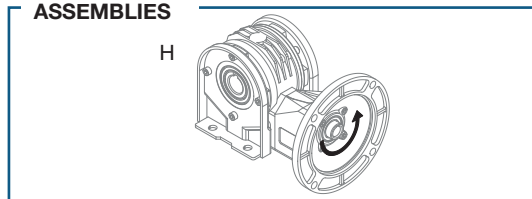
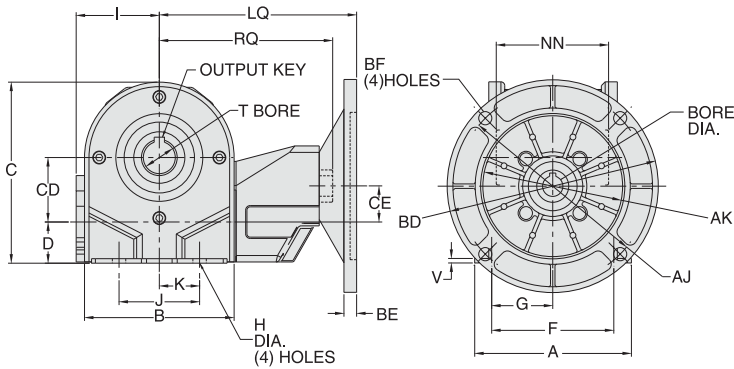
Double Reduction
BRAVO® Helical - Worm

Accessory Kits
BRAVO®

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

Style DXUHMQ



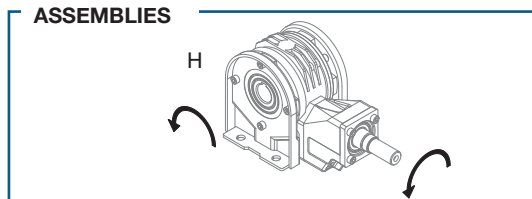
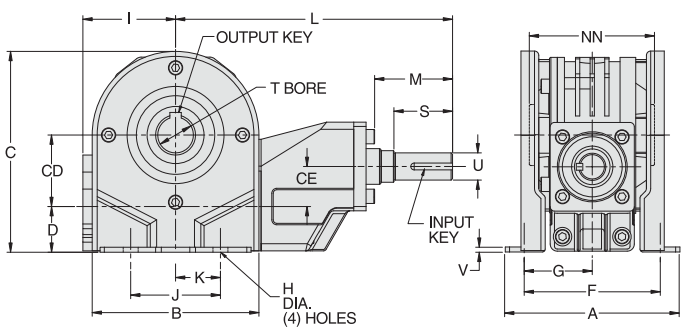
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXUHMQ DIMENSIONS - Inches

Series	A	B	C	CD	CE	D	F	G	H	I	J	K	LQ*	NN	RQ	T*	V	OUTPUT KEY*
518	3.94	3.86	4.76	1.77	1.10	1.06	3.17	1.59	0.413	2.16	1.97	0.99	6.23	2.56	5.59	0.750	0.12	3/16 X 1.00
520	4.84	4.45	5.45	1.97	1.10	1.26	3.94	1.97	0.413	2.56	2.48	1.24	6.41	3.19	5.77	1.000	0.14	1/4 X 1.62
525	5.67	5.24	6.69	2.48	1.50	1.45	4.35	2.18	0.413	3.11	3.74	1.87	7.17	4.72	6.49	1.125	0.16	1/4 X 2.00
534	7.17	7.09	9.31	3.35	1.50	2.24	5.71	2.86	0.413	3.86	5.51	2.76	7.84	5.31	7.42	1.500	0.20	3/8 X 2.00

* Metric options are available. Refer to dimensions on opposite page. Contact Factory for availability of metric options.

Style DXUH

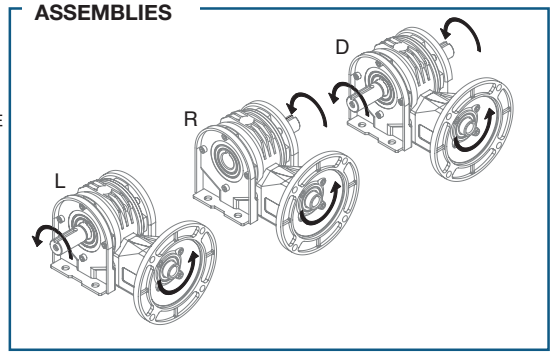
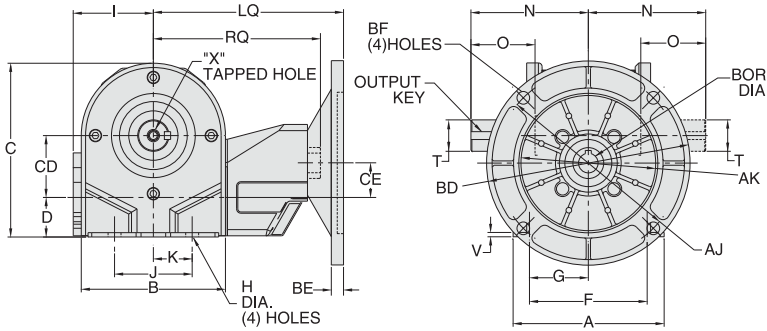


REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXUH DIMENSIONS - Inches

Series	A	B	C	CD	CE	D	F	G	H	I	J	K	L	M	NN	S	T	U	V	INPUT KEY	OUTPUT KEY
518	3.94	3.86	4.76	1.77	1.10	1.06	3.17	1.59	0.413	2.16	1.97	0.99	6.65	1.65	2.56	1.42	0.750	0.625	0.12	3/16 X 1.12	3/16 X 1.00
520	4.84	4.45	5.45	1.97	1.10	1.26	3.94	1.97	0.413	2.56	2.48	1.24	6.83	1.83	3.19	1.42	1.000	0.625	0.14	3/16 X 1.12	1/4 X 1.62
525	5.67	5.24	6.69	2.48	1.50	1.45	4.35	2.18	0.413	3.11	3.74	1.87	8.54	2.00	4.72	1.65	1.125	0.750	0.16	3/16 X 1.50	1/4 X 2.00
534	7.17	7.09	9.31	3.35	1.50	2.24	5.71	2.86	0.413	3.86	5.51	2.76	9.21	2.65	5.31	1.65	1.500	0.750	0.20	3/16 X 1.50	3/8 X 2.00

Style DXUMQ



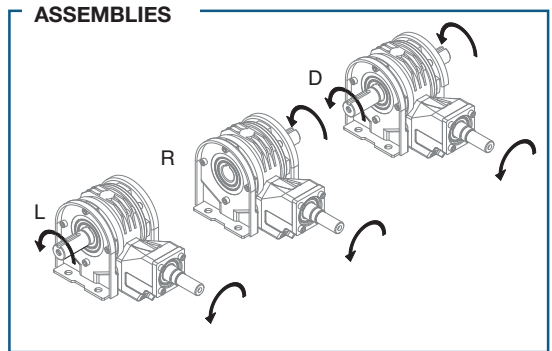
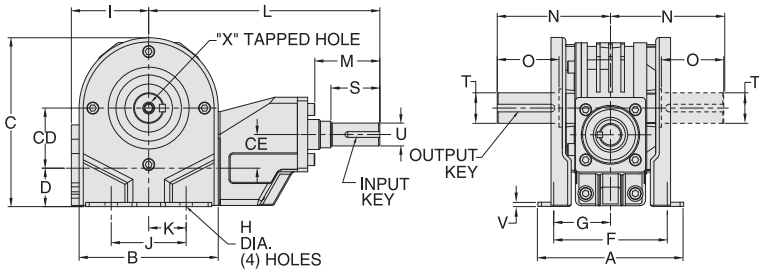
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXUMQ DIMENSIONS - Inches

Series	A	B	C	CD	CE	D	F	G	H	I	J	K	LQ* 56/140	N	O*	RQ	T* +0.000 -0.001	V	X		OUTPUT KEY*
																			Tap Size	Depth	
518	3.94	3.86	4.76	1.77	1.10	1.06	3.17	1.59	0.413	2.16	1.97	0.99	6.23	2.97	1.26	5.59	0.750	0.12	1/4-20 UNC	0.62	3/16 x 1.00
520	4.84	4.45	5.45	1.97	1.10	1.26	3.94	1.97	0.413	2.56	2.48	1.24	6.41	3.94	2.05	5.77	1.000	0.14	5/16-18 UNC	0.75	1/4 X 1.62
525	5.67	5.24	6.69	2.48	1.50	1.45	4.35	2.18	0.413	3.11	3.74	1.87	7.17	4.85	2.36	6.49	1.125	0.16	5/16-18 UNC	0.75	1/4 X 2.00
534	7.17	7.09	9.31	3.35	1.50	2.24	5.71	2.86	0.413	3.86	5.51	2.76	7.84	5.55	2.36	7.42	1.500	0.20	5/16-18 UNC	0.75	3/8 X 2.00

* Metric options are available. Refer to dimensions below. Contact Factory for availability of metric options.

Style DXU



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXU DIMENSIONS - Inches

Series	A	B	C	CD	CE	D	F	G	H	I	J	K	L	M	N	O	S	T +0.000 -0.001	U +0.000 -0.001	V	X		INPUT KEY	OUTPUT KEY
																					Tap Size	Depth		
518	3.94	3.86	4.76	1.77	1.10	1.06	3.17	1.59	0.413	2.16	1.97	0.99	6.65	1.65	2.97	1.26	1.42	0.750	0.625	0.12	1/4-20 UNC	0.62	3/16 X 1.12	3/16 X 1.00
520	4.84	4.45	5.45	1.97	1.10	1.26	3.94	1.97	0.413	2.56	2.48	1.24	6.83	1.83	3.94	2.05	1.42	1.000	0.625	0.14	5/16-18 UNC	0.75	3/16 X 1.12	1/4 X 1.62
525	5.67	5.24	6.69	2.48	1.50	1.45	4.35	2.18	0.413	3.11	3.74	1.87	8.54	2.00	4.85	2.36	1.65	1.125	0.750	0.16	5/16-18 UNC	0.75	3/16 X 1.50	1/4 X 2.00
534	7.17	7.09	9.31	3.35	1.50	2.24	5.71	2.86	0.413	3.86	5.51	2.76	9.21	2.65	5.55	2.36	1.65	1.500	0.750	0.20	5/16-18 UNC	0.75	3/16 X 1.50	3/8 X 2.00

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	0.41	.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	0.41	.875	3/16 x 3/32

OPTIONAL METRIC DIMENSIONS[◊] - MM

Series	LQ*			T H7	O	N	Output Keyway
	IEC B5 & B14 Options						
	D63D	D71D	D90D				
518	136 ◊	136	N/A	18	32	75	6
520	141 ◊	141	N/A	25	52	100	8
525	179 ◊	179 ◊	179	25	60	123	8
534	197 ■	197 ◊	197	35	60	141	10

OPTIONAL METRIC DIMENSIONS[◊] - MM

IEC Frame	B5					B14 [◆]					Input Bore Dia	Input Keyway▲
	AJ	AK	BD	BE	BF	AJ	AK	BD	BE	BF [◆]		
D63D	115	95	140	11	9	75 [◆]	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85 [◆]	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100 [◆]	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5

◊ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.

▲ Keyway width by depth

◆ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows:
D63D(All), D71D & D80D(Series 525 & 534)

◆ Dimensions are maximum (B5 and B14 options)

■ B14 Option not available

Single Reduction Reducers

Bravo® Worm - Worm
Double Reduction

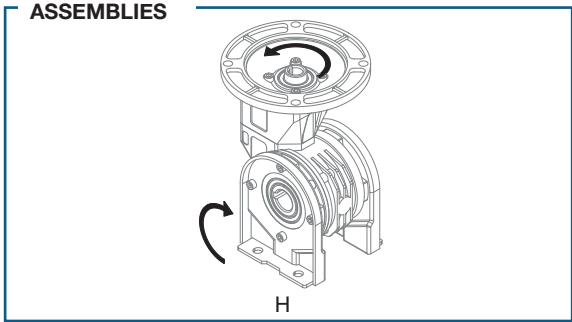
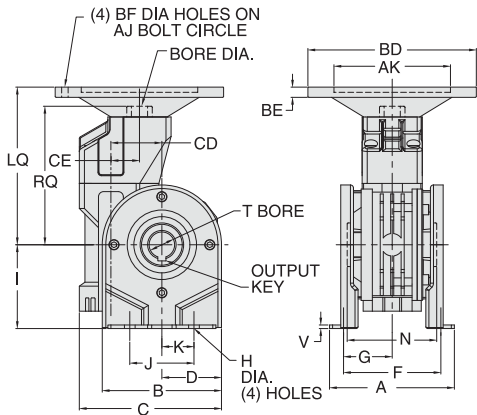
Bravo® Helical - Worm
Double Reduction

Bravo® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

Style DXJHMQ



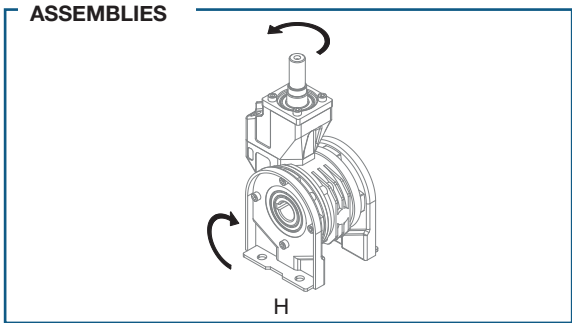
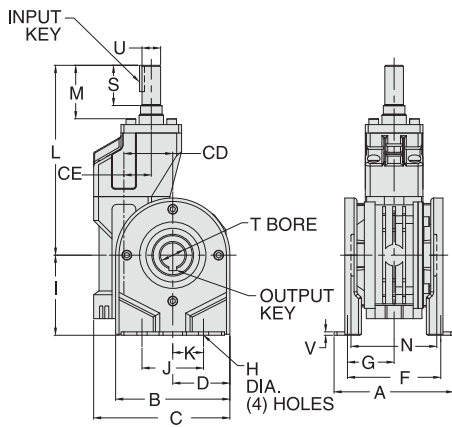
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXJHMQ DIMENSIONS - Inches

Series	A	B	C	CD	CE	D	F	G	H	I	J	K	LQ* 56/140	NN	RQ	T* +0.0015 -0.0000	V	OUTPUT KEY*
518	3.94	3.86	4.76	1.77	1.10	1.93	3.17	1.59	0.413	2.83	1.97	0.99	6.23	2.56	5.59	0.750	0.12	3/16 X 1.00
520	4.84	4.45	5.45	1.97	1.10	2.23	3.94	1.97	0.413	3.22	2.48	1.24	6.41	3.19	5.77	1.000	0.14	1/4 X 1.62
525	5.67	5.24	6.69	2.48	1.50	2.76	4.35	2.18	0.413	3.94	3.74	1.87	7.17	4.72	6.49	1.125	0.16	1/4 X 2.00
534	7.17	7.09	9.15	3.35	1.50	3.72	5.71	2.86	0.413	5.59	5.51	2.76	7.84	5.31	7.42	1.500	0.20	3/8 X 2.00

* Metric options are available. Refer to dimensions on opposite page. Contact Factory for availability of metric options.

Style DXJH



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXJH DIMENSIONS - Inches

Series	A	B	C	CD	CE	D	F	G	H	I	J	K	L	M	NN	S	T +0.0015 -0.0000	U +0.000 -0.001	V	INPUT KEY	OUTPUT KEY
518	3.94	3.86	4.76	1.77	1.10	1.93	3.17	1.59	0.413	2.83	1.97	0.99	6.65	1.65	2.56	1.42	0.750	0.625	0.12	3/16 X 1.12	3/16 X 1.00
520	4.84	4.45	5.45	1.97	1.10	2.23	3.94	1.97	0.413	3.22	2.48	1.24	6.83	1.83	3.19	1.42	1.000	0.625	0.14	3/16 X 1.12	1/4 X 1.62
525	5.67	5.24	6.69	2.48	1.50	2.76	4.35	2.18	0.413	3.94	3.74	1.87	8.54	2.00	4.72	1.65	1.125	0.750	0.16	3/16 X 1.50	1/4 X 2.00
534	7.17	7.09	9.15	3.35	1.50	3.72	5.71	2.86	0.413	5.59	5.51	2.76	9.21	2.65	5.31	1.65	1.500	0.750	0.20	3/16 X 1.50	3/8 X 2.00

BRAVO[®] Single Reduction Reducers

BRAVO[®] Worm - Worm Double Reduction

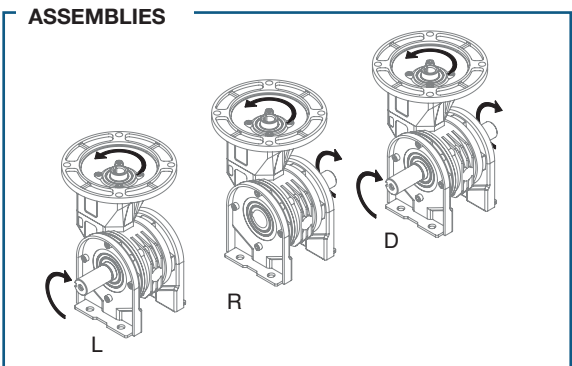
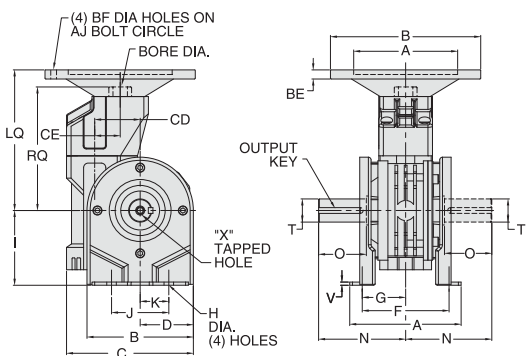
BRAVO[®] Helical - Worm Double Reduction

BRAVO[®] Accessory Kits

High Efficiency Helical - In-line Gear Reducers

High Efficiency Helical - Worm Gear Reducers

Style DXJMQ



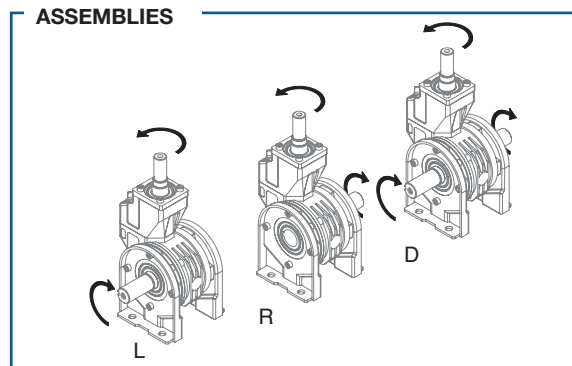
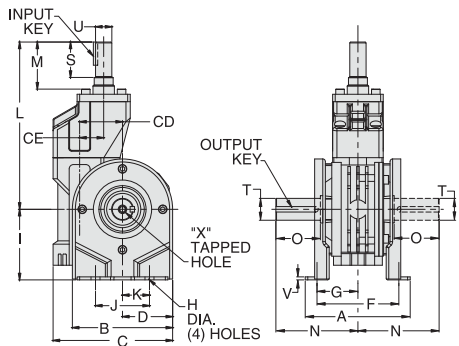
REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXJMQ DIMENSIONS - Inches

Series	A	B	C	CD	CE	D	F	G	H	I	J	K	LQ* 56/140	N	O*	RQ	T* +0.000 -0.001	V	X		OUTPUT KEY*
																			Tap Size	Depth	
518	3.94	3.86	4.76	1.77	1.10	1.93	3.17	1.59	0.413	2.83	1.97	0.99	6.23	2.97	1.26	5.59	0.750	0.12	1/4-20 UNC	0.62	3/16 x 1.00
520	4.84	4.45	5.45	1.97	1.10	2.23	3.94	1.97	0.413	3.22	2.48	1.24	6.41	3.94	2.05	5.77	1.000	0.14	5/16-18 UNC	0.75	1/4 X 1.62
525	5.67	5.24	6.69	2.48	1.50	2.76	4.35	2.18	0.413	3.94	3.74	1.87	7.17	4.85	2.36	6.49	1.125	0.16	5/16-18 UNC	0.75	1/4 X 2.00
534	7.17	7.09	9.15	3.35	1.50	3.72	5.71	2.86	0.413	5.59	5.51	2.76	7.84	5.55	2.36	7.42	1.500	0.20	5/16-18 UNC	0.75	3/8 X 2.00

* Metric options are available. Refer to dimensions below. Contact Factory for availability of metric options.

Style DXJ



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.

STYLE DXJ DIMENSIONS - Inches

Series	A	B	C	CD	CE	D	F	G	H	I	J	K	L	M	N	O	S	T +0.000 -0.001	U +0.000 -0.001	V	X		INPUT KEY	OUTPUT KEY
																					Tap Size	Depth		
518	3.94	3.86	4.76	1.77	1.10	1.93	3.17	1.59	0.413	2.83	1.97	0.99	6.65	1.65	2.97	1.26	1.42	0.750	0.625	0.12	1/4-20 UNC	0.62	3/16 X 1.12	3/16 X 1.00
520	4.84	4.45	5.45	1.97	1.10	2.23	3.94	1.97	0.413	3.22	2.48	1.24	6.83	1.83	3.94	2.05	1.42	1.000	0.625	0.14	5/16-18 UNC	0.75	3/16 X 1.12	1/4 X 1.62
525	5.67	5.24	6.69	2.48	1.50	2.76	4.35	2.18	0.413	3.94	3.74	1.87	8.54	2.00	4.85	2.36	1.65	1.125	0.750	0.16	5/16-18 UNC	0.75	3/16 X 1.50	1/4 X 2.00
534	7.17	7.09	9.15	3.35	1.50	3.72	5.71	2.86	0.413	5.59	5.51	2.76	9.21	2.65	5.55	2.36	1.65	1.500	0.750	0.20	5/16-18 UNC	0.75	3/16 X 1.50	3/8 X 2.00

Motor Mounting Dimensions

NEMA DIMENSIONS - Inches

Frame	AJ	AK	BD	BE	BF	Input Bore Dia	Input Keyway▲
56C	5.88	4.50	6.50	0.38	0.41	.625	3/16 x 3/32
140TC	5.88	4.50	6.50	0.38	0.41	.875	3/16 x 3/32

OPTIONAL METRIC DIMENSIONS - MM

Series	LQ*				T H7	O	N	Output Keyway
	IEC B5 & B14 Options							
	D63D	D71D	D80D	D90D				
518	136	136	N/A	N/A	18	32	75	6
520	141	141	N/A	N/A	25	52	100	8
525	179	179	179	179	25	60	123	8
534	197	197	197	197	35	60	141	10

OPTIONAL METRIC DIMENSIONS - MM

IEC Frame	B5					B14					Input Bore Dia	Input Keyway▲
	AJ	AK	BD	BE	BF	AJ	AK	BD	BE	BF		
D63D	115	95	140	11	9	75	60	90	5.5	5.5	11	4 x 2
D71D	130	110	160	10	9	85	70	105	8	6.5	14	5 x 2.5
D80D	165	130	200	12	11	100	80	120	10	7	19	6 x 3
D90D	165	130	200	12	11	115	95	140	11	9	24	8 x 3.5

- ◆ Contact Factory for availability of metric input options. The output bore and/or solid output shaft extension will be metric as standard with metric input options.
- ▲ Keyway width by depth
- ◆ AJ Mounting holes are rotated 45° from positions shown on B14 input options as follows:
D63D(All), D71D & D80D(Series 525 & 534)
- ◆ Dimensions are maximum (B5 and B14 options)
- B14 Option not available

Single Reduction Reducers
BRAVO®

Double Reduction
BRAVO® Worm - Worm

Double Reduction
BRAVO® Helical - Worm

Accessory Kits
BRAVO®

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

BRAVO® Single Reduction Reducers

BRAVO® Worm - Worm Double Reduction

BRAVO® Helical - Worm Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline Gear Reducers

High Efficiency Helical - Worm Gear Reducers

Quick shipment is standard on all Grove Gear BRAVO® stock and modified stock gear reducers. A wide range of mounting styles are offered and are listed on the accompanying chart. Start with one of the stock reducer styles shown—add an accessory—and create a new mounting style.

STYLE T, U OR J HORIZONTAL BASE



MOTORIZED C FLANGE QUILL INPUT



(Style BMQ Shown)

NON-FLANGED



(Style B Shown)

Type	Stock Reducer Style	T Base Worm Over	U Base Worm Under	J Base Vertical Input
Single Reduction Solid Shaft	BMQ	TMQ	UMQ*	JMQ
Single Reduction Hollow Shaft	HMQ	THMQ	UHMQ*	JHMQ
Double Reduction Worm-Worm Solid Shaft	DMQ	DTMQ	DUMQ*	DJMQ
Double Reduction Worm-Worm Hollow Shaft	DHMQ	DTHMQ	DUHMQ*	DJHMQ
Double Reduction Helical-Worm Solid Shaft	DXMQ	DXTMQ	DXUMQ*	DXJMQ
Double Reduction Helical-Worm Hollow Shaft	DXHMQ	DXTHMQ	DXUHMQ*	DXJHMQ
Single Reduction Solid Shaft	B	T	U*	J
Single Reduction Hollow Shaft	H	TH	UH*	JH
Double Reduction Worm-Worm Solid Shaft	D	DT	DU*	DJ
Double Reduction Worm-Worm Hollow Shaft	DH	DTH	DUH*	DJH
Double Reduction Helical-Worm Solid Shaft	DX	DXT	DXU*	DXJ
Double Reduction Helical-Worm Hollow Shaft	DXH	DXTH	DXUH*	DXJH

* Not a recommended mounting style. Consult Factory for selection assistance.



Free Mod-Squad™ Service Or Assemble It Yourself!

Any of the modified stock gear reducers shown are available on a quick-shipment basis, factory assembled by the **Grove Gear Mod-Squad™**—at no charge for the labor! Just pay for the accessory item. To order, specify the stock reducer and the Gear Mod-Squad Service Number (see below).

Or **assemble it yourself** by ordering the appropriate stock reducer and accessory kit (see below).

Before ordering, check the dimensional information available in this catalog.

More Grove Gear BRAVO® accessories, options and assembly services are available. See next page.

Ordering Information

Style T, U or J - Horizontal Base

Series	Accessory Kit Only Catalog No.	Mod-Squad-Service Number			Weight (lbs)
		Style T	Style U	Style J	
512	G175231	T512	U512	J512	2
518	G175205	T518	U518	J518	2
520	G175206	T520	U520	J520	2
525	G175207	T525	U525	J525	3
534	G175208	T534	U534	J534	5

Style F - Short Output Flange

Series	Accessory Kit Only Catalog No.	Mod-Squad-Service Number Style F	Weight (lbs)
518	G175209	F518	1
520	G175210	F520	1
525	G175211	F525	2
534	G175212	F534	3

Style FL - Long Output Flange

Series	Accessory Kit Only Catalog No.	Mod-Squad-Service Number Style FL	Weight (lbs)
518	G175213	FL518	2
520	G175214	FL520	2
525	G175215	FL525	3
534	G175216	FL534	5

Style R - Reaction Arm

Series	Accessory Kit Only Catalog No.	Mod-Squad-Service Number Style R	Weight (lbs)
518	G175201	R518	1
520	G175202	R520	1
525	G175203	R525	2
534	G175204	R534	3

Refer to page 364 for reaction arm dimensions.

STYLE F OUTPUT FLANGE



STYLE FL OUTPUT FLANGE



STYLE R REACTION ARM



F Short Output Flange	FL Long Output Flange	R Reaction Arm Shaft
FMQ	FLMQ	RMQ
FHMQ	FLHMQ	RHMQ
DFMQ	DFLMQ	DRMQ
DFHMQ	DFLHMQ	DRHMQ
DXFMQ	DXFLMQ	DXRMQ
DXFHMQ	DXFLHMQ	DXRHMQ
F	FL	R
FH	FLH	RH
DF	DFL	DR
DFH	DFLH	DRH
DXF	DXFL	DXR
DXFH	DXFLH	DXRH

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

Solid Output Shaft Accessory Kits



SINGLE EXTENSION INCH DIMENSIONS*

Series	Accessory Kit Only Catalog No.	Weight (lbs)
512	CONTACT Factory	
518	G175236	2
520	G175237	3
525	G175521	3
534	G175238	6

SINGLE EXTENSION METRIC DIMENSIONS†

Series	Accessory Kit Only Catalog No.	Weight (lbs)
512	G175240	2
518	G175241	2
520	G175242	3
525	G175243	3
534	G175244	6

DOUBLE EXTENSION INCH DIMENSIONS*

Series	Accessory Kit Only Catalog No.	Weight (lbs)
512	CONTACT Factory	
518	G175221	3
520	G175222	4
525	G175223	4
534	G175224	7

DOUBLE EXTENSION METRIC DIMENSIONS†

Series	Accessory Kit Only Catalog No.	Weight (lbs)
512	G175245	3
518	G175246	3
520	G175247	4
525	G175248	4
534	G175249	7

* Shaft dimensions are in inches. These shafts will only fit into reducers with inch dimensioned output bores.

† Shaft dimensions are in millimeters. These shafts will only fit into reducers with metric dimensioned output bores.

* Shaft dimensions are in inches. These shafts will only fit into reducers with inch dimensioned output bores.

† Shaft dimensions are in millimeters. These shafts will only fit into reducers with metric dimensioned output bores.

Motorized C-Face Quill Input Bushing Kits

NEMA Bushing Kits ◊ - Inches

Frame Conversion	Input Quill Bore Size (Inch)	Accessory Kit Only Catalog No.	Weight (lbs)
180TC to 140TC	1-1/8 to 7/8	G175230	0.5
180TC to 56C	1-1/8 to 5/8	G175229	0.4
140TC to 56C	7/8 to 5/8	G175228	0.4

◊ Bushing reduces the bore size of input quill to accommodate a smaller motor shaft diameter. The application may also require a different input flange size. Bushings are not intended to be used in output bores.

IEC Bushing Kits ◊ - MM

Frame Conversion	Input Quill Bore Size (mm)	Accessory Kit Only Catalog No.	Weight (lbs)
D63 to D56	11 to 9	G175259	0.4
D71 to D63	14 to 11	G175251	0.4
D71 to D56	14 to 9	G175252	0.4
D80 to D71	19 to 14	G175253	0.4
D80 to D63	19 to 11	G175254	0.4
D90 to D80	24 to 19	G175255	0.4
D90 to D71	24 to 14	G175256	0.4
DF100/112 to D90	28 to 24	G175257	0.5
DF100/112 to D80	28 to 19	G175258	0.5

◊ Bushing reduces the bore size of input quill to accommodate a smaller motor shaft diameter. The application may also require a different input flange size. Bushings are not intended to be used in output bores.

Double Reduction Adapter Kits

Series	Accessory Kit Only Catalog No.	Primary Unit Size	Secondary Unit Quill Size	Weight (lbs)
518	G175225	518	0.625	1
520	G175225	518	0.625	1
525	G175226	518	0.875	1
534	G175227	518	1.125	1.5

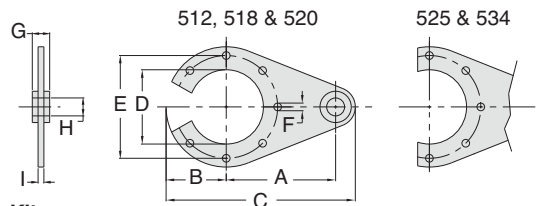
Protection Cap Accessory Kits Ω

Series	Accessory Kit Only Catalog No.	Weight (lbs)
512	G175250	0.3
518	G175217	0.3
520	G175218	0.3
525	G175219	0.4
534	G175220	0.6



Ω This protective cap covers the unused output bore for single extension assemblies. Check OSHA requirements and review installation manual to assure all safety requirements of gear reducer installation are met.

Style R Reaction Arm Dimensions



Style R - Reaction Arm Kits

Series	A	B	C	D	E	F	G	H	I
512	3.94	1.57	6.22	1.97	2.56	0.28	0.16	0.31	0.16
518	3.94	1.77	6.22	1.97	2.56	0.28	0.16	0.31	0.16
520	3.94	2.17	6.81	2.68	3.70	0.28	0.16	0.31	0.16
525	5.91	2.17	9.25	2.95	3.54	0.35	0.79	0.39	0.24
534	7.87	3.15	12.60	4.33	5.12	0.43	0.98	0.79	0.24

Refer to page 363 for accessory kits available.

www.grovetgear.com

Single Reduction Reducers
BRAVO[®]

HELICAL - WORM REDUCTION • APPROXIMATE WEIGHTS^Δ (LBS.)

Reducer Style	Reducer Size			
	518	520	525	534
Solid Output Shaft Models				
DXMQ	9	11	19	47
DX	8	11	19	47
DXTMQ, DXUMQ	11	13	22	52
DXT, DXU	10	13	22	52
DXJMQ	11	13	22	52
DXJ	10	13	22	52
DXFMQ	10	12	21	50
DXF	9	12	21	50
DXFLMQ	11	13	22	52
DXFL	10	13	22	52
DRMQ	10	12	21	50
DXR	9	12	21	50
Hollow Output Shaft Models				
DXHMQ	8	9	17	42
DXH	7	9	17	42
DXTHMQ, DXUHMQ	10	11	20	47
DXTH, DXUH	9	11	20	47
DXJHMQ	10	11	20	47
DXJH	9	11	20	47
DXFHMQ	9	10	19	45
DXFH	8	10	19	45
DXFLHMQ	10	11	20	47
DXFLH	9	11	20	47
DXRHMQ	9	10	19	45
DXRH	8	10	19	45

^Δ Weight includes grease/ oil.

Double Reduction
BRAVO[®] Worm - Worm

Double Reduction
BRAVO[®] Helical - Worm

BRAVO[®] Accessory Kits

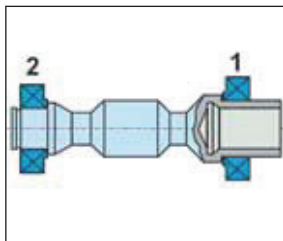
REDUCER ACCESSORIES • APPROXIMATE WEIGHTS (LBS.)

Accessory	Reducer Size			
	518	520	525	534
T/U - Base	2	2	3	5
J - Base	2	2	3	5
F - Flange	1	1	2	3
FL - Flange	2	2	3	5
R - Reaction Arm	1	1	2	3

High Efficiency Helical - Inline
Gear Reducers

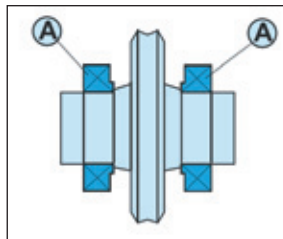
High Efficiency Helical - Worm
Gear Reducers

Grove Gear Bravo® reducers are available with many special options on request. Select from the common options below or contact Factory with specific application requests. Contact Factory for availability of reducers with special features.



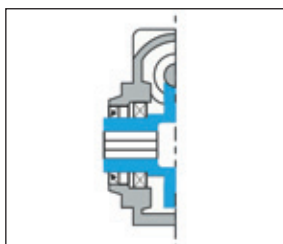
Tapered roller bearings on input worm shaft

REDUCER SIZE	1	2
512	--	--
518	--	--
520	32005X	30204
525	32007X	30205
534	32009X	30206



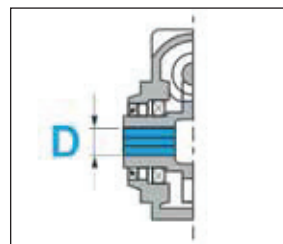
Tapered roller bearings on output shaft

REDUCER SIZE	A
512	--
518	--
520	32008X
525	32009X
534	32011X



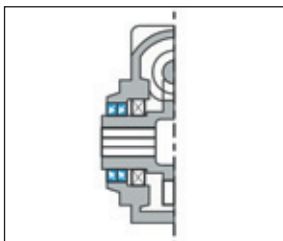
Stainless steel (AISI 303) or bronze output bore

REDUCER SIZE	MAX DIAMETER INCHES (MM)
512	0.550 (14)
518	0.875 (22.2)
520	1.1875 (30.16)
525	1.3125 (33.33)
534	1.625 (41.27)



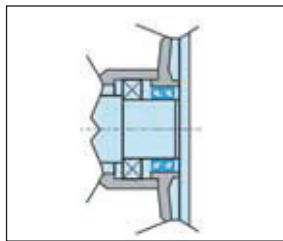
Non-standard output bore

REDUCER SIZE	MAX DIAMETER INCHES (MM)
512	0.550 (14)
518	0.875 (22.2)
520	1.1875 (30.16)
525	1.3125 (33.33)
534	1.625 (41.27)



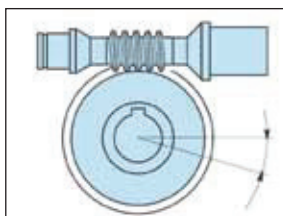
Double output seals

REDUCER SIZE(MM)	SEAL SIZE
512	--
518	--
520	--
525	45/62/7
534	55/80/8



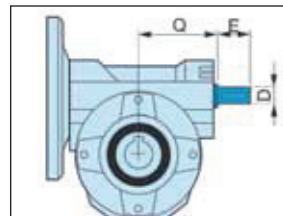
Double input seals

REDUCER SIZE(MM)	SEAL SIZE
512	20/30/7
518	25/40/7
520	25/40/7 or 30/40/7
525	35/47/7
534	45/62/7



Minimum backlash gearing

**ALL SIZES AVAILABLE.
CONTACT FACTORY WITH
REQUIREMENTS.**



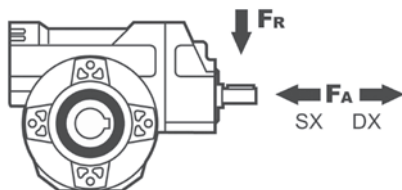
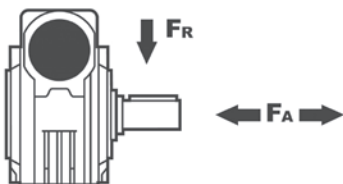
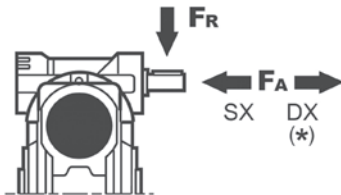
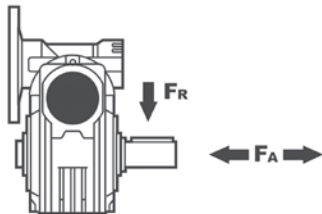
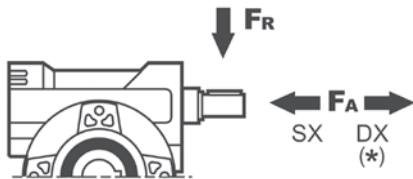
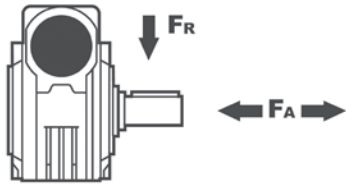
Double input worm shaft extension

**ALL SIZES AVAILABLE.
CONTACT FACTORY WITH
REQUIREMENTS.**

SPECIAL OPTIONS NOT PICTURED INCLUDE:

- Epoxy paint
- Custom mounting accessories
- Custom ratios
- NEMA input flange/ metric dimensioned output shaft combinations
- IEC input flange/ inch dimensioned output shaft combinations
- Special solid output shaft extensions

Maximum Overhung Load[‡] and Thrust Load Ratings (lbs.)



Single Reduction Output Shaft Ratings[‡]

Output RPM	Series									
	512		518		520		525		534	
	F _A	F _R	F _A	F _R	F _A	F _R	F _A	F _R	F _A	F _R
200	27	135	40	200	54	270	81	405	112	562
150	31	157	45	225	63	315	90	450	130	652
100	36	180	50	248	68	338	104	518	135	675
75	40	202	54	270	76	382	112	562	157	787
50	45	225	58	315	86	428	135	675	180	900
25	56	281	68	405	108	562	158	855	225	1125
15	63	315	90	450	126	629	180	899	261	1304

Single Reduction Input Shaft Ratings[‡]

Input RPM	Series									
	512		518		520		525		534	
	F _A	F _R	F _A	F _R	F _A	F _R	F _A	F _R	F _A	F _R
1750	4	21	9	43	16	79	19	93	33	167

Double Reduction Worm - Worm Output Shaft Ratings[‡]

Output RPM	Series							
	518		520		525		534	
	F _A	F _R	F _A	F _R	F _A	F _R	F _A	F _R
25	68	405	108	562	158	855	225	1125
15	90	450	126	629	180	899	261	1304

Double Reduction Worm - Worm Input Shaft Ratings[‡]

Input RPM	Series							
	518		520		525		534	
	F _A	F _R	F _A	F _R	F _A	F _R	F _A	F _R
1750	9	43	9	43	9	43	9	43

Double Reduction Helical - Worm Output Shaft Ratings[‡]

Output RPM	Series							
	518		520		525		534	
	F _A	F _R	F _A	F _R	F _A	F _R	F _A	F _R
75	54	270	76	382	112	562	157	787
50	58	315	86	428	135	675	180	900
25	68	405	108	562	158	855	225	1125
15	90	450	126	629	180	899	261	1304

Double Reduction Helical - Worm Input Shaft Ratings[‡]

Input RPM	Series							
	518		520		525		534	
	F _A	F _R	F _A	F _R	F _A	F _R	F _A	F _R
1750	9	46	9	46	13	63	22	112

F_R = Radial load rating = overhung load (lbs)

F_A = Axial load rating = thrust rating (lbs)

* Axial loads in the DX direction should be avoided.

‡ Overhung load is located at centerline of shaft extension for solid input/ output shaft style

Single Reduction Reducers
BRAVO[®]

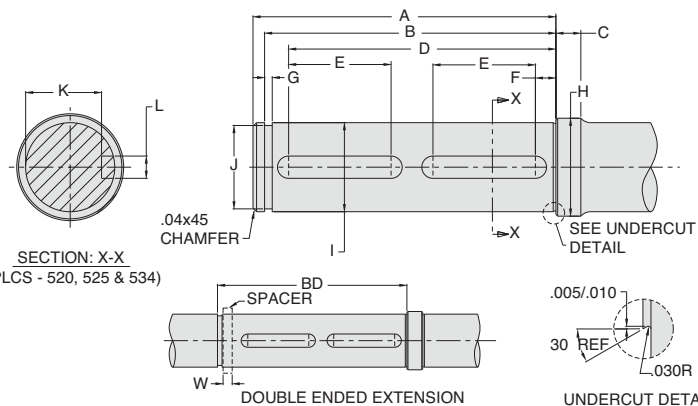
Double Reduction
BRAVO[®] Worm - Worm

Double Reduction
BRAVO[®] Helical - Worm

Accessory Kits
BRAVO[®]

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



There are several possible methods to retain a drive shaft into the hollow bore of a gear reducer. A few common options are listed below:

- Retain drive shaft with a retaining ring (illustrated above)
- Retain drive shaft with a locknut
- Retain drive shaft with a thrust plate and fastener
- Retain drive shaft with a collar and setscrew
- Retain drive shaft with a recessed plate and fastener

DRIVEN SHAFT RECOMMENDATIONS ● HOLLOW BORE IN INCHES

Dimensions - Inches

Series	A	B +/- 0.0025	C	D	F	Retaining Ring Groove		Mfg. No. (Waldes Truarc)	H	I +/- 0.0005	E	Keyway		Double Extension Details	
						G +0.005/- 0.000	J +/- 0.002					K +/- 0.0025	L +/- 0.001	BD +/- 0.0025	W* +/- 0.001
518	2.80	2.6445	0.43	N/A	0.18	0.086	0.703	5160-75	0.88	0.749	1.15	0.6365	0.1875	3.0755	0.430
520	3.50	3.2725	0.30	3.00	0.23	0.086	0.937	5160-98	1.12	0.999	1.15	0.8565	0.250	3.5735	0.300
525	5.00	4.8225	0.13	4.25	0.22	0.103	1.058	5160-112	1.25	1.124	1.53	0.9785	0.250	4.9535	0.130
534	5.65	5.4315	0.53	5.00	0.28	0.120	1.405	5160-150	1.75	1.499	1.65	1.2815	0.375	5.9625	0.530

* Dimension "W" refers to the width of spacer used.

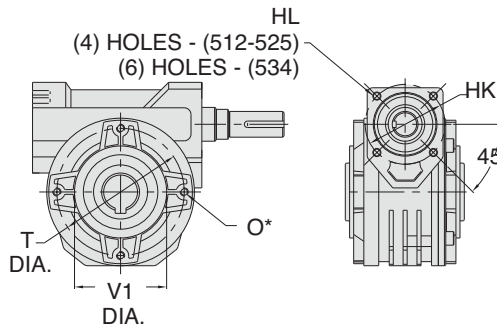
DRIVEN SHAFT RECOMMENDATIONS ● HOLLOW BORE IN MILLIMETERS

Dimensions - MM

Series	A	B +/- 0.064	C	D	F	Retaining Ring Groove		Mfg. No. (Waldes Truarc)	H	I - 0.005/ -0.020	E	Keyway		Double Extension Details	
						G +0.12/- 0.00	J +/- 0.05					K +/- 0.05	L + 0.015/-0.005	BD +/- 0.064	W* +/- 0.02
512	60.5	56.223	10	N/A	5	1.1	13	5100-55	19.1	14	20.2	10.8	5	66.383	10.16
518	71.1	67.170	11	N/A	5	1.4	16	5160-66	22.4	18	30.2	14.5	6	78.118	10.92
520	88.9	83.120	8	76.2	5	2.3	23.5	5160-98	28.4	25	30.2	21.0	8	90.767	7.62
525	127.0	122.492	3	108.0	8	2.6	26	5160-106	31.8	28	40.2	24.0	8	125.819	3.30
534	143.5	137.960	14	127.0	9	2.6	32.8	5160-137	44.5	35	50.2	30.0	10	151.448	13.46

* Dimension "W" refers to the width of spacer used.

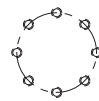
BOLT CIRCLE DIMENSIONS - mm



	O*	T DIA.	V1 DIA. (h8)	HL	HK DIA.
512	4 - M6 x 9	VIEW - A	65	50	M5 x 11
518	4 - M6 x 14	VIEW - A	65	50	M6 x 15
520	4 - M6 x 9	VIEW - A	94	68	M6 x 16
525	8 - M8 x 17	VIEW - B	90	75	M8 x 17
534	4 - M10 x 8	VIEW - C	130	110	M6 x 16



VIEW - A

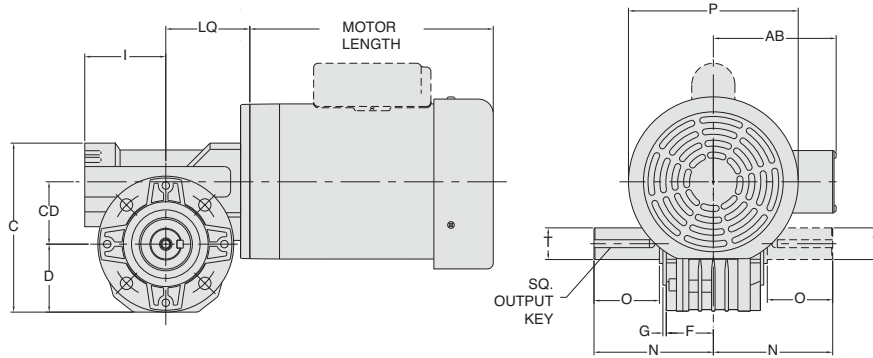


VIEW - B



VIEW - C

GEAR+MOTOR™ DIMENSIONS



BMQ STYLE DIMENSIONS - Inches (MM)

Series	C	CD	D	F	G	I	N	O	T +0.000 -0.001	OUTPUT KEY
512	3.54 (89.9)	1.18 (30)	1.54 (39)	1.18 (30)	0.08 (2)	1.81(46)	2.48 (63.0)	1.01(25.7)	(14)*	(5)
518	4.76 (121)	1.77 (45)	1.93 (49)	1.38 (35)	0.08 (2)	2.16 (55)	2.97 (75.4)	1.26 (32.0)	0.750	3/16 x 1.00
520	5.33 (135)	1.97 (50)	2.15 (54.5)	1.50 (38)	0.12 (3)	2.56 (65)	3.94 (100.1)	2.05 (52.1)	1.000	1/4 X 1.62
525	6.69 (170)	2.48 (63)	2.76 (70)	1.77 (45)	0.19 (5)	3.11 (79)	4.85 (123.2)	2.36 (59.9)	1.125	1/4 X 2.00
534	9.15 (232)	3.35 (85)	3.72 (94.5)	2.52 (64)	0.14 (3.5)	3.86 (98)	5.55 (141.0)	2.36 (59.9)	1.500	3/8 X 2.00

* Tolerance is -0.005/ -0.0020.

NEMA MOTOR MOUNTING DIMENSIONS - Inches

Series	AB		LQ		P	
	56C/140TC	180TC	56C/140TC	180TC	56C/140TC	180TC
518	5.31	N/A	3.33	N/A	7.16	9.22
520	5.31	N/A	3.51	N/A	7.16	9.22
525	5.31	N/A	4.08	N/A	7.16	9.22
534	5.31	6.44	4.83	5.35	7.16	9.22

Refer to page 663 for NEMA motor length dimensions.

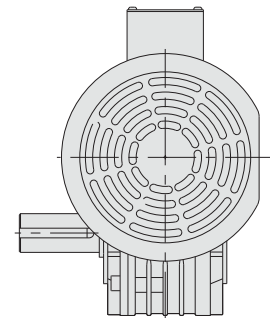
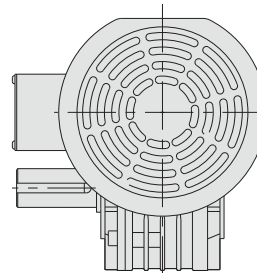
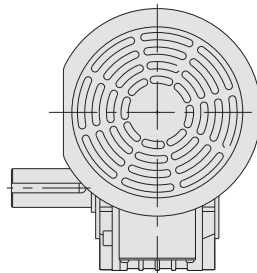
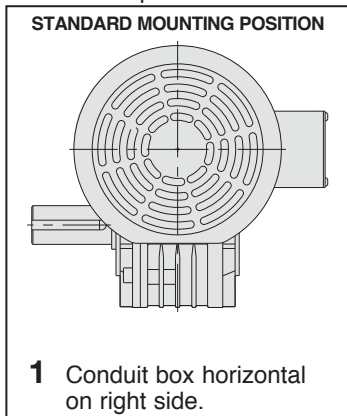
IEC MOTOR MOUNTING DIMENSIONS -Inches

Contact Factory for outline drawings of specific IEC BRAVO® Gear+Motor™ combinations.

Refer to page 649 for IEC motor dimensions.

MOTOR MOUNTING POSITIONS

Conduit box position viewed from input side of reducer.



Bravo® BRAVO® Exploded View

ALUMINUM GEAR REDUCERS

BRAVO®
Single Reduction Reducers

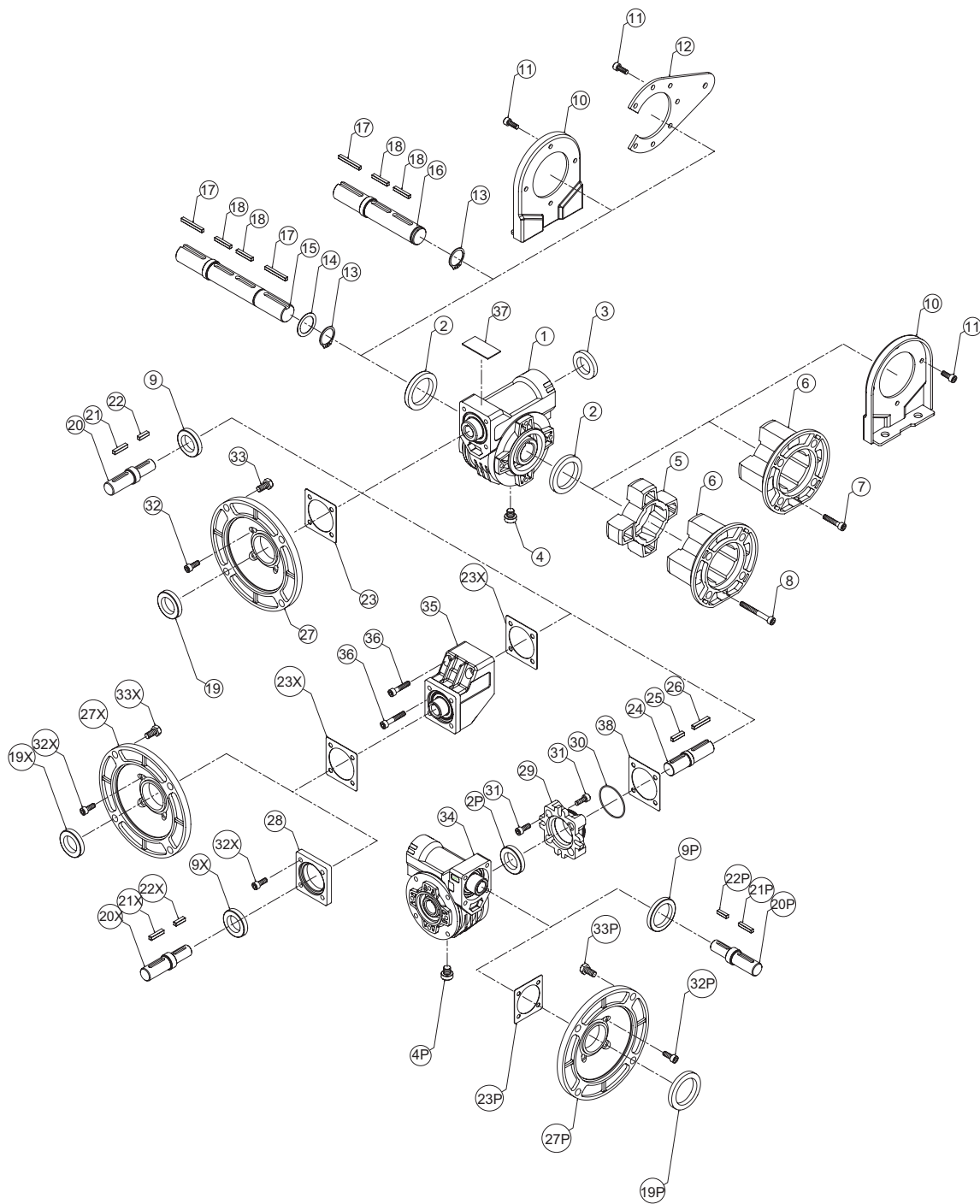
BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



ITEM #	DESCRIPTION				
1	GEAR MODULE	11	SOCKET HEAD CAPSCREW	20,20P,20X	INPUT SHAFT - NON-MOTORIZED INPUT
2,2P	OIL SEAL - OUTPUT	12	REACTION ARM	21,21P,21X	KEY - INPUT (EXTENSION)
3	RCA SEAL PLUG	13	RETAINING RING	22,22P,22X	KEY -INPUT (INTERNAL)
4,4P	DRAIN PLUG	14	SPACER	23,23P,23X	GASKET
5	FL-SPACER	15	OUTPUT SHAFT - DOUBLE EXTENSION	24	CONNECTOR SHAFT
6	F-FLANGE	16	OUTPUT SHAFT - SINGLE EXTENSION	25	KEY
7	SOCKET HEAD CAPSCREW	17	KEY-OUTPUT (EXTENSION)	26	KEY
8	SOCKET HEAD CAPSCREW	18	KEY-OUTPUT (INTERNAL)	27,27P,27X	FLANGE - MOTORIZED INPUT
9,9P,9X	OIL SEAL - NON-MOTORIZED INPUT	19,19P,19X	OIL SEAL - MOTORIZED INPUT	28	INPUT COVER
10	HORIZONTAL BASE			29	CONNECTOR FLANGE - DOUBLE REDUCTION
				30	O-RING
				31	SOCKET HEAD CAPSCREW
				32,32P,32X	SOCKET HEAD CAPSCREW
				33,33P,33X	HEX HEAD CAPSCREW
				34	PRIMARY GEAR MODULE - DOUBLE REDUCTION
				35	HELICAL STEP MODULE - DOUBLE REDUCTION
				36	SOCKET HEAD CAPSCREW
				37	NAMEPLATE
				38	GASKET

General Operation

1. Run the motor which drives the reducer and check the direction of reducer output rotation. Consult motor nameplate for instructions to reverse the direction of rotation.
2. Attaching the load: On direct coupled installations, check shaft and coupling alignment between speed reducer and loading mechanism. On chain/sprocket and belt/pulley installation, locate the sprocket or pulley as close to the oil seal as possible to minimize overhung load. Check to verify that the overhung load does not exceed specifications published in the catalog.
3. High momentum loads: If coasting to a stop is undesirable, a braking mechanism should be provided to the speed reducer output or the driven mechanism.

CAUTION The system of connected rotating parts must be free from critical speed, torsional or other type vibration, no matter how induced. The responsibility for this system analysis lies with the purchaser of the speed reducer.

Installation Instructions

The following instructions apply to standard Grove Gear Bravo[®] type reducers with base or flange mounting in motorized and non-motorized single and double reduction options.

1. Mount the unit to a rigid flat surface using grade 5 or higher fasteners. The mounting fasteners should be the largest standard size that will fit in the base mounting hole. Shim as required under flange or base feet which do not lie flat against the mounting surface.
2. Carefully follow lubrication instructions and installation manual furnished with the gear reducer. All standard Bravo[®] reducers are properly filled at Factory with sufficient lubricant quantity for nearly any mounting position.

BRAVO aluminum gear reducers: Series 512-525 utilize a vent-free design and are Factory filled with synthetic oil formulated for lifetime lubrication & wide operating temperature range (+5F to +220F). It is not necessary to change the lubricant unless the reducer is used in a severe environment. If these reducers will be used in severe environment or if lubricant must be replaced, contact Factory.

3. Connect motor to speed reducer.

CAUTION DO NOT CHANGE MOUNTING POSITIONS WITHOUT CONTACTING FACTORY. Altering the mounting position may require special lubrication provisions which must be factory installed.

CAUTION Do not operate the reducer without making sure it contains the correct amount of oil. Confirm that mounting position on nameplate matches application requirement per Figure 1. Do not overfill or underfill with oil, or injury to personnel, reducer or other equipment may result.

CAUTION A unit cannot be used as an integral part of a machine superstructure which would impose additional loads on the unit other than those imposed by the torque being transmitted either through a shaft-mounted arrangement, and any shaft mounted power transmitting device. (e.g. sprockets, pulleys, couplings)

CAUTION For safe operation and to maintain the unit warranty, when changing a factory installed fastener for any reason it becomes the responsibility of the person making the change to properly account for fastener grade, thread engagement, load, tightening torque and the means of torque retention.

Lubrication

Carefully follow lubrication instructions and installation manual furnished with the gear reducer. All standard Bravo[®] reducers are properly filled at Factory with sufficient lubricant quantity for any mounting position.

Change oil only when performing maintenance that requires gearbox disassembly or if the reducer is operated in a severe environment. If oil must be replaced, use only Mobil PAG 460.

Mobil PAG 460 is H1 Food Grade approved lube.

CAUTION Lubricant should be changed more often if gear reducer is used in a severe environment. (ie: humid, wet, caustic, etc)

CAUTION Do not mix different lubricants in the reducer.

SPECIAL LUBRICATION REQUIREMENTS – Sizes 518-534

- Reducer is mounted with input worm shaft vertical
- Input speed is sustained less than 900 RPM

NOTE: The reducer may require modifications to assure proper lubrication in these applications. Contact Factory for more detail.

For lubrication requirements of helical reducers (primaries of helical worm reducers and ratio multipliers), contact Factory.

Lubrication type	Series				
	512	518	520	525	534
Oil (ounces)	2.2	3.0	5.2	13	41

16 oz. = 1 pint	1 quart = .9463 liter
2 pints = 1 quart	1 gallon = 3.785 liter
4 quarts = 1 gallon	1 lb = .4535 kg.
1 gallon = 128 oz.	

High Efficiency Gear Reducers

Grove Gear offers a complete line of high efficiency gearing products including: helical - inline, helical - bevel, helical - worm and parallel shaft reducers. System operating efficiency is maximized with gear reducer efficiencies up to 97%. In many cases, high efficiency gear products can do the same job as a conventional worm drive, but with a smaller motor and lower energy consumption. All Grove Gear high efficiency gearing products offer decreased motor power requirements, no thermal limitations, industry standard mounting capability and modular design.

	STANDARD	GROVE GEAR HIGH EFFICIENCY GEAR REDUCERS				
	Worm	Helical - Worm	Helical - Bevel	Helical - Inline	Parallel Shaft Drives	LeCentric Inline
Ratios	5:1 thru 60:1	Up to 3000:1	Up to 3400:1	Up to 3700:1	Up to 3333:1	Up to 280:1
Housing	Cast Iron, Aluminum, & Stainless Steel	Cast Iron & Stainless Steel	Cast Iron & Stainless Steel	Cast Iron & Stainless Steel	Cast Iron	Aluminum
C-Flange	Standard Product Offering					
Integral Motor	Available	Available	Available	Available	Available	Not Available
Self-Locking	Not Guaranteed	Not Guaranteed	Not Guaranteed	Not Guaranteed	Not Guaranteed	Not Guaranteed
Minimum Backlash	Available	No	No	No	No	No
Hollow Bore Output	Standard Product Offering			No	Available	No
Solid Shaft Output	Standard Product Offering					
Thermal Limits	No	No	No	No	No	No
Efficiency	48% - 85%	46% - 83%	85% - 95%	90% - 97%	90 - 97%	93 - 97%

IRONMAN HIGH EFFICIENCY GEAR REDUCERS



Helical - Worm

- 4 sizes available in reducer, GEAR+MOTOR™ and integral gearmotor designs
- Input horsepower ratings up to 17 HP
- Available in double, triple and quadruple reduction with ratios from 7:1 to 3400:1
- Solid output shaft and hollow output shaft available in all sizes
- Hardened and ground steel worm shaft and high capacity bronze alloy worm gear give you the advantages of worm gearing with the efficiency of helical gearing



Helical - Bevel

- 6 sizes available in reducer, GEAR+MOTOR™, and integral gearmotor designs
- Input horsepower ratings to 130 HP
- Available in triple and quintuple reduction with ratios from 6.2:1 to 3400:1
- Solid output shaft and hollow output shaft available in all sizes
- Precision carburized and hardened spiral bevel gearing for quiet, efficient, right angle speed reduction



Helical - Inline

- 10 sizes available in reducer, GEAR+MOTOR™, and integral gearmotor designs
- Input horsepower ratings to 125 HP
- Available in double, triple and quadruple reduction with ratios from 2.2:1 to 3700:1
- Base mount and output flange designs available in all sizes





IRONMAN HIGH EFFICIENCY GEAR REDUCERS

Helical Parallel Drives

- Power ratings from 1/4 to 20 HP
- Ratios from 3.42:1 thru 3333:1
- Output speeds .5 rpm to 280 rpm
- Universal base, flange and hollow bore mounting with competitive interchange capability
- Precision carburized and hardened crowned helical gearing
- Double lip spring loaded seals with precision ground seal journals
- High capacity ball and tapered bearings with splash lubrication, factory filled
- Enhanced high tensile strength steel shafting with low notch sensitivity
- Optimum structural designed housings made of high strength alloy case iron



LeCENTRIC INLINE GEAR REDUCERS

- LeCentric inline reducers available in four sizes with ratings to 15 HP and in ratios from 3.5:1 to 280:1
- Fit into small spaces. Up to one third smaller than other brands
- Sealed for life, never change or add oil
- Lightweight OEM design suitable for mobile equipment and difficult installations
- Mounting dimensions are interchangeable with most major worldwide competitors



HIGH EFFICIENCY GEAR REDUCERS

High Efficiency R Series

Helical - Inline Gear Reducers

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High Efficiency S Series

Helical - Worm Gear Reducers

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High Efficiency K Series

Helical - Bevel Gear Reducers

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High Efficiency F Series

Parallel Shaft Gear Reducers

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Grove Gear Ironman High Efficiency Helical - Inline Gear Reducers and GEAR+MOTOR™ Solutions

R Series Features and Benefits



MODULAR DESIGN

Innovative design includes double reduction, triple reduction and quad reduction reducers assembled from standard components.

ALL GEARING IS HARDENED AND GROUND (AGMA class 10 or better) for enhanced efficiency and noise reduction. Double reduction units are 96-97% efficient.

LUBRICATION

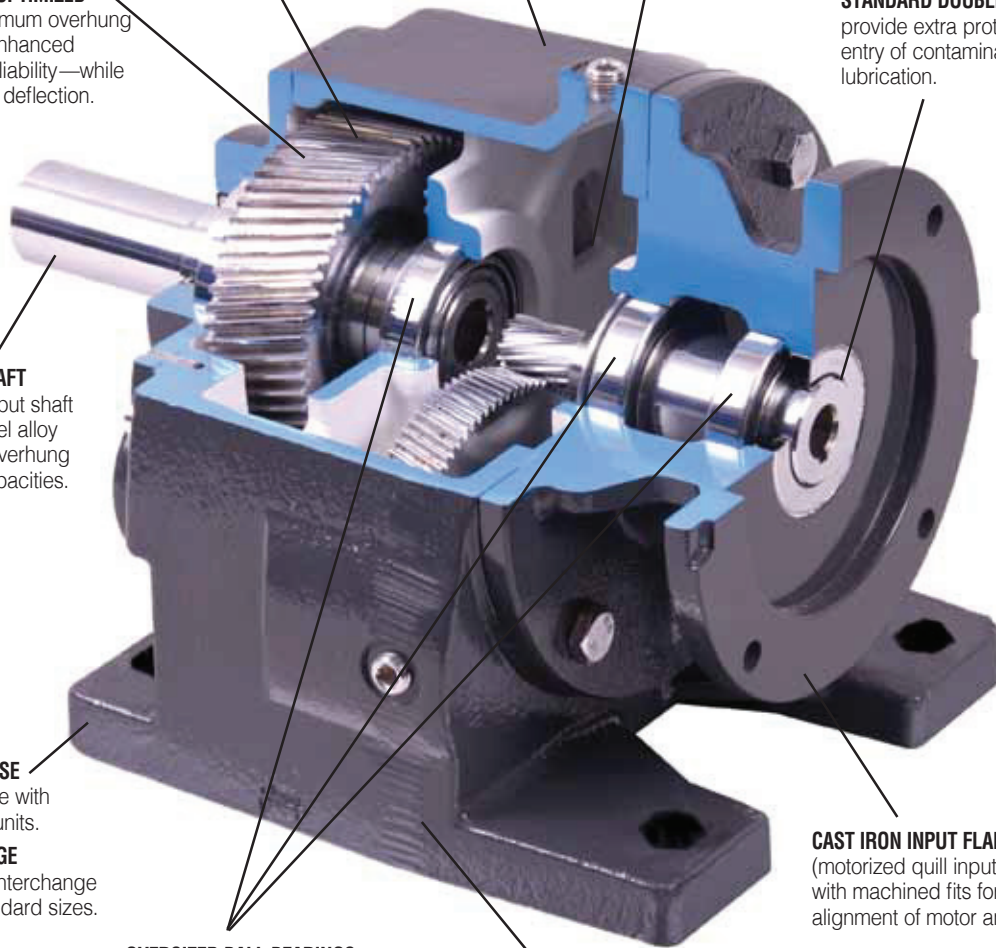
All Ironman reducers are filled with high quality gear oil at the factory.

BEARING SPANS OPTIMIZED

to allow for maximum overhung load capacity, enhanced durability and reliability—while minimizing shaft deflection.

STANDARD DOUBLE LIP SEALS

provide extra protection against entry of contaminants or loss of lubrication.



ROBUST OUTPUT SHAFT

Oversized steel output shaft of high strength steel alloy provides superior overhung load and torque capacities.

CAST IRON INPUT FLANGE

(motorized quill input styles) with machined fits for precision alignment of motor and bearings.

INTEGRAL MOUNTING BASE

designed to interchange with dozens of competitive units.

INTEGRAL OUTPUT FLANGE

also available to allow interchange with many industry standard sizes.

OVERSIZED BALL BEARINGS

on both input and output shafts for long life and high ratings.

HOUSING

Precision machined rugged cast iron housings give you the industrial strength and durability you've come to expect from Grove Gear.

MOUNTING DIMENSIONS

allow interchange with many popular reducers including SEW, David Brown, Nord and Dodge.

PERMANENTLY MARKED NAMEPLATE

with output torque, ratio and maximum input horsepower.



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON or Lincoln industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.



BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

LeCentric Reducers and GEAR+MOTOR™ Solutions

P Series Features and Benefits



LeCENTRIC™ REDUCERS ARE FILLED WITH MOBIL GLYGOYLE 460 POLGLYCOL LUBRICANT (or equivalent) as standard. All sizes are considered "lubed for life." Specify mounting position at time of order. Refer to page 466 for available positions.

REMOVABLE INSPECTION COVER allows periodic inspection of gearing during routine maintenance.

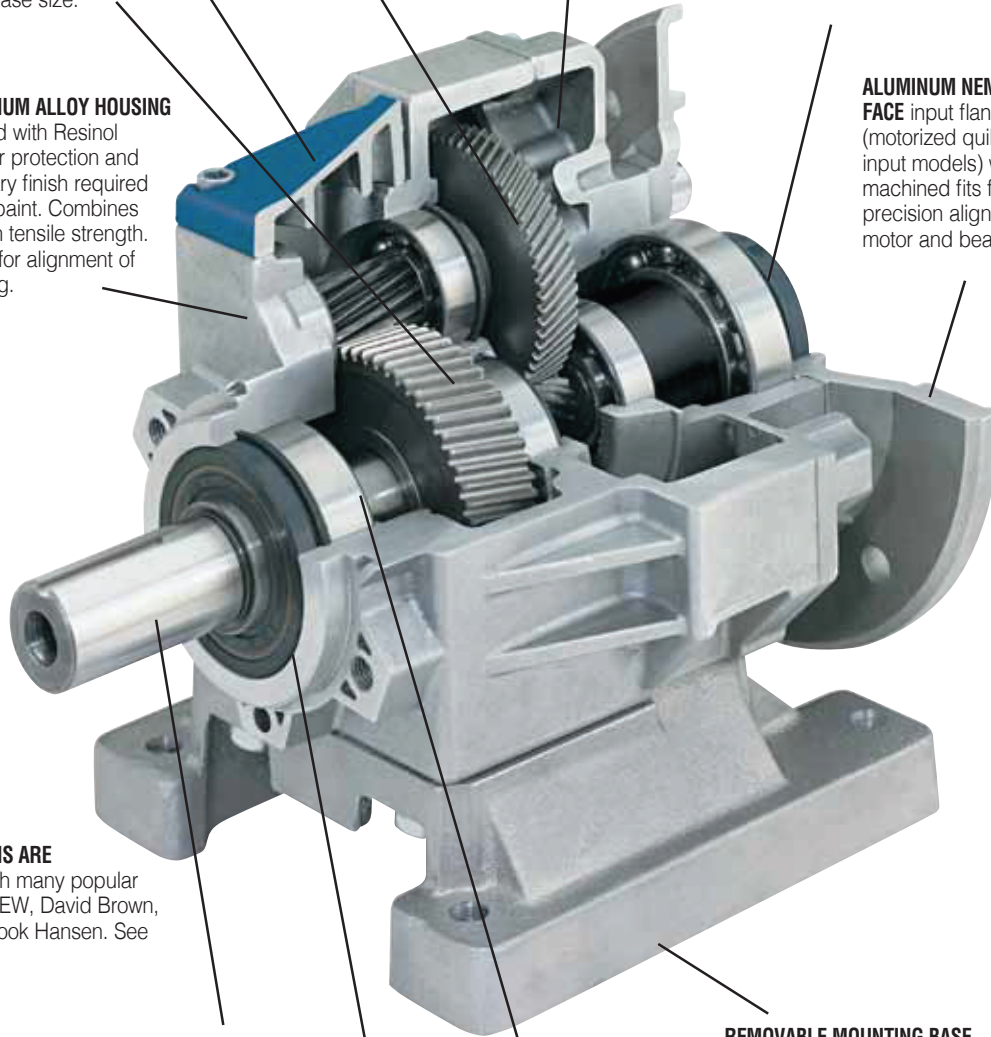
RATIOS UP TO 63:1 in two-stage units and up to 278:1 in three-stage units to maximize efficiency and reduce overall case size.

SINGLE-PIECE ALUMINUM ALLOY HOUSING vacuum impregnated with Resinol RT (MIL-STD 276) for protection and sealing. No secondary finish required but readily accepts paint. Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing.

ALL GEARING IS HARDENED AND GROUND (AGMA Class 10 or better), for enhanced efficiency and noise reduction. Double reduction units are 96–97% efficient.

BEARING SPANS OPTIMIZED to allow for maximum overhung load capacity, enhanced durability and reliability—while minimizing shaft deflection.

ALUMINUM NEMA C FACE input flange (motorized quill input models) with machined fits for precision alignment of motor and bearings.



MOUNTING DIMENSIONS ARE INTERCHANGEABLE with many popular reducers, including SEW, David Brown, Nord, Dodge, and Brook Hansen. See page 460 for details.

ROBUST OUTPUT SHAFT of high strength steel alloy for superior torque and overhung load capacities.

PREMIUM VITON® SEALS provide extra protection against entry of contaminants or loss of lubrication. Tandem seals available on input and output.

PERMANENTLY MARKED NAMEPLATE with output torque, ratio and maximum input horsepower.

OVERSIZED BALL BEARINGS on both input and output shafts.

REMOVABLE MOUNTING BASE allows interchange with dozens of competitive units.

BOLT-ON OUTPUT FLANGE also available to allow interchange with many industry-standard sizes.

Single Reduction Reducers

BRAVO®

Double Reduction
BRAVO® Worm - Worm

Double Reduction
BRAVO® Helical - Worm

BRAVO® Accessory Kits

High Efficiency Helical - In-Line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

WIDE RANGE OF STYLES:

Double or Triple Reduction, Base or Flange Mount!

Grove Gear Helical-Inline reducers are available in a wide range of styles to meet the ever increasing needs of the market place. To start the selection process, choose between the rugged IRONMAN cast iron designs or the lightweight LeCentric™ aluminum reducers. Choose between a motorized or non-motorized basic design. Then select either a base mount or an output flange mount model.

To make your job even easier, you can order your Grove Gear reducers ready-to-run by selecting from any of the power-matched LEESON motors from the Quick Selection Guide starting on page 380. Or create your own combination by selecting from hundreds of LEESON and Lincoln motors available in LEESON catalog 1050 or at www.leeson.com. Your GEAR+MOTOR™ package can come with the motor mounted to the reducer or ready to install.

Direct Interchange Charts

LeCENTRIC™ reducers serve as dependable, bolt-in replacements for many popular brands. See page 446 for specific information about interchangeability.

	FOOT MOUNT	FLANGE MOUNT		FOOT MOUNT	FLANGE MOUNT
SEW	✓	✓	Hansen	✓▲	✓
Bonfiglioli	✓▲	✓	Lenze	✓	✓
Brook Hansen	✓	✓	Leroy Somer	✓	✓
Browning	✓	✓	Motovario	✓▲	✓
David Brown	✓	✓	Nord	✓	✓
Dodge Quantis	✓	✓	Stober	✓▲	✓
Falk	✓	✓	Sterlin	✓	✓
Flender/Motox	✓	✓	Sumitomo	✓▲	✓

▲ Only LeCentric Series offers direct bolt-in replacement.

Model Number System

R Series and P Series Helical - Inline



Single Reduction Reducers
BRAVO®

Double Reduction
BRAVO® Worm - Worm

Double Reduction
BRAVO® Helical - Worm

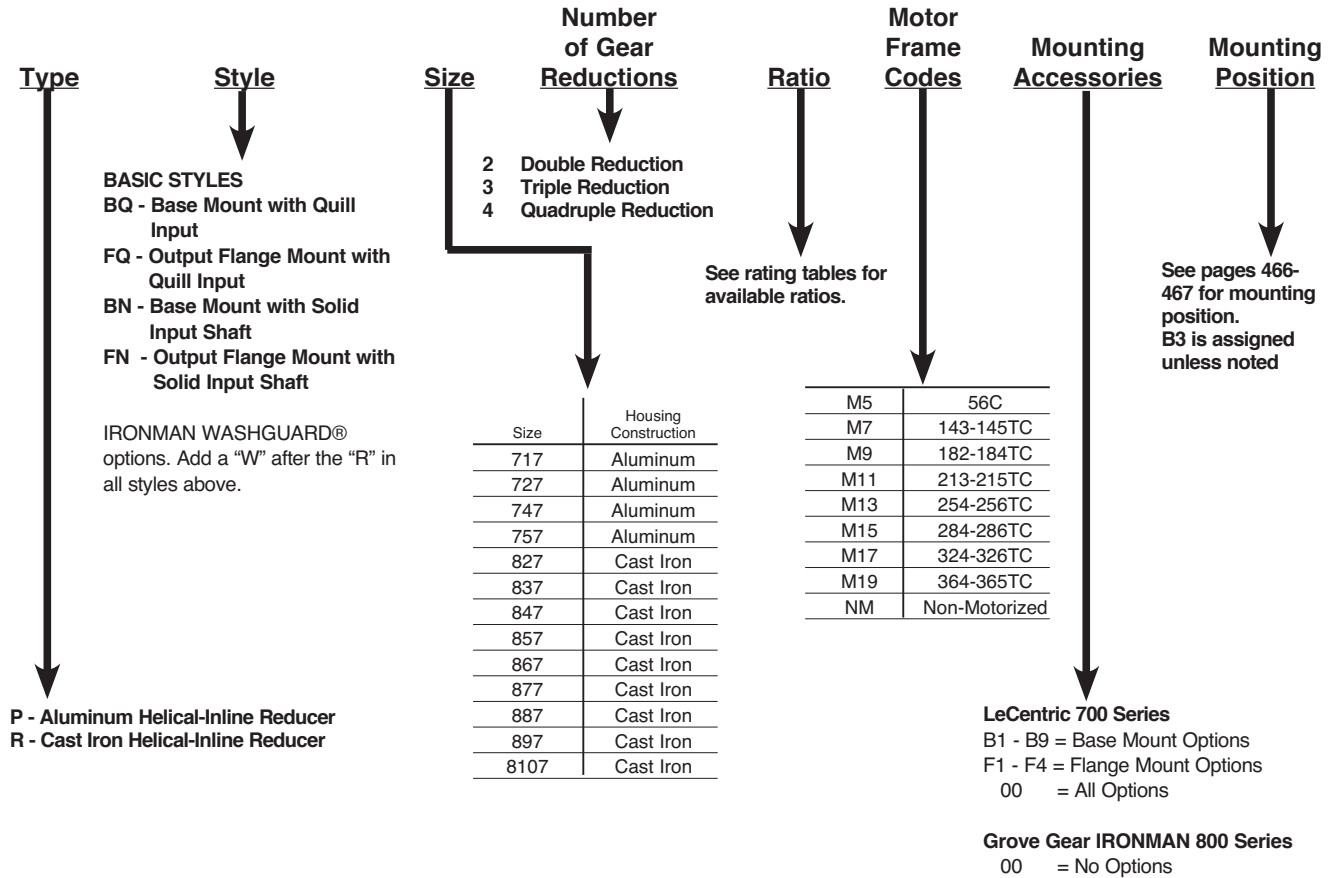
BRAVO® Accessory Kits

High Efficiency Helical - Inline Gear Reducers

High Efficiency Helical - Worm Gear Reducers

Grove Gear IRONMAN Helical-Inline Model Number System

The Mounting position must be specified on all orders, and included in the reducer description. To order Motorized Reducers, simply specify the reducer, indicate the motor description or catalog number and specify "Motorized Assembly". To order Integral Gearmotors, simply specify the reducer, motor horsepower and "Integral Gearmotor". Integral Gearmotors in this catalog are supplied with 3 phase 230/460v totally enclosed 1750 rpm general purpose motors.



Sample Model Numbers

Cast iron, size 827 base mount unit with quill input, 32.53:1 ratio, 56C motor frame

R	- BQ	827	- 32.53	- M5	- B3
Type	Style	Size	Ratio	Motor Frame	Mounting

Cast Iron Styles page 378.
Aluminum Styles page 446.



Selection Guide

R Series Helical - Inline • Cast Iron

Aluminum Styles page 458.

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, any stock reducer can be field or Factory modified into a wide range of styles.

**Base Mount
Quill "C" Face Input**

**Output Flange Mount
Quill Input Shaft**

Style RBQ

Style RFQ

**DOUBLE
REDUCTION**



Ratings Pages 417-455
Dimension Page 432

Ratings Pages 417-455
Dimension Page 435

**TRIPLE
REDUCTION**



Ratings Pages 417-455
Dimension Page 433

Ratings Pages 417-455
Dimension Page 436

**QUADRUPLE
REDUCTION**



Ratings Pages 417-455
Dimension Page 434

Ratings Pages 417-455
Dimension Page 437



**Base Mount
 Solid Input Shaft**

**Output Flange Mount
 Solid Input Shaft**

Style RBN

Style RFN



Ratings Pages 417-455
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Ratings Pages 417-455
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 Dimension Page 443

BRAVO®
 Single Reduction Reducers

BRAVO® Worm - Worm
 Double Reduction

BRAVO® Helical - Worm
 Double Reduction

BRAVO® Accessory Kits

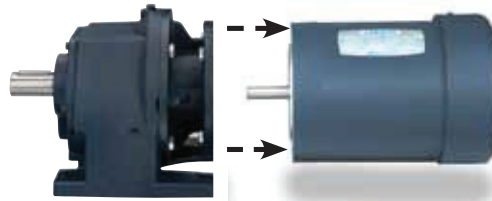
High Efficiency Helical - Inline
 Gear Reducers

High Efficiency Helical - Worm
 Gear Reducers



"How To Use" Quick Selections R Series and P Series Helical - Inline

GROVE GEAR



Determine the actual input horsepower of the motor by multiplying the motor's nameplate horsepower by the Service Factor.

Determine the output speed (RPM) required at output shaft of reducer.

Identify the mounting style required by your application from the style charts shown on pages 378-379 or 446. Note the different bases and flanges to interchange with various competitive units.

To select the proper gear reducer size, use the Quick Selections as shown:

STOCK GEAR+MOTOR™

Start with a reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

A wide variety of single phase, three phase and DC motors—suitable for almost every industrial application need—have been pre-selected and assembled to reducers to provide a variety of torque and output speed combinations...ready for shipment. Saves time and expense.

How To Use Quick Selections

Maximum Rating Tables for Cast Iron Double, Triple and Quad Reduction Gear Reducers start on page 417. Aluminum maximum rating tables start on page 447. Selection of the appropriate gear reducer can be made using those tables or the Quick Selections on the following pages.

BEFORE YOU START:

Identify the Service Factor of the application.

Quick Selections R Series and P Series Helical - Inline 1750 RPM Input

1 Find the appropriate Quick Selections page. The tables begin on page 381 and are organized by motor HP. The reducer should be selected first; GEAR+MOTOR™ combinations follow.

2 Locate output RPM column on left side of the table. All ratings are based on an input speed of 1750 RPM. Scroll down to the output speed (RPM) required. Output speeds are rounded to the nearest whole number. For exact output speed, divide 1750 by the ratio listed.

3 Choose aluminum or cast iron construction.

4 Move to the Service Factor column and find one suitable to meet the application requirements. Refer to page 644 for AGMA recommended service factors.

5 Check load capacities against the needs of your application. Do not exceed the overhung load (OHL) shown in the table. Detailed instructions for calculating the actual overhung load are shown on page 645. If overhung and thrust loads will be applied simultaneously or if the load exceeds listed capacities, contact Factory.

6 Select motor frame size.

7 Identify the catalog number of the reducer by continuing to the right. See page 377 for detailed information on building an exact catalog number. The B1 suffix can be replaced with optional Mod-Squad™ codes as detailed on page 377.

8 Identify reducer mounting position on page 466-447.

9 Verify physical dimensions using the dimensional drawings shown on pages 432-443 or 456-459.

10 Add a motor

.25 HP		.375 HP		.5 HP		.75 HP		1 HP		1.5 HP		2 HP		3 HP		4 HP		5 HP		7.5 HP		10 HP	
Output Speed (RPM)	Service Factor	Output Torque (lb-in)	Overhung Load (lbs.)	Ratio	Material	Mounting	Frame	Motor	Reducer Only Catalog Number	Weight (lbs)	Reducer Only Catalog Number	Weight (lbs)	Reducer Only Catalog Number	Weight (lbs)	Reducer Only Catalog Number	Weight (lbs)	Reducer Only Catalog Number	Weight (lbs)	Reducer Only Catalog Number	Weight (lbs)	Reducer Only Catalog Number	Weight (lbs)	Reducer Only Catalog Number
405	16.12	37	216	4.3	Aluminum	A	56C	PBG172-13.25-M5-B1	P7172002.B1	22	P7172002.B1	22	P7172002.B1	22	P7172002.B1	22	P7172002.B1	22	P7172002.B1	22	P7172002.B1	22	P7172002.B1
275	10.94	55	250	6.3	Cast Iron	A	56C	PBG172-15.37-M5-B1	P7172004.B1	36	P7172004.B1	36	P7172004.B1	36	P7172004.B1	36	P7172004.B1	36	P7172004.B1	36	P7172004.B1	36	P7172004.B1
241	9.59	63	260	7.2	Cast Iron	A	56C	PBG172-16.20-M5-B1	P7172005.B1	26	P7172005.B1	26	P7172005.B1	26	P7172005.B1	26	P7172005.B1	26	P7172005.B1	26	P7172005.B1	26	P7172005.B1
222	8.84	68	266	7.8	Cast Iron	A	56C	PBG172-16.90-M5-B1	P7172006.B1	29	P7172006.B1	29	P7172006.B1	29	P7172006.B1	29	P7172006.B1	29	P7172006.B1	29	P7172006.B1	29	P7172006.B1
174	9.18	87	264	10.0	Cast Iron	A	56C	PBG172-17.54-M5-B1	P7172008.B1	104	P7172008.B1	104	P7172008.B1	104	P7172008.B1	104	P7172008.B1	104	P7172008.B1	104	P7172008.B1	104	P7172008.B1
150	7.91	101	293	11.6	Cast Iron	A	56C	PBG172-18.45-M5-B1	P7172009.B1	54	P7172009.B1	54	P7172009.B1	54	P7172009.B1	54	P7172009.B1	54	P7172009.B1	54	P7172009.B1	54	P7172009.B1
132	6.96	115	305	12.6	Cast Iron	A	56C	PBG172-19.25-M5-B1	P7172010.B1	59	P7172010.B1	59	P7172010.B1	59	P7172010.B1	59	P7172010.B1	59	P7172010.B1	59	P7172010.B1	59	P7172010.B1
114	6.01	133	321	15.37	Cast Iron	A	56C	PBG172-20.85-M5-B1	P7172011.B1	63	P7172011.B1	63	P7172011.B1	63	P7172011.B1	63	P7172011.B1	63	P7172011.B1	63	P7172011.B1	63	P7172011.B1
108	5.70	140	335	16.20	Cast Iron	A	56C	PBG172-21.45-M5-B1	P7172012.B1	67	P7172012.B1	67	P7172012.B1	67	P7172012.B1	67	P7172012.B1	67	P7172012.B1	67	P7172012.B1	67	P7172012.B1
90.0	4.91	163	350	18.80	Cast Iron	A	56C	PBG172-23.15-M5-B1	P7172013.B1	71	P7172013.B1	71	P7172013.B1	71	P7172013.B1	71	P7172013.B1	71	P7172013.B1	71	P7172013.B1	71	P7172013.B1
81.0	4.37	187	374	21.54	Cast Iron	A	56C	PBG172-24.90-M5-B1	P7172014.B1	75	P7172014.B1	75	P7172014.B1	75	P7172014.B1	75	P7172014.B1	75	P7172014.B1	75	P7172014.B1	75	P7172014.B1
78.0	4.17	191	375	22.26	Cast Iron	A	56C	PBG172-25.25-M5-B1	P7172015.B1	78	P7172015.B1	78	P7172015.B1	78	P7172015.B1	78	P7172015.B1	78	P7172015.B1	78	P7172015.B1	78	P7172015.B1
				24.30	Cast Iron	A	56C	PBG172-26.30-M5-B1	P7172016.B1	82	P7172016.B1	82	P7172016.B1	82	P7172016.B1	82	P7172016.B1	82	P7172016.B1	82	P7172016.B1	82	P7172016.B1
				25.90	Cast Iron	A	56C	PBG172-27.45-M5-B1	P7172017.B1	86	P7172017.B1	86	P7172017.B1	86	P7172017.B1	86	P7172017.B1	86	P7172017.B1	86	P7172017.B1	86	P7172017.B1
				27.90	Cast Iron	A	56C	PBG172-28.80-M5-B1	P7172018.B1	90	P7172018.B1	90	P7172018.B1	90	P7172018.B1	90	P7172018.B1	90	P7172018.B1	90	P7172018.B1	90	P7172018.B1
				29.90	Cast Iron	A	56C	PBG172-30.30-M5-B1	P7172019.B1	94	P7172019.B1	94	P7172019.B1	94	P7172019.B1	94	P7172019.B1	94	P7172019.B1	94	P7172019.B1	94	P7172019.B1
				31.90	Cast Iron	A	56C	PBG172-31.90-M5-B1	P7172020.B1	98	P7172020.B1	98	P7172020.B1	98	P7172020.B1	98	P7172020.B1	98	P7172020.B1	98	P7172020.B1	98	P7172020.B1
				33.90	Cast Iron	A	56C	PBG172-33.60-M5-B1	P7172021.B1	102	P7172021.B1	102	P7172021.B1	102	P7172021.B1	102	P7172021.B1	102	P7172021.B1	102	P7172021.B1	102	P7172021.B1
				35.90	Cast Iron	A	56C	PBG172-35.40-M5-B1	P7172022.B1	106	P7172022.B1	106	P7172022.B1	106	P7172022.B1	106	P7172022.B1	106	P7172022.B1	106	P7172022.B1	106	P7172022.B1
				37.90	Cast Iron	A	56C	PBG172-37.30-M5-B1	P7172023.B1	110	P7172023.B1	110	P7172023.B1	110	P7172023.B1	110	P7172023.B1	110	P7172023.B1	110	P7172023.B1	110	P7172023.B1
				39.90	Cast Iron	A	56C	PBG172-39.30-M5-B1	P7172024.B1	114	P7172024.B1	114	P7172024.B1	114	P7172024.B1	114	P7172024.B1	114	P7172024.B1	114	P7172024.B1	114	P7172024.B1
				41.90	Cast Iron	A	56C	PBG172-41.40-M5-B1	P7172025.B1	118	P7172025.B1	118	P7172025.B1	118	P7172025.B1	118	P7172025.B1	118	P7172025.B1	118	P7172025.B1	118	P7172025.B1
				43.90	Cast Iron	A	56C	PBG172-43.60-M5-B1	P7172026.B1	122	P7172026.B1	122	P7172026.B1	122	P7172026.B1	122	P7172026.B1	122	P7172026.B1	122	P7172026.B1	122	P7172026.B1
				45.90	Cast Iron	A	56C	PBG172-45.90-M5-B1	P7172027.B1	126	P7172027.B1	126	P7172027.B1	126	P7172027.B1	126	P7172027.B1	126	P7172027.B1	126	P7172027.B1	126	P7172027.B1
				47.90	Cast Iron	A	56C	PBG172-48.30-M5-B1	P7172028.B1	130	P7172028.B1	130	P7172028.B1	130	P7172028.B1	130	P7172028.B1	130	P7172028.B1	130	P7172028.B1	130	P7172028.B1
				49.90	Cast Iron	A	56C	PBG172-50.80-M5-B1	P7172029.B1	134	P7172029.B1	134	P7172029.B1	134	P7172029.B1	134	P7172029.B1	134	P7172029.B1	134	P7172029.B1	134	P7172029.B1
				51.90	Cast Iron	A	56C	PBG172-53.40-M5-B1	P7172030.B1	138	P7172030.B1	138	P7172030.B1	138	P7172030.B1	138	P7172030.B1	138	P7172030.B1	138	P7172030.B1	138	P7172030.B1

BRAVO® Single Reduction Reducers

BRAVO® Worm - Worm Double Reduction

BRAVO® Helical - Worm Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline Gear Reducers

High Efficiency Helical - Worm Gear Reducers

BRAVO® Single Reduction Reducers

BRAVO® Worm - Worm Double Reduction

BRAVO® Helical - Worm Double Reduction

BRAVO®

Quick Selections

R Series and P Series Helical - Inline

1750 RPM Input



Single Reduction Reducers

BRAYVO® Worm - Worm
Double Reduction

BRAYVO® Helical - Worm
Double Reduction

BRAYVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.



.25 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
405	16.12	37	216	4.32	2	11	A	56C	PBQ7172-4.32-M5-B1	P7172002.B1
275	10.94	55	250	6.36	2	11	A	56C	PBQ7172-6.36-M5-B1	P7172004.B1
241	9.59	63	260	7.26	2	11	A	56C	PBQ7172-7.26-M5-B1	P7172005.B1
222	8.84	68	266	7.89	2	11	A	56C	PBQ7172-7.89-M5-B1	P7172006.B1
174	9.18	87	284	10.04	2	11	A	56C	PBQ7172-10.04-M5-B1	P7172008.B1
150	7.91	101	293	11.64	2	11	A	56C	PBQ7172-11.64-M5-B1	P7172009.B1
132	6.96	115	305	13.26	2	11	A	56C	PBQ7172-13.26-M5-B1	P7172010.B1
114	6.01	133	321	15.37	2	11	A	56C	PBQ7172-15.37-M5-B1	P7172011.B1
108	5.70	140	335	16.20	2	11	A	56C	PBQ7172-16.20-M5-B1	P7172012.B1
93.0	4.91	163	350	18.80	2	11	A	56C	PBQ7172-18.80-M5-B1	P7172013.B1
81.0	4.27	187	374	21.54	2	11	A	56C	PBQ7172-21.54-M5-B1	P7172014.B1
79.0	4.17	191	375	22.26	2	11	A	56C	PBQ7172-22.26-M5-B1	P7172015.B1
67.0	3.53	226	420	26.30	2	11	A	56C	PBQ7172-26.30-M5-B1	P7172016.B1
60.0	3.17	252	435	29.40	2	11	A	56C	PBQ7172-29.40-M5-B1	P7172017.B1
52.0	2.83	282	459	33.50	3	12	A	56C	PBQ7173-33.50-M5-B1	P7173001.B1
49.0	2.53	315	470	35.90	2	11	A	56C	PBQ7172-35.90-M5-B1	P7172018.B1
49.0	3.68	315	658	35.90	2	11	A	56C	PBQ7272-35.90-M5-B1	P7272018.B1
46.0	2.43	329	478	38.37	2	11	A	56C	PBQ7172-38.37-M5-B1	P7172019.B1
40.0	2.11	378	495	43.69	3	12	A	56C	PBQ7173-43.69-M5-B1	P7173003.B1
40.0	3.14	378	674	43.69	3	12	A	56C	PBQ7273-43.69-M5-B1	P7273003.B1
37.0	1.95	409	507	46.80	2	11	A	56C	PBQ7172-46.80-M5-B1	P7172020.B1
37.0	2.61	409	674	46.80	2	11	A	56C	PBQ7272-46.80-M5-B1	P7272020.B1
35.0	1.85	432	510	50.64	3	12	A	56C	PBQ7173-50.64-M5-B1	P7173004.B1
35.0	2.84	419	674	50.64	3	12	A	56C	PBQ7273-50.64-M5-B1	P7273004.B1
35.0	2.69	419	674	50.67	2	11	A	56C	PBQ7272-50.67-M5-B1	P7272021.B1
33.0	2.62	444	674	54.30	3	12	A	56C	PBQ7273-54.30-M5-B1	P7273005.B1
33.0	1.74	458	520	54.30	3	12	A	56C	PBQ7173-54.30-M5-B1	P7173005.B1

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
R8172017 – 102868



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1/4 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TENV	56C	102868
General Purpose, C Face	208-230/460 3-PH	TENV	56C	101648
CR Rated DC Motor	90 VDC	TEFC	56C	098002
SCR Rated DC Motor	90 VDC	TEFC	56C	098003



Quick Selections

R Series and P Series Helical - Inline
1750 RPM Input



BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.



.25 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
32.0	5.23	458	1041	54.73	3	24	A	56C	PBQ7473-54.73-M5-B1	P7473004.B1
31.0	5.07	473	1050	57.13	3	24	A	56C	PBQ7473-57.13-M5-B1	P7473005.B1
29.0	1.58	505	525	61.22	3	12	A	56C	PBQ7173-61.22-M5-B1	P7173006.B1
29.0	2.32	513	674	61.22	3	12	A	56C	PBQ7273-61.22-M5-B1	P7273006.B1
28.0	7.98	517	4120	61.69	3	64	C	56C	RBQ8473-61.69-M5-B1	R8473003
28.0	2.04	523	674	61.80	2	11	A	56C	PBQ7272-62.97-M5-B1	P7272022.B1
26.0	4.25	564	1075	66.22	3	24	A	56C	PBQ7473-66.22-M5-B1	P7473006.B1
25.0	1.36	586	540	70.95	3	12	A	56C	PBQ7173-70.95-M5-B1	P7173008.B1
25.0	1.15	586	674	70.95	3	12	A	56C	PBQ7273-70.95-M5-B1	P7273008.B1
24.0	3.04	608	1150	72.63	3	36	C	56C	RBQ8273-72.63-M5-B1	R8273002
24.0	1.83	611	674	73.33	3	12	A	56C	PBQ7273-73.33-M5-B1	P7273009.B1
23.0	1.82	637	674	74.50	3	12	A	56C	PBQ7273-74.50-M5-B1	P7273010.B1
23.0	6.53	634	1600	75.71	3	64	C	56C	RBQ8473-75.71-M5-00	R8473004
22.0	2.79	663	1150	79.17	3	36	C	56C	RBQ8273-79.17-M5-00	R8273003
21.0	3.43	698	1091	82.30	3	24	A	56C	PBQ7473-82.30-M5-B1	P7473009.B1
21.0	5.83	710	1600	84.76	3	64	C	56C	RBQ8473-84.76-M5-00	R8473005
20.0	1.59	733	674	86.80	3	12	A	56C	PBQ7273-86.80-M5-B1	P7273011.B1
19.0	5.36	773	1600	92.29	3	64	C	56C	RBQ8473-92.29-M5-00	R8473006
19.0	2.38	777	1150	92.74	3	36	C	56C	RBQ8273-92.74-M5-00	R8273004
19.0	3.11	771	1102	92.78	3	24	A	56C	PBQ7473-92.78-M5-B1	P7473011.B1
18.0	1.46	814	674	96.85	3	12	A	56C	PBQ7273-96.85-M5-B1	P7273012.B1
17.0	2.19	844	1150	100.76	3	36	C	56C	RBQ8273-100.76-M5-00	R8273005
17.0	4.84	856	1600	102.22	3	64	C	56C	RBQ8473-102.22-M5-00	R8473007
17.0	1.36	862	674	102.80	3	12	A	56C	PBQ7273-102.80-M5-B1	P7273013.B1
17.0	2.78	862	1112	104.68	3	24	A	56C	PBQ7473-104.68-M5-B1	P7473012.B1
16.0	5.79	927	1700	110.67	3	95	C	56C	RBQ8673-110.67-M5-00	R8673007
15.0	4.30	963	1600	115.03	3	64	C	56C	RBQ8473-115.03-M5-00	R8473008
15.0	1.92	964	1150	115.15	3	36	C	56C	RBQ8273-115.15-M5-00	R8273006

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

R8172017 – 102868



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS

1/4 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
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General Purpose, C Face	208-230/460 3-PH	TENV	56C	101648
CR Rated DC Motor	90 VDC	TEFC	56C	098002
SCR Rated DC Motor	90 VDC	TEFC	56C	098003



Quick Selections

R Series and P Series Helical - Inline 1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.



BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

.25 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load (lbs.)●	Ratio	Number of Stages	Reducer Weight (lbs.)♦	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
15.0	1.85	977	1124	117.22	3	24	A	56C	PBQ7473-117.22-M5-B1	P7473013.B1
14.0	1.82	1016	1150	121.28	3	36	C	56C	RBQ8273-121.28-M5-00	R8273007
14.0	2.29	1047	1130	126.65	3	24	A	56C	PBQ7473-126.65-M5-B1	P7473014.B1
14.0	5.04	1065	1700	127.22	3	95	C	56C	RBQ8673-127.22-M5-00	R8673008
13.0	1.66	1115	1150	133.14	3	36	C	56C	RBQ8273-133.14-M5-00	R8273008
13.0	1.61	1127	1136	135.74	3	24	A	56C	PBQ7473-135.74-M5-B1	P7473015.B1
13.0	3.56	1162	1600	138.73	3	64	C	56C	RBQ8473-138.73-M5-B1	R8473009
12.0	1.96	1221	1150	145.68	3	24	A	56C	PBQ7473-145.68-M5-B1	P7473016.B1
12.0	2.76	1221	1475	145.68	3	29	A	56C	PBQ7573-145.68-M5-B1	P7573038.B1
12.0	3.31	1250	1600	149.23	3	64	C	56C	RBQ8473-149.23-M5-B1	R8473010
11.0	1.43	1292	1150	154.35	3	36	C	56C	RBQ8273-154.35-M5-00	R8273009
11.0	2.53	1332	1492	157.40	3	29	A	56C	PBQ7573-157.40-M5-B1	P7573039.B1
11.0	3.10	1335	1600	159.46	3	64	C	56C	RBQ8473-159.46-M5-00	R8473011
11.0	1.80	1332	1186	164.23	3	24	A	56C	PBQ7473-164.23-M5-B1	P7473018.B1
9.4	1.54	1559	1186	185.29	3	24	A	56C	PBQ7473-185.29-M5-B1	P7473019.B1
9.4	2.16	1559	1498	185.29	3	29	A	56C	PBQ7573-185.29-M5-B1	P7573041.B1
9.2	3.36	1600	1700	191.13	3	95	C	56C	RBQ8673-191.13-M5-00	R8673011
8.6	1.41	1704	1186	204.12	3	24	A	56C	PBQ7473-204.12-M5-B1	P7473020.B1
8.6	1.98	1704	1502	204.12	3	29	A	56C	PBQ7573-204.12-M5-B1	P7573042.B1
7.8	1.79	1879	1510	224.18	3	29	A	56C	PBQ7573-224.18-M5-B1	P7573043.B1
7.6	3.79	1917	2240	228.92	3	120	C	56C	RBQ8773-228.92-M5-00	R8773018
7.4	3.69	1968	2240	235.09	3	120	C	56C	RBQ8773-235.09-M5-00	R8773019
6.3	1.45	2326	1510	278.62	3	29	A	56C	PBQ7573-278.62-M5-B1	P7573044.B1
6.2	3.06	2374	2240	283.56	3	120	C	56C	RBQ8773-283.56-M5-00	R8773021
6.2	5.77	2374	3800	283.57	3	173	C	56C	RBQ8873-283.57-M5-00	R8873023
5.4	5.07	2704	3800	322.95	3	173	C	56C	RBQ8873-322.95-M5-00	R8873024

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
R8172017 – 102868



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1/4 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TENV	56C	102868
General Purpose, C Face	208-230/460 3-PH	TENV	56C	101648
CR Rated DC Motor	90 VDC	TEFC	56C	098002
SCR Rated DC Motor	90 VDC	TEFC	56C	098003



Quick Selections

R Series and P Series Helical - Inline
1750 RPM Input



BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.

.33 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load● (lbs.)	Ratio	Number of Stages	Reducer Weight♦ (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
503	15.03	40	204	3.48	2	11	A	56C	PBQ7172-3.48-M5-B1	P7172001.B1
405	12.10	50	216	4.32	2	11	A	56C	PBQ7172-4.32-M5-B1	P7172002.B1
318	9.50	63	230	5.50	2	11	A	56C	PBQ7172-5.50-M5-B1	P7172003.B1
275	8.22	73	250	6.36	2	11	A	56C	PBQ7172-6.36-M5-B1	P7172004.B1
241	7.20	84	260	7.26	2	11	A	56C	PBQ7172-7.26-M5-B1	P7172005.B1
222	6.63	91	266	7.89	2	11	A	56C	PBQ7172-7.89-M5-B1	P7172006.B1
174	6.89	116	284	10.04	2	11	A	56C	PBQ7172-10.04-M5-B1	P7172008.B1
150	5.94	134	293	11.64	2	11	A	56C	PBQ7172-11.64-M5-B1	P7172009.B1
132	5.23	153	305	13.26	2	11	A	56C	PBQ7172-13.26-M5-B1	P7172010.B1
114	4.52	177	321	15.37	2	11	A	56C	PBQ7172-15.37-M5-B1	P7172011.B1
108	4.28	187	335	16.20	2	11	A	56C	PBQ7172-16.20-M5-B1	P7172012.B1
93.0	3.68	217	350	18.80	2	11	A	56C	PBQ7172-18.80-M5-B1	P7172013.B1
81.0	3.21	249	374	21.54	2	11	A	56C	PBQ7172-21.54-M5-B1	P7172014.B1
79.0	3.13	255	375	22.26	2	11	A	56C	PBQ7172-22.26-M5-B1	P7172015.B1
67.0	2.65	301	420	26.30	2	11	A	56C	PBQ7172-26.30-M5-B1	P7172016.B1
60.0	2.38	336	435	29.40	2	11	A	56C	PBQ7172-29.40-M5-B1	P7172017.B1
52.0	2.06	387	459	33.50	3	12	A	56C	PBQ7173-33.50-M5-B1	P7173001.B1
52.0	3.07	387	645	33.50	3	12	A	56C	PBQ7273-33.50-M5-B1	P7273001.B1
49.0	1.94	411	470	35.90	2	11	A	56C	PBQ7172-35.90-M5-B1	P7172018.B1
46.0	2.55	438	663	38.34	3	12	A	56C	PBQ7273-38.34-M5-B1	P7273002.B1
46.0	1.82	438	478	38.37	2	11	A	56C	PBQ7172-38.37-M5-B1	P7172019.B1
40.0	1.58	504	495	43.69	3	12	A	56C	PBQ7173-43.69-M5-B1	P7173003.B1
40.0	2.36	504	674	43.69	3	12	A	56C	PBQ7273-43.69-M5-B1	P7273003.B1
37.0	1.47	545	507	46.80	2	11	A	56C	PBQ7172-46.80-M5-B1	P7172020.B1
37.0	1.96	545	674	46.80	2	11	A	56C	PBQ7272-46.80-M5-B1	P7272020.B1
35.0	3.05	581	1150	50.47	2	30	C	56C	RBQ8272-50.47-M5-B1	R8272046
35.0	1.39	576	510	50.64	3	12	A	56C	PBQ7173-50.64-M5-B1	P7173004.B1
35.0	1.96	576	674	50.67	2	11	A	56C	PBQ7272-50.67-M5-B1	P7272021.B1

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
R8172001 – 102867



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS

1/3 HP LEESON ELECTRIC MOTORS



Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TENV	56C	102867
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	101769
WATTS-AVER® Premium Efficiency Motor	208-230/460	TEFC	56C	102696
SCR Rated DC Motor	90 VDC	TEFC	56C	098004
SCR Rated DC Motor	180 VDC	TEFC	56C	098005

Quick Selections

R Series and P Series Helical - Inline

1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.



Single Reduction Reducers
BRAVO®

Double Reduction
BRAVO® Worm - Worm

Double Reduction
BRAVO® Helical - Worm

BRAVO® Accessory Kits

High Efficiency Helical - Inline Gear Reducers

High Efficiency Helical - Worm Gear Reducers

.33 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
33.0	1.90	611	674	54.30	3	12	A	56C	PBQ7273-54.30-M5-B1	P7273005.B1
33.0	1.31	611	520	54.30	3	12	A	56C	PBQ7173-54.30-M5-B1	P7173005.B1
32.0	3.81	630	1041	54.73	3	24	A	56C	PBQ7473-54.73-M5-B1	P7473004.B1
31.0	3.69	650	1050	57.13	3	24	A	56C	PBQ7473-57.13-M5-B1	P7473005.B1
29.0	2.65	697	1150	60.54	3	36	C	56C	RBQ8273-60.54-M5-B1	R8273001
29.0	1.13	705	525	61.22	3	12	A	56C	PBQ7173-61.22-M5-B1	P7173006.B1
29.0	1.69	705	674	61.22	3	12	A	56C	PBQ7273-61.22-M5-B1	P7273006.B1
28.0	5.80	710	4120	61.69	3	64	C	56C	RBQ8473-61.69-M5-B1	R8473003
28.0	1.48	720	674	61.80	2	11	A	56C	PBQ7272-62.97-M5-B1	P7272022.B1
26.0	3.09	775	1075	66.22	3	24	A	56C	PBQ7473-66.22-M5-B1	P7473006.B1
25.0	0.99	806	540	70.95	3	12	A	56C	PBQ7173-70.95-M5-B1	P7173008.B1
24.0	2.21	836	1150	72.63	3	36	C	56C	RBQ8273-72.63-M5-B1	R8273002
24.0	1.33	839	674	73.33	3	12	A	56C	PBQ7273-73.33-M5-B1	P7273009.B1
23.0	1.33	876	674	74.50	3	12	A	56C	PBQ7273-74.50-M5-B1	P7273010.B1
23.0	4.75	872	1600	75.71	3	64	C	56C	RBQ8473-75.71-M5-00	R8473004
22.0	2.03	911	1150	79.17	3	36	C	56C	RBQ8273-79.17-M5-00	R8273003
21.0	2.50	959	1091	82.30	3	24	A	56C	PBQ7473-82.30-M5-B1	P7473009.B1
21.0	4.24	976	1600	84.76	3	64	C	56C	RBQ8473-84.76-M5-00	R8473005
20.0	1.15	1007	674	86.80	3	12	A	56C	PBQ7273-86.80-M5-B1	P7273011.B1
19.0	3.90	1063	1600	92.29	3	64	C	56C	RBQ8473-92.29-M5-00	R8473006
19.0	1.73	1068	1150	92.74	3	36	C	56C	RBQ8273-92.74-M5-00	R8273004
19.0	2.26	1060	1102	92.78	3	24	A	56C	PBQ7473-92.78-M5-B1	P7473011.B1
18.0	1.06	1119	674	96.85	3	12	A	56C	PBQ7273-96.85-M5-B1	P7273012.B1
17.0	1.59	1160	1150	100.76	3	36	C	56C	RBQ8273-100.76-M5-00	R8273005
17.0	3.52	1177	1600	102.22	3	64	C	56C	RBQ8473-102.22-M5-00	R8473007
17.0	0.99	1185	674	102.80	3	12	A	56C	PBQ7273-102.80-M5-B1	P7273013.B1
17.0	2.02	1185	1112	104.68	3	24	A	56C	PBQ7473-104.68-M5-B1	P7473012.B1
16.0	4.21	1274	1700	110.67	3	95	C	56C	RBQ8673-110.67-M5-00	R8673007

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
R8172001 – 102867



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1/3 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TENV	56C	102867
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	101769
WATTSaver® Premium Efficiency Motor	208-230/460	TEFC	56C	102696
SCR Rated DC Motor	90 VDC	TEFC	56C	098004
SCR Rated DC Motor	180 VDC	TEFC	56C	098005



Quick Selections

R Series and P Series Helical - Inline
1750 RPM Input



BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.

.33 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight* (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
15.0	3.13	1324	1600	115.03	3	64	C	56C	RBQ8473-115.03-M5-00	R8473008
15.0	1.40	1326	1150	115.15	3	36	C	56C	RBQ8273-115.15-M5-00	R8273006
15.0	1.85	1343	1124	117.22	3	24	A	56C	PBQ7473-117.22-M5-B1	P7473013.B1
14.0	1.32	1396	1150	121.28	3	36	C	56C	RBQ8273-121.28-M5-00	R8273007
14.0	1.66	1439	1130	126.65	3	24	A	56C	PBQ7473-126.65-M5-B1	P7473014.B1
14.0	3.67	1465	1700	127.22	3	95	C	56C	RBQ8673-127.22-M5-00	R8673008
13.0	1.21	1533	1150	133.14	3	36	C	56C	RBQ8273-133.14-M5-00	R8273008
13.0	1.61	1550	1136	135.74	3	24	A	56C	PBQ7473-135.74-M5-B1	P7473015.B1
13.0	2.59	1597	1600	138.73	3	64	C	56C	RBQ8473-138.73-M5-B1	R8473009
12.0	1.43	1679	1150	145.68	3	24	A	56C	PBQ7473-145.68-M5-B1	P7473016.B1
12.0	2.01	1679	1475	145.68	3	29	A	56C	PBQ7573-145.68-M5-B1	P7573038.B1
12.0	2.41	1718	1600	149.23	3	64	C	56C	RBQ8473-149.23-M5-B1	R8473010
11.0	1.04	1777	1150	154.35	3	36	C	56C	RBQ8273-154.35-M5-00	R8273009
11.0	1.84	1832	1492	157.40	3	29	A	56C	PBQ7573-157.40-M5-B1	P7573039.B1
11.0	2.26	1836	1600	159.46	3	64	C	56C	RBQ8473-159.46-M5-00	R8473011
11.0	1.31	1832	1186	164.23	3	24	A	56C	PBQ7473-164.23-M5-B1	P7473018.B1
9.4	1.12	2143	1186	185.29	3	24	A	56C	PBQ7473-185.29-M5-B1	P7473019.B1
9.4	1.57	2143	1498	185.29	3	29	A	56C	PBQ7573-185.29-M5-B1	P7573041.B1
9.2	2.44	2200	1700	191.13	3	95	C	56C	RBQ8673-191.13-M5-00	R8673011
8.6	1.02	2343	1186	204.12	3	24	A	56C	PBQ7473-204.12-M5-B1	P7473020.B1
8.6	1.44	2343	1502	204.12	3	29	A	56C	PBQ7573-204.12-M5-B1	P7573042.B1
7.8	1.31	2583	1510	224.18	3	29	A	56C	PBQ7573-224.18-M5-B1	P7573043.B1
7.6	2.75	2636	2240	228.92	3	120	C	56C	RBQ8773-228.92-M5-00	R8773018
7.4	2.68	2707	2240	235.09	3	120	C	56C	RBQ8773-235.09-M5-00	R8773019
6.3	1.05	3198	1510	278.62	3	29	A	56C	PBQ7573-278.62-M5-B1	P7573044.B1
6.2	2.22	3265	2240	283.56	3	120	C	56C	RBQ8773-283.56-M5-00	R8773021
6.2	4.20	3265	3800	283.57	3	173	C	56C	RBQ8873-283.57-M5-00	R8873023
5.4	3.68	3718	3800	322.95	3	173	C	56C	RBQ8873-322.95-M5-00	R8873024

- ◆ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
R8172001 – 102867



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS

1/3 HP LEESON ELECTRIC MOTORS



Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TENV	56C	102867
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	101769
WATTS-AVER® Premium Efficiency Motor	208-230/460	TEFC	56C	102696
SCR Rated DC Motor	90 VDC	TEFC	56C	098004
SCR Rated DC Motor	180 VDC	TEFC	56C	098005

Quick Selections

R Series and P Series Helical - Inline

1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.

.50 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
503	10.01	60	204	3.48	2	11	A	56C	PBQ7172-3.48-M5-B1	P7172001.B1
405	8.06	75	216	4.32	2	11	A	56C	PBQ7172-4.32-M5-B1	P7172002.B1
318	6.33	95	230	5.50	2	11	A	56C	PBQ7172-5.50-M5-B1	P7172003.B1
275	5.47	110	250	6.36	2	11	A	56C	PBQ7172-6.36-M5-B1	P7172004.B1
241	4.80	126	260	7.26	2	11	A	56C	PBQ7172-7.26-M5-B1	P7172005.B1
222	4.42	136	266	7.89	2	11	A	56C	PBQ7172-7.89-M5-B1	P7172006.B1
174	4.59	174	284	10.04	2	11	A	56C	PBQ7172-10.04-M5-B1	P7172008.B1
150	3.96	202	293	11.64	2	11	A	56C	PBQ7172-11.64-M5-B1	P7172009.B1
132	3.48	229	305	13.26	2	11	A	56C	PBQ7172-13.26-M5-B1	P7172010.B1
114	3.01	265	321	15.37	2	11	A	56C	PBQ7172-15.37-M5-B1	P7172011.B1
108	2.85	280	335	16.20	2	11	A	56C	PBQ7172-16.20-M5-B1	P7172012.B1
93	2.45	325	350	18.80	2	11	A	56C	PBQ7172-18.80-M5-B1	P7172013.B1
81	2.14	373	374	21.54	2	11	A	56C	PBQ7172-21.54-M5-B1	P7172014.B1
79	2.08	383	375	22.26	2	11	A	56C	PBQ7172-22.26-M5-B1	P7172015.B1
67	1.77	452	420	26.30	2	11	A	56C	PBQ7172-26.30-M5-B1	P7172016.B1
67	2.56	452	615	26.30	2	11	A	56C	PBQ7272-26.30-M5-B1	P7272016.B1
60	1.58	504	435	29.40	2	11	A	56C	PBQ7172-29.40-M5-B1	P7172017.B1
60	2.36	504	629	29.40	2	11	A	56C	PBQ7272-29.40-M5-B1	P7272017.B1
52	1.37	582	459	33.50	3	12	A	56C	PBQ7173-33.50-M5-B1	P7173001.B1
52	2.04	582	645	33.50	3	12	A	56C	PBQ7273-33.50-M5-B1	P7273001.B1
49	1.29	617	470	35.90	2	11	A	56C	PBQ7172-35.90-M5-B1	P7172018.B1
48	2.91	632	1150	36.56	2	30	C	56C	RBQ8272-36.56-M5-00	R8272021
46	1.12	658	420	37.85	2	18	C	56C	RBQ8172-37.85-M5-00	R8172020
46	1.71	658	663	38.37	2	11	A	56C	PBQ7272-38.37-M5-B1	P7272019.B1
44	3.60	688	988	39.79	3	24	A	56C	PBQ7473-39.79-M5-B1	P7473002.B1
43	2.90	704	988	40.50	2	23	A	56C	PBQ7472-40.50-M5-B1	P7472016.B1
40	1.06	756	495	43.69	3	12	A	56C	PBQ7173-43.69-M5-B1	P7173003.B1
40	1.57	756	674	43.69	3	12	A	56C	PBQ7273-43.69-M5-B1	P7273003.B1

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1/2 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	102862
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	102860
WATTS AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	101780
575 Volt Motor	575 3-PH	TENV	56C	110176
SCR Rated DC Motor	90 VDC	TEFC	56C	098000
SCR Rated DC Motor	180 VDC	TEFC	56C	098008

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

R8172001 – 102862

Single Reduction Reducers
BRAVO®

Double Reduction
BRAVO® Worm - Worm

Double Reduction
BRAVO® Helical - Worm

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



Quick Selections

R Series and P Series Helical - Inline
1750 RPM Input



BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.



.50 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
40	2.43	762	1150	44.10	2	30	C	56C	RBQ8272-44.10-M5-00	R8272022
37	1.30	818	674	46.80	2	11	A	56C	PBQ7272-46.80-M5-B1	P7272020.B1
37	2.93	818	1028	47.22	3	24	A	56C	PBQ7473-47.22-M5-B1	P7473003.B1
36	2.86	840	1028	49.00	2	23	A	56C	PBQ7472-49.00-M5-B1	P7472018.B1
35.0	2.03	872	1150	50.47	2	30	C	56C	RBQ8272-50.47-M5-00	R8272023
35.0	1.30	864	674	50.67	2	11	A	56C	PBQ7272-50.67-M5-B1	P7272021.B1
33.0	1.27	917	674	53.40	3	12	A	56C	PBQ7273-53.40-M5-B1	P7273005.B1
32.0	2.62	916	1041	54.73	3	24	A	56C	PBQ7473-54.73-M5-00	P7473004.B1
31.0	2.53	945	1050	57.13	3	24	A	56C	PBQ7473-57.13-M5-00	P7473005.B1
31.0	4.41	934	4120	55.79	3	64	C	56C	RBQ8473-55.79-M5-00	R8473001
29.0	2.18	1011	1050	60.90	2	23	A	56C	PBQ7472-60.90-M5-00	P7472019.B1
29.0	1.82	1014	1150	60.54	3	30	C	56C	RBQ8273-60.54-M5-00	R8273001
29.0	1.18	1011	674	61.22	3	12	A	56C	PBQ7273-61.22-M5-00	P7273006.B1
28.0	3.99	1033	1600	61.69	3	64	C	56C	RBQ8473-61.69-M5-00	R8473002
28.0	1.11	1047	674	62.00	3	12	A	56C	PBQ7273-62.00-M5-00	P7273007.B1
26.0	2.13	1127	1075	66.22	3	24	A	56C	PBQ7472-66.22-M5-00	P7473006.B1
26.0	3.62	1139	1600	68.00	3	64	C	56C	RBQ8473-68.00-M5-00	R8473003
25.0	1.01	1172	674	70.95	3	12	A	56C	PBQ7273-70.95-M5-00	P7273008.B1
25.0	2.04	1172	1079	71.01	3	24	A	56C	PBQ7473-71.01-M5-00	P7473007.B1
24.0	1.52	1216	1150	72.63	3	30	C	56C	RBQ8273-72.63-M5-00	R8273002
23.0	3.27	1268	1600	75.71	3	64	C	56C	RBQ8473-75.71-M5-00	R8473004
23.0	1.88	1274	1091	76.69	3	24	A	56C	PBQ7473-76.69-M5-00	P7473008.B1
23.0	2.65	1274	1414	76.69	3	29	A	56C	PBQ7573-76.69-M5-00	P7573030.B1
22.0	1.40	1326	1150	79.17	3	30	C	56C	RBQ8273-79.19-M5-00	R8273003
21.0	1.72	1396	1091	82.30	3	24	A	56C	PBQ7473-82.30-M5-00	P7473009.B1
21.0	2.42	1396	1422	82.30	3	29	A	56C	PBQ7573-82.30-M5-00	P7573031.B1
21.0	2.92	1419	1600	84.76	3	64	C	56C	RBQ8473-84.76-M5-00	R8473005
19.0	2.68	1546	1600	92.29	3	64	C	56C	RBQ8473-92.29-M5-00	R8473006
19.0	1.19	1553	1150	92.74	3	30	C	56C	RBQ8273-92.74-M5-00	R8273004
19.0	1.55	1542	1102	92.78	3	24	A	56C	PBQ7473-92.78-M5-00	P7473011.B1

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1/2 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	102862
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	102860
WATSAVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	101780
575 Volt Motor	575 3-PH	TENV	56C	110176
SCR Rated DC Motor	90 VDC	TEFC	56C	098000
SCR Rated DC Motor	180 VDC	TEFC	56C	098008

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

R8172001 – 102862

Quick Selections

R Series and P Series Helical - Inline

1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.



Single Reduction Reducers
BRAVO®

Double Reduction
BRAVO® Worm - Worm

Double Reduction
BRAVO® Helical - Worm

BRAVO® Accessory Kits

High Efficiency Helical - Inline Gear Reducers

High Efficiency Helical - Worm Gear Reducers

.50 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
17.0	1.10	1687	1150	100.76	3	30	C	56C	RBQ8273-100.76-M5-00	R8273005
17.0	2.42	1712	1600	102.22	3	64	C	56C	RBQ8473-102.22-M5-00	R8473007
17.0	1.39	1724	1112	104.68	3	24	A	56C	PBQ7473-104.68-M5-00	P7473012.B1
16.0	2.90	1853	1700	110.67	3	95	C	56C	RBQ8673-110.67-M5-00	R8673007
15.0	2.15	1926	1600	115.03	3	64	C	56C	RBQ8473-115.03-M5-00	R8473008
15.0	1.23	1954	1124	117.22	3	24	A	56C	PBQ7473-117.22-M5-00	P7473013.B1
15.0	1.73	1954	1461	117.22	3	29	A	56C	PBQ7573-117.22-M5-00	P7573035.B1
14.0	1.14	2093	1130	126.65	3	24	A	56C	PBQ7473-126.65-M5-00	P7473014.B1
14.0	1.61	2093	1468	126.65	3	29	A	56C	PBQ7573-126.65-M5-00	P7573036.B1
14.0	2.52	2131	1700	127.22	3	95	C	56C	RBQ8673-127.22-M5-00	R8673008
13.0	1.06	2254	1136	135.74	3	24	A	56C	PBQ7473-135.74-M5-00	P7473015.B1
13.0	1.50	2254	1472	135.74	3	29	A	56C	PBQ7573-135.74-M5-00	P7573037.B1
13.0	2.33	2309	1700	137.88	3	95	C	56C	RBQ8673-137.88-M5-00	R8673009
13.0	1.78	2323	1600	138.73	3	64	C	56C	RBQ8473-138.73-M5-00	R8473009
12.0	1.66	2499	1600	149.23	3	64	C	56C	RBQ8473-149.23-M5-00	R8473010
12.0	1.38	2442	1475	145.68	3	29	A	56C	PBQ7573-145.68-M5-00	P7573038.B1
11.0	1.27	2664	1492	157.40	3	29	A	56C	PBQ7573-157.40-M5-00	P7573039.B1
11.0	1.55	2670	1600	159.46	3	64	C	56C	RBQ8473-159.46-M5-00	R8473011
11.0	1.98	2706	1700	161.57	3	95	C	56C	RBQ8673-161.57-M5-00	R8673010
11.0	1.27	2664	1492	164.23	3	29	A	56C	PBQ7573-164.23-M5-00	P7573040.B1
9.4	1.08	3118	1498	185.29	3	29	A	56C	PBQ7573-185.29-M5-00	P7573041.B1
9.2	2.28	3178	2240	189.79	3	120	C	56C	RBQ8773-189.79-M5-00	R8773017
9.2	1.68	3201	1700	191.13	3	95	C	56C	RBQ8673-191.13-M5-00	R8673011
7.6	1.89	3834	2240	228.92	3	120	C	56C	RBQ8773-228.92-M5-00	R8773018
7.4	1.84	3937	2240	235.09	3	120	C	56C	RBQ8873-235.09-M5-00	R8773019
6.7	1.65	4387	2240	261.99	3	120	C	56C	RBQ8773-261.99-M5-00	R8773020
6.7	3.14	4366	3800	260.72	3	173	C	56C	RBQ8873-260.72-M5-00	R8873022
6.2	1.53	4749	2240	283.56	3	120	C	56C	RBQ8773-283.56-M5-00	R8773021
6.2	2.88	4749	3800	283.57	3	173	C	56C	RBQ8873-283.57-M5-00	R8873023
5.4	2.53	5408	3800	322.95	3	173	C	56C	RBQ8873-322.95-M5-00	R8873024

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
R8172001 – 102862



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1/2 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	102862
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	102860
WATSAVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	101780
575 Volt Motor	575 3-PH	TENV	56C	110176
SCR Rated DC Motor	90 VDC	TEFC	56C	098000
SCR Rated DC Motor	180 VDC	TEFC	56C	098008

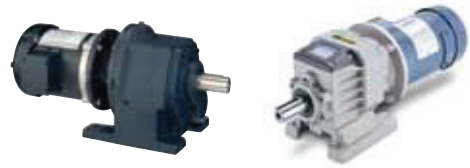


Quick Selections

R Series and P Series Helical - Inline
1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.



BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

.75 HP Gear Reducer Quick Selections										
Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight † (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
503	6.67	90	204	3.48	2	11	A	56C	PBQ7172-3.48-M5-B1	P7172001.B1
405	5.37	112	216	4.32	2	11	A	56C	PBQ7172-4.32-M5-B1	P7172002.B1
318	4.22	143	230	5.50	2	11	A	56C	PBQ7172-5.50-M5-B1	P7172003.B1
275	3.65	165	250	6.36	2	11	A	56C	PBQ7172-6.36-M5-B1	P7172004.B1
241	3.20	188	260	7.26	2	11	A	56C	PBQ7172-7.26-M5-B1	P7172005.B1
222	2.95	204	266	7.89	2	11	A	56C	PBQ7172-7.89-M5-B1	P7172006.B1
174	3.06	261	284	10.04	2	11	A	56C	PBQ7172-10.04-M5-B1	P7172008.B1
150	2.64	303	293	11.64	2	11	A	56C	PBQ7172-11.64-M5-B1	P7172009.B1
150	3.93	303	445	11.64	2	11	A	56C	PBQ7272-11.64-M5-B1	P7272009.B1
132	2.32	344	305	13.26	2	11	A	56C	PBQ7172-13.26-M5-B1	P7172010.B1
132	3.46	344	476	13.26	2	11	A	56C	PBQ7272-13.26-M5-B1	P7272010.B1
114	2.00	398	321	15.37	2	11	A	56C	PBQ7172-15.37-M5-B1	P7172011.B1
114	2.99	398	508	15.37	2	11	A	56C	PBQ7272-15.37-M5-B1	P7272011.B1
108	1.90	420	335	16.20	2	11	A	56C	PBQ7172-16.20-M5-B1	P7172012.B1
108	2.76	420	520	16.20	2	11	A	56C	PBQ7272-16.20-M5-B1	P7272012.B1
93	1.64	488	350	18.80	2	11	A	56C	PBQ7172-18.80-M5-B1	P7172013.B1
93	2.37	488	535	18.80	2	11	A	56C	PBQ7272-18.80-M5-B1	P7272013.B1
81	1.42	560	374	21.54	2	11	A	56C	PBQ7172-21.54-M5-B1	P7172014.B1
81	2.12	560	562	21.54	2	11	A	56C	PBQ7272-21.54-M5-B1	P7272014.B1
79	1.39	574	375	22.26	2	11	A	56C	PBQ7172-22.26-M5-B1	P7172015.B1
79	2.07	574	562	22.26	2	11	A	56C	PBQ7272-22.26-M5-B1	P7272015.B1
70	2.82	649	1150	25.04	2	30	C	56C	RBQ8372-25.04-M5-00	R8372019
67	1.18	677	420	26.30	2	11	A	56C	PBQ7172-26.30-M5-B1	P7172016.B1
67	1.71	677	615	26.30	2	11	A	56C	PBQ7272-26.30-M5-B1	P7272016.B1
61	2.48	747	1150	28.79	2	30	C	56C	RBQ8372-28.79-M5-00	R8372020
60	1.06	756	435	29.40	2	11	A	56C	PBQ7172-29.40-M5-00	P7172017.B1
60	1.57	756	629	29.40	2	11	A	56C	PBQ7272-29.40-M5-B1	P7272017.B1
60	3.31	756	900	29.41	2	23	A	56C	PBQ7472-29.41-M5-B1	P7472014.B1
59	5.30	768	4070	29.62	2	51	C	56C	RBQ8472-29.62-M5-00	R8472016
54	4.85	843	4090	32.50	2	51	C	56C	RBQ8472-32.50-M5-00	R8472017
52	1.36	873	645	33.50	3	12	A	56C	PBQ7273-33.50-M5-00	P7273001.B1
52	2.75	873	918	34.01	3	24	A	56C	PBQ7473-34.01-M5-B1	P7473001.B1

- ◆ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS

3/4 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	110057
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	110047
WATTS-AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	114213
575 Volt Motor	575 3-PH	TEFC	56C	110177
SCR Rated DC Motor	90 VDC	TEFC	56C	098032
SCR Rated DC Motor	180 VDC	TEFC	56C	098069

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

R8172001 – 110057



Quick Selections

R Series and P Series Helical - Inline 1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.

.75 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
49	2.70	926	922	35.58	2	23	A	56C	PBQ7472-35.58-M5-B1	P7472015.B1
49	1.25	926	660	35.90	2	11	A	56C	PBQ7272-35.90-M5-B1	P7272018.B1
46	1.13	986	663	38.34	3	12	A	56C	PBQ7273-38.34-M5-B1	P7273002.B1
46	1.14	986	663	38.37	2	11	A	56C	PBQ7272-38.37-M5-B1	P7272019.B1
44	2.32	1031	988	39.79	3	24	A	56C	PBQ7473-39.79-M5-B1	P7473002.B1
43	2.28	1055	988	40.50	2	23	A	56C	PBQ7472-40.50-M5-B1	P7472016.B1
40	1.05	1134	674	43.69	3	12	A	56C	PBQ7273-43.69-M5-B1	P7273003.B1
40.0	2.03	1134	1012	44.23	2	23	A	56C	PBQ7472-44.23-M5-B1	P7472017.B1
39.0	3.52	1167	1600	45.00	2	51	C	56C	RBQ8472-45.00-M5-00	R8472019
37.0	1.95	1226	1028	47.22	3	24	A	56C	PBQ7473-47.22-M5-B1	P7473003.B1
36.0	1.91	1261	1028	49.00	2	23	A	56C	PBQ7472-49.00-M5-B1	P7472018.B1
36.0	2.20	1261	1330	49.00	2	28	A	56C	PBQ7572-49.00-M5-B1	P7572037.B1
35.0	1.35	1309	1150	50.47	2	30	C	56C	RBQ8472-50.47-M5-00	R8372023
34.0	3.10	1329	1600	51.25	2	51	C	56C	RBQ8472-51.25-M5-00	R8472020
32.0	1.69	1418	1041	54.73	3	24	A	56C	PBQ7473-54.73-M5-B1	P7473004.B1
32.0	2.38	1418	1354	54.73	3	29	A	56C	PBQ7573-54.73-M5-B1	P7573026.B1
31.0	2.85	1447	1600	55.79	3	64	C	56C	RBQ8473-55.79-M5-00	R8473001
31.0	1.64	1464	1050	57.13	3	24	A	56C	PBQ7473-57.13-M5-B1	P7473005.B1
31.0	2.30	1464	1354	57.13	3	29	A	56C	PBQ7573-57.13-M5-B1	P7573027.B1
29.0	1.18	1570	1150	60.54	3	30	C	56C	RBQ8373-60.54-M5-00	R8373013
29.0	1.41	1565	1050	60.90	2	23	A	56C	PBQ7472-60.90-M5-B1	P7472019.B1
29.0	1.79	1565	1367	60.90	2	28	A	56C	PBQ7572-60.90-M5-B1	P7572038.B1
28.0	2.58	1600	1600	61.69	3	64	C	56C	RBQ8473-61.69-M5-00	R8473002
26.0	1.37	1745	1075	66.22	3	24	A	56C	PBQ7473-66.22-M5-B1	P7473006.B1
26.0	1.93	1745	1519	66.22	3	29	A	56C	PBQ7573-66.22-M5-B1	P7573028.B1
26.0	2.34	1763	1600	68.00	3	64	C	56C	RBQ8473-68.00-M5-00	R8473003
25.0	1.32	1815	1079	71.01	3	24	A	56C	PBQ7473-71.01-M5-B1	P7473007.B1
25.0	1.86	1815	1398	71.01	3	29	A	56C	PBQ7573-71.01-M5-B1	P7573029.B1
23.0	2.11	1963	1600	75.71	3	64	C	56C	RBQ8473-75.71-M5-00	R8473004
23.0	1.21	1973	1091	76.69	3	24	A	56C	PBQ7473-76.69-M5-B1	P7473008.B1
23.0	1.71	1973	1414	76.69	3	29	A	56C	PBQ7573-76.69-M5-B1	P7573030.B1
21.0	1.25	2161	1091	82.30	3	24	A	56C	PBQ7473-82.30-M5-B1	P7473009.B1

- ◆ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



3/4 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	110057
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	110047
WATTS-AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	114213
575 Volt Motor	575 3-PH	TEFC	56C	110177
SCR Rated DC Motor	90 VDC	TEFC	56C	098032
SCR Rated DC Motor	180 VDC	TEFC	56C	098069

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

R8172001 – 110057

Single Reduction Reducers
BRAVO®

Double Reduction
BRAVO® Worm - Worm

Double Reduction
BRAVO® Helical - Worm

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



Quick Selections

R Series and P Series Helical - Inline
1750 RPM Input



BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.

.75 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
21.0	1.56	2161	1422	82.30	3	29	A	56C	PBQ7573-82.30-M5-B1	P7573031.B1
21.0	1.88	2198	1600	84.76	3	64	C	56C	RBQ8473-84.76-M5-00	R8473005
19.0	2.26	2380	5370	91.77	3	95	C	56C	RBQ8673-91.77-M5-00	R8673036
19.0	1.00	2388	1102	92.78	3	24	A	56C	PBQ7473-92.78-M5-B1	P7473011.B1
19.0	1.73	2393	1600	92.29	3	64	C	56C	RBQ8473-92.29-M5-00	R8473006
17.0	1.56	2651	1600	102.22	3	64	C	56C	RBQ8473-102.22-M5-00	R8473007
17.0	1.26	2669	1454	104.68	3	29	A	56C	PBQ7573-104.68-M5-B1	P7573034.B1
16.0	1.88	2862	1700	110.37	3	95	C	56C	RBQ8673-110.37-M5-00	R8673037
15.0	1.39	2983	1600	115.03	3	64	C	56C	RBQ8473-115.03-M5-00	R8473008
15.0	1.11	3025	1461	117.22	3	29	A	56C	PBQ7573-117.22-M5-B1	P7573035.B1
14.0	1.63	3299	1700	127.22	3	95	C	56C	RBQ8673-127.22-M5-00	R8673038
14.0	1.04	3241	1468	126.65	3	29	A	56C	PBQ7573-126.65-M5-B1	P7573036.B1
13.0	1.50	3575	1700	137.88	3	95	C	56C	RBQ8673-137.88-M5-00	R8673039
13.0	1.15	3597	1600	138.73	3	64	C	56C	RBQ8473-138.73-M5-00	R8473009
12.0	1.07	3870	1600	149.23	3	64	C	56C	RBQ8473-149.23-M5-00	R8673010
11.0	1.00	4135	1600	159.46	3	64	C	56C	RBQ8473-159.46-M5-00	R8473011
11.0	1.28	4190	1700	161.57	3	95	C	56C	RBQ8673-161.57-M5-00	R8673040
9.0	1.48	4921	7260	189.79	3	120	C	56C	RBQ8773-189.79-M5-00	R8773017
9.0	1.08	4956	1700	191.13	3	95	C	56C	RBQ8673-191.13-M5-00	R8673041
8.0	1.22	5936	2240	228.92	3	120	C	56C	RBQ8773-228.92-M5-00	R8773018
7.0	1.19	6096	2240	235.09	3	120	C	56C	RBQ8773-235.09-M5-00	R8773019
7.0	2.03	6761	3800	260.72	3	173	C	56C	RBQ8873-260.72-M5-00	R8873094
6.0	1.86	7353	3800	283.57	3	173	C	56C	RBQ8873-283.57-M5-00	R8873095
6.0	1.70	8044	3800	310.23	3	243	C	143-5TC	RBQ8874-310.23-M7-00	R8874016
5.0	1.64	8374	3800	322.95	3	173	C	56C	RBQ8873-322.95-M5-00	R8873096
5.0	1.50	9109	3800	351.29	3	243	C	143-5TC	RBQ8874-351.29-M7-00	R8874017
4.0	1.32	10380	3800	400.30	3	243	C	143-5TC	RBQ8874-400.30-M7-00	R8874018
4.0	1.19	11543	3800	445.16	3	243	C	143-5TC	RBQ8874-445.16-M7-00	R8874019

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

R8172001 – 110057



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS

3/4 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	110057
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	110047
WATTS-AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	114213
575 Volt Motor	575 3-PH	TEFC	56C	110177
SCR Rated DC Motor	90 VDC	TEFC	56C	098032
SCR Rated DC Motor	180 VDC	TEFC	56C	098069



Quick Selections

R Series and P Series Helical - Inline

1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.



Single Reduction Reducers

Double Reduction

Double Reduction

Accessory Kits

High Efficiency Helical - Inline Gear Reducers

High Efficiency Helical - Worm Gear Reducers

1 HP

Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
503	5.02	120	204	3.48	2	11	A	56C	PBQ7172-3.48-M5-B1	P7172001.B1
405	4.04	149	216	4.32	2	11	A	56C	PBQ7172-4.32-M5-B1	P7172002.B1
318	3.17	190	230	5.50	2	11	A	56C	PBQ7172-5.50-M5-B1	P7172003.B1
275	2.73	220	250	6.36	2	11	A	56C	PBQ7172-6.36-M5-B1	P7172004.B1
275	2.73	220	376	6.36	2	11	A	56C	PBQ7272-6.36-M5-B1	P7272004.B1
241	2.40	251	260	7.26	2	11	A	56C	PBQ7172-7.26-M5-B1	P7172005.B1
241	4.24	251	391	7.26	2	11	A	56C	PBQ7272-7.26-M5-B1	P7272005.B1
222	2.21	273	266	7.89	2	11	A	56C	PBQ7172-7.89-M5-B1	P7172006.B1
222	3.70	273	400	7.89	2	11	A	56C	PBQ7272-7.89-M5-B1	P7272006.B1
194	2.56	312	277	9.02	2	11	A	56C	PBQ7172-9.02-M5-B1	P7172007.B1
194	3.41	312	412	9.02	2	11	A	56C	PBQ7272-9.02-M5-B1	P7272007.B1
174	2.30	348	284	10.04	2	11	A	56C	PBQ7172-10.04-M5-B1	P7172008.B1
174	3.42	348	420	10.04	2	11	A	56C	PBQ7272-10.04-M5-B1	P7272008.B1
157	4.73	385	1150	11.14	2	30	C	56C	RBQ8372-11.14-M5-00	R8372014
150	1.98	403	293	11.64	2	11	A	56C	PBQ7172-11.64-M5-B1	P7172009.B1
150	2.95	403	445	11.64	2	11	A	56C	PBQ7272-11.64-M5-B1	P7272009.B1
137	4.13	440	1150	12.74	2	30	C	56C	RBQ8372-12.74-M5-00	R8372015
132	1.74	458	305	13.26	2	11	A	56C	PBQ7172-13.26-M5-B1	P7172010.B1
132	2.60	458	474	13.26	2	11	A	56C	PBQ7272-13.26-M5-B1	P7272010.B1
128	3.85	473	1150	13.67	2	30	C	56C	RBQ8372-13.67-M5-00	R8372016
127	8.22	475	1470	13.75	2	51	C	56C	RBQ8472-13.75-M5-00	R8472009
114	1.50	531	321	15.37	2	11	A	56C	PBQ7172-15.37-M5-B1	P7172011.B1
114	2.24	531	510	15.37	2	11	A	56C	PBQ7272-15.37-M5-B1	P7272011.B1
107	7.04	568	1560	16.43	2	51	C	56C	RBQ8472-16.43-M5-00	R8472010
106	1.40	571	335	16.48	2	11	A	56C	PBQ7172-16.48-M5-B1	P7172012.B1
106	2.03	571	520	16.48	2	11	A	56C	PBQ7272-16.48-M5-B1	P7272012.B1
105	4.36	576	711	16.62	2	23	A	56C	PBQ7472-16.62-M5-B1	P7472011.B1
105	3.16	576	1150	16.66	2	30	C	56C	RBQ8372-16.66-M5-00	R8372017
100	6.63	605	1600	17.50	2	51	C	56C	RBQ8472-17.50-M5-00	R8472011
92	1.21	658	350	19.11	2	11	A	56C	PBQ7172-19.11-M5-B1	P7172013.B1
92	1.75	658	535	19.11	2	11	A	56C	PBQ7272-19.11-M5-B1	P7272013.B1
88	5.83	691	1600	20.00	2	51	C	56C	RBQ8472-20.00-M5-00	R8472012
87	3.60	695	780	20.10	2	23	A	56C	PBQ7472-20.10-M5-B1	P7472012.B1
84	2.53	718	1150	20.77	2	30	C	56C	RBQ8372-20.77-M5-00	R8372018
82	5.44	742	1600	21.47	2	51	C	56C	RBQ8572-21.47-M5-00	R8572013
81	1.07	747	374	21.54	2	11	A	56C	PBQ7172-21.54-M5-B1	P7172014.B1

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	110058
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	110048
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	1144638
575 Volt Motor	575 3-PH	TEFC	56C	110204
SCR Rated DC Motor	90 VDC	TEFC	56C	108022
SCR Rated DC Motor	180 VDC	TEFC	56C	108023

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

R8172001 – 110098



Quick Selections

R Series and P Series Helical - Inline
1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

1 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight † (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
81	1.60	747	562	21.54	2	11	A	56C	PBQ7272-21.54-M5-B1	P7272014.B1
79	1.04	766	375	22.26	2	11	A	56C	PBQ7172-22.26-M5-B1	P7172015.B1
79	1.55	766	562	22.26	2	11	A	56C	PBQ7272-22.26-M5-B1	P7272015.B1
70	2.10	866	1150	25.04	2	30	C	56C	RBQ8372-25.04-M5-00	R8372019
70	2.66	864	877	24.98	2	23	A	56C	PBQ7472-24.98-M5-B1	P7472013.B1
70	4.69	864	1600	25.00	2	51	C	56C	RBQ8472-25.00-M5-00	R8472014
65	1.25	931	615	26.77	2	11	A	56C	PBQ7272-26.77-M5-B1	P7272016.B1
64	4.33	938	1600	27.14	2	51	C	56C	RBQ8472-27.14-M5-00	R8472015
61	1.84	995	1150	28.79	2	30	C	56C	RBQ8372-28.79-M5-00	R8372020
60	1.17	1008	629	29.40	2	11	A	56C	PBQ7272-29.40-M5-B1	P7272017.B1
60	2.48	1008	900	29.41	2	23	A	56C	PBQ7472-29.41-M5-B1	P7472014.B1
59	3.97	1024	1600	29.62	2	51	C	56C	RBQ8472-29.62-M5-00	R8472016
54	1.42	1124	1600	32.50	2	51	C	56C	RBQ8472-32.50-M5-00	R8472017
52	1.06	1164	645	33.50	3	12	A	56C	PBQ7273-33.50-M5-B1	P7273001.B1
52	2.10	1164	918	34.01	3	24	A	56C	PBQ7473-34.01-M5-B1	P7473001.B1
52	2.96	1164	1060	34.01	3	29	A	56C	PBQ7573-34.01-M5-B1	P7573023.B1
49	2.03	1235	922	35.58	2	23	A	56C	PBQ7472-35.58-M5-B1	P7472015.B1
49	3.30	1242	1600	35.91	2	51	C	56C	RBQ8472-35.91-M5-00	R8472018
48	1.46	1264	1150	36.56	2	30	C	56C	RBQ8372-36.56-M5-00	R8372021
44	1.80	1375	988	39.79	3	24	A	56C	PBQ7473-39.79-M5-B1	P7473002.B1
44	2.53	1375	1192	39.79	3	29	A	56C	PBQ7573-39.79-M5-B1	P7573024.B1
43	1.72	1407	988	40.50	2	23	A	56C	PBQ7472-40.50-M5-B1	P7472016.B1
43	1.82	1407	1192	40.50	2	28	A	56C	PBQ7572-40.50-M5-B1	P7572035.B1
40	1.50	1513	1012	44.23	2	23	A	56C	PBQ7472-44.23-M5-B1	P7472017.B1
40	1.21	1525	1150	44.10	2	30	C	56C	RBQ8372-44.10-M5-00	R8372022
40	1.83	1513	1304	44.23	2	28	A	56C	PBQ7572-44.23-M5-B1	P7572036.B1
39	2.64	1556	1600	45.00	2	51	C	56C	RBQ8472-45.00-M5-00	R8472019
37	1.51	1635	1028	47.22	3	24	A	56C	PBQ7473-47.22-M5-B1	P7473003.B1
37	2.13	1635	1323	47.22	3	29	A	56C	PBQ7573-47.22-M5-B1	P7573025.B1
36	1.42	1681	1028	49.00	2	23	A	56C	PBQ7472-49-B1-M5-B1	P7472018.B1
36	1.64	1681	1330	49.00	2	28	A	56C	PBQ7572-49.00-M5-B1	P7572037.B1
35.0	1.01	1745	1150	50.47	2	30	C	56C	RBQ8372-50.47-M5-00	R8372023
34.0	2.33	1772	1600	51.25	2	51	C	56C	RBQ8472-51.25-M5-00	R8472020
32.0	1.31	1891	1041	54.73	3	24	A	56C	PBQ7473-54.73-M5-B1	P7473004.B1
32.0	1.84	1891	1354	54.73	3	29	A	56C	PBQ7573-54.73-M5-B1	P7573026.B1
31.0	2.14	1929	1600	55.79	3	64	C	56C	RBQ8473-55.79-M5-00	R8473001

- ◆ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

R8172001 – 110098



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS

1 HP LEESON ELECTRIC MOTORS



Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	110058
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	110048
WATTS AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	1144638
575 Volt Motor	575 3-PH	TEFC	56C	110204
SCR Rated DC Motor	90 VDC	TEFC	56C	108022
SCR Rated DC Motor	180 VDC	TEFC	56C	108023

Quick Selections

R Series and P Series Helical - Inline

1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.

1 HP con't Gear Reducer Quick Selections										
Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
31.0	1.25	1952	1050	57.13	3	24	A	56C	PBQ7473-57.13-M5-B1	P7473005.B1
31.0	1.76	1952	1354	57.13	3	29	A	56C	PBQ7573-57.13-M5-B1	P7573027.B1
29.0	1.04	2086	1050	60.90	2	23	A	56C	PBQ7472-60.90-M5-B1	P7472019.B1
29.0	1.33	2086	1367	60.90	2	28	A	56C	PBQ7572-60.90-M5-B1	P7572038.B1
28.0	1.93	2133	1600	61.69	3	64	C	56C	RBQ8473-61.69-M5-00	R8473002
26.0	1.08	2327	1075	66.22	3	24	A	56C	PBQ7473-66.22-M5-B1	P7473006.B1
26.0	1.75	2351	1600	68.00	3	64	C	56C	RBQ8473-68.00-M5-00	R8473003
26.0	1.52	2327	1398	66.22	3	29	A	56C	PBQ7573-66.22-M5-B1	P7573028.B1
25.0	1.01	2420	1079	71.01	3	24	A	56C	PBQ7473-71.01-M5-B1	P7473007.B1
25.0	1.42	2420	1398	71.01	3	29	A	56C	PBQ7573-71.01-M5-B1	P7573029.B1
23.0	1.58	2618	1600	75.71	3	64	C	56C	RBQ8473-75.71-M5-00	R8473004
23.0	1.31	2631	1414	76.69	3	29	A	56C	PBQ7573-76.69-M5-B1	P7573030.B1
21.0	1.84	2925	1700	84.59	3	95	C	56C	RBQ8673-84.59-M5-00	R8673005
21.0	1.41	2930	1600	84.76	3	64	C	56C	RBQ8473-84.76-M5-00	R8473005
21.0	1.22	2881	1422	82.30	3	29	A	56C	PBQ7573-82.30-M5-B1	P7573031.B1
20.0	2.43	2990	2240	86.48	3	120	C	56C	RBQ8773-86.48-M5-00	R8773009
20.0	2.39	3039	2240	87.89	3	120	C	56C	RBQ8773-87.89-M5-00	R8773010
19.0	1.30	3191	1600	92.29	3	64	C	56C	RBQ8473-92.29-M5-00	R8473006
19.0	1.09	3184	1430	92.78	3	29	A	56C	PBQ7573-92.78-M5-B1	P7573033.B1
17.0	1.17	3534	1600	102.22	3	64	C	56C	RBQ8473-102.22-M5-00	R8473007
16.0	1.96	3704	2240	107.12	3	120	C	56C	RBQ8773-107.12-M5-00	R8773011
16.0	1.40	3826	1700	110.67	3	95	C	56C	RBQ8673-110.67-M5-00	R8673007
15.0	1.04	3977	1600	115.03	3	64	C	56C	RBQ8473-115.03-M5-00	R8473008
14.0	1.22	4398	1700	127.22	3	95	C	56C	RBQ8573-127.22-M5-00	R8673008
13.0	1.62	4495	2240	130.00	3	120	C	56C	RBQ8773-130.00-M5-00	R8773012
13.0	1.57	4617	2240	133.53	3	120	C	56C	RBQ8773-133.53-M5-00	R8773013
12.0	1.41	5166	2240	149.43	3	120	C	56C	RBQ8773-149.43-M5-00	R8773014
11.0	1.30	5568	2240	161.04	3	120	C	56C	RBQ8773-161.04-M5-00	R8773015
9.0	1.13	6400	2240	185.10	3	120	C	56C	RBQ8773-185.10-M5-00	R8773016
9.0	1.93	7081	2240	204.80	3	173	C	56C	RBQ8873-204.80-M5-00	R8873019
8.0	1.75	7823	3800	226.28	3	173	C	56C	RBQ8873-226.28-M5-00	R8873020
8.0	1.73	7915	3800	228.92	3	173	C	56C	RBQ8873-228.92-M5-00	R8873021
7.0	1.52	9014	3800	260.72	3	173	C	56C	RBQ8873-260.72-M5-00	R8873022
6.0	1.40	9804	3800	283.57	3	173	C	56C	RBQ8873-283.57-M5-00	R8873023
6.0	1.28	10726	3800	310.23	4	243	C	56C	RBQ8874-310.23-M5-00	R8874016
5.0	1.23	11166	2240	322.95	3	173	C	56C	RBQ8873-332.95-M5-00	R8773024
5.0	1.13	12145	3800	351.29	4	243	C	56C	RBQ8874-351.29-M5-00	R8874017

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	110058
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	110048
WATTS AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	1144638
575 Volt Motor	575 3-PH	TEFC	56C	110204
SCR Rated DC Motor	90 VDC	TEFC	56C	108022
SCR Rated DC Motor	180 VDC	TEFC	56C	108023

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

R8172001 – 110098

Single Reduction Reducers

Double Reduction

Double Reduction

Accessory Kits

High Efficiency Helical - Inline Gear Reducers

High Efficiency Helical - Worm Gear Reducers



Quick Selections

R Series and P Series Helical - Inline
1750 RPM Input



BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.

1.5 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor ▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
503	3.34	180	204	3.48	2	11	A	143-5TC	PBQ7172-3.48-M7-B1	P7172023.B1
405	2.69	224	216	4.32	2	11	A	143-5TC	PBQ7172-4.32-M7-B1	P7172024.B1
405	3.46	224	289	4.32	2	11	A	143-5TC	PBQ7272-4.32-M7-B1	P7272024.B1
366	5.16	248	1150	4.78	2	30	C	56C	RBQ8372-4.78-M5-00	R8372006
320	4.51	284	1150	5.47	2	30	C	56C	RBQ8372-5.47-M5-00	R8372007
318	2.11	285	230	5.50	2	11	A	143-5TC	PBQ7172-5.50-M7-B1	P7172025.B1
318	3.11	285	350	5.50	2	11	A	143-5TC	PBQ7272-5.50-M7-B1	P7272025.B1
298	4.20	304	1150	5.87	2	30	C	56C	RBQ8372-5.87-M5-00	R8372008
285	4.53	318	1150	6.13	2	30	C	56C	RBQ8372-6.13-M5-00	R8372009
275	1.82	330	250	6.36	2	11	A	56C	PBQ7172-6.36-M5-B1	P7172004.B1
275	2.88	330	376	6.36	2	11	A	143-5TC	PBQ7272-6.36-M7-B1	P7272026.B1
255	4.10	356	1150	6.86	2	30	C	56C	RBQ8372-6.86-M5-00	R8372010
241	1.60	377	260	7.26	2	11	A	56C	PBQ7172-7.26-M5-B1	P7172005.B1
241	2.83	377	391	7.26	2	11	A	143-5TC	PBQ7272-7.26-M7-B1	P7272027.B1
232	5.88	391	568	7.54	2	23	A	143-5TC	PBQ7472-7.63-M7-B1	P7472025.B1
227	3.71	399	1150	7.70	2	30	C	56C	RBQ8372-7.70-M5-00	R8372011
222	1.47	409	266	7.89	2	11	A	56C	PBQ7172-7.89-M5-B1	P7172006.B1
222	2.47	409	400	7.89	2	11	A	143-5TC	PBQ7272-7.89-M7-B1	P7272028.B1
220	5.82	413	579	7.96	2	23	A	143-5TC	PBQ7472-7.96-M7-B1	P7472026.B1
202	3.45	450	1150	8.67	2	30	C	56C	RBQ8372-8.67-M5-00	R8372012.B1
194	1.71	468	277	9.02	2	11	A	56C	PBQ7172-9.02-M5-B1	P7172007.B1
194	2.27	468	412	9.02	2	11	A	143-5TC	PBQ7272-9.02-M7-B1	P7272029.B1
193	7.34	470	1290	9.06	2	51	C	143-5TC	RBQ8472-9.06-M7-00	R8472027
185	5.11	491	615	9.45	2	23	A	143-5TC	PBQ7472-9.45-M7-B1	P7472027.B1
179	3.17	508	1150	9.80	2	30	C	56C	RBQ8372-9.80-M5-00	R8372013
174	1.53	522	284	10.04	2	11	A	56C	PBQ7172-10.04-M5-B1	P7172008.B1
174	2.28	522	420	10.04	2	11	A	143-5TC	PBQ7272-10.04-M7-B1	P7272030.B1
166	6.75	546	1340	10.52	2	51	C	143-5TC	RBQ8472-10.52-M7-00	R8472028
157	2.94	578	1150	11.14	2	30	C	56C	RBQ8372-11.14-M5-00	R8372014
153	4.39	593	658	11.43	2	23	A	143-5TC	PBQ7472-11.43-M7-B1	P7472028.B1
150	1.32	605	293	11.64	2	11	A	56C	PBQ7172-11.64-M5-B1	P7172009.B1
150	1.97	605	445	11.64	2	11	A	56C	PBQ7272-11.64-M5-B1	P7272009.B1
137	2.63	661	1150	12.74	2	30	C	56C	RBQ8372-12.74-M5-00	R8372015
132	1.16	688	305	13.26	2	11	A	56C	PBQ7172-13.26-M5-B1	P7172010.B1
132	1.73	688	476	13.26	2	11	A	56C	PBQ7272-13.26-M5-B1	P7272010.B1
128	2.51	709	1150	13.67	2	30	C	56C	RBQ8372-13.67-M5-00	R8372016

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



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MOTOR SELECTIONS



1.5 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	110420
General Purpose, C Face	208-230/460 3-PH	TEFC	140TC	120037
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	116743
575 Volt Motor	575 3-PH	TEFC	56C	111444
SCR Rated DC Motor	180 VDC	TEFC	56C	108092

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

R8172001 – 110420

Quick Selections

R Series and P Series Helical - Inline

1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.

1.5 HP con't Gear Reducer Quick Selections										
Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
127	5.48	713	1470	13.75	2	51	C	143-5TC	RBQ8472-13.75-M7-00	R8472029
123	3.12	738	693	14.21	2	23	A	143-5TC	PBQ7472-14.21-M7-B1	P7472029.B1
114	1.00	796	321	15.37	2	11	A	56C	PBQ7172-15.37-M5-B1	P7172011.B1
114	1.49	796	508	15.37	2	11	A	56C	PBQ7272-15.37-M5-B1	P7272011.B1
107	4.69	852	1560	16.43	2	51	C	143-5TC	RBQ8472-16.43-M7-00	R8472030
106	1.35	856	520	16.48	2	11	A	56C	PBQ7272-16.48-M5-B1	P7272012.B1
105	2.08	864	1150	16.66	2	30	C	56C	RBQ8372-16.66-M5-00	R8372017
105	2.91	864	711	16.62	2	23	A	143-5TC	PBQ7472-16.62-M7-B1	P7472030.B1
100	4.42	908	1600	17.50	2	51	C	56C	RBQ8472-17.50-M5-00	R8472011
92	1.17	986	535	19.11	2	11	A	56C	PBQ7272-19.11-M5-B1	P7272013.B1
88	3.89	1037	1600	20.00	2	51	C	143-5TC	RBQ8472-20.00-M7-00	R8472032
87	2.40	1043	780	20.10	2	23	A	143-5TC	PBQ7472-20.10-M7-B1	P7472031.B1
87	3.65	1043	900	20.10	2	28	A	143-5TC	PBQ7572-20.10-M7-B1	P7572069.B1
84	1.68	1077	1150	20.77	2	30	C	56C	RBQ8372-20.77-M5-00	R8372018
82	3.63	1113	1600	21.47	2	51	C	143-5TC	RBQ8472-21.47-M7-00	R8472033
81	1.07	1120	562	21.54	2	11	A	56C	PBQ7272-21.54-M5-B1	P7272014.B1
70	1.40	1299	1150	25.04	2	30	C	56C	RBQ8372-25.04-M5-00	R8372019
70	1.77	1297	877	24.98	2	23	A	143-5TC	PBQ7472-24.98-M7-B1	P7472032.B1
70	2.93	1297	944	24.98	2	28	A	143-5TC	PBQ7572-24.98-M7-B1	P7572070.B1
64	2.88	1407	1600	27.14	2	51	C	143-5TC	RBQ8472-27.14-M7-00	R8472035
61	1.23	1493	1150	28.79	2	30	C	56C	RBQ8372-28.79-M5-00	R8372020
60	1.65	1513	900	29.41	2	23	A	56C	PBQ7472-29.41-M5-B1	P7472014.B1
60	1.97	1513	1012	29.41	2	28	A	143-5TC	PBQ7572-29.41-M7-B1	P7572071.B1
59	2.65	1536	1600	29.62	2	51	C	143-5TC	RBQ8472-29.62-M7-00	R8472036
54	2.43	1685	1600	32.50	2	51	C	143-5TC	RBQ8472-32.50-M7-00	R8472037
52	1.40	1745	918	34.01	3	24	A	56C	PBQ7473-34.01-M5-B1	P7473001.B1
52	1.97	1745	1060	34.01	3	29	A	143-5TC	PBQ7573-34.01-M7-B1	P7573067.B1
49	1.62	1852	1079	35.58	2	28	A	143-5TC	PBQ7572-35.58-M7-B1	P7572034.B1
49	2.20	1862	1600	35.91	2	51	C	143-5TC	RBQ8472-35.91-M7-00	R8472038
44	1.20	2063	988	39.79	3	24	A	56C	PBQ7473-39.79-M5-B1	P7473002.B1
44	1.69	2063	1192	39.79	3	29	A	143-5TC	PBQ7573-39.79-M7-B1	P7573024.B1
43.0	1.15	2111	988	40.50	2	23	A	56C	PBQ7472-40.50-M5-B1	P7472016.B1
43.0	1.22	2111	1192	40.50	2	28	A	56C	PBQ7572-40.50-M5-B1	P7572035.B1
40.0	1.00	2269	1012	44.23	2	23	A	56C	PBQ7472-44.23-M5-B1	P7472017.B1
40.0	1.22	2269	1304	44.23	2	28	A	56C	PBQ7572-44.23-M5-B1	P7572036.B1
39.0	1.76	2334	1600	45.00	2	51	C	143-5TC	RBQ8472-45.00-M7-00	R8472039

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



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MOTOR SELECTIONS



1.5 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	110420
General Purpose, C Face	208-230/460 3-PH	TEFC	140TC	120037
WATTS-AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	116743
575 Volt Motor	575 3-PH	TEFC	56C	111444
SCR Rated DC Motor	180 VDC	TEFC	56C	108092

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

R8172001 – 110420

Single Reduction Reducers
BRAVO®

Double Reduction
BRAVO® Worm - Worm

Double Reduction
BRAVO® Helical - Worm

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



Quick Selections

R Series and P Series Helical - Inline
1750 RPM Input



BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.



1.5 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
37.0	1.01	2453	1028	47.22	3	24	A	56C	PBQ7473-47.22-M5-B1	P7473003.B1
37.0	1.42	2453	1330	47.22	3	29	A	56C	PBQ7573-47.22-M5-B1	P7573025.B1
36.0	1.09	2521	1330	49.00	2	28	A	56C	PBQ7572-49.00-M5-B1	P7572037.B1
34.0	1.55	2658	1600	51.25	2	51	C	143-5TC	RBQ8472-51.25-M7-00	R8472040
32.0	1.23	2836	1354	54.73	3	29	A	56C	PBQ7573-54.73-M5-B1	P7573026.B1
31.0	1.42	2893	1600	55.79	3	64	C	56C	RBQ8473-55.79-M5-00	R8473001
31.0	1.17	2928	1354	57.13	3	29	A	56C	PBQ7573-57.13-M5-B1	P7573027.B1
29.0	1.71	3132	1700	60.40	3	95	C	143-5TC	RBQ8673-60.4-M7-00	R8673017
28.0	1.29	3199	1600	61.69	3	64	C	56C	RBQ8473-61.69-M5-00	R8473002
27.0	1.59	3375	1700	65.07	3	95	C	143-5TC	RBQ8673-65.07-M7-00	R8673018
26.0	1.01	3491	1398	66.22	3	29	A	56C	PBQ7573-66.22-M5-B1	P7573028.B1
26.0	1.17	3527	1600	68.00	3	64	C	56C	RBQ8473-68.00-M5-00	R8473003
24.0	1.40	3835	1700	73.94	3	95	C	56C	RBQ8673-73.94-M5-00	R8673004
23.0	1.05	3926	1600	75.71	3	64	C	56C	RBQ8473-75.71-M5-00	R8473004
21.0	1.71	4248	2240	81.92	3	120	C	143-5TC	RBQ8773-81.92-M7-00	R8773030
20.0	1.62	4485	2240	86.48	3	120	C	143-5TC	RBQ8773-87.89-M7-00	R8773031
20.0	1.59	4558	2240	87.89	3	120	C	143-5TC	RBQ8773-87.89-M7-00	R8773032
16.0	1.31	5555	2240	107.12	3	120	C	56C	RBQ8773-107.12-M5-00	R8773011
13.0	1.08	6742	2240	130.00	3	120	C	56C	RBQ8773-130.00-M5-00	R8773012
13.0	1.05	6925	2240	133.53	3	120	C	56C	RBQ8773-133.53-M5-00	R8773013
12.0	1.75	7813	3800	150.66	3	173	C	143-5TC	RBQ8873-150.66-M7-00	R8873037
11.0	1.68	8170	3800	157.54	3	173	C	143-5TC	RBQ8873-157.54-M7-00	R8873038
11.0	1.60	8574	3800	165.33	3	173	C	143-5TC	RBQ8873-165.33-M7-00	R8873039
10.0	1.54	8870	3800	171.04	3	173	C	143-5TC	RBQ8873-171.04-M7-00	R8873040
10.0	1.45	9474	3800	182.68	3	173	C	56C	RBQ8873-182.68-M5-00	R8873017
9.0	1.42	9678	3800	186.62	3	173	C	56C	RBQ8873-186.62-M5-00	R8873018
9.0	1.29	10621	3800	204.80	3	173	C	56C	RBQ8873-204.80-M5-00	R8873019
8.0	1.17	11735	3800	226.28	3	173	C	56C	RBQ8873-226.28-M5-00	R8873020
8.0	1.15	11872	3800	228.92	3	173	C	56C	RBQ8873-228.92-M5-00	R8873021
7.0	2.19	12157	4460	234.41	3	318	C	143-5TC	RBQ8973-234.41-M7-00	R8973035
7.0	1.01	13521	4460	260.72	3	173	C	56C	RBQ8873-260.72-M5-00	R8873022
6.0	1.81	14660	4460	282.68	3	318	C	143-5TC	RBQ8973-282.68-M7-00	R8973037
6.0	1.63	16287	4460	314.06	3	318	C	143-5TC	RBQ8973-314.06-M7-00	R8973038

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1.5 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	110420
General Purpose, C Face	208-230/460 3-PH	TEFC	140TC	120037
WATTS-AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	116743
575 Volt Motor	575 3-PH	TEFC	56C	111444
SCR Rated DC Motor	180 VDC	TEFC	56C	108092

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

R8172001 – 110420

Quick Selections

R Series and P Series Helical - Inline

1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.



Single Reduction Reducers

Double Reduction

Double Reduction

Accessory Kits

High Efficiency Helical - Inline Gear Reducers

High Efficiency Helical - Worm Gear Reducers

2 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
503	2.50	241	204	3.48	2	11	A	143-5TC	PBQ7172-3.48-M7-B1	P7172023.B1
503	2.94	241	268	3.48	2	11	A	143-5TC	PBQ7272-3.48-M7-B1	P7272023.B1
405	2.01	299	216	4.32	2	11	A	143-5TC	PBQ7172-4.32-M7-B1	P7172024.B1
405	2.60	299	289	4.32	2	11	A	143-5TC	PBQ7272-4.32-M7-B1	P7272024.B1
366	3.87	331	1150	4.78	2	30	C	143-5TC	RBQ8372-4.78-M7-00	R8372029
320	3.38	378	1150	5.47	2	30	C	143-5TC	RBQ8372-5.47-M7-00	R8372030
318	1.58	381	230	5.50	2	11	A	143-5TC	PBQ7172-5.50-M7-B1	P7172025.B1
318	2.34	381	350	5.50	2	11	A	143-5TC	PBQ7272-5.50-M7-B1	P7272025.B1
298	3.15	406	1150	5.87	2	30	C	143-5TC	RBQ8372-5.87-M7-00	R8372031
293	7.88	414	1080	5.98	2	51	C	143-5TC	RBQ8472-5.98-M7-00	R8472025
288	5.25	420	522	6.07	2	23	A	143-5TC	PBQ7472-6.07-M7-00	P7472023.B1
285	3.40	424	1150	6.13	2	30	C	143-5TC	RBQ8372-6.13-M7-00	R8372032
275	1.37	440	250	6.36	2	11	A	143-5TC	PBQ7172-6.36-M7-B1	P7172026.B1
275	2.16	440	376	6.36	2	11	A	143-5TC	PBQ7272-6.36-M7-B1	P7272026.B1
257	5.11	471	540	6.81	2	23	A	143-5TC	PBQ7472-6.81-M7-B1	P7472024.B1
255	3.08	474	1150	6.86	2	30	C	143-5TC	RBQ8372-6.86-M7-00	R8372033
244	6.75	495	3340	7.16	2	51	C	143-5TC	RBQ8472-7.16-M7-00	R8472026
241	1.20	502	260	7.26	2	11	A	143-5TC	PBQ7172-7.26-M7-B1	P7172027.B1
241	2.12	502	391	7.26	2	11	A	143-5TC	PBQ7272-7.26-M7-B1	P7272027.B1
232	4.41	522	568	7.54	2	23	A	143-5TC	PBQ7472-7.54-M7-B1	P7472025.B1
227	2.78	532	1150	7.70	2	30	C	143-5TC	RBQ8372-7.70-M7-00	R8372034
222	1.10	545	266	7.89	2	11	A	143-5TC	PBQ7172-7.89-M7-B1	P7172028.B1
222	1.85	545	400	7.89	2	11	A	143-5TC	PBQ7272-7.89-M7-B1	P7272028.B1
220	4.37	550	579	7.96	2	23	A	143-5TC	PBQ7472-7.96-M7-B1	P7472026.B1
202	2.59	600	1150	8.67	2	30	C	143-5TC	RBQ8372-8.22-M7-00	R8372035
194	1.28	624	277	9.02	2	11	A	143-5TC	PBQ7172-9.02-M7-B1	P7172029.B1
194	1.71	624	412	9.02	2	11	A	143-5TC	PBQ7272-9.02-M7-B1	P7272029.B1
193	5.51	626	1290	9.06	2	51	C	143-5TC	RBQ8472-9.06-M7-00	R8472027
185	3.83	654	615	9.45	2	23	A	143-5TC	PBQ7472-9.45-M7-B1	P7472027.B1
179	2.38	678	1150	9.80	2	30	C	143-5TC	RBQ8372-9.80-M7-00	R8372036
174	1.15	695	284	10.04	2	11	A	143-5TC	PBQ7172-10.04-M7-B1	P7172030.B1
174	1.71	695	420	10.04	2	11	A	143-5TC	PBQ7272-10.04-M7-B1	P7272030.B1
166	5.06	727	1340	10.52	2	51	C	143-5TC	RBQ8472-10.52-M7-00	R8472028
157	2.21	770	1150	11.14	2	30	C	143-5TC	RBQ8372-11.14-M7-00	R8372037

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



2 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	112136
General Purpose, C Face	208-230/460 3-PH	TEFC	140TC	120038
575 Volt Motor	575 3-PH	TEFC	145TC	120178
WATSAVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	145TC	121065
SCR Rated DC Motor	180 VDC	TEFC	145TC	128010

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

R8372029 – 112136



Quick Selections

R Series and P Series Helical - Inline
1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.



BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

2 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight † (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
503	2.50	241	204	3.48	2	11	A	143-5TC	PBQ7172-3.48-M7-B1	P7172023.B1
503	2.94	241	268	3.48	2	11	A	143-5TC	PBQ7272-3.48-M7-B1	P7272023.B1
405	2.01	299	216	4.32	2	11	A	143-5TC	PBQ7172-4.32-M7-B1	P7172024.B1
405	2.60	299	289	4.32	2	11	A	143-5TC	PBQ7272-4.32-M7-B1	P7272024.B1
366	3.87	331	1150	4.78	2	30	C	143-5TC	RBQ8372-4.78-M7-00	R8372029
320	3.38	378	1150	5.47	2	30	C	143-5TC	RBQ8372-5.47-M7-00	R8372030
318	1.58	381	230	5.50	2	11	A	143-5TC	PBQ7172-5.50-M7-B1	P7172025.B1
318	2.34	381	350	5.50	2	11	A	143-5TC	PBQ7272-5.50-M7-B1	P7272025.B1
298	3.15	406	1150	5.87	2	30	C	143-5TC	RBQ8372-5.87-M7-00	R8372031
293	7.88	414	1080	5.98	2	51	C	143-5TC	RBQ8472-5.98-M7-00	R8472025
288	5.25	420	522	6.07	2	23	A	143-5TC	PBQ7472-6.07-M7-00	P7472023.B1
285	3.40	424	1150	6.13	2	30	C	143-5TC	RBQ8372-6.13-M7-00	R8372032
275	1.37	440	250	6.36	2	11	A	143-5TC	PBQ7172-6.36-M7-B1	P7172026.B1
275	2.16	440	376	6.36	2	11	A	143-5TC	PBQ7272-6.36-M7-B1	P7272026.B1
257	5.11	471	540	6.81	2	23	A	143-5TC	PBQ7472-6.81-M7-B1	P7472024.B1
255	3.08	474	1150	6.86	2	30	C	143-5TC	RBQ8372-6.86-M7-00	R8372033
244	6.75	495	3340	7.16	2	51	C	143-5TC	RBQ8472-7.16-M7-00	R8472026
241	1.20	502	260	7.26	2	11	A	143-5TC	PBQ7172-7.26-M7-B1	P7172027.B1
241	2.12	502	391	7.26	2	11	A	143-5TC	PBQ7272-7.26-M7-B1	P7272027.B1
232	4.41	522	568	7.54	2	23	A	143-5TC	PBQ7472-7.54-M7-B1	P7472025.B1
227	2.78	532	1150	7.70	2	30	C	143-5TC	RBQ8372-7.70-M7-00	R8372034
222	1.10	545	266	7.89	2	11	A	143-5TC	PBQ7172-7.89-M7-B1	P7172028.B1
222	1.85	545	400	7.89	2	11	A	143-5TC	PBQ7272-7.89-M7-B1	P7272028.B1
220	4.37	550	579	7.96	2	23	A	143-5TC	PBQ7472-7.96-M7-B1	P7472026.B1
202	2.59	600	1150	8.67	2	30	C	143-5TC	RBQ8372-8.22-M7-00	R8372035
194	1.28	624	277	9.02	2	11	A	143-5TC	PBQ7172-9.02-M7-B1	P7172029.B1
194	1.71	624	412	9.02	2	11	A	143-5TC	PBQ7272-9.02-M7-B1	P7272029.B1
193	5.51	626	1290	9.06	2	51	C	143-5TC	RBQ8472-9.06-M7-00	R8472027
185	3.83	654	615	9.45	2	23	A	143-5TC	PBQ7472-9.45-M7-B1	P7472027.B1
179	2.38	678	1150	9.80	2	30	C	143-5TC	RBQ8372-9.80-M7-00	R8372036
174	1.15	695	284	10.04	2	11	A	143-5TC	PBQ7172-10.04-M7-B1	P7172030.B1
174	1.71	695	420	10.04	2	11	A	143-5TC	PBQ7272-10.04-M7-B1	P7272030.B1
166	5.06	727	1340	10.52	2	51	C	143-5TC	RBQ8472-10.52-M7-00	R8472028
157	2.21	770	1150	11.14	2	30	C	143-5TC	RBQ8372-11.14-M7-00	R8372037

- † Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



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MOTOR SELECTIONS



2 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	112136
General Purpose, C Face	208-230/460 3-PH	TEFC	140TC	120038
575 Volt Motor	575 3-PH	TEFC	145TC	120178
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	145TC	121065
SCR Rated DC Motor	180 VDC	TEFC	145TC	128010

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

R8372029 – 112136



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.



2 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight † (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
153	3.29	791	658	11.43	2	23	A	143-5TC	PBQ7472-11.43-M7-B1	P7472028.B1
150	1.47	807	445	11.64	2	11	A	143-5TC	PBQ7272-11.64-M7-B1	P7272031.B1
137	1.98	881	1150	12.74	2	30	C	143-5TC	RBQ8372-12.74-M7-00	R8372038
132	1.30	917	476	13.26	2	11	A	143-5TC	PBQ7272-13.26-M7-B1	P7272032.B1
128	1.88	945	1150	13.67	2	30	C	143-5TC	RBQ8372-13.67-M7-00	R8372039
127	4.11	951	1470	13.75	2	51	C	143-5TC	RBQ8472-13.75-M7-00	R8472029
123	2.34	984	693	14.21	2	23	A	143-5TC	PBQ7472-14.21-M7-B1	P7472029.B1
123	3.87	984	850	14.21	2	28	A	143-5TC	PBQ7572-14.21-M7-B1	P7572067.B1
114	1.12	1061	508	15.37	2	11	A	143-5TC	PBQ7272-15.37-M7-B1	P7272033.B1
107	3.52	1136	1560	16.43	2	51	C	143-5TC	RBQ8472-16.43-M7-00	R8472030
106	1.02	1142	520	16.48	2	11	A	143-5TC	PBQ7272-16.48-M7-B1	P7272034.B1
105	2.18	1152	711	16.62	2	23	A	143-5TC	PBQ7472-16.62-M7-B1	P7472030.B1
105	1.56	1152	1150	16.66	2	30	C	143-5TC	RBQ8372-16.62-M7-00	R8372040
88	2.91	1383	1600	20.00	2	51	C	143-5TC	RBQ8472-20.00-M7-00	R8472032
87	1.80	1391	780	20.10	2	23	A	143-5TC	PBQ7472-20.10-M7-B1	P7472031.B1
87	2.74	1391	900	20.10	2	28	A	143-5TC	PBQ7572-20.10-M7-B1	P7572069.B1
84	1.26	1436	1150	20.77	2	30	C	143-5TC	RBQ8372-20.77-M7-00	R8372041
70	1.33	1729	877	24.98	2	23	A	143-5TC	PBQ7472-24.98-M7-B1	P7472032.B1
70	2.20	1729	944	24.98	2	28	A	143-5TC	PBQ7572-24.98-M7-B1	P7572070.B1
70	1.05	1731	1150	25.04	2	30	C	143-5TC	RBQ8372-25.04-M7-00	R8372042
64	2.16	1877	1600	27.14	2	51	C	143-5TC	RBQ8472-27.14-M7-00	R8472035
60	1.24	2017	900	29.41	2	23	A	143-5TC	PBQ7472-29.41-M7-B1	P7472033.B1
60	1.48	2017	1012	29.41	2	28	A	143-5TC	PBQ7572-29.41-M7-B1	P7572071.B1
59	1.99	2048	1600	29.62	2	51	C	143-5TC	RBQ8472-29.62-M7-00	R8472036
54	1.82	2247	1600	32.50	2	51	C	143-5TC	RBQ8472-32.50-M7-00	R8472037
52	1.05	2327	918	34.01	3	24	A	143-5TC	PBQ7473-34.01-M7-B1	P7473023.B1
52.0	1.48	2327	1060	34.01	3	29	A	143-5TC	PBQ7573-34.01-M7-B1	P7573067.B1
49.0	1.01	2470	922	35.58	2	23	A	143-5TC	PBQ7472-35.58-M7-B1	P7472034.B1
49.0	1.65	2483	1600	35.91	2	51	C	143-5TC	RBQ8472-35.91-M7-00	R8472038
44.0	1.27	2750	1192	39.79	3	29	A	143-5TC	PBQ7573-39.79-M7-B1	P7573068.B1
39.0	1.32	3112	1600	45.00	2	51	C	56C	RBQ8472-45.00-M5-00	R8472039
38.0	1.67	3207	1700	46.38	2	80	C	143-5TC	RBQ8672-46.38-M7-00	R8672047
37.0	1.07	3270	1330	47.22	3	29	A	143-5TC	PBQ7573-47.22-M7-B1	P7573069.B1
34.0	2.06	3518	2240	50.87	3	120	C	143-5TC	RBQ8773-50.87-M7-00	R8773023

- † Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



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MOTOR SELECTIONS



2 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	112136
General Purpose, C Face	208-230/460 3-PH	TEFC	140TC	120038
575 Volt Motor	575 3-PH	TEFC	145TC	120178
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	145TC	121065
SCR Rated DC Motor	180 VDC	TEFC	145TC	128010

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
R8372029 – 112136

Single Reduction Reducers
BRAVO®

Double Reduction
BRAVO® Worm - Worm

Double Reduction
BRAVO® Helical - Worm

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



Quick Selections

R Series and P Series Helical - Inline
1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.



BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

2 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
34.0	1.16	3544	1600	51.25	2	51	C	56C	RBQ8472-51.25-M7-00	R8472040
34.0	1.50	3566	1700	51.57	2	80	C	56C	RBQ8672-51.57-M5-00	R8672024
31.0	1.88	3854	2240	55.74	3	120	C	143-5TC	RBQ8773-55.74-M5-00	R8773024
31.0	1.07	3858	1600	55.79	3	64	C	56C	RBQ8473-55.79-M5-00	R8473001
31.0	1.34	3893	1700	56.30	3	95	C	56C	RBQ8673-56.30-M5-00	R8673031
30.0	1.82	3997	2240	57.81	3	120	C	143-5TC	RBQ8773-57.81-M7-00	R8773025
29.0	1.29	4152	1700	60.04	3	95	C	56C	RBQ8673-60.04-M5-00	R8673032
28.0	1.67	4357	2240	63.01	3	120	C	143-5TC	RBQ8773-63.01-M7-00	R8773026
26.0	1.59	4573	2240	66.13	3	120	C	143-5TC	RBQ8773-66.13-M7-00	R8773027
26.0	2.99	4582	3800	66.27	3	173	C	143-5TC	RBQ8873-66.27-M7-00	R8873027
25.0	2.83	4837	3800	69.95	3	173	C	143-5TC	RBQ8873-69.95-M7-00	R8873028
25.0	1.48	4906	2240	70.95	3	120	C	56C	RBQ8773-70.95-M5-00	R8773028
24.0	1.47	4952	2240	71.61	3	120	C	56C	RBQ8773-71.61-M5-00	R8773029
21.0	1.28	5665	2240	81.92	3	120	C	56C	RBQ8773-81.92-M5-00	R8773030
21.0	2.37	5779	3800	83.58	3	173	C	143-5TC	RBQ8873-83.58-M7-00	R8873029
20.0	1.21	5980	2240	86.48	3	120	C	56C	RBQ8773-86.48-M5-00	R8773031
20.0	2.29	5992	3800	86.65	3	173	C	143-5TC	RBQ8873-86.65-M7-00	R8873030
20.0	1.18	6156	2240	89.03	3	173	C	143-5TC	RBQ8773-89.03-M7-00	R8773031
17.0	1.91	7159	3800	103.53	3	173	C	143-5TC	RBQ8873-103.53-M7-00	R8873032
13.0	1.46	9356	3800	135.30	3	173	C	56C	RBQ8873-135.3-M5-00	R8873011
12.0	1.32	10418	3800	150.66	3	173	C	56C	RBQ8873-150.66-M5-00	R8873013
11.0	1.26	10893	3800	157.54	3	173	C	56C	RBQ8873-157.54-M5-00	R8873014
11.0	2.39	11109	4460	160.66	3	318	C	143-5TC	RBQ8973-160.66-M7-00	R8973031
11.0	1.20	11432	3800	165.33	3	173	C	56C	RBQ8873-165.33-M5-00	R8873015
10.0	1.16	11827	3800	171.04	3	173	C	56C	RBQ8873-171.04-M5-00	R8873016
10.0	1.08	12632	3800	182.68	3	173	C	56C	RBQ8873-182.68-M5-00	R8873017
9.0	2.08	12798	4460	185.09	3	318	C	143-5TC	RBQ8973-185.09-M7-00	R8973032
9.0	1.06	12904	3800	186.62	3	173	C	56C	RBQ8873-186.62-M5-00	R8873018
9.0	1.93	13761	4460	199.01	3	318	C	143-5TC	RBQ8973-199.01-M7-00	R8973033
8.0	1.72	15435	4460	223.22	3	318	C	143-5TC	RBQ8973-223.22-M7-00	R8973034
7.0	1.64	16209	4460	234.41	3	318	C	143-5TC	RBQ8973-234.41-M7-00	R8973035
7.0	1.55	17149	4460	248.00	3	318	C	143-5TC	RBQ8973-248.00-M7-00	R8973036
6.0	1.36	19547	4460	282.68	3	318	C	56C	RBQ8973-282.68-M5-00	R8973037
6.0	1.22	21716	4460	314.06	3	318	C	56C	RBQ8973-314.06-M5-00	R8973038

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



2 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	112136
General Purpose, C Face	208-230/460 3-PH	TEFC	140TC	120038
575 Volt Motor	575 3-PH	TEFC	145TC	120178
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	145TC	121065
SCR Rated DC Motor	180 VDC	TEFC	145TC	128010

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

R8372029 – 112136

Quick Selections

R Series and P Series Helical - Inline

1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.



3 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight † (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
529	3.20	343	1150	3.31	2	30	C	143-5TC	RBQ8372-3.31-M7-00	R8372026
503	1.67	361	204	3.48	2	11	A	143-5TC	PBQ7172-3.48-M7-B1	P7172023.B1
503	1.96	361	268	3.48	2	11	A	143-5TC	PBQ7272-3.48-M7-B1	P7272023.B1
485	3.93	374	450	3.61	2	25	A	182-4TC	PBQ7472-3.61-M9-B1	P7472039.B1
470	3.03	386	1150	3.72	2	30	C	143-5TC	RBQ8372-3.72-M7-00	R8372027
416	2.93	437	1150	4.21	2	30	C	143-5TC	RBQ8372-3.87-M7-00	R8372028
414	4.09	438	474	4.23	2	25	A	182-4TC	PBQ7472-4.23-M9-B1	P7472040.B1
405	1.34	448	216	4.32	2	11	A	143-5TC	PBQ7172-4.32-M7-B1	P7172024.B1
405	1.73	448	289	4.32	2	11	A	143-5TC	PBQ7272-4.32-M7-B1	P7272024.B1
366	2.58	496	1150	4.78	2	30	C	143-5TC	RBQ8372-4.78-M7-00	R8372029
349	4.23	520	491	5.01	2	25	A	182-4TC	PBQ7472-5.01-M9-B1	P7472041.B1
320	2.26	567	1150	5.47	2	30	C	143-5TC	RBQ8372-5.47-M7-00	R8372030
318	1.56	571	350	5.50	2	11	A	143-5TC	PBQ7272-5.50-M7-B1	P7272025.B1
298	2.40	609	1150	5.87	2	30	C	143-5TC	RBQ8372-5.87-M7-00	R8372031
293	5.26	620	1080	5.98	2	51	C	182-4TC	RBQ8472-5.98-M9-00	R8472045
289	3.50	628	522	6.07	2	25	A	182-4TC	PBQ7472-6.07-M9-B1	P7472042.B1
285	2.26	636	1150	6.13	2	30	C	143-5TC	RBQ8372-6.13-M7-00	R8372032
275	1.44	660	376	6.36	2	11	A	143-5TC	PBQ7272-6.36-M7-B1	P7272026.B1
257	3.41	706	540	6.81	2	25	A	182-4TC	PBQ7472-6.81-M9-B1	P7472043.B1
257	4.05	706	646	6.81	2	30	A	182-4TC	PBQ7572-6.81-M9-B1	P7572100.B1
255	2.05	712	1150	6.86	2	30	C	143-5TC	RBQ8372-6.86-M7-00	R8372033
241	1.41	753	391	7.26	2	11	A	143-5TC	PBQ7272-7.26-M7-B1	P7272027.B1
232	2.94	782	568	7.54	2	25	A	182-4TC	PBQ7472-7.54-M9-B1	P7472044.B1
227	1.85	799	1150	7.70	2	30	C	143-5TC	RBQ8372-7.70-M7-00	R8372034
222	1.23	818	400	7.89	2	11	A	143-5TC	PBQ7272-7.89-M7-B1	P7272028.B1
220	2.91	825	579	7.96	2	25	A	182-4TC	PBQ7472-7.96-M9-B1	P7472045.B1
220	3.85	825	663	7.96	2	30	A	182-4TC	PBQ7572-7.96-M9-B1	P7572102.B1
202	1.79	899	1150	8.67	2	30	C	143-5TC	RBQ8372-8.67-M7-00	R8372035
194	1.14	936	412	9.02	2	11	A	143-5TC	PBQ7272-9.02-M7-B1	P7272029.B1
193	3.67	940	1290	9.06	2	51	C	182-4TC	RBQ8472-9.06-M9-00	R8472047
185	2.55	981	615	9.45	2	25	A	182-4TC	PBQ7472-9.45-M9-B1	P7472046.B1
185	3.06	981	674	9.45	2	30	A	182-4TC	PBQ7572-9.45-M9-B1	P7572103.B1

- ◆ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



3 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	182TC	131491
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	182TC	131503
575 Volt Motor	575 3-PH	TEFC	182TC	131498

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

R8372026 – 131491

Single Reduction Reducers
BRAVO®

Double Reduction
BRAVO® Worm - Worm

Double Reduction
BRAVO® Helical - Worm

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



Quick Selections

R Series and P Series Helical - Inline
1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.



BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

3 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
179	1.67	1016	1150	9.80	2	30	C	143-5TC	RBQ8372-9.80-M7-00	R8372036
174	1.14	1043	420	10.04	2	11	A	143-5TC	PBQ7272-10.04-M7-B1	P7272030.B1
166	3.37	1091	1340	10.52	2	51	C	182-4TC	RBQ8472-10.52-M9-00	R8472048
157	1.47	1155	1150	11.14	2	30	C	143-5TC	RBQ8372-11.14-M7-00	R8372037
153	2.19	1186	658	11.43	2	25	A	182-4TC	PBQ7472-11.43-M9-B1	P7472047.B1
137	1.32	1321	1150	12.74	2	30	C	143-5TC	RBQ8372-12.74-M7-00	R8372038
128	1.26	1418	1150	13.67	2	30	C	143-5TC	RBQ8372-13.67-M7-00	R8372039
127	2.74	1426	1470	13.75	2	51	C	182-4TC	RBQ8472-13.75-M9-00	R8472049
123	1.56	1476	693	14.21	2	25	A	182-4TC	PBQ7472-14.21-M9-B1	P7472048.B1
123	2.58	1476	850	14.21	2	30	A	182-4TC	PBQ7572-14.21-M9-B1	P7572105.B1
107	2.35	1704	1600	16.43	2	51	C	182-4TC	RBQ8472-16.43-M9-00	R8472050
105	1.04	1728	1150	16.66	2	30	C	143-5TC	RBQ8372-16.66-M7-00	R8372040
105	1.45	1729	711	16.62	2	25	A	182-4TC	PBQ7472-16.62-M9-B1	P7472049.B1
105	2.20	1729	872	16.62	2	30	A	182-4TC	PBQ7572-16.62-M9-B1	P7572106.B1
100	2.21	1815	1600	17.50	2	51	C	182-4TC	RBQ8472-17.50-M9-00	R8472051
88	1.94	2074	1600	20.00	2	51	C	182-4TC	RBQ8472-20.00-M9-00	R8472052
87	1.20	2086	780	20.10	2	23	A	143-5TC	PBQ7472-20.10-M7-B1	P7472031.B1
87	1.82	2086	900	20.10	2	30	A	182-4TC	PBQ7572-20.10-M9-B1	P7572107.B1
82	1.81	2227	1600	21.47	2	51	C	182-4TC	RBQ8472-21.47-M9-00	R8472053
70	1.56	2593	1600	25.00	2	51	C	182-4TC	RBQ8472-25.00-M9-00	R8472054
70	1.47	2593	944	24.98	2	28	A	143-5TC	PBQ7572-24.98-M7-B1	P7572070.B1
67	1.94	2716	1700	26.19	2	95	C	182-4TC	RBQ8672-26.19-M9-00	R8672068
64	1.44	2815	1600	27.14	2	51	C	143-5TC	RBQ8472-27.14-M7-00	R8472035
59	1.32	3072	1600	29.62	2	51	C	143-5TC	RBQ8472-29.62-M7-00	R8472036
56	2.22	3268	2240	31.51	2	116	C	182-4TC	RBQ8772-31.51-M9-00	R8772066
54	1.21	3371	1600	32.50	2	51	C	143-5TC	RBQ8472-32.50-M7-00	R8472037
54	1.57	3374	1700	32.53	2	95	C	182-4TC	RBQ8672-32.53-M9-00	R8672069
49	1.10	3725	1600	35.91	2	51	C	143-5TC	RBQ8472-35.91-M7-00	R8472038
39	1.56	4642	2240	44.75	2	116	C	182-4TC	RBQ8772-44.75-M9-00	R8772068
38	1.11	4811	1700	46.38	2	80	C	143-5TC	RBQ8672-46.38-M7-00	R8672071
35.0	1.41	5157	2240	49.72	2	101	C	143-5TC	RBQ8772-49.72-M7-00	R8772069
35.0	2.60	5157	3800	49.72	2	191	C	182-4TC	RBQ8872-49.72-M9-00	R8872066

♦ Weight does not include oil.

▼ Service Factor is based on maximum torque rating of reducer.

● Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



3 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	182TC	131491
WATTS-AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	182TC	131503
575 Volt Motor	575 3-PH	TEFC	182TC	131498

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

R8372026 – 131491

Quick Selections

R Series and P Series Helical - Inline

1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.



3 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
34.0	1.38	5276	2240	50.87	3	120	C	143-5TC	RBQ8773-50.87-M7-00	R8773023
34.0	1.00	5349	1700	51.57	2	80	C	143-5TC	RBQ8672-51.57-M7-00	R8672072
33.0	2.47	5549	3800	53.50	3	193	C	182-4TC	RBQ8873-53.50-M9-00	R8873049
31.0	1.26	5781	2240	55.74	3	120	C	143-5TC	RBQ8773-55.74-M7-00	R8773024
30.0	1.21	5996	2240	57.81	3	120	C	143-5TC	RBQ8773-57.81-M7-00	R8773025
28.0	1.11	6535	2240	63.01	3	120	C	143-5TC	RBQ8773-63.01-M7-00	R8773026
26.0	1.06	6859	2240	66.13	3	120	C	143-5TC	RBQ8773-66.13-M7-00	R8773027
26.0	1.99	6874	3800	66.27	3	193	C	182-4TC	RBQ8873-66.27-M9-00	R8873051
25.0	1.89	7255	3800	69.95	3	193	C	182-4TC	RBQ8873-69.95-M9-00	R8873052
25.0	3.64	7304	4460	70.42	3	360	C	182-4TC	RBQ8973-70.42-M9-00	R8973042
22.0	3.20	8323	4460	80.24	3	360	C	182-4TC	RBQ8973-80.24-M9-00	R8973043
21.0	1.58	8669	3800	83.58	3	193	C	182-4TC	RBQ8873-83.58-M9-00	R8873053
20.0	1.52	8987	3800	86.65	3	193	C	182-4TC	RBQ8873-86.65-M9-00	R8873054
20.0	2.88	9232	4460	89.01	3	360	C	182-4TC	RBQ8973-89.01-M9-00	R8973044
17.0	1.28	10738	3800	103.53	3	173	C	143-5TC	RBQ8873-103.53-M7-00	R8873032
17.0	2.44	10915	4460	105.23	3	360	C	182-4TC	RBQ8973-105.23-M9-00	R8973045
16.0	1.20	11438	3800	110.28	3	173	C	143-5TC	RBQ8873-110.28-M7-00	R8873033
14.0	1.05	13072	3800	126.03	3	173	C	143-5TC	RBQ8873-126.03-M7-00	R8873034
14.0	2.02	13159	4460	126.87	3	360	C	182-4TC	RBQ8973-126.87-M9-00	R8973047
13.0	1.92	13822	4460	133.26	3	360	C	182-4TC	RBQ8973-133.26-M9-00	R8973048
11.0	1.63	16300	4460	157.15	3	360	C	182-4TC	RBQ8973-157.15-M9-00	R8973049
11.0	1.60	16664	4460	160.66	3	360	C	182-4TC	RBQ8973-160.66-M9-00	R8973050
9.0	1.39	19198	4460	185.09	3	318	C	143-5TC	RBQ8973-185.09-M7-00	R8973032
9.0	1.29	20642	4460	199.01	3	318	C	143-5TC	RBQ8973-199.01-M7-00	R8973033
8.0	1.77	21564	6500	207.90	3	428	C	182-4TC	RBQ81073-207.9-M9-00	R81073050
8.0	1.15	23153	4460	223.22	3	318	C	143-5TC	RBQ8973-223.22-M7-00	R8973034
7.0	1.09	24313	4460	234.41	3	318	C	143-5TC	RBQ8973-234.41-M7-00	R8973035
7.0	1.43	26714	6500	257.56	3	428	C	182-4TC	RBQ81073-257.56-M9-00	R81073051
6.0	1.28	29680	6500	286.15	3	428	C	182-4TC	RBQ81073-286.15-M9-00	R81073052
6.0	1.24	30630	6500	295.31	3	428	C	182-4TC	RBQ81073-295.31-M9-00	R81073053
5.0	1.12	34030	6500	328.09	3	428	C	182-4TC	RBQ81073-328.09-M9-00	R81073054

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™

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How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

R8372026 – 131491

MOTOR SELECTIONS



3 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	182TC	131491
WATSAVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	182TC	131503
575 Volt Motor	575 3-PH	TEFC	182TC	131498



Quick Selections

R Series and P Series Helical - Inline
1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

5 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
665	2.24	455	530	2.63	2	35	C	182-4TC	RBQ8372-2.63-M9-00	R8372047
593	2.08	510	550	2.95	2	35	C	182-4TC	RBQ8372-2.95-M9-00	R8372048
568	3.31	532	1010	3.08	2	66	C	182-4TC	RBQ8472-3.08-M9-00	R8472042
529	1.92	572	570	3.31	2	35	C	182-4TC	RBQ8372-3.31-M9-00	R8372049
485	2.36	624	450	3.61	2	25	A	182-4TC	PBQ7472-3.61-M9-B1	P7472039.B1
470	1.82	643	580	3.72	2	35	C	182-4TC	RBQ8372-3.72-M9-00	R8372050
449	2.79	674	1090	3.90	2	66	C	182-4TC	RBQ8472-3.90-M9-00	R8472043
416	1.76	728	590	4.21	2	35	C	182-4TC	RBQ8372-4.21-M9-00	R8372051
414	2.45	731	474	4.23	2	25	A	182-4TC	PBQ7472-4.23-M9-B1	P7472040.B1
387	2.52	781	1140	4.52	2	66	C	182-4TC	RBQ8472-4.52-M9-00	R8472044
366	1.55	826	620	4.78	2	35	C	182-4TC	RBQ8372-4.78-M9-00	R8372052
349	2.65	867	491	5.01	2	25	A	182-4TC	PBQ7472-5.01-M9-B1	P7472041.B1
349	2.65	867	603	5.01	2	30	A	182-4TC	PBQ7572-5.01-M9-B1	P7572098.B1
320	1.35	946	650	5.47	2	35	C	182-4TC	RBQ8372-5.47-M9-00	R8372053
298	1.26	1015	680	5.87	2	35	C	182-4TC	RBQ8372-5.87-M9-00	R8372054
293	3.15	1034	1080	5.98	2	66	C	182-4TC	RBQ8472-5.98-M9-00	R8472045
289	2.10	1047	522	6.07	2	25	A	182-4TC	PBQ7472-6.07-M9-B1	P7472042.B1
289	2.65	1047	629	6.07	2	30	A	182-4TC	PBQ7572-6.07-M9-B1	P7572099.B1
285	1.36	1060	710	6.13	2	35	C	182-4TC	RBQ8372-6.13-M9-00	R8372055
257	2.04	1177	540	6.81	2	25	A	182-4TC	PBQ7472-6.81-M9-B1	P7472043.B1
257	2.43	1177	646	6.81	2	30	A	182-4TC	PBQ7572-6.81-M9-B1	P7572100.B1
255	1.23	1186	740	6.86	2	35	C	182-4TC	RBQ8372-6.86-M9-00	R8372056
244	2.70	1238	1180	7.16	2	61	C	182-4TC	RBQ8472-7.16-M9-00	R8472046
232	1.76	1304	568	7.54	2	25	A	182-4TC	PBQ7472-7.54-M9-B1	P7472044.B1
232	2.39	1304	658	7.54	2	30	A	182-4TC	PBQ7572-7.54-M9-B1	P7572101.B1
227	1.11	1331	770	7.70	2	35	C	182-4TC	RBQ8372-7.70-M9-00	R8372057
220	1.75	1375	579	7.96	2	25	A	182-4TC	PBQ7472-7.96-M9-B1	P7472045.B1
220	2.31	1375	663	7.96	2	30	A	182-4TC	PBQ7572-7.96-M9-B1	P7572102.B1
202	1.03	1499	790	8.67	2	35	C	182-4TC	RBQ8372-8.67-M9-00	R8372058
193	2.20	1566	1290	9.06	2	66	C	182-4TC	RBQ8472-9.06-M9-00	R8472047
193	3.73	1571	1710	9.09	2	116	C	182-4TC	RBQ8772-9.09-M9-00	R8772059
185	1.53	1635	615	9.45	2	25	A	182-4TC	PBQ7472-9.45-M9-B1	P7472046.B1
185	1.84	1635	674	9.45	2	30	C	182-4TC	PBQ7572-9.45-M9-B1	P7572103.B1
166	2.02	1819	1340	10.52	2	66	C	182-4TC	RBQ8472-10.52-M9-00	R8472048
156	2.40	1945	1700	11.25	2	95	C	182-4TC	RBQ8672-11.25-M9-00	R8672063
153	1.32	1977	658	11.43	2	25	A	182-4TC	PBQ7472-11.43-M9-B1	P7472047.B1
153	1.74	1977	778	11.43	2	30	A	182-4TC	PBQ7572-11.43-M9-B1	P7572104.B1
138	2.90	2197	1830	12.71	2	116	C	182-4TC	RBQ8772-12.71-M9-00	R8772062
136	2.16	2227	1700	12.88	2	95	C	182-4TC	RBQ8672-12.88-M9-00	R8672064
127	1.64	2377	1470	13.75	2	66	C	182-4TC	RBQ8472-13.75-M9-00	R8472049
123	1.55	2460	850	14.21	2	30	A	182-4TC	PBQ7572-14.21-M9-B1	P7572105.B1
112	1.86	2698	1700	15.61	2	95	C	182-4TC	RBQ8672-15.61-M9-00	R8672065

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

R8372047 – 131492

MOTOR SELECTIONS

5 HP LEESON ELECTRIC MOTORS



Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	184TC	131492
WATTS-AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	184TC	131501
575 Volt Motor	575 3-PH	TEFC	184TC	131499



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.

5 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight † (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
107	1.41	2840	1560	16.43	2	51	C	143-5TC	RBQ8472-16.43-M7-00	R8472030
105	1.32	2881	872	16.62	2	30	A	182-4TC	PBQ7572-16.62-M9-B1	P7572106.B1
100	1.33	3025	1600	17.50	2	51	C	143-5TC	RBQ8472-17.50-M7-00	R8472031
98	2.24	3086	2030	17.85	2	116	C	182-4TC	RBQ8772-17.85-M9-00	R8772063
96	1.59	3155	1700	18.25	2	95	C	182-4TC	RBQ8672-18.25-M9-00	R8672066
88	1.17	3457	1600	20.00	2	51	C	143-5TC	RBQ8472-20.00-M7-00	R8472032
87	1.09	3477	900	20.10	2	30	A	182-4TC	PBQ7572-20.10-M9-B1	P7572107.B1
83	1.99	3648	2150	21.10	2	116	C	182-4TC	RBQ8772-21.10-M9-00	R8772064
83	3.64	3648	2750	21.10	2	191	C	182-4TC	RBQ8872-21.10-M9-00	R8872062
82	1.09	3711	1600	21.47	2	51	C	143-5TC	RBQ8472-21.47-M7-00	R8472033
81	1.39	3743	1700	21.65	2	95	C	182-4TC	RBQ8672-21.65-M9-00	R8672067
69	3.02	4398	3000	25.44	2	191	C	182-4TC	RBQ8872-25.44-M9-00	R8872063
69	1.65	4398	2150	25.44	2	116	C	182-4TC	RBQ8672-25.44-M9-00	R872065
67	1.16	4527	1700	26.19	2	80	C	143-5TC	RBQ8672-26.19-M7-00	R8672044
56	1.33	5447	2200	31.51	2	116	C	143-5TC	RBQ8772-31.51-M7-00	R8772043
56	2.44	5447	3400	31.51	2	191	C	182-4TC	RBQ8872-31.51-M9-00	R8872064
47	1.13	6415	2240	37.11	2	116	C	143-5TC	RBQ8772-37.11-M7-00	R8772044
39	1.73	7736	3800	44.75	2	191	C	182-4TC	RBQ8872-44.75-M9-00	R8872065
35.0	1.56	8595	3800	49.72	2	191	C	182-4TC	RBQ8872-49.72-M9-00	R8872066
33.0	1.48	9248	3800	53.50	3	173	C	143-5TC	RBQ8873-53.50-M7-00	R8873025
31.0	1.39	9873	3800	57.11	3	173	C	143-5TC	RBQ8873-57.11-M7-00	R8873026
30.0	2.68	9924	4460	57.41	3	360	C	182-4TC	RBQ8973-57.41-M9-00	R8973039
28.0	2.47	10751	4460	62.19	3	360	C	182-4TC	RBQ8973-62.19-M9-00	R8973040
28.0	2.43	10955	4460	63.37	3	360	C	182-4TC	RBQ8973-63.37-M9-00	R8973041
26.0	1.20	11456	3800	66.27	3	173	C	143-5TC	RBQ8873-66.27-M7-00	R8873027
26.0	2.02	11593	4460	67.06	2	305	C	182-4TC	RBQ8972-67.06-M9-00	R8972021
25.0	1.13	12092	3800	69.95	3	173	C	143-5TC	RBQ8873-69.95-M7-00	R8873028
22.0	1.92	13871	4460	80.24	3	360	C	182-4TC	RBQ8973-80.24-M9-00	R8973043
20.0	1.73	15387	4460	89.01	3	360	C	182-4TC	RBQ8973-89.01-M9-00	R8973044
17.0	2.15	17754	6500	102.70	3	428	C	182-4TC	RBQ81073-102.70-M9-00	R81073043
17.0	1.46	18191	4460	105.23	3	318	C	143-5TC	RBQ8973-105.23-M7-00	R8973026
16.0	1.37	19486	4460	112.72	3	318	C	143-5TC	RBQ8973-112.72-M7-00	R8973027
15.0	1.87	20357	6500	117.76	3	428	C	182-4TC	RBQ81073-117.76-M9-00	R81073044
14.0	1.82	20991	6500	121.43	3	428	C	182-4TC	RBQ81073-121.43-M9-00	R81073045
14.0	1.21	21932	4460	126.87	3	318	C	143-5TC	RBQ8973-126.87-M7-00	R8973028
13.0	1.15	23036	4460	133.26	3	318	C	143-5TC	RBQ8973-133.26-M7-00	R8973029
13.0	1.58	24068	6500	139.23	3	428	C	182-4TC	RBQ81073-139.23-M9-00	R81073046
12.0	1.51	25306	6500	146.39	3	428	C	182-4TC	RBQ81073-146.39-M9-00	R81073047
10.0	1.31	29016	6500	167.85	3	428	C	182-4TC	RBQ81073-167.85-M9-00	R81073048
10.0	1.22	31345	6500	181.32	3	428	C	182-4TC	RBQ81073-181.32-M9-00	R81073049
8.00	1.06	35939	6500	207.90	3	428	C	182-4TC	RBQ81073-207.90-M9-00	R81073050

- ◆ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



5 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	184TC	131492
WATSAVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	184TC	131501
575 Volt Motor	575 3-PH	TEFC	184TC	131499

How To Create a GEAR+MOTOR Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

R8372047 – 131492



Quick Selections

R Series and P Series Helical - Inline
1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.



BRAYO®
Single Reduction Reducers

BRAYO® Worm - Worm
Double Reduction

BRAYO® Helical - Worm
Double Reduction

BRAYO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

7.5 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight * (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
665	1.50	682	530	2.63	2	35	C	182-4TC	RBQ8327-2.45-M9-00	R8372047
593	1.39	765	550	2.95	2	35	C	182-4TC	RBQ8327-2.95-M9-00	R8372048
568	2.20	799	1010	3.08	2	61	C	182-4TC	RBQ8472-3.08-M9-00	R8472042
529	1.28	858	570	3.31	2	35	C	182-4TC	RBQ8372-3.31-M9-00	R8372049
485	1.57	936	450	3.61	2	25	A	182-4TC	PBQ7472-3.61-M9-B1	P7472039.B1
485	1.76	936	534	3.61	2	30	A	182-4TC	PBQ7572-3.61-M5-B1	P7572096.B1
470	1.21	965	580	3.72	2	35	C	182-4TC	RBQ8372-3.72-M9-00	R8372050
449	1.86	1011	1090	3.90	2	66	C	182-4TC	RBQ8472-3.90-M9-00	R8472043
416	1.17	1092	590	4.21	2	35	C	182-4TC	RBQ8372-4.21-M9-00	R8372051
414	1.64	1096	474	4.23	2	25	A	182-4TC	PBQ7472-4.23-M9-B1	P7472041.B1
414	1.76	1096	566	4.23	2	30	A	182-4TC	PBQ7572-4.23-M9-B1	P7572097.B1
387	1.68	1172	1140	4.52	2	66	C	182-4TC	RBQ8472-4.52-M9-00	R8472044
366	1.03	1239	620	4.78	2	35	C	182-4TC	RBQ8372-4.78-M9-00	R8372052
349	1.69	1300	491	5.01	2	25	A	182-4TC	PBQ7472-5.01-M9-B1	P7472041.B1
349	1.76	1300	603	5.01	2	30	A	182-4TC	PBQ7572-5.01-M9-B1	P7572098.B1
293	2.10	1551	1080	5.98	2	66	C	182-4TC	RBQ8572-5.98-M9-00	R8572045
289	1.40	1570	522	6.07	2	25	A	182-4TC	PBQ7472-6.07-M9-B1	P7472042.B1
289	1.76	1570	629	6.07	2	30	A	182-4TC	PBQ7572-6.07-M9-B1	P7572099.B1
257	1.36	1766	540	6.81	2	25	A	182-4TC	PBQ7472-6.81-M9-B1	P7472043.B1
257	1.62	1766	646	6.81	2	30	A	182-4TC	PBQ7572-6.81-M9-B1	P7572100.B1
244	1.80	1857	1180	7.16	2	66	C	182-4TC	RBQ8472-7.16-M9-00	R8472046
232	1.18	1956	568	7.54	2	25	A	182-4TC	PBQ7472-7.54-M9-B1	P7472044.B1
232	1.60	1956	658	7.54	2	30	A	182-4TC	PBQ7572-7.54-M9-B1	P7572101.B1
220	1.16	2063	579	7.96	2	25	A	182-4TC	PBQ7472-7.96-M9-B1	P7472045.B1
220	1.54	2063	663	7.96	2	30	A	182-4TC	PBQ7572-7.96-M9-B1	P7572102.B1
217	2.00	2087	1700	8.05	2	95	C	182-4TC	RBQ8672-8.05-M9-00	R8672060
216	2.71	2098	1710	8.09	2	116	C	182-4TC	RBQ8772-8.09-M9-00	R8772058
193	1.47	2349	1290	9.06	2	66	C	182-4TC	RBQ8472-9.06-M9-00	R8472047
192	1.82	2360	1700	9.10	2	95	C	182-4TC	RBQ8672-9.10-M9-00	R8672061
185	1.02	2453	615	9.45	2	25	A	182-4TC	PBQ7472-9.45-M9-B1	P7472046.B1
185	1.22	2453	674	9.45	2	30	A	182-4TC	PBQ7572-9.45-M9-B1	P7572103.B1
178	2.35	2554	1710	9.85	2	116	C	182-4TC	RBQ8772-9.85-M9-00	R8772060
177	1.73	2565	1700	9.89	2	95	C	182-4TC	RBQ8672-9.89-M9-00	R8672062
166	1.35	2728	1340	10.52	2	66	C	182-4TC	RBQ8472-10.52-M9-00	R8472048

- Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



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Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

R8372047 – 131492

MOTOR SELECTIONS

7.5 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	184TC	131606
WATSAVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	213TC	140486



Quick Selections

R Series and P Series Helical - Inline

1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.



7.5 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
157	2.09	2891	1780	11.15	2	116	C	182-4TC	RBQ8772-11.15-M9-00	R8772061
156	1.60	2917	1700	11.25	2	95	C	182-4TC	RBQ8672-11.25-M9-00	R8672063
153	1.16	2966	778	11.43	2	30	A	182-4TC	PBQ7572-11.43-M9-B1	P7572104.B1
138	1.93	3296	1830	12.71	2	116	C	182-4TC	RBQ8772-12.71-M9-00	R8772062
136	1.44	3340	1700	12.88	2	95	C	182-4TC	RBQ8672-12.88-M9-00	R8672064
127	1.10	3565	1470	13.75	2	66	C	182-4TC	RBQ8472-13.75-M9-00	R8472049
123	1.03	3689	850	14.21	2	30	A	182-4TC	PBQ7572-14.21-M9-B1	P7572105.B1
112	1.24	4048	1700	15.61	2	95	C	182-4TC	RBQ8672-15.61-M9-00	R8672065
98	1.49	4629	2030	17.85	2	116	C	182-4TC	RBQ8772-17.85-M9-00	R8772063
98	2.85	4629	2500	17.85	2	191	C	182-4TC	RBQ8872-17.85-M9-00	R8872061
96	1.10	4732	1700	18.25	2	95	C	182-4TC	RBQ8672-18.25-M9-00	R8672066
83	1.33	5471	2120	21.10	2	116	C	182-4TC	RBQ8772-21.10-M9-00	R8772064
83	2.42	5471	2750	21.10	2	191	C	182-4TC	RBQ8872-21.10-M9-00	R8872062
69	2.02	6597	3000	25.44	2	191	C	182-4TC	RBQ8872-25.44-M9-00	R8872063
69	1.10	6597	2150	25.44	2	116	C	182-4TC	RBQ8772-25.44-M9-00	R8772065
56	1.63	8171	3400	31.51	2	191	C	182-4TC	RBQ8872-31.51-M9-00	R8872064
46	2.34	9929	3370	38.29	2	305	C	182-4TC	RBQ8972-38.29-M9-00	R8972018
39	1.15	11604	3800	44.75	2	191	C	182-4TC	RBQ8872-44.75-M9-00	R8872065
39	2.00	11650	3370	44.93	2	305	C	182-4TC	RBQ8972-44.93-M9-00	R8972019
35.0	1.04	12893	3800	49.72	2	191	C	182-4TC	RBQ8872-49.72-M9-00	R8872066
30.0	1.79	14887	4460	57.41	3	360	C	182-4TC	RBQ8973-57.41-M9-00	R8973039
29.0	1.51	15522	3370	59.86	2	305	C	182-4TC	RBQ8972-59.86-M9-00	R8972020
28.0	1.65	16126	4460	62.19	3	360	C	182-4TC	RBQ8973-62.19-M9-00	R8973040
28.0	1.62	16432	4460	63.37	3	360	C	182-4TC	RBQ8973-63.37-M9-00	R8973041
26.0	1.35	17389	3370	67.06	2	305	C	182-4TC	RBQ8972-67.06-M9-00	R8972021
24.0	2.01	18960	6300	73.12	3	428	C	182-4TC	RBQ81073-73.12-M9-00	R81073041
22.0	1.28	20806	4460	80.24	3	360	C	182-4TC	RBQ8973-80.24-M9-00	R8973043
21.0	1.75	21740	6500	83.84	3	428	C	182-4TC	RBQ81073-83.84-M9-00	R81073042
20.0	1.15	23081	4460	89.01	3	360	C	182-4TC	RBQ8973-89.01-M9-00	R8973044
17.0	1.43	26630	6500	102.70	3	428	C	182-4TC	RBQ81073-102.7-M9-00	R81073043
15.0	1.25	30536	6500	117.76	3	428	C	182-4TC	RBQ81073-117.76-M9-00	R81073044
14.0	1.21	31487	6500	121.43	3	428	C	182-4TC	RBQ81073-121.43-M9-00	R81073045
13.0	1.06	36103	6500	139.23	3	428	C	182-4TC	RBQ81073-139.23-M9-00	R81073046
12.0	1.00	37959	6500	146.39	3	428	C	182-4TC	RBQ81073-146.39-M9-00	R81073047

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



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MOTOR SELECTIONS



7.5 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	184TC	131606
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	213TC	140486

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
R8372047 – 131492

Single Reduction Reducers
BRAVO®

Double Reduction
BRAVO® Worm - Worm

Double Reduction
BRAVO® Helical - Worm

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



Quick Selections

R Series and P Series Helical - Inline
1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.

10 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load (lbs.)●	Ratio	Number of Stages	Reducer Weight (lbs.)♦	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
646	2.52	937	1270	2.71	2	95	C	213-5 TC	RBQ8672-2.71-M11-00	R8672074
574	2.35	1054	1310	3.05	2	95	C	213-5 TC	RBQ8672-3.05-M11-00	R8672075
530	2.26	1141	1330	3.30	2	95	C	213-5 TC	RBQ8672-3.30-M11-00	R8672076
469	2.09	1290	1370	3.73	2	95	C	213-5 TC	RBQ8672-3.73-M11-00	R8672077
432	1.97	1400	1420	4.05	2	95	C	213-5 TC	RBQ8672-4.05-M11-00	R8672078
380	1.80	1594	1470	4.61	2	95	C	213-5 TC	RBQ8672-4.61-M11-00	R8672079
331	1.63	1825	1540	5.28	2	95	C	213-5 TC	RBQ8672-5.28-M11-00	R8672080
298	1.81	2033	1550	5.88	2	95	C	213-5 TC	RBQ8672-5.88-M11-00	R8672081
265	1.64	2285	1640	6.61	2	95	C	213-5 TC	RBQ8672-6.61-M11-00	R8672082
235	1.53	2572	1690	7.44	2	95	C	213-5 TC	RBQ8672-7.44-M11-00	R8672083
217	1.50	2783	1700	8.05	2	95	C	213-5 TC	RBQ8672-8.05-M11-00	R8672084
216	2.03	2797	1685	8.09	2	116	C	213-5 TC	RBQ8772-8.09-M11-00	R8772081
193	1.86	3143	1710	9.09	2	116	C	213-5 TC	RBQ8772-9.09-M11-00	R8772082
192	1.37	3146	1700	9.10	2	95	C	213-5 TC	RBQ8672-9.10-M11-00	R8672085
178	1.76	3406	1710	9.85	2	116	C	213-5 TC	RBQ8772-9.85-M11-00	R8772083
177	1.30	3419	1700	9.89	2	95	C	213-5 TC	RBQ8672-9.89-M11-00	R8672086
164	3.15	3696	2200	10.69	2	191	C	213-5 TC	RBQ8872-10.69-M11-00	R8872081
156	1.20	3890	1700	11.25	2	95	C	213-5 TC	RBQ8672-11.25-M11-00	R8672087
138	2.77	4394	2350	12.71	2	191	C	213-5 TC	RBQ8872-12.71-M11-00	R8872082
138	1.45	4394	1830	12.71	2	116	C	213-5 TC	RBQ8772-12.71-M11-00	R8772085
136	1.08	4453	1700	12.88	2	95	C	213-5 TC	RBQ8672-12.88-M11-00	R8672088
98	1.12	6171	2030	17.85	2	116	C	213-5 TC	RBQ8772-17.85-M11-00	R8772086
98	2.14	6171	2500	17.85	2	191	C	213-5 TC	RBQ8872-17.85-M11-00	R8872083
83	1.00	7295	2120	21.10	2	116	C	213-5 TC	RBQ8772-21.10-M11-00	R8772087
83	1.82	7295	2750	21.10	2	191	C	213-5 TC	RBQ8872-21.10-M11-00	R8872084
69	1.51	8796	3000	25.44	2	191	C	213-5 TC	RBQ8872-25.44-M11-00	R8872085
56	1.22	10894	3400	31.51	2	191	C	213-5 TC	RBQ8872-31.51-M11-00	R8872086
46	1.75	13238	3370	38.29	2	305	C	213-5 TC	RBQ8972-38.29-M11-00	R8972039
39	1.50	15534	3370	44.93	2	305	C	213-5 TC	RBQ8972-44.93-M11-00	R8972040
30.0	1.34	19849	4460	57.41	3	370	C	213-5 TC	RBQ8972-57.41-M11-00	R8973058
32.0	2.02	18815	5550	54.42	3	428	C	213-5 TC	RBQ81073-54.42-M11-00	R81073063
29.0	1.13	20696	3370	59.86	2	305	C	213-5 TC	RBQ8972-59.86-M11-00	R8972041
29.0	1.84	20734	5750	59.97	3	428	C	213-5 TC	RBQ81073-59.97-M11-00	R81073064
28.0	1.79	21266	6000	61.51	3	428	C	213-5 TC	RBQ81073-61.51-M11-00	R81073065
28.0	1.24	21501	4460	62.19	3	370	C	213-5 TC	RBQ8973-62.19-M11-00	R8973059
28.0	1.77	21574	6000	62.40	3	428	C	213-5 TC	RBQ81073-62.40-M11-00	R81073066
28.0	1.21	21909	4460	63.37	3	370	C	213-5 TC	RBQ8973-63.37-M11-00	R8973060
26.0	1.01	23185	3370	67.06	2	305	C	213-5 TC	RBQ8972-67.06-M11-00	R8972042
25.0	1.56	24381	6300	70.52	3	428	C	213-5 TC	RBQ81073-70.52-M11-00	R81073067
24.0	1.51	25280	6300	73.12	3	428	C	213-5 TC	RBQ81073-73.12-M11-00	R81073068
21.0	1.31	28987	6500	83.84	3	428	C	213-5 TC	RBQ81073-83.84-M11-00	R81073069
17.0	1.07	35507	6500	102.70	3	428	C	213-5 TC	RBQ81073-102.70-M11-00	R81073070

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



10 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	215TC	140109
WATSAVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	215TC	140484

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

R8372074 – 140109



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.



15 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
732	1.90	1239	1280	2.39	2	116	C	254-5TC	RBQ8772-2.39-M13-00	R8772093
655	1.90	1385	1340	2.67	2	116	C	254-5TC	RBQ8772-2.67-M13-00	R8772094
585	1.81	1551	1350	2.99	2	116	C	254-5TC	RBQ8772-2.99-M13-00	R8772095
543	1.70	1670	1350	3.22	2	116	C	254-5TC	RBQ8772-3.22-M13-00	R8772096
483	1.53	1877	1450	3.62	2	116	C	254-5TC	RBQ8772-3.62-M13-00	R8772097
446	1.46	2033	1550	3.92	2	116	C	254-5TC	RBQ8772-3.92-M13-00	R8772098
394	1.33	2303	1620	4.44	2	116	C	254-5TC	RBQ8772-4.44-M13-00	R8772099
346	1.22	2624	1640	5.06	2	116	C	254-5TC	RBQ8772-5.06-M13-00	R8772100
291	1.68	3117	1685	6.01	2	116	C	254-5TC	RBQ8772-6.01-M13-00	R8772101
261	1.55	3480	1685	6.71	2	116	C	254-5TC	RBQ8772-6.71-M13-00	R8772102
233	1.43	3890	1685	7.50	2	116	C	254-5TC	RBQ8772-7.50-M13-00	R8772103
216	1.35	4196	1685	8.09	2	116	C	254-5TC	RBQ8772-8.09-M13-00	R8772104
193	1.24	4714	1710	9.09	2	116	C	254-5TC	RBQ8772-9.09-M13-00	R8772105
178	1.17	5108	1710	9.85	2	116	C	254-5TC	RBQ8772-9.85-M13-00	R8772106
164	2.10	5544	2200	10.69	2	191	C	254-5TC	RBQ8872-10.69-M13-00	R8872103
157	1.05	5782	1780	11.15	2	116	C	254-5TC	RBQ8772-11.15-M13-00	R8772107
138	1.85	6591	2350	12.71	2	191	C	254-5TC	RBQ8872-12.71-M13-00	R8872104
98	1.43	9257	2500	17.85	2	191	C	254-5TC	RBQ8872-17.85-M13-00	R8872105
83	1.21	10943	2750	21.10	2	191	C	254-5TC	RBQ8872-21.10-M13-00	R8872106
71	1.96	12732	3370	24.55	2	305	C	254-5TC	RBQ8972-24.55-M13-00	R8972057
69	1.01	13193	3000	25.44	2	191	C	254-5TC	RBQ8872-25.44-M13-00	R8872107
64	1.62	14262	3370	27.50	2	305	C	254-5TC	RBQ8972-27.50-M13-00	R8972058
56	1.43	16129	3370	31.10	2	305	C	254-5TC	RBQ8972-31.10-M13-00	R8972059
51	2.13	17923	4500	34.56	3	473	C	254-5TC	RBQ81073-34.56-M13-00	R81073082
46	1.17	19857	3370	38.29	2	305	C	254-5TC	RBQ8972-38.29-M13-00	R8972060
45	1.90	20013	4570	38.59	3	473	C	254-5TC	RBQ81073-38.59-M13-00	R8107308
44	1.85	20552	4850	39.63	3	473	C	254-5TC	RBQ81073-39.63-M13-00	R81073084
41	1.70	22378	5000	43.15	3	473	C	254-5TC	RBQ81073-43.15-M13-00	R81073085
39	1.00	23301	3370	44.93	2	305	C	254-5TC	RBQ8972-44.93-M13-00	R8972061
38	1.58	24141	5100	46.55	3	473	C	254-5TC	RBQ81073-46.55-M13-00	R81073086
35	1.49	25655	5300	49.47	3	473	C	254-5TC	RBQ81073-49.47-M13-00	R81073087
33	1.40	27123	5450	52.30	3	473	C	254-5TC	RBQ81073-52.30-M13-00	R81073088
33	1.38	27678	5500	53.37	3	473	C	254-5TC	RBQ81073-53.37-M13-00	R81073089
32.0	1.35	28223	5550	54.42	3	473	C	254-5TC	RBQ81073-54.42-M13-00	R81073090
29.0	1.23	31101	5750	59.97	3	473	C	254-5TC	RBQ81073-59.97-M13-00	R81073091
28.0	1.19	31899	6000	61.51	3	473	C	254-5TC	RBQ81073-61.51-M13-00	R81073092
28.0	1.18	32361	6000	62.40	3	473	C	254-5TC	RBQ81073-62.40-M13-00	R81073093
25.0	1.04	36572	6300	70.52	3	473	C	254-5TC	RBQ81073-70.52-M13-00	R81073094
24.0	1.00	37920	6300	73.12	3	473	C	254-5TC	RBQ81073-73.12-M13-00	R81073095

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



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MOTOR SELECTIONS



15 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	254TC	151350
WATSAVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	254TC	171587

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
R8772093 – 151350



Quick Selections

R Series and P Series Helical - Inline
1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.



BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

20 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load● (lbs.)	Ratio	Number of Stages	Reducer Weight♦ (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
732	1.43	1653	1280	2.39	2	116	C	254-5TC	RBQ8772-2.39-M13-00	R8772093
655	1.42	1846	1340	2.67	2	116	C	254-5TC	RBQ8772-2.67-M13-00	R8772094
585	1.36	2068	1350	2.99	2	116	C	254-5TC	RBQ8772-2.99-M13-00	R8772095
543	1.28	2227	1350	3.22	2	116	C	254-5TC	RBQ8772-3.22-M13-00	R8772096
483	1.15	2503	1450	3.62	2	116	C	254-5TC	RBQ8772-3.62-M13-00	R8772097
464	2.02	2607	1850	3.77	2	191	C	254-5TC	RBQ8872-3.77-M13-00	R8872094
446	1.09	2711	1550	3.92	2	116	C	254-5TC	RBQ8772-3.92-M13-00	R8772098
411	1.86	2946	1860	4.26	2	191	C	254-5TC	RBQ8872-4.26-M13-00	R8872095
394	1.00	3070	1620	4.44	2	116	C	254-5TC	RBQ8772-4.44-M13-00	R8772099
346	1.64	3499	1880	5.06	2	191	C	254-5TC	RBQ8872-5.06-M13-00	R8872096
291	2.27	4156	1900	6.01	2	191	C	254-5TC	RBQ8872-6.01-M13-00	R8872097
261	2.13	4640	1980	6.71	2	191	C	254-5TC	RBQ8872-6.71-M13-00	R8872098
233	2.00	5186	2080	7.50	2	191	C	254-5TC	RBQ8872-7.50-M13-00	R8872099
216	1.90	5594	2100	8.09	2	191	C	254-5TC	RBQ8872-8.09-M13-00	R8872100
193	1.77	6286	2140	9.09	2	191	C	254-5TC	RBQ8872-9.09-M13-00	R8872101
185	1.71	6541	2150	9.46	2	191	C	254-5TC	RBQ8872-10.69-M13-00	R8872102
164	1.58	7392	2200	10.69	2	191	C	254-5TC	RBQ8872-10.69-M13-00	R8872103
138	1.39	8789	2350	12.71	2	191	C	254-5TC	RBQ8872-12.71-M13-00	R8872104
124	2.08	9798	3370	14.17	2	305	C	254-5TC	RBQ8972-14.17-M13-00	R8972054
98	1.07	12343	2500	17.85	2	191	C	254-5TC	RBQ8872-17.85-M13-00	R8872105
96	1.75	12619	3370	18.25	2	305	C	254-5TC	RBQ8972-18.25-M13-00	R8972055
87	1.67	13850	3370	20.03	2	305	C	254-5TC	RBQ8972-20.03-M13-00	R8972056
71	1.47	16976	3370	24.55	2	305	C	254-5TC	RBQ8972-24.55-M13-00	R8972057
70	2.20	17294	3900	25.01	2	443	C	254-5TC	RBQ81072-25.01-M13-00	R81072054
64	1.21	19016	3370	27.50	2	305	C	254-5TC	RBQ8972-27.50-M13-00	R8972058
62	1.94	19589	4200	28.33	2	443	C	254-5TC	RBQ81072-28.33-M13-00	R81072055
56	1.07	21505	3370	31.10	2	305	C	254-5TC	RBQ8972-31.10-M13-00	R8972059
54	1.70	22459	4350	32.48	2	443	C	254-5TC	RBQ81072-32.48-M13-00	R81072056
50	1.58	24181	4550	34.97	2	443	C	254-5TC	RBQ81072-34.97-M13-00	R81072057
51	1.59	23897	4550	34.56	3	473	C	254-5TC	RBQ81073-34.56-M13-00	R81073082
45	1.43	26684	4570	38.59	3	473	C	254-5TC	RBQ81073-38.59-M13-00	R81073083
44	1.39	27403	4850	39.63	3	473	C	254-5TC	RBQ81073-39.63-M13-00	R81073084
41	1.28	29837	5000	43.15	3	473	C	254-5TC	RBQ81073-43.15-M13-00	R81073085
38	1.18	32188	5100	46.55	3	473	C	254-5TC	RBQ81073-46.55-M13-00	R81073086
35	1.11	34207	5300	49.47	3	473	C	254-5TC	RBQ81073-49.47-M13-00	R81073087
33	1.05	36164	5450	52.30	3	473	C	254-5TC	RBQ81073-52.30-M13-00	R81073088
33	1.03	36904	5500	53.37	3	473	C	254-5TC	RBQ81073-53.37-M13-00	R81073089
32	1.01	37630	5550	54.42	3	473	C	254-5TC	RBQ81073-54.42-M13-00	R81073090

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
R8772093 – 151352



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS

20 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	256TC	151352
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	256TC	171589



Quick Selections

R Series and P Series Helical - Inline

1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.

25 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
781	4.13	1936	3370	2.24	2	320	C	284-6TC	RBQ8972-2.24-M15-00	R8972064
774	5.00	1953	2725	2.26	2	443	C	284-6TC	RBQ81072-2.26-M15-00	R81072058
732	2.15	2066	1820	2.39	2	199	C	284-6TC	RBQ8872-2.39-M15-00	R8872111
692	3.85	2187	3370	2.53	2	320	C	284-6TC	RBQ8972-2.53-M15-00	R8972065
655	2.02	2308	1830	2.67	2	199	C	284-6TC	RBQ8872-2.67-M15-00	R8872112
585	1.89	2584	1840	2.99	2	199	C	284-6TC	RBQ8872-2.99-M15-00	R8872113
556	3.39	2723	3370	3.15	2	320	C	284-6TC	RBQ8972-3.15-M15-00	R8972066
543	1.02	2783	1350	3.22	2	116	C	254-5TC	RBQ8772-3.22-M13-00	R8772096
543	1.80	2783	1840	3.22	2	199	C	284-6TC	RBQ8872-3.22-M15-00	R8872114
486	3.12	3112	3370	3.60	2	320	C	284-6TC	RBQ8972-3.60-M15-00	R8972067
483	1.67	3129	1840	3.62	2	199	C	284-6TC	RBQ8872-3.62-M15-00	R8872115
464	1.62	3259	1850	3.77	2	199	C	284-6TC	RBQ8872-3.77-M15-00	R8872116
411	1.49	3682	1860	4.26	2	199	C	284-6TC	RBQ8872-4.26-M15-00	R8872117
380	2.64	3976	3370	4.60	2	320	C	284-6TC	RBQ8972-4.60-M15-00	R8972068
346	1.31	4374	1880	5.06	2	199	C	284-6TC	RBQ8872-5.06-M15-00	R8872118
326	2.27	4633	3370	5.36	2	320	C	284-6TC	RBQ8972-5.36-M15-00	R8972069
296	3.22	5117	3370	5.92	2	320	C	284-6TC	RBQ8972-5.92-M15-00	R8972070
291	1.82	5195	1900	6.01	2	199	C	284-6TC	RBQ8872-6.01-M15-00	R8872119
262	3.03	5782	3370	6.69	2	320	C	284-6TC	RBQ8972-6.69-M15-00	R8972071
261	1.71	5800	1980	6.71	2	199	C	284-6TC	RBQ8872-6.71-M15-00	R8872120
233	1.60	6483	2080	7.50	2	199	C	284-6TC	RBQ8872-7.50-M15-00	R8872121
216	1.52	6993	2100	8.09	2	199	C	284-6TC	RBQ8872-8.09-M15-00	R8872122
210	2.50	7209	3370	8.34	2	320	C	284-6TC	RBQ8972-8.34-M15-00	R8972072
193	1.41	7857	2140	9.09	2	199	C	284-6TC	RBQ8872-9.09-M15-00	R8872123
185	1.37	8177	2150	9.46	2	199	C	284-6TC	RBQ8872-9.46-M15-00	R8872124
184	2.21	8229	3370	9.52	2	320	C	284-6TC	RBQ8972-9.52-M15-00	R8972073
164	1.26	9240	2200	10.69	2	199	C	284-6TC	RBQ8872-10.69-M15-00	R8872125
144	1.83	10519	3370	12.17	2	320	C	284-6TC	RBQ8972-12.17-M15-00	R8972074
138	1.11	10986	2350	12.71	2	191	C	284-6TC	RBQ8872-12.71-M15-00	R8872126
124	1.67	12248	3370	14.17	2	320	C	284-6TC	RBQ8972-14.17-M15-00	R8972075
97	2.43	15662	3350	18.12	2	443	C	284-6TC	RBQ81072-18.12-M15-00	R81072070
96	1.40	15774	3370	18.25	2	320	C	284-6TC	RBQ8972-18.25-M15-00	R8972076
87	1.33	17313	3370	20.03	2	320	C	284-6TC	RBQ8972-20.03-M15-00	R8972077
87	2.20	17321	3500	20.04	2	443	C	284-6TC	RBQ81072-20.04-M15-00	R81072071
78	1.98	19275	3700	22.30	2	443	C	284-6TC	RBQ81072-22.30-M15-00	R81072072
70	1.76	21617	3900	25.01	2	443	C	284-6TC	RBQ81072-25.01-M15-00	R81072073
62	1.56	24487	4200	28.33	2	443	C	284-6TC	RBQ81072-28.33-M15-00	R81072074
54	1.36	28074	4350	32.48	2	443	C	284-6TC	RBQ81072-32.48-M15-00	R81072075
50	1.26	30226	4550	34.97	2	443	C	284-6TC	RBQ81072-34.97-M15-00	R81072076
51	1.28	29872	4550	34.56	3	473	C	284-6TC	RBQ81073-34.56-M15-00	R81073109
45	1.14	33355	4570	38.59	3	473	C	254-5TC	RBQ81073-38.59-M13-00	R81073083
44	1.11	34254	4850	39.63	3	473	C	254-5TC	RBQ81073-39.63-M13-00	R81073084
41	1.02	37296	5000	43.15	3	473	C	254-5TC	RBQ81073-43.15-M13-00	R81073085

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



25 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	284TC	151507
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	284TC	171591

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
R8972064 – 151507

Single Reduction Reducers
BRAVO®

Double Reduction
BRAVO® Worm - Worm

Double Reduction
BRAVO® Helical - Worm

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



Quick Selections

R Series and P Series Helical - Inline
1750 RPM Input



BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.



30 HP

Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
781	3.44	2323	3370	2.24	2	320	C	286TC	RBQ8972-2.24-M15-00	R8972064
774	4.17	2344	2725	2.26	2	443	C	286TC	RBQ81072-2.26-M15-00	R81072058
732	1.80	2479	1820	2.39	2	199	C	286TC	RBQ8872-2.39-M15-00	R8872111
692	3.21	2624	3370	2.53	2	320	C	286TC	RBQ8972-2.53-M15-00	R8972065
655	1.68	2769	1830	2.67	2	199	C	286TC	RBQ8872-2.67-M15-00	R8872112
585	1.57	3101	1840	2.99	2	199	C	286TC	RBQ8872-2.99-M15-00	R8872113
556	2.83	3267	3370	3.15	2	320	C	286TC	RBQ8972-3.15-M15-00	R8972066
543	1.50	3340	1840	3.22	2	199	C	286TC	RBQ8872-3.22-M15-00	R8872114
486	2.60	3734	3370	3.60	2	320	C	286TC	RBQ8972-3.60-M15-00	R8972067
483	1.39	3755	1840	3.62	2	199	C	286TC	RBQ8872-3.62-M15-00	R8872115
464	1.35	3910	1850	3.77	2	199	C	286TC	RBQ8872-3.77-M15-00	R8872116
411	1.24	4419	1860	4.26	2	199	C	286TC	RBQ8872-4.26-M15-00	R8872117
380	2.20	4771	3370	4.60	2	320	C	286TC	RBQ8972-4.60-M15-00	R8972068
346	1.10	5248	1880	5.06	2	199	C	286TC	RBQ8872-5.06-M15-00	R8872118
326	1.89	5559	3370	5.36	2	320	C	286TC	RBQ8972-5.36-M15-00	R8972069
296	2.69	6140	3370	5.92	2	320	C	286TC	RBQ8972-5.92-M15-00	R8972070
291	1.52	6234	1900	6.01	2	199	C	286TC	RBQ8872-6.01-M15-00	R8872119
262	2.52	6939	3370	6.69	2	320	C	286TC	RBQ8972-6.69-M15-00	R8972071
261	1.42	6960	1980	6.71	2	199	C	286TC	RBQ8872-6.71-M15-00	R8872120
233	1.33	7779	2080	7.50	2	199	C	286TC	RBQ8872-7.50-M15-00	R8872121
216	1.27	8391	2100	8.09	2	199	C	286TC	RBQ8872-8.09-M15-00	R8872122
210	2.08	8650	3370	8.34	2	320	C	286TC	RBQ8972-8.34-M15-00	R8972072
193	1.18	9428	2140	9.09	2	199	C	286TC	RBQ8872-9.09-M15-00	R8872123
185	1.14	9812	2150	9.46	2	199	C	286TC	RBQ8872-9.46-M15-00	R8872124
184	1.84	9874	3370	9.52	2	320	C	286TC	RBQ8972-9.52-M15-00	R8972073
164	1.05	11088	2200	10.69	2	199	C	286TC	RBQ8872-10.69-M15-00	R8872125
144	1.52	12623	3370	12.17	2	320	C	286TC	RBQ8972-12.17-M15-00	R8972074
124	1.39	14697	3370	14.17	2	320	C	286TC	RBQ8972-14.17-M15-00	R8972075
97	2.03	18794	3350	18.12	2	443	C	286TC	RBQ81072-18.12-M15-00	R81072070
96	1.17	18929	3370	18.25	2	320	C	286TC	RBQ8972-18.25-M15-00	R8972076
87	1.11	20775	3370	20.03	2	320	C	286TC	RBQ8972-20.03-M15-00	R8972077
87	1.83	20786	3500	20.04	2	443	C	286TC	RBQ81072-20.04-M15-00	R81072071
78	1.65	23130	3700	22.30	2	443	C	286TC	RBQ81072-22.30-M15-00	R81072072
70	1.47	25941	3900	25.01	2	443	C	286TC	RBQ81072-25.01-M15-00	R81072073
62	1.30	29384	4200	28.33	2	443	C	286TC	RBQ81072-28.33-M15-00	R81072074
54	1.13	33689	4350	32.48	2	443	C	286TC	RBQ81072-32.48-M15-00	R81072075
50	1.05	36271	4550	34.97	2	443	C	286TC	RBQ81072-34.97-M15-00	R81072076
51	1.06	35846	4550	34.56	3	473	C	286TC	RBQ81073-34.56-M15-00	R81073109

♦ Weight does not include oil.

▼ Service Factor is based on maximum torque rating of reducer.

● Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS

30 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	286TC	151508
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	286TC	171592

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

R8972064 – 151505



Quick Selections

R Series and P Series Helical - Inline

1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.



40 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
774	3.13	3125	2725	2.26	2	473	C	324-5TC	RBQ81072-2.26-M17-00	R81072096
591	3.12	4094	2745	2.96	2	473	C	324-5TC	RBQ81072-2.96-M17-00	R81072098
461	3.13	5241	2755	3.79	2	473	C	324-5TC	RBQ81072-3.79-M17-00	R81072099
322	2.57	7509	2700	5.43	2	473	C	324-5TC	RBQ81072-5.43-M17-00	R81072101
255	2.77	9487	2785	6.86	2	473	C	324-5TC	RBQ81072-6.86-M17-00	R81072103
222	2.58	10856	2790	7.85	2	473	C	324-5TC	RBQ81072-7.85-M17-00	R81072104
173	2.51	13940	2800	10.08	2	473	C	324-5TC	RBQ81072-10.08-M17-00	R81072105
143	2.26	16886	2810	12.21	2	473	C	324-5TC	RBQ81072-12.21-M17-00	R81072106
121	1.91	19928	3050	14.41	2	473	C	324-5TC	RBQ81072-14.41-M17-00	R81072107
96	1.52	25059	3350	18.12	2	473	C	324-5TC	RBQ81072-18.12-M17-00	R81072108
87	1.37	27714	3500	20.04	2	473	C	324-5TC	RBQ81072-20.04-M17-00	R81072109
78	1.24	30840	3700	22.30	2	473	C	324-5TC	RBQ81072-22.30-M17-00	R81072110
70	1.10	34588	3900	25.01	2	473	C	324-5TC	RBQ81072-25.01-M17-00	R81072111

50 HP Gear Reducer Quick Selections

774	2.50	3907	2725	2.26	2	488	C	364-5TC	RBQ81072-2.26-M19-00	R81072096
591	2.50	5117	2745	2.96	2	488	C	364-5TC	RBQ81072-2.96-M19-00	R81072098
461	2.50	6552	2755	3.79	2	473	C	324-5TC	RBQ81072-3.79-M19-00	R81072099
322	2.06	9387	2700	5.43	2	473	C	324-5TC	RBQ81072-5.43-M19-00	R81072101
254	2.21	11911	2785	6.89	2	473	C	324-5TC	RBQ81072-6.89-M19-00	R81072103
222	2.06	13570	2790	7.85	2	473	C	324-5TC	RBQ81072-7.85-M19-00	R81072104
173	2.01	17425	2800	10.08	2	473	C	324-5TC	RBQ81072-10.08-M19-00	R81072105
143	1.81	21107	2810	12.21	2	473	C	324-5TC	RBQ81072-12.21-M19-00	R81072106
121	1.53	24910	3050	14.41	2	473	C	324-5TC	RBQ81072-14.41-M19-00	R81072107
96	1.22	31324	3350	18.12	2	473	C	324-5TC	RBQ81072-18.12-M19-00	R81072108
87	1.10	34643	3500	20.04	2	473	C	324-5TC	RBQ81072-20.04-M19-00	R81072109

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
R81072096 – 151509



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



40 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	324TC	151509
WATTS-AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	324TC	171593



50 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	326TC	151510
WATTS-AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	326TC	171594

Single Reduction Reducers
BRAVO®

Double Reduction
BRAVO® Worm - Worm

Double Reduction
BRAVO® Helical - Worm

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



Quick Selections

R Series and P Series Helical - Inline
1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (Aluminum = B1 suffix, Cast Iron = no suffix.) For other reducer configurations refer to Maximum Rating Tables beginning on page 417.



BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

60 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight † (lbs.)	Aluminum or Cast Iron	Motor Frame	Model Number	Reducer Only Catalog Number
774	2.08	4688	2725	2.26	2	488	C	364-5TC	RBQ81072-2.26-M19-00	R81072096
591	2.08	6140	2745	2.96	2	488	C	364-5TC	RBQ81072-2.96-M19-00	R81072098
461	2.09	7862	2755	3.79	2	488	C	364-5TC	RBQ81072-3.79-M19-00	R81072099
380	2.02	9542	2570	4.60	2	488	C	364-5TC	RBQ81072-4.60-M19-00	R81072100
322	1.71	11264	2700	5.43	2	488	C	364-5TC	RBQ81072-5.43-M19-00	R81072101
291	2.09	12467	2750	6.01	2	488	C	364-5TC	RBQ81072-6.01-M19-00	R81072102
255	1.85	14231	2785	6.86	2	488	C	364-5TC	RBQ81072-6.89-M19-00	R81072103
222	1.72	16284	2790	7.85	2	488	C	364-5TC	RBQ81072-7.85-M19-00	R81072104
173	1.67	20910	2800	10.08	2	488	C	364-5TC	RBQ81072-10.08-M19-00	R81072105
143	1.50	25329	2810	12.21	2	488	C	364-5TC	RBQ81072-12.21-M19-00	R81072106
121	1.27	29892	3050	14.41	2	488	C	364-5TC	RBQ81072-14.41-M19-00	R81072107
96	1.01	37589	3350	18.12	2	488	C	364-5TC	RBQ81072-18.12-M19-00	R81072108

75 HP Gear Reducer Quick Selections

774	1.67	5860	2725	2.26	2	488	C	364-5TC	RBQ81072-2.26-M19-00	R81072096
678	1.67	6690	2735	2.58	2	488	C	364-5TC	RBQ81072-2.58-M19-00	R81072097
591	1.67	7675	2745	2.96	2	488	C	364-5TC	RBQ81072-2.96-M19-00	R81072098
461	1.67	9828	2755	3.79	2	488	C	364-5TC	RBQ81072-3.79-M19-00	R81072099
380	1.62	11928	2570	4.60	2	488	C	364-5TC	RBQ81072-4.60-M19-00	R81072100
322	1.37	14080	2700	5.43	2	488	C	364-5TC	RBQ81072-5.43-M19-00	R81072101
291	1.69	15584	2750	6.01	2	488	C	364-5TC	RBQ81072-6.01-M19-00	R81072102
255	1.48	17788	2785	6.86	2	488	C	364-5TC	RBQ81072-6.89-M19-00	R81072103
222	1.38	20355	2790	7.85	2	488	C	364-5TC	RBQ81072-7.85-M19-00	R81072104
173	1.34	26138	2800	10.08	2	488	C	364-5TC	RBQ81072-10.08-M19-00	R81072105
143	1.20	31661	2810	12.21	2	488	C	364-5TC	RBQ81072-12.21-M19-00	R81072106
121	1.02	37366	3050	14.41	2	488	C	364-5TC	RBQ81072-14.41-M19-00	R81072107

- † Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

R81072096 – 151519



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



60 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	364TC	151519
WATTS-AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	364TC	171595



75 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	365TC	G150086
WATTS-AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	365TC	171596

“HOW TO USE” Maximum Rating Tables

R Series • Helical - Inline
Cast Iron Case • 1750 RPM Input



How To Use Maximum Rating Tables

Cast Iron Inline Maximum Rating Tables are shown on pages 418-431. Selection of the appropriate gear reducer can be made using these tables or the Quick Selections on pages 380-416.

BEFORE YOU START:
Identify the Service Factor of the application.
Determine the actual input horsepower of the motor by multiplying the motor's nameplate horsepower by the Service Factor.
Determine the output speed (RPM) required at output shaft of reducer.

Identify the mounting style required by your application from the style charts shown on pages 378-379. Note the different bases and flanges to interchange with various competitive units.

To select the proper gear reducer size, use the Maximum Rating Tables as shown:

1 Find the appropriate Maximum Rating Tables pages for your basic mounting style. The tables begin on page 418.

2 Locate output RPM column on left side of the table. All ratings are based on an input speed of 1750 RPM. Scroll down to the output speed (RPM) required. Most output speeds are rounded to the nearest whole number. For exact output speed, divide 1750 by the ratio listed.

Maximum Rating Tables R837 Series • Helical - Inline Cast Iron Case • 1750 RPM Input

					STYLE RBN		STYLE RFN		STYLE RBN		STYLE RFN			
					NON-MOTORIZED				MOTORIZED QUILL INPUT					
					Base Mount Catalog Number		Flange Mount Catalog Number		Motor Frame		Base Mount Catalog Number		Flange Mount Catalog Number	
965	1020	11.20	2.63	530	R8372139	R8372162	56C	R8372001	R8372070					
938	1090	10.40	2.95	550	R8372140	R8372163	143-5TC	R8372021	R8372093					
539	1100	9.61	3.31	570	R8372141	R8372164	56C	R8372002	R8372071					
470	1170	9.10	3.72	580	R8372142	R8372165	143-5TC	R8372025	R8372094					
416	1280	8.79	4.21	590	R8372143	R8372166	56C	R8372003	R8372072					
366	1280	7.75	4.78	620	R8372144	R8372167	143-5TC	R8372026	R8372095					
320	1280	6.77	5.47	650	R8372145	R8372168	56C	R8372004	R8372073					
298	1280	6.31	5.87	680	R8372146	R8372169	143-5TC	R8372027	R8372096					
285	1440	6.79	6.13	710	R8372147	R8372170	56C	R8372005	R8372074					
255	1460	6.16	6.86	740	R8372148	R8372171	143-5TC	R8372028	R8372097					
227	1480	5.56	7.70	770	R8372149	R8372172	56C	R8372006	R8372075					
202	1550	5.17	8.67	790	R8372150	R8372173	143-5TC	R8372012	R8372081					
179	1610	4.75	9.80	820	R8372151	R8372174	56C	R8372035	R8372104					
157	1700	4.41	11.14	850	R8372152	R8372175	143-5TC	R8372013	R8372082					
137	1740	3.95	12.74	890	R8372153	R8372176	56C	R8372036	R8372105					
128	1760	3.73	13.63	900	R8372154	R8372177	143-5TC	R8372014	R8372083					
					R8372155	R8372178	56C	R8372037	R8372106					
					R8372156	R8372179	143-5TC	R8372015	R8372084					
					R8372157	R8372180	56C	R8372038	R8372107					
					R8372158	R8372181	143-5TC	R8372016	R8372085					
					R8372159	R8372182	56C	R8372039	R8372108					
					R8372160	R8372183	143-5TC	R8372017	R8372086					
					R8372161	R8372184	56C	R8372040	R8372109					
							143-5TC	R8372018	R8372087					
								R8372041	R8372110					
								R8372019	R8372088					
								R8372042	R8372111					
								R8372020	R8372089					
								R8372043	R8372112					
								R8372021	R8372090					
								R8372044	R8372113					
								R8372022	R8372091					
								R8372045	R8372114					

5 Select motor frame size if reducer is to have a motorized input.

6 Identify the catalog number of the reducer by continuing to the right. See page 377 for detailed information on building an exact catalog number on LeCentric sizes, the XX suffix will be replaced with optional Mod-Squad codes as detailed on page 377.

3 Move across the table to the Input HP column until you find a rating that is equal to or greater than the actual input horsepower required. Once located, check the top of the table to identify the correct gear reducer size (717, 727, 747, 757, etc.).

4 Check load capacities against the needs of your application. Do not exceed the overhung load (OHL) capacity shown in the table. Detailed instructions for calculating the actual overhung load are shown on page 645. If overhung and thrust loads will be applied simultaneously or if the load exceeds listed capacities, contact Factory.

7 Verify physical dimensions using the dimensional drawings shown on pages 432-443.

8 Determine reducer mounting position from page 467.

* Overhung load is calculated at centerline of output shaft.

Single Reduction Reducers

Double Reduction

Worm - Worm

Helical - Worm

Accessories Kits

High Efficiency Helical - Worm



Maximum Rating Tables

R827 Series • Helical - Inline

Cast Iron Case • 1750 RPM Input

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

STYLE RBN

STYLE RFN

STYLE RBQ

STYLE RFQ



R8272 Series • DOUBLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED		MOTORIZED QUILL INPUT		
					Base Mount Catalog Number	Flange Mount Catalog Number	Motor Frame	Base Mount Catalog Number	Flange Mount Catalog Number
665	1020	11.20	2.63	530	R8272139	R8272162	56C 143-5TC	R8272001	R8272070
593	1060	10.40	2.95	550	R8272140	R8272163	56C 143-5TC	R8272024	R8272093
529	1100	9.61	3.31	570	R8272141	R8272164	56C 143-5TC	R2672002	R8272071
470	1170	9.10	3.72	580	R8272142	R8272165	56C 143-5TC	R8272025	R8272094
416	1280	8.79	4.21	590	R8272143	R8272166	56C 143-5TC	R8272003	R8272072
366	1280	7.75	4.78	620	R8272144	R8272167	56C 143-5TC	R8272026	R8272095
320	1280	6.77	5.47	650	R8272145	R8272168	56C 143-5TC	R8272004	R8272073
298	1280	6.31	5.87	680	R8272146	R8272169	56C 143-5TC	R8272027	R8272096
285	1440	6.79	6.13	710	R8272147	R8272170	56C 143-5TC	R8272005	R8272074
255	1460	6.16	6.86	740	R8272148	R8272171	56C 143-5TC	R8272028	R8272097
227	1480	5.56	7.70	770	R8272149	R8272172	56C 143-5TC	R8272006	R8272075
202	1550	5.17	8.67	790	R8272150	R8272173	56C 143-5TC	R8272029	R8272098
179	1610	4.75	9.80	820	R8272151	R8272174	56C 143-5TC	R8272007	R8272076
157	1700	4.41	11.14	850	R8272152	R8272175	56C 143-5TC	R8272030	R8272099
137	1740	3.95	12.74	890	R8272153	R8272176	56C 143-5TC	R8272008	R8272077
128	1780	3.77	13.67	920	R8272154	R8272177	56C 143-5TC	R8272031	R8272100
105	1800	3.13	16.66	980	R8272155	R8272178	56C 143-5TC	R8272009	R8272078
84	1810	2.52	20.77	1050	R8272156	R8272179	56C 143-5TC	R8272032	R8272101
70	1820	2.10	25.04	1150	R8272157	R8272180	56C 143-5TC	R8272010	R8272079
61	1830	1.84	28.79	1150	R8272158	R8272181	56C 143-5TC	R8272033	R8272102
48.0	1840	1.46	36.56	1150	R8272159	R8272182	56C 143-5TC	R8272011	R8272080
40.0	1850	1.21	44.10	1150	R8272160	R8272183	56C 143-5TC	R8272034	R8272103
35.0	1770	1.01	50.47	1150	R8272161	R8272184	56C 143-5TC	R8272012	R8272081
								R8272035	R8272104
								56C 143-5TC	R8272082
								56C 143-5TC	R8272105
								56C 143-5TC	R8272083
								56C 143-5TC	R8272106
								56C 143-5TC	R8272084
								56C 143-5TC	R8272107
								56C 143-5TC	R8272085
								56C 143-5TC	R8272108
								56C 143-5TC	R8272086
								56C 143-5TC	R8272109
								56C 143-5TC	R8272087
								56C 143-5TC	R8272110
								56C 143-5TC	R8272088
								56C 143-5TC	R8272111
								56C 143-5TC	R8272089
								56C 143-5TC	R8272112
								56C 143-5TC	R8272090
								56C 143-5TC	R8272113
								56C 143-5TC	R8272091
								56C 143-5TC	R8272114
								56C 143-5TC	R8272092
								56C 143-5TC	R8272115

* Overhung load is calculated at centerline of output shaft.

STYLE RBN

STYLE RFN

STYLE RBQ

STYLE RFQ



R8273 Series • TRIPLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED		MOTORIZED QUILL INPUT		
					Base Mount Catalog Number	Flange Mount Catalog Number	Motor Frame	Base Mount Catalog Number	Flange Mount Catalog Number
28.90	1850	0.90	60.54	1150	R8273025	R8273037	56C	R8273001	R8273013
24.10	1850	0.75	72.63	1150	R8273026	R8273038	56C	R8273002	R8273014
22.10	1850	0.69	79.17	1150	R8273027	R8273039	56C	R8273003	R8273015
18.90	1850	0.59	92.74	1150	R8273028	R8273040	56C	R8273004	R8273016
17.40	1850	0.54	100.76	1150	R8273029	R8273041	56C	R8273005	R8273017
15.20	1850	0.47	115.15	1150	R8273030	R8273042	56C	R8273006	R8273018
14.40	1850	0.45	121.28	1150	R8273031	R8273043	56C	R8273007	R8273019
13.10	1850	0.41	133.14	1150	R8273032	R8273044	56C	R8273008	R8273020
11.30	1850	0.35	154.35	1150	R8273033	R8273045	56C	R8273009	R8273021
9.90	1850	0.31	176.40	1150	R8273034	R8273046	56C	R8273010	R8273022
8.60	1850	0.27	203.96	1150	R8273035	R8273047	56C	R8273011	R8273023
7.30	1850	0.23	239.42	1150	R8273036	R8273048	56C	R8273012	R8273024

* Overhung load is calculated at centerline of output shaft.

NOTE: Mounting position is assumed to be B3. Other mounting positions to be specified on order and will not impact the catalog number. Units may become thermally limited when operating HP above 1750 RPM ratings. Contact Factory for details.

Maximum Rating Tables

R837 Series • Helical - Inline

Cast Iron Case • 1750 RPM Input



Single Reduction Reducers

BRAVO® Worm - Worm Double Reduction

BRAVO® Helical - Worm Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline Gear Reducers

High Efficiency Helical - Worm Gear Reducers

STYLE RBN

STYLE RFN

STYLE RBQ

STYLE RFQ



R8372 Series • DOUBLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED		MOTORIZED QUILL INPUT		
					Base Mount Catalog Number	Flange Mount Catalog Number	Motor Frame	Base Mount Catalog Number	Flange Mount Catalog Number
665	1020	11.20	2.63	530	R8372139	R8372162	56C	R8372001	R8372070
							143-5TC	R8372024	R8372093
593	1060	10.40	2.95	550	R8372140	R8372163	56C	R8372002	R8372071
							143-5TC	R8372025	R8372094
529	1100	9.61	3.31	570	R8372141	R8372164	56C	R8372003	R8372072
							143-5TC	R8372026	R8372095
470	1170	9.10	3.72	580	R8372142	R8372165	56C	R8372004	R8372073
							143-5TC	R8372027	R8372096
416	1280	8.79	4.21	590	R8372143	R8372166	56C	R8372005	R8372074
							143-5TC	R8372028	R8372097
366	1280	7.75	4.78	620	R8372144	R8372167	56C	R8372006	R8372075
							143-5TC	R8372029	R8372098
320	1280	6.77	5.47	650	R8372145	R8372168	56C	R8372007	R8372076
							143-5TC	R8372030	R8372099
298	1280	6.31	5.87	680	R8372146	R8372169	56C	R8372008	R8372077
							143-5TC	R8372031	R8372100
285	1440	6.79	6.13	710	R8372147	R8372170	56C	R8372009	R8372078
							143-5TC	R8372032	R8372101
255	1460	6.16	6.86	740	R8372148	R8372171	56C	R8372010	R8372079
							143-5TC	R8372033	R8372102
227	1480	5.56	7.70	770	R8372149	R8372172	56C	R8372011	R8372080
							143-5TC	R8372034	R8372103
202	1550	5.17	8.67	790	R8372150	R8372173	56C	R8372012	R8372081
							143-5TC	R8372035	R8372104
179	1610	4.75	9.80	820	R8372151	R8372174	56C	R8372013	R8372082
							143-5TC	R8372036	R8372105
157	1700	4.41	11.14	850	R8372152	R8372175	56C	R8372014	R8372083
							143-5TC	R8372037	R8372106
137	1740	3.95	12.74	890	R8372153	R8372176	56C	R8372015	R8372084
							143-5TC	R8372038	R8372107
128	1780	3.77	13.67	920	R8372154	R8372177	56C	R8372016	R8372085
							143-5TC	R8372039	R8372108
105	1800	3.13	16.66	980	R8372155	R8372178	56C	R8372017	R8372086
							143-5TC	R8372040	R8372109
84	1810	2.52	20.77	1050	R8372156	R8372179	56C	R8372018	R8372087
							143-5TC	R8372041	R8372110
70	1820	2.10	25.04	1150	R8372157	R8372180	56C	R8372019	R8372088
							143-5TC	R8372042	R8372111
61	1830	1.84	28.79	1150	R8372158	R8372181	56C	R8372020	R8372089
							143-5TC	R8372043	R8372112
48.0	1840	1.46	36.56	1150	R8372159	R8372182	56C	R8372021	R8372090
							143-5TC	R8372044	R8372113
40.0	1850	1.21	44.10	1150	R8372160	R8372183	56C	R8372022	R8372091
							143-5TC	R8372045	R8372114
35.0	1770	1.01	50.47	1150	R8372161	R8372184	56C	R8372023	R8372092
							143-5TC	R8372046	R8372115

* Overhung load is calculated at centerline of output shaft.

STYLE RBN

STYLE RFN

STYLE RBQ

STYLE RFQ



R8373 Series • TRIPLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED		MOTORIZED QUILL INPUT		
					Base Mount Catalog Number	Flange Mount Catalog Number	Motor Frame	Base Mount Catalog Number	Flange Mount Catalog Number
28.9	1850	0.90	60.54	1150	R8373025	R8373037	56C	R8373001	R8373013
24.10	1850	0.75	72.63	1150	R8373026	R8373038	56C	R8373002	R8373014
22.10	1850	0.69	79.17	1150	R8373027	R8373039	56C	R8373003	R8373015
18.90	1850	0.59	92.74	1150	R8373028	R8373040	56C	R8373004	R8373016
17.40	1850	0.54	100.76	1150	R8373029	R8373041	56C	R8373005	R8373017
15.20	1850	0.47	115.15	1150	R8373030	R8373042	56C	R8373006	R8373018
14.40	1850	0.45	121.28	1150	R8373031	R8373043	56C	R8373007	R8373019
13.10	1850	0.41	133.14	1150	R8373032	R8373044	56C	R8373008	R8373020
11.30	1850	0.35	154.35	1150	R8373033	R8373045	56C	R8373009	R8373021
9.90	1850	0.31	176.40	1150	R8373034	R8373046	56C	R8373010	R8373022
8.60	1850	0.27	203.96	1150	R8373035	R8373047	56C	R8373011	R8373023
7.30	1850	0.23	239.42	1150	R8373036	R8373048	56C	R8373012	R8373024

* Overhung load is calculated at centerline of output shaft.

NOTE: Mounting position is assumed to be B3. Other mounting positions to be specified on order and will not impact the catalog number.

Units may become thermally limited when operating HP above 1750 RPM ratings. Contact Factory for details.



Maximum Rating Tables

R847 Series • Helical - Inline
Cast Iron Case • 1750 RPM Input

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

STYLE RBN

STYLE RFN

STYLE RBQ

STYLE RFQ



R8472 Series • DOUBLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED		MOTORIZED QUILL INPUT		
					Base Mount Catalog Number	Flange Mount Catalog Number	Motor Frame	Base Mount Catalog Number	Flange Mount Catalog Number
681	1650	18.60	2.57	960	R8472161	R8472181	213-5TC	R8472061	R8472141
568	1760	16.50	3.08	1010	R8472162	R8472182	213-5TC	R8472062	R8472142
449	1880	13.90	3.90	1090	R8472163	R8472183	213-5TC	R8472063	R8472143
387	1970	12.60	4.52	1140	R8472164	R8472184	213-5TC	R8472064	R8472144
293	3260	15.80	5.98	1080	R8472165	R8472185	213-5TC	R8472065	R8472145
244	3340	13.50	7.16	1180	R8472166	R8472186	213-5TC	R8472066	R8472146
193	3450	11.00	9.06	1290	R8472167	R8472187	213-5TC	R8472067	R8472147
166	3680	10.10	10.52	1340	R8472168	R8472188	213-5TC	R8472068	R8472148
127	3910	8.22	13.75	1470	R8472169	R8472189	213-5TC	R8472069	R8472149
107	4000	7.04	16.43	1560	R8472170	R8472190	182-4TC	R8472050	R8472130
100	4010	6.63	17.50	1600	R8472171	R8472191	182-4TC	R8472051	R8472131
88	4030	5.83	20.00	1600	R8472172	R8472192	182-4TC	R8472052	R8472132
82	4040	5.44	21.47	1600	R8472173	R8472193	182-4TC	R8472053	R8472133
70	4050	4.69	25.00	1600	R8472174	R8472194	182-4TC	R8472054	R8472134
64	4060	4.33	27.14	1600	R8472175	R8472195	182-4TC	R8472055	R8472135
59	4070	3.97	29.62	1600	R8472176	R8472196	182-4TC	R8472056	R8472136
54	4090	3.64	32.50	1600	R8472177	R8472197	182-4TC	R8472057	R8472137
48.7	4100	3.30	35.91	1600	R8472178	R8472198	182-4TC	R8472058	R8472138
38.9	4110	2.64	45.00	1600	R8472179	R8472199	182-4TC	R8472059	R8472139
34.1	4120	2.33	51.25	1600	R8472180	R8472200	143-5TC	R8472040	R8472120

* Overhung load is calculated at centerline of output shaft.

STYLE RBN

STYLE RFN

STYLE RBQ

STYLE RFQ



R8473 Series • TRIPLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED		MOTORIZED QUILL INPUT		
					Base Mount Catalog Number	Flange Mount Catalog Number	Motor Frame	Base Mount Catalog Number	Flange Mount Catalog Number
31.4	4120	2.18	55.79	1600	R8473061	R8473076	143-5TC	R8473016	R8473046
28.4	4120	1.97	61.69	1600	R8473062	R8473077	143-5TC	R8473017	R8473047
25.70	4120	1.79	68.00	1600	R8473063	R8473078	143-5TC	R8473018	R8473048
23.10	4140	1.62	75.71	1600	R8473064	R8473079	143-5TC	R8473019	R8473049
20.60	4140	1.44	84.76	1600	R8473065	R8473080	56C 143-5TC	R8473005 R8473020	R8473035 R8473050
19.00	4140	1.33	92.29	1600	R8473066	R8473081	56C 143-5TC	R8473006 R8473021	R8473036 R8473051
17.10	4140	1.20	102.22	1600	R8473067	R8473082	56C 143-5TC	R8473007 R8473022	R8473037 R8473052
15.20	4140	1.06	115.03	1600	R8473068	R8473083	56C 143-5TC	R8473008 R8473023	R8473038 R8473053
12.60	4140	0.88	138.73	1600	R8473069	R8473084	56C 143-5TC	R8473009 R8473024	R8473039 R8473054
11.70	4140	0.82	149.23	1600	R8473070	R8473085	56C 143-5TC	R8473010 R8473025	R8473040 R8473055
11.00	4140	0.77	159.46	1600	R8473071	R8473086	56C 143-5TC	R8473011 R8473026	R8473041 R8473056
9.70	4140	0.68	180.00	1600	R8473072	R8473087	56C	R8473012	R8473042
8.50	4140	0.59	206.00	1600	R8473073	R8473088	56C	R8473013	R8473043
7.20	4140	0.50	244.29	1600	R8473074	R8473089	56C	R8473014	R8473044
6.30	4140	0.44	279.57	1600	R8473075	R8473090	56C	R8473015	R8473045

* Overhung load is calculated at centerline of output shaft.

NOTE: Mounting position is assumed to be B3. Other mounting positions to be specified on order and will not impact the catalog number. Units may become thermally limited when operating HP above 1750 RPM ratings. Contact Factory for details.

Maximum Rating Tables

R847 and R857 Series • Helical - Inline Cast Iron Case • 1750 RPM Input



Single Reduction Reducers

BRAVO®

Double Reduction

BRAVO® Worm - Worm

Double Reduction

BRAVO® Helical - Worm

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

STYLE RBN

STYLE RFN

STYLE RBQ

STYLE RFQ



R8474 Series • QUAD REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED		MOTORIZED QUILL INPUT		
					Base Mount Catalog Number	Flange Mount Catalog Number	Motor Frame	Base Mount Catalog Number	Flange Mount Catalog Number
5.96	4140	0.43	293.47	1600	R8474073	R8474091	56C	R8474001	R8474037
5.49	4140	0.39	318.50	1600	R8474074	R8474092	56C	R8474002	R8474038
4.89	4140	0.35	257.70	1600	R8474075	R8474093	56C	R8474003	R8474039
4.38	4140	0.31	399.90	1600	R8474076	R8474094	56C	R8474004	R8474040
3.83	4140	0.27	457.48	1600	R8474077	R8474095	56C	R8474005	R8474041
3.25	4140	0.23	537.72	1600	R8474078	R8474096	56C	R8474006	R8474042
2.93	4140	0.21	598.25	1600	R8474079	R8474097	56C	R8474007	R8474043
2.57	4140	0.18	679.78	1600	R8474080	R8474098	56C	R8474008	R8474044
2.23	4140	0.16	785.00	1600	R8474081	R8474099	56C	R8474009	R8474045
1.95	4140	0.14	899.32	1600	R8474082	R8474100	56C	R8474010	R8474046
1.69	4140	0.12	1034.00	1600	R8474083	R8474101	56C	R8474011	R8474047
1.46	4140	0.10	1197.00	1600	R8474084	R8474102	56C	R8474012	R8474048
1.28	4140	0.09	1370.00	1600	R8474085	R8474103	56C	R8474013	R8474049
1.10	4140	0.08	1584.00	1600	R8474086	R8474104	56C	R8474014	R8474050
0.970	4140	0.07	1812.00	1600	R8474087	R8474105	56C	R8474015	R8474051
0.880	4140	0.06	1985.00	1600	R8474088	R8474106	56C	R8474016	R8474052
0.770	4140	0.06	2260.00	1600	R8474089	R8474107	56C	R8474017	R8474053
0.680	4140	0.05	2587.00	1600	R8474090	R8474108	56C	R8474018	R8474054

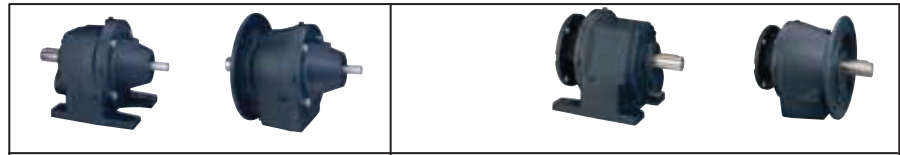
* Overhung load is calculated at centerline of output shaft.

STYLE RBN

STYLE RFN

STYLE RBQ

STYLE RFQ



R8572 Series • DOUBLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED		MOTORIZED QUILL INPUT		
					Base Mount Catalog Number	Flange Mount Catalog Number	Motor Frame	Base Mount Catalog Number	Flange Mount Catalog Number
681	1650	18.60	2.57	960	R8572161	R8572181	213-5TC	R8572061	R8572141
568	1760	16.50	3.08	1010	R8572162	R8572182	213-5TC	R8572062	R8572142
449	1880	13.90	3.90	1090	R8572163	R8572183	213-5TC	R8572063	R8572143
387	1970	12.60	4.52	1140	R8572164	R8572184	213-5TC	R8572064	R8572144
293	3260	15.80	5.98	1080	R8572165	R8572185	213-5TC	R8572065	R8572145
244	3340	13.50	7.16	1180	R8572166	R8572186	213-5TC	R8572066	R8572146
193	3450	11.00	9.06	1290	R8572167	R8572187	213-5TC	R8572067	R8572147
166	3680	10.10	10.52	1340	R8572168	R8572188	213-5TC	R8572068	R8572148
127	3910	8.22	13.75	1470	R8572169	R8572189	213-5TC	R8572069	R8572149
107	4000	7.04	16.43	1560	R8572170	R8572190	182-4TC	R8572050	R8572130
100	4010	6.63	17.50	1600	R8572171	R8572191	182-4TC	R8572051	R8572131
88	4030	5.83	20.00	1600	R8572172	R8572192	182-4TC	R8572052	R8572132
82	4040	5.44	21.47	1600	R8572173	R8572193	182-4TC	R8572053	R8572133
70	4050	4.69	25.00	1600	R8572174	R8572194	182-4TC	R8572054	R8572134
64	4060	4.33	27.14	1600	R8572175	R8572195	182-4TC	R8572055	R8572135
59	4070	3.97	29.62	1600	R8572176	R8572196	182-4TC	R8572056	R8572136
54	4090	3.64	32.50	1600	R8572177	R8572197	182-4TC	R8572057	R8572137
48.7	4100	3.30	35.91	1600	R8572178	R8572198	143-5TC	R8572038	R8572118
38.9	4110	2.64	45.00	1600	R8572179	R8572199	143-5TC	R8572039	R8572119
34.1	4120	2.33	51.25	1600	R8572180	R8572200	143-5TC	R8572040	R8572120

* Overhung load is calculated at centerline of output shaft.

NOTE: Mounting position is assumed to be B3. Other mounting positions to be specified on order and will not impact the catalog number. Units may become thermally limited when operating HP above 1750 RPM ratings. Contact Factory for details.



Maximum Rating Tables

R857 Series • Helical - Inline Cast Iron Case • 1750 RPM Input

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

STYLE RBN

STYLE RFN

STYLE RBQ

STYLE RFQ



R8573 Series • TRIPLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED		MOTORIZED QUILL INPUT		
					Base Mount Catalog Number	Flange Mount Catalog Number	Motor Frame	Base Mount Catalog Number	Flange Mount Catalog Number
31.4	4120	2.18	55.79	1600	R8573061	R8573076	143-5TC	R8573016	R8573046
28.4	4120	1.97	61.69	1600	R8573062	R8573077	143-5TC	R8573017	R8573047
25.7	4120	1.79	68.00	1600	R8573063	R8573078	143-5TC	R8573018	R8573048
23.1	4140	1.62	75.71	1600	R8573064	R8573079	143-5TC	R8573019	R8573049
23.1	4140	1.62	75.71	1600	R8573064	R8573079	143-5TC	R8573019	R8573049
20.6	4140	1.44	84.76	1600	R8573065	R8573080	56C	R8573005	R8573035
							143-5TC	R8573020	R8573050
							56C	R8573006	R8573036
19.0	4140	1.33	92.29	1600	R8573066	R8573081	143-5TC	R8573021	R8573051
							56C	R8573007	R8573037
17.1	4140	1.20	102.22	1600	R8573067	R8573082	143-5TC	R8573022	R8573052
							56C	R8573008	R8573038
15.2	4140	1.06	115.03	1600	R8573068	R8573083	143-5TC	R8573023	R8573053
							56C	R8573009	R8573039
12.6	4140	0.88	138.73	1600	R8573069	R8573084	143-5TC	R8573024	R8573054
							56C	R8573010	R8573040
11.7	4140	0.82	149.23	1600	R8573070	R8573085	143-5TC	R8573025	R8573055
							56C	R8573011	R8573041
11.0	4140	0.77	159.46	1600	R8573071	R8573086	143-5TC	R8573026	R8573056
							56C	R8573012	R8573042
9.7	4140	0.68	180.00	1600	R8573072	R8573087	56C	R8573013	R8573043
8.5	4140	0.59	206.00	1600	R8573073	R8573088	56C	R8573014	R8573044
7.2	4140	0.50	244.29	1600	R8573074	R8573089	56C	R8573015	R8573045
6.3	4140	0.44	279.57	1600	R8573075	R8573090	56C		

* Overhung load is calculated at centerline of output shaft.

STYLE RBN

STYLE RFN

STYLE RBQ

STYLE RFQ



R8574 Series • QUAD REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED		MOTORIZED QUILL INPUT		
					Base Mount Catalog Number	Flange Mount Catalog Number	Motor Frame	Base Mount Catalog Number	Flange Mount Catalog Number
5.96	4140	0.43	293.47	1600	R8574073	R8574091	56C	R8574001	R8574037
5.49	4140	0.39	318.50	1600	R8574074	R8574092	56C	R8574002	R8574038
4.89	4140	0.35	257.70	1600	R8574075	R8574093	56C	R8574003	R8574039
4.38	4140	0.31	399.90	1600	R8574076	R8574094	56C	R8574004	R8574040
3.83	4140	0.27	457.48	1600	R8574077	R8574095	56C	R8574005	R8574041
3.25	4140	0.23	537.72	1600	R8574078	R8574096	56C	R8574006	R8574042
2.93	4140	0.21	598.25	1600	R8574079	R8574097	56C	R8574007	R8574043
2.57	4140	0.18	679.78	1600	R8574080	R8574098	56C	R8574008	R8574044
2.23	4140	0.16	785.00	1600	R8574081	R8574099	56C	R8574009	R8574045
1.95	4140	0.14	899.32	1600	R8574082	R8574100	56C	R8574010	R8574046
1.69	4140	0.12	1034.00	1600	R8574083	R8574101	56C	R8574011	R8574047
1.46	4140	0.10	1197.00	1600	R8574084	R8574102	56C	R8574012	R8574048
1.28	4140	0.09	1370.00	1600	R8574085	R8574103	56C	R8574013	R8574049
1.10	4140	0.08	1584.00	1600	R8574086	R8574104	56C	R8574014	R8574050
0.97	4140	0.07	1812.00	1600	R8574087	R8574105	56C	R8574015	R8574051
0.88	4140	0.06	1985.00	1600	R8574088	R8574106	56C	R8574016	R8574052
0.770	4140	0.06	2260.00	1600	R8574089	R8574107	56C	R8574017	R8574053
0.680	4140	0.05	2587.00	1600	R8574090	R8574108	56C	R8574018	R8574054

* Overhung load is calculated at centerline of output shaft.

NOTE: Mounting position is assumed to be B3. Other mounting positions to be specified on order and will not impact the catalog number. Units may become thermally limited when operating HP above 1750 RPM ratings. Contact Factory for details.

Maximum Rating Tables

R867 Series • Helical - Inline

Cast Iron Case • 1750 RPM Input



Single Reduction Reducers

BRAVO®

Double Reduction

Worm - Worm

Double Reduction

Helical - Worm

Accessory Kits

High Efficiency Helical - Inline

High Efficiency Helical - Worm

STYLE RBN

STYLE RFN

STYLE RBQ

STYLE RFQ



R8672 Series • DOUBLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED		MOTORIZED QUILL INPUT		
					Base Mount Catalog Number	Flange Mount Catalog Number	Motor Frame	Base Mount Catalog Number	Flange Mount Catalog Number
726	2240	26.90	2.41	1230	R8672193	R8672217	213-5TC	R8672073	R8672169
646	2360	25.20	2.71	1270	R8672194	R8672218	213-5TC	R8672074	R8672170
574	2480	23.50	3.05	1310	R8672195	R8672219	213-5TC	R8672075	R8672171
530	2580	22.60	3.30	1330	R8672196	R8672220	213-5TC	R8672076	R8672172
469	2690	20.90	3.73	1370	R8672197	R8672221	213-5TC	R8672077	R8672173
432	2760	19.70	4.05	1420	R8672198	R8672222	213-5TC	R8672078	R8672174
380	2870	18.00	4.61	1470	R8672199	R8672223	213-5TC	R8672079	R8672175
331	2970	16.30	5.28	1540	R8672200	R8672224	213-5TC	R8672080	R8672176
298	3680	18.10	5.88	1550	R8672201	R8672225	213-5TC	R8672081	R8672177
265	3750	16.40	6.61	1640	R8672202	R8672226	213-5TC	R8672082	R8672178
235	3930	15.30	7.44	1690	R8672203	R8672227	213-5TC	R8672083	R8672179
217	4180	15.00	8.05	1700	R8672204	R8672228	213-5TC	R8672084	R8672180
192	4300	13.70	9.10	1700	R8672205	R8672229	213-5TC	R8672085	R8672181
177	4430	13.00	9.89	1700	R8672206	R8672230	213-5TC	R8672086	R8672182
156	4660	12.00	11.25	1700	R8672207	R8672231	213-5TC	R8672087	R8672183
136	4810	10.80	12.88	1700	R8672208	R8672232	213-5TC	R8672088	R8672184
112	5030	9.32	15.61	1700	R8672209	R8672233	213-5TC	R8672089	R8672185
96	5200	8.24	18.25	1700	R8672210	R8672234	213-5TC	R8672090	R8672186
81	5230	6.99	21.65	1700	R8672211	R8672235	182-4TC	R8672067	R8672163
67	5260	5.81	26.19	1700	R8672212	R8672236	182-4TC	R8672068	R8672164
54	5300	4.71	32.53	1700	R8672213	R8672237	182-4TC	R8672069	R8672165
45.6	5320	4.01	38.39	1700	R8672214	R8672238	182-4TC	R8672070	R8672166
37.7	5340	3.33	46.38	1700	R8672215	R8672239	182-4TC	R8672071	R8672167
33.9	5350	3.00	51.57	1700	R8672216	R8672240	143-5TC	R8672048	R8672144

* Overhung load is calculated at centerline of output shaft.

STYLE RBN

STYLE RFN

STYLE RBQ

STYLE RFQ



R8673 Series • TRIPLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED		MOTORIZED QUILL INPUT		
					Base Mount Catalog Number	Flange Mount Catalog Number	Motor Frame	Base Mount Catalog Number	Flange Mount Catalog Number
31.1	5220	2.74	56.30	1700	R8673061	R8673076	143-5TC	R8673016	R8673046
29.0	5370	2.63	60.40	1700	R8673062	R8673077	143-5TC	R8673017	R8673047
26.9	5370	2.44	65.07	1700	R8673063	R8673078	143-5TC	R8673018	R8673048
23.67	5370	2.15	73.94	1700	R8673064	R8673079	143-5TC	R8673019	R8673049
20.69	5370	1.88	84.59	1700	R8673065	R8673080	143-5TC	R8673020	R8673050
19.07	5370	1.73	91.77	1700	R8673066	R8673081	56C	R8673006	R8673036
15.81	5370	1.43	110.67	1700	R8673067	R8673082	56C	R8673007	R8673037
13.76	5370	1.25	127.22	1700	R8673068	R8673083	56C	R8673008	R8673038
12.69	5370	1.15	137.88	1700	R8673069	R8673084	56C	R8673009	R8673039
10.83	5370	1.00	161.57	1700	R8673070	R8673085	56C	R8673010	R8673040
9.16	5370	0.83	191.13	1700	R8673071	R8673086	56C	R8673011	R8673041
7.85	5370	0.71	223.03	1700	R8673072	R8673087	56C	R8673012	R8673042
7.21	5370	0.65	242.75	1700	R8673073	R8673088	56C	R8673013	R8673043
5.98	5370	0.50	292.80	1700	R8673074	R8673089	56C	R8673014	R8673044
5.22	5370	0.47	335.09	1700	R8673075	R8673090	56C	R8673015	R8673045

* Overhung load is calculated at centerline of output shaft.

NOTE: Mounting position is assumed to be B3. Other mounting positions to be specified on order and will not impact the catalog number. Units may become thermally limited when operating HP above 1750 RPM ratings. Contact Factory for details.



Maximum Rating Tables

R867 and R877 Series • Helical - Inline

Cast Iron Case • 1750 RPM Input

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

STYLE RBN

STYLE RFN

STYLE RBQ

STYLE RFQ



R8674 Series • QUAD REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED		MOTORIZED QUILL INPUT		
					Base Mount Catalog Number	Flange Mount Catalog Number	Motor Frame	Base Mount Catalog Number	Flange Mount Catalog Number
4.89	5370	0.45	357.93	1700	R8674081	R8674101	56C	R8674001	R8674041
4.22	5370	0.39	414.47	1700	R8674082	R8674102	56C	R8674002	R8674042
3.94	5370	0.36	444.68	1700	R8674083	R8674103	56C	R8674003	R8674043
3.58	5370	0.33	489.11	1700	R8674084	R8674104	56C	R8674004	R8674044
3.33	5370	0.31	524.75	1700	R8674085	R8674105	56C	R8674005	R8674045
3.05	5370	0.28	574.33	1700	R8674086	R8674106	56C	R8674006	R8674046
2.67	5370	0.25	655.84	1700	R8674087	R8674107	56C	R8674007	R8674047
2.32	5370	0.21	753.85	1700	R8674088	R8674108	56C	R8674008	R8674048
2.19	5370	0.20	797.27	1700	R8674089	R8674109	56C	R8674009	R8674049
2.04	5370	0.19	859.20	1700	R8674090	R8674110	56C	R8674010	R8674050
1.82	5370	0.17	963.16	1700	R8674091	R8674111	56C	R8674011	R8674051
1.63	5370	0.15	1071.00	1700	R8674092	R8674112	56C	R8674012	R8674052
1.47	5370	0.14	1189.00	1700	R8674093	R8674113	56C	R8674013	R8674053
1.31	5370	0.12	1335.00	1700	R8674094	R8674114	56C	R8674014	R8674054
1.18	5370	0.11	1485.00	1700	R8674095	R8674115	56C	R8674015	R8674055
1.03	5370	0.10	1693.00	1700	R8674096	R8674116	56C	R8674016	R8674056
0.930	5370	0.09	1886.00	1700	R8674097	R8674117	56C	R8674017	R8674057
0.860	5370	0.08	2045.00	1700	R8674098	R8674118	56C	R8674018	R8674058
0.750	5370	0.07	2341.00	1700	R8674099	R8674119	56C	R8674019	R8674059
0.670	5370	0.06	2603.00	1700	R8674100	R8674120	56C	R8674020	R8674060

* Overhung load is calculated at centerline of output shaft.

STYLE RBN

STYLE RFN

STYLE RBQ

STYLE RFQ



R8772 Series • DOUBLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED		MOTORIZED QUILL INPUT		
					Base Mount Catalog Number	Flange Mount Catalog Number	Motor Frame	Base Mount Catalog Number	Flange Mount Catalog Number
732	2360	28.60	2.39	1280	R8772231	R8772254	254-6TC	R8772093	R8772208
655	2630	28.50	2.67	1340	R8772232	R8772255	254-6TC	R8772094	R8772209
585	2810	27.20	2.99	1350	R8772233	R8772256	254-6TC	R8772095	R8772210
544	2840	25.50	3.22	1350	R8772234	R8772257	254-6TC	R8772096	R8772211
483	2880	23.00	3.62	1450	R8772235	R8772258	254-6TC	R8772097	R8772212
446	2960	21.80	3.92	1550	R8772236	R8772259	254-6TC	R8772098	R8772213
394	3070	20.00	4.44	1620	R8772237	R8772260	254-6TC	R8772099	R8772214
346	3200	18.30	5.06	1640	R8772238	R8772261	254-6TC	R8772100	R8772215
291	5230	25.20	6.01	1685	R8772239	R8772262	254-6TC	R8772101	R8772216
261	5400	23.30	6.71	1685	R8772240	R8772263	254-6TC	R8772102	R8772217
233	5560	21.40	7.50	1685	R8772241	R8772264	254-6TC	R8772103	R8772218
216	5680	20.30	8.09	1685	R8772242	R8772265	254-6TC	R8772104	R8772219
193	5860	18.60	9.09	1710	R8772243	R8772266	254-6TC	R8772105	R8772220
178	6000	17.60	9.85	1710	R8772244	R8772267	254-6TC	R8772106	R8772221
157	6050	15.70	11.15	1780	R8772245	R8772268	254-6TC	R8772107	R8772222
138	6370	14.50	12.71	1830	R8772246	R8772269	254-6TC	R8772108	R8772223
98	6900	11.20	17.85	2030	R8772247	R8772270	213-5TC	R8772086	R8772201
83	7260	10.00	21.10	2120	R8772248	R8772271	213-5TC	R8772087	R8772202
69	7260	8.25	25.44	2150	R8772249	R8772272	213-5TC	R8772088	R8772203
56	7260	6.66	31.51	2200	R8772250	R8772273	213-5TC	R8772089	R8772204
47.2	7260	5.66	37.11	2230	R8772251	R8772274	182-4TC	R8772067	R8772182
39.1	7260	4.69	44.75	2240	R8772252	R8772275	182-4TC	R8772068	R8772183
35.2	7260	4.22	49.72	2240	R8772253	R8772276	182-4TC	R8772069	R8772184

* Overhung load is calculated at centerline of output shaft.

NOTE: Mounting position is assumed to be B3. Other mounting positions to be specified on order and will not impact the catalog number. Units may become thermally limited when operating HP above 1750 RPM ratings. Contact Factory for details.

Maximum Rating Tables

R827 Series • Helical - Inline

Cast Iron Case • 1750 RPM Input



Single Reduction Reducers

BRAVO®

Double Reduction

BRAVO® Worm - Worm

Double Reduction

BRAVO® Helical - Worm

BRAVO® Accessory Kits

High Efficiency Helical - Inline Gear Reducers

High Efficiency Helical - Worm Gear Reducers

STYLE RBN

STYLE RFN

STYLE RBQ

STYLE RFQ



R8773 Series • TRIPLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED		MOTORIZED QUILL INPUT		
					Base Mount Catalog Number	Flange Mount Catalog Number	Motor Frame	Base Mount Catalog Number	Flange Mount Catalog Number
34.4	7260	4.22	50.87	2240	R8773089	R8773111	143-5TC	R8773023	R8773067
31.4	7260	3.85	55.74	2240	R8773090	R8773112	143-5TC	R8773024	R8773068
30.3	7260	3.71	57.81	2240	R8773091	R8773113	143-5TC	R8773025	R8773069
27.8	7260	3.40	63.01	2240	R8773092	R8773114	143-5TC	R8773026	R8773070
26.5	7260	3.24	66.13	2240	R8773093	R8773115	143-5TC	R8773027	R8773071
24.70	7260	3.02	70.95	2240	R8773094	R8773116	143-5TC	R8773028	R8773072
24.40	7260	2.99	71.61	2240	R8773095	R8773117	143-5TC	R8773029	R8773073
21.40	7260	2.62	81.92	2240	R8773096	R8773118	143-5TC	R8773030	R8773074
20.20	7260	2.48	86.48	2240	R8773097	R8773119	143-5TC	R8773031	R8773075
19.90	7260	2.44	87.89	2240	R8773098	R8773120	143-5TC	R8773032	R8773076
16.30	7260	2.00	107.12	2240	R8773099	R8773121	143-5TC	R8773033	R8773077
13.50	7260	1.65	130.00	2240	R8773100	R8773122	143-5TC	R8773034	R8773078
13.10	7260	1.61	133.53	2240	R8773101	R8773123	143-5TC	R8773035	R8773079
11.70	7260	1.44	149.43	2240	R8773102	R8773124	56C	R8773014	R8773058
							143-5TC	R8773036	R8773080
10.90	7260	1.33	161.04	2240	R8773103	R8773125	56C	R8773015	R8773059
							143-5TC	R8773037	R8773081
9.50	7260	1.16	185.10	2240	R8773104	R8773126	56C	R8773016	R8773060
							143-5TC	R8773038	R8773082
9.20	7260	1.13	189.79	2240	R8773105	R8773127	56C	R8773017	R8773061
							143-5TC	R8773039	R8773083
7.60	7260	0.94	228.92	2240	R8773106	R8773128	56C	R8773018	R8773062
							143-5TC	R8773040	R8773084
7.40	7260	0.91	235.09	2240	R8773107	R8773129	56C	R8773019	R8773063
							143-5TC	R8773041	R8773085
6.70	7260	0.82	261.99	2240	R8773108	R8773130	56C	R8773020	R8773064
							143-5TC	R8773042	R8773086
6.20	7260	0.76	283.56	2240	R8773109	R8773131	56C	R8773021	R8773065
							143-5TC	R8773043	R8773087
5.40	7260	0.66	324.52	2240	R8773110	R8773132	56C	R8773022	R8773066

* Overhung load is calculated at centerline of output shaft.

STYLE RBN

STYLE RFN

STYLE RBQ

STYLE RFQ



R8774 Series • QUAD REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED		MOTORIZED QUILL INPUT		
					Base Mount Catalog Number	Flange Mount Catalog Number	Motor Frame	Base Mount Catalog Number	Flange Mount Catalog Number
5.10	7260	0.62	344.84	2240	R8774061	R8774076	56C	R8774001	R8774031
4.90	7260	0.60	356.92	2240	R8774062	R8774077	56C	R8774002	R8774032
4.40	7260	0.54	400.36	2240	R8774063	R8774078	56C	R8774003	R8774033
3.90	7260	0.48	445.13	2240	R8774064	R8774079	56C	R8774004	R8774034
3.20	7260	0.39	546.12	2240	R8774065	R8774080	56C	R8774005	R8774035
2.70	7260	0.33	649.47	2240	R8774066	R8774081	56C	R8774006	R8774036
2.20	7260	0.27	803.08	2240	R8774067	R8774082	56C	R8774007	R8774037
2.00	7260	0.25	855.21	2240	R8774068	R8774083	56C	R8774008	R8774038
1.74	7260	0.21	1007.34	2240	R8774069	R8774084	56C	R8774009	R8774039
1.59	7260	0.20	1099.10	2240	R8774070	R8774085	56C	R8774010	R8774040
1.45	7260	0.18	1206.15	2240	R8774071	R8774086	56C	R8774011	R8774041
1.19	7260	0.15	1472.57	2240	R8774072	R8774087	56C	R8774012	R8774042
1.05	7260	0.13	1670.06	2240	R8774073	R8774088	56C	R8774013	R8774043
0.980	7260	0.12	1785.51	2240	R8774074	R8774089	56C	R8774014	R8774044

* Overhung load is calculated at centerline of output shaft.

NOTE: Mounting position is assumed to be B3. Other mounting positions to be specified on order and will not impact the catalog number. Units may become thermally limited when operating HP above 1750 RPM ratings. Contact Factory for details.



Maximum Rating Tables

R887 Series • Helical - Inline
Cast Iron Case • 1750 RPM Input

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

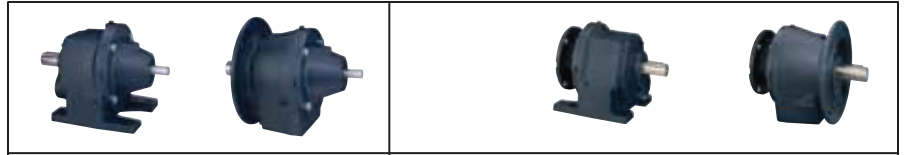
High Efficiency Helical - Worm
Gear Reducers

STYLE RBN

STYLE RFN

STYLE RBQ

STYLE RFQ



R8872 Series • DOUBLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED		MOTORIZED QUILL INPUT		
					Base Mount Catalog Number	Flange Mount Catalog Number	Motor Frame	Base Mount Catalog Number	Flange Mount Catalog Number
731	4450	53.80	2.39	1820	R8872265	R8872287	284-6TC	R8872111	R8872243
655	4660	50.50	2.67	1830	R8872266	R8872288	284-6TC	R8872112	R8872244
585	4880	47.20	2.99	1840	R8872267	R8872289	284-6TC	R8872113	R8872245
543	5000	44.90	3.22	1840	R8872268	R8872290	284-6TC	R8872114	R8872246
483	5230	41.80	3.62	1840	R8872269	R8872291	284-6TC	R8872115	R8872247
464	5270	40.40	3.77	1850	R8872270	R8872292	284-6TC	R8872116	R8872248
411	5490	37.30	4.26	1860	R8872271	R8872293	284-6TC	R8872117	R8872249
346	5750	32.90	5.06	1880	R8872272	R8872294	284-6TC	R8872118	R8872250
291	9450	45.50	6.01	1900	R8872273	R8872295	284-6TC	R8872119	R8872251
261	9890	42.60	6.71	1980	R8872274	R8872296	284-6TC	R8872120	R8872252
233	10360	40.00	7.50	2080	R8872275	R8872297	284-6TC	R8872121	R8872253
216	10630	38.00	8.09	2100	R8872276	R8872298	284-6TC	R8872122	R8872254
193	11100	35.30	9.09	2140	R8872277	R8872299	284-6TC	R8872123	R8872255
185	11200	34.20	9.46	2150	R8872278	R8872300	284-6TC	R8872124	R8872256
164	11650	31.50	10.69	2200	R8872279	R8872301	284-6TC	R8872125	R8872257
138	12190	27.70	12.71	2350	R8872280	R8872302	284-6TC	R8872126	R8872258
98	13200	21.40	17.85	2500	R8872281	R8872303	254-6TC	R8872105	R8872237
83	13260	18.20	21.10	2750	R8872282	R8872304	254-6TC	R8872106	R8872238
69	13300	15.10	25.44	3000	R8872283	R8872305	254-6TC	R8872107	R8872239
56	13330	12.20	31.51	3400	R8872284	R8872306	254-6TC	R8872108	R8872240
39.0	13380	8.65	44.75	3800	R8872285	R8872307	213-5TC	R8872087	R8872219
35.0	13400	7.80	49.72	3800	R8872286	R8872308	182-4TC 213-5TC	R8872066 R8872088	R8872198 R8872220

* Overhung load is calculated at centerline of output shaft.

NOTE: Mounting position is assumed to be B3. Other mounting positions to be specified on order and will not impact the catalog number. Units may become thermally limited when operating HP above 1750 RPM ratings. Contact Factory for details.

Maximum Rating Tables

R827 Series • Helical - Inline

Cast Iron Case • 1750 RPM Input



Single Reduction Reducers

Double Reduction

Double Reduction

Accessory Kits

High Efficiency Helical - Inline Gear Reducers

High Efficiency Helical - Worm Gear Reducers

STYLE RBN

STYLE RFN

STYLE RBQ

STYLE RFQ



R8873 Series • TRIPLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED		MOTORIZED QUILL INPUT		
					Base Mount Catalog Number	Flange Mount Catalog Number	Motor Frame	Base Mount Catalog Number	Flange Mount Catalog Number
32.7	13700	7.56	53.50	3800	R8873145	R8873169	182-4TC	R8873049	R8873121
30.6	13700	7.09	57.11	3800	R8873146	R8873170	182-4TC	R8873050	R8873122
26.4	13700	6.11	66.27	3800	R8873147	R8873171	182-4TC	R8873051	R8873123
25.00	13700	5.79	69.95	3800	R8873148	R8873172	182-4TC	R8873052	R8873124
20.90	13700	4.84	83.58	3800	R8873149	R8873173	182-4TC	R8873053	R8873125
20.20	13700	4.67	86.65	3800	R8873150	R8873174	182-4TC	R8873054	R8873126
19.70	13700	4.55	89.03	3800	R8873151	R8873175	182-4TC	R8873055	R8873127
16.90	13700	3.91	103.53	3800	R8873152	R8873176	182-4TC	R8873056	R8873128
15.90	13700	3.67	110.28	3800	R8873153	R8873177	182-4TC	R8873057	R8873129
13.90	13700	3.21	126.03	3800	R8873154	R8873178	143-5TC 182-4TC	R8873034 R8873058	R8873106 R8873130
12.90	13700	2.99	135.30	3800	R8873155	R8873179	143-5TC 182-4TC	R8873035 R8873059	R8873107 R8873131
12.70	13700	2.93	138.08	3800	R8873156	R8873180	143-5TC 182-4TC	R8873036 R8873060	R8873108 R8873132
11.60	13700	2.69	150.66	3800	R8873157	R8873181	143-5TC	R8873037	R8873109
11.10	13700	2.57	157.54	3800	R8873158	R8873182	143-5TC	R8873038	R8873110
10.60	13700	2.45	165.33	3800	R8873159	R8873183	143-5TC	R8873039	R8873111
10.20	13700	2.37	171.04	3800	R8873160	R8873184	143-5TC	R8873040	R8873112
9.60	13700	2.22	182.68	3800	R8873161	R8873185	143-5TC	R8873041	R8873113
9.40	13700	2.17	186.62	3800	R8873162	R8873186	143-5TC	R8873042	R8873114
8.50	13700	1.98	204.80	3800	R8873163	R8873187	143-5TC	R8873043	R8873115
7.70	13700	1.79	226.28	3800	R8873164	R8873188	143-5TC	R8873044	R8873116
7.60	13700	1.77	228.92	3800	R8873165	R8873189	143-5TC	R8873045	R8873117
6.70	13700	1.55	260.72	3800	R8873166	R8873190	56C 143-5TC	R8873022 R8873046	R8873094 R8873118
6.20	13700	1.43	283.57	3800	R8873167	R8873191	56C 143-5TC	R8873023 R8873047	R8873095 R8873119
5.40	13700	1.25	322.95	3800	R8873168	R8873192	56C 143-5TC	R8873024 R8873048	R8873096 R8873120

* Overhung load is calculated at centerline of output shaft.

NOTE: Mounting position is assumed to be B3. Other mounting positions to be specified on order and will not impact the catalog number. Units may become thermally limited when operating HP above 1750 RPM ratings. Contact Factory for details.



MAXIMUM RATING TABLES

R887 & R897 SERIES • HELICAL-INLINE CAST IRON CASE • 1750 RPM INPUT

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

STYLE RBN

STYLE RFN

STYLE RBQ

STYLE RFQ



R8874 Series • QUAD REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED		MOTORIZED QUILL INPUT		
					Base Mount Catalog Number	Flange Mount Catalog Number	Motor Frame	Base Mount Catalog Number	Flange Mount Catalog Number
5.60	13700	1.30	310.23	3800	R8874061	R8874076	56C 143-5TC	R8874001 R8874018 R8874002	R8874031 R8874046 R8874032
5.00	13700	1.15	351.29	3800	R8874062	R8874077	56C 143-5TC	R8874019 R8874003	R8874047 R8874033
4.40	13700	1.01	400.30	3800	R8874063	R8874078	56C 143-5TC	R8874020 R8874004	R8874048 R8874034
3.90	13700	0.91	445.16	3800	R8874064	R8874079	56C 143-5TC	R8874021 R8874005	R8874049 R8874035
3.30	13700	0.75	536.67	3800	R8874065	R8874080	56C 143-5TC	R8874020 R8874006	R8874050 R8874036
2.70	13700	0.63	646.98	3800	R8874066	R8874081	56C	R8874007	R8874037
2.20	13700	0.50	801.43	3800	R8874067	R8874082	56C	R8874008	R8874038
1.76	13700	0.41	992.73	3800	R8874068	R8874083	56C	R8874009	R8874039
1.50	13700	0.35	1169.33	3800	R8874069	R8874084	56C	R8874010	R8874040
1.38	13700	0.32	1264.75	3800	R8874070	R8874085	56C	R8874011	R8874041
1.24	13700	0.29	1410.13	3800	R8874071	R8874086	56C	R8874012	R8874042
1.12	13700	0.26	1566.66	3800	R8874072	R8874087	56C	R8874013	R8874043
0.950	13700	0.22	1845.34	3800	R8874073	R8874088	56C	R8874014	R8874044
0.790	13700	0.18	2225.37	3800	R8874074	R8874089	56C	R8874015	R8874045
0.710	13700	0.16	2472.38	3800	R8874075	R8874090	56C		

* Overhung load is calculated at centerline of output shaft.

STYLE RBN

STYLE RFN

STYLE RBQ

STYLE RFQ



R8972 Series • DOUBLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED		MOTORIZED QUILL INPUT		
					Base Mount Catalog Number	Flange Mount Catalog Number	Motor Frame	Base Mount Catalog Number	Flange Mount Catalog Number
781	8000	103.30	2.24	3370	R8972253	R8972274	365-7TC	R8972106	R8972232
692	8430	96.40	2.53	3370	R8972254	R8972275	365-7TC	R8972107	R8972233
556	9230	84.80	3.15	3370	R8972255	R8972276	365-7TC	R8972108	R8972234
486	9700	77.90	3.60	3370	R8972256	R8972277	365-7TC	R8972109	R8972235
380	10510	66.10	4.60	3370	R8972257	R8972278	365-7TC	R8972110	R8972236
327	10510	56.70	5.36	3370	R8972258	R8972279	325-6TC	R8972090	R8972216
296	16500	80.60	5.92	3370	R8972259	R8972280	325-6TC	R8972091	R8972217
262	17500	75.70	6.69	3370	R8972260	R8972281	325-6TC	R8972092	R8972218
210	18000	62.40	8.34	3370	R8972261	R8972282	325-6TC	R8972093	R8972219
184	18200	55.30	9.52	3370	R8972262	R8972283	325-6TC	R8972094	R8972220
144	19200	45.60	12.17	3370	R8972263	R8972284	284-6TC	R8972074	R8972200
124	20400	41.60	14.17	3370	R8972264	R8972285	284-6TC	R8972075	R8972201
96	22100	35.00	18.25	3370	R8972265	R8972286	284-6TC	R8972076	R8972202
87	23100	33.40	20.03	3370	R8972266	R8972287	284-6TC	R8972077	R8972203
71	25000	29.50	24.55	3370	R8972267	R8972288	284-6TC	R8972078	R8972204
64	23100	24.30	27.50	3370	R8972268	R8972289	284-6TC	R8972079	R8972205
56	23100	21.50	31.10	3370	R8972269	R8972290	254-6TC	R8972059	R8972185
45.7	23200	17.50	38.29	3370	R8972270	R8972291	254-6TC	R8972060	R8972186
38.9	23300	15.00	44.93	3370	R8972271	R8972292	254-6TC	R8972061	R8972187
29.2	23400	11.30	59.86	3370	R8972272	R8972293	213-5TC	R8972041	R8972167
26.1	23400	10.10	67.06	3370	R8972273	R8972294	213-5TC	R8972042	R8972168

* Overhung load is calculated at centerline of output shaft.

NOTE: Mounting position is assumed to be B3. Other mounting positions to be specified on order and will not impact the catalog number. Units may become thermally limited when operating HP above 1750 RPM ratings. Contact Factory for details.

MAXIMUM RATING TABLES

R897 SERIES • HELICAL-INLINE
CAST IRON CASE • 1750 RPM INPUT



Single Reduction Reducers

BRAVO®

Double Reduction

BRAVO® Worm - Worm

Double Reduction

BRAVO® Helical - Worm

BRAVO® Accessory Kits

High Efficiency Helical - Inline Gear Reducers

High Efficiency Helical - Worm Gear Reducers

STYLE RBN

STYLE RFN

STYLE RBQ

STYLE RFQ



NON-MOTORIZED

MOTORIZED QUILL INPUT

R8973 Series • TRIPLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED		MOTORIZED QUILL INPUT		
					Base Mount Catalog Number	Flange Mount Catalog Number	Motor Frame	Base Mount Catalog Number	Flange Mount Catalog Number
30.5	26600	13.70	57.41	4460	R8973191	R8973210	254-6TC	R8973077	R8973172
28.1	26600	12.60	62.19	4460	R8973192	R8973211	254-6TC	R8973078	R8973173
27.6	26600	12.40	63.37	4460	R8973193	R8973212	254-6TC	R8973079	R8973174
24.90	26600	11.20	70.42	4460	R8973194	R8973213	213-5TC	R8973061	R8973156
21.80	26600	9.79	80.24	4460	R8973195	R8973214	213-5TC	R8973062	R8973157
19.70	26600	8.83	89.01	4460	R8973196	R8973215	213-5TC	R8973063	R8973158
16.60	26600	7.47	105.23	4460	R8973197	R8973216	182-4TC	R8973045	R8973140
							213-5TC	R8973064	R8973159
15.50	26600	6.97	112.72	4460	R8973198	R8973217	182-4TC	R8973046	R8973141
13.80	26600	6.19	126.87	4460	R8973199	R8973218	182-4TC	R8973047	R8973142
13.10	26600	5.90	133.26	4460	R8973200	R8973219	182-4TC	R8973048	R8973143
11.10	26600	5.00	157.15	4460	R8973201	R8973220	182-4TC	R8973049	R8973144
10.90	26600	4.89	160.66	4460	R8973202	R8973221	182-4TC	R8973050	R8973145
9.50	26600	4.25	185.09	4460	R8973203	R8973222	182-4TC	R8973051	R8973146
8.80	26600	3.95	199.01	4460	R8973204	R8973223	182-4TC	R8973052	R8973147
7.80	26600	3.52	223.22	4460	R8973205	R8973224	182-4TC	R8973053	R8973148
							143-5TC	R8973035	R8973130
7.50	26600	3.35	234.41	4460	R8973206	R8973225	182-4TC	R8973054	R8973149
							143-5TC	R8973036	R8973131
7.10	26600	3.17	248.00	4460	R8973207	R8973226	182-4TC	R8973055	R8973150
							143-5TC	R8973037	R8973132
6.20	26600	2.78	282.68	4460	R8973208	R8973227	143-5TC	R8973038	R8973133
5.60	26600	2.50	314.06	4460	R8973209	R8973228	143-5TC		

* Overhung load is calculated at centerline of output shaft.

STYLE RBN

STYLE RFN

STYLE RBQ

STYLE RFQ



NON-MOTORIZED

MOTORIZED QUILL INPUT

R8974 Series • QUAD REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED		MOTORIZED QUILL INPUT		
					Base Mount Catalog Number	Flange Mount Catalog Number	Motor Frame	Base Mount Catalog Number	Flange Mount Catalog Number
4.90	26600	2.20	357.43	4460	R8974097	R8974113	143-5TC	R8974017	R8974065
4.00	26600	1.79	438.20	4460	R8974098	R8974114	143-5TC	R8974018	R8974066
3.60	26600	1.60	490.71	4460	R8974099	R8974115	56C	R8974003	R8974051
							143-5TC	R8974019	R8974067
3.20	26600	1.42	554.88	4460	R8974100	R8974116	56C	R8974004	R8974052
							143-5TC	R8974020	R8974068
2.80	26600	1.25	631.04	4460	R8974101	R8974117	56C	R8974005	R8974053
							143-5TC	R8974021	R8974069
2.70	26600	1.20	656.02	4460	R8974102	R8974118	56C	R8974006	R8974054
							143-5TC	R8974022	R8974070
2.20	26600	0.97	807.76	4460	R8974103	R8974119	56C	R8974007	R8974055
							143-5TC	R8974023	R8974071
1.79	26600	0.80	979.66	4460	R8974104	R8974120	56C	R8974008	R8974056
							143-5TC	R8974024	R8974072
1.45	26600	0.65	1206.25	4460	R8974105	R8974121	56C	R8974009	R8974057
							143-5TC	R8974025	R8974073
1.26	26600	0.56	1391.56	4460	R8974106	R8974122	56C	R8974010	R8974058
1.02	26600	0.46	1713.43	4460	R8974107	R8974123	56C	R8974011	R8974059
0.920	26600	0.41	1903.62	4460	R8974108	R8974124	56C	R8974012	R8974060
0.830	26600	0.37	2112.65	4460	R8974109	R8974125	56C	R8974013	R8974061
0.650	26600	0.29	2679.05	4460	R8974110	R8974126	56C	R8974014	R8974062
0.580	26600	0.26	3000.92	4460	R8974111	R8974127	56C	R8974015	R8974063
0.520	26600	0.24	3334.02	4460	R8974112	R8974128	56C	R8974016	R8974064

* Overhung load is calculated at centerline of output shaft.

NOTE: Mounting position is assumed to be B3. Other mounting positions to be specified on order and will not impact the catalog number. Units may become thermally limited when operating HP above 1750 RPM ratings. Contact Factory for details.



MAXIMUM RATING TABLES

R8107 SERIES • HELICAL-INLINE CAST IRON CASE • 1750 RPM INPUT

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

STYLE RBN

STYLE RFN

STYLE RBQ

STYLE RFQ



R8107 Series • DOUBLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED			MOTORIZED QUILL INPUT	
					Base Mount Catalog Number	Flange Mount Catalog Number	Motor Frame	Base Mount Catalog Number	Flange Mount Catalog Number
774	9770	125.00	2.26	2725	R81072229	R81072248	364-6TC	R81072096	R81072210
678	11150	125.00	2.58	2735	R81072230	R81072249	364-6TC	R81072097	R81072211
592	12780	125.00	2.96	2745	R81072231	R81072250	364-6TC	R81072098	R81072212
462	16400	125.10	3.79	2755	R81072232	R81072251	364-6TC	R81072099	R81072213
381	19300	121.50	4.60	2570	R81072233	R81072252	364-6TC	R81072100	R81072214
323	19300	102.90	5.43	2700	R81072234	R81072253	364-6TC	R81072101	R81072215
291	26000	125.20	6.01	2750	R81072235	R81072254	364-6TC	R81072102	R81072216
255	26300	110.90	6.86	2785	R81072236	R81072255	364-6TC	R81072103	R81072217
223	28000	103.10	7.85	2790	R81072237	R81072256	364-6TC	R81072104	R81072218
174	35000	100.40	10.08	2800	R81072238	R81072257	364-6TC	R81072105	R81072219
143	38100	90.20	12.21	2810	R81072239	R81072258	324-6TC	R81072087	R81072201
121	38100	76.50	14.41	3050	R81072240	R81072259	324-6TC	R81072088	R81072202
97	38100	60.80	18.12	3350	R81072241	R81072260	324-6TC	R81072089	R81072203
87	38100	55.00	20.04	3500	R81072242	R81072261	324-6TC	R81072090	R81072204
79	38100	49.40	22.30	3700	R81072243	R81072262	324-6TC	R81072091	R81072205
70	38100	44.10	25.10	3900	R81072244	R81072263	284-6TC	R81072073	R81072187
62	38100	38.90	28.33	4200	R81072245	R81072264	284-6TC	R81072074	R81072188
54	38100	33.90	32.48	4350	R81072246	R81072265	284-6TC	R81072075	R81072189

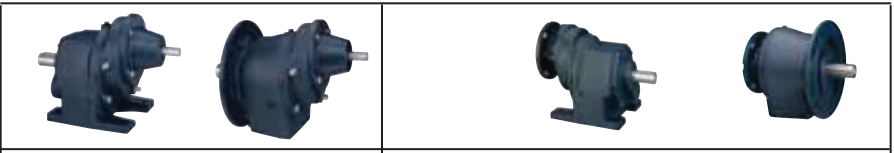
* Overhung load is calculated at centerline of output shaft.

STYLE RBN

STYLE RFN

STYLE RBQ

STYLE RFQ



R81073 Series • TRIPLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED			MOTORIZED QUILL INPUT	
					Base Mount Catalog Number	Flange Mount Catalog Number	Motor Frame	Base Mount Catalog Number	Flange Mount Catalog Number
50.6	38100	32.60	34.56	4550	R81073271	R81073298	284-6TC	R81073109	R81073244
45.3	38100	29.20	38.59	4570	R81073272	R81073299	284-6TC	R81073110	R81073245
44.2	38100	28.40	39.63	4850	R81073273	R81073300	284-6TC	R81073111	R81073246
40.6	38100	26.10	43.15	5000	R81073274	R81073301	284-6TC	R81073112	R81073247
37.6	38100	24.20	46.55	5100	R81073275	R81073302	254-6TC	R81073086	R81073221
35.4	38100	22.70	49.47	5300	R81073276	R81073303	254-6TC	R81073087	R81073222
33.5	38100	21.50	52.30	5450	R81073277	R81073304	254-6TC	R81073088	R81073223
32.8	38100	21.10	53.37	5500	R81073278	R81073305	254-6TC	R81073089	R81073224
32.2	38100	20.70	54.42	5550	R81073279	R81073306	254-6TC	R81073090	R81073225
29.2	38100	18.80	59.97	5750	R81073280	R81073307	254-6TC	R81073091	R81073226
28.5	38100	18.30	61.51	6000	R81073281	R81073308	254-6TC	R81073092	R81073227
28.0	38100	18.00	62.40	6000	R81073282	R81073309	254-6TC	R81073093	R81073228
24.80	38100	16.00	70.52	6300	R81073283	R81073310	254-6TC	R81073094	R81073229
23.90	38100	15.40	73.12	6300	R81073284	R81073311	254-6TC	R81073095	R81073230
20.90	38100	13.40	83.84	6500	R81073285	R81073312	254-6TC	R81073096	R81073231
17.00	38100	11.00	102.70	6500	R81073286	R81073313	213-5TC	R81073070	R81073205
14.90	38100	9.56	117.76	6500	R81073287	R81073314	213-5TC	R81073071	R81073206
14.40	38100	9.27	121.43	6500	R81073288	R81073315	213-5TC	R81073072	R81073207
12.60	38100	8.08	139.23	6500	R81073289	R81073316	213-5TC	R81073073	R81073208
12.00	38100	7.69	146.39	6500	R81073290	R81073317	182-4TC 213-5TC	R81073047 R81073074	R81073182 R81073209
10.40	38100	6.71	167.85	6500	R81073291	R81073318	182-4TC	R81073048	R81073183
9.70	38100	6.21	181.32	6500	R81073292	R81073319	182-4TC	R81073049	R81073184
8.40	38100	5.41	207.90	6500	R81073293	R81073320	182-4TC	R81073050	R81073185
6.80	38100	4.37	257.56	6500	R81073294	R81073321	182-4TC	R81073051	R81073186
6.10	38100	3.93	286.15	6500	R81073295	R81073322	182-4TC	R81073052	R81073187
5.90	38100	3.81	295.31	6500	R81073296	R81073323	182-4TC	R81073053	R81073188
5.30	38100	3.43	328.09	6500	R81073297	R81073324	143-5TC 182-4TC	R81073026 R81073054	R81073134 R81073189

* Overhung load is calculated at centerline of output shaft.

NOTE: Mounting position is assumed to be B3. Other mounting positions to be specified on order and will not impact the catalog number. Units may become thermally limited when operating HP above 1750 RPM ratings. Contact Factory for details.

MAXIMUM RATING TABLES

R8107 SERIES • HELICAL-INLINE
CAST IRON CASE • 1750 RPM INPUT



STYLE RBN

STYLE RFN

STYLE RBQ

STYLE RFQ



R81074 Series • QUAD REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED		MOTORIZED QUILL INPUT		
					Base Mount Catalog Number	Flange Mount Catalog Number	Motor Frame	Base Mount Catalog Number	Flange Mount Catalog Number
4.90	38100	3.15	357.56	6500	R81074091	R81074106	182-4TC	R81074031	R81074076
4.40	38100	2.83	397.95	6500	R81074092	R81074107	182-4TC	R81074032	R81074077
3.90	38100	2.52	446.41	6500	R81074093	R81074108	182-4TC	R81074033	R81074078
3.30	38100	2.13	527.77	6500	R81074094	R81074109	182-4TC	R81074034	R81074079
2.80	38100	1.77	636.26	6500	R81074095	R81074110	143-5TC	R81074020	R81074065
2.50	38100	1.60	702.58	6500	R81074096	R81074111	143-5TC	R81074021	R81074066
2.10	38100	1.36	826.21	6500	R81074097	R81074112	143-5TC	R81074022	R81074067
2.00	38100	1.26	896.70	6500	R81074098	R81074113	143-5TC	R81074023	R81074068
1.75	38100	1.13	997.98	6500	R81074099	R81074114	143-5TC	R81074024	R81074069
1.71	38100	1.10	1023.44	6500	R81074100	R81074115	143-5TC	R81074025	R81074070
1.56	38100	1.01	1119.52	6500	R81074101	R81074116	143-5TC	R81074026	R81074071
1.38	38100	0.89	1268.07	6500	R81074102	R81074117	143-5TC	R81074027	R81074072
1.24	38100	0.80	1408.82	6500	R81074103	R81074118	143-5TC	R81074028	R81074073
1.20	38100	0.77	1453.75	6500	R81074104	R81074119	143-5TC	R81074029	R81074074
1.08	38100	0.70	1615.11	6500	R81074105	R81074120	143-5TC	R81074030	R81074075

* Overhung load is calculated at centerline of output shaft.

NOTE: Mounting position is assumed to be B3. Other mounting positions to be specified on order and will not impact the catalog number. Units may become thermally limited when operating HP above 1750 RPM ratings. Contact Factory for details.

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

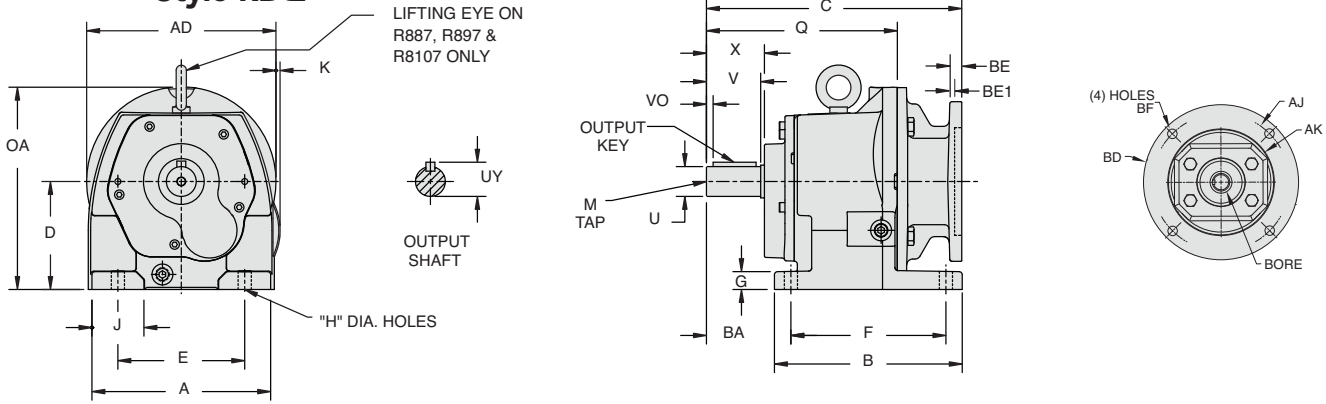
High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



Helical - Inline Double Reduction Dimensions

Style RBQ



Gearcase

Size	A	AD	B	BA	D	E	F	G	H	J	K	OA	Q
RBQ827	5.72	6.61	6.30	2.95	3.54	4.33	5.12	0.59	0.39	1.40	0.29	6.68	7.29
	145	168	160	75	90	110	130	15	10	35	7	170	185
RBQ837	5.72	6.61	6.30	2.95	3.54	4.33	5.12	0.59	0.39	1.40	0.29	6.68	7.29
	145	168	160	75	90	110	130	15	10	35	7	170	185
RBQ847	7.48	7.93	7.87	3.94	4.53	5.32	6.50	0.75	0.53	2.18	N/A	8.48	8.40
	190	201	200	100	115	135	165	19	14	55	N/A	215	213
RBQ857	7.48	7.93	7.87	3.94	4.53	5.32	6.50	0.75	0.53	2.18	N/A	8.48	8.40
	190	201	200	100	115	135	165	19	14	55	N/A	215	213
RBQ867	8.14	8.50	9.13	3.94	5.12	5.91	7.68	0.82	0.53	2.39	0.24	9.08	9.44
	207	216	232	100	130	150	195	21	14	61	6	231	240
RBQ877	8.66	9.97	9.65	4.53	5.51	6.69	8.07	0.98	0.69	2.16	N/A	10.47	10.79
	288	304	320	140	180	170	205	25	18	55	N/A	266	274
RBQ887	11.34	11.96	12.59	5.51	7.09	8.47	10.24	1.11	0.75	2.93	N/A	13.04	12.99
	288	304	320	140	180	215	260	28	19	74	N/A	331	330
RBQ897	13.42	14.00	14.37	6.30	8.86	9.84	12.21	1.38	0.91	3.55	0.40	15.84	16.41
	341	356	365	160	225	250	310	35	23	90	11	402	417
RBQ8107	15.25	16.08	17.32	7.28	9.84	11.42	14.57	1.50	1.02	4.00	0.35	16.78	19.00
	387	408	440	185	250	290	370	38	26	102	9	426	483

Output Shaft - Inches

Size	U +0.000 -0.001	UY	V	VO	X	Output Key	M
RBQ827	1.000	1.10	N/A	0.40	2.12	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
RBQ837	1.000	1.10	N/A	0.40	2.12	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
RBQ847	1.250	1.36	2.36	0.41	2.43	1/4 x 1/4 x 1-11/16	3/8-24 x 0.088
RBQ857	1.375	1.51	N/A	0.44	2.83	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
RBQ867	1.375	1.51	2.76	0.44	2.94	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
RBQ877	1.625	1.78	3.15	0.45	3.27	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
RBQ887	2.125	2.34	3.94	0.64	4.06	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
RBQ897	2.375	2.64	4.72	0.70	4.95	5/8 x 5/8 x 3-3/4	3/4-10 x 1.61
RBQ8107	2.875	3.19	5.51	0.67	5.62	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61

NEMA Motor Mounting Dimensions - Inches

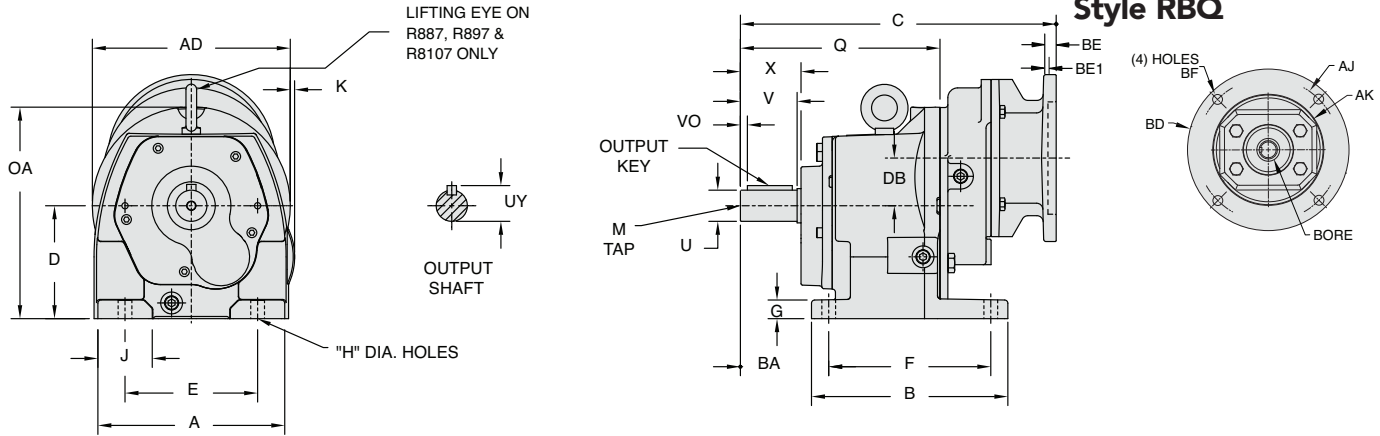
Size	Dimension "C"						Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
	56C 140TC	180TC	210TC	250TC	280TC	324TC/326TC 364TC/366TC									
PBQ717	8.83	-	-	-	-	-	48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
RBQ827	9.90	11.21	-	-	-	-	56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
RBQ837	9.90	11.21	-	-	-	-	140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
RBQ847	11.10	12.12	12.12	-	-	-	180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53
RBQ857	11.10	12.12	12.12	-	-	-	210TC	7.25	8.50	8.50	N/A	0.50	1.375	5/16 X 5/32	0.53
RBQ867	12.14	13.16	13.16	-	-	-	250TC	7.25	8.50	8.50	N/A	0.50	1.625	3/8 X 3/16	0.53
RBQ877	14.15	14.83	14.83	14.83	-	-	280TC	9.00	10.50	11.25	N/A	0.55	1.875	1/2 X 1/4	0.55
RBQ887	-	18.45	18.45	18.45	19.00	-	320TC	11.00	12.50	14.00	N/A	0.55	2.125	1/2 X 1/4	0.65
RBQ897	-	20.89	20.89	20.89	20.89	22.15	360TC	11.00	12.50	14.00	N/A	0.55	2.375	5/8 X 5/16	0.65
RBQ8107	-	23.19	23.49	23.49	23.49	24.75									

Dimensions subject to change without notice



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

Helical - Inline Triple Reduction Dimensions



Gearcase Size	inch/mm													
	A	AD	B	BA	D	DB	E	F	G	H	J	K	OA	Q
RBQ827	5.72	6.61	6.30	2.95	3.54	1.50	4.33	5.12	0.59	0.39	1.40	0.29	6.68	7.29
	145	168	160	75	90	38	110	130	15	10	35	7	170	185
RBQ837	5.72	6.61	6.30	2.95	3.54	1.50	4.33	5.12	0.59	0.39	1.40	0.29	6.68	7.29
	145	168	160	75	90	38	110	130	15	10	35	7	170	185
RBQ847	7.48	7.93	7.87	3.94	4.53	1.91	5.32	6.50	0.75	0.53	2.18	N/A	8.48	8.40
	190	201	200	100	115	49	135	165	19	14	55	N/A	215	213
RBQ857	7.48	7.93	7.87	3.94	4.53	1.91	5.32	6.50	0.75	0.53	2.18	N/A	8.48	8.40
	190	201	200	100	115	49	135	165	19	14	55	N/A	215	213
RBQ867	8.14	8.50	9.13	3.94	5.12	1.91	5.91	7.68	0.82	0.53	2.39	0.24	9.08	9.44
	207	216	232	100	130	49	150	195	21	14	61	6	231	240
RBQ877	8.66	9.97	9.65	4.53	5.51	1.91	6.69	8.07	0.98	0.69	2.16	N/A	10.47	10.79
	220	253	245	115	140	49	170	205	25	18	55	N/A	266	274
RBQ887	11.34	11.96	12.59	5.51	7.09	2.36	8.47	10.24	1.11	0.75	2.93	N/A	13.04	12.99
	288	304	320	140	180	60	215	260	28	19	74	N/A	331	330
RBQ897	13.42	14.00	14.37	6.30	8.86	2.87	9.84	12.21	1.38	0.91	3.55	0.45	15.84	16.41
	341	356	365	160	225	73	250	310	35	23	90	11	402	417
RBQ8107	15.25	16.08	17.32	7.28	9.84	3.39	11.42	14.57	1.50	1.02	4.00	0.35	16.78	19.00
	387	408	440	185	250	86	290	370	38	26	102	9	426	483

Output Shaft - Inches

Size	U $\pm \frac{0.000}{0.001}$	UY	V	VO	Output Key	M
RBQ827	1.000	1.10	N/A	0.40	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
RBQ837	1.000	1.10	N/A	0.40	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
RBQ847	1.250	1.36	2.36	0.41	1/4 X 1/4 x 1-11/16	3/8-24 x 0.88
RBQ857	1.375	1.51	N/A	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
RBQ867	1.375	1.51	2.76	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
RBQ877	1.625	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
RBQ887	2.125	2.34	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
RBQ897	2.375	2.64	4.72	0.70	5/8 x 5/8 x 3-3/4	3/4-10 x 1.61
RBQ8107	2.875	3.19	5.51	0.67	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61

NEMA Motor Mounting Dimensions - Inches

Size	Dimension "C"			
	56C 140TC	182TC 184TC	250TC	280TC
PBQ717	9.60	-	-	-
RBQ827	10.68*	-	-	-
RBQ837	10.68*	-	-	-
RBQ847	13.06	-	-	-
RBQ857	13.06	-	-	-
RBQ867	14.10	-	-	-
RBQ877	14.97	-	-	-
RBQ887	16.87	17.89	-	-
RBQ897	22.30	22.98	22.98	-
RBQ8107	-	28.34	28.34	28.89

** 56 Only
Dimensions subject to change without notice

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	8.50	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	8.50	N/A	0.50	1.625	3/8 X 3/16	0.53
280TC	9.00	10.50	11.25	N/A	0.55	1.875	1/2 X 1/4	0.55

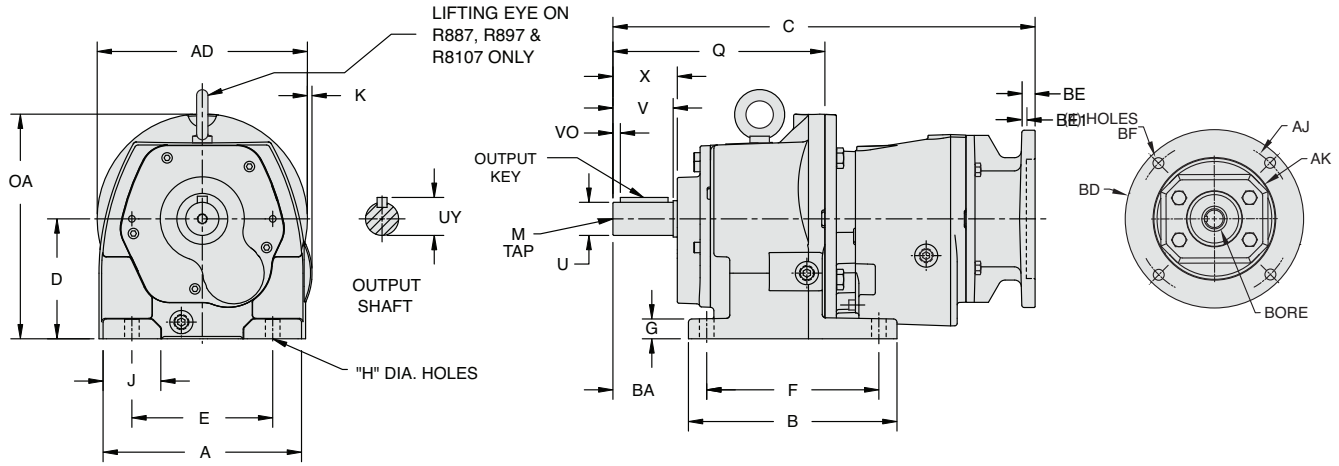


For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.



Helical - Inline Quad Reduction Dimensions

Style RBQ



Gearcase

Size	A	AD	B	BA	D	E	F	G	H	J	K	OA	Q
RBQ857	7.48	7.93	7.87	3.94	4.53	5.32	6.50	0.75	0.53	2.18	N/A	8.48	8.40
	190	201	200	100	115	135	165	19	14	55	N/A	215	213
RBQ867	8.14	8.50	9.13	3.94	5.12	5.91	7.68	0.82	0.53	2.39	0.24	9.08	9.44
	207	216	232	100	130	150	195	21	14	61	6	231	240
RBQ877	8.66	9.97	9.65	4.53	5.51	6.69	8.07	0.98	0.69	2.16	N/A	10.47	10.79
	220	253	245	115	140	170	205	25	18	55	N/A	266	274
RBQ887	11.34	11.96	12.59	5.51	7.09	8.47	10.24	1.11	0.75	2.93	N/A	13.04	12.99
	288	304	320	140	180	215	260	28	19	74	N/A	331	330
RBQ897	13.42	14.00	14.37	6.30	8.86	9.84	12.21	1.38	0.91	3.55	0.45	15.84	16.41
	341	356	365	160	225	250	310	35	23	90	11	402	417
RBQ8107	15.25	16.08	17.32	7.28	9.84	11.42	14.57	1.50	1.02	4.00	0.35	16.78	19.00
	387	408	440	185	250	290	370	38	26	102	9	426	483

Output Shaft - Inches

Size	U ^{+0.000} / _{-0.001}	UY	V	VO	X	Output Key	M
RBQ857	1.375	1.51	N/A	0.44	2.83	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
RBQ867	1.375	1.51	2.76	0.44	2.94	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
RBQ877	1.625	1.78	3.15	0.45	3.27	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
RBQ887	2.125	2.34	3.94	0.64	4.06	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
RBQ897	2.375	2.64	4.72	0.70	4.95	5/8 x 5/8 x 3-3/4	3/4-10 x 1.61
RBQ8107	2.875	3.19	5.51	0.67	5.62	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61

NEMA Motor Mounting Dimensions - Inches

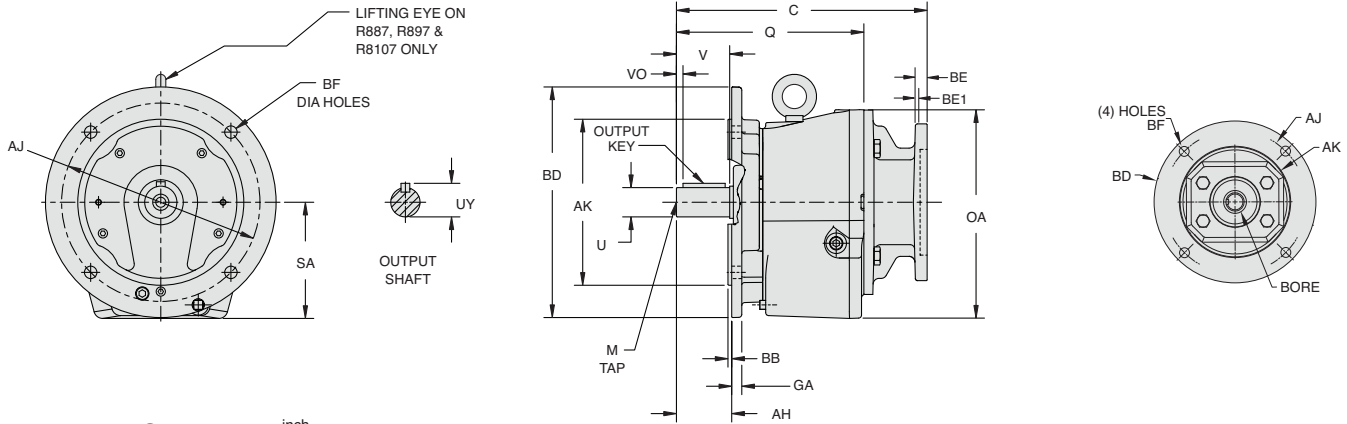
Size	Dimension "C"		Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
	56C	140TC										180TC
RBQ857	16.33	-	56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
RBQ867	17.37	-	140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
RBQ877	19.13	-									
RBQ887	23.99	-									
RBQ897	**	30.93									
RBQ8107	**	33.52									

Dimensions subject to change without notice



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

Helical - Inline Double Reduction Dimensions Style RFQ



Gearcase inch
mm

Size	AH	AJ	AK	BB	BD	BF	GA	OA	Q	SA
RFQ827	1.97	6.50	5.118 ⁺⁰ _{-.002}	0.14	7.90	0.47	0.43	7.22	7.29	4.04
	50	165	130 ^{-.003} _{-.054}	4	200	12	11	183	185	103
RFQ837	1.97	6.50	5.118 ⁺⁰ _{-.002}	0.14	7.90	0.47	0.43	7.22	7.29	4.04
	50	165	130 ^{-.003} _{-.054}	4	200	12	11	183	185	103
RFQ847	2.76	8.46	7.087 ^{-.0004} _{-.0029}	0.16	9.84	0.53	0.43	8.92	8.40	4.96
	70	215	180 ⁺⁰ _{-.064}	4	250	14	11	227	213	126
RFQ857	2.76	8.46	7.087 ^{-.0004} _{-.0029}	0.16	9.84	0.53	0.43	8.92	8.40	4.96
	70	215	180 ⁺⁰ _{-.064}	4	250	14	11	227	213	126
RFQ867	2.76	8.46	7.087 ^{-.0004} _{-.0029}	0.16	9.84	0.53	0.43	9.71	9.44	5.75
	70	215	180 ⁺⁰ _{-.064}	4	250	14	11	247	240	146
RFQ877	3.15	10.43	9.055 ^{+0.0001} _{-.0027}	0.16	11.81	0.53	0.59	10.93	10.79	5.94
	80	265	230 ⁺⁰ _{-.072}	4	300	14	15	278	274	151
RFQ887	3.93	11.81	9.843 ^{-.0005} _{-.0025}	0.20	13.78	0.69	0.70	13.05	12.99	7.08
	100	300	250 ⁺⁰ _{-.051}	5	350	18	18	331	330	180
RFQ897	4.72	15.75	13.780 ^{-.0005} _{-.0032}	0.19	17.74	0.75	1.02	16.42	16.41	9.45
	120	400	350 ⁺⁰ _{-.070}	5	451	19	26	417	417	240
RFQ8107	5.51	15.75	13.780 ^{-.0005} _{-.0032}	0.20	17.72	0.75	1.00	17.98	19.00	11.02
	140	400	350 ⁺⁰ _{-.070}	5	450	19	25.4	457	483	280

Output Shaft - Inches

Size	U ^{+0.000} _{-.001}	UY	V	VO	Output Key	M
RFQ827	1.000	1.10	N/A	0.40	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
RFQ837	1.000	1.10	N/A	0.40	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
RFQ847	1.250	1.36	2.36	0.41	1/4 X 1/4 x 1-11/16	3/8-24 x 0.88
RFQ857	1.375	1.51	N/A	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
RFQ867	1.375	1.51	2.76	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
RFQ877	1.625	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
RFQ887	2.125	2.34	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
RFQ897	2.375	2.64	4.72	0.70	5/8 x 5/8 x 3-3/4	3/4-10 x 1.61
RFQ8107	2.875	3.19	5.51	0.67	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61

NEMA Motor Mounting Dimensions - Inches

Size	Dimension "C"						Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
	56C 140TC	180TC	210TC 215TC	250TC 256TC	280TC 286TC	320TC 360TC									
RFQ827	9.90	-	-	-	-	-	48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
RFQ837	9.90	11.21	-	-	-	-	56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
RFQ847	11.10	12.12	12.12	-	-	-	140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
RFQ857	11.10	12.12	12.12	-	-	-	180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53
RFQ867	12.14	13.16	13.16	-	-	-	210TC	7.25	8.50	8.50	N/A	0.50	1.375	5/16 X 5/32	0.53
RFQ877	14.15	14.83	14.83	14.83	-	-	250TC	7.25	8.50	8.50	N/A	0.50	1.625	3/8 X 3/16	0.53
RFQ887	-	18.45	18.45	18.45	19.00	-	280TC	9.00	10.50	11.25	N/A	0.55	1.875	1/2 X 1/4	0.55
RFQ897	-	20.89	20.89	20.89	20.89	22.15	320TC	11.00	12.50	14.00	N/A	0.55	2.125	1/2 X 1/4	0.65
RFQ8107	-	23.49	23.49	23.49	23.49	24.75	360TC	11.00	12.50	14.00	N/A	0.55	2375	5/8 X 5/16	0.65

Dimensions subject to change without notice



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.



Helical - Inline Triple Reduction Dimensions

Style RFQ

BRAVO® Single Reduction Reducers

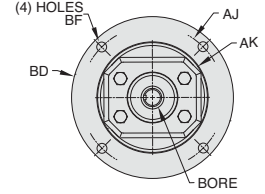
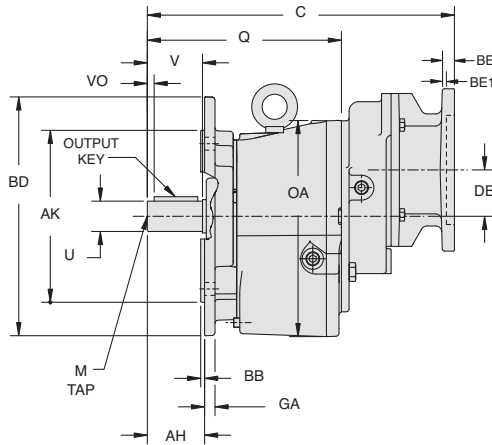
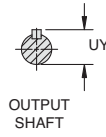
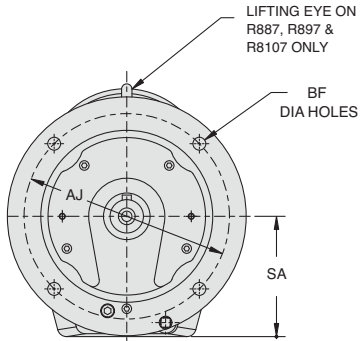
BRAVO® Worm - Worm Double Reduction

BRAVO® Helical - Worm Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline Gear Reducers

High Efficiency Helical - Worm Gear Reducers



Gearcase

Size	AH	AJ	AK	BB	BD	BF	GA	OA	Q	SA	DB
RFQ827	1.97	6.50	5.118 ⁰ / _{-.002}	0.14	7.90	0.47	0.43	7.22	7.29	4.04	1.50
	50	165	130 ^{-.003} / _{-.054}	4	200	12	11	183	185	103	38
RFQ837	1.97	6.50	5.118 ⁰ / _{-.002}	0.14	7.90	0.47	0.43	7.22	7.29	4.04	1.50
	50	165	130 ^{-.003} / _{-.054}	4	200	12	11	183	185	103	38
RFQ847	2.76	8.46	7.087 ^{-.0004} / _{-.0029}	0.16	9.84	0.53	0.43	8.92	8.40	4.96	1.91
	70	215	180 ⁰ / _{-.064}	4	250	14	11	227	213	126	49
RFQ857	2.76	8.46	7.087 ^{-.0004} / _{-.0029}	0.16	9.84	0.53	0.43	8.92	8.40	4.96	1.91
	70	215	180 ⁰ / _{-.064}	4	250	14	11	227	213	126	49
RFQ867	2.76	8.46	7.087 ^{-.0004} / _{-.0029}	0.16	9.84	0.53	0.43	9.71	9.44	5.75	1.91
	70	215	180 ⁰ / _{-.064}	4	250	14	11	247	240	146	49
RFQ877	3.15	10.43	9.055 ^{+.0001} / _{-.0027}	0.16	11.81	0.53	0.59	10.93	10.79	5.94	1.91
	80	265	230 ⁰ / _{-.072}	4	300	14	15	278	274	151	49
RFQ887	3.93	11.81	9.843 ^{-.0005} / _{-.0025}	0.20	13.78	0.69	0.70	13.05	12.99	7.08	2.36
	100	300	250 ^{+.001} / _{-.051}	5	350	18	18	331	330	180	60
RFQ897	4.72	15.75	13.780 ^{-.0005} / _{-.0032}	0.19	17.74	0.75	1.02	16.42	16.41	9.45	2.87
	120	400	350 ⁰ / _{-.070}	5	451	19	26	417	417	240	73
RFQ8107	5.51	15.75	13.780 ^{-.0005} / _{-.0032}	0.20	17.72	0.75	1.00	17.98	19.00	11.02	3.39
	140	400	350 ⁰ / _{-.070}	5	450	19	25.4	457	483	280	86

Output Shaft - Inches

Size	U ^{+0.000} / _{-.001}	UY	V	VO	Output Key	M
RFQ827	1.000	1.10	N/A	0.40	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
RFQ837	1.000	1.10	N/A	0.40	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
RFQ847	1.250	1.36	2.36	0.41	1/4 X 1/4 x 1-11/16	3/8-24 x 0.88
RFQ857	1.375	1.51	N/A	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
RFQ867	1.375	1.51	2.76	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
RFQ877	1.625	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
RFQ887	2.125	2.34	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
RFQ897	2.375	2.64	4.72	0.70	5/8 x 5/8 x 3-3/4	3/4-10 x 1.61
RFQ8107	2.875	3.19	5.51	0.67	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61

NEMA Motor Mounting Dimensions - Inches

Size	Dimension "C"			
	56C 140TC	182TC 184TC	210TC 250TC	280TC
RFQ827	10.68	-	-	-
RFQ837	10.68	-	-	-
RFQ847	13.06	-	-	-
RFQ857	13.06	-	-	-
RFQ867	14.10	-	-	-
RFQ877	14.97	-	-	-
RFQ887	16.87	17.89	-	-
RFQ897	22.30	22.98	22.98	-
RFQ8107	-	28.34	28.34	28.89

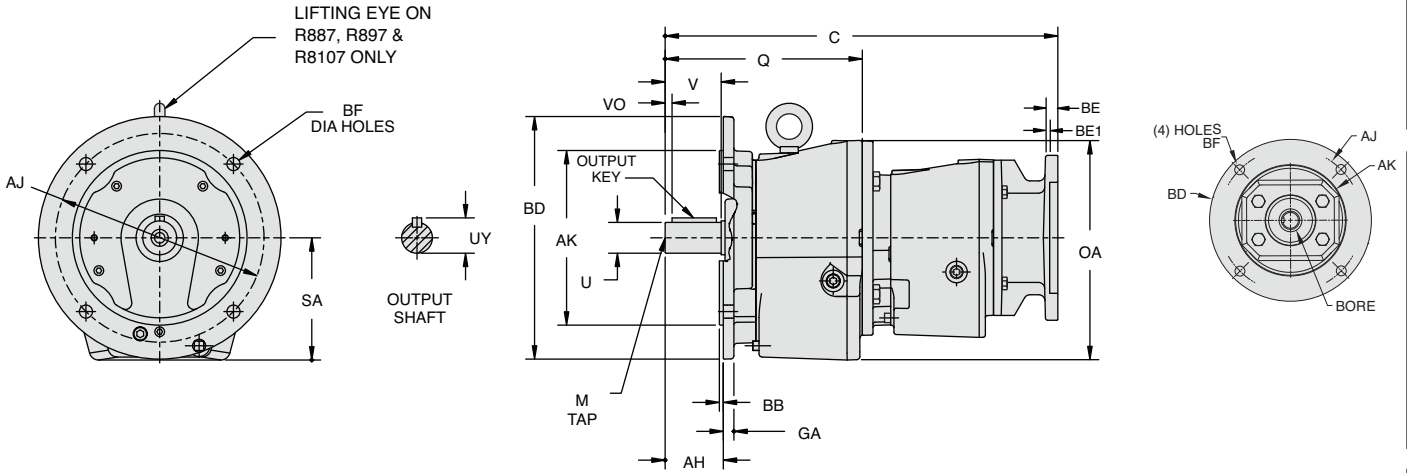
Dimensions subject to change without notice

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	8.50	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	8.50	N/A	0.50	1.625	3/8 X 3/16	0.53
280TC	9.00	10.50	11.25	N/A	0.55	1.875	1/2 X 1/4	0.55
320TC	11.00	12.50	14.00	N/A	0.55	2.125	1/2 X 1/4	0.65
360TC	11.00	12.50	14.00	N/A	0.55	2375	5/8 X 5/16	0.65



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

Helical - Inline Quad Reduction Dimensions Style RFQ



Gearcase inch mm

Size	AH	AJ	AK	BB	BD	BF	GA	OA	Q	SA
RFQ857	2.76	8.46	7.087 ^{-0.004} _{-0.029}	0.16	9.84	0.53	0.43	8.92	8.40	4.96
	70	215	180 ⁺⁰ _{-0.064}	4	250	14	11	227	213	126
RFQ867	2.76	8.46	7.087 ^{-0.004} _{-0.029}	0.16	9.84	0.53	0.43	9.71	9.44	5.75
	70	215	180 ⁺⁰ _{-0.064}	4	250	14	11	247	240	146
RFQ877	3.15	10.43	9.055 ^{+0.001} _{-0.027}	0.16	11.81	0.53	0.59	10.93	10.79	5.94
	80	265	230 ⁺⁰ _{-0.072}	4	300	14	15	278	274	151
RFQ887	3.93	11.81	9.843 ^{-0.005} _{-0.025}	0.20	13.78	0.69	0.70	13.05	12.99	7.08
	100	300	250 ⁺⁰ _{-0.051}	5	350	18	18	331	330	180
RFQ897	4.72	15.75	13.780 ^{-0.005} _{-0.032}	0.19	17.74	0.75	1.02	16.42	16.41	9.45
	120	400	350 ⁺⁰ _{-0.070}	5	451	19	26	417	417	240
RFQ8107	5.51	15.75	13.780 ^{-0.005} _{-0.032}	0.20	17.72	0.75	1.00	17.98	19.00	11.02
	140	400	350 ⁺⁰ _{-0.070}	5	450	19	25.4	457	483	280

Output Shaft - Inches

Size	U ^{+0.000} _{-0.001}	UY	V	VO	X	KEY	M
RFQ857	1.375	1.51	N/A	0.44	2.83	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
RFQ867	1.375	1.51	2.76	0.44	2.94	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
RFQ877	1.625	1.78	3.15	0.45	3.27	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
RFQ887	2.125	2.34	3.94	0.64	4.06	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
RFQ897	2.375	2.64	4.72	0.70	4.95	5/8 x 5/8 x 3-3/4	3/4-10 x 1.61
RFQ8107	2.875	3.19	5.51	0.67	5.62	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61

NEMA Motor Mounting Dimensions - Inches

Size	Dimension "C"	
	56C 140TC	180TC
RFQ857	16.33	-
RFQ867	17.37	-
RFQ877	19.13	-
RFQ887	23.99	-
RFQ897	**	30.93
RFQ8107	**	33.52

Dimensions subject to change without notice

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	8.50	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	8.50	N/A	0.50	1.625	3/8 X 3/16	0.53
280TC	9.00	10.50	11.25	N/A	0.55	1.875	1/2 X 1/4	0.55
320TC	11.00	12.50	14.00	N/A	0.55	2.125	1/2 X 1/4	0.65
360TC	11.00	12.50	14.00	N/A	0.55	2375	5/8 X 5/16	0.65

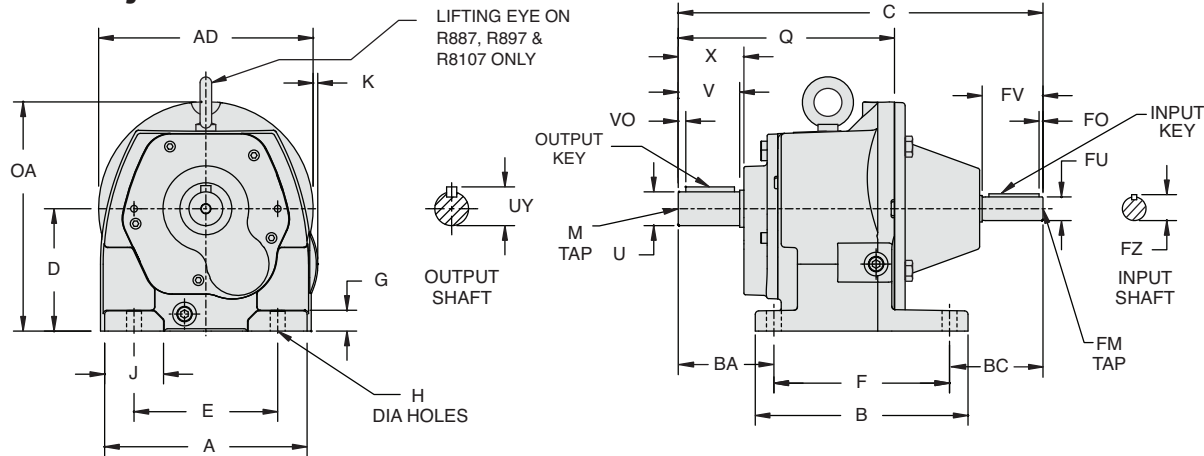


For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.



Helical - Inline Double Reduction Dimensions

Style RBN



Gearcase

Size	inch		mm										
	A	AD	B	BA	D	E	F	G	H	J	K	OA	Q
RBN827	5.72	6.61	6.30	2.95	3.54	4.33	5.12	0.59	0.39	1.40	0.29	6.68	7.29
	145	168	160	75	90	110	130	15	10	35	7	170	185
RBN837	5.72	6.61	6.30	2.95	3.54	4.33	5.12	0.59	0.39	1.40	0.29	6.68	7.29
	145	168	160	75	90	110	130	15	10	35	7	170	185
RBN847	7.48	7.93	7.87	3.94	4.53	5.32	6.50	0.75	0.53	2.18	N/A	8.48	8.40
	190	201	200	100	115	135	165	19	14	55	N/A	215	213
RBN857	7.48	7.93	7.87	3.94	4.53	5.32	6.50	0.75	0.53	2.18	N/A	8.48	8.40
	190	201	200	100	115	135	165	19	14	55	N/A	215	213
RBN867	8.14	8.50	9.13	3.94	5.12	5.91	7.68	0.82	0.53	2.39	0.24	9.08	9.44
	207	216	232	100	130	150	195	21	14	61	6	231	240
RBN877	8.66	9.97	9.65	4.53	5.51	6.69	8.07	0.98	0.69	2.16	N/A	10.47	10.79
	288	304	320	140	180	170	205	25	18	55	N/A	266	274
RBN887	11.34	11.96	12.59	5.51	7.09	8.47	10.24	1.11	0.75	2.93	N/A	13.04	12.99
	288	304	320	140	180	215	260	28	19	74	N/A	331	330
RBN897	13.42	14.00	14.37	6.30	8.86	9.84	12.21	1.38	0.91	3.55	0.40	15.84	16.41
	341	356	365	160	225	250	310	35	23	90	11	402	417
RBN8107	15.25	16.08	17.32	7.28	9.84	11.42	14.57	1.50	1.02	4.00	0.35	16.78	19.00
	387	408	440	185	250	290	370	38	26	102	9	426	483

Output Shaft - Inches

Size	U $\pm \frac{0.000}{0.001}$	UY	V	VO	X	KEY	M
RBN827	1.000	1.10	N/A	0.40	2.12	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
RBN837	1.000	1.10	N/A	0.40	2.12	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
RBN847	1.250	1.36	2.36	0.41	2.43	1/4 x 1/4 x 1-11/16	3/8-24 x 0.088
RBN857	1.375	1.51	N/A	0.44	2.83	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
RBN867	1.375	1.51	2.76	0.44	2.94	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
RBN877	1.625	1.78	3.15	0.45	3.27	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
RBN887	2.125	2.34	3.94	0.64	4.06	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
RBN897	2.375	2.64	4.72	0.70	4.95	5/8 x 5/8 x 3-3/4	3/4-10 x 1.61
RBN8107	2.875	3.19	5.51	0.67	5.62	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61

Input Shaft* - Inches

Size	FU $\pm \frac{0.000}{0.001}$	FZ	FV	FO	KEY	FM
RBN827	0.625	0.69	1.88	0.60	3/16 x 3/16 x 1-1/16	N/A
RBN837	0.75	0.95	2.25	0.25	3/16 x 3/16 x 1-1/16	N/A
RBN847	0.875	0.95	2.25	N/A	3/16 x 3/16 x 2	1/4-20 x 0.75
RBN857	0.875	0.95	2.25	N/A	3/16 x 3/16 x 2	1/4-20 x 0.75
RBN867	0.875	0.95	2.25	N/A	3/16 x 3/16 x 2	1/4-20 x 0.75
RBN877	1.125	1.23	2.63	N/A	1/4 x 1/4 x 2-1/2	3/8-16 x 1.00
RBN887	1.375	1.51	3.15	0.35	5/16 x 5/16 x 2-3/8	1/2-18 x 1.41
RBN897	1.875	2.08	3.75	N/A	1/2 x 1/2 x 3-1/4	5/8-18 x 1.50
RBN8107	1.875	2.08	3.75	N/A	1/2 x 1/2 x 3-1/4	5/8-18 x 1.50

Gearcase/Input

Model	BC	C
RBN827	3.87	11.26
RBN837	3.56	11.63
RBN847	3.45	13.89
RBN857	3.45	13.89
RBN867	3.31	14.93
RBN877	5.04	17.64
RBN887	5.82	21.57
RBN897	6.82	25.33
RBN8107	6.07	27.92

* See Page 444 For Additional Shaft Diameters Available.
Dimensions subject to change without notice

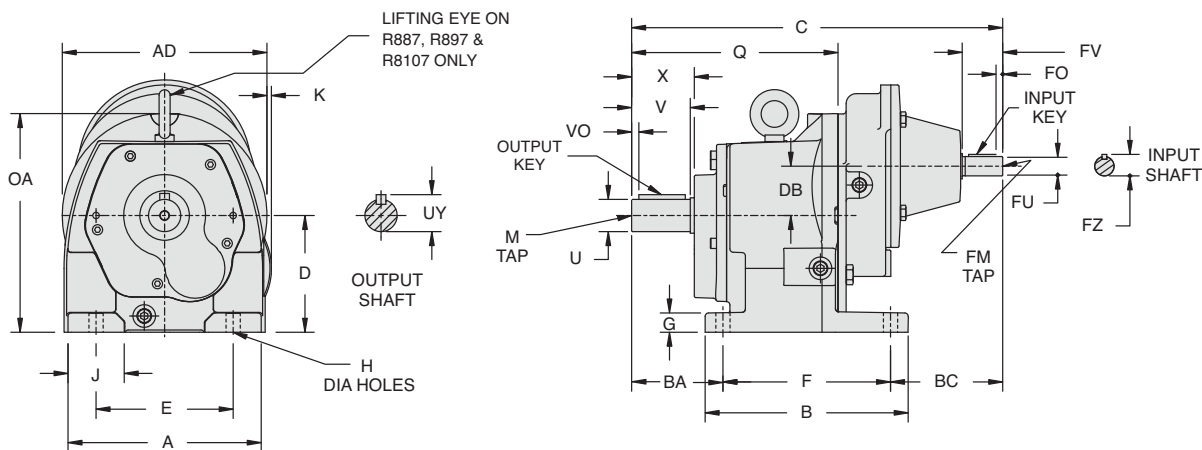


For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

Helical - Inline Triple Reduction Dimensions



Style RBN



Gearcase

Size	A	AD	B	BA	D	DB	E	F	G	H	J	K	OA	Q
RBN827	5.72	6.61	6.30	2.95	3.54	1.50	4.33	5.12	0.59	0.39	1.40	0.29	6.68	7.29
	145	168	160	75	90	38	110	130	15	10	35	7	170	185
RBN837	5.72	6.61	6.30	2.95	3.54	1.50	4.33	5.12	0.59	0.39	1.40	0.29	6.68	7.29
	145	168	160	75	90	38	110	130	15	10	35	7	170	185
RBN847	7.48	7.93	7.87	3.94	4.53	1.91	5.32	6.50	0.75	0.53	2.18	N/A	8.48	8.40
	190	201	200	100	115	49	135	165	19	14	55	N/A	215	213
RBN857	7.48	7.93	7.87	3.94	4.53	1.91	5.32	6.50	0.75	0.53	2.18	N/A	8.48	8.40
	190	201	200	100	115	49	135	165	19	14	55	N/A	215	213
RBN867	8.14	8.50	9.13	3.94	5.12	1.91	5.91	7.68	0.82	0.53	2.39	0.24	9.08	9.44
	207	216	232	100	130	49	150	195	21	14	61	6	231	240
RBN877	8.66	9.97	9.65	4.53	5.51	1.91	6.69	8.07	0.98	0.69	2.16	N/A	10.47	10.79
	220	253	245	115	140	49	170	205	25	18	55	N/A	266	274
RBN887	11.34	11.96	12.59	5.51	7.09	2.36	8.47	10.24	1.11	0.75	2.93	N/A	13.04	12.99
	288	304	320	140	180	60	215	260	28	19	74	N/A	331	330
RBN897	13.42	14.00	14.37	6.30	8.86	2.87	9.84	12.21	1.38	0.91	3.55	0.45	15.84	16.41
	341	356	365	160	225	73	250	310	35	23	90	11	402	417
RBN8107	15.25	16.08	17.32	7.28	9.84	3.39	11.42	14.57	1.50	1.02	4.00	0.35	16.78	19.00
	387	408	440	185	250	86	290	370	38	26	102	9	426	483

Output Shaft - Inches

Size	U ^{+0.000} / _{-0.001}	UY	V	VO	KEY	M
RBN827	1.000	1.10	N/A	0.40	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
RBN837	1.000	1.10	N/A	0.40	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
RBN847	1.250	1.36	2.36	0.41	1/4 X 1/4 x 1-11/16	3/8-24 x 0.88
RBN857	1.375	1.51	N/A	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
RBN867	1.375	1.51	2.76	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
RBN877	1.625	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
RBN887	2.125	2.34	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
RBN897	2.375	2.64	4.72	0.70	5/8 x 5/8 x 3-3/4	3/4-10 x 1.61
RBN8107	2.875	3.19	5.51	0.67	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61

Input Shaft* - Inches

Size	FU ^{+0.000} / _{-0.001}	FZ	FV	FO	KEY	FM
RBN827	0.625	0.69	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
RBN837	0.625	0.69	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
RBN847	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
RBN857	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
RBN867	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
RBN877	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
RBN887	0.875	0.95	2.25	N/A	3/16 x 3/16 x 2	1/4-20 x 0.75
RBN897	1.125	1.23	2.63	N/A	1/4 x 1/4 x 2-1/2	3/8-16 x 1.00
RBN8107	1.375	1.51	3.15	0.35	5/16 x 5/16 x 2-3/8	1/2-13 x 1.41

Gearcase/Input

Model	BC	C
RBN827	4.12	12.12
RBN837	4.12	12.12
RBN847	4.35	14.78
RBN857	4.35	14.78
RBN867	4.21	15.82
RBN877	4.10	16.70
RBN887	3.92	19.66
RBN897	7.29	25.79
RBN8107	9.62	31.46

* See Page 444 For Additional Shaft Diameters Available.

Dimensions subject to change without notice



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

Single Reduction Reducers

Double Reduction

Double Reduction

Accessory Kits

High Efficiency Helical - Inline Gear Reducers

High Efficiency Helical - Worm Gear Reducers

BRAVO®

Worm - Worm

Worm

Accessory Kits

High Efficiency Helical - Inline

High Efficiency Helical - Worm



Helical - Inline Quad Reduction Dimensions

Style RBN

BRAVO®
Single Reduction Reducers

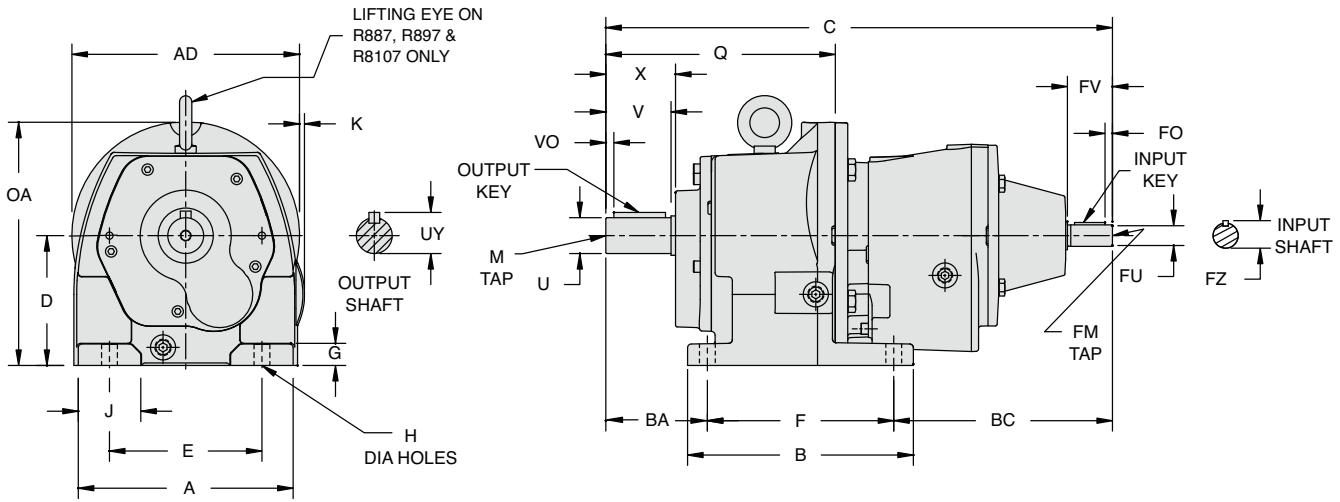
BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



Gearcase $\frac{\text{inch}}{\text{mm}}$

Size	A	AD	B	BA	D	E	F	G	H	J	K	OA	Q
RBN857	7.48	7.93	7.87	3.94	4.53	5.32	6.50	0.75	0.53	2.18	N/A	8.48	8.40
	190	201	200	100	115	135	165	19	14	55	N/A	215	213
RBN867	8.14	8.50	9.13	3.94	5.12	5.91	7.68	0.82	0.53	2.39	0.24	9.08	9.44
	207	216	232	100	130	150	195	21	14	61	6	231	240
RBN877	8.66	9.97	9.65	4.53	5.51	6.69	8.07	0.98	0.69	2.16	N/A	10.47	10.79
	220	253	245	115	140	170	205	25	18	55	N/A	266	274
RBN887	11.34	11.96	12.59	5.51	7.09	8.47	10.24	1.11	0.75	2.93	N/A	13.04	12.99
	288	304	320	140	180	215	260	28	19	74	N/A	331	330
RBN897	13.42	14.00	14.37	6.30	8.86	9.84	12.21	1.38	0.91	3.55	0.45	15.84	16.41
	341	356	365	160	225	250	310	35	23	90	11	402	417
RBN8107	15.25	16.08	17.32	7.28	9.84	11.42	14.57	1.50	1.02	4.00	0.35	16.78	19.00
	387	408	440	185	250	290	370	38	26	102	9	426	483

Output Shaft - Inches

Size	U $\pm \frac{0.000}{0.001}$	UY	V	VO	X	KEY	M
RBN857	1.375	1.51	N/A	0.44	2.83	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
RBN867	1.375	1.51	2.76	0.44	2.94	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
RBN877	1.625	1.78	3.15	0.45	3.27	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
RBN887	2.125	2.34	3.94	0.64	4.06	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
RBN897	2.375	2.64	4.72	0.70	4.95	5/8 x 5/8 x 3-3/4	3/4-10 x 1.61
RBN8107	2.875	3.19	5.51	0.67	5.62	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61

Input Shaft* - Inches

Size	FU $\pm \frac{0.000}{0.001}$	FZ	FV	FO	KEY	FM
RBN857	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
RBN867	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
RBN877	0.875	0.95	2.25	N/A	3/16 x 3/16 x 2	1/4-20 x 0.75
RBN887	1.125	1.23	2.63	N/A	1/4 x 1/4 x 2-1/2	3/8-16 x 1.00
RBN897	1.375	1.51	3.15	0.35	5/16 x 5/16 x 2-3/8	1/2-13 x 1.41
RBN8107	1.375	1.51	3.15	0.35	5/16 x 5/16 x 2-3/8	1/2-13 x 1.41

Gearcase/Input

Model	BC	C
RBN857	7.62	18.06
RBN867	7.48	19.10
RBN877	9.32	21.92
RBN887	11.73	27.48
RBN897	15.54	34.05
RBN8107	14.79	36.64

* See Page 444 For Additional Shaft Diameters Available.
Dimensions subject to change without notice

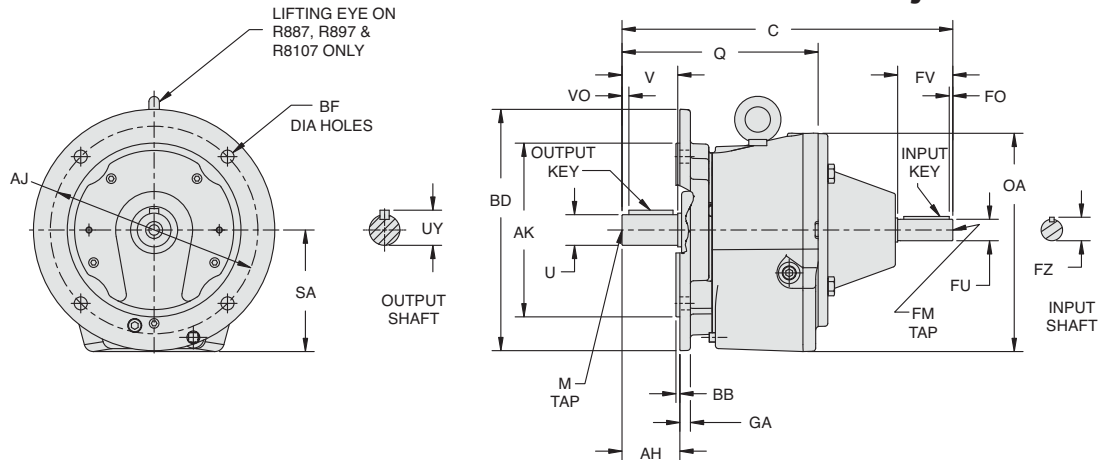


For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

Helical - Inline Double Reduction Dimensions



Style RFN



Gearcase inch
mm

Size	AH	AJ	AK	BB	BD	BF	GA	OA	Q	SA
RFN827	1.97	6.50	5.118 ⁺⁰ / _{-.002}	0.14	7.90	0.47	0.43	7.22	7.29	4.04
	50	165	130 ^{-.003} / _{-.054}	4	200	12	11	183	185	103
RFN837	1.97	6.50	5.118 ⁺⁰ / _{-.002}	0.14	7.90	0.47	0.43	7.22	7.29	4.04
	50	165	130 ^{-.003} / _{-.054}	4	200	12	11	183	185	103
RFN847	2.76	8.46	7.087 ^{-.0004} / _{-.0029}	0.16	9.84	0.53	0.43	8.92	8.40	4.96
	70	215	180 ^{-.064} / ₀	4	250	14	11	227	213	126
RFN857	2.76	8.46	7.087 ^{-.0004} / _{-.0029}	0.16	9.84	0.53	0.43	8.92	8.40	4.96
	70	215	180 ^{-.064} / ₀	4	250	14	11	227	213	126
RFN867	2.76	8.46	7.087 ^{-.0004} / _{-.0029}	0.16	9.84	0.53	0.43	9.71	9.44	5.75
	70	215	180 ^{-.064} / ₀	4	250	14	11	247	240	146
RFN877	3.15	10.43	9.055 ^{-.0001} / _{-.0027}	0.16	11.81	0.53	0.59	10.93	10.79	5.94
	80	265	230 ^{-.072} / ₀	4	300	14	15	278	274	151
RFN887	3.93	11.81	9.843 ^{-.0005} / _{-.0025}	0.20	13.78	0.69	0.70	13.05	12.99	7.08
	100	300	250 ^{-.051} / ₀	5	350	18	18	331	330	180
RFN897	4.72	15.75	13.780 ^{-.0005} / _{-.0032}	0.19	17.74	0.75	1.02	16.42	16.41	9.45
	120	400	350 ^{-.070} / ₀	5	451	19	26	417	417	240
RFN8107	5.51	15.75	13.780 ^{-.0005} / _{-.0032}	0.20	17.72	0.75	1.00	17.98	19.00	11.02
	140	400	350 ^{-.070} / ₀	5	450	19	25.4	457	483	280

Output Shaft - Inches

Size	U ^{+.0000} / _{-.0001}	UY	V	VO	KEY	M
RFN827	1.000	1.10	N/A	0.40	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
RFN837	1.000	1.10	N/A	0.40	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
RFN847	1.250	1.36	2.36	0.41	1/4 X 1/4 x 1-11/16	3/8-24 x 0.88
RFN857	1.375	1.51	N/A	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
RFN867	1.375	1.51	2.76	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
RFN877	1.625	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
RFN887	2.125	2.34	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
RFN897	2.375	2.64	4.72	0.70	5/8 x 5/8 x 3-3/4	3/4-10 x 1.61
RFN8107	2.875	3.19	5.51	0.67	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61

Input Shaft* - Inches

Size	FU ^{+.0000} / _{-.0001}	FZ	FV	FO	KEY	FM
RFN827	0.625	0.69	1.88	0.60	3/16 x 3/16 x 1-1/16	N/A
RFN837	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
RFN847	0.875	0.95	2.25	N/A	3/16 x 3/16 x 2	1/4-20 x 0.75
RFN857	0.875	0.95	2.25	N/A	3/16 x 3/16 x 2	1/4-20 x 0.75
RFN867	0.875	0.95	2.25	N/A	3/16 x 3/16 x 2	1/4-20 x 0.75
RFN877	1.125	1.23	2.63	N/A	1/4 x 1/4 x 2-1/2	3/8-16 x 1.00
RFN887	1.375	1.51	3.15	0.35	5/16 x 5/16 x 2-3/8	1/2-13 x 1.41
RFN897	1.875	2.08	3.75	N/A	1/2 x 1/2 x 3-1/4	5/8-18 x 1.50
RFN8107	1.875	2.08	3.75	N/A	1/2 x 1/2 x 3-1/4	5/8-18 x 1.50

Gearcase/Input

Size	C
RFN827	11.91
RFN837	11.63
RFN847	13.89
RFN857	13.89
RFN867	14.93
RFN877	17.64
RFN887	21.57
RFN897	25.33
RFN8107	27.92

* See Page 444 For Additional Shaft Diameters Available.
Dimensions subject to change without notice

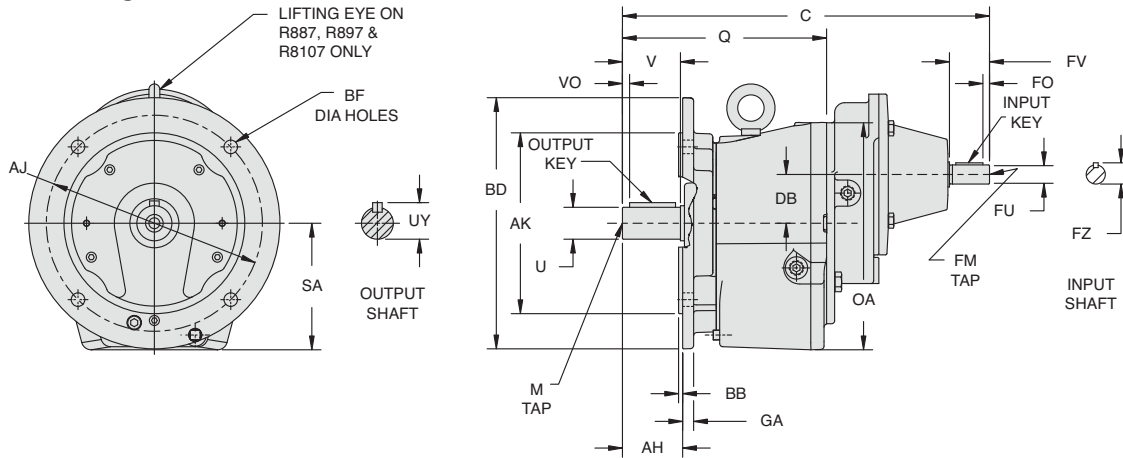


For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.



Helical - Inline Triple Reduction Dimensions

Style RFN



Gearcase $\frac{\text{inch}}{\text{mm}}$

Model	AH	AJ	AK	BB	BD	BF	GA	OA	Q	SA	DB
RFN827	1.97	6.50	5.118 $\begin{smallmatrix} +0 \\ -0.002 \end{smallmatrix}$	0.14	7.90	0.47	0.43	7.22	7.29	4.04	1.50
	50	165	130 $\begin{smallmatrix} +0.003 \\ -0.054 \end{smallmatrix}$	4	200	12	11	183	185	103	38
RFN837	1.97	6.50	5.118 $\begin{smallmatrix} +0 \\ -0.002 \end{smallmatrix}$	0.14	7.90	0.47	0.43	7.22	7.29	4.04	1.50
	50	165	130 $\begin{smallmatrix} +0.003 \\ -0.054 \end{smallmatrix}$	4	200	12	11	183	185	103	38
RFN847	2.76	8.46	7.087 $\begin{smallmatrix} +0.0004 \\ -0.0029 \end{smallmatrix}$	0.16	9.84	0.53	0.43	8.92	8.40	4.96	1.91
	70	215	180 $\begin{smallmatrix} +0 \\ -0.064 \end{smallmatrix}$	4	250	14	11	227	213	126	49
RFN857	2.76	8.46	7.087 $\begin{smallmatrix} +0.0004 \\ -0.0029 \end{smallmatrix}$	0.16	9.84	0.53	0.43	8.92	8.40	4.96	1.91
	70	215	180 $\begin{smallmatrix} +0 \\ -0.064 \end{smallmatrix}$	4	250	14	11	227	213	126	49
RFN867	2.76	8.46	7.087 $\begin{smallmatrix} +0.0004 \\ -0.0029 \end{smallmatrix}$	0.16	9.84	0.53	0.43	9.71	9.44	5.75	1.91
	70	215	180 $\begin{smallmatrix} +0 \\ -0.064 \end{smallmatrix}$	4	250	14	11	247	240	146	49
RFN877	3.15	10.43	9.055 $\begin{smallmatrix} +0.001 \\ -0.0027 \end{smallmatrix}$	0.16	11.81	0.53	0.59	10.93	10.79	5.94	1.91
	80	265	230 $\begin{smallmatrix} +0 \\ -0.072 \end{smallmatrix}$	4	300	14	15	278	274	151	49
RFN887	3.93	11.81	9.843 $\begin{smallmatrix} +0.0005 \\ -0.0025 \end{smallmatrix}$	0.20	13.78	0.69	0.70	13.05	12.99	7.08	2.36
	100	300	250 $\begin{smallmatrix} +0 \\ -0.051 \end{smallmatrix}$	5	350	18	18	331	330	180	60
RFN897	4.72	15.75	13.780 $\begin{smallmatrix} +0.0005 \\ -0.0032 \end{smallmatrix}$	0.19	17.74	0.75	1.02	16.42	16.41	9.45	2.87
	120	400	350 $\begin{smallmatrix} +0 \\ -0.070 \end{smallmatrix}$	5	451	19	26	417	417	240	73
RFN8107	5.51	15.75	13.780 $\begin{smallmatrix} +0.0005 \\ -0.0032 \end{smallmatrix}$	0.20	17.72	0.75	1.00	17.98	19.00	11.02	3.39
	140	400	350 $\begin{smallmatrix} +0 \\ -0.070 \end{smallmatrix}$	5	450	19	25.4	457	483	280	86

Output Shaft - Inches

Model	U $\begin{smallmatrix} +0.000 \\ -0.001 \end{smallmatrix}$	UY	V	VO	KEY	M
RFN827	1.000	1.10	N/A	0.40	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
RFN837	1.000	1.10	N/A	0.40	1/4 x 1/4 x 1-1/2	3/8-24 x 0.91
RFN847	1.250	1.36	2.36	0.41	1/4 X 1/4 x 1-11/16	3/8-24 x 0.88
RFN857	1.375	1.51	N/A	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
RFN867	1.375	1.51	2.76	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
RFN877	1.625	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
RFN887	2.125	2.34	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
RFN897	2.375	2.64	4.72	0.70	5/8 x 5/8 x 3-3/4	3/4-10 x 1.61
RFN8107	2.875	3.19	5.51	0.67	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61

Input Shaft* - Inches

Model	FU $\begin{smallmatrix} +0.000 \\ -0.001 \end{smallmatrix}$	FZ	FV	FO	KEY	FM
RFN827	0.625	0.69	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
RFN837	0.625	0.69	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
RFN847	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
RFN857	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
RFN867	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
RFN877	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
RFN887	0.875	0.95	2.25	N/A	3/16 x 3/16 x 2	1/4-20 x 0.75
RFN897	1.125	1.23	2.63	N/A	1/4 x 1/4 x 2-1/2	3/8-16 x 1.00
RFN8107	1.375	1.51	3.15	0.35	5/16 x 5/16 x 2-3/8	1/2-13 x 1.41

Gearcase/Input

Model	C
RFN827	12.19
RFN837	12.19
RFN847	14.78
RFN857	14.78
RFN867	15.82
RFN877	16.70
RFN887	19.66
RFN897	25.79
RFN8107	31.46

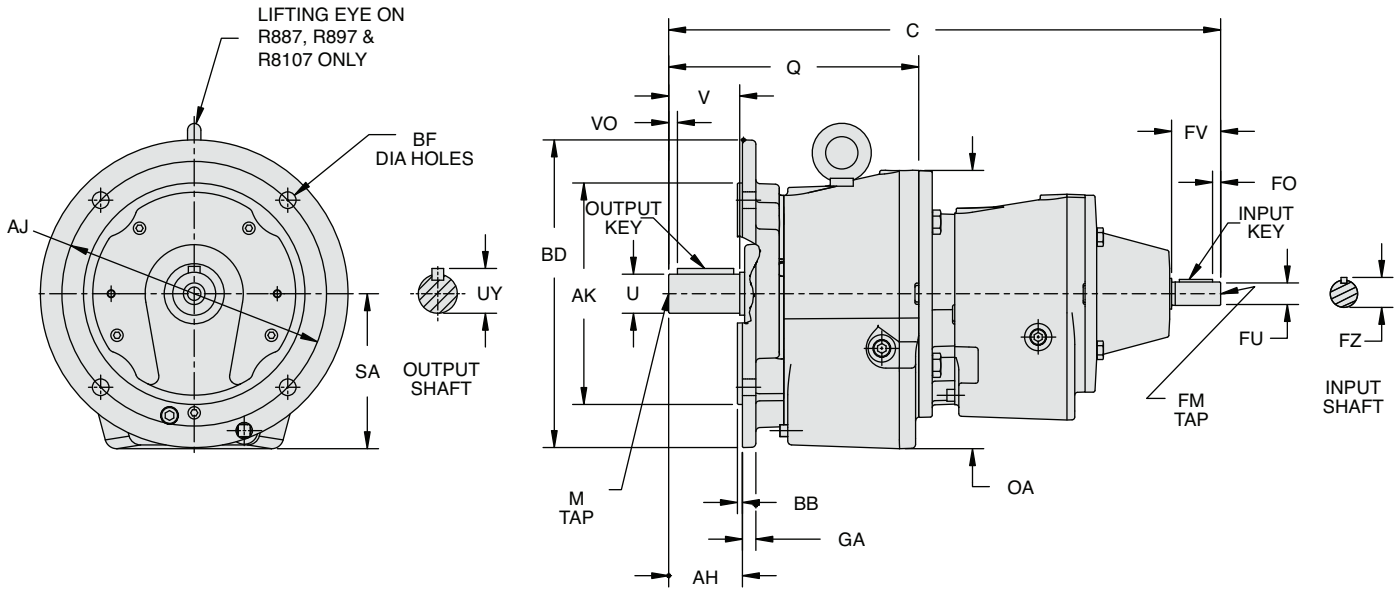
* See Page 444 For Additional Shaft Diameters Available.
Dimensions subject to change without notice



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

Helical - Inline Quad Reduction Dimensions

Style RFN



Gearcase

Size	inch		mm								
	AH	AJ	AK	BB	BD	BF	GA	OA	Q	SA	
RFN857	2.76	8.46	7.087 ^{-0.0004} _{-0.0029}	0.16	9.84	0.53	0.43	8.92	8.40	4.96	
	70	215	180 ⁺⁰ _{-0.064}	4	250	14	11	227	213	126	
RFN867	2.76	8.46	7.087 ^{-0.0004} _{-0.0029}	0.16	9.84	0.53	0.43	9.71	9.44	5.75	
	70	215	180 ⁺⁰ _{-0.064}	4	250	14	11	247	240	146	
RFN877	3.15	10.43	9.055 ^{+0.0001} _{-0.0027}	0.16	11.81	0.53	0.59	10.93	10.79	5.94	
	80	265	230 ⁺⁰ _{-0.072}	4	300	14	15	278	274	151	
RFN887	3.93	11.81	9.843 ^{-0.0005} _{-0.0025}	0.20	13.78	0.69	0.70	13.05	12.99	7.08	
	100	300	250 ⁺⁰ _{-0.051}	5	350	18	18	331	330	180	
RFN897	4.72	15.75	13.780 ^{-0.0005} _{-0.0032}	0.19	17.74	0.75	1.02	16.42	16.41	9.45	
	120	400	350 ⁺⁰ _{-0.070}	5	451	19	26	417	417	240	
RFN8107	5.51	15.75	13.780 ^{-0.0005} _{-0.0032}	0.20	17.72	0.75	1.00	17.98	19.00	11.02	
	140	400	350 ⁺⁰ _{-0.070}	5	450	19	25.4	457	483	280	

Output Shaft - Inches

Size	U ^{+0.000} _{-0.001}	UY	V	VO	KEY	M
RFN857	1.375	1.51	N/A	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
RFN867	1.375	1.51	2.76	0.44	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
RFN877	1.625	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
RFN887	2.125	2.34	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
RFN897	2.375	2.64	4.72	0.70	5/8 x 5/8 x 3-3/4	3/4-10 x 1.61
RFN8107	2.875	3.19	5.51	0.67	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61

Input Shaft* - Inches

Size	FU ^{+0.000} _{-0.001}	FZ	FV	FO	KEY	FM
RFN857	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
RFN867	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
RFN877	0.875	0.95	2.25	N/A	3/16 x 3/16 x 2	1/4-20 x 0.75
RFN887	1.125	1.23	2.63	N/A	1/4 x 1/4 x 2-1/2	3/8-16 x 1.00
RFN897	1.375	1.51	3.15	0.35	5/16 x 5/16 x 2-3/8	1/2-13 x 1.41
RFN8107	1.375	1.51	3.15	0.35	5/16 x 5/16 x 2-3/8	1/2-13 x 1.41

Gearcase/Input

Model	C
RFN857	18.06
RFN867	19.10
RFN877	21.92
RFN887	27.48
RFN897	34.05
RFN8107	36.64

* See Page 444 For Additional Shaft Diameters Available.
Dimensions subject to change without notice



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

Single Reduction Reducers

Double Reduction

Double Reduction

Accessory Kits

High Efficiency Helical - Inline Gear Reducers

High Efficiency Helical - Worm Gear Reducers



Helical - Inline Optional Input Shaft Dimensions

BRAVO®
Single Reduction Reducers

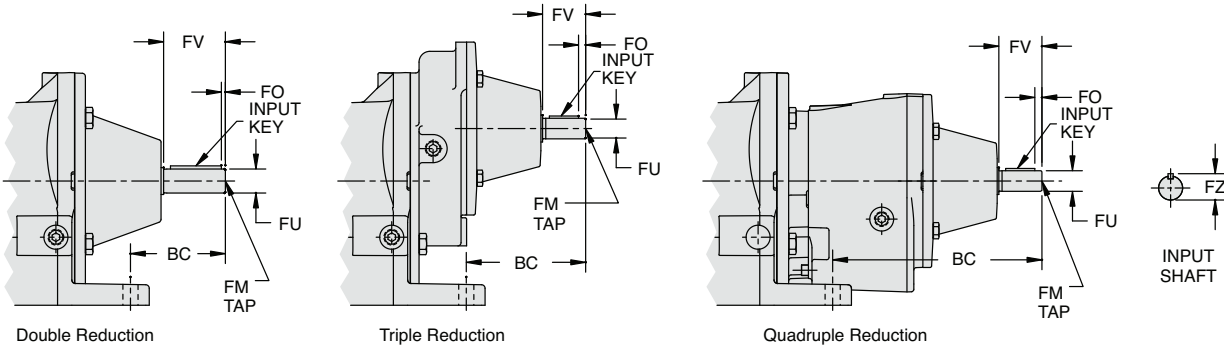
BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



Optional Inch Shafts - Inches

	Series	BC	FU ^{+0.000} _{-0.001}	FZ	FV	FO	KEY	FM
Double Reduction	8372	3.87	0.625	0.69	1.88	0 - 0.60	3/16 x 3/16 x 1-1/16	N/A
	8572	2.78	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
	8672	CONTACT FACTORY						
	8772	4.39	0.875	0.95	1.97	0.28	3/16 X 3/16 X 1-1/4	N/A
	8872	5.04	1.125	1.23	2.36	0.32	1/4 x 1/4 x 1-11/16	3/8-16 x 1.00
	8972	CONTACT FACTORY						
	81072	CONTACT FACTORY						
Triple Reduction	8373	CONTACT FACTORY						
	8573	4.66	0.625	0.69	1.88	0 - 0.60	3/16 x 3/16 x 1-1/16	N/A
	8673	4.52	0.625	0.69	1.88	0 - 0.60	3/16 x 3/16 x 1-1/16	N/A
	8773	4.41	0.625	0.69	1.88	0 - 0.60	3/16 x 3/16 x 1-1/16	N/A
	8873	3.24	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
	8973	6.63	0.875	0.95	1.97	0.28	3/16 X 3/16 X 1-1/4	N/A
	81073	8.83	1.125	1.23	2.36	0.32	1/4 x 1/4 x 1-11/16	3/8-16 x 1.00
Quadruple Reduction	8574	7.93	0.625	0.69	1.88	0 - 0.60	3/16 x 3/16 x 1-1/16	N/A
	8674	7.79	0.625	0.69	1.88	0 - 0.60	3/16 x 3/16 x 1-1/16	N/A
	8774	8.64	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16	N/A
	8874	11.08	0.875	0.95	1.97	0.28	3/16 X 3/16 X 1-1/4	N/A
	8974	14.75	1.125	1.23	2.36	0.32	1/4 x 1/4 x 1-11/16	3/8-16 x 1.00
	81074	14.00	1.125	1.23	2.36	0.32	1/4 x 1/4 x 1-11/16	3/8-16 x 1.00

Optional Metric Shafts - MM

	Series	BC	FU	FZ	FV	FO	KEY	FM
Double Reduction	8372	90	16 ^{+0.008} _{-0.003}	18	40	7	5 x 5 x 20	M5x0.8 x 13
		90	19 ^{+0.014} _{+0.002}	21.5	40	7	6 x 6 x 25	M6x1.0 x 17
	8572	81	24 ^{+0.009} _{-0.004}	27	50	9	8 x 7 x 30	M8x1.25 x 21
	8672	77	24 ^{+0.009} _{-0.004}	27	50	9	8 x 7 x 30	M8x1.25 x 21
	8772	121	28 ^{+0.009} _{-0.004}	31	60	7	8 x 7 x 40	M10x1.5 x 24
	8872	148	38 ^{+0.018} _{+0.002}	41	80	5	10 x 8 x 70	M12x1.75 x 28
	8972	188	48 ^{+0.018} _{+0.002}	51.5	110	5	14 x 9 x 100	M16x2 x 38
	81072	169	48 ^{+0.018} _{+0.002}	51.5	110	5	14 x 9 x 100	M16x2 x 38
Triple Reduction	8373	95	14 ^{+0.008} _{-0.003}	16	30	5	5 x 5 x 20	M5x0.8 x 13
		105	16 ^{+0.008} _{-0.003}	18	40	7	5 x 5 x 20	M5x0.8 x 13
	8573	110	16 ^{+0.008} _{-0.003}	18	40	7	5 x 5 x 20	M5x0.8 x 13
		110	19 ^{+0.014} _{+0.002}	21.5	40	7	6 x 6 x 25	M6x1.0 x 17
	8673	107	16 ^{+0.008} _{-0.003}	18	40	7	5 x 5 x 20	M5x0.8 x 13
		107	19 ^{+0.014} _{+0.002}	21.5	40	7	6 x 6 x 25	M6x1.0 x 17
	8773	104	16 ^{+0.008} _{-0.003}	18	40	7	5 x 5 x 20	M5x0.8 x 13
		104	19 ^{+0.014} _{+0.002}	21.5	40	7	6 x 6 x 25	M6x1.0 x 17
	8873	92	24 ^{+0.009} _{-0.004}	27	50	9	8 x 7 x 30	M8x1.25 x 21
	8973	178	28 ^{+0.009} _{-0.004}	31	60	7	8 x 7 x 40	M10x1.5 x 24
81073	244	38 ^{+0.018} _{+0.002}	41	80	5	10 x 8 x 70	M12x1.75 x 28	
Quadruple Reduction	8574	194	16 ^{+0.008} _{-0.003}	18	40	7	5 x 5 x 20	M5x0.8 x 13
		194	19 ^{+0.014} _{+0.002}	21.5	40	7	6 x 6 x 25	M6x1.0 x 17
	8674	190	16 ^{+0.008} _{-0.003}	18	40	7	5 x 5 x 20	M5x0.8 x 13
		190	19 ^{+0.014} _{+0.002}	21.5	40	7	6 x 6 x 25	M6x1.0 x 17
	8774	230	24 ^{+0.009} _{-0.004}	27	50	9	8 x 7 x 30	M8x1.25 x 21
	8874	291	28 ^{+0.009} _{-0.004}	31	60	7	8 x 7 x 40	M10x1.5 x 24
	8974	395	38 ^{+0.018} _{+0.002}	41	80	5	10 x 8 x 70	M12x1.75 x 28
	81074	376	38 ^{+0.018} _{+0.002}	41	80	5	10 x 8 x 70	M12x1.75 x 28

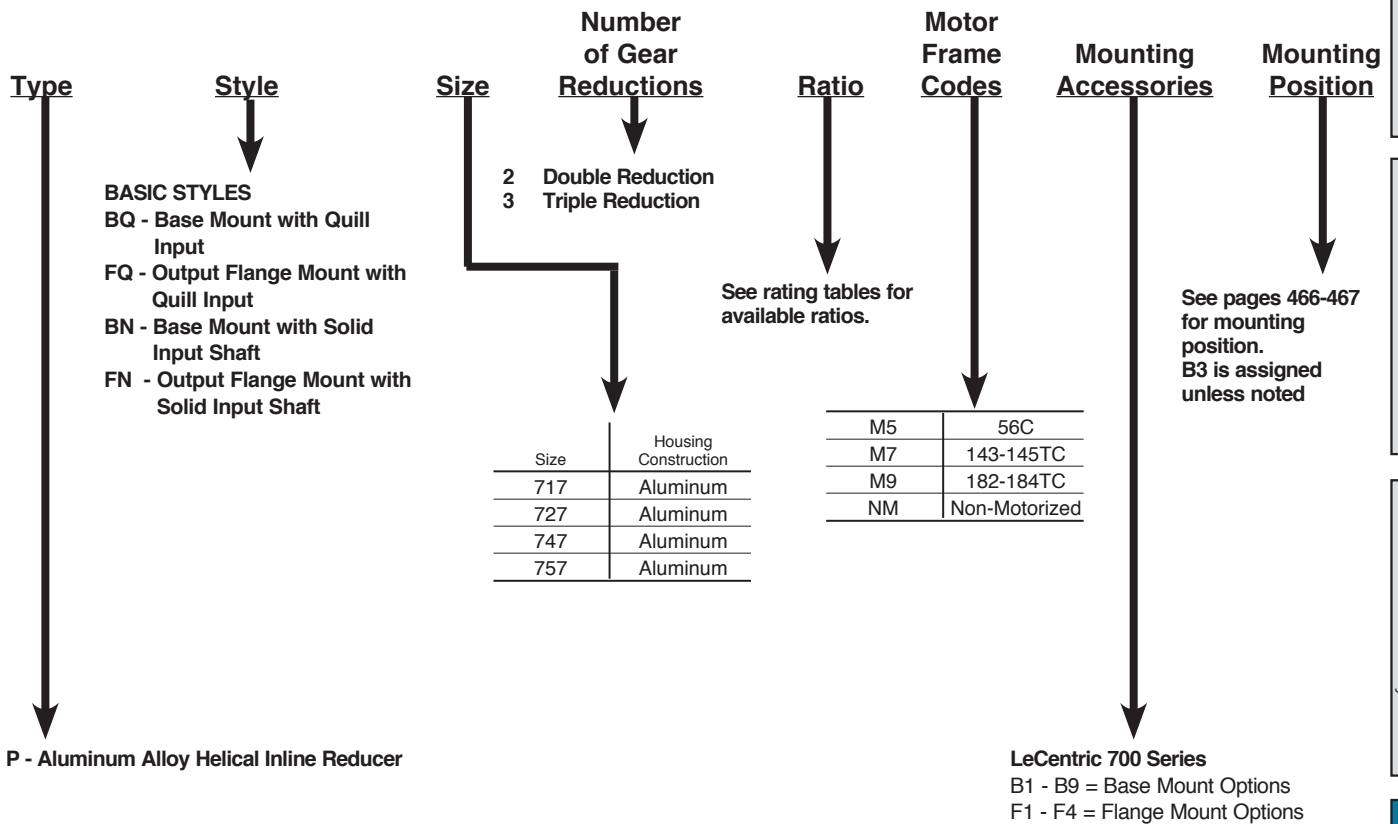
Dimensions subject to change without notice



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

Grove Gear LeCentric Helical-Inline Model Number System

The Mounting position must be specified on all orders, and included in the reducer description. To order Motorized Reducers, simply specify the reducer, indicate the motor description or catalog number and specify "Motorized Assembly". To order GEAR+MOTOR™, simply specify the reducer, motor catalog numbers and "GEAR+MOTOR™".



Sample Model Numbers

Cast iron, size 727 base mount unit with quill input, 35.90:1 ratio, 56C motor frame

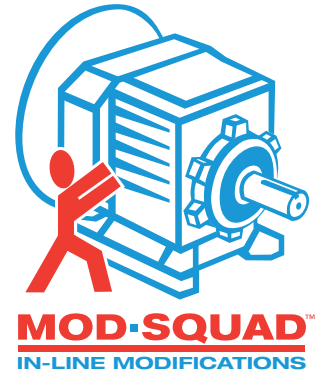
P	-	BQ		727	-	35.90	-	M5	-	B3
Type		Style		Size		Ratio		Motor Frame		Mounting

SPECIFY REDUCER MOUNTING POSITION AT TIME OF ORDER. REFER TO PAGE 466 FOR POSSIBLE MOUNTING POSITIONS. LeCENTRIC REDUCERS WILL BE FACTORY FILLED WITH OIL FOR POSITION B3 UNLESS OTHERWISE SPECIFIED.

Selection Guide**P Series • Helical - Inline • Aluminum Case****Free Mod-Squad™ Service Or Assemble It Yourself!**

Any of the preferred stock 700 Series reducers are available on a quick shipment basis, assembled with an interchange base or output flange by the **Grove Gear Gear Mod-Squad™**—at no charge for the labor! Just pay for the accessory item. To order, specify the basic reducer catalog number and the Mod-Squad™ suffix code. Output flanges are listed on page 462. Interchange bases are listed on pages 460-461.

Or **assemble it yourself** by ordering the appropriate basic reducer and accessory kit (see options below).

**START****CHOOSE**

Select
Basic Reducer
Double or Triple Reduction

Base Mount

OR

Flange Mount



SEE MAX RATINGS PP. 447455

SEE INTERCHANGE BASE P. 460

SEE OUTPUT FLANGE P. 462



"HOW TO USE" Maximum Rating Tables

P Series • Helical - Inline Aluminum Case • 1750 Input RPM

Single Reduction Reducers
BRAVO®

Double Reduction
BRAVO® Worm - Worm

Double Reduction
BRAVO® Helical - Worm

Accessory Kits
BRAVO®

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

How To Use Maximum Rating Tables

Maximum Rating Tables for Double and Triple Reduction Gear Reducers start on page 448. Selection of the appropriate gear reducer can be made using these tables or the Quick Selections on pages 380-416.

BEFORE YOU START:

Identify the Service Factor of the application.

Determine the actual input horsepower of the motor by multiplying the motor's nameplate horsepower by the Service Factor.

Determine the output speed (RPM) required at output shaft of reducer.

Identify the mounting style required by your application from the style chart shown on page 446. Note the different bases and flanges to interchange with various competitive units.

To select the proper gear reducer size, use the Maximum Rating Tables as shown:

BRAVO® Worm - Worm
Double Reduction

Double Reduction Maximum Rating Tables

**P717 Series • Helical - Inline
Aluminum Case • 1750 Input RPM**

BRAVO® Worm - Worm
Double Reduction

1 Find the appropriate Maximum Rating Tables pages for your basic mounting style. The tables begin on page 448.

P7172 • DOUBLE REDUCTION					NON-MOTORIZED		MOTORIZED QUILL INPUT	
Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output OHL (lbs.)	Basic Reducer Catalog Number**	Motor Frame	Basic Reducer Catalog Number**	
503	602	5.00	3.48	204	P7172045.XX	56C 143-5TC	P7172001.XX P7172023.XX	
405	602	4.03	4.32	216	P7172046.XX	56C 143-5TC	P7172002.XX P7172024.XX	
318	602	2.80	5.50	230	P7172047.XX	56C 143-5TC	P7172003.XX P7172025.XX	
275	602	2.74	6.36	250	P7172048.XX	56C 143-5TC	P7172004.XX P7172026.XX	
		2.40	7.26	260	P7172049.XX	56C 143-5TC	P7172005.XX P7172027.XX	
		2.21	7.89	266	P7172050.XX	56C 143-5TC	P7172006.XX P7172028.XX	
		2.30	10.04	284	P7172052.XX			
		1.98	11.64	293	P7172053.XX			
132	798	1.74	13.26	305	P7172054.XX			
				321	P7172055.XX			
		6.20	335		P7172056.XX	56C 143-5TC	P7172012.XX P7172034.XX	
		8.80	350		P7172057.XX	56C 143-5TC	P7172013.XX P7172035.XX	
		11.54	374		P7172058.XX	56C 143-5TC	P7172014.XX P7172036.XX	
		12.26	375		P7172059.XX	56C 143-5TC		

2 Locate output RPM column on left side of the table. All ratings are based on an input speed of 1750 RPM. Scroll down to the output speed (RPM) required. Output speeds are rounded to the nearest whole number. For exact output speed, divide 1750 by the ratio listed.

3 Move across the table to the Input HP column until you find a rating that is equal to or greater than the actual input horsepower required. Once located, check the top of the table to identify the correct gear reducer size (717, 727, 747, 757, etc.).

4 Check load capacities against the needs of your application. Do not exceed the overhung load (OHL) capacity shown in the table. Detailed instructions for calculating the actual overhung load are shown on page 645. If overhung and thrust loads will be applied simultaneously or if the load exceeds listed capacities, contact Factory.

5 Select motor frame size if reducer is to have a motorized input.

6 Identify the catalog number of the reducer by continuing to the right. See page 445 for detailed information on building an exact catalog number. The XX suffix will be replaced with optional Mod-Squad codes as detailed on page 445.

7 Verify physical dimensions using the dimensional drawings shown on pages 456-459.

8 Determine reducer mounting position from page 466.

Double Reduction Maximum Rating Tables

P717 Series • Helical - Inline

Aluminum Case • 1750 Input RPM



P7172 • DOUBLE REDUCTION

					NON-MOTORIZED	MOTORIZED QUILL INPUT	
Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Basic Reducer Catalog Number**	Motor Frame	Basic Reducer Catalog Number**
503	602	5.00	3.48	204	P7172045.XX	56C 143-5TC	P7172001.XX P7172023.XX
405	602	4.03	4.32	216	P7172046.XX	56C 143-5TC	P7172002.XX P7172024.XX
318	602	2.80	5.50	230	P7172047.XX	56C 143-5TC	P7172003.XX P7172025.XX
275	602	2.74	6.36	250	P7172048.XX	56C 143-5TC	P7172004.XX P7172026.XX
241	602	2.40	7.26	260	P7172049.XX	56C 143-5TC	P7172005.XX P7172027.XX
222	602	2.21	7.89	266	P7172050.XX	56C 143-5TC	P7172006.XX P7172028.XX
174	798	2.30	10.04	284	P7172052.XX	56C 143-5TC	P7172008.XX P7172030.XX
150	798	1.98	11.64	293	P7172053.XX	56C 143-5TC	P7172009.XX P7172031.XX
132	798	1.74	13.26	305	P7172054.XX	56C 143-5TC	P7172010.XX P7172032.XX
114	798	1.50	15.37	321	P7172055.XX	56C 143-5TC	P7172011.XX P7172033.XX
108	798	1.40	16.20	335	P7172056.XX	56C 143-5TC	P7172012.XX P7172034.XX
93	798	1.21	18.80	350	P7172057.XX	56C 143-5TC	P7172013.XX P7172035.XX
81	798	1.07	21.54	374	P7172058.XX	56C 143-5TC	P7172014.XX P7172036.XX
79	798	1.04	22.26	375	P7172059.XX	56C 143-5TC	P7172015.XX P7172037.XX
67	798	0.86	26.30	420	P7172060.XX	56C	P7172016.XX
60	798	0.79	29.40	435	P7172061.XX	56C	P7172017.XX
49	798	0.63	35.90	470	P7172062.XX	56C	P7172018.XX
46	798	0.60	38.37	478	P7172063.XX	56C	P7172019.XX
37	798	0.48	46.80	507	P7172064.XX	56C	P7172020.XX
35	798	0.46	50.67	510	P7172065.XX	56C	P7172021.XX
28	798	0.37	61.80	532	P7172066.XX	56C	P7172022.XX

* Overhung load is calculated at centerline of output shaft.

**Catalog numbers are for basic reducer without base or output flange.

IN THIS CATALOG

RPM = Revolutions Per Minute

HP = Horsepower

TQ = Torque (lb-in.)

OHL = Overhung Load In Pounds At Centerline
Of Output Shaft With No Thrust Load.

TL = Thrust Load (lbs.) - Output Shaft

**WHEN ORDERING, SUBSTITUTE THE XX SUFFIX
WITH REQUIRED MOD-SQUAD CODE.
FOR AVAILABLE INTERCHANGE BASE AND OUTPUT
FLANGE CODES SEE PAGES 460-462.**

SELECT REDUCER MOUNTING POSITION ON PAGE 466



Triple Reduction Maximum Rating Tables

**P717 Series • Helical - Inline
Aluminum Case • 1750 Input RPM**



P7173 • TRIPLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED	MOTORIZED QUILL INPUT	
					Basic Reducer Catalog Number**	Motor Frame	Basic Reducer Catalog Number**
52	798	0.71	33.50	459	P7173017.XX	56C	P7173001.XX
46	798	0.62	38.34	478	P7173018.XX	56C	P7173002.XX
40	798	0.55	43.69	495	P7173019.XX	56C	P7173003.XX
35	798	0.47	50.64	510	P7173020.XX	56C	P7173004.XX
33	798	0.44	53.40	520	P7173021.XX	56C	P7173005.XX
29	798	0.39	61.22	525	P7173022.XX	56C	P7173006.XX
28	798	0.38	62.00	532	P7173023.XX	56C	P7173007.XX
25	798	0.34	70.95	540	P7173024.XX	56C	P7173008.XX
24	798	0.32	73.33	540	P7173025.XX	56C	P7173009.XX
23	798	0.31	74.50	540	P7173026.XX	56C	P7173010.XX
20	798	0.27	86.80	540	P7173027.XX	56C	P7173011.XX
18	798	0.25	96.85	540	P7173028.XX	56C	P7173012.XX
17	798	0.23	102.80	540	P7173029.XX	56C	P7173013.XX
15	798	0.20	126.40	540	P7173030.XX	56C	P7173014.XX
13	798	0.18	135.69	540	P7173031.XX	56C	P7173015.XX
10	798	0.14	165.20	540	P7173032.XX	56C	P7173016.XX

*Overhung load is calculated at centerline of output shaft.

**Catalog numbers are for basic reducer without base or output flange.

IN THIS CATALOG

RPM = Revolutions Per Minute
HP = Horsepower
TQ = Torque (lb-in.)
OHL = Overhung Load In Pounds At Centerline Of Output Shaft With No Thrust Load.
TL = Thrust Load (lbs.) - Output Shaft

WHEN ORDERING, SUBSTITUTE THE XX SUFFIX WITH REQUIRED MOD-SQUAD CODE. FOR AVAILABLE INTERCHANGE BASE AND OUTPUT FLANGE CODES SEE PAGES 460-462.

SELECT REDUCER MOUNTING POSITION ON PAGE 466



Double Reduction Maximum Rating Tables

**P727 Series • Helical - Inline
Aluminum Case • 1750 Input RPM**



P7272 • DOUBLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED	MOTORIZED QUILL INPUT	
					Basic Reducer Catalog Number**	Motor Frame	Basic Reducer Catalog Number**
503	708	5.88	3.48	268	P7272045.XX	56C 143-5TC	P7272001.XX P7272023.XX
405	775	5.19	4.32	289	P7272046.XX	56C 143-5TC	P7272002.XX P7272024.XX
318	887	4.67	5.50	350	P7272047.XX	56C 143-5TC	P7272003.XX P7272025.XX
275	949	4.32	6.36	376	P7272048.XX	56C 143-5TC	P7272004.XX P7272026.XX
241	1065	4.24	7.26	391	P7272049.XX	56C 143-5TC	P7272005.XX P7272027.XX
222	1065	3.90	7.89	400	P7272050.XX	56C 143-5TC	P7272006.XX P7272028.XX
174	1190	3.43	10.04	420	P7272052.XX	56C 143-5TC	P7272008.XX P7272030.XX
150	1190	2.96	11.64	445	P7272053.XX	56C 143-5TC	P7272009.XX P7272031.XX
132	1190	2.60	13.26	476	P7272054.XX	56C 143-5TC	P7272010.XX P7272032.XX
114	1190	2.24	15.37	508	P7272055.XX	56C 143-5TC	P7272011.XX P7272033.XX
108	1158	2.03	16.20	520	P7272056.XX	56C 143-5TC	P7272012.XX P7272034.XX
93	1158	1.75	18.80	535	P7272057.XX	56C 143-5TC	P7272013.XX P7272035.XX
81	1190	1.60	21.54	562	P7272058.XX	56C 143-5TC	P7272014.XX P7272036.XX
79	1190	1.55	22.26	562	P7272059.XX	56C 143-5TC	P7272015.XX P7272037.XX
67	1158	1.25	26.30	615	P7272060.XX	56C 143-5TC	P7272016.XX P7272038.XX
60	1190	1.17	29.40	629	P7272061.XX	56C 143-5TC	P7272017.XX P7272039.XX
49	1158	0.92	35.90	660	P7272062.XX	56C	P7272018.XX
46	1127	0.85	38.37	663	P7272063.XX	56C	P7272019.XX
37	1065	0.65	46.80	674	P7272064.XX	56C	P7272020.XX
35	1127	0.64	50.67	674	P7272065.XX	56C	P7272021.XX
28	1065	0.49	61.80	674	P7272066.XX	56C	P7272022.XX

* Overhung load is calculated at centerline of output shaft.

**Catalog numbers are for basic reducer without base or output flange.

IN THIS CATALOG

RPM = Revolutions Per Minute
HP = Horsepower
TQ = Torque (lb-in.)
OHL = Overhung Load In Pounds At Centerline Of Output Shaft With No Thrust Load.
TL = Thrust Load (lbs.) - Output Shaft

WHEN ORDERING, SUBSTITUTE THE XX SUFFIX WITH REQUIRED MOD-SQUAD CODE. FOR AVAILABLE INTERCHANGE BASE AND OUTPUT FLANGE CODES SEE PAGES 460-462.

SELECT REDUCER MOUNTING POSITION ON PAGE 466



Triple Reduction Maximum Rating Tables

P727 Series • Helical - Inline
Aluminum Case • 1750 Input RPM



P7273 • TRIPLE REDUCTION

					NON-MOTORIZED	MOTORIZED QUILL INPUT	
Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Basic Reducer Catalog Number**	Motor Frame	Basic Reducer Catalog Number**
52	1189	1.06	33.50	645	P7273017.XX	56C	P7273001.XX
46	1118	0.87	38.34	663	P7273018.XX	56C	P7273002.XX
40	1189	0.81	43.69	674	P7273019.XX	56C	P7273003.XX
35	1189	0.70	50.64	674	P7273020.XX	56C	P7273004.XX
33	1162	0.64	53.40	674	P7273021.XX	56C	P7273005.XX
29	1189	0.58	61.22	674	P7273022.XX	56C	P7273006.XX
28	1162	0.55	62.00	674	P7273023.XX	56C	P7273007.XX
25	1189	0.50	70.95	674	P7273024.XX	56C	P7273008.XX
24	1118	0.46	73.33	674	P7273025.XX	56C	P7273009.XX
23	1162	0.46	74.50	674	P7273026.XX	56C	P7273010.XX
20	1162	0.39	86.80	674	P7273027.XX	56C	P7273011.XX
18	1189	0.37	96.85	674	P7273028.XX	56C	P7273012.XX
17	1171	0.34	102.80	674	P7273029.XX	56C	P7273013.XX
15	1162	0.29	126.40	674	P7273030.XX	56C	P7273014.XX
13	1189	0.26	135.69	674	P7273031.XX	56C	P7273015.XX
10	1162	0.21	165.20	674	P7273032.XX	56C	P7273016.XX

*Overhung load is calculated at centerline of output shaft.
**Catalog numbers are for basic reducer without base or output flange.

IN THIS CATALOG

RPM = Revolutions Per Minute
HP = Horsepower
TQ = Torque (lb-in.)
OHL = Overhung Load In Pounds At Centerline Of Output Shaft With No Thrust Load.
TL = Thrust Load (lbs.) - Output Shaft

WHEN ORDERING, SUBSTITUTE THE XX SUFFIX WITH REQUIRED MOD-SQUAD CODE. FOR AVAILABLE INTERCHANGE BASE AND OUTPUT FLANGE CODES SEE PAGES 460-462.

SELECT REDUCER MOUNTING POSITION ON PAGE 466



Double and Triple Reduction Maximum Rating Tables

**P747 Series • Helical - Inline
Aluminum Case • 1750 Input RPM**

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



P7472 • DOUBLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	P7472 • DOUBLE REDUCTION		
					NON-MOTORIZED	MOTORIZED QUILL INPUT	
					Basic Reducer Catalog Number**	Motor Frame	Basic Reducer Catalog Number**
485	1473	11.80	3.61	450	P7472058.XX	143-5TC 182-4TC	P7472020.XX P7472039.XX
414	1792	12.27	4.23	474	P7472059.XX	143-5TC 182-4TC	P7472021.XX P7472040.XX
349	2200	12.69	5.01	491	P7472060.XX	143-5TC 182-4TC	P7472022.XX P7472041.XX
288	2200	10.49	6.07	522	P7472061.XX	143-5TC 182-4TC	P7472023.XX P7472042.XX
257	2404	10.22	6.81	540	P7472062.XX	143-5TC 182-4TC	P7472024.XX P7472043.XX
220	2404	8.73	7.96	579	P7472064.XX	143-5TC 182-4TC	P7472026.XX P7472045.XX
185	2502	7.66	9.45	615	P7472065.XX	143-5TC 182-4TC	P7472027.XX P7472046.XX
153	2600	6.58	11.43	658	P7472066.XX	143-5TC 182-4TC	P7472028.XX P7472047.XX
123	2300	4.68	14.21	693	P7472067.XX	143-5TC 182-4TC	P7472029.XX P7472048.XX
105	2502	4.36	16.62	711	P7472068.XX	56C 143-5TC 182-4TC	P7472011.XX P7472030.XX P7472049.XX
87	2502	3.60	20.10	780	P7472069.XX	56C 143-5TC 182-4TC	P7472012.XX P7472031.XX P7472050.XX
70	2300	2.66	24.98	877	P7472070.XX	56C 143-5TC 182-4TC	P7472013.XX P7472032.XX P7472051.XX
60	2502	2.46	29.41	900	P7472071.XX	56C 143-5TC	P7472014.XX P7472033.XX
49	2502	2.03	35.58	922	P7472072.XX	56C 143-5TC	P7472015.XX P7472034.XX
43	2404	1.72	40.50	988	P7472073.XX	56C 143-5TC	P7472016.XX P7472035.XX
40	2300	1.50	44.23	1012	P7472074.XX	56C 143-5TC	P7472017.XX P7472036.XX
36	2404	1.42	49.00	1028	P7472075.XX	56C 143-5TC	P7472018.XX P7472037.XX
29	2200	1.04	60.90	1050	P7472076.XX	56C 143-5TC	P7472019.XX P7472038.XX

* Overhung load is calculated at centerline of output shaft.
**Catalog numbers are for basic reducer without base or output flange.

IN THIS CATALOG

- _____ RPM = Revolutions Per Minute
- _____ HP = Horsepower
- _____ TQ = Torque (lb-in.)
- _____ OHL = Overhung Load In Pounds At Centerline
Of Output Shaft With No Thrust Load.
- _____ TL = Thrust Load (lbs.) - Output Shaft

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FLANGE CODES SEE PAGES 460-462.**

SELECT REDUCER MOUNTING POSITION ON PAGE 466



Triple Reduction Maximum Rating Tables

P747 Series • Helical - Inline Aluminum Case • 1750 Input RPM

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



P7473 • TRIPLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED	MOTORIZED QUILL INPUT	
					Basic Reducer Catalog Number**	Motor Frame	Basic Reducer Catalog Number**
52	2396	2.10	34.01	918	P7473045.XX	56C 143-5TC	P7473001.XX P7473023.XX
44	2396	1.80	39.79	988	P7473046.XX	56C 143-5TC	P7473002.XX P7473024.XX
37	2396	1.51	47.22	1028	P7473047.XX	56C 143-5TC	P7473003.XX P7473025.XX
32	2396	1.31	54.73	1041	P7473048.XX	56C 143-5TC	P7473004.XX P7473026.XX
31	2396	1.25	57.13	1050	P7473049.XX	56C 143-5TC	P7473005.XX P7473027.XX
26	2396	1.08	66.22	1075	P7473050.XX	56C 143-5TC	P7473006.XX P7473028.XX
25	2396	1.01	71.01	1079	P7473051.XX	56C 143-5TC	P7473007.XX P7473029.XX
23	2396	0.93	76.69	1091	P7473052.XX	56C 143-5TC	P7473008.XX P7473030.XX
21	2396	0.87	82.30	1091	P7473053.XX	56C 143-5TC	P7473009.XX P7473031.XX
21	2396	0.86	83.59	1091	P7473054.XX	56C 143-5TC	P7473010.XX P7473032.XX
19	2396	0.77	92.78	1102	P7473055.XX	56C	P7473011.XX
17	2396	0.68	104.68	1112	P7473056.XX	56C	P7473012.XX
15	2396	0.61	117.22	1124	P7473057.XX	56C	P7473013.XX
14	2396	0.56	126.65	1130	P7473058.XX	56C	P7473014.XX
13	2396	0.53	135.74	1136	P7473059.XX	56C	P7473015.XX
12	2396	0.49	145.68	1150	P7473060.XX	56C	P7473016.XX
11	2396	0.45	157.40	1168	P7473061.XX	56C	P7473017.XX
11	2396	0.44	164.23	1186	P7473062.XX	56C	P7473018.XX
9.4	2396	0.39	185.29	1186	P7473063.XX	56C	P7473019.XX
8.6	2396	0.35	204.12	1186	P7473064.XX	56C	P7473020.XX
7.8	2396	0.32	224.18	1195	P7473065.XX	56C	P7473021.XX
6.3	2396	0.26	278.62	1214	P7473066.XX	56C	P7473022.XX

*Overhung load is calculated at centerline of output shaft.
**Catalog numbers are for basic reducer without base or output flange.

IN THIS CATALOG

RPM = Revolutions Per Minute
HP = Horsepower
TQ = Torque (lb-in.)
OHL = Overhung Load In Pounds At Centerline Of Output Shaft With No Thrust Load.
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FLANGE CODES SEE PAGES 460-462.**

SELECT REDUCER MOUNTING POSITION ON PAGE 466

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Double Reduction Maximum Rating Tables

**P757 Series • Helical - Inline
Aluminum Case • 1750 Input RPM**



P7572 • DOUBLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED	MOTORIZED QUILL INPUT	
					Basic Reducer Catalog Number**	Motor Frame	Basic Reducer Catalog Number**
485	1651	13.22	3.61	534	P7572134.XX	143-5TC 182-4TC	P7572058.XX P7572096.XX
414	1932	13.23	4.23	566	P7572135.XX	143-5TC 182-4TC	P7572059.XX P7572097.XX
349	2293	13.23	5.01	603	P7572136.XX	143-5TC 182-4TC	P7572060.XX P7572098.XX
288	2774	13.23	6.07	629	P7572137.XX	143-5TC 182-4TC	P7572061.XX P7572099.XX
257	2860	12.15	6.81	646	P7572138.XX	143-5TC 182-4TC	P7572062.XX P7572100.XX
220	3180	11.55	7.96	663	P7572140.XX	143-5TC 182-4TC	P7572064.XX P7572102.XX
185	3000	9.18	9.45	674	P7572141.XX	143-5TC 182-4TC	P7572065.XX P7572103.XX
153	3442	8.71	11.43	778	P7572142.XX	143-5TC 182-4TC	P7572066.XX P7572104.XX
123	3800	7.73	14.21	850	P7572143.XX	143-5TC 182-4TC	P7572067.XX P7572105.XX
105	3800	6.61	16.62	872	P7572144.XX	143-5TC 182-4TC	P7572068.XX P7572106.XX
87	3800	5.47	20.10	900	P7572145.XX	143-5TC 182-4TC	P7572069.XX P7572107.XX
70	3800	4.40	24.98	944	P7572146.XX	143-5TC 182-4TC	P7572070.XX P7572108.XX
60	3000	2.95	29.41	1012	P7572147.XX	56C 143-5TC	P7572033.XX P7572071.XX
49	3000	2.44	35.58	1079	P7572148.XX	56C 143-5TC	P7572034.XX P7572072.XX
43	2567	1.83	40.50	1192	P7572149.XX	56C 143-5TC	P7572035.XX P7572073.XX
40	2800	1.83	44.23	1304	P7572150.XX	56C 143-5TC	P7572036.XX P7572074.XX
36	2777	1.64	49.00	1330	P7572151.XX	56C 143-5TC	P7572037.XX P7572075.XX
29	2800	1.33	60.90	1367	P7572152.XX	56C 143-5TC	P7572038.XX P7572076.XX

* Overhung load is calculated at centerline of output shaft.
**Catalog numbers are for basic reducer without base or output flange.

IN THIS CATALOG

RPM = Revolutions Per Minute
HP = Horsepower
TQ = Torque (lb-in.)
OHL = Overhung Load In Pounds At Centerline Of Output Shaft With No Thrust Load.
TL = Thrust Load (lbs.) - Output Shaft

WHEN ORDERING, SUBSTITUTE THE XX SUFFIX WITH REQUIRED MOD-SQUAD CODE. FOR AVAILABLE INTERCHANGE BASE AND OUTPUT FLANGE CODES SEE PAGES 460-462.

SELECT REDUCER MOUNTING POSITION ON PAGE 466

BRAVO® Single Reduction Reducers

BRAVO® Worm - Worm Double Reduction

BRAVO® Helical - Worm Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline Gear Reducers

High Efficiency Helical - Worm Gear Reducers



Triple Reduction Maximum Rating Tables

**P757 Series • Helical - Inline
Aluminum Case • 1750 Input RPM**



P7573 • TRIPLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED	MOTORIZED QUILL INPUT	
					Basic Reducer Catalog Number**	Motor Frame	Basic Reducer Catalog Number**
52	3372	2.96	34.01	1060	P7573111.XX	56C 143-5TC	P7573023.XX P7573067.XX
44	3372	2.53	39.79	1192	P7573112.XX	56C 143-5TC	P7573024.XX P7573068.XX
37	3372	2.13	47.22	1330	P7573113.XX	56C 143-5TC	P7573025.XX P7573069.XX
32	3372	1.84	54.73	1354	P7573114.XX	56C 143-5TC	P7573026.XX P7573070.XX
31	3372	1.76	57.13	1354	P7573115.XX	56C 143-5TC	P7573027.XX P7573071.XX
26	3372	1.52	66.22	1398	P7573116.XX	56C 143-5TC	P7573028.XX P7573072.XX
25	3372	1.42	71.01	1398	P7573117.XX	56C 143-5TC	P7573029.XX P7573073.XX
23	3372	1.31	76.69	1414	P7573118.XX	56C 143-5TC	P7573030.XX P7573074.XX
21	3372	1.22	82.30	1422	P7573119.XX	56C 143-5TC	P7573031.XX P7573075.XX
21	3372	1.20	83.59	1422	P7573120.XX	56C 143-5TC	P7573032.XX P7573076.XX
19	3372	1.09	92.78	1430	P7573121.XX	56C 143-5TC	P7573033.XX P7573077.XX
17	3372	0.96	104.68	1454	P7573122.XX	56C 143-5TC	P7573034.XX P7573078.XX
15	3372	0.86	117.22	1461	P7573123.XX	56C 143-5TC	P7573035.XX P7573079.XX
14	3372	0.79	126.65	1468	P7573124.XX	56C	P7573036.XX
13	3372	0.74	135.74	1472	P7573125.XX	56C	P7573037.XX
12	3372	0.69	145.68	1475	P7573126.XX	56C	P7573038.XX
11	3372	0.64	157.40	1492	P7573127.XX	56C	P7573039.XX
11	3372	0.61	164.23	1492	P7573128.XX	56C	P7573040.XX
9.4	3372	0.54	185.29	1498	P7573129.XX	56C	P7573041.XX
8.6	3372	0.49	204.12	1502	P7573130.XX	56C	P7573042.XX
7.8	3372	0.45	224.18	1510	P7573131.XX	56C	P7573043.XX
6.3	3372	0.36	278.62	1510	P7573132.XX	56C	P7573044.XX

*Overhung load is calculated at centerline of output shaft.

**Catalog numbers are for basic reducer without base or output flange.

IN THIS CATALOG

RPM = Revolutions Per Minute
HP = Horsepower
TQ = Torque (lb-in.)
OHL = Overhung Load In Pounds At Centerline Of Output Shaft With No Thrust Load.
TL = Thrust Load (lbs.) - Output Shaft

**WHEN ORDERING, SUBSTITUTE THE XX SUFFIX
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FLANGE CODES SEE PAGES 460-462.**

SELECT REDUCER MOUNTING POSITION ON PAGE 466



Helical - Inline Dimensions

Motorized • Base Mount

BRAVO®
Single Reduction Reducers

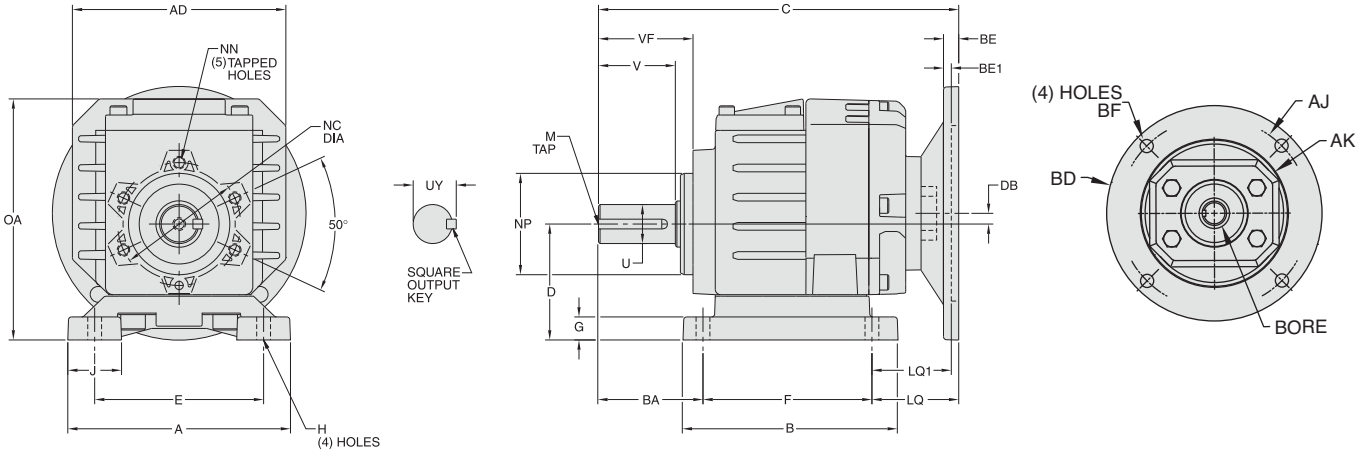
BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



Motorized Quill Input, Double Reduction (B1 Base Mount Shown)

Size	A	AD	B	BA	C		D	DB	E	F	G	H	J	LQ	LQ1	M	
					56/140	180										TAP	DEPTH
P7172	5.71	5.47	5.51	2.28	8.83	NA	2.95	0.27	4.33	4.33	0.59	0.35	1.38	2.23	NA	1/4-20	0.62
P7272	5.71	5.47	6.02	2.95	9.23	NA	3.54	0.27	4.33	5.12	0.79	0.35	1.38	1.16	NA	5/16-18	0.75
P7472	6.69	7.01	7.76	3.54	11.49	12.02	4.53	0.21	5.31	6.50	0.94	0.55	1.65	1.45	1.98	5/16-18	0.75
P7572	6.69	7.95	7.76	3.54	12.20	12.73	4.53	0.61	5.31	6.50	0.94	0.55	1.65	2.16	2.69	5/16-18	0.75

Size	NC	NP	NN		OA	U +0.000/ -0.001	UY	V	VF	Output Key
			TAP	DEPTH						
P7172	3.15	2.60	M8	0.67	6.12	0.750	0.83	1.57	2.02	3/16 x 1.12
P7272	3.15	2.60	M8	0.67	6.71	1.000	1.11	1.97	2.40	1/4 x 1.62
P7472	4.84	4.17	M10	0.71	8.52	1.250	1.36	2.36	2.97	1/4 x 2.00
P7572	4.84	4.17	M10	0.71	8.58	1.250*	1.36	2.36	2.97	1/4 x 2.00

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53

Motorized Quill Input, Triple Reduction (B1 Base Mount Shown)

Size	A	AD	B	BA	C	D	DB	E	F	G	H	J	LQ	M	
														TAP	DEPTH
P7173	5.71	5.47	5.51	2.28	9.60	2.95	0.13	4.33	4.33	0.59	0.35	1.38	2.99	1/4-20	0.62
P7273	5.71	5.47	6.02	2.95	10.00	3.54	0.13	4.33	5.12	0.79	0.35	1.38	1.93	5/16-18	0.75
P7473	6.69	7.01	7.76	3.54	11.83	4.53	0.59	5.31	6.50	0.94	0.55	1.65	1.83	5/16-18	0.75
P7573	6.69	7.95	7.76	3.54	12.55	4.53	0.61	5.31	6.50	0.94	0.55	1.65	2.51	5/16-18	0.75

Size	NC	NP	NN		OA	U +0.000/ -0.001	UY	V	VF	Output Key
			TAP	DEPTH						
P7173	3.15	2.60	M8	0.67	6.12	0.750	0.83	1.57	2.02	3/16 x 1.12
P7273	3.15	2.60	M8	0.67	6.71	1.000	1.11	1.97	2.40	1/4 x 1.62
P7473	4.84	4.17	M10	0.71	8.52	1.250	1.36	2.36	2.97	1/4 x 2.00
P7573	4.84	4.17	M10	0.71	8.58	1.250*	1.36	2.36	2.97	1/4 x 2.00

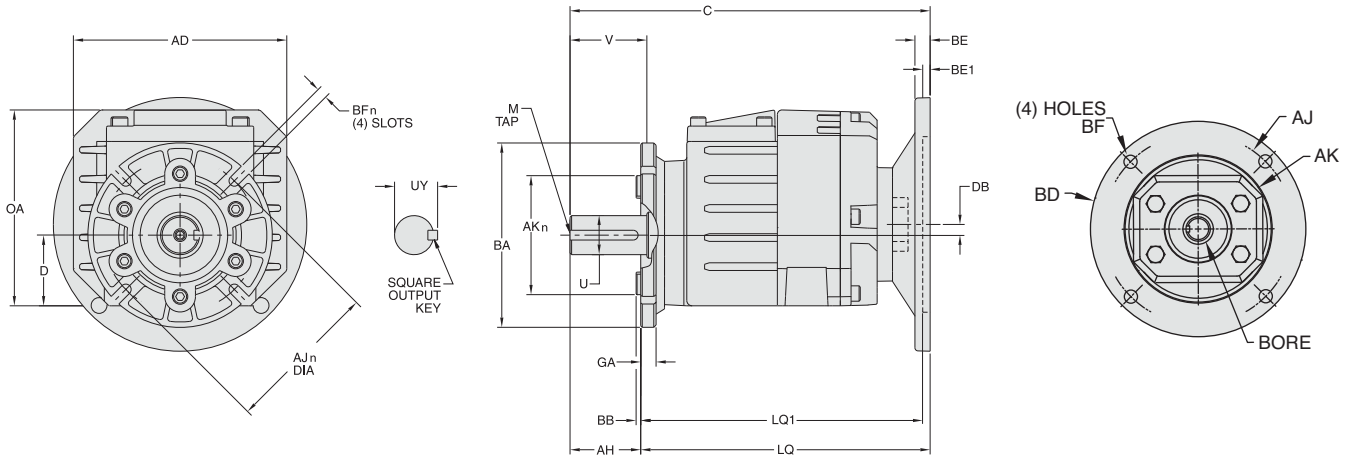
Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41

*.1375" diameter shaft is available. Contact Factory for availability.

B1 Base Mount is shown. See pages 460-461 for all available interchange bases

For NEMA motor mounting dimensions see page 464.

Motorized • Flange Mount



Motorized Quill Input, Double Reduction (F1 Flange Mount Shown)

Size	AD	AH	AJn	AKn	BA	BB	BFn	C		D	DB	GA
P7172	5.47	1.41	3.94	3.15	4.72	0.12	0.28	8.83	N/A	1.81	0.27	0.39
P7272	5.47	1.79	3.94	3.15	4.72	0.12	0.28	9.23	N/A	1.81	0.27	0.39
P7472	7.01	2.24	5.12	4.33	6.30	0.14	0.43	11.49	12.02	2.76	0.21	0.61
P7572	7.95	2.60	5.12	4.33	6.30	0.14	0.43	12.20	12.73	2.76	0.61	0.61

Size	LQ 56C/140TC	LQ1	M TAP	DEPTH	OA	U +0.000/ -0.001	UY	V	Output Key
P7172	7.42	N/A	1/4-20	0.62	5.02	0.750	0.83	1.57	3/16 x 1.12
P7272	7.44	N/A	5/16-18	0.75	5.02	1.000	1.11	1.97	1/4 x 1.62
P7472	9.25	9.78	5/16-18	0.75	6.75	1.250	1.36	2.36	1/4 x 2.00
P7572	10.00	10.53	5/16-18	0.75	6.81	1.250*	1.36	2.36	1/4 x 2.00

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53

Motorized Quill Input, Triple Reduction (F1 Flange Mount Shown)

Size	AD	AH	AJn	AKn	BA	BB	BFn	C	D	DB	GA
P7173	5.47	1.41	3.94	3.15	4.72	0.12	0.28	9.60	1.81	0.13	0.39
P7273	5.47	1.79	3.94	3.15	4.72	0.12	0.28	10.00	1.81	0.13	0.39
P7473	7.01	2.24	5.12	4.33	6.30	0.14	0.43	11.83	2.76	0.59	0.61
P7573	7.95	2.60	5.12	4.33	6.30	0.14	0.43	12.55	2.76	0.61	0.61

Size	LQ 56C/140TC	LQ1	M TAP	DEPTH	OA	U +0.000/ -0.001	UY	V	Output Key
P7173	8.19	N/A	1/4-20	0.62	5.02	0.750	0.83	1.57	3/16 x 1.12
P7273	8.21	N/A	5/16-18	0.75	5.02	1.000	1.11	1.97	1/4 x 1.62
P7473	9.59	9.78	5/16-18	0.75	6.75	1.250	1.36	2.36	1/4 x 2.00
P7573	10.35	10.53	5/16-18	0.75	6.81	1.250*	1.36	2.36	1/4 x 2.00

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41

*1.375" diameter shaft is available. Contact Factory for availability.
 n Tolerance of AK on flanges with BA dimension under 6.30" is -0.0014 to -0.0028".
 Flanges with a BA of 6.30" or larger have a AK tolerance of -0.0017 to -0.0033".

F1 Flange Mount is shown. See page 462 for all available output flanges

For NEMA motor mounting dimensions see page 464.

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

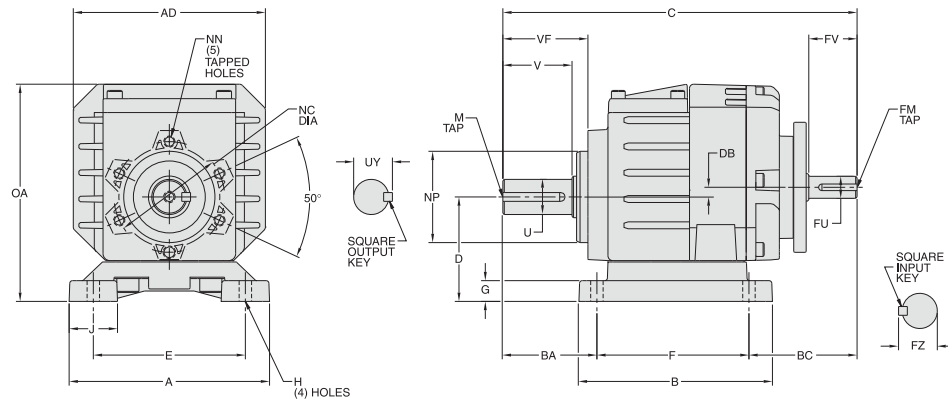
High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



Helical - Inline Dimensions

Non-Motorized • Base Mount



Non-Motorized, Double Reduction (B1 Base Mount Shown)

Size	A	AD	B	BA	BC	C	D	DB	E	F	FM		FU +0.000/ -0.001	FV	FZ	G	H	J
											TAP	DEPTH						
P7172	5.71	5.47	5.51	2.28	3.28	9.88	2.95	0.27	4.33	4.33	1/4-20	0.62	0.625	1.57	0.70	0.59	0.35	1.38
P7272	5.71	5.47	6.02	2.95	2.20	10.26	3.54	0.27	4.33	5.12	1/4-20	0.62	0.625	1.57	0.70	0.79	0.35	1.38
P7472	6.69	7.01	7.76	3.54	2.96	13.00	4.53	0.21	5.31	6.50	5/16-18	0.75	0.750s	1.97	0.83	0.94	0.55	1.65
P7572	6.69	7.95	7.76	3.54	3.63	13.67	4.53	0.61	5.31	6.50	5/16-18	0.75	0.750s	1.97	0.83	0.94	0.55	1.65

Size	M		NC	NN		NP	OA	U +0.000/ -0.001	UY	V	VF	Input Key	Output Key
	TAP	DEPTH		TAP	DEPTH								
P7172	1/4-20	0.62	3.15	M8	0.67	2.60	6.12	0.750	0.83	1.57	2.02	3/16 x 1.12	3/16 x 1.12
P7272	5/16-18	0.75	3.15	M8	0.67	2.60	6.71	1.000	1.11	1.97	2.40	3/16 x 1.12	1/4 x 1.62
P7472	5/16-18	0.75	4.84	M10	0.71	4.17	8.52	1.250	1.36	2.36	2.97	3/16 x 1.50	1/4 x 2.00
P7572	5/16-18	0.75	4.84	M10	0.71	4.17	8.58	1.250*	1.36	2.36	2.97	3/16 x 1.50	1/4 x 2.00

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53

Non-Motorized, Triple Reduction (B1 Base Mount Shown)

Size	A	AD	B	BA	BC	C	D	DB	E	F	FM		FU +0.000/ -0.001	FV	FZ	G	H	J
											TAP	DEPTH						
P7173	5.71	5.47	5.51	2.28	3.45	10.06	2.95	0.13	4.33	4.33	1/4-20	0.62	0.625	1.57	0.70	0.59	0.35	1.38
P7273	5.71	5.47	6.02	2.95	2.38	10.44	3.54	0.13	4.33	5.12	1/4-20	0.62	0.625	1.57	0.70	0.59	0.35	1.38
P7473	6.69	7.01	7.76	3.54	2.88	12.92	4.53	0.59	5.31	6.50	5/16-18	0.75	0.750	1.57	0.83	0.94	0.55	1.65
P7573	6.69	7.95	7.76	3.54	3.56	13.60	4.53	0.61	5.31	6.50	5/16-18	0.75	0.750	1.57	0.83	0.94	0.55	1.65

Size	M		NC	NN		NP	OA	U +0.000/ -0.001	UY	V	VF	Input Key	Output Key
	TAP	DEPTH		TAP	DEPTH								
P7173	1/4-20	0.62	3.15	M8	0.67	2.60	6.12	0.750	0.83	1.57	2.02	3/16 x 1.12	3/16 x 1.12
P7273	5/16-18	0.75	3.15	M8	0.67	2.60	6.71	1.000	1.11	1.97	2.40	3/16 x 1.12	1/4 x 1.62
P7473	5/16-18	0.75	4.84	M10	0.71	4.17	8.52	1.250	1.36	2.36	2.97	3/16 x 1.50	1/4 x 2.00
P7573	5/16-18	0.75	4.84	M10	0.71	4.17	8.58	1.250*	1.36	2.36	2.97	3/16 x 1.50	1/4 x 2.00

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41

* 1.375" diameter shaft is available. Contact Factory for availability.
 s 0.875" diameter shaft is available on 2-stage reducers only. Contact factory for availability.

B1 Base Mount is shown. See pages 460-461 for all available interchange bases

For NEMA motor mounting dimensions see page 464.

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

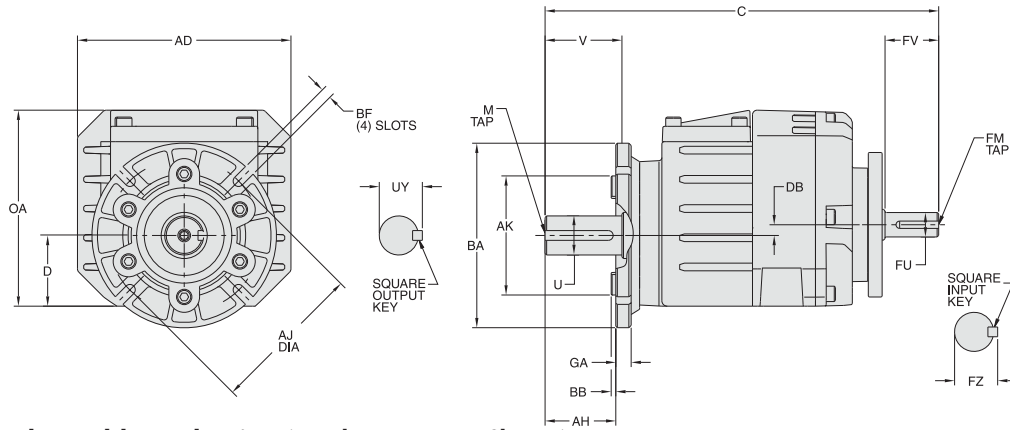
BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

Non-Motorized • Flange Mount



Non-Motorized, Double Reduction (F1 Flange Mount Shown)

Size	AD	AH	AJ	AKn	BA	BB	BF	C	D	DB	FM		FU +0.000/ -0.001	FV	FZ
											TAP	DEPTH			
P7172	5.47	1.41	3.94	3.15	4.72	0.12	0.28	9.88	1.81	0.27	1/4-20	0.62	0.625	1.57	0.70
P7272	5.47	1.79	3.94	3.15	4.72	0.12	0.28	10.26	1.81	0.27	1/4-20	0.62	0.625	1.57	0.70
P7472	7.01	2.24	5.12	4.33	6.30	0.14	0.43	13.00	2.76	0.21	5/16-18	0.75	0.750s	1.97	0.83
P7572	7.95	2.60	5.12	4.33	6.30	0.14	0.43	13.67	2.76	0.61	5/16-18	0.75	0.750s	1.97	0.83

Size	GA	LQ		LQ1 180TC	M		OA	U +0.000/ -0.001	UY	V	Input Key	Output Key
		56C/140TC 2-Stage	3-Stage		TAP	DEPTH						
P7172	0.39	7.42	8.19	N/A	1/4-20	0.62	5.02	0.750	0.83	1.57	3/16 x 1.12	3/16 x 1.12
P7272	0.39	7.44	8.21	N/A	1/4-20	0.62	5.02	1.000	1.11	1.97	3/16 x 1.12	1/4 x 1.62
P7472	0.61	9.25	9.59	9.78	5/16-18	0.75	6.75	1.250	1.36	2.36	3/16 x 1.50	1/4 x 2.00
P7572	0.61	10.00	10.35	10.53	5/16-18	0.75	6.81	1.250*	1.36	2.36	3/16 x 1.50	1/4 x 2.00

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53

Non-Motorized, Triple Reduction (F1 Flange Mount Shown)

Size	AD	AH	AJ	AKn	BA	BB	BF	C	D	DB	FM		FU +0.000/ -0.001	FV	FZ
											TAP	DEPTH			
P7173	5.47	1.41	3.94	3.15	4.72	0.12	0.28	10.06	1.81	0.13	1/4-20	0.62	0.625	1.57	0.70
P7273	5.47	1.79	3.94	3.15	4.72	0.12	0.28	10.44	1.81	0.13	1/4-20	0.62	0.625	1.57	0.70
P7473	7.01	2.24	5.12	4.33	6.30	0.14	0.43	12.92	2.76	0.59	5/16-18	0.75	0.750	1.57	0.83
P7573	7.95	2.60	5.12	4.33	6.30	0.14	0.43	13.60	2.76	0.61	5/16-18	0.75	0.750	1.57	0.83

Size	GA	LQ		LQ1 180TC	M		OA	U +0.000/ -0.001	UY	V	Input Key	Output Key
		56C/140TC 2-Stage	3-Stage		TAP	DEPTH						
P7173	0.39	7.42	8.19	N/A	1/4-20	0.62	5.02	0.750	0.83	1.57	3/16 x 1.12	3/16 x 1.12
P7273	0.39	7.44	8.21	N/A	5/16-18	0.75	5.02	1.000	1.11	1.97	3/16 x 1.12	1/4 x 1.62
P7473	0.61	9.25	9.59	9.78	5/16-18	0.75	6.75	1.250	1.36	2.36	3/16 x 1.50	1/4 x 2.00
P7573	0.61	10.00	10.35	10.53	5/16-18	0.75	6.81	1.250*	1.36	2.36	3/16 x 1.50	1/4 x 2.00

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41

* 1.375" diameter shaft is available. Contact Factory for availability.
s 0.875" diameter shaft is available on 2-stage reducers only. Contact Factory for availability.
n Tolerance of AK on flanges with BA dimension under 6.30" is -0.0014 to -0.0028".
Flanges with a BA of 6.30" or larger have a AK tolerance of -0.0017 to -0.0033".

F1 Flange Mount is shown. See page 462 for all available output flanges

For NEMA motor mounting dimensions see page 464.

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



Helical - Inline Interchange Base Selections

BRAVO®
Single Reduction Reducers

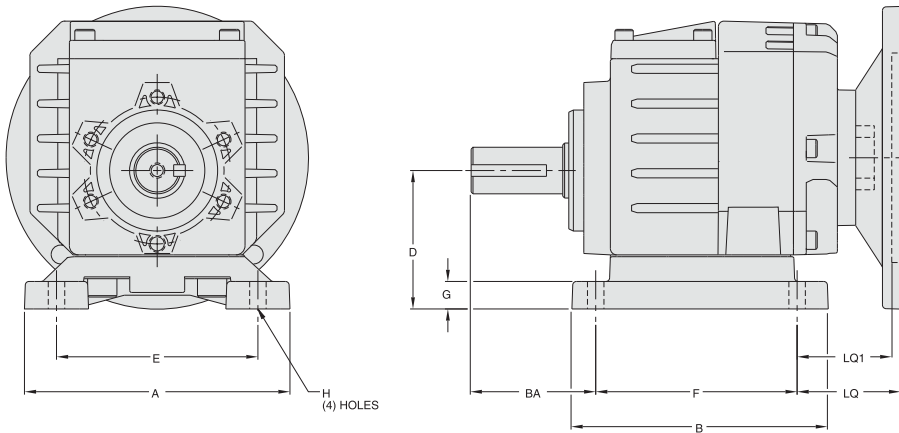
BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



**Base Mounting Dimensions
Motorized Quill Input**

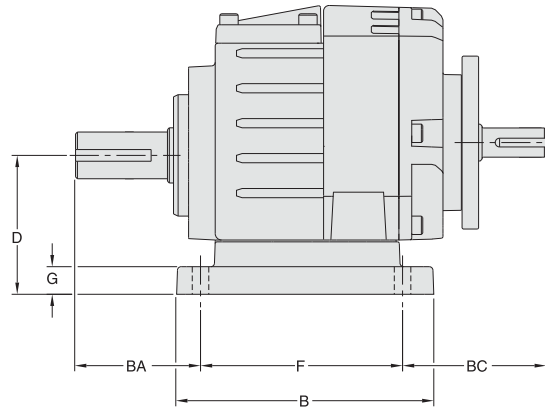
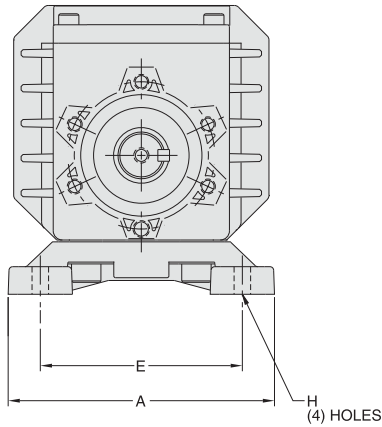
Size 717 • Interchange Base Selections • Mod-Squad Codes • Accessory Kits

Interchange With:	Mod-Squad Suffix Code (XX)	Accessory Kit No.	Critical Interchange Dimensions (Inches)										LQ - 56C/140TC			
			A	B	BA	BC		D	E	F	G	H	2-Stage	3-Stage		
No Base	00	N/A														
SEW R17	B1	G175710	5.71	5.51	2.28	3.28	3.45	2.95	4.33	4.33	0.59	0.35	2.23	2.99		
SEW R32	B1	G175710	5.71	5.51	2.28	4.25	4.43	2.95	4.33	3.35	0.59	0.35	3.20	3.97		
Bonfiglioli C10	B2**	G175711	5.71	5.51	2.28	4.17	4.35	3.35	4.33	3.43	0.99	0.35	3.12	3.89		
Brook Hansen SFN03B	B1	G175710	5.71	5.51	2.28	3.28	3.45	2.95	4.33	3.35	0.59	0.35	2.23	2.99		
Browning CbN20	B1	G175710	5.71	5.51	2.28	3.28	3.45	2.95	4.33	3.35	0.59	0.35	2.23	2.99		
David Brown M03	B1	G175710	5.71	5.51	2.28	3.28	3.45	2.95	4.33	3.35	0.59	0.35	2.23	2.99		
Falk 03UC	B1	G175710	5.71	5.51	2.28	3.28	3.45	2.95	4.33	3.35	0.59	0.35	2.23	2.99		
Grove 2032/3	B1	G175710	5.71	5.51	2.28	3.28	3.45	2.95	4.33	3.35	0.59	0.35	2.23	2.99		
Hansen 0	B1	G175710	5.71	5.51	2.28	3.28	3.45	2.95	4.33	3.35	0.59	0.35	2.23	2.99		
Lenze 4	B3	G175712	5.67	4.41	2.01	4.88	5.06	3.15	4.13	2.99	0.40	0.35	3.83	4.60		
Leroy Somer NXT N20	B1	G175710	5.71	5.51	2.28	3.28	3.45	2.95	4.33	3.35	0.59	0.35	2.23	2.99		
Motovario 032/3	B1	G175710	5.71	5.51	2.28	3.28	3.45	2.95	4.33	3.15	0.59	0.35	2.23	2.99		
Nord SK02	B4	G175713	5.67	4.41	1.97	5.55	5.73	3.39	4.33	2.36	0.64	0.35	4.50	5.27		
Nord SK172	B1	G175710	5.71	5.51	2.28	3.28	3.45	2.95	4.33	4.33	0.59	0.35	2.23	2.99		
Stober C002/3	B5	G175714	5.67	4.41	2.17	5.27	5.45	3.23	4.33	2.44	0.48	0.28	4.22	4.99		
Sumitomo 4085	B6	G175715	5.67	4.41	1.85	5.67	5.85	3.15	4.72	2.36	0.40	0.35	4.62	5.39		

Size 727 • Interchange Base Selections • Mod-Squad Codes • Accessory Kits

Interchange With:	Mod-Squad Suffix Code (XX)	Accessory Kit No.	Critical Interchange Dimensions (Inches)										LQ - 56C/140TC		
			A	B	BA	BC		D	E	F	G	H	2-Stage	3-Stage	
No Base	00	N/A													
SEW R27	B1	G175717	5.71	6.02	2.95	2.20	2.38	3.54	4.33	5.12	0.79	0.35	1.15	2.99	
SEW R37	B1	G175717	5.71	6.02	2.95	2.20	2.38	3.54	4.33	5.12	0.79	0.35	1.15	2.99	
SEW R40	B1	G175717	5.71	6.02	2.95	2.20	2.38	3.54	4.33	5.12	0.79	0.35	1.15	2.99	
Bonfiglioli C20	B2	G175718	6.10	5.35	2.68	3.35	3.53	3.94	5.12	4.23	0.67	0.43	2.32	3.09	
Brook Hansen SFN15B	B1	G175717	5.71	6.02	2.95	2.20	2.38	3.54	4.33	5.12	0.79	0.35	1.15	2.99	
Browning CbN21	B3	G175719	5.31	6.12	2.63	1.13	1.31	3.15	4.33	6.50	0.62	0.35	0.10	0.87	
David Brown M04	B1	G175717	5.71	6.02	2.95	2.20	2.38	3.54	4.33	5.12	0.79	0.35	1.15	2.99	
Dodge Quantis HB38	B1	G175717	5.71	6.02	2.95	2.20	2.38	3.54	4.33	5.12	0.79	0.35	1.15	2.99	
Falk 04UC	B1	G175717	5.71	6.02	2.95	2.20	2.38	3.54	4.33	5.12	0.79	0.35	1.15	2.99	
Flender/Motox D30	B1	G175717	5.71	6.02	2.95	2.20	2.38	3.54	4.33	5.12	0.79	0.35	1.15	2.99	
Grove 2042/3	B1	G175717	5.71	6.02	2.95	2.20	2.38	3.54	4.33	5.12	0.79	0.35	1.15	2.99	
Hansen 1	B3	G175719	5.31	6.12	2.63	1.13	1.31	3.15	4.33	6.50	0.62	0.35	0.10	0.87	
Lenze 5	B4	G175720	7.09	5.47	2.63	4.09	4.27	3.94	4.92	3.54	0.66	0.43	3.06	3.83	
Leroy Somer NXT N21	B3	G175719	5.31	6.12	2.63	1.13	1.31	3.15	4.33	6.50	0.62	0.35	0.10	0.87	
Motovario 042/3	B5	G175721	5.71	5.08	2.95	3.96	4.14	3.15	4.33	3.35	0.59	0.35	2.93	3.70	
Nord SK272	B1	G175717	5.71	5.98	2.95	2.20	2.38	3.54	4.33	5.12	0.71	0.35	1.15	2.99	
Stober C102/3	B7	G175723	7.09	5.47	2.64	4.86	5.04	4.02	5.91	2.76	0.74	0.35	3.83	4.60	
Sumitomo 4097	B8	G175724	7.09	5.47	2.36	4.36	4.54	3.94	5.90	3.54	0.66	0.43	3.33	4.10	

Helical - Inline Interchange Base Selections



**Base Mounting Dimensions
Non-Motorized Input**

Single Reduction Reducers
BRAVO®

Double Reduction
BRAVO® Worm - Worm

Double Reduction
BRAVO® Helical - Worm

Accessory Kits
BRAVO®

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

Size 747 • Interchange Base Selections • Mod-Squad Codes • Accessory Kits

Interchange With:	Mod-Squad Suffix Code (XX)	Accessory Kit No.	Critical Interchange Dimensions (Inches)											LQ - 56C/140TC		LQ1 180TC	
			A	B	BA	BC		D	E	F	G	H	2-Stage	3-Stage			
No Base	00	N/A															
SEW R47	B1	G175725	6.69	7.76	3.54	2.96	2.88	4.53	5.31	6.50	0.94	0.55	1.45	1.83	1.98		
SEW R60	B1	G175725	6.69	7.76	3.54	2.96	2.88	4.53	5.31	6.50	0.94	0.55	1.45	1.83	1.98		
Bonfiglioli C30	B2	G175726	7.48	6.14	3.07	4.83	4.75	4.33	6.30	5.10	0.79	0.43	3.32	3.66	3.85		
Brook Hansen SFN25B	B1	G175725	6.69	7.76	3.54	2.96	2.88	4.53	5.31	6.50	0.94	0.55	1.45	1.83	1.98		
Browning CbN22	B3	G175727	7.52	8.58	3.01	2.43	2.35	3.94	5.31	7.56	0.75	0.55	0.92	1.26	1.45		
David Brown M06	B1	G175725	6.69	7.76	3.54	2.96	2.88	4.53	5.31	6.50	0.94	0.55	1.45	1.83	1.98		
Dodge Quantis HB48	B1	G175725	6.69	7.76	3.54	2.96	2.88	4.53	5.31	6.50	0.94	0.55	1.45	1.83	1.98		
Falk 06UC	B1	G175725	6.69	7.76	3.54	2.96	2.88	4.53	5.31	6.50	0.94	0.55	1.45	1.83	1.98		
Flender/ Motox D40	B1	G175725	6.69	7.76	3.54	2.96	2.88	4.53	5.31	6.50	0.94	0.55	1.45	1.83	1.98		
Grove 2062	B1	G175725	6.69	7.76	3.54	2.96	2.88	4.53	5.31	6.50	0.94	0.55	1.45	1.83	1.98		
Hansen 2	B3	G175727	7.52	8.58	3.01	2.43	2.35	3.94	5.31	7.56	0.75	0.55	0.92	1.26	1.45		
Lenze 6	B4	G175728	7.87	6.59	3.25	5.58	5.50	4.92	6.30	4.17	0.92	0.53	4.07	4.41	4.60		
Leroy Somer NXT N22	B3	G175727	7.52	8.58	3.01	2.43	2.35	3.94	5.31	7.56	0.75	0.55	0.92	1.26	1.45		
Motovario 052	B5	G175729	7.48	5.51	3.54	5.52	5.44	4.33	5.31	3.94	0.71	0.43	4.01	4.35	4.54		
Nord SK22	B6	G175730	7.87	6.59	3.30	6.55	6.47	4.92	6.30	3.15	0.92	0.43	5.04	5.38	5.57		
Nord SK472	B1	G175725	6.69	7.76	3.54	2.96	2.88	4.53	5.31	6.50	0.94	0.55	1.45	1.83	1.98		
Stober C202	B7	G175731	7.87	6.59	3.11	6.54	6.46	4.53	6.69	3.35	0.53	0.43	5.03	5.37	5.56		

Size 757 • Interchange Base Selections • Mod-Squad Codes • Accessory Kits

Interchange With:	Mod-Squad Suffix Code (XX)	Accessory Kit No.	Critical Interchange Dimensions (Inches)											LQ - 56C/140TC		LQ1 180TC	
			A	B	BA	BC		D	E	F	G	H	2-Stage	3-Stage			
No Base	00	N/A															
SEW R57	B1**	G175732	6.69	7.76	3.94	3.63	3.56	4.53	5.31	6.50	0.94	0.55	2.16	2.51	2.69		
SEW R60	B1	G175732	6.69	7.76	3.54	3.63	3.56	4.53	5.31	6.50	0.94	0.55	2.16	2.51	2.69		
Bonfiglioli C30	B2	G175733	7.48	6.14	3.07	5.90	5.97	4.33	6.30	5.10	0.79	0.43	4.43	4.78	4.96		
Bonfiglioli C40	B9	G175740	8.50	7.30	3.54	4.64	4.71	5.12	7.09	5.89	0.71	0.55	3.17	3.52	3.70		
Brook Hansen SFN25B	B1	G175732	6.69	7.76	3.54	3.63	3.56	4.53	5.31	6.50	0.94	0.55	2.16	2.51	2.69		
Browning CbN22	B3	G175734	7.52	8.58	3.01	3.50	3.57	3.94	5.31	7.56	0.75	0.55	2.03	2.38	2.56		
David Brown M06	B1	G175732	6.69	7.76	3.54	3.63	3.56	4.53	5.31	6.50	0.94	0.55	2.16	2.51	2.69		
Dodge Quantis HB48	B1	G175732	6.69	7.76	3.54	3.63	3.56	4.53	5.31	6.50	0.94	0.55	2.16	2.51	2.69		
Falk 06UC	B1	G175732	6.69	7.76	3.54	3.63	3.56	4.53	5.31	6.50	0.94	0.55	2.16	2.51	2.69		
Flender/ Motox D40	B1	G175732	6.69	7.76	3.54	3.63	3.56	4.53	5.31	6.50	0.94	0.55	2.16	2.51	2.69		
Grove 2062	B1	G175732	6.69	7.76	3.54	3.63	3.56	4.53	5.31	6.50	0.94	0.55	2.16	2.51	2.69		
Hansen 2	B3	G175734	7.52	8.58	3.01	3.50	3.57	3.94	5.31	7.56	0.75	0.55	2.03	2.38	2.56		
Lenze 6	B4	G175735	7.87	6.59	3.25	6.65	6.72	4.92	6.30	4.17	0.92	0.53	5.18	5.53	5.71		
Leroy Somer NXT N22	B3	G175734	7.52	8.58	3.01	3.50	3.57	3.94	5.31	7.56	0.75	0.55	2.03	2.38	2.56		
Motovario 052	B5	G175736	7.48	5.51	3.54	6.59	6.66	4.33	5.31	3.94	0.71	0.43	5.12	5.47	5.65		
Nord SK22	B6	G175737	7.97	6.59	3.30	7.62	7.69	4.92	6.30	3.15	0.92	0.43	6.15	6.50	6.68		
Nord SK572	B1**	G175732	6.69	7.76	3.94	3.63	3.56	4.53	5.31	6.50	0.94	0.55	2.16	2.51	2.69		
Stober C202	B7	G175738	7.87	6.59	3.11	7.61	7.68	4.53	6.69	3.35	0.53	0.43	6.14	6.49	6.67		

** Requires optional 1.375" diameter shaft to obtain stated BA dimension. Contact Factory for availability.



Helical - Inline Output Flange Selections

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

Size 717 • Flange Mount • Mod-Squad Codes Accessory Kits

Output Flange Options:	Mod-Squad Suffix Code (XX)	Accessory Kit No.	Critical Interchange Dimensions (Inches)								
			AH	AJ	AK \diamond	BA	BB	BF	GA	LQ	
No Flange	00	N/A								2-Stage	3-Stage
Option 1	F1	G175701	1.41	3.94	3.15	4.72	0.12	0.28	0.39	7.42	8.19
Option 2	F2	G175702	1.41	4.53	3.74	5.51	0.12	0.35	0.39	7.42	8.19
Option 3	F3	G175703	1.41	5.12	4.33	6.30	0.14	0.35	0.39	7.42	8.19
Option 4	F4	G175704	1.41	6.54	5.12	7.87	0.14	0.43	0.43	7.42	8.19

Size 727 • Flange Mount • Mod-Squad Codes Accessory Kits

Output Flange Options:	Mod-Squad Suffix Code (XX)	Accessory Kit No.	Critical Interchange Dimensions (Inches)								
			AH	AJ	AK \diamond	BA	BB	BF	GA	LQ	
No Flange	00	N/A								2-Stage	3-Stage
Option 1	F1	G175701	1.79	3.94	3.15	4.72	0.12	0.28	0.39	7.44	8.21
Option 2	F2	G175702	1.79	4.53	3.74	5.51	0.12	0.35	0.39	7.44	8.21
Option 3	F3	G175703	1.79	5.12	4.33	6.30	0.14	0.35	0.39	7.44	8.21
Option 4	F4	G175704	1.79	6.54	5.12	7.87	0.14	0.43	0.43	7.44	8.21

Size 747 • Flange Mount • Mod-Squad Codes Accessory Kits

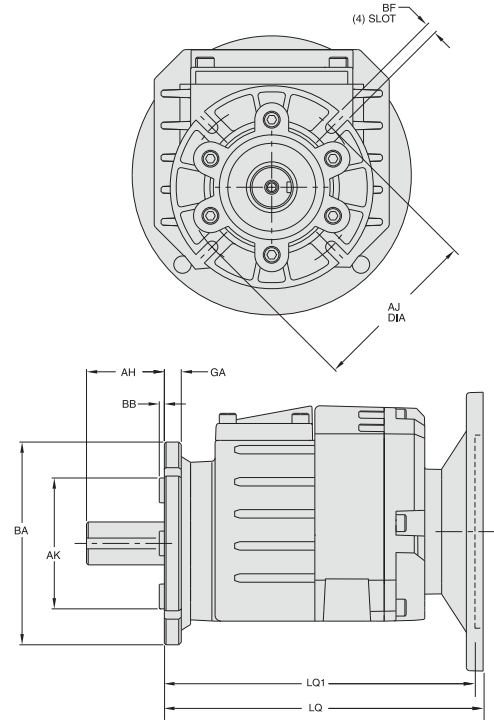
Output Flange Options:	Mod-Squad Suffix Code (XX)	Accessory Kit No.	Critical Interchange Dimensions (Inches)									
			AH	AJ	AK \diamond	BA	BB	BF	GA	LQ		LQ1
No Flange	00	N/A								2-Stage	3-Stage	
Option 1	F1	G175705	2.24	5.12	4.33	6.30	0.14	0.43	0.61	9.25	9.59	9.78
Option 2	F2	G175706	2.30	6.46	5.12	7.87	0.14	0.43	0.51	9.19	9.53	9.72
Option 3	F3	G175707	2.30	8.47	7.09	9.84	0.16	0.55	0.61	9.19	9.53	9.72

Size 757 • Flange Mount • Mod-Squad Codes Accessory Kits

Output Flange Options:	Mod-Squad Suffix Code (XX)	Accessory Kit No.	Critical Interchange Dimensions (Inches)									
			AH	AJ	AK \diamond	BA	BB	BF	GA	LQ		LQ1
No Flange	00	N/A								2-Stage	3-Stage	
Option 1	F1	G175705	2.60	5.12	4.33	6.30	0.14	0.43	0.61	10.00	10.35	10.53
Option 2	F2	G175706	2.66	6.46	5.12	7.87	0.14	0.43	0.51	9.94	10.29	10.47
Option 3	F3	G175707	2.66	8.47	7.09	9.84	0.16	0.55	0.61	9.94	10.29	10.47

\diamond Tolerance of AK on flanges with BA dimension under 6.30" is -0.0014 to -0.0028". Flanges with a BA of 6.30" or larger have a AK tolerance of -0.0017 to -0.0033".

Output Flange Mounting Dimensions



Shipping Weights and Motor Compatibility

R & P Series Helical - Inline



Reducer Weights - Foot Mounted (lbs.)

Unit Size	Solid Input Shaft	NEMA FRAME						
		56C/140TC	180TC	210TC	250TC	280TC	320TC	360TC
P7172	13	13	-	-	-	-	-	-
P7173	14	14	-	-	-	-	-	-
P7472	26	26	28	-	-	-	-	-
P7473	27	27	-	-	-	-	-	-
P7572	33	33	35	-	-	-	-	-
P7573	32	32	-	-	-	-	-	-
R8272	27	28	33	-	-	-	-	-
R8273	33	34	-	-	-	-	-	-
R8372	27	28	33	-	-	-	-	-
R8373	33	34	-	-	-	-	-	-
R8472	46	46	61	61	-	-	-	-
R8473	59	59	-	-	-	-	-	-
R8474	59	61	66	-	-	-	-	-
R8572	46	46	61	61	-	-	-	-
R8573	59	59	-	-	-	-	-	-
R8574	59	61	66	-	-	-	-	-
R8672	70	70	85	85	-	-	-	-
R8673	85	85	-	-	-	-	-	-
R8674	87	88	-	-	-	-	-	-
R8772	92	88	103	103	103	-	-	-
R8773	111	107	-	-	-	-	-	-
R8774	118	118	124	-	-	-	-	-
R8872	142	-	166	166	166	174	-	-
R8873	169	148	168	-	-	-	-	-
R8874	218	-	234	234	-	-	-	-
R8972	241	-	265	265	265	280	-	-
R8973	281	283	325	335	335	350	-	-
R8974	292	-	347	347	-	-	-	-
R81072	380	-	380	380	425	425	455	470
R81073	410	-	410	410	455	455	-	-
R81074	445	-	445	445	480	-	-	-

Reducer Weights - Flange Mounted (lbs.)

Unit Size	Solid Input Shaft	NEMA FRAME						
		56C/140TC	180TC	210TC	250TC	280TC	320TC	360TC
P7172	12	12	-	-	-	-	-	-
P7173	13	13	-	-	-	-	-	-
P7472	26	26	28	-	-	-	-	-
P7473	27	27	-	-	-	-	-	-
P7572	33	33	35	-	-	-	-	-
P7573	32	32	-	-	-	-	-	-
R8272	29	30	35	-	-	-	-	-
R8273	35	36	-	-	-	-	-	-
R8372	29	30	35	-	-	-	-	-
R8373	35	36	-	-	-	-	-	-
R8472	51	51	66	66	-	-	-	-
R8473	64	64	-	-	-	-	-	-
R8474	64	66	71	-	-	-	-	-
R8572	51	51	66	66	-	-	-	-
R8573	64	64	-	-	-	-	-	-
R8574	64	66	71	-	-	-	-	-
R8672	80	80	95	95	-	-	-	-
R8673	95	95	-	-	-	-	-	-
R8674	97	98	-	-	-	-	-	-
R8772	105	101	116	116	116	-	-	-
R8773	124	120	-	-	-	-	-	-
R8774	131	131	137	-	-	-	-	-
R8872	167	-	191	191	191	199	-	-
R8873	194	173	193	-	-	-	-	-
R8874	243	-	259	259	-	-	-	-
R8972	281	-	305	305	305	320	-	-
R8973	316	318	360	370	370	385	-	-
R8974	327	-	382	382	-	-	-	-
R81072	398	-	398	398	443	443	473	488
R81073	428	-	428	428	473	473	-	-
R81074	463	-	463	463	498	-	-	-

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

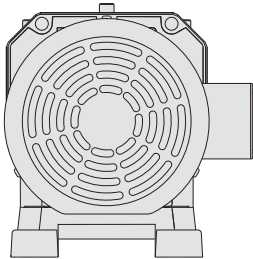
Available Motor Frames

Reducer Size	# of Stages	56C	143-5TC	182-4TC
717	2-Stage	X	X	
	3-Stage	X		
727	2-Stage	X	X	
	3-Stage	X		
747	2-Stage	X	X	X
	3-Stage	X	X	
757	2-Stage	X	X	X
	3-Stage	X	X	

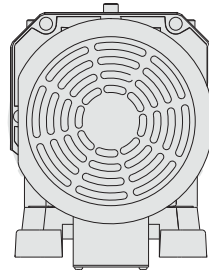
Motor Mounting Position

Conduit box position viewed from input side of reducer.

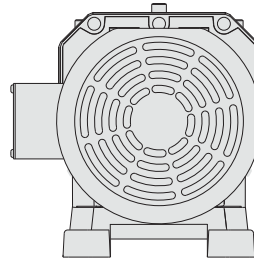
STANDARD MOUNTING POSITION



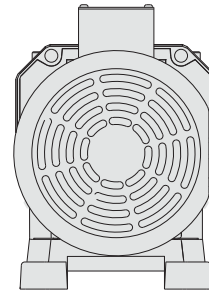
1 Conduit box horizontal on right side.



2 Conduit box vertical on bottom side.



3 Conduit box horizontal on left side.



4 Conduit box vertical on top side.

Overhung LoadS and Thrust Loads

An overhung load exists when a force is applied at right angles to a shaft beyond the shaft's outermost bearing. Pulleys, sheaves and sprockets will cause an overhung load when used as a power take-off. The amount of overhung load will vary, depending on the type of power take-off used and its mounting location on the shaft. The LeCentric™ overhung load ratings listed in this catalog and in selection tables are calculated at the centerline of the shaft.

Overhung load ratings are listed for each reducer size and should not be exceeded. If the basic reducer is selected using a service factor, that factor must also be used in the equations below.

Output Shaft OHL =

$$\frac{126000 \times \text{Input HP} \times \text{Overhung Load Factor} \times \text{Efficiency}}{\text{Pitch Diameter (of sprocket, pulley or sheave)} \times \text{Output RPM}}$$

Input Shaft OHL =

$$\frac{126000 \times \text{Input HP} \times \text{Overhung Load Factor}}{\text{Pitch Diameter (of sprocket, pulley or sheave)} \times \text{Input RPM}}$$

Overhung Load Factors—

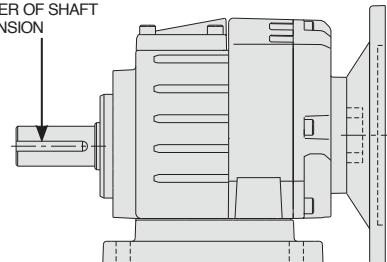
Sprocket	1.00
Gear Pinion	1.25
V-Belt Sheave or Pulley	1.50
Flat Belt	2.50

Maximum Overhung Load Capacities

External Load Applied	Drive Size				
	717	727	747	757	
Input Shaft OHL (lbs.)	2-Stage	112	112	180	180
	3-Stage	100	100	135	135
Output Shaft OHL (lbs.)	Refer to Selection Tables for overhung load variable by output RPM.				

NOTE: The overhung load capacities in the catalog are calculated at centerline of shaft extension with no thrust load.

OVERHUNG LOAD AT
CENTER OF SHAFT
EXTENSION



Available Input and Output Shafts

Output Shaft Options

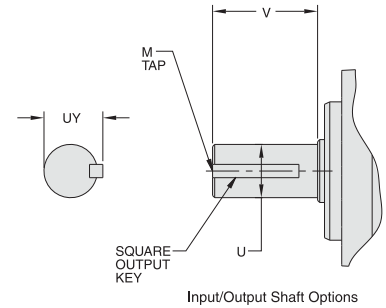
Reducer Size	U +0.000/ -0.001	UY	V	KEY	M	
					TAP	DEPTH
717	0.750	0.83	1.57	3/16 x 1.12 SQ	1/4-20	0.62
727	1.000	1.11	1.97	1/4 x 1.62 SQ	5/16-18	0.75
747	1.250	1.36	2.36	1/4 x 2.00 SQ	5/16-18	0.75
757	1.250	1.36	2.36	1/4 x 2.00 SQ	5/16-18	0.75
	1.375**	1.51	2.76	5/16 x 2.25 SQ	3/8-16	0.88

**Optional size. Contact factory for availability. The standard shaft diameters are shown in dimensional pages.

Input Shaft Options

Reducer Size	U +0.000/ -0.001	UY	V	KEY	M	
					TAP	DEPTH
717	0.625	0.70	1.57	3/16 x 1.12	1/4-20	0.62
727	0.625	0.70	1.57	3/16 x 1.12	1/4-20	0.62
747	0.750	0.83	1.97	3/16 x 1.50	5/16-18	0.75
	0.875**					
757	0.750	0.83	1.97	3/16 x 1.50	5/16-18	0.75
	0.875**					

**Optional size for 2 stage ratios only. Contact factory for availability.
The standard shaft diameters are shown in dimensional pages.



BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



Helical - Inline Mounting Positions

BRAVO®
Single Reduction Reducers

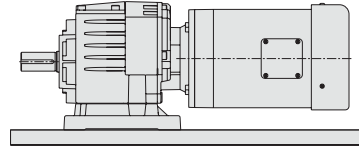
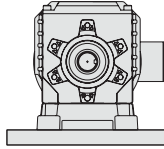
BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

REDUCER MOUNTING POSITIONS

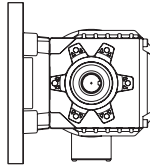
Carefully follow lubrication instructions and installation manuals furnished with the gear reducer. All standard LeCENTRIC™ Inline Reducers are factory filled with Mobil Glygoyle 460 Polyglycol lubricant. The mounting position is stamped on all LeCENTRIC™ Reducer nameplates. Position H3 is standard. Specify mounting position of reducer for correct oil fill. Positions B3-B8 are horizontal mounts. Positions V5 and V6 are vertical mounts.

B3 (Standard Position)

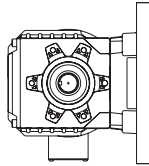


Standard mounting position is B3. All reducers will be filled to this level, unless otherwise specified.

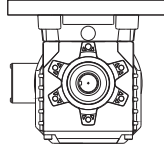
B6



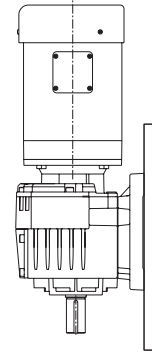
B7



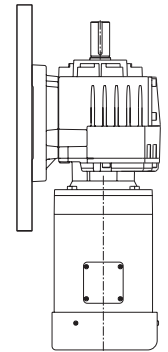
B8



V5



V6*



**Not Recommended

Motorized Reducers & GEAR+MOTOR™

The Reducer and Motor are assembled at the Factory, and filled with the proper quantity of lubricant based on your specified mounting position. Special integral gearmotors are available. Consult Factory for details.

Standard Integral Gearmotors and GEAR+MOTOR™ are assembled at the Factory with the conduit box and the conduit opening at the position illustrated on page 464. The user may rotate the body of the motor to reposition the conduit box (in 90° increments from original position). The conduit opening may also be repositioned at 90° increments from the original position. Both operations may be performed without disassembling the drive.

Backstops

Backstops are available as Factory options. Consult the Factory for details.

Lube Quantities (Ounces)

Reducer Size		H3	H6	H7	H8	V5	V6
717	2-Stage	8.5	10	13.5	13.5	13.5	17
	3-Stage	10	12	15	15	15	18.5
727	2-Stage	8.5	10	13.5	13.5	13.5	17
	3-Stage	10	12	15	15	15	18.5
747	2-Stage	15	19	34	37	37	39
	3-Stage	25.5	25.5	35.5	39	40.5	40.5
757	2-Stage	19	29	37	40.5	40.5	42
	3-Stage	25.5	30.5	39	42	44.0	46

Note: Multiply the above quantities by 0.06 to obtain the equivalent weight of oil in pounds.

16 oz = 1 Pint
2 Pints = 1 Quart
4 Quarts = 1 Gallon
1 Gallon = 128 oz.

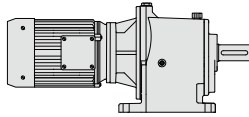
High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



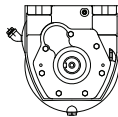
Mounting position must be specified on all orders, and included in the reducer description, so the correct amount of oil is installed at the Factory.

Mounting Positions - Foot Mounted Reducers and Gearmotors

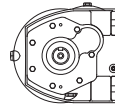


Standard mounting position is B3. All reducers will be filled to this level, unless otherwise specified.

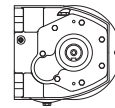
B3 - Standard Floor



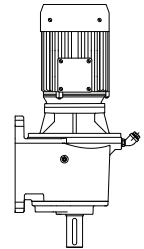
B8 - Ceiling



B7 - R.H. Wall

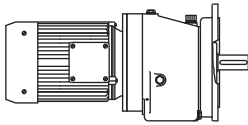


B6 - L.H. Wall

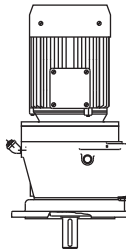


V5 - Vertical Down

Mounting Positions - Flange Mounted Reducers and Gearmotors



B5 - Horizontal



V1 - Vertical Down

For Mounting Positions Not Shown, Contact Factory.

Motorized Reducers & GEAR+MOTOR™

The Reducer and Motor are assembled at the Factory, and filled with the proper quantity of lubricant based on your specified mounting position. Special integral gearmotors are available. Consult Factory for details.

Standard Integral Gearmotors and GEAR+MOTOR™ are assembled at the Factory with the conduit box and the conduit opening at the position illustrated on page 464. The user may rotate the body of the motor to reposition the conduit box (in 90° increments from original position). The conduit opening may also be repositioned at 90° increments from the original position. Both operations may be performed without disassembling the drive.

Backstops

Backstops are available as Factory options. Consult the Factory for details.

Grove Gear IRONMAN High Efficiency Helical - Worm Gear Reducers

S Series Features and Benefits



BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

BEARING SPANS OPTIMIZED

to allow for maximum overhung load capacity, enhanced durability and reliability—while minimizing shaft deflection.

HOUSING

Precision machined rugged cast iron housings give you the industrial strength and durability you've come to expect from Grove Gear.

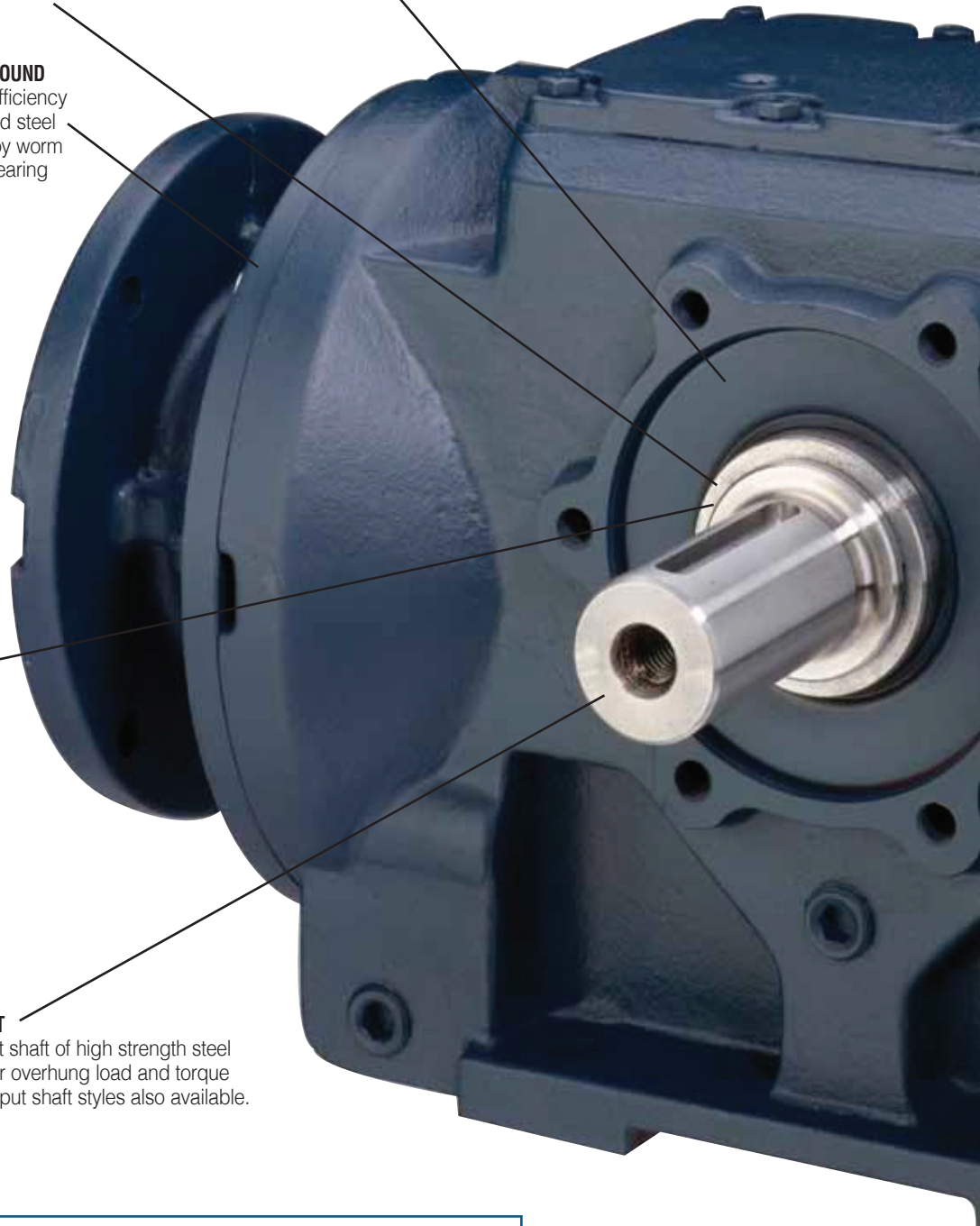
ALL HELICAL GEARING IS HARDENED AND GROUND (AGMA class 10 or better) for enhanced efficiency and noise reduction. Hardened and ground steel worm shafts and high capacity bronze alloy worm gears give you the advantages of worm gearing with the efficiency of helical gearing.

STANDARD DOUBLE LIP SEALS

provide extra protection against entry of contaminants or loss of lubrication.

ROBUST OUTPUT SHAFT

Oversized steel output shaft of high strength steel alloy provides superior overhung load and torque capacities. Hollow output shaft styles also available.



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON or Lincoln industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.





MODULAR DESIGN

Innovative design includes double reduction, triple reduction and quad reduction reducers assembled from standard components.

LUBRICATION

All Ironman reducers are filled with high quality gear oil at the factory.

INTEGRAL MOUNTING BASE

designed to interchange with dozens of competitive units. Output flange mounted styles also available.

Additional S Series Helical - Worm Gear reducer Features

4 SIZES AVAILABLE in reducer, GEAR+MOTOR™ and integral gearmotor designs.

INPUT HORSEPOWER ratings up to 17 HP.

AVAILABLE IN DOUBLE, TRIPLE AND QUADRUPLE REDUCTION with ratios from 7:1 to 3400:1.

SOLID OUTPUT SHAFT and hollow output shaft available in all sizes.

HIGH CAPACITY BALL AND TAPERED BEARINGS provide long life and trouble free operation.

MOUNTING DIMENSIONS ALLOW INTERCHANGE with many popular reducers including SEW, David Brown, Nord and Dodge.

PERMANENTLY MARKED NAMEPLATE with output torque ratio and maximum input horsepower.

CAST IRON INPUT FLANGE (motorized quill input styles) with machined fits for precision alignment of motor and bearings.



Style SFN
Double Reduction Reducer



Style SFQ
Quadruple Reduction Reducer



Style SABN
Double Reduction Reducer



Style SFG
Double Reduction Gearmotor

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



Helical - Worm Gear Reducers

Selection Guide

S Series

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, any stock reducer can be field or Factory modified into a wide range of styles.

**Base Mount
Solid Output Shaft
Quill "C" Face Input**

**Output Flange Mount
Solid Output Shaft
Quill "C" Face Input**

Style SBQ

Style SFQ

**DOUBLE
REDUCTION**



Ratings Pages 493-505

Ratings Pages 493-505

Dimension Page 506

Dimension Pages 518

**TRIPLE
REDUCTION**



Ratings Pages 493-505

Ratings Pages 493-505

Dimension Page 510

Dimension Pages 518

**QUADRUPLE
REDUCTION**



Ratings Pages 493-505

Ratings Pages 493-505

Dimension Page 514

Dimension Pages 518

Additional accessories, options and assembly services are available, contact factory for details.



BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

**Base Mount
Solid Output Shaft
Solid Input Shaft**

Style SBN



Ratings Pages 493-505
Dimension Page 508



Ratings Pages 493-505
Dimension Page 512



Ratings Pages 493-505
Dimension Page 516

**Output Flange Mount
Solid Output Shaft
Solid Input Shaft**

Style SFN



Ratings Pages 493-505
Dimension Pages 518



Ratings Pages 493-505
Dimension Pages 518



Ratings Pages 493-505
Dimension Pages 518

Continued on next page...



Helical - Worm Gear Reducers Selection Guide

S Series

Modified Stock Styles

Using off-the-shelf accessories, any stock reducer can be field or Factory modified into a wide range of styles.

**Hollow Output Shaft
Base or Shaft Mount
Quill "C" Face Input**

**Hollow Output Shaft
Output Flange Mount
Quill "C" Face Input**

Style SABQ

Style SAFQ

**DOUBLE
REDUCTION**



Ratings Pages 493-505

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Dimension Page 507

Dimension Pages 519

**TRIPLE
REDUCTION**



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Dimension Pages 519

**QUADRUPLE
REDUCTION**



Ratings Pages 493-505

Ratings Pages 493-505

Dimension Page 515

Dimension Pages 519

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, any stock reducer can be field or Factory modified into a wide range of styles.

**Hollow Output Shaft
 Base or Shaft Mount
 Solid Input Shaft**

**Hollow Output Shaft
 Output Flange Mount
 Solid Input Shaft**

Style SABN

Style SAFN

**DOUBLE
 REDUCTION**



Ratings Pages 493-505

Ratings Pages 493-505

Dimension Page 509

Dimension Pages 519

**TRIPLE
 REDUCTION**



Ratings Pages 493-505

Ratings Pages 493-505

Dimension Page 513

Dimension Pages 519

**QUADRUPLE
 REDUCTION**



Ratings Pages 493-505

Ratings Pages 493-505

Dimension Page 517

Dimension Pages 519

BRAVO®
 Single Reduction Reducers

BRAVO® Worm - Worm
 Double Reduction

BRAVO® Helical - Worm
 Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
 Gear Reducers

High Efficiency Helical - Worm
 Gear Reducers



Model Number System

S Series • Helical - Worm

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

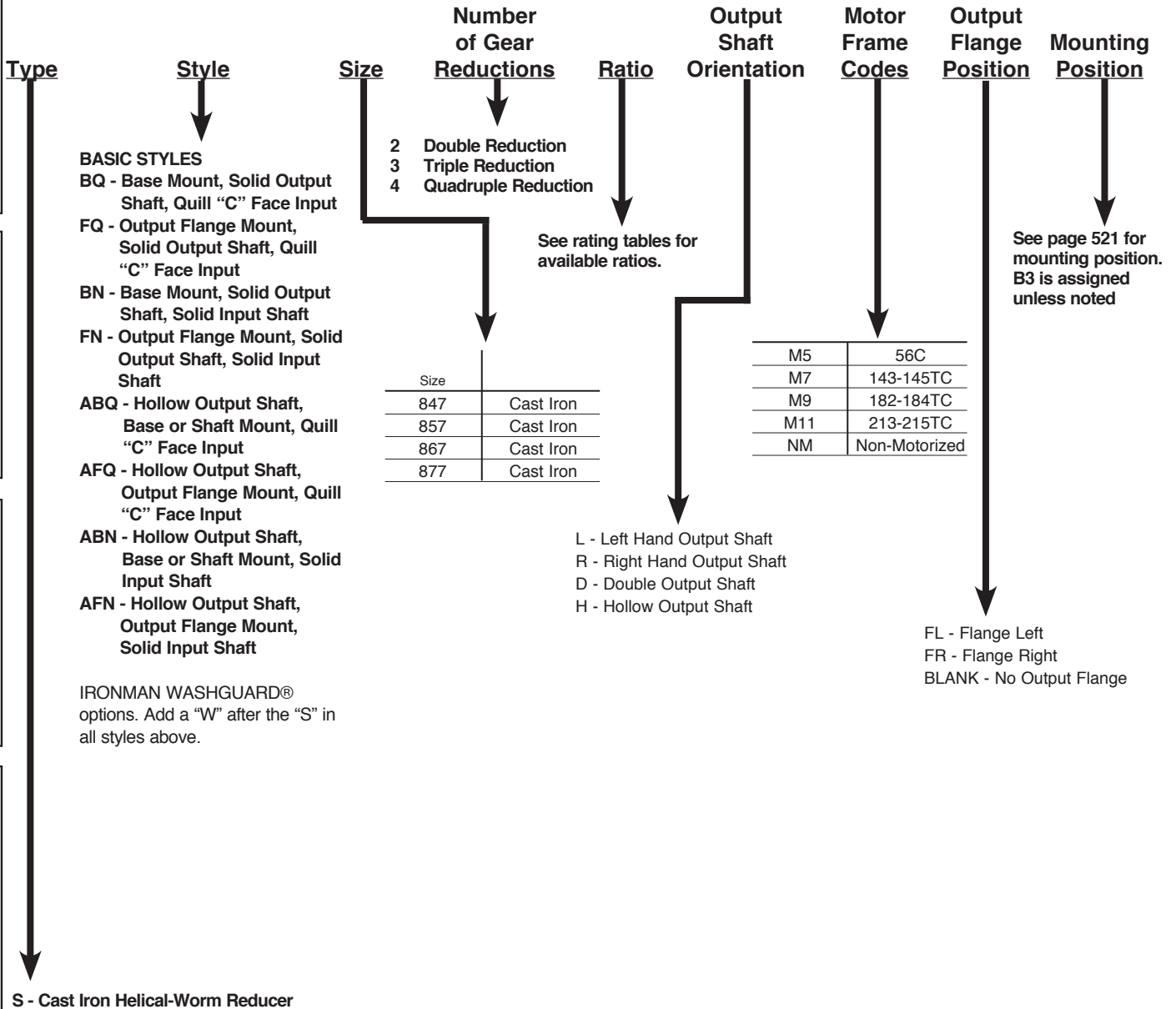
BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

Grove Gear IRONMAN Helical-Worm Model Number System

The Mounting position must be specified on all orders, and included in the reducer description. To order Motorized Reducers, simply specify the reducer, indicate the motor description or catalog number and specify "Motorized Assembly". To order Integral Gearmotors, simply specify the reducer, motor horsepower and "Integral Gearmotor". Integral Gearmotors in this catalog are supplied with 3 phase 230/460v totally enclosed 1750 rpm general purpose motors.

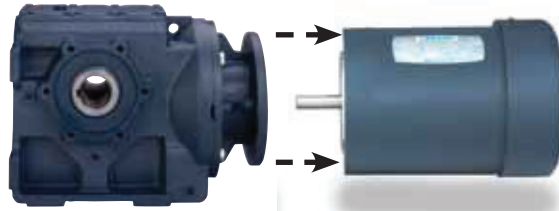


Sample Model Numbers

Cast iron, size 847 base mount unit with quill input, 7.50:1 ratio, B3 mounting

S	-	BQ		8472	-	7.50	-	M5	-	B3
Type		Style		Size		Ratio		Motor Frame		Mounting

"HOW TO USE" Quick Selections S Series Helical - Worm



How To Use Quick Selections

Maximum Rating Tables for Double, Triple and Quad Reduction Gear Reducers start on page 493. Selection of the appropriate gear reducer can be made using those tables or the Quick Selections on the following pages.

BEFORE YOU START:

- Identify the Service Factor of the application.
- Determine the actual input horsepower of the

motor by multiplying the motor's nameplate horsepower by the Service Factor.

Determine the output speed (RPM) required at output shaft of reducer.

Identify the mounting style required by your application from the style charts shown on pages 470-473. Note the different bases and flanges to interchange with various competitive units.

To select the proper gear reducer size, use the Quick Selections as shown:

STOCK GEAR+MOTOR™

Start with a reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

A wide variety of single phase, three phase and DC motors—suitable for almost every industrial application need—have been pre-selected and assembled to reducers to provide a variety of torque and output speed combinations...ready for shipment. Saves time and expense.

Quick Selections
S Series Helical - Worm
1750 RPM Input

1 Find the appropriate Quick Selections page. The tables begin on page 476 and are organized by motor HP. The reducer should be selected first; Gear+Motor™ combinations follow.

This quick selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations refer to Maximum Rating Tables beginning on page 493.

.25 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor	Output Torque (lb-in)	Overhung Load (lbs.)	Ratio	Number of Stages	Reducer Weight (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
6.5	1.50	1879	1750					37.38-L-M5-B3	58573004.00
6.0	1.38	2041	1750					32.85-L-M5-B3	58573005.00
5.7	2.18	2541	2100					36.66-L-M5-B3	58673002.00
5.9	1.19	2403	1750					39.64-L-M5-B3	58573006.00
5.0	1.90	2993	2100					32.50-L-M5-B3	58673003.00
4.5	1.17	2440	1750					30.46-L-M5-B3	58573007.00
4.3	1.97	2960	2100					38.00-L-M5-B3	58673004.00
4.0	3.71	3168	3050					32.32-L-M5-B3	58773004.00
3.9	1.91	2938	2100					36.24-L-M5-B3	58673005.00
3.8	1.00	2874	1750					35.18-L-M5-B3	58573008.00
3.7	3.50	3262	3050					39.78-L-M5-B3	58773005.00
3.6	2.90	4013	3050					39.78-L-M5-B3	58774004.00
3.4	1.60	3635	2100					508.56	58673006.00
3.3	3.12	3811	3050					527.03	58773006.00
								544.00	58673007.00
								576.43	5873007.00
				482.77	4	193	56C	5808774-492.77-L-M5-B3	58774004.00
				508.56	3	96	56C	5808673-508.56-L-M5-B3	58673006.00
				527.03	3	187	56C	5808773-527.03-L-M5-B3	58773006.00
				544.00	3	96	56C	5808673-544.00-L-M5-B3	58673007.00
				576.43	3	187	56C	5808773-576.43-L-M5-B3	5873007.00
				613.32	3	96	56C	5808673-613.32-L-M5-B3	58673008.00
				656.93	3	187	56C	5808773-656.93-L-M5-B3	58773008.00
				678.08	3	96	56C	5808673-678.08-L-M5-B3	58673009.00
				705.00	3	96	56C	5808673-705.00-L-M5-B3	58673010.00
				792.26	3	187	56C	5808773-792.26-L-M5-B3	58773010.00
				817.76	3	96	56C	5808673-817.76-L-M5-B3	58673011.00
				849.38	4	193	56C	5808774-849.38-L-M5-B3	58774004.00
				910.68	3	187	56C	5808773-910.68-L-M5-B3	58773006.00

2 Locate output RPM column on left side of the table. All ratings are based on an input speed of 1750 RPM. Scroll down to the output speed (RPM) required. Output speeds are rounded to the nearest whole number. For exact output speed, divide 1750 by the ratio listed.

3 Move to the Service Factor column and find one suitable to meet the application requirements. Refer to page 644 for AGMA recommended service factors.

4 Check load capacities against the needs of your application. Do not exceed the overhung load (OHL) shown in the table. Detailed instructions for calculating the actual overhung load are shown on page 645. If overhung and thrust loads will be applied simultaneously or if the load exceeds listed capacities, contact Factory.

5 Select motor frame size.

6 Identify the catalog number of the reducer by continuing to the right. See page 474 for detailed information on building an exact catalog number.

7 Identify reducer mounting position on page 521.

8 Verify physical dimensions using the dimensional drawings shown on pages 506-517.

9 Add a motor

STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

Example:
S8472009-1028

GEAR+MOTOR
MOTOR SELECTIONS
1/4 HP LEESON ELECTRIC MOTORS

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - In-Line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



Quick Selections

S Series Helical - Worm

1750 RPM Input

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations refer to Maximum Rating Tables beginning on page 493.

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

.25 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor ▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
233	12.37	61	1350	7.50	2	45	56C	SBQ8472-7.50-L-M5-B3	S8472001.00
208	11.66	69	1350	8.40	2	45	56C	SBQ8472-8.40-L-M5-B3	S8472002.00
186	10.94	77	1350	9.43	2	45	56C	SBQ8472-9.43-L-M5-B3	S8472003.00
165	10.11	86	1350	10.62	2	45	56C	SBQ8472-10.62-L-M5-B3	S8472004.00
146	9.40	97	1350	12.00	2	45	56C	SBQ8472-12.00-L-M5-B3	S8472005.00
128	8.58	110	1350	13.64	2	45	56C	SBQ8472-13.64-L-M5-B3	S8472006.00
112	7.79	125	1350	15.60	2	45	56C	SBQ8472-15.60-L-M5-B3	S8472007.00
105	7.42	133	1350	16.74	2	45	56C	SBQ8472-16.74-L-M5-B3	S8472008.00
93	7.11	142	1350	18.75	2	45	56C	SBQ8472-18.75-L-M5-B3	S8472009.00
86	6.39	161	1350	20.40	2	45	56C	SBQ8472-20.40-L-M5-B3	S8472010.00
74	6.31	176	1350	23.57	2	45	56C	SBQ8472-23.57-L-M5-B3	S8472011.00
69	5.32	199	1350	25.43	2	45	56C	SBQ8472-25.43-L-M5-B3	S8472012.00
58	5.41	220	1350	30.00	2	45	56C	SBQ8472-30.00-L-M5-B3	S8472013.00
51	4.95	248	1350	34.09	2	45	56C	SBQ8472-34.09-L-M5-B3	S8472014.00
45	4.52	281	1350	39.00	2	45	56C	SBQ8472-39.00-L-M5-B3	S8472015.00
42	4.30	300	1350	41.84	2	45	56C	SBQ8472-41.84-L-M5-B3	S8472016.00
37	3.72	307	1350	47.14	2	45	56C	SBQ8472-47.14-L-M5-B3	S8472017.00
33	3.46	341	1350	53.08	2	45	56C	SBQ8472-53.08-L-M5-B3	S8472018.00
29	3.21	380	1350	60.00	2	45	56C	SBQ8472-60.00-L-M5-B3	S8472019.00
28	3.09	446	1350	63.57	2	45	56C	SBQ8472-63.57-L-M5-B3	S8472020.00
26	2.96	425	1350	68.18	2	45	56C	SBQ8472-68.18-L-M5-B3	S8472021.00
22	2.71	479	1350	78.00	2	45	56C	SBQ8472-78.00-L-M5-B3	S8472022.00
21	2.59	509	1350	83.68	2	45	56C	SBQ8472-83.68-L-M5-B3	S8472023.00
19	2.35	528	1350	90.91	2	45	56C	SBQ8472-90.91-L-M5-B3	S8472024.00
17	2.25	608	1350	102.00	2	45	56C	SBQ8472-102.00-L-M5-B3	S8472025.00
16	2.06	631	1350	111.58	2	45	56C	SBQ8472-111.58-L-M5-B3	S8472032.00
14	1.91	739	1350	127.14	2	45	56C	SBQ8472-127.14-L-M5-B3	S8472031.00
13	1.79	749	1350	136.00	2	45	56C	SBQ8472-136.00-L-M5-B3	S8472030.00
8.4	1.00	1484	1350	209.40	3	53	56C	SBQ8473-209.40-L-M5-B3	S8473002.00
8.4	1.83	1509	1750	209.40	3	58	56C	SBQ8573-209.40-L-M5-B3	S8573002.00
7.6	1.71	1642	1750	230.09	3	58	56C	SBQ8573-230.09-L-M5-B3	S8573003.00
6.9	2.56	2226	2100	254.28	3	96	56C	SBQ8673-254.28-L-M5-B3	S8673001.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
S8472009-102868



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1/4 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TENV	56C	102868
General Purpose, C Face	208-230/460 3-PH	TENV	56C	101648
CR Rated DC Motor	90 VDC	TEFC	56C	098002
SCR Rated DC Motor	90 VDC	TEFC	56C	098003

Quick Selections

S Series Helical - Worm

1750 RPM Input



BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations refer to Maximum Rating Tables beginning on page 493.

.25 HP con't		Gear Reducer Quick Selections							
Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
6.5	1.50	1879	1750	267.38	3	58	56C	SBQ8573-267.38-L-M5-B3	S8573004.00
6.0	1.39	2041	1750	292.85	3	58	56C	SBQ8573-292.85-L-M5-B3	S8573005.00
5.7	2.16	2641	2100	306.66	3	96	56C	SBQ8673-306.66-L-M5-B3	S8673002.00
5.0	1.19	2403	1750	349.64	3	58	56C	SBQ8573-349.64-L-M5-B3	S8573006.00
5.0	1.90	2993	2100	352.50	3	96	56C	SBQ8673-352.50-L-M5-B3	S8673003.00
4.5	1.17	2440	1750	390.46	3	58	56C	SBQ8573-390.46-L-M5-B3	S8573007.00
4.3	1.97	2960	2100	408.00	3	96	56C	SBQ8673-408.00-L-M5-B3	S8673004.00
4.0	3.71	3168	3050	432.32	3	187	56C	SBQ8773-432.32-L-M5-B3	S8773004.00
3.9	1.91	2938	2100	446.24	3	96	56C	SBQ8673-446.24-L-M5-B3	S8673005.00
3.8	1.00	2874	1750	466.18	3	58	56C	SBQ8573-466.18-L-M5-B3	S8573008.00
3.7	3.50	3262	3050	469.78	3	187	56C	SBQ8773-469.78-L-M5-B3	S8773005.00
3.6	2.90	4013	3050	492.77	4	193	56C	SBQ8774-492.77-L-M5-B3	S8774004.00
3.4	1.60	3635	2100	508.56	3	96	56C	SBQ8673-508.56-L-M5-B3	S8673006.00
3.3	3.12	3811	3050	527.03	3	187	56C	SBQ8773-527.03-L-M5-B3	S8773006.00
3.2	1.62	3523	2100	544.00	3	96	56C	SBQ8673-544.00-L-M5-B3	S8673007.00
3.0	2.94	3933	3050	576.43	3	187	56C	SBQ8773-576.43-L-M5-B3	S8773007.00
2.9	1.36	4281	2100	613.32	3	96	56C	SBQ8673-613.32-L-M5-B3	S8673008.00
2.7	2.59	4585	3050	656.93	3	187	56C	SBQ8773-656.93-L-M5-B3	S8773008.00
2.6	1.34	4310	2100	678.08	3	96	56C	SBQ8673-678.08-L-M5-B3	S8673009.00
2.5	2.43	4811	3050	705.00	3	96	56C	SBQ8673-705.00-L-M5-B3	S8673010.00
2.2	2.12	5596	3050	792.26	3	187	56C	SBQ8773-792.26-L-M5-B3	S8773010.00
2.1	2.31	5061	3050	817.76	3	96	56C	SBQ8673-817.76-L-M5-B3	S8673011.00
2.1	1.73	6723	3050	849.38	4	193	56C	SBQ8774-849.38-L-M5-B3	S8774008.00
1.9	1.95	6083	3050	910.68	3	187	56C	SBQ8773-910.68-L-M5-B3	S8773011.00
1.8	1.86	6394	3050	985.55	4	193	56C	SBQ8774-985.55-L-M5-B3	S8774009.00
1.7	1.77	6623	3050	1056.00	3	187	56C	SBQ8773-1056-L-M5-B3	S8773012.00
1.4	1.56	7498	3050	1214.00	3	187	56C	SBQ8773-1214-L-M5-B3	S8773013.00
1.20	1.30	9116	3050	1459.00	4	193	56C	SBQ8774-1459-L-M5-B3	S8774011.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
S8472009-102868



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1/4 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TENV	56C	102868
General Purpose, C Face	208-230/460 3-PH	TENV	56C	101648
CR Rated DC Motor	90 VDC	TEFC	56C	098002
SCR Rated DC Motor	90 VDC	TEFC	56C	098003



Quick Selections

S Series Helical - Worm

1750 RPM Input

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations refer to Maximum Rating Tables beginning on page 493.

.33 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight † (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
233	9.29	82	1350	7.50	2	45	56C	SBQ8472-7.50-L-M5-B3	S8472001.00
208	8.76	91	1350	8.40	2	45	56C	SBQ8472-8.40-L-M5-B3	S8472002.00
186	8.22	102	1350	9.43	2	45	56C	SBQ8472-9.43-L-M5-B3	S8472003.00
165	7.59	115	1350	10.62	2	45	56C	SBQ8472-10.62-L-M5-B3	S8472004.00
146	7.06	129	1350	12.00	2	45	56C	SBQ8472-12.00-L-M5-B3	S8472005.00
128	6.44	146	1350	13.64	2	45	56C	SBQ8472-13.64-L-M5-B3	S8472006.00
112	5.85	166	1350	15.60	2	45	56C	SBQ8472-15.60-L-M5-B3	S8472007.00
105	5.57	178	1350	16.74	2	45	56C	SBQ8472-16.74-L-M5-B3	S8472008.00
93	5.33	189	1350	18.75	2	45	56C	SBQ8472-18.75-L-M5-B3	S8472009.00
86	4.80	215	1350	20.40	2	45	56C	SBQ8472-20.40-L-M5-B3	S8472010.00
74	4.74	234	1350	23.57	2	45	56C	SBQ8472-23.57-L-M5-B3	S8472011.00
69	3.99	266	1350	25.43	2	45	56C	SBQ8472-25.43-L-M5-B3	S8472012.00
58	4.06	293	1350	30.00	2	45	56C	SBQ8472-30.00-L-M5-B3	S8472013.00
51	3.72	331	1350	34.09	2	45	56C	SBQ8472-34.09-L-M5-B3	S8472014.00
45	3.39	375	1350	39.00	2	45	56C	SBQ8472.00-39-L-M5-B3	S8472015.00
42	3.23	400	1350	41.84	2	45	56C	SBQ8472-41.84-L-M5-B3	S8472016.00
37	2.79	409	1350	47.14	2	45	56C	SBQ8472-47.14-L-M5-B3	S8472017.00
33	2.60	454	1350	53.08	2	45	56C	SBQ8472-53.08-L-M5-B3	S8472018.00
29	2.41	507	1350	60.00	2	45	56C	SBQ8472-60.00-L-M5-B3	S8472019.00
28	2.34	590	1350	63.57	2	45	56C	SBQ8472-63.57-L-M5-B3	S8472020.00
26	2.22	567	1350	68.18	2	45	56C	SBQ8472-68.18-L-M5-B3	S8472021.00
22	2.04	638	1350	78.00	2	45	56C	SBQ8472-78.00-L-M5-B3	S8472022.00
21	1.83	678	1350	83.68	2	45	56C	SBQ8472-83.68-L-M5-B3	S8472023.00
19	1.95	703	1350	90.91	2	45	56C	SBQ8472-90.91-L-M5-B3	S8472024.00
17	1.61	810	1350	102.00	2	45	56C	SBQ8472-102.00-L-M5-B3	S8472025.00
17	3.03	826	1750	102.00	2	50	56C	SBQ8572-102.00-L-M5-B3	S8572025.00
16	1.68	840	1350	111.58	2	45	56C	SBQ8472-111.58-L-M5-B3	S8472026.00
16	2.81	851	1750	111.58	2	50	56C	SBQ8572-111.58-L-M5-B3	S8572026.00
14	1.36	985	1350	127.14	2	45	56C	SBQ8472-127.14-L-M5-B3	S8472027.00
14	2.58	1005	1750	127.14	2	50	56C	SBQ8572-127.14-L-M5-B3	S8572027.00
13	1.38	998	1350	136.00	2	45	56C	SBQ8472-136.00-L-M5-B3	S8472028.00
13	2.48	1008	1750	136.00	2	50	56C	SBQ8572-136.00-L-M5-B3	S8572028.00
10.3	1.15	1210	1350	169.52	2	45	56C	SBQ8472-169.52-L-M5-B3	S8472029.00
10.3	2.12	1222	1750	169.52	2	50	56C	SBQ8572-169.52-L-M5-B3	S8572029.00
9.5	1.17	1265	1350	183.74	3	53	56C	SBQ8473-183.74-L-M5-B3	S8473001.00
9.5	2.05	1276	1750	183.74	3	58	56C	SBQ8573-183.74-L-M5-B3	S8573001.00

† Weight does not include oil.

▼ Service Factor is based on maximum torque rating of reducer.

● Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

S8472009-102868

MOTOR SELECTIONS



1/3 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TENV	56C	102867
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	101769
WATTSaver® Premium Efficiency Motor	208-230/460	TEFC	56C	102696
SCR Rated DC Motor	90 VDC	TEFC	56C	098004
SCR Rated DC Motor	180 VDC	TEFC	56C	098005

Quick Selections

S Series Helical - Worm

1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations refer to Maximum Rating Tables beginning on page 493.

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

.33 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
8.4	1.00	1484	1350	209.40	3	53	56C	SBQ8473-209.40-L-M5-B3	S8473002.00
8.4	1.83	1509	1750	209.40	3	58	56C	SBQ8573-209.40-L-M5-B3	S8573002.00
7.6	1.71	1642	1750	230.09	3	58	56C	SBQ8573-230.09-L-M5-B3	S8573003.00
6.9	2.56	2226	2100	254.28	3	96	56C	SBQ8673-254.28-L-M5-B3	S8673001.00
6.5	1.50	1879	1750	267.38	3	58	56C	SBQ8573-267.38-L-M5-B3	S8573004.00
6.0	1.39	2041	1750	292.85	3	58	56C	SBQ8573-292.85-L-M5-B3	S8573005.00
5.7	2.16	2641	2100	306.66	3	96	56C	SBQ8673-306.66-L-M5-B3	S8673002.00
5.0	1.19	2403	1750	349.64	3	58	56C	SBQ8573-349.64-L-M5-B3	S8573006.00
5.0	1.90	2993	2100	352.50	3	96	56C	SBQ8673-352.50-L-M5-B3	S8673003.00
4.5	1.17	2440	1750	390.46	3	58	56C	SBQ8573-390.46-L-M5-B3	S8573007.00
4.3	1.97	2960	2100	408.00	3	96	56C	SBQ8673-408.00-L-M5-B3	S8673004.00
4.0	3.71	3168	3050	432.32	3	187	56C	SBQ8773-432.32-L-M5-B3	S8773004.00
3.9	1.91	2938	2100	446.24	3	96	56C	SBQ8673-446.24-L-M5-B3	S8673005.00
3.8	1.00	2874	1750	466.18	3	58	56C	SBQ8573-466.18-L-M5-B3	S8573008.00
3.7	3.50	3262	3050	469.78	3	187	56C	SBQ8773-469.78-L-M5-B3	S8773005.00
3.6	2.90	4013	3050	492.77	4	193	56C	SBQ8774-492.77-L-M5-B3	S8774004.00
3.4	1.60	3635	2100	508.56	3	96	56C	SBQ8673-508.56-L-M5-B3	S8673006.00
3.3	3.12	3811	3050	527.03	3	187	56C	SBQ8773-527.03-L-M5-B3	S8773006.00
3.2	1.62	3523	2100	544.00	3	96	56C	SBQ8673-544.00-L-M5-B3	S8673007.00
3.0	2.94	3933	3050	576.43	3	187	56C	SBQ8773-576.43-L-M5-B3	S8773007.00
2.9	1.36	4281	2100	613.32	3	96	56C	SBQ8673-613.32-L-M5-B3	S8673008.00
2.7	2.59	4585	3050	656.93	3	187	56C	SBQ8773-656.93-L-M5-B3	S8773008.00
2.6	1.34	4310	2100	678.08	3	96	56C	SBQ8673-678.08-L-M5-B3	S8673009.00
2.5	2.43	4811	3050	705.00	3	96	56C	SBQ8673-705.00-L-M5-B3	S8673010.00
2.2	2.12	5596	3050	792.26	3	187	56C	SBQ8773-792.26-L-M5-B3	S8773010.00
2.1	2.31	5061	3050	817.76	3	96	56C	SBQ8673-817.76-L-M5-B3	S8673011.00
2.1	1.73	6723	3050	849.38	4	193	56C	SBQ8774-849.38-L-M5-B3	S8774008.00
1.9	1.95	6083	3050	910.68	3	187	56C	SBQ8773-910.68-L-M5-B3	S8773011.00
1.8	1.86	6394	3050	985.55	4	193	56C	SBQ8774-985.55-L-M5-B3	S8774009.00
1.7	1.77	6623	3050	1056.00	3	187	56C	SBQ8773-1056-L-M5-B3	S8773012.00
1.4	1.56	7498	3050	1214.00	3	187	56C	SBQ8773-1214-L-M5-B3	S8773013.00
1.20	1.30	9116	3050	1459.00	4	193	56C	SBQ8774-1459-L-M5-B3	S8774011.00
0.98	1.08	11016	3050	1787.00	4	193	56C	SBQ8774-1787-L-M5-B3	S8774012.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
S8472009-102868



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1/3 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TENV	56C	102867
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	101769
WATTSAYER® Premium Efficiency Motor	208-230/460	TEFC	56C	102696
SCR Rated DC Motor	90 VDC	TEFC	56C	098004
SCR Rated DC Motor	180 VDC	TEFC	56C	098005



Quick Selections

S Series Helical - Worm

1750 RPM Input

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations refer to Maximum Rating Tables beginning on page 493.

.50 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
128	4.29	219	1350	13.64	2	45	56C	SBQ8472-13.64-L-M5-B3	S8472006.00
112	3.89	249	1350	15.60	2	45	56C	SBQ8472-15.60-L-M5-B3	S8472007.00
105	3.71	267	1350	16.74	2	45	56C	SBQ8472-16.74-L-M5-B3	S8472008.00
93	3.55	284	1350	18.75	2	45	56C	SBQ8472-18.75-L-M5-B3	S8472009.00
86	3.19	323	1350	20.40	2	45	56C	SBQ8472-20.40-L-M5-B3	S8472010.00
74	3.15	352	1350	23.57	2	45	56C	SBQ8472-23.57-L-M5-B3	S8472011.00
69	2.66	399	1350	25.43	2	45	56C	SBQ8472-25.43-L-M5-B3	S8472012.00
58	2.70	440	1350	30.00	2	45	56C	SBQ8472-30.00-L-M5-B3	S8472013.00
51	2.48	497	1350	34.09	2	45	56C	SBQ8472-34.09-L-M5-B3	S8472014.00
45	2.26	563	1350	39.00	2	45	56C	SBQ8472-39.00-L-M5-B3	S8472015.00
42	2.15	600	1350	41.84	2	45	56C	SBQ8472-41.84-L-M5-B3	S8472016.00
37	1.86	614	1350	47.14	2	45	56C	SBQ8472-47.17-L-M5-B3	S8472017.00
33	1.73	681	1350	53.08	2	45	56C	SBQ8472-53.08-L-M5-B3	S8472018.00
29	1.60	761	1350	60.00	2	45	56C	SBQ8472-60.00-L-M5-B3	S8472019.00
29	2.80	776	1750	60.00	2	50	56C	SBQ8572-60.00-L-M5-B3	S8572019.00
28	1.56	886	1350	63.57	2	45	56C	SBQ8472-63.57-L-M5-B3	S8472020.00
28	2.82	897	1750	63.57	2	50	56C	SBQ8572-63.57-L-M5-B3	S8572020.00
26	1.48	851	1350	68.18	2	45	56C	SBQ8472-68.18-L-M5-B3	S8472021.00
26	2.60	870	1750	68.18	2	50	56C	SBQ8572-68.18-L-M5-B3	S8572021.00
22	1.36	958	1350	78.00	2	45	56C	SBQ8472-78.00-L-M5-B3	S8472022.00
21	2.30	1041	1750	83.68	2	50	56C	SBQ8572-83.68-L-M5-B3	S8572023.00
19	2.12	1071	1750	90.91	2	50	56C	SBQ8572-90.91-L-M5-B3	S8572024.00
17	2.02	1240	1750	102.00	2	50	56C	SBQ8572-102.00-L-M5-B3	S8572025.00
16	1.87	1278	1750	111.58	2	50	56C	SBQ8572-111.58-L-M5-B3	S8572026.00
14	1.72	1509	1750	127.14	2	50	56C	SBQ8572-127.14-L-M5-B3	S8572027.00
14	3.16	1614	2100	128.82	2	84	56C	SBQ8672-128.82-L-M5-B3	S8672025.00
13	1.65	1513	1750	136.00	2	50	56C	SBQ8572-136.00-L-M5-B3	S8572028.00
13	2.94	1644	2100	140.00	2	84	56C	SBQ8672-140.00-L-M5-B3	S8672026.00
12	2.83	1848	2100	150.00	2	84	56C	SBQ8672-150.00-L-M5-B3	S8672027.00
11	2.67	1988	2100	162.86	2	84	56C	SBQ8672-162.86-L-M5-B3	S8672028.00
10.3	1.41	1835	1750	169.52	2	50	56C	SBQ8572-169.52-L-M5-B3	S8572029.00
10.2	2.57	1964	2100	171.76	2	84	56C	SBQ8672-171.76-L-M5-B3	S8672029.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS

1/2 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	102862
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	102860
WATTS-AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	101780
575 Volt Motor	575 3-PH	TENV	56C	110176
SCR Rated DC Motor	90 VDC	TEFC	56C	098000
SCR Rated DC Motor	180 VDC	TEFC	56C	098008

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

S8472009-102868



Quick Selections

S Series Helical - Worm

1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations refer to Maximum Rating Tables beginning on page 493.

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

.50 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
9.5	1.37	1916	1750	183.74	3	58	56C	SBQ8573-183.74-L-M5-B3	S8573001.00
8.8	2.30	2244	2100	200.00	2	84	56C	SBQ8672-200.00-L-M5-B3	S8672030.00
8.4	1.20	2300	1750	209.40	3	58	56C	SBQ8573-209.40-L-M5-B3	S8573002.00
8.1	2.17	2409	2100	217.14	2	84	56C	SBQ8672-217.14-L-M5-B3	S8672031.00
7.6	1.13	2465	1750	230.09	3	58	56C	SBQ8573-230.09-L-M5-B3	S8573003.00
6.9	1.71	3343	2100	254.28	3	96	56C	SBQ8673-254.28-L-M5-B3	S8673001.00
6.5	1.00	2821	1750	267.38	3	58	56C	SBQ8573-267.38-L-M5-B3	S8573004.00
5.7	1.44	3965	2100	306.66	3	96	56C	SBQ8673-306.66-L-M5-B3	S8673002.00
5.7	2.96	3920	3050	307.90	4	193	56C	SBQ8774-307.90-L-M5-B3	S8774001.00
5.0	2.94	3940	3050	352.34	3	187	56C	SBQ8773-352.34-L-M5-B3	S8773002.00
5.0	1.27	4494	2100	352.50	3	96	56C	SBQ8673-352.50-L-M5-B3	S8673003.00
4.6	2.44	4765	3050	380.74	4	193	56C	SBQ8774-380.74-L-M5-B3	S8774002.00
4.3	2.63	4449	3050	403.03	3	187	56C	SBQ8773-403.03-L-M5-B3	S8773003.00
4.3	1.31	4445	2100	408.00	3	96	56C	SBQ8673-408.00-L-M5-B3	S8673004.00
4.0	2.47	4757	3050	432.32	3	187	56C	SBQ8773-432.32-L-M5-B3	S8773004.00
3.9	1.27	4411	2100	446.24	3	96	56C	SBQ8673-446.24-L-M5-B3	S8673005.00
3.7	2.33	4898	3050	469.78	3	187	56C	SBQ8773-469.78-L-M5-B3	S8773005.00
3.6	1.93	6025	3050	492.77	4	193	56C	SBQ8774-492.77-L-M5-B3	S8774004.00
3.4	1.07	5458	2100	508.56	3	96	56C	SBQ8673-508.56-L-M5-B3	S8673006.00
3.3	2.08	5723	3050	527.03	3	187	56C	SBQ8773-527.03-L-M5-B3	S8773006.00
3.2	1.08	5290	2100	544.00	3	96	56C	SBQ8673-544.00-L-M5-B3	S8673007.00
2.9	1.62	7195	3050	594.56	4	193	56C	SBQ8774-594.56-L-M5-B3	S8774005.00
2.7	1.73	6885	3050	656.93	3	187	56C	SBQ8773-656.93-L-M5-B3	S8773008.00
2.5	1.65	7111	3050	702.71	3	187	56C	SBQ8773-702.71-L-M5-B3	S8773009.00
2.3	1.55	7665	3050	761.48	4	193	56C	SBQ8774-761.48-L-M5-B3	S8774007.00
2.2	1.41	8403	3050	792.26	3	187	56C	SBQ8773-792.26-L-M5-B3	S8773010.00
2.1	1.15	10095	3050	849.38	4	193	56C	SBQ8774-849.38-L-M5-B3	S8774008.00
1.9	1.30	9134	3050	910.68	3	187	56C	SBQ8773-910.68-L-M5-B3	S8773011.00
1.8	1.08	11003	3050	985.55	4	193	56C	SBQ8774-985.55-L-M5-B3	S8774009.00
1.4	1.04	11258	3050	1214.00	3	187	56C	SBQ8773-1214.00-L-M5-B3	S8773013.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
S8472009-102868



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1/2 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	102862
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	102860
WATTS AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	101780
575 Volt Motor	575 3-PH	TENV	56C	110176
SCR Rated DC Motor	90 VDC	TEFC	56C	098000
SCR Rated DC Motor	180 VDC	TEFC	56C	098008



Quick Selections

S Series Helical - Worm

1750 RPM Input

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations refer to Maximum Rating Tables beginning on page 493.

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

.75 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
233	4.12	184	1350	7.50	2	45	143-5TC	SBQ8472-7.50-L-M7-B3	S8472030.00
208	3.89	206	1350	8.40	2	45	143-5TC	SBQ8472-8.40-L-M7-B3	S8472031.00
186	3.65	230	1350	9.43	2	45	143-5TC	SBQ8472-9.43-L-M7-B3	S8472032.00
165	3.37	258	1350	10.62	2	45	143-5TC	SBQ8472-10.62-L-M7-B3	S8472033.00
146	3.13	290	1350	12.00	2	45	143-5TC	SBQ8472-12.00-L-M7-B3	S8472034.00
128	2.86	329	1350	13.64	2	45	143-5TC	SBQ8472-13.64-L-M7-B3	S8472035.00
112	2.58	376	1350	15.60	2	45	143-5TC	SBQ8472-15.60-L-M7-B3	S8472036.00
105	2.47	400	1350	16.74	2	45	143-5TC	SBQ8472-16.74-L-M7-B3	S8472037.00
93	2.37	426	1350	18.75	2	45	143-5TC	SBQ8472-18.75-L-M7-B3	S8472038.00
86	2.13	484	1350	20.40	2	45	143-5TC	SBQ8472-20.40-L-M7-B3	S8472039.00
74	2.10	528	1350	23.57	2	45	143-5TC	SBQ8472-23.57-L-M7-B3	S8472040.00
69	1.77	598	1350	25.43	2	45	143-5TC	SBQ8472-25.43-L-M7-B3	S8472041.00
58	1.80	660	1350	30.00	2	45	143-5TC	SBQ8472-30.00-L-M7-B3	S8472042.00
51	1.65	745	1350	34.09	2	45	143-5TC	SBQ8472-34.09-L-M7-B3	S8472043.00
51	2.92	754	1750	34.09	2	50	143-5TC	SBQ8572-34.09-L-M7-B3	S8572043.00
45	1.51	844	1350	39.00	2	45	143-5TC	SBQ8472-39.00-L-M7-B3	S8472044.00
45	2.68	854	1750	39.00	2	50	143-5TC	SBQ8572-39.00-L-M7-B3	S8572044.00
42	1.43	901	1750	41.84	2	45	56C	SBQ8472-41.84-L-M5-B3	S8472016.00
42	2.54	914	1750	41.84	2	50	143-5TC	SBQ8572-41.84-L-M7-B3	S8572045.00
37	1.24	921	1750	47.14	2	45	56C	SBQ8472-47.14-L-M5-B3	S8472017.00
37	2.11	941	1750	47.14	2	50	143-5TC	SBQ8572-47.14-L-M7-B3	S8572046.00
33	1.15	1022	1350	53.08	2	45	56C	SBQ8472-53.08-L-M5-B3	S8472018.00
33	1.99	1045	1750	53.08	2	50	143-5TC	SBQ8572-53.08-L-M7-B3	S8572047.00
29	1.07	1141	1350	60.00	2	45	56C	SBQ8472-60.00-L-M5-B3	S8472019.00
29	1.86	1164	1750	60.00	2	50	56C	SBQ8572-60.00-L-M5-B3	S8572019.00
28	1.04	1329	1350	63.57	2	45	56C	SBQ8472-63.57-L-M5-B3	S8472020.00
28	1.88	1346	1750	63.57	2	50	143-5TC	SBQ8572-63.57-L-M7-B3	S8572049.00
26	1.73	1306	1750	68.18	2	50	143-5TC	SBQ8572-68.18-L-M7-B3	S8572050.00
22	1.59	1468	1750	78.00	2	50	143-5TC	SBQ8572-78.00-L-M7-B3	S8572051.00
21	2.94	1755	2100	81.43	2	84	143-5TC	SBQ8672-81.43-L-M7-B3	S8672052.00
21	1.53	1562	1750	83.68	2	50	143-5TC	SBQ8572-83.68-L-M7-B3	S8572052.00
19	1.41	1606	1750	90.91	2	50	56C	SBQ8572-90.91-L-M5-B3	S8572024.00
18	2.54	1904	2100	98.57	2	84	143-5TC	SBQ8672-98.57-L-M7-B3	S8672053.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



3/4 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	110057
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	110047
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	114213
575 Volt Motor	575 3-PH	TEFC	56C	110177
SCR Rated DC Motor	90 VDC	TEFC	56C	098032
SCR Rated DC Motor	180 VDC	TEFC	56C	098069

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

S8472009-102868

Quick Selections

S Series Helical - Worm

1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations refer to Maximum Rating Tables beginning on page 493.

Single Reduction Reducers
BRAVO®

Double Reduction
BRAVO® Worm - Worm

Double Reduction
BRAVO® Helical - Worm

BRAVO® Accessory Kits

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

.75 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
17	1.34	1860	1750	102.00	2	50	56C	SBQ8572-102.00-L-M5-B3	S8572025.00
17	2.43	2016	2100	105.00	2	84	143-5TC	SBQ8672.00-105-L-M7-B3	S8672054.00
16	1.25	1917	1750	111.58	2	50	56C	SBQ8572-111.58-L-M5-B3	S8572026.00
15	2.21	2272	2100	120.00	2	84	143-5TC	SBQ8672-120.00-L-M7-B3	S8672055.00
14	1.14	2263	1750	127.14	2	50	56C	SBQ8572-127.14-L-M5-B3	S8572027.00
14	2.11	2422	2100	128.82	2	84	143-5TC	SBQ8672-128.82-L-M7-B3	S8672056.00
13	1.10	2270	1750	136.00	2	50	56C	SBQ8572-136.00-L-M5-B3	S8572028.00
13	1.96	2466	2100	140.00	2	84	143-5TC	SBQ8672-140.00-L-M7-B3	S8672057.00
12	1.89	2771	2100	150.00	2	84	143-5TC	SBQ8672-150.00-L-M7-B3	S8672058.00
11	3.54	2918	3050	155.00	2	173	143-5TC	SBQ8772-155.00-L-M7-B3	S8772048.00
11	1.78	2982	2100	162.86	2	84	143-5TC	SBQ8672-162.86-L-M7-B3	S8672059.00
10.2	3.21	3102	3050	171.43	2	173	143-5TC	SBQ8772-171.43-L-M7-B3	S8772049.00
10.2	1.71	2946	2100	171.76	2	84	143-5TC	SBQ8672-171.76-L-M7-B3	S8672060.00
8.8	1.54	3366	2100	200.00	2	84	143-5TC	SBQ8672-200.00-L-M7-B3	S8672061.00
8.5	2.82	3662	3050	206.67	2	173	143-5TC	SBQ8772-206.67-L-M7-B3	S8772051.00
8.1	1.45	3613	2100	217.14	2	84	56C	SBQ8672-217.14-L-M5-B3	S8672031.00
6.9	1.14	5014	2100	254.28	3	96	56C	SBQ8673-254.28-L-M5-B3	S8673001.00
6.8	2.42	4412	3050	256.00	2	173	143-5TC	SBQ8772-256.00-L-M7-B3	S8772052.00
5.9	1.01	5671	2100	298.63	4	102	56C	SBQ8674-298.63-L-M5-B3	S8674001.00
5.7	1.98	5880	3050	307.90	4	193	143-5TC	SBQ8774-307.90-L-M7-B3	S8774018.00
5.0	1.96	5910	3050	352.34	3	187	143-5TC	SBQ8773-352.34-L-M7-B3	S8773015.00
4.6	1.63	7147	3050	380.74	4	193	143-5TC	SBQ8774-380.74-L-M7-B3	S8774019.00
4.3	1.75	6673	3050	403.03	3	187	143-5TC	SBQ8773-403.03-L-M7-B3	S8773016.00
4.0	1.65	7135	3050	432.32	3	187	143-5TC	SBQ8773-432.32-L-M7-B3	S8773017.00
3.8	1.38	8392	3050	454.91	4	193	56C	SBQ8774-454.91-L-M5-B3	S8774003.00
3.7	1.55	7347	3050	469.78	3	187	143-5TC	SBQ8773-469.78-L-M7-B3	S8773018.00
3.6	1.29	9038	3050	492.77	4	193	56C	SBQ8774-492.77-L-M5-B3	S8774004.00
3.3	1.33	8584	3050	527.03	3	187	56C	SBQ8773-527.03-L-M5-B3	S8773006.00
3.0	1.29	8859	3050	576.43	3	187	56C	SBQ8773-576.43-L-M5-B3	S8773007.00
2.9	1.08	10792	3050	594.56	4	193	56C	SBQ8774-594.56-L-M5-B3	S8774005.00
2.7	1.10	10327	3050	656.93	3	187	56C	SBQ8773-656.93-L-M5-B3	S8773008.00
2.5	1.07	10667	3050	702.71	3	187	56C	SBQ8773-702.71-L-M5-B3	S8773009.00
2.3	1.01	11498	3050	761.48	4	193	56C	SBQ8774-761.48-L-M5-B3	S8774007.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
S8472009-102868



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



3/4 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	110057
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	110047
WATSAVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	114213
575 Volt Motor	575 3-PH	TEFC	56C	110177
SCR Rated DC Motor	90 VDC	TEFC	56C	098032
SCR Rated DC Motor	180 VDC	TEFC	56C	098069



Quick Selections

S Series Helical - Worm

1750 RPM Input

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations refer to Maximum Rating Tables beginning on page 493.

1 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
233	3.09	246	1350	7.50	2	45	143-5TC	SBQ8472-7.50-L-M7-B3	S8472030.00
208	2.92	274	1350	8.40	2	45	143-5TC	SBQ8472-8.40-L-M7-B3	S8472031.00
186	2.74	307	1350	9.43	2	45	143-5TC	SBQ8472-9.43-L-M7-B3	S8472032.00
165	2.53	344	1350	10.62	2	45	143-5TC	SBQ8472-10.62-L-M7-B3	S8472033.00
146	2.35	387	1350	12.00	2	45	143-5TC	SBQ8472-12.00-L-M7-B3	S8472034.00
128	2.15	438	1350	13.64	2	45	143-5TC	SBQ8472-13.64-L-M7-B3	S8472035.00
112	1.95	498	1350	15.60	2	45	143-5TC	SBQ8472-15.60-L-M7-B3	S8472036.00
105	1.86	534	1350	16.74	2	45	143-5TC	SBQ8472-16.74-L-M7-B3	S8472037.00
93	1.78	569	1350	18.75	2	45	143-5TC	SBQ8472-18.75-L-M7-B3	S8472038.00
93	3.01	575	1750	18.75	2	50	143-5TC	SBQ8572-18.75-L-M7-B3	S8572038.00
86	1.60	645	1350	20.40	2	45	56C	SBQ8472-20.40-L-M5-B3	S8472010.00
83	2.88	640	1750	21.00	2	50	143-5TC	SBQ8572-21.00-L-M7-B3	S8572039.00
74	1.58	704	1350	23.57	2	45	56C	SBQ8472-23.57-L-M5-B3	S8472011.00
74	2.71	713	1750	23.57	2	50	143-5TC	SBQ8572-23.57-L-M7-B3	S8572040.00
69	1.33	798	1350	25.43	2	45	56C	SBQ8472-25.43-L-M5-B3	S8472012.00
66	2.55	796	1750	26.54	2	50	143-5TC	SBQ8572-26.54-L-M7-B3	S8572041.00
58	1.35	881	1350	30.00	2	45	56C	SBQ8472-30.00-L-M5-B3	S8472013.00
58	2.38	892	1750	30.00	2	50	143-5TC	SBQ8572-30.00-L-M7-B3	S8572042.00
51	1.24	993	1350	34.09	2	45	56C	SBQ8472-34.09-L-M5-B3	S8472014.00
51	2.19	1006	1750	34.09	2	50	143-5TC	SBQ8572-34.09-L-M7-B3	S8572043.00
49	3.15	1024	2100	35.85	2	84	143-5TC	SBQ8672-35.85-L-M7-B3	S8672045.00
45	2.01	1139	1750	39.00	2	50	143-5TC	SBQ8572-39.00-L-M7-B3	S8572044.00
42	1.91	1218	1750	41.84	2	50	143-5TC	SBQ8572-41.84-L-M7-B3	S8572045.00
37	1.59	1255	1750	47.14	2	50	56C	SBQ8572-47.14-L-M5-B3	S8572017.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	110058
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	110048
WATTS AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	1144638
575 Volt Motor	575 3-PH	TEFC	56C	110204
SCR Rated DC Motor	90 VDC	TEFC	56C	108022
SCR Rated DC Motor	180 VDC	TEFC	56C	108023

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

S8472009-102868

Quick Selections

S Series Helical - Worm

1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations refer to Maximum Rating Tables beginning on page 493.

1 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
33	1.49	1394	1750	53.08	2	50	56C	SBQ8572-53.08-L-M5-B3	S8572018.00
32	2.68	1490	2100	54.38	2	84	143-5TC	SBQ8672-54.38-L-M7-B3	S8672048.00
29	1.40	1551	1750	60.00	2	50	56C	SBQ8572-60.00-L-M5-B3	S8572019.00
29	2.83	1757	2100	60.00	2	84	143-5TC	SBQ8672-60.00-L-M7-B3	S8672049.00
28	1.41	1795	1750	63.57	2	50	56C	SBQ8572-63.57-L-M5-B3	S8572020.00
27	2.72	1877	2100	64.41	2	84	143-5TC	SBQ8672-64.41-L-M7-B3	S8672050.00
23	2.36	2166	2100	75.00	2	84	143-5TC	SBQ8672-75.00-L-M7-B3	S8672051.00
21	2.20	2340	2100	81.43	2	84	143-5TC	SBQ8672-81.43-L-M7-B3	S8672052.00
18	1.90	2538	2100	98.57	2	84	56C	SBQ8672-98.57-L-M5-B3	S8672022.00
17	1.82	2689	2100	105.00	2	84	56C	SBQ8672-105.00-L-M5-B3	S8672023.00
16	3.35	2836	3050	108.75	2	173	143-5TC	SBQ8772-108.75-L-M7-B3	S8772045.00
15	1.66	3030	2100	120.00	2	84	56C	SBQ8672-120.00-L-M5-B3	S8672024.00
14	3.02	3292	3050	128.57	2	173	143-5TC	SBQ8772-128.57-L-M7-B3	S8772046.00
14	1.58	3229	2100	128.82	2	84	56C	SBQ8672-128.82-L-M5-B3	S8672025.00
13	1.47	3287	2100	140.00	2	84	56C	SBQ8672-140.00-L-M5-B3	S8672026.00
11	2.66	3891	3050	155.00	2	173	143-5TC	SBQ8772-155.00-L-M7-B3	S8772048.00
10.2	2.41	4137	3050	171.43	2	173	143-5TC	SBQ8772-171.43-L-M7-B3	S8772049.00
9.1	2.29	4702	3050	192.00	2	173	143-5TC	SBQ8772-192.00-L-M7-B3	S8772050.00
8.5	2.11	4883	3050	206.67	2	173	56C	SBQ8772-206.67-L-M5-B3	S8772025.00
6.8	1.81	5882	3050	256.00	2	173	56C	SBQ8772-256.00-L-M5-B3	S8772026.00
5.7	1.48	7840	3050	307.90	4	173	56C	SBQ8774-307.90-L-M5-B3	S8774018.00
5.6	1.63	7023	3050	310.02	3	173	56C	SBQ8773-310.02-L-M5-B3	S8773001.00

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	110058
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	110048
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	1144638
575 Volt Motor	575 3-PH	TEFC	56C	110204
SCR Rated DC Motor	90 VDC	TEFC	56C	108022
SCR Rated DC Motor	180 VDC	TEFC	56C	108023

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
S8472009-102868



Quick Selections

S Series Helical - Worm 1750 RPM Input

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations refer to Maximum Rating Tables beginning on page 493.

1.5 HP

Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
165	1.68	516	1350	10.62	2	45	143-5TC	SBQ8472-10.62-L-M7-B3	S8472033.00
146	1.57	581	1350	12.00	2	45	56C	SBQ8472-12.00-L-M5-B3	S8472005.00
146	2.80	585	1750	12.00	2	50	143-5TC	SBQ8572-12.00-L-M7-B3	S8572034.00
128	1.43	657	1350	13.64	2	45	56C	SBQ8472-13.64-L-M5-B3	S8472006.00
128	2.60	662	1750	13.64	2	50	143-5TC	SBQ8572-13.64-L-M7-B3	S8572035.00
112	1.30	748	1350	15.60	2	45	56C	SBQ8472-15.60-L-M5-B3	S8472007.00
105	1.24	800	1350	16.74	2	45	56C	SBQ8472-16.74-L-M5-B3	S8472008.00
93	1.18	853	1350	18.75	2	45	56C	SBQ8472-18.75-L-M5-B3	S8472009.00
93	2.00	863	1750	18.75	2	50	56C	SBQ8572-18.75-L-M5-B3	S8572009.00
83	1.92	960	1750	21.00	2	50	143-5TC	SBQ8572-21.00-L-M7-B3	S8572039.00
83	3.77	1014	2100	21.00	2	84	143-5TC	SBQ8672-21.00-L-M7-B3	S8672039.00
74	1.80	1070	1750	23.57	2	50	143-5TC	SBQ8572-23.57-L-M7-B3	S8572040.00
73	3.31	1153	2100	24.00	2	84	143-5TC	SBQ8672-24.00-L-M7-B3	S8672040.00
68	3.14	1234	2100	25.76	2	84	143-5TC	SBQ8672-25.76-L-M7-B3	S8672041.00
66	1.70	1194	1750	26.54	2	50	56C	SBQ8572-26.54-L-M5-B3	S8572012.00
64	3.10	1256	2100	27.19	2	84	143-5TC	SBQ8672-27.19-L-M7-B3	S8672042.00
58	1.58	1339	1750	30.00	2	50	56C	SBQ8572-30.00-L-M5-B3	S8572013.00
58	2.79	1429	2100	30.00	2	84	143-5TC	SBQ8672-30.00-L-M7-B3	S8672043.00
54	2.62	1547	2100	32.57	2	84	143-5TC	SBQ8672-32.57-L-M7-B3	S8672044.00
51	1.46	1508	1750	34.09	2	50	56C	SBQ8572-34.09-L-M5-B3	S8572014.00
49	2.10	1536	2100	35.85	2	84	143-5TC	SBQ8672-35.85-L-M7-B3	S8672045.00
45	1.34	1709	1750	39.00	2	50	56C	SBQ8572-39.00-L-M5-B3	S8572015.00
42	1.27	1826	1750	41.84	2	50	56C	SBQ8572-41.84-L-M5-B3	S8572016.00
38	3.30	1952	3050	45.68	2	173	143-5TC	SBQ8772-45.68-L-M7-B3	S8772040.00
32	1.79	2236	2100	54.38	2	84	56C	SBQ8672-54.38-L-M5-B3	S8672017.00
32	3.80	2435	3050	54.38	2	173	143-5TC	SBQ8772-54.38-L-M7-B3	S8772041.00
29	1.89	2635	2100	60.00	2	84	143-5TC	SBQ8672-60.00-L-M7-B3	S8672049.00
27	1.82	2815	2100	64.41	2	84	143-5TC	SBQ8672-64.41-L-M7-B3	S8672050.00
23	1.57	3249	2100	75.00	2	84	56C	SBQ8672-75.00-L-M5-B3	S8672020.00
23	2.97	3391	3050	77.50	2	173	143-5TC	SBQ8772-77.50-L-M7-B3	S8772043.00
21	1.47	3510	2100	81.43	2	84	56C	SBQ8672-81.43-L-M5-B3	S8672021.00
18	2.53	4144	3050	96.00	2	173	143-5TC	SBQ8772-96.00-L-M7-B3	S8772044.00
16	2.23	4253	3050	108.75	2	173	143-5TC	SBQ8772-108.75-L-M7-B3	S8772045.00
14	2.01	4938	3050	128.57	2	173	56C	SBQ8772-128.57-L-M5-B3	S8772020.00
11	1.77	5836	3050	155.00	2	173	56C	SBQ8772-155.00-L-M5-B3	S8772022.00
10.2	1.60	6205	3050	171.43	2	173	56C	SBQ8772-171.43-L-M5-B3	S8772023.00
9.1	1.52	7053	3050	192.00	2	173	56C	SBQ8772-192.00-L-M5-B3	S8772024.00
8.5	1.41	7324	3050	206.67	2	173	56C	SBQ8772-206.67-L-M5-B3	S8772025.00

♦ Weight does not include oil.

▼ Service Factor is based on maximum torque rating of reducer.

● Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS

1.5 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	110420
General Purpose, C Face	208-230/460 3-PH	TEFC	140TC	120037
WATTS-AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	116743
575 Volt Motor	575 3-PH	TEFC	56C	111444
SCR Rated DC Motor	180 VDC	TEFC	56C	108092

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

S8472009-102868





BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations refer to Maximum Rating Tables beginning on page 493.

2 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
233	1.55	492	1350	7.50	2	45	143-5TC	SBQ8472-7.50-L-M7-B3	S8472030.00
233	2.69	495	1750	7.50	2	50	143-5TC	SBQ8572-7.50-L-M7-B3	S8572030.00
208	1.46	549	1350	8.40	2	45	143-5TC	SBQ8472-8.40-L-M7-B3	S8472031.00
208	2.55	552	1750	8.40	2	50	143-5TC	SBQ8572-8.40-L-M7-B3	S8572031.00
186	1.37	614	1350	9.43	2	45	143-5TC	SBQ8472-9.43-L-M7-B3	S8472032.00
186	2.41	617	1750	9.43	2	50	143-5TC	SBQ8572-9.43-L-M7-B3	S8572032.00
165	1.26	688	1350	10.62	2	45	143-5TC	SBQ8472-10.62-L-M7-B3	S8472033.00
165	2.26	694	1750	10.62	2	50	143-5TC	SBQ8572-10.62-L-M7-B3	S8572033.00
146	1.18	774	1350	12.00	2	45	143-5TC	SBQ8472-12.00-L-M7-B3	S8472034.00
146	2.10	781	1750	12.00	2	50	143-5TC	SBQ8572-12.00-L-M7-B3	S8572034.00
128	1.07	876	1350	13.64	2	45	143-5TC	SBQ8472-13.64-L-M7-B3	S8472035.00
128	1.95	882	1750	13.64	2	50	143-5TC	SBQ8572-13.64-L-M7-B3	S8572035.00
112	1.79	1005	1750	15.60	2	50	143-5TC	SBQ8572-15.60-L-M7-B3	S8572036.00
105	1.70	1076	1750	16.74	2	50	143-5TC	SBQ8572-16.74-L-M7-B3	S8572037.00
93	1.50	1151	1750	18.75	2	50	143-5TC	SBQ8572-18.75-L-M7-B3	S8572038.00
83	1.44	1280	1750	21.00	2	50	143-5TC	SBQ8572-21.00-L-M7-B3	S8572039.00
83	2.82	1352	2100	21.00	2	84	143-5TC	SBQ8672-21.00-L-M7-B3	S8672039.00
74	1.35	1426	1750	23.57	2	50	143-5TC	SBQ8572-23.57-L-M7-B3	S8572040.00
73	2.49	1537	2100	24.00	2	84	143-5TC	SBQ8672-24.00-L-M7-B3	S8672040.00
68	2.35	1646	2100	25.76	2	84	143-5TC	SBQ8672-25.76-L-M7-B3	S8672041.00
66	1.13	1800	1750	26.54	2	50	143-5TC	SBQ8572-26.54-L-M7-B3	S8572041.00
64	2.32	1674	2100	27.19	2	84	143-5TC	SBQ8672-27.19-L-M7-B3	S8672042.00
58	1.19	1785	1750	30.00	2	50	143-5TC	SBQ8572-30.00-L-M7-B3	S8572042.00
58	2.09	1906	2100	30.00	2	84	143-5TC	SBQ8672-30.00-L-M7-B3	S8672043.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
S8472009-102868



STOCK GEAR+MOTOR™
 Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.



2 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	112136
General Purpose, C Face	208-230/460 3-PH	TEFC	140TC	120038
575 Volt Motor	575 3-PH	TEFC	145TC	120178
WATSAVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	145TC	121065
SCR Rated DC Motor	180 VDC	TEFC	145TC	128010



Quick Selections

S Series Helical - Worm

1750 RPM Input

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations refer to Maximum Rating Tables beginning on page 493.

2 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor ▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
54	1.96	2062	2100	32.57	2	84	143-5TC	SBQ8672-32.57-L-M7-B3	S8672044.00
51	1.09	2011	1750	34.09	2	50	143-5TC	SBQ8572-34.09-L-M7-B3	S8572043.00
49	1.58	2048	2100	35.85	2	84	143-5TC	SBQ8672-35.85-L-M7-B3	S8672045.00
45	3.49	2362	3050	38.71	2	173	143-5TC	SBQ8772-38.71-L-M7-B3	S8772039.00
45	1.01	2278	1750	39.00	2	50	143-5TC	SBQ8572-39.00-L-M7-B3	S8572044.00
38	2.47	2603	3050	45.68	2	173	143-5TC	SBQ8772-45.68-L-M7-B3	S8772040.00
32	1.34	2981	2100	54.38	2	84	143-5TC	SBQ8672-54.38-L-M7-B3	S8672048.00
32	2.85	3247	3050	54.38	2	173	143-5TC	SBQ8772-54.38-L-M7-B3	S8772041.00
29	1.41	3514	2100	60.00	2	84	143-5TC	SBQ8672-60.00-L-M7-B3	S8672049.00
27	2.55	3797	3050	64.29	2	173	143-5TC	SBQ8772-64.29-L-M7-B3	S8772042.00
27	1.36	3753	2100	64.41	2	84	143-5TC	SBQ8672-64.41-L-M7-B3	S8672050.00
23	1.18	4333	2100	75.00	2	84	143-5TC	SBQ8672-75.00-L-M7-B3	S8672051.00
23	2.23	4522	3050	77.50	2	173	143-5TC	SBQ8772-77.50-L-M7-B3	S8772043.00
21	1.10	4680	2100	81.43	2	84	143-5TC	SBQ8672-81.43-L-M7-B3	S8672052.00
18	1.90	5525	3050	96.00	2	173	143-5TC	SBQ8772-96.00-L-M7-B3	S8772044.00
16	1.68	5671	3050	108.75	2	173	143-5TC	SBQ8772-108.75-L-M7-B3	S8772045.00
14	1.51	6584	3050	128.57	2	173	143-5TC	SBQ8772-128.57-L-M7-B3	S8772046.00
11	1.33	7782	3050	155.00	2	173	143-5TC	SBQ8772-155.00-L-M7-B3	S8772048.00
10.2	1.25	8273	3050	171.43	2	173	143-5TC	SBQ8772-171.43-L-M7-B3	S8772049.00
9.1	1.10	9404	3050	192.00	2	173	143-5TC	SBQ8772-192.00-L-M7-B3	S8772050.00
8.5	1.06	9765	3050	206.67	2	173	143-5TC	SBQ8772-206.67-L-M7-B3	S8772051.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

S8472009-102868



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS

2 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	112136
General Purpose, C Face	208-230/460 3-PH	TEFC	140TC	120038
575 Volt Motor	575 3-PH	TEFC	145TC	120178
WATTSERVER™ Premium Efficiency Motor	208-230/460 3-PH	TEFC	145TC	121065
SCR Rated DC Motor	180 VDC	TEFC	145TC	128010



BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

Quick Selections

S Series Helical - Worm

1750 RPM Input



This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations refer to Maximum Rating Tables beginning on page 493.

3 HP

Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
233	1.03	737	1350	7.50	2	45	143-5TC	SBQ8472-7.50-L-M7-B3	S8472030.00
233	1.79	742	1750	7.50	2	55	182-4TC	SBQ8572-7.50-L-M9-B3	S8572059.00
208	1.70	829	1750	8.40	2	55	182-4TC	SBQ8572-8.40-L-M9-B3	S8572060.00
204	3.01	854	2100	8.59	2	90	182-4TC	SBQ8672-8.59-L-M9-B3	S8672064.00
186	1.61	926	1750	9.43	2	55	182-4TC	SBQ8572-9.43-L-M9-B3	S8572061.00
165	1.51	1041	1750	10.62	2	50	143-5TC	SBQ8572-10.62-L-M7-B3	S8572033.00
161	2.72	1073	2100	10.88	2	90	182-4TC	SBQ8672-10.88-L-M9-B3	S8672065.00
146	1.40	1171	1750	12.00	2	50	143-5TC	SBQ8572-12.00-L-M7-B3	S8572034.00
139	2.53	1239	2100	12.62	2	90	182-4TC	SBQ8672-12.62-L-M9-B3	S8672066.00
128	1.30	1323	1750	13.64	2	50	143-5TC	SBQ8572-13.64-L-M7-B3	S8572035.00
112	1.19	1507	1750	15.60	2	50	143-5TC	SBQ8572-15.60-L-M7-B3	S8572036.00
106	2.15	1606	2100	16.50	2	90	182-4TC	SBQ8672-16.50-L-M9-B3	S8672067.00
105	1.13	1613	1750	16.74	2	50	143-5TC	SBQ8572-16.74-L-M7-B3	S8572037.00
98	1.84	1693	2100	17.93	2	90	182-4TC	SBQ8672-17.93-L-M9-B3	S8672068.00
93	1.06	1726	1750	18.75	2	50	143-5TC	SBQ8572-18.75-L-M7-B3	S8572038.00
89	1.91	1908	2100	19.71	2	84	182-4TC	SBQ8672-19.71-L-M9-B3	S8672069.00
83	1.82	2028	2100	21.00	2	90	182-4TC	SBQ8672-21.00-L-M9-B3	S8672070.00
80	3.46	2117	3050	21.75	2	173	182-4TC	SBQ8772-21.75-L-M9-B3	S8772060.00
73	1.66	2305	2100	24.00	2	84	182-4TC	SBQ8672-24.00-L-M9-B3	S8672071.00
68	3.10	2486	3050	25.71	2	173	182-4TC	SBQ8772-25.71-L-M9-B3	S8772061.00
68	1.57	2469	2100	25.76	2	84	143-5TC	SBQ8672-25.76-L-M7-B3	S8672041.00
64	1.55	2512	2100	27.19	2	84	143-5TC	SBQ8672-27.19-L-M7-B3	S8672042.00
63	2.72	2585	3050	27.69	2	173	182-4TC	SBQ8772-27.69-L-M9-B3	S8772062.00
58	1.40	2859	2100	30.00	2	84	143-5TC	SBQ8672-30.00-L-M7-B3	S8672043.00
58	2.63	2788	3050	30.00	2	173	182-4TC	SBQ8772-30.00-L-M9-B3	S8772063.00
54	1.31	3093	2100	32.57	2	84	143-5TC	SBQ8672-32.57-L-M7-B3	S8672044.00
52	2.49	3134	3050	33.97	2	173	182-4TC	SBQ8772-33.97-L-M9-B3	S8772064.00
49	1.32	3072	2100	35.85	2	84	143-5TC	SBQ8672-35.85-L-M7-B3	S8672045.00
45	2.33	3542	3050	38.71	2	173	182-4TC	SBQ8772-38.71-L-M9-B3	S8772065.00
42	1.09	3712	2100	41.25	2	84	143-5TC	SBQ8672-41.25-L-M7-B3	S8672046.00
38	1.65	3904	3050	45.68	2	173	182-4TC	SBQ8772-45.68-L-M9-B3	S8772066.00
32	1.90	4871	3050	54.38	2	173	182-4TC	SBQ8772-54.38-L-M9-B3	S8772067.00
27	1.70	5696	3050	64.29	2	173	182-4TC	SBQ8772-64.29-L-M9-B3	S8772068.00
23	1.49	6782	3050	77.50	2	173	143-5TC	SBQ8772-77.50-L-M7-B3	S8772043.00
18	1.27	8287	3050	96.00	2	173	143-5TC	SBQ8772-96.00-L-M7-B3	S8772044.00
16	1.12	8507	3050	108.75	2	173	143-5TC	SBQ8772-108.75-L-M7-B3	S8772045.00
14	1.01	9877	3050	128.57	2	173	143-5TC	SBQ8772-128.57-L-M7-B3	S8772046.00

♦ Weight does not include oil.

▼ Service Factor is based on maximum torque rating of reducer.

● Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



3 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	182TC	131491
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	182TC	131503
575 Volt Motor	575 3-PH	TEFC	182TC	131498

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

S8472009-102868



Quick Selections

S Series Helical - Worm

1750 RPM Input

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations refer to Maximum Rating Tables beginning on page 493.

5 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
244	1.92	1194	2100	7.17	2	90	182-4TC	SBQ8672-7.17-L-M9-B3	S8672063.00
239	3.52	1226	3050	7.32	2	173	182-4TC	SBQ8772-7.32-L-M9-B3	S8772053.00
233	1.08	1237	1750	7.50	2	55	182-4TC	SBQ8572-7.50-L-M9-B3	S8572059.00
214	3.36	1365	3050	8.17	2	173	182-4TC	SBQ8772-8.17-L-M9-B3	S8772054.00
208	1.02	1381	1750	8.40	2	55	182-4TC	SBQ8572-8.40-L-M9-B3	S8572060.00
204	1.81	1423	2100	8.59	2	90	182-4TC	SBQ8672-8.59-L-M9-B3	S8672064.00
191	3.11	1522	3050	9.14	2	173	182-4TC	SBQ8772-9.14-L-M9-B3	S8772055.00
161	1.63	1789	2100	10.88	2	90	182-4TC	SBQ8672-10.88-L-M9-B3	S8672065.00
158	2.95	1836	3050	11.08	2	173	182-4TC	SBQ8772-11.08-L-M9-B3	S8772056.00
139	1.52	2066	2100	12.62	2	90	182-4TC	SBQ8672-12.62-L-M9-B3	S8672066.00
129	2.71	2237	3050	13.59	2	173	182-4TC	SBQ8772-13.59-L-M9-B3	S8772057.00
113	2.55	2537	3050	15.48	2	173	182-4TC	SBQ8772-15.48-L-M9-B3	S8772058.00
106	1.29	2677	2100	16.50	2	90	182-4TC	SBQ8672-16.50-L-M9-B3	S8672067.00
98	1.10	2822	2100	17.93	2	90	182-4TC	SBQ8672-17.93-L-M9-B3	S8672068.00
96	1.92	2910	3050	18.30	2	173	182-4TC	SBQ8772-18.30-L-M9-B3	S8772059.00
89	1.14	3180	2100	19.71	2	90	182-4TC	SBQ8672-19.71-L-M9-B3	S8672069.00
83	1.09	3381	2100	21.00	2	90	182-4TC	SBQ8672-21.00-L-M9-B3	S8672070.00
80	2.08	3529	3050	21.75	2	173	182-4TC	SBQ8772-21.75-L-M9-B3	S8772060.00
68	1.86	4144	3050	25.71	2	173	182-4TC	SBQ8772-25.71-L-M9-B3	S8772061.00
63	1.63	4308	3050	27.69	2	173	182-4TC	SBQ8772-27.69-L-M9-B3	S8772062.00
58	1.58	4646	3050	30.00	2	173	182-4TC	SBQ8772-30.00-L-M9-B3	S8772063.00
52	1.49	5224	3050	33.97	2	173	182-4TC	SBQ8772-33.97-L-M9-B3	S8772064.00
45	1.40	5904	3050	38.71	2	173	182-4TC	SBQ8772-38.71-L-M9-B3	S8772065.00
38	0.99	6506	3050	45.68	2	173	182-4TC	SBQ8772-45.68-L-M9-B3	S8772066.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

S8472009-102868



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS

5 HP LEESON ELECTRIC MOTORS



Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	184TC	131492
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	184TC	131501
575 Volt Motor	575 3-PH	TEFC	184TC	131499

Quick Selections

S Series Helical - Worm

1750 RPM Input



Single Reduction Reducers
BRAVO®

Double Reduction
BRAVO® Worm - Worm

Double Reduction
BRAVO® Helical - Worm

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations refer to Maximum Rating Tables beginning on page 493.

7.5 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load● (lbs.)	Ratio	Number of Stages	Reducer Weight♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
244	1.28	1791	2100	7.17	2	90	182-4TC	SBQ8672-7.17-L-M9-B3	S8672063.00
239	2.34	1839	3050	7.32	2	173	213-5TC	SBQ8772-7.32-L-M11-B3	S8772079.00
214	2.24	2048	3050	8.17	2	173	213-5TC	SBQ8772-8.17-L-M11-B3	S8772080.00
204	1.20	2135	2100	8.59	2	90	182-4TC	SBQ8672-8.59-L-M9-B3	S8672064.00
191	2.08	2284	3050	9.14	2	173	213-5TC	SBQ8772-9.14-L-M11-B3	S8772081.00
161	1.09	2683	2100	10.88	2	90	182-4TC	SBQ8672-10.88-L-M9-B3	S8672065.00
158	1.96	2753	3050	11.08	2	173	213-5TC	SBQ8772-12.62-L-M11-B3	S8772082.00
139	1.01	3099	2100	12.62	2	90	182-4TC	SBQ8672-12.62-L-M9-B3	S8672066.00
129	1.81	3355	3050	13.59	2	173	213-5TC	SBQ8772-13.59-L-M11-B3	S8772083.00
113	1.70	3805	3050	15.48	2	173	213-5TC	SBQ8772-15.48-L-M11-B3	S8772084.00
96	1.28	4365	3050	18.30	2	173	182-4TC	SBQ8772-18.30-L-M9-B3	S8772059.00
80	1.38	5293	3050	21.75	2	173	182-4TC	SBQ8772-21.75-L-M9-B3	S8772060.00
68	1.24	6215	3050	25.71	2	173	182-4TC	SBQ8772-25.71-L-M9-B3	S8772061.00
63	1.09	6462	3050	27.69	2	173	182-4TC	SBQ8772-27.69-L-M9-B3	S8772062.00
58	1.05	6969	3050	30.00	2	173	182-4TC	SBQ8772-30.00-L-M9-B3	S8772063.00
52	0.99	7836	3050	33.97	2	173	182-4TC	SBQ8772-33.97-L-M9-B3	S8772064.00

♦ Weight does not include oil.

▼ Service Factor is based on maximum torque rating of reducer.

● Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

S8472009-102868

MOTOR SELECTIONS



7.5 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	184TC	131606
WATTS-AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	213TC	140486



Quick Selections

S Series Helical - Worm

1750 RPM Input

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations refer to Maximum Rating Tables beginning on page 493.

10 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load● (lbs.)	Ratio	Number of Stages	Reducer Weight* (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
239	1.76	2452	3050	7.32	2	173	213-5TC	SBQ8772-7.32-L-M11-B3	S8772079.00
214	1.68	2731	3050	8.17	2	173	213-5TC	SBQ8772-8.17-L-M11-B3	S8772080.00
191	1.56	3045	3050	9.14	2	173	213-5TC	SBQ8772-9.14-L-M11-B3	S8772081.00
158	1.47	3671	3050	11.08	2	173	213-5TC	SBQ8772-11.08-L-M11-B3	S8772082.00
129	1.36	4473	3050	13.59	2	173	213-5TC	SBQ8772-13.59-L-M11-B3	S8772083.00
113	1.27	5073	3050	15.48	2	173	213-5TC	SBQ8772-15.48-L-M11-B3	S8772084.00
96	0.96	5820	3050	18.30	2	173	213-5TC	SBQ8772-18.30-L-M11-B3	S8772085.00

15 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load● (lbs.)	Ratio	Number of Stages	Reducer Weight* (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
239	1.17	3678	3050	7.32	2	173	213-5TC	SBQ8772-7.32-L-M11-B3	S8772079.00
214	1.12	4105	3050	8.17	2	173	213-5TC	SBQ8772-8.17-L-M11-B3	S8772080.00
191	1.03	4592	3050	9.14	2	173	213-5TC	SBQ8772-9.14-L-M11-B3	S8772081.00
158	0.97	5567	3050	11.08	2	173	213-5TC	SBQ8772-11.08-L-M11-B3	S8772082.00

* Weight does not include oil.

▼ Service Factor is based on maximum torque rating of reducer.

● Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

S8472009-102868



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



10 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	215TC	140109
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	215TC	140484

15 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	254TC	151350
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	254TC	171587

BRAVO® Accessory Kits

High Efficiency Helical - In-line Gear Reducers

High Efficiency Helical - Worm Gear Reducers

"HOW TO USE" Maximum Rating Tables

S Series Helical - Worm 1750 RPM Input



How To Use Maximum Rating Tables

Maximum Rating Tables for Double, Triple and Quad Reduction Gear Reducers start on page 494. Selection of the appropriate gear reducer can be made using these tables or the Quick Selections on pages 475-492.

BEFORE YOU START:

Identify the Service Factor of the application.

Determine the actual input horsepower of the motor by multiplying the motor's nameplate horsepower by the Service Factor.

Determine the output speed (RPM) required at output shaft of reducer.

Identify the mounting style required by your application from the style charts shown on pages 470-473.

To select the proper gear reducer size, use the Maximum Rating Tables as shown:

1 Find the appropriate Maximum Rating Tables pages for your basic mounting style. The tables begin on page 494.

5 Select motor frame size if reducer is to have a motorized input.

6 Identify the catalog number of the reducer by continuing to the right. See page 474 for detailed information on building an exact catalog number.

7 Verify physical dimensions using the dimensional drawings shown on pages 506-577.

8 Determine reducer mounting position from page 519.

		S847 Series • Helical - Worm 1750 RPM Input					STYLE SBN / SFN		STYLE SBO / SFO	
		S8472 Series • DOUBLE REDUCTION					NON-MOTORIZED		MOTORIZED	
Output Speed (RPM)	Output Torque (lb-in)	Input HP	Ratio	Output OHL (lbs.)	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Motor Frame	Left Hand Catalog Number ■	Right Hand Catalog Number ■	
233	760	3.09 ▲	7.50	1350	S8472262.XX	S8472291.XX	182-3TC	S8472059.XX	S8472146.XX	
208	800	3.00 ▲	8.40	1350	S8472263.XX	S8472292.XX	143-5TC	S8472031.XX	S8472118.XX	
180	840	2.73 ▲	9.43	1350	S8472264.XX	S8472293.XX	182-4TC	S8472060.XX	S8472147.XX	
165	870	2.54 ▲	10.62	1350	S8472265.XX	S8472294.XX	143-5TC	S8472032.XX	S8472119.XX	
146	910	2.35 ▲	12.00	1350	S8472266.XX	S8472295.XX	182-4TC	S8472061.XX	S8472148.XX	
128	940	2.15 ▲	13.64	1350	S8472267.XX	S8472296.XX	143-5TC	S8472033.XX	S8472120.XX	
112	970	2.00	15.60	1350	S8472268.XX	S8472297.XX	143-5TC	S8472034.XX	S8472121.XX	
					S8472269.XX	S8472298.XX	143-5TC	S8472035.XX	S8472122.XX	
					S8472270.XX	S8472299.XX	143-5TC	S8472036.XX	S8472123.XX	
					S8472271.XX	S8472300.XX		S8472037.XX	S8472124.XX	
					S8472272.XX	S8472301.XX			125.XX	
					S8472273.XX	S8472302.XX			097.XX	
					S8472274.XX	S8472303.XX			126.XX	
					S8472275.XX	S8472304.XX			098.XX	
					S8472276.XX	S8472305.XX			127.XX	
					S8472277.XX	S8472306.XX			099.XX	
					S8472278.XX	S8472307.XX			128.XX	
					S8472279.XX	S8472308.XX			100.XX	
					S8472280.XX	S8472309.XX	143-5TC	S8472042.XX	S8472129.XX	
					S8472281.XX	S8472310.XX	56C	S8472014.XX	S8472101.XX	
					S8472282.XX	S8472311.XX	143-5TC	S8472043.XX	S8472130.XX	
					S8472283.XX	S8472312.XX	56C	S8472015.XX	S8472102.XX	
					S8472284.XX	S8472313.XX	143-5TC	S8472044.XX	S8472131.XX	
					S8472285.XX	S8472314.XX	56C	S8472016.XX	S8472103.XX	
					S8472286.XX	S8472315.XX	143-5TC	S8472045.XX	S8472132.XX	
					S8472287.XX	S8472316.XX	56C	S8472017.XX	S8472104.XX	
					S8472288.XX	S8472317.XX	143-5TC	S8472046.XX	S8472133.XX	
					S8472289.XX	S8472318.XX	56C	S8472018.XX	S8472105.XX	
					S8472290.XX	S8472319.XX	143-5TC	S8472047.XX	S8472134.XX	
					S8472291.XX	S8472320.XX	56C	S8472019.XX	S8472106.XX	
					S8472292.XX	S8472321.XX	143-5TC	S8472048.XX	S8472135.XX	
					S8472293.XX	S8472322.XX	56C	S8472020.XX	S8472107.XX	
					S8472294.XX	S8472323.XX	143-5TC	S8472049.XX	S8472136.XX	
					S8472295.XX	S8472324.XX	56C	S8472021.XX	S8472108.XX	
					S8472296.XX	S8472325.XX	143-5TC	S8472050.XX	S8472137.XX	
					S8472297.XX	S8472326.XX	56C	S8472022.XX	S8472109.XX	
					S8472298.XX	S8472327.XX	56C	S8472023.XX	S8472110.XX	
					S8472299.XX	S8472328.XX	56C	S8472024.XX	S8472111.XX	
					S8472300.XX	S8472329.XX	56C	S8472025.XX	S8472112.XX	
					S8472301.XX	S8472330.XX	56C	S8472026.XX	S8472113.XX	
					S8472302.XX	S8472331.XX			S8472114.XX	
					S8472303.XX	S8472332.XX			S8472115.XX	
					S8472304.XX	S8472333.XX			S8472116.XX	

2 Locate output RPM column on left side of the table. All ratings are based on an input speed of 1750 RPM. Scroll down to the output speed (RPM) required. Output speeds are rounded to the nearest whole number. For exact output speed, divide 1750 by the ratio listed.

3 Move across the table to the Input HP column until you find a rating that is equal to or greater than the actual input horsepower required. Once located, check the top of the table to identify the correct gear reducer size.

4 Check load capacities against the needs of your application. Do not exceed the overhung load (OHL) capacity shown in the table. Detailed instructions for calculating the actual overhung load are shown on page 645. If overhung and thrust loads will be applied simultaneously or if the load exceeds listed capacities, contact Factory.

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



Maximum Rating Tables

S847 Series • Helical - Worm

1750 RPM Input

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

STYLE SBN / SFN

STYLE SABN / SAFN



S8472 Series • DOUBLE REDUCTION

					NON-MOTORIZED			
Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■
233	760	3.09 ▲	7.50	1350	S8472262.XX	S8472291.XX	S8472320.XX	S8472436.XX
208	800	3.00 ▲	8.40	1350	S8472263.XX	S8472292.XX	S8472321.XX	S8472437.XX
186	840	2.73 ▲	9.43	1350	S8472264.XX	S8472293.XX	S8472322.XX	S8472438.XX
165	870	2.54 ▲	10.62	1350	S8472265.XX	S8472294.XX	S8472323.XX	S8472439.XX
146	910	2.35 ▲	12.00	1350	S8472266.XX	S8472295.XX	S8472324.XX	S8472440.XX
128	940	2.15 ▲	13.64	1350	S8472267.XX	S8472296.XX	S8472325.XX	S8472441.XX
112	970	2.00	15.60	1350	S8472268.XX	S8472297.XX	S8472326.XX	S8472442.XX
105	990	1.85	16.74	1350	S8472269.XX	S8472298.XX	S8472327.XX	S8472443.XX
93	1010	1.78	18.75	1350	S8472270.XX	S8472299.XX	S8472328.XX	S8472444.XX
86	1030	1.59	20.40	1350	S8472271.XX	S8472300.XX	S8472329.XX	S8472445.XX
74	1110	1.57	23.57	1350	S8472272.XX	S8472301.XX	S8472330.XX	S8472446.XX
69	1060	1.33	25.43	1350	S8472273.XX	S8472302.XX	S8472331.XX	S8472447.XX
58	1190	1.35	30.00	1350	S8472274.XX	S8472303.XX	S8472332.XX	S8472448.XX
51	1230	1.24	34.09	1350	S8472275.XX	S8472304.XX	S8472333.XX	S8472449.XX
45.0	1270	1.13	39.00	1350	S8472276.XX	S8472305.XX	S8472334.XX	S8472450.XX
42.0	1290	1.07	41.84	1350	S8472277.XX	S8472306.XX	S8472335.XX	S8472451.XX
37.0	1140	0.93	47.14	1350	S8472278.XX	S8472307.XX	S8472336.XX	S8472452.XX
33.0	1180	0.87	53.08	1350	S8472279.XX	S8472308.XX	S8472337.XX	S8472453.XX
29.0	1220	0.80	60.00	1350	S8472280.XX	S8472309.XX	S8472338.XX	S8472454.XX
28.0	1380	0.78	63.57	1350	S8472281.XX	S8472310.XX	S8472339.XX	S8472455.XX
26.0	1260	0.75	68.18	1350	S8472282.XX	S8472311.XX	S8472340.XX	S8472456.XX
22.00	1300	0.68	78.00	1350	S8472283.XX	S8472312.XX	S8472341.XX	S8472457.XX
21.00	1320	0.65	83.68	1350	S8472284.XX	S8472313.XX	S8472342.XX	S8472458.XX
19.30	1240	0.59	90.91	1350	S8472285.XX	S8472314.XX	S8472343.XX	S8472459.XX
17.20	1370	0.56	102.00	1350	S8472286.XX	S8472315.XX	S8472344.XX	S8472460.XX
15.70	1300	0.51	111.58	1350	S8472287.XX	S8472316.XX	S8472345.XX	S8472461.XX
13.80	1410	0.50	127.14	1350	S8472288.XX	S8472317.XX	S8472346.XX	S8472462.XX
12.90	1340	0.45	136.00	1350	S8472289.XX	S8472318.XX	S8472347.XX	S8472463.XX
10.30	1380	0.38	169.52	1350	S8472290.XX	S8472319.XX	S8472348.XX	S8472464.XX

* Overhung load is calculated at centerline of output shaft.
▲ S847 thermal rating limit is 2.1HP.

NOTE: Styles SFN and SAFN shown above.

AVAILABLE MOD-SQUAD™ CODES

- .00 - Base Mount
- .FL - Output Flange (Left)
- .FR - Output Flange (Right)

■ When ordering, substitute the XX suffix with the required Mod-Squad™ code.

Maximum Rating Tables

S847 Series • Helical - Worm

1750 RPM Input



Single Reduction Reducers

Double Reduction

Double Reduction

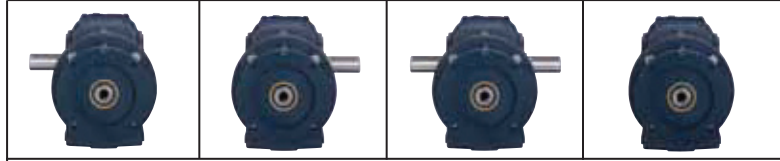
Accessory Kits

High Efficiency Helical - In-line Gear Reducers

High Efficiency Helical - Worm Gear Reducers

STYLE SBQ / SFQ

STYLE SABQ / SAFQ



MOTORIZED QUILL INPUT

Motor Frame	Left Hand Catalog Number ■	Right Hand Catalog Number ■	Double Extension Catalog Number ■	Hollow Output Catalog Number ■	Output Speed (RPM)
182-4TC	S8472059.XX	S8472146.XX	S8472233.XX	S8472407.XX	233
143-5TC	S8472031.XX	S8472118.XX	S8472205.XX	S8472379.XX	208
182-4TC	S8472060.XX	S8472147.XX	S8472234.XX	S8472408.XX	
143-5TC	S8472032.XX	S8472119.XX	S8472206.XX	S8472380.XX	186
182-4TC	S8472061.XX	S8472148.XX	S8472235.XX	S8472409.XX	
143-5TC	S8472033.XX	S8472120.XX	S8472207.XX	S8472381.XX	165
143-5TC	S8472034.XX	S8472121.XX	S8472208.XX	S8472382.XX	146
143-5TC	S8472035.XX	S8472122.XX	S8472209.XX	S8472383.XX	128
143-5TC	S8472036.XX	S8472123.XX	S8472210.XX	S8472384.XX	112
143-5TC	S8472037.XX	S8472124.XX	S8472211.XX	S8472385.XX	105
143-5TC	S8472038.XX	S8472125.XX	S8472212.XX	S8472386.XX	93
56C	S8472010.XX	S8472097.XX	S8472184.XX	S8472358.XX	86
143-5TC	S8472039.XX	S8472126.XX	S8472213.XX	S8472387.XX	
56C	S8472011.XX	S8472098.XX	S8472185.XX	S8472359.XX	74
143-5TC	S8472040.XX	S8472127.XX	S8472214.XX	S8472388.XX	
56C	S8472012.XX	S8472099.XX	S8472186.XX	S8472360.XX	69
143-5TC	S8472041.XX	S8472128.XX	S8472215.XX	S8472389.XX	
56C	S8472013.XX	S8472100.XX	S8472187.XX	S8472361.XX	58
143-5TC	S8472042.XX	S8472129.XX	S8472216.XX	S8472390.XX	
56C	S8472014.XX	S8472101.XX	S8472188.XX	S8472362.XX	51
143-5TC	S8472043.XX	S8472130.XX	S8472217.XX	S8472391.XX	
56C	S8472015.XX	S8472102.XX	S8472189.XX	S8472363.XX	45.0
143-5TC	S8472044.XX	S8472131.XX	S8472218.XX	S8472392.XX	
56C	S8472016.XX	S8472103.XX	S8472190.XX	S8472364.XX	42.0
143-5TC	S8472045.XX	S8472132.XX	S8472219.XX	S8472393.XX	
56C	S8472017.XX	S8472104.XX	S8472191.XX	S8472365.XX	37.0
143-5TC	S8472046.XX	S8472133.XX	S8472220.XX	S8472394.XX	
56C	S8472018.XX	S8472105.XX	S8472192.XX	S8472366.XX	33.0
143-5TC	S8472047.XX	S8472134.XX	S8472221.XX	S8472395.XX	
56C	S8472019.XX	S8472106.XX	S8472193.XX	S8472367.XX	29.0
143-5TC	S8472048.XX	S8472135.XX	S8472222.XX	S8472396.XX	
56C	S8472020.XX	S8472107.XX	S8472194.XX	S8472368.XX	28.0
143-5TC	S8472049.XX	S8472136.XX	S8472223.XX	S8472397.XX	
56C	S8472021.XX	S8472108.XX	S8472195.XX	S8472369.XX	26.0
143-5TC	S8472050.XX	S8472137.XX	S8472224.XX	S8472398.XX	
56C	S8472022.XX	S8472109.XX	S8472196.XX	S8472370.XX	22.00
56C	S8472023.XX	S8472110.XX	S8472197.XX	S8472371.XX	21.00
56C	S8472024.XX	S8472111.XX	S8472198.XX	S8472372.XX	19.30
56C	S8472025.XX	S8472112.XX	S8472199.XX	S8472373.XX	17.20
56C	S8472026.XX	S8472113.XX	S8472200.XX	S8472374.XX	15.70
56C	S8472027.XX	S8472114.XX	S8472201.XX	S8472375.XX	13.80
56C	S8472028.XX	S8472115.XX	S8472202.XX	S8472376.XX	12.90
56C	S8472029.XX	S8472116.XX	S8472203.XX	S8472377.XX	10.30

* Overhung load is calculated at centerline of output shaft.

NOTE: Styles SBQ and SABQ shown above.

AVAILABLE
MOD-SQUAD™ CODES

- .00 - Base Mount
- .FL - Output Flange (Left)
- .FR - Output Flange (Right)

■ When ordering, substitute the XX suffix with the required Mod-Squad™ code.



Maximum Rating Tables

S847 Series • Helical - Worm

1750 RPM Input

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

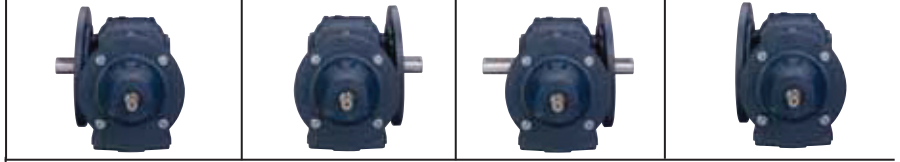
BRAVO® Accessory Kits

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

STYLE SBN / SFN

STYLE SABN / SAFN



S8473 Series • TRIPLE REDUCTION

NON-MOTORIZED

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■
9.50	1390	0.37	183.74	1350	S8473028.XX	S8473037.XX	S8473046.XX	S8473064.XX
8.40	1480	0.33	209.40	1350	S8473029.XX	S8473038.XX	S8473047.XX	S8473065.XX
7.60	1490	0.31	230.09	1350	S8473030.XX	S8473039.XX	S8473048.XX	S8473066.XX
6.50	1500	0.27	267.38	1350	S8473031.XX	S8473040.XX	S8473049.XX	S8473067.XX
6.00	1510	0.25	292.85	1350	S8473032.XX	S8473041.XX	S8473050.XX	S8473068.XX
5.00	1530	0.21	349.64	1350	S8473033.XX	S8473042.XX	S8473051.XX	S8473069.XX
4.50	1480	0.20	390.46	1350	S8473034.XX	S8473043.XX	S8473052.XX	S8473070.XX
3.80	1490	0.17	466.18	1350	S8473035.XX	S8473044.XX	S8473053.XX	S8473071.XX
2.90	1510	0.14	593.32	1350	S8473036.XX	S8473045.XX	S8473054.XX	S8473072.XX

* Overhung load is calculated at centerline of output shaft.

NOTE: Styles SFN and SAFN shown above.

AVAILABLE MOD-SQUAD™ CODES

- .00 - Base Mount
- .FL - Output Flange (Left)
- .FR - Output Flange (Right)

■ When ordering, substitute the XX suffix with the required Mod-Squad™ code.

Maximum Rating Tables

S847 Series • Helical - Worm

1750 RPM Input



BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

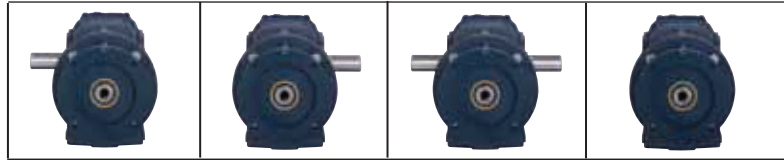
BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

STYLE SBQ / SFQ

STYLE SABQ / SAFQ



MOTORIZED QUILL INPUT

Motor Frame	Left Hand Catalog Number ■	Right Hand Catalog Number ■	Double Extension Catalog Number ■	Hollow Output Catalog Number ■	Output Speed (RPM)
56C	S8473001.XX	S8473010.XX	S8473019.XX	S8473055.XX	9.50
56C	S8473002.XX	S8473011.XX	S8473020.XX	S8473056.XX	8.40
56C	S8473003.XX	S8473012.XX	S8473021.XX	S8473057.XX	7.60
56C	S8473004.XX	S8473013.XX	S8473022.XX	S8473058.XX	6.50
56C	S8473005.XX	S8473014.XX	S8473023.XX	S8473059.XX	6.00
56C	S8473006.XX	S8473015.XX	S8473024.XX	S8473060.XX	5.00
56C	S8473007.XX	S8473016.XX	S8473025.XX	S8473061.XX	4.50
56C	S8473008.XX	S8473017.XX	S8473026.XX	S8473062.XX	3.80
56C	S8473009.XX	S8473018.XX	S8473027.XX	S8473063.XX	2.90

* Overhung load is calculated at centerline of output shaft.

NOTE: Styles SBQ and SABQ shown above.

AVAILABLE MOD-SQUAD™ CODES

- .00 - Base Mount
- .FL - Output Flange (Left)
- .FR - Output Flange (Right)

■ When ordering, substitute the XX suffix with the required Mod-Squad™ code.



Maximum Rating Tables

S857 Series • Helical - Worm

1750 RPM Input

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

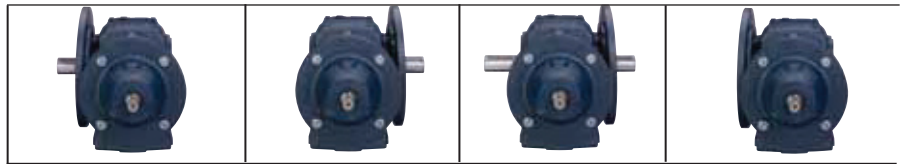
BRAVO® Accessory Kits

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

STYLE SBN / SFN

STYLE SABN / SAFN



S8572 Series • DOUBLE REDUCTION

NON-MOTORIZED

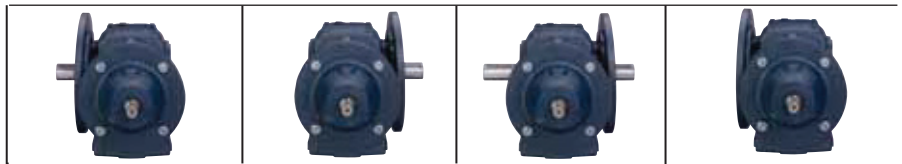
Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■
233	1330	5.36 ▲	7.50	1750	S8572262.XX	S8572291.XX	S8572320.XX	S8572436.XX
208	1410	5.09 ▲	8.40	1750	S8572263.XX	S8572292.XX	S8572321.XX	S8572437.XX
186	1490	5.00 ▲	9.43	1750	S8572264.XX	S8572293.XX	S8572322.XX	S8572438.XX
165	1570	4.53 ▲	10.62	1750	S8572265.XX	S8572294.XX	S8572323.XX	S8572439.XX
146	1640	4.21 ▲	12.00	1750	S8572266.XX	S8572295.XX	S8572324.XX	S8572440.XX
128	1720	3.91 ▲	13.64	1750	S8572267.XX	S8572296.XX	S8572325.XX	S8572441.XX
112	1800	3.58	15.60	1750	S8572268.XX	S8572297.XX	S8572326.XX	S8572442.XX
105	1830	3.40	16.74	1750	S8572269.XX	S8572298.XX	S8572327.XX	S8572443.XX
93	1730	3.05	18.75	1750	S8572270.XX	S8572299.XX	S8572328.XX	S8572444.XX
83	1840	3.00	21.00	1750	S8572271.XX	S8572300.XX	S8572329.XX	S8572445.XX
74	1930	2.71	23.57	1750	S8572272.XX	S8572301.XX	S8572330.XX	S8572446.XX
66	2030	2.55	26.54	1750	S8572273.XX	S8572302.XX	S8572331.XX	S8572447.XX
58	2120	2.37	30.00	1750	S8572274.XX	S8572303.XX	S8572332.XX	S8572448.XX
51	2200	2.19	34.09	1750	S8572275.XX	S8572304.XX	S8572333.XX	S8572449.XX
45.0	2290	2.05	39.00	1750	S8572276.XX	S8572305.XX	S8572334.XX	S8572450.XX
42.0	2320	2.00	41.84	1750	S8572277.XX	S8572306.XX	S8572335.XX	S8572451.XX
37.0	1990	1.58	47.14	1750	S8572278.XX	S8572307.XX	S8572336.XX	S8572452.XX
33.0	2080	1.50	53.08	1750	S8572279.XX	S8572308.XX	S8572337.XX	S8572453.XX
29.0	2170	1.40	60.00	1750	S8572280.XX	S8572309.XX	S8572338.XX	S8572454.XX
28.0	2530	1.41	63.57	1750	S8572281.XX	S8572310.XX	S8572339.XX	S8572455.XX
26.0	2260	1.30	68.18	1750	S8572282.XX	S8572311.XX	S8572340.XX	S8572456.XX
22.00	2340	1.20	78.00	1750	S8572283.XX	S8572312.XX	S8572341.XX	S8572457.XX
21.00	2390	1.15	83.68	1750	S8572284.XX	S8572313.XX	S8572342.XX	S8572458.XX
19.30	2270	1.06	90.91	1750	S8572285.XX	S8572314.XX	S8572343.XX	S8572459.XX
17.20	2500	1.01	102.00	1750	S8572286.XX	S8572315.XX	S8572344.XX	S8572460.XX
15.70	2390	0.93	111.58	1750	S8572287.XX	S8572316.XX	S8572345.XX	S8572461.XX
13.80	2590	0.86	127.14	1750	S8572288.XX	S8572317.XX	S8572346.XX	S8572462.XX
12.90	2500	0.82	136.00	1750	S8572289.XX	S8572318.XX	S8572347.XX	S8572463.XX
10.30	2590	0.70	169.52	1750	S8572290.XX	S8572319.XX	S8572348.XX	S8572464.XX

* Overhung load is calculated at centerline of output shaft.
▲ S847 thermal rating limit is 2.1HP.

NOTE: Styles SFN and SAFN shown above.

STYLE SBN / SFN

STYLE SABN / SAFN



S8573 Series • TRIPLE REDUCTION

NON-MOTORIZED

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■
9.50	2620	0.68	183.74	1750	S8573028.XX	S8573037.XX	S8573046.XX	S8573064.XX
8.40	2760	0.61	209.40	1750	S8573029.XX	S8573038.XX	S8573047.XX	S8573065.XX
7.60	2780	0.56	230.09	1750	S8573030.XX	S8573039.XX	S8573048.XX	S8573066.XX
6.50	2810	0.50	267.38	1750	S8573031.XX	S8573040.XX	S8573049.XX	S8573067.XX
6.00	2830	0.46	292.85	1750	S8573032.XX	S8573041.XX	S8573050.XX	S8573068.XX
5.00	2860	0.40	349.64	1750	S8573033.XX	S8573042.XX	S8573051.XX	S8573069.XX
4.50	2820	0.38	390.46	1750	S8573034.XX	S8573043.XX	S8573052.XX	S8573070.XX
3.80	2850	0.33	466.18	1750	S8573035.XX	S8573044.XX	S8573053.XX	S8573071.XX
2.90	2880	0.27	593.32	1750	S8573036.XX	S8573045.XX	S8573054.XX	S8573072.XX

* Overhung load is calculated at centerline of output shaft.
▲ S847 thermal rating limit is 2.1HP.

NOTE: Styles SFN and SAFN shown above.

AVAILABLE
MOD-SQUAD™ CODES

- .00 - Base Mount
- .FL - Output Flange (Left)
- .FR - Output Flange (Right)

■ When ordering, substitute the XX suffix with the required Mod-Squad™ code.

Maximum Rating Tables

S857 Series • Helical - Worm

1750 RPM Input



Single Reduction Reducers
BRAVO®

Double Reduction
BRAVO® Worm - Worm

Double Reduction
BRAVO® Helical - Worm

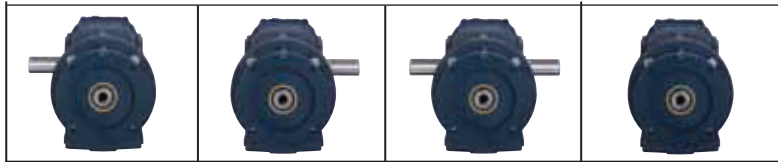
BRAVO® Accessory Kits

High Efficiency Helical - Inline Gear Reducers

High Efficiency Helical - Worm Gear Reducers

STYLE SBQ / SFQ

STYLE SABQ / SAFQ

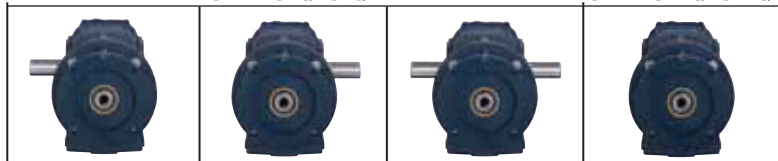


MOTORIZED QUILL INPUT

Motor Frame	Left Hand Catalog Number ■	Right Hand Catalog Number ■	Double Extension Catalog Number ■	Hollow Output Catalog Number ■	Output Speed (RPM)
182-4 TC	S8572059.XX	S8572146.XX	S8572233.XX	S8572407.XX	233
182-4 TC	S8572060.XX	S8572147.XX	S8572234.XX	S8572408.XX	208
182-4 TC	S8572061.XX	S8572148.XX	S8572235.XX	S8572409.XX	186
182-4 TC	S8572062.XX	S8572149.XX	S8572236.XX	S8572410.XX	165
182-4 TC	S8572063.XX	S8572150.XX	S8572237.XX	S8572411.XX	146
182-4 TC	S8572064.XX	S8572151.XX	S8572238.XX	S8572412.XX	128
182-4 TC	S8572065.XX	S8572152.XX	S8572239.XX	S8572413.XX	112
143-5TC	S8572037.XX	S8572124.XX	S8572211.XX	S8572385.XX	105
143-5TC	S8572038.XX	S8572125.XX	S8572212.XX	S8572386.XX	93
143-5TC	S8572039.XX	S8572126.XX	S8572213.XX	S8572387.XX	83
143-5TC	S8572040.XX	S8572127.XX	S8572214.XX	S8572388.XX	74
143-5TC	S8572041.XX	S8572128.XX	S8572215.XX	S8572389.XX	66
143-5TC	S8572042.XX	S8572129.XX	S8572216.XX	S8572390.XX	58
143-5TC	S8572043.XX	S8572130.XX	S8572217.XX	S8572391.XX	51
143-5TC	S8572044.XX	S8572131.XX	S8572218.XX	S8572392.XX	45.0
143-5TC	S8572045.XX	S8572132.XX	S8572219.XX	S8572393.XX	42.0
56C	S8572017.XX	S8572104.XX	S8572191.XX	S8572365.XX	37.0
56C	S8572018.XX	S8572105.XX	S8572192.XX	S8572366.XX	33.0
56C	S8572019.XX	S8572106.XX	S8572193.XX	S8572367.XX	29.0
56C	S8572020.XX	S8572107.XX	S8572194.XX	S8572368.XX	28.0
56C	S8572021.XX	S8572108.XX	S8572195.XX	S8572369.XX	26.0
56C	S8572022.XX	S8572109.XX	S8572196.XX	S8572370.XX	22.00
56C	S8572023.XX	S8572110.XX	S8572197.XX	S8572371.XX	21.00
56C	S8572024.XX	S8572111.XX	S8572198.XX	S8572372.XX	19.30
56C	S8572025.XX	S8572112.XX	S8572199.XX	S8572373.XX	17.20
56C	S8572026.XX	S8572113.XX	S8572200.XX	S8572374.XX	15.70
56C	S8572027.XX	S8572114.XX	S8572201.XX	S8572375.XX	13.80
56C	S8572028.XX	S8572115.XX	S8572202.XX	S8572376.XX	12.90
56C	S8572029.XX	S8572116.XX	S8572203.XX	S8572377.XX	10.30

STYLE SBQ / SFQ

STYLE SABQ / SAFQ



MOTORIZED QUILL INPUT

Motor Frame	Left Hand Catalog Number ■	Right Hand Catalog Number ■	Double Extension Catalog Number ■	Hollow Output Catalog Number ■	Output Speed (RPM)
56C	S8573001.XX	S8573010.XX	S8573019.XX	S8573055.XX	9.50
56C	S8573002.XX	S8573011.XX	S8573020.XX	S8573056.XX	8.40
56C	S8573003.XX	S8573012.XX	S8573021.XX	S8573057.XX	7.60
56C	S8573004.XX	S8573013.XX	S8573022.XX	S8573058.XX	6.50
56C	S8573005.XX	S8573014.XX	S8573023.XX	S8573059.XX	6.00
56C	S8573006.XX	S8573015.XX	S8573024.XX	S8573060.XX	5.00
56C	S8573007.XX	S8573016.XX	S8573025.XX	S8573061.XX	4.50
56C	S8573008.XX	S8573017.XX	S8573026.XX	S8573062.XX	3.80
56C	S8573009.XX	S8573018.XX	S8573027.XX	S8573063.XX	2.90

* Overhung load is calculated at centerline of output shaft.
▲ S847 thermal rating limit is 2.1HP.

NOTE: Styles SBQ and SABQ shown above.

AVAILABLE
MOD-SQUAD™ CODES

- .00 - Base Mount
- .FL - Output Flange (Left)
- .FR - Output Flange (Right)

■ When ordering, substitute the XX suffix with the required Mod-Squad™ code.



Maximum Rating Tables

S867 Series • Helical - Worm 1750 RPM Input

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

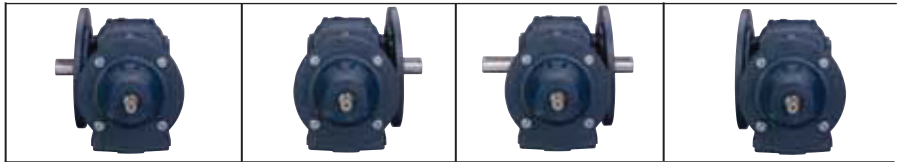
BRAVO® Accessory Kits

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

STYLE SBN / SFN

STYLE SABN / SAFN



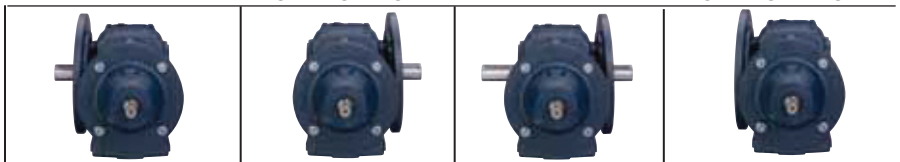
S8672 Series • DOUBLE REDUCTION

NON-MOTORIZED

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■
244	2290	9.57 ▲	7.17	2100	S8672280.XX	S8672311.XX	S8672342.XX	S8672466.XX
204	2570	9.04 ▲	8.59	2100	S8672281.XX	S8672312.XX	S8672343.XX	S8672467.XX
161	2920	8.18 ▲	10.88	2100	S8672282.XX	S8672313.XX	S8672344.XX	S8672468.XX
139	3130	7.57 ▲	12.62	2100	S8672283.XX	S8672314.XX	S8672345.XX	S8672469.XX
106	3460	6.47	16.50	2100	S8672284.XX	S8672315.XX	S8672346.XX	S8672470.XX
98	3110	5.52	17.93	2100	S8672285.XX	S8672316.XX	S8672347.XX	S8672471.XX
89	3640	5.72	19.71	2100	S8672286.XX	S8672317.XX	S8672348.XX	S8672472.XX
83	3700	5.47	21.00	2100	S8672287.XX	S8672318.XX	S8672349.XX	S8672473.XX
73	3820	5.00	24.00	2100	S8672288.XX	S8672319.XX	S8672350.XX	S8672474.XX
68	3870	4.71	25.76	2100	S8672289.XX	S8672320.XX	S8672351.XX	S8672475.XX
64	3890	4.64	27.19	2100	S8672290.XX	S8672321.XX	S8672352.XX	S8672476.XX
58	3990	4.18	30.00	2100	S8672291.XX	S8672322.XX	S8672353.XX	S8672477.XX
54	4050	3.93	32.57	2100	S8672292.XX	S8672323.XX	S8672354.XX	S8672478.XX
49.0	3230	3.15	35.85	2100	S8672293.XX	S8672324.XX	S8672355.XX	S8672479.XX
42.0	4490	3.63	41.25	2100	S8672294.XX	S8672325.XX	S8672356.XX	S8672480.XX
36.0	4700	3.22	49.29	2100	S8672295.XX	S8672326.XX	S8672357.XX	S8672481.XX
32.0	4000	2.68	54.38	2100	S8672296.XX	S8672327.XX	S8672358.XX	S8672482.XX
29.0	4910	2.79	60.00	2100	S8672297.XX	S8672328.XX	S8672359.XX	S8672483.XX
27.0	4970	2.65	64.41	2100	S8672298.XX	S8672329.XX	S8672360.XX	S8672484.XX
23.00	5110	2.36	75.00	2100	S8672299.XX	S8672330.XX	S8672361.XX	S8672485.XX
22.00	5160	2.21	81.43	2100	S8672300.XX	S8672331.XX	S8672362.XX	S8672486.XX
17.80	4830	1.90	98.57	2100	S8672301.XX	S8672332.XX	S8672363.XX	S8672487.XX
16.70	4890	1.82	105.00	2100	S8672302.XX	S8672333.XX	S8672364.XX	S8672488.XX
14.60	5030	1.66	120.00	2100	S8672303.XX	S8672334.XX	S8672365.XX	S8672489.XX
13.60	5100	1.58	128.82	2100	S8672304.XX	S8672335.XX	S8672366.XX	S8672490.XX
12.50	4840	1.50	140.00	2100	S8672305.XX	S8672336.XX	S8672367.XX	S8672491.XX
11.70	5230	1.42	150.00	2100	S8672306.XX	S8672337.XX	S8672368.XX	S8672492.XX
10.70	5300	1.33	162.86	2100	S8672307.XX	S8672338.XX	S8672369.XX	S8672493.XX
10.20	5040	1.28	171.76	2100	S8672308.XX	S8672339.XX	S8672370.XX	S8672494.XX
8.80	5170	1.15	200.00	2100	S8672309.XX	S8672340.XX	S8672371.XX	S8672495.XX
8.10	5230	1.09	217.14	2100	S8672310.XX	S8672341.XX	S8672372.XX	S8672496.XX

STYLE SBN / SFN

STYLE SABN / SAFN



S8673 Series • TRIPLE REDUCTION

NON-MOTORIZED

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■
6.90	5700	0.85	254.28	2100	S8673109.XX	S8673121.XX	S8673133.XX	S8673157.XX
5.70	5700	0.72	306.66	2100	S8673110.XX	S8673122.XX	S8673134.XX	S8673158.XX
5.00	5700	0.63	352.50	2100	S8673111.XX	S8673123.XX	S8673135.XX	S8673159.XX
4.30	5830	0.66	408.00	2100	S8673112.XX	S8673124.XX	S8673136.XX	S8673160.XX
3.90	5620	0.64	446.24	2100	S8673113.XX	S8673125.XX	S8673137.XX	S8673161.XX
3.40	5830	0.53	508.56	2100	S8673114.XX	S8673126.XX	S8673138.XX	S8673162.XX
3.20	5690	0.54	544.00	2100	S8673115.XX	S8673127.XX	S8673139.XX	S8673163.XX
2.90	5830	0.45	613.32	2100	S8673116.XX	S8673128.XX	S8673140.XX	S8673164.XX
2.60	5760	0.45	678.08	2100	S8673117.XX	S8673129.XX	S8673141.XX	S8673165.XX
2.50	5830	0.40	705.00	2100	S8673118.XX	S8673130.XX	S8673142.XX	S8673166.XX
2.10	5760	0.38	817.76	2100	S8673119.XX	S8673131.XX	S8673143.XX	S8673167.XX
1.90	5760	0.34	940.00	2100	S8673120.XX	S8673132.XX	S8673144.XX	S8673168.XX

* Overhung load is calculated at centerline of output shaft.
▲ S847 thermal rating limit is 2.1HP.

NOTE: Styles SFN and SAFN shown above.

AVAILABLE
MOD-SQUAD™ CODES

- .00 - Base Mount
- .FL - Output Flange (Left)
- .FR - Output Flange (Right)

■ When ordering, substitute the XX suffix with the required Mod-Squad™ code.

Maximum Rating Tables

S867 Series • Helical - Worm

1750 RPM Input



Single Reduction Reducers

Double Reduction

Double Reduction

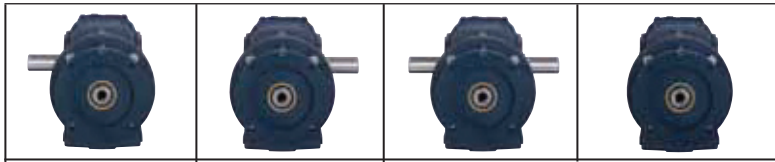
Accessory Kits

Helical - In-line Reducers

Helical - Worm Gear Reducers

STYLE SBQ / SFQ

STYLE SABQ / SAFQ

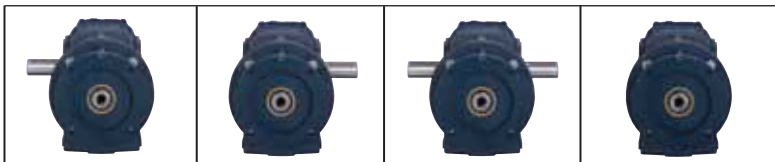


MOTORIZED QUILL INPUT

Motor Frame	Left Hand Catalog Number ■	Right Hand Catalog Number ■	Double Extension Catalog Number ■	Hollow Output Catalog Number ■	Output Speed (RPM)
182-4TC	S8672063.XX	S8672156.XX	S8672249.XX	S8672435.XX	244
182-4TC	S8672064.XX	S8672157.XX	S8672250.XX	S8672436.XX	204
182-4TC	S8672065.XX	S8672158.XX	S8672251.XX	S8672437.XX	161
182-4TC	S8672066.XX	S8672159.XX	S8672252.XX	S8672438.XX	139
182-4TC	S8672067.XX	S8672160.XX	S8672253.XX	S8672439.XX	106
182-4TC	S8672068.XX	S8672161.XX	S8672254.XX	S8672440.XX	98
182-4TC	S8672069.XX	S8672162.XX	S8672255.XX	S8672441.XX	89
182-4TC	S8672070.XX	S8672163.XX	S8672256.XX	S8672442.XX	83
182-4TC	S8672071.XX	S8672164.XX	S8672257.XX	S8672443.XX	73
182-4TC	S8672072.XX	S8672165.XX	S8672258.XX	S8672444.XX	68
182-4TC	S8672073.XX	S8672166.XX	S8672259.XX	S8672445.XX	64
182-4TC	S8672074.XX	S8672167.XX	S8672260.XX	S8672446.XX	58
182-4TC	S8672075.XX	S8672168.XX	S8672261.XX	S8672447.XX	54
182-4TC	S8672076.XX	S8672169.XX	S8672262.XX	S8672448.XX	49.0
182-4TC	S8672077.XX	S8672170.XX	S8672263.XX	S8672449.XX	42.0
182-4TC	S8672078.XX	S8672171.XX	S8672264.XX	S8672450.XX	36.0
143-5TC	S8672048.XX	S8672141.XX	S8672234.XX	S8672420.XX	32.0
143-5TC	S8672049.XX	S8672142.XX	S8672235.XX	S8672421.XX	29.0
143-5TC	S8672050.XX	S8672143.XX	S8672236.XX	S8672422.XX	27.0
143-5TC	S8672051.XX	S8672144.XX	S8672237.XX	S8672423.XX	23.00
143-5TC	S8672052.XX	S8672145.XX	S8672238.XX	S8672424.XX	22.00
143-5TC	S8672053.XX	S8672146.XX	S8672239.XX	S8672425.XX	17.80
143-5TC	S8672054.XX	S8672147.XX	S8672240.XX	S8672426.XX	16.70
143-5TC	S8672055.XX	S8672148.XX	S8672241.XX	S8672427.XX	14.60
143-5TC	S8672056.XX	S8672149.XX	S8672242.XX	S8672428.XX	13.60
143-5TC	S8672057.XX	S8672150.XX	S8672243.XX	S8672429.XX	12.50
143-5TC	S8672058.XX	S8672151.XX	S8672244.XX	S8672430.XX	11.70
56C	S8672028.XX	S8672121.XX	S8672214.XX	S8672400.XX	10.70
56C	S8672029.XX	S8672122.XX	S8672215.XX	S8672401.XX	10.20
56C	S8672030.XX	S8672123.XX	S8672216.XX	S8672402.XX	8.80
56C	S8672031.XX	S8672124.XX	S8672217.XX	S8672403.XX	8.10

STYLE SBQ / SFQ

STYLE SABQ / SAFQ



MOTORIZED QUILL INPUT

Motor Frame	Left Hand Catalog Number ■	Right Hand Catalog Number ■	Double Extension Catalog Number ■	Hollow Output Catalog Number ■	Output Speed (RPM)
143-5TC	S8673013.XX	S8673049.XX	S8673085.XX	S8673157.XX	6.90
143-5TC	S8673014.XX	S8673050.XX	S8673086.XX	S8673158.XX	5.70
56C	S8673003.XX	S8673039.XX	S8673075.XX	S8673147.XX	5.00
56C	S8673004.XX	S8673040.XX	S8673076.XX	S8673148.XX	4.30
56C	S8673005.XX	S8673041.XX	S8673077.XX	S8673149.XX	3.90
56C	S8673006.XX	S8673042.XX	S8673078.XX	S8673150.XX	3.40
56C	S8673007.XX	S8673043.XX	S8673079.XX	S8673151.XX	3.20
56C	S8673008.XX	S8673044.XX	S8673080.XX	S8673152.XX	2.90
56C	S8673009.XX	S8673045.XX	S8673081.XX	S8673153.XX	2.60
56C	S8673010.XX	S8673046.XX	S8673082.XX	S8673154.XX	2.50
56C	S8673011.XX	S8673047.XX	S8673083.XX	S8673155.XX	2.10
56C	S8673012.XX	S8673048.XX	S8673084.XX	S8673156.XX	1.90

* Overhung load is calculated at centerline of output shaft.
 ▲ S847 thermal rating limit is 2.1HP.

NOTE: Styles SBQ and SABQ shown above.

AVAILABLE MOD-SQUAD™ CODES

- .00 - Base Mount
- .FL - Output Flange (Left)
- .FR - Output Flange (Right)

■ When ordering, substitute the XX suffix with the required Mod-Squad™ code.



Maximum Rating Tables

S867 and S877 Series • Helical - Worm 1750 RPM Input

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

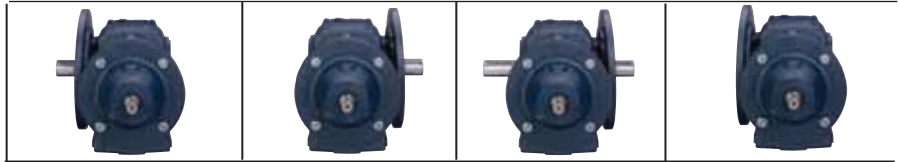
BRAVO® Accessory Kits

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

STYLE SBN / SFN

STYLE SABN / SAFN



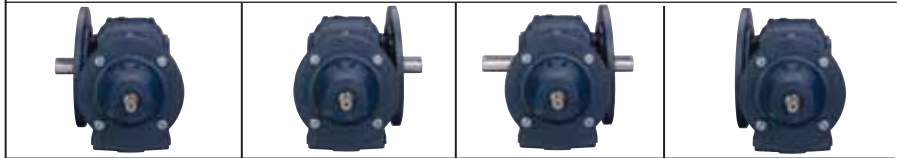
S8674 Series • QUAD REDUCTION

NON-MOTORIZED

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■
5.90	5700	0.75	298.63	2100	S8674097.XX	S8674113.XX	S8674129.XX	S8674177.XX
4.90	5700	0.64	357.86	2100	S8674098.XX	S8674114.XX	S8674130.XX	S8674178.XX
3.90	5700	0.52	452.82	2100	S8674099.XX	S8674115.XX	S8674131.XX	S8674179.XX
3.30	5700	0.45	525.50	2100	S8674100.XX	S8674116.XX	S8674132.XX	S8674180.XX
2.90	5830	0.47	597.26	2100	S8674101.XX	S8674117.XX	S8674133.XX	S8674181.XX
2.50	5700	0.35	687.23	2100	S8674102.XX	S8674118.XX	S8674134.XX	S8674182.XX
2.10	5700	0.29	821.17	2100	S8674103.XX	S8674119.XX	S8674135.XX	S8674183.XX
1.90	5830	0.32	905.64	2100	S8674104.XX	S8674120.XX	S8674136.XX	S8674184.XX
1.80	5700	0.24	999.60	2100	S8674105.XX	S8674121.XX	S8674137.XX	S8674185.XX
1.40	5700	0.20	1250.00	2100	S8674106.XX	S8674122.XX	S8674138.XX	S8674186.XX
1.30	5830	0.22	1374.00	2100	S8674107.XX	S8674123.XX	S8674139.XX	S8674187.XX
1.00	5830	0.18	1749.00	2100	S8674108.XX	S8674124.XX	S8674140.XX	S8674188.XX
0.900	5830	0.16	1999.00	2100	S8674109.XX	S8674125.XX	S8674141.XX	S8674189.XX
0.800	5830	0.14	2181.00	2100	S8674110.XX	S8674126.XX	S8674142.XX	S8674190.XX
0.700	5830	0.12	2675.00	2100	S8674111.XX	S8674127.XX	S8674143.XX	S8674191.XX
0.500	5830	0.09	3455.00	2100	S8674112.XX	S8674128.XX	S8674144.XX	S8674192.XX

STYLE SBN / SFN

STYLE SABN / SAFN



S8772 Series • DOUBLE REDUCTION

NON-MOTORIZED

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■
239	4310	17.60□	7.32	3050	S8772313.XX	S8772339.XX	S8772365.XX	S8772495.XX
214	4590	16.80□	8.17	3050	S8772314.XX	S8772340.XX	S8772366.XX	S8772496.XX
192	4740	15.60□	9.14	3050	S8772315.XX	S8772341.XX	S8772367.XX	S8772497.XX
158	5410	15.00□	11.08	3050	S8772316.XX	S8772342.XX	S8772368.XX	S8772498.XX
129	6070	13.60□	13.59	3050	S8772317.XX	S8772343.XX	S8772369.XX	S8772499.XX
113	6460	12.70□	15.48	3050	S8772318.XX	S8772344.XX	S8772370.XX	S8772500.XX
96	5580	10.00	18.30	3050	S8772319.XX	S8772345.XX	S8772371.XX	S8772501.XX
80	7330	10.40	21.75	3050	S8772320.XX	S8772346.XX	S8772372.XX	S8772502.XX
68	7710	9.30	25.71	3050	S8772321.XX	S8772347.XX	S8772373.XX	S8772503.XX
63	7020	8.14	27.69	3050	S8772322.XX	S8772348.XX	S8772374.XX	S8772504.XX
58	7330	7.89	30.00	3050	S8772323.XX	S8772349.XX	S8772375.XX	S8772505.XX
52	7790	7.50	33.97	3050	S8772324.XX	S8772350.XX	S8772376.XX	S8772506.XX
45.0	8240	6.98	38.71	3050	S8772325.XX	S8772351.XX	S8772377.XX	S8772507.XX
38.0	6440	5.00	45.68	3050	S8772326.XX	S8772352.XX	S8772378.XX	S8772508.XX
32.0	9260	5.70	54.38	3050	S8772327.XX	S8772353.XX	S8772379.XX	S8772509.XX
27.0	9680	5.10	64.29	3050	S8772328.XX	S8772354.XX	S8772380.XX	S8772510.XX
23.00	10080	4.45	77.50	3050	S8772339.XX	S8772355.XX	S8772381.XX	S8772511.XX
18.20	10490	3.80	96.00	3050	S8772330.XX	S8772356.XX	S8772382.XX	S8772512.XX
16.10	9500	3.35	108.75	3050	S8772331.XX	S8772357.XX	S8772383.XX	S8772513.XX
13.60	9930	3.00	128.57	3050	S8772332.XX	S8772358.XX	S8772384.XX	S8772514.XX
12.10	9550	2.67	145.00	3050	S8772333.XX	S8772359.XX	S8772385.XX	S8772515.XX
11.30	10340	2.66	155.00	3050	S8772334.XX	S8772360.XX	S8772386.XX	S8772516.XX
10.20	9950	2.40	171.43	3050	S8772335.XX	S8772361.XX	S8772387.XX	S8772517.XX
9.10	10750	2.28	192.00	3050	S8772336.XX	S8772362.XX	S8772388.XX	S8772518.XX
8.50	10320	2.11	206.67	3050	S8772337.XX	S8772363.XX	S8772389.XX	S8772519.XX
6.80	10670	1.81	256.00	3050	S8772338.XX	S8772364.XX	S8772390.XX	S8772520.XX

* Overhung load is calculated at centerline of output shaft.

▲ S847 thermal rating limit is 2.1HP.

NOTE: Styles SFN and SAFN shown above.

AVAILABLE
MOD-SQUAD™ CODES

- .00 - Base Mount
- .FL - Output Flange (Left)
- .FR - Output Flange (Right)

■ When ordering, substitute the XX suffix with the required Mod-Squad™ code.

Maximum Rating Tables

S867 and S877 Series • Helical - Worm

1750 RPM Input



BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

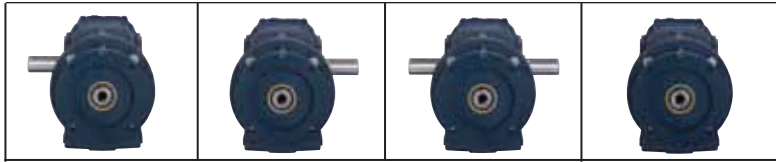
BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

STYLE SBQ / SFQ

STYLE SABQ / SAFQ

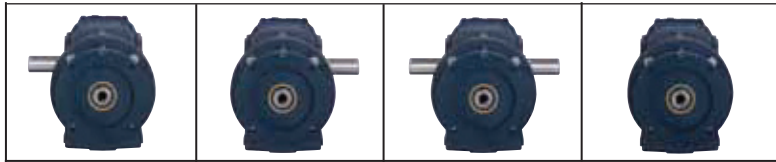


MOTORIZED QUILL INPUT

Motor Frame	Left Hand Catalog Number ■	Right Hand Catalog Number ■	Double Extension Catalog Number ■	Hollow Output Catalog Number ■	Output Speed (RPM)
143-5TC	S8674017.XX	S8674049.XX	S8674081.XX	S8674161.XX	5.90
143-5TC	S8674018.XX	S8674050.XX	S8674082.XX	S8674162.XX	4.90
56C	S8674003.XX	S8674035.XX	S8674067.XX	S8674147.XX	3.90
56C	S8674004.XX	S8674036.XX	S8674068.XX	S8674148.XX	3.30
56C	S8674005.XX	S8674037.XX	S8674069.XX	S8674149.XX	2.90
56C	S8674006.XX	S8674038.XX	S8674070.XX	S8674150.XX	2.50
56C	S8674007.XX	S8674039.XX	S8674071.XX	S8674151.XX	2.10
56C	S8674008.XX	S8674040.XX	S8674072.XX	S8674152.XX	1.90
56C	S8674009.XX	S8674041.XX	S8674073.XX	S8674153.XX	1.80
56C	S8674010.XX	S8674042.XX	S8674074.XX	S8674154.XX	1.40
56C	S8674011.XX	S8674043.XX	S8674075.XX	S8674155.XX	1.30
56C	S8674012.XX	S8674044.XX	S8674076.XX	S8674156.XX	1.00
56C	S8674013.XX	S8674045.XX	S8674077.XX	S8674157.XX	0.900
56C	S8674014.XX	S8674046.XX	S8674078.XX	S8674158.XX	0.800
56C	S8674015.XX	S8674047.XX	S8674079.XX	S8674159.XX	0.700
56C	S8674016.XX	S8674048.XX	S8674080.XX	S8674160.XX	0.500

STYLE SBQ / SFQ

STYLE SABQ / SAFQ



MOTORIZED QUILL INPUT

Motor Frame	Left Hand Catalog Number ■	Right Hand Catalog Number ■	Double Extension Catalog Number ■	Hollow Output Catalog Number ■	Output Speed (RPM)
213-5 TC	S8772079.XX	S8772183.XX	S8772287.XX	S8772469.XX	239
213-5 TC	S8772080.XX	S8772184.XX	S8772288.XX	S8772470.XX	214
213-5 TC	S8772081.XX	S8772185.XX	S8772289.XX	S8772471.XX	192
213-5 TC	S8772082.XX	S8772186.XX	S8772290.XX	S8772472.XX	158
213-5 TC	S8772083.XX	S8772187.XX	S8772291.XX	S8772473.XX	129
213-5 TC	S8772084.XX	S8772188.XX	S8772292.XX	S8772474.XX	113
213-5 TC	S8772085.XX	S8772189.XX	S8772293.XX	S8772475.XX	96
213-5 TC	S8772086.XX	S8772190.XX	S8772294.XX	S8772476.XX	80
213-5 TC	S8772087.XX	S8772191.XX	S8772295.XX	S8772477.XX	68
213-5 TC	S8772088.XX	S8772192.XX	S8772296.XX	S8772478.XX	63
213-5 TC	S8772089.XX	S8772193.XX	S8772297.XX	S8772479.XX	58
213-5 TC	S8772090.XX	S8772194.XX	S8772298.XX	S8772480.XX	52
182-4TC	S8772065.XX	S8772169.XX	S8772273.XX	S8772455.XX	45.0
182-4TC	S8772066.XX	S8772170.XX	S8772274.XX	S8772456.XX	38.0
182-4TC	S8772067.XX	S8772171.XX	S8772275.XX	S8772457.XX	32.0
182-4TC	S8772068.XX	S8772172.XX	S8772276.XX	S8772458.XX	27.0
182-4TC	S8772069.XX	S8772173.XX	S8772277.XX	S8772459.XX	23.00
182-4TC	S8772070.XX	S8772174.XX	S8772278.XX	S8772460.XX	18.20
182-4TC	S8772071.XX	S8772175.XX	S8772280.XX	S8772461.XX	16.10
182-4TC	S8772072.XX	S8772176.XX	S8772281.XX	S8772462.XX	13.60
143-5TC	S8772047.XX	S8772151.XX	S8772255.XX	S8772437.XX	12.10
143-5TC	S8772048.XX	S8772152.XX	S8772256.XX	S8772438.XX	11.30
143-5TC	S8772049.XX	S8772153.XX	S8772257.XX	S8772439.XX	10.20
143-5TC	S8772050.XX	S8772154.XX	S8772258.XX	S8772440.XX	9.10
143-5TC	S8772051.XX	S8772155.XX	S8772259.XX	S8772441.XX	8.50
143-5TC	S8772052.XX	S8772156.XX	S8772260.XX	S8772442.XX	6.80

* Overhung load is calculated at centerline of output shaft.

▲ S847 thermal rating limit is 2.1HP.

NOTE: Styles SBQ and SABQ shown above.

AVAILABLE
MOD-SQUAD™ CODES

- .00 - Base Mount
- .FL - Output Flange (Left)
- .FR - Output Flange (Right)

■ When ordering, substitute the XX suffix with the required Mod-Squad™ code.



Maximum Rating Tables

S877 Series • Helical - Worm

1750 RPM Input

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

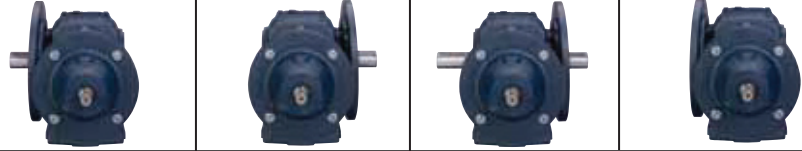
BRAVO® Accessory Kits

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

STYLE SBN / SFN

STYLE SABN / SAFN



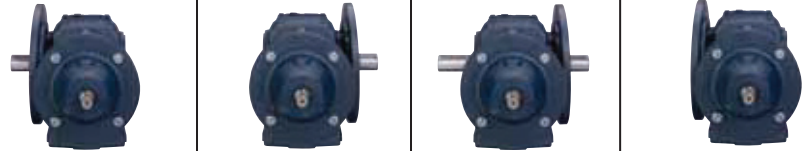
S8773 Series • TRIPLE REDUCTION

NON-MOTORIZED

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■
5.60	11430	1.63	310.02	3050	S8773118.XX	S8773131.XX	S8773144.XX	S8773196.XX
5.00	11570	1.47	352.34	3050	S8773119.XX	S8773132.XX	S8773145.XX	S8773197.XX
4.30	11700	1.31	403.03	3050	S8773120.XX	S8773133.XX	S8773146.XX	S8773198.XX
4.00	11750	1.24	432.32	3050	S8773121.XX	S8773134.XX	S8773147.XX	S8773199.XX
3.70	11410	1.16	469.78	3050	S8773122.XX	S8773135.XX	S8773148.XX	S8773200.XX
3.30	11890	1.04	527.03	3050	S8773123.XX	S8773136.XX	S8773149.XX	S8773201.XX
3.00	11580	0.98	576.43	3050	S8773124.XX	S8773137.XX	S8773150.XX	S8773202.XX
2.70	11890	0.86	656.93	3050	S8773125.XX	S8773138.XX	S8773151.XX	S8773203.XX
2.50	11700	0.82	702.71	3050	S8773126.XX	S8773139.XX	S8773152.XX	S8773204.XX
2.20	11890	0.71	792.26	3050	S8773127.XX	S8773140.XX	S8773153.XX	S8773205.XX
1.90	11890	0.65	910.68	3050	S8773128.XX	S8773141.XX	S8773154.XX	S8773206.XX
1.70	11700	0.59	1056.00	3050	S8773129.XX	S8773142.XX	S8773155.XX	S8773207.XX
1.40	11700	0.52	1214.00	3050	S8773130.XX	S8773143.XX	S8773156.XX	S8773208.XX

STYLE SBN / SFN

STYLE SABN / SAFN



S8774 Series • QUAD REDUCTION

NON-MOTORIZED

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■
5.70	11620	1.48	307.90	3050	S8774154.XX	S8774171.XX	S8774188.XX	S8774256.XX
4.70	11620	1.22	380.74	3050	S8774155.XX	S8774172.XX	S8774189.XX	S8774257.XX
3.80	11620	1.04	454.91	3050	S8774156.XX	S8774173.XX	S8774190.XX	S8774258.XX
3.60	11620	0.96	492.77	3050	S8774157.XX	S8774174.XX	S8774191.XX	S8774259.XX
2.90	11620	0.81	594.56	3050	S8774158.XX	S8774175.XX	S8774192.XX	S8774260.XX
2.80	11890	0.94	615.80	3050	S8774159.XX	S8774176.XX	S8774193.XX	S8774261.XX
2.30	11890	0.78	761.48	3050	S8774160.XX	S8774177.XX	S8774194.XX	S8774262.XX
2.10	11620	0.58	849.38	3050	S8774161.XX	S8774178.XX	S8774195.XX	S8774263.XX
1.80	11890	0.62	985.55	3050	S8774162.XX	S8774179.XX	S8774196.XX	S8774264.XX
1.50	11890	0.52	1189.00	3050	S8774163.XX	S8774180.XX	S8774197.XX	S8774265.XX
1.20	11890	0.43	1459.00	3050	S8774164.XX	S8774181.XX	S8774198.XX	S8774266.XX
1.00	11890	0.36	1787.00	3050	S8774165.XX	S8774182.XX	S8774199.XX	S8774267.XX
0.800	11890	0.30	2175.00	3050	S8774166.XX	S8774183.XX	S8774200.XX	S8774268.XX
0.700	11890	0.26	2547.00	3050	S8774167.XX	S8774184.XX	S8774201.XX	S8774269.XX
0.600	11890	0.24	2713.00	3050	S8774168.XX	S8774185.XX	S8774202.XX	S8774270.XX
0.600	11890	0.22	2952.00	3050	S8774169.XX	S8774186.XX	S8774203.XX	S8774271.XX
0.500	11890	0.19	3490.00	3050	S8774170.XX	S8774187.XX	S8774204.XX	S8774272.XX

* Overhung load is calculated at centerline of output shaft.
▲ S847 thermal rating limit is 2.1HP.

NOTE: Styles SFN and SAFN shown above.

AVAILABLE MOD-SQUAD™ CODES

- .00 - Base Mount
- .FL - Output Flange (Left)
- .FR - Output Flange (Right)

■ When ordering, substitute the XX suffix with the required Mod-Squad™ code.

Maximum Rating Tables

S877 Series • Helical - Worm

1750 RPM Input



BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

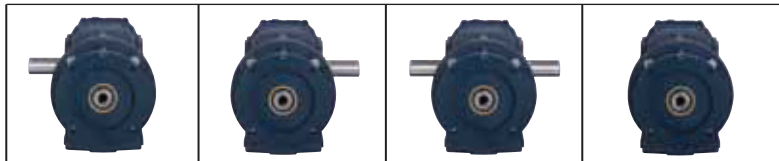
BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

STYLE SBQ / SFQ

STYLE SABQ / SAFQ



MOTORIZED QUILL INPUT

Motor Frame	Left Hand Catalog Number ■	Right Hand Catalog Number ■	Double Extension Catalog Number ■	Hollow Output Catalog Number ■	Output Speed (RPM)
143-5TC	S8773014.XX	S8773053.XX	S8773092.XX	S8773170.XX	5.60
143-5TC	S8773015.XX	S8773054.XX	S8773093.XX	S8773171.XX	5.00
143-5TC	S8773016.XX	S8773055.XX	S8773094.XX	S8773172.XX	4.30
56C	S8773004.XX	S8773043.XX	S8773082.XX	S8773160.XX	4.00
56C	S8773005.XX	S8773044.XX	S8773083.XX	S8773161.XX	3.70
56C	S8773006.XX	S8773045.XX	S8773084.XX	S8773162.XX	3.30
56C	S8773007.XX	S8773046.XX	S8773085.XX	S8773163.XX	3.00
56C	S8773008.XX	S8773047.XX	S8773086.XX	S8773164.XX	2.70
56C	S8773009.XX	S8773048.XX	S8773087.XX	S8773165.XX	2.50
56C	S8773010.XX	S8773049.XX	S8773088.XX	S8773166.XX	2.20
56C	S8773011.XX	S8773050.XX	S8773089.XX	S8773167.XX	1.90
56C	S8773012.XX	S8773051.XX	S8773090.XX	S8773168.XX	1.70
56C	S8773013.XX	S8773052.XX	S8773091.XX	S8773169.XX	1.40

STYLE SBQ / SFQ

STYLE SABQ / SAFQ



MOTORIZED QUILL INPUT

Motor Frame	Left Hand Catalog Number ■	Right Hand Catalog Number ■	Double Extension Catalog Number ■	Hollow Output Catalog Number ■	Output Speed (RPM)
143-5TC	S8774018.XX	S8774069.XX	S8774120.XX	S8774222.XX	5.70
143-5TC	S8774019.XX	S8774070.XX	S8774121.XX	S8774223.XX	4.70
143-5TC	S8774020.XX	S8774071.XX	S8774122.XX	S8774224.XX	3.80
143-5TC	S8774021.XX	S8774072.XX	S8774123.XX	S8774225.XX	3.60
143-5TC	S8774022.XX	S8774073.XX	S8774124.XX	S8774226.XX	2.90
143-5TC	S8774023.XX	S8774074.XX	S8774125.XX	S8774227.XX	2.80
143-5TC	S8774024.XX	S8774075.XX	S8774126.XX	S8774228.XX	2.30
56C	S8774008.XX	S8774059.XX	S8774110.XX	S8774212.XX	2.10
56C	S8774009.XX	S8774060.XX	S8774111.XX	S8774213.XX	1.80
56C	S8774010.XX	S8774061.XX	S8774112.XX	S8774214.XX	1.50
56C	S8774011.XX	S8774062.XX	S8774113.XX	S8774215.XX	1.20
56C	S8774012.XX	S8774063.XX	S8774114.XX	S8774216.XX	1.00
56C	S8774013.XX	S8774064.XX	S8774115.XX	S8774217.XX	0.800
56C	S8774014.XX	S8774065.XX	S8774116.XX	S8774218.XX	0.700
56C	S8774015.XX	S8774066.XX	S8774117.XX	S8774219.XX	0.600
56C	S8774016.XX	S8774067.XX	S8774118.XX	S8774220.XX	0.600
56C	S8774017.XX	S8774068.XX	S8774119.XX	S8774221.XX	0.500

* Overhung load is calculated at centerline of output shaft.

▲ S847 thermal rating limit is 2.1HP.

NOTE: Styles SBQ and SABQ shown above.

**AVAILABLE
MOD-SQUAD™ CODES**

- .00 - Base Mount
- .FL - Output Flange (Left)
- .FR - Output Flange (Right)

■ When ordering, substitute the XX suffix with the required Mod-Squad™ code.



Helical - Worm Double Reduction Dimensions Style SBQ

BRAVO®
Single Reduction Reducers

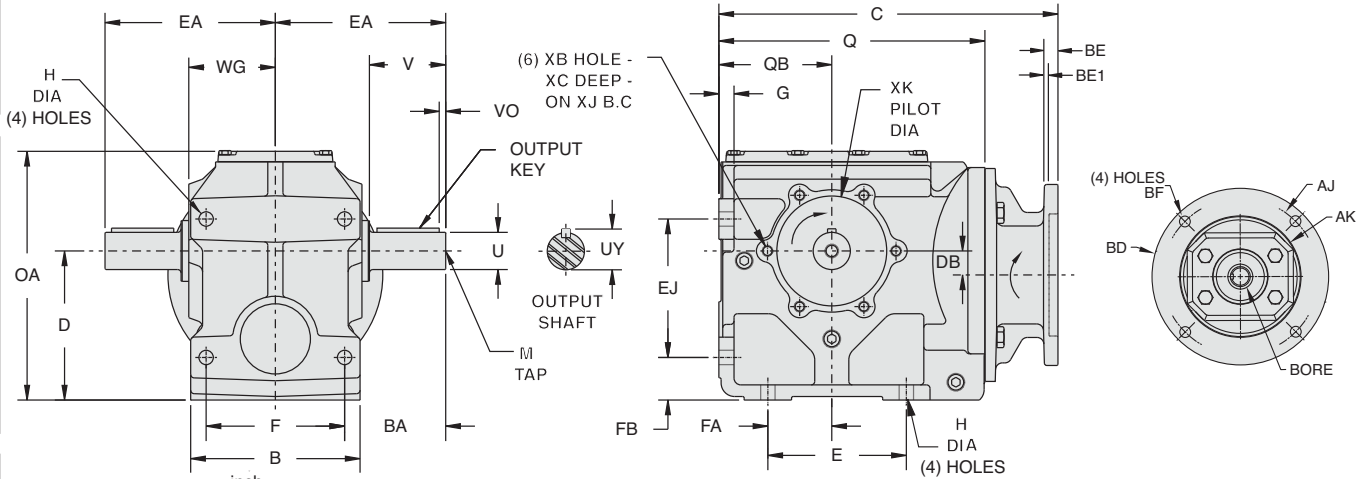
BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



Gearcase

Size	B	BA	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
SBQ8472	4.72	2.56	3.94	0.23	3.15	4.53	3.15	3.94	1.38	1.38	0.50	0.43	6.72	7.72
	120	65	100	5.8	80	115	80	100	35	35	13	11.0	171	196
SBQ8572	5.34	3.15	4.41	0.72	3.94	5.31	3.94	4.33	1.77	1.38	0.50	0.43	7.45	8.32
	136	80	112	18.2	100	135	100	110	45	35	12.7	11.0	189	211
SBQ8672	6.26	3.17	5.51	0.89	5.12	6.30	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	159	81	140	22.6	130	160	130	130	60	40	14	13.5	233	250
SBQ8772	7.28	4.04	7.09	1.38	5.32	7.68	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	185	103	180	35.0	135	195	135	150	75	70	24	17.5	299	319

Gearcase

Size	QB	WG	XB	XC	XJ	XK
SBQ8472	2.95	2.30	-	0.63	3.56	2.952
	75	58.4	M8 X 1.25	16.0	90.4	74.98
SBQ8572	3.15	2.85	-	0.63	3.88	3.228
	80	72.4	M8 X 1.25	16.0	98.6	81.99
SBQ8672	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
SBQ8772	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

Output Shaft * - Inches

U+ ^{0.000} / _{0.001}	UY	V	VO	OUTPUT KEY	M
1.000	1.10	1.97	0.25	1/4 x 1/4 x 1-5/16	3/8 -16 x .87
-	-	50.0	6.4	-	-
1.250	1.36	2.36	0.29	1/4 x 1/4 x 1-11/16	1/2 -13 x 1.13
-	-	59.9	7.4	-	-
1.375	1.51	2.82	0.40	5/16 x 5/16 x 1-3/4	1/2 -13 x 1.13
-	-	7.16	10.2	-	-
1.750	1.91	3.54	0.43	3/8 x 3/8 x 2-1/4	5/8 -11 x 1.38
-	-	89.9	10.9	-	-

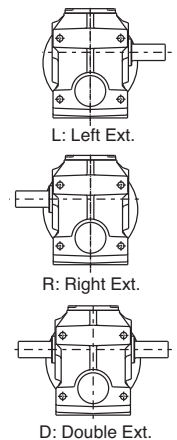
NEMA Motor Mounting Dimensions - inches

Size	Dimension "C"		
	56C	180TC	210TC
SBQ8472	10.33	11.64	-
	262	296	-
SBQ8572	10.93	12.24	-
	278	311	-
SBQ8672	12.53	13.55	-
	318	344	-
SBQ8772	15.93	16.64	16.64
	405	423	423

Dimensions subject to change without notice

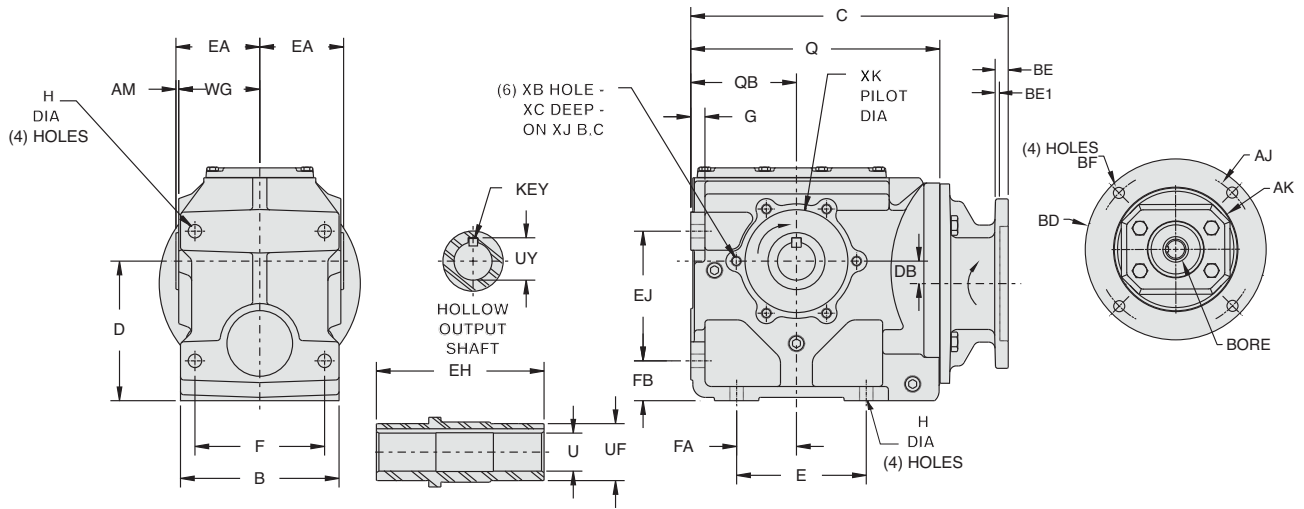
Frame	AJ [▲]	AK	BD	BE	BE1	Bore Dia.	Keyway [▲]	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	8.50	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	8.50	N/A	0.50	1.625	3/8 X 3/16	0.53
280TC	9.00	10.50	11.25	N/A	10.55	1.875	1/2 X 1/4	0.53
320TC	11.00	12.50	14.00	N/A	10.55	2.125	1/2 X 1/4	0.65
360TC	11.00	12.50	14.00	N/A	10.55	2.375	5/8 X 5/16	0.65

Output Styles



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

Helical - Worm Double Reduction Dimensions Style SABQ



Gearcase

Size	AM	B	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
SABQ8472	0.07	4.72	3.94	0.23	3.15	2.36	3.15	3.94	1.38	1.38	0.50	0.43	6.72	7.72
	1.8	120	100	5.8	80	60	80	100	35	35	13	11.0	171	196
SABQ8572	0.10	5.34	4.41	0.72	3.94	2.96	3.94	4.33	1.77	1.38	0.50	0.43	7.45	8.32
	2.5	136	112	18.2	100	75	100	110	45	35	12.7	11.0	189	211
SABQ8672	0.11	6.26	5.51	0.89	5.12	3.31	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	2.8	159	140	22.6	130	84	130	130	60	40	14	13.5	233	250
SABQ8772	0.16	7.28	7.09	1.38	5.32	4.14	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	4.1	185	180	35.0	135	105	135	150	75	70	24	17.5	299	319

Gearcase

Size	QB	WG	XB	XC	XJ	XK
SABQ8472	2.95	2.30	-	0.63	3.56	2.952
	75	58.4	M8 X 1.25	16.0	90.4	74.98
SABQ8572	3.15	2.85	-	0.63	3.88	3.228
	80	72.4	M8 X 1.25	16.0	98.6	81.99
SABQ8672	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
SABQ8772	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

Hollow Output Shaft

Size	UH ± 0.0009	UF	UY	KEY
SABQ8472	4.72	1.250	1.77	(2) 1/4 x 1/4 x 1-11/16
	-	-	-	-
SABQ8572	5.91	1.375	1.97	(2) 5/16 x 5/16 x 1-3/4
	-	-	-	-
SABQ8672	6.62	1.500	1.68	(2) 3/8 x 3/8 x 2-1/4
	-	-	-	-
SABQ8772	8.27	2.000	2.23	(2) 1/2 x 1/2 x 2-5/8
	-	-	-	-

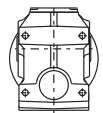
NEMA Motor Mounting Dimensions - inches

Size	Dimension "C"		
	56C 140TC	180TC	210TC
SABQ8472	10.33	11.64	-
	262	296	-
SABQ8572	10.93	12.24	-
	278	311	-
SABQ8672	12.53	13.55	-
	318	344	-
SABQ8772	15.93	16.64	16.64
	405	423	423

Dimensions subject to change without notice

Output Style

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway▲	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	8.50	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	8.50	N/A	0.50	1.625	3/8 X 3/16	0.53
280TC	9.00	10.50	11.25	N/A	10.55	1.875	1/2 X 1/4	0.53
320TC	11.00	12.50	14.00	N/A	10.55	2.125	1/2 X 1/4	0.65
360TC	11.00	12.50	14.00	N/A	10.55	2.375	5/8 X 5/16	0.65



H Hollow Output



WARNING For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



Helical - Worm Double Reduction Dimensions Style SBN

BRAVO®
Single Reduction Reducers

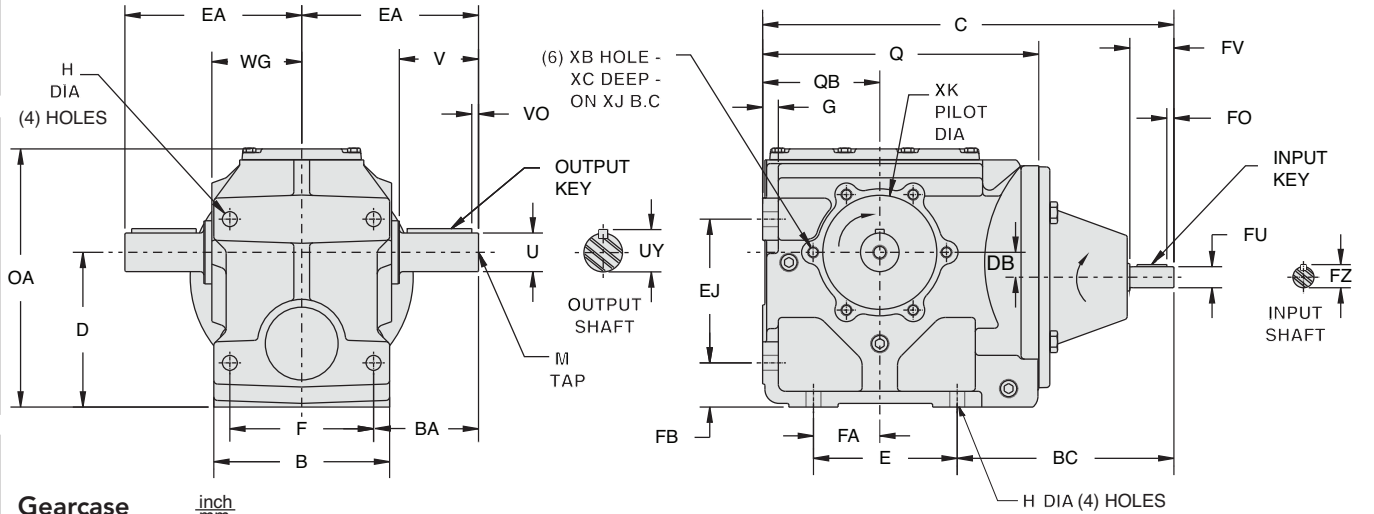
BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



Gearcase inch
mm

Size	B	BA	BC	C	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
SBN8472	4.72	2.56	7.34	12.06	3.94	0.23	3.15	4.53	3.15	3.94	1.38	1.38	0.50	0.43	6.72	7.72
	120	65	186	306	100	5.8	80	115	80	100	35	35	13	11.0	171	196
SBN8572	5.34	3.15	7.34	12.66	4.41	0.72	3.94	5.31	3.94	4.33	1.77	1.38	0.50	0.43	7.45	8.32
	136	80	186	322	112	18.2	100	135	100	110	45	35	12.7	11.0	189	211
SBN8672	6.26	3.17	7.72	14.65	5.51	0.89	5.12	6.30	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	159	81	196	372	140	22.6	130	160	130	130	60	40	14	13.5	233	250
SBN8772	7.28	4.04	11.42	18.76	7.09	1.38	5.32	7.68	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	185	103	290	477	180	35.0	135	195	135	150	75	70	24	17.5	299	319

Gearcase inch
mm

Size	QB	WG	XB	XC	XJ	XK
SBN8472	2.95	2.30	-	0.63	3.56	2.952
	75	58.4	M8 X 1.25	16.0	90.4	74.98
SBN8572	3.15	2.85	-	0.63	3.88	3.228
	80	72.4	M8 X 1.25	16.0	98.6	81.99
SBN8672	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
SBN8772	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

Output Shaft - Inches

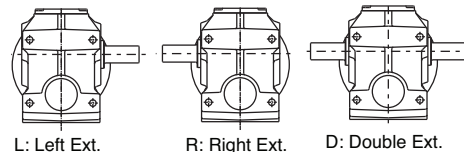
U ± 0.000 0.001	UY	V	VO	OUTPUT KEY	M
1.000	1.10	1.97	0.25	1/4 x 1/4 x 1-5/16	3/8 - 16 x .87
-	-	50.0	6.4	-	-
1.250	1.36	2.36	0.29	1/4 x 1/4 x 1-11/16	1/2 - 13 x 1.13
-	-	59.9	7.4	-	-
1.375	1.51	2.82	0.40	5/16 x 5/16 x 1-3/4	1/2 - 13 x 1.13
-	-	71.6	10.2	-	-
1.750	1.91	3.54	0.43	3/8 x 3/8 x 2-1/4	5/8 - 11 x 1.38
-	-	89.9	10.9	-	-

Output Shaft - Inches

Size	FU ± 0.000 0.001	FZ	FV	FO	INPUT KEY
SBN8472	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
SBN8572	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
SBN8672	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
SBN8772	0.875	0.95	1.97	0.28	3/16 x 3/16 x 1-1/4
	-	-	-	-	-

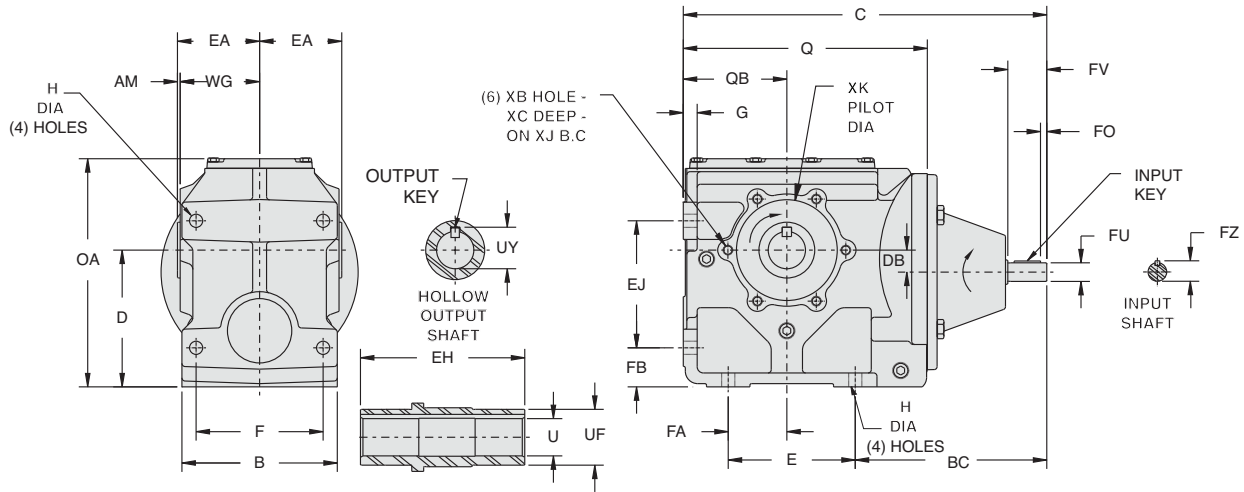
Dimensions subject to change without notice

Output Styles



WARNING For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

Helical - Worm Double Reduction Dimensions Style SABN



Gearcase

inch
mm

Size	AM	B	BC	C	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
SABN8472	0.07	4.72	7.34	12.06	3.94	0.23	3.15	2.36	3.15	3.94	1.38	1.38	0.50	0.43	6.72	7.72
	1.8	120	186	306	100	5.8	80	60	80	100	35	35	13	11.0	171	196
SABN8572	0.10	5.34	7.34	12.66	4.41	0.72	3.94	2.96	3.94	4.33	1.77	1.38	0.50	0.43	7.45	8.32
	2.5	136	186	322	112	18.2	100	75	100	110	45	35	12.7	11.0	189	211
SABN8672	0.11	6.26	7.72	14.65	5.51	0.89	5.12	3.31	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	2.8	159	196	372	140	22.6	130	84	130	130	60	40	14	13.5	233	250
SABN8772	0.16	7.28	11.42	18.76	7.09	1.38	5.32	4.14	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	4.1	185	290	477	180	35.0	135	105	135	150	75	70	24	17.5	299	319

Gearcase

inch
mm

Size	QB	WG	XB	XC	XJ	XK
SABN8472	2.95	2.30	-	0.63	3.56	2.952
	75	58.4	M8 X 1.25	16.0	90.4	74.98
SABN8572	3.15	2.85	-	0.63	3.88	3.228
	80	72.4	M8 X 1.25	16.0	98.6	81.99
SABN8672	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
SABN8772	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

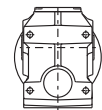
Hollow Output Shaft - Inches

EH	U ^{+0.0025} / _{-0.0000}	UF	UY	OUTPUT KEY
4.72	1.250	1.77	1.37	(2) 1/4 x 1/4 x 1-11/16
-	-	-	-	-
5.91	1.375	1.97	1.52	(2) 5/16 x 5/16 x 1-3/4
-	-	-	-	-
6.62	1.500	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-
8.27	2.000	2.75	2.22	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-

Input Shaft - Inches

Size	FU ^{+0.000} / _{-0.001}	FZ	FV	FO	INPUT KEY
SABN8472	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
SABN8572	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
SABN8672	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
SABN8772	0.875	0.95	1.97	0.28	3/16 x 3/16 x 1-1/4
	-	-	-	-	-

Output Style



Hollow Output

Dimensions subject to change without notice



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

Single Reduction Reducers

Double Reduction

Helical - Worm

Accessory Kits

High Efficiency Helical - Inline Gear Reducers

High Efficiency Helical - Worm Gear Reducers



Helical - Worm Triple Reduction Dimensions Style SBQ

BRAVO®
Single Reduction Reducers

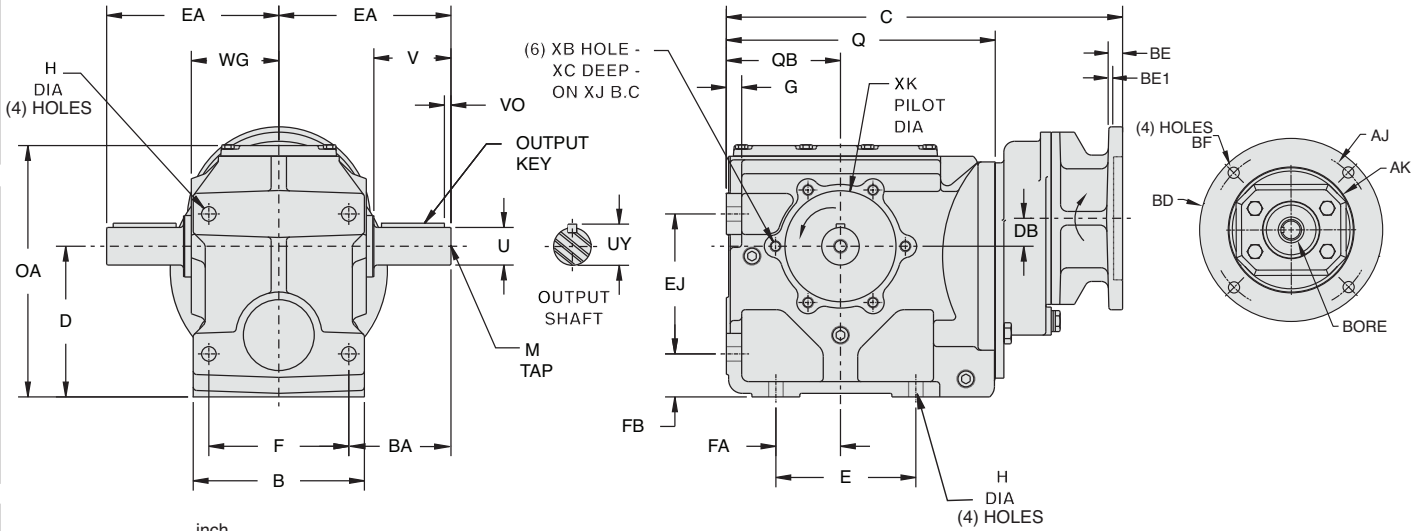
BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



Gearcase

Size	B	BA	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
SBQ8473	4.72	2.56	3.94	1.27	3.15	4.53	3.15	3.94	1.38	1.38	0.50	0.43	6.72	7.72
	120	65	100	32.2	80	115	80	100	35	35	13	11.0	171	196
SBQ8573	5.34	3.15	4.41	0.78	3.94	5.31	3.94	4.33	1.77	1.38	0.50	0.43	7.45	8.32
	136	80	112	19.8	100	135	100	110	45	35	12.7	11.0	189	211
SBQ8673	6.26	3.17	5.51	1.02	5.12	6.30	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	159	81	140	25.9	130	160	130	130	60	40	14	13.5	233	250
SBQ8773	7.28	4.04	7.09	.53	5.32	7.68	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	185	103	180	13.5	135	195	135	150	75	70	24	17.5	299	319

Gearcase

Size	QB	WG	XB	XC	XJ	XK
SBQ8473	2.95	2.30	-	0.63	3.56	2.952
	75	58.4	M8 X 1.25	16.0	90.4	74.98
SBQ8573	3.15	2.85	-	0.63	3.88	3.228
	80	72.4	M8 X 1.25	16.0	98.6	81.99
SBQ8673	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
SBQ8773	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

Output Shaft - Inches

U ^{+0.000} / _{-0.001}	UY	V	VO	OUTPUT KEY	M
1.000	1.10	1.97	0.25	1/4 x 1/4 x 1-5/16	3/8 -16 x .87
-	-	50.0	6.4	-	-
1.250	1.36	2.36	0.29	1/4 x 1/4 x 1-11/16	1/2 -13 x 1.13
-	-	59.9	7.4	-	-
1.375	1.51	2.82	0.40	5/16 x 5/16 x 1-3/4	1/2 -13 x 1.13
-	-	7.16	10.2	-	-
1.750	1.91	3.54	0.43	3/8 x 3/8 x 2-1/4	5/8 -11 x 1.38
-	-	89.9	10.9	-	-

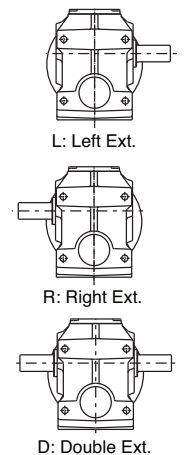
NEMA Motor Mounting Dimensions - inches

Size	Dimension "C"		
	56C	140TC	180TC
SBQ8473	11.11	-	-
	282	-	-
SBQ8573	11.71	-	-
	297	-	-
SBQ8673	14.49	14.49	15.80
	368	368	401
SBQ8773	16.75	16.75	18.06
	425	425	459

Dimensions subject to change without notice

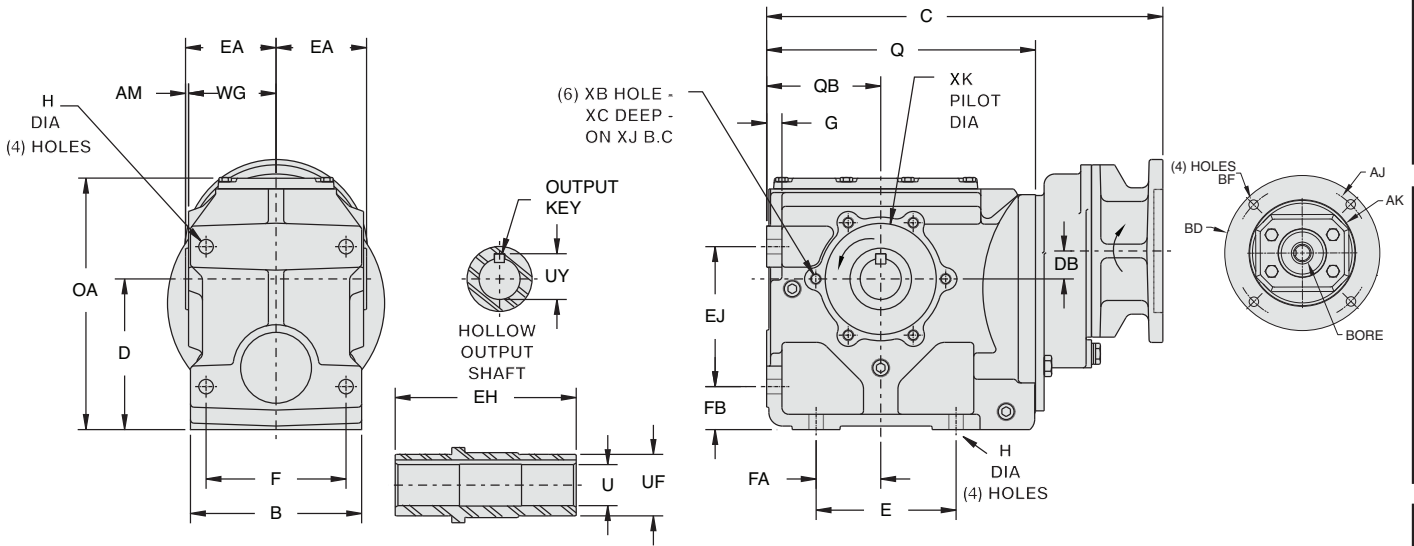
Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway▲	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	8.50	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	8.50	N/A	0.50	1.625	3/8 X 3/16	0.53
280TC	9.00	10.50	11.25	N/A	10.55	1.875	1/2 X 1/4	0.53
320TC	11.00	12.50	14.00	N/A	10.55	2.125	1/2 X 1/4	0.65
360TC	11.00	12.50	14.00	N/A	10.55	2.375	5/8 X 5/16	0.65

Output Styles



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

Helical - Worm Triple Reduction Dimensions Style SABQ



Gearcase

Size	AM	B	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
SABQ8473	0.07	4.72	3.94	1.27	3.15	2.36	3.15	3.94	1.38	1.38	0.50	0.43	6.72	7.72
	1.8	120	100	32.2	80	60	80	100	35	35	13	11.0	171	196
SABQ8573	0.10	5.34	4.41	0.78	3.94	2.96	3.94	4.33	1.77	1.38	0.50	0.43	7.45	8.32
	2.5	136	112	19.8	100	75	100	110	45	35	12.7	11.0	189	211
SABQ8673	0.11	6.26	5.51	1.02	5.12	3.31	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	2.8	159	140	25.9	130	84	130	130	60	40	14	13.5	233	250
SABQ8773	0.16	7.28	7.09	.53	5.32	4.14	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	4.1	185	180	13.5	135	105	135	150	75	70	24	17.5	299	319

Gearcase

Size	QB	WG	XB	XC	XJ	XK
SABQ8473	2.95	2.30	-	0.63	3.56	2.952
	75	58.4	M8 X 1.25	16.0	90.4	74.98
SABQ8573	3.15	2.85	-	0.63	3.88	3.228
	80	72.4	M8 X 1.25	16.0	98.6	81.99
SABQ8673	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
SABQ8773	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

Hollow Output Shaft

EH	U	UF	UY	KEY
4.72	1.250	1.77	1.37	(2) 1/4 x 1/4 x 1-11/16
-	-	-	-	-
5.91	1.375	1.97	1.52	(2) 5/16 x 5/16 x 1-3/4
-	-	-	-	-
6.62	1.500	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-
8.27	2.000	2.75	2.22	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-

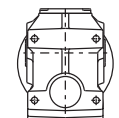
NEMA Motor Mounting Dimensions - inches

Size	Dimension "C"		
	56C	140TC	180TC
SABQ8473	11.11	-	-
	282	-	-
SABQ8573	11.71	-	-
	297	-	-
SABQ8673	14.49	14.49	15.80
	368	368	401
SABQ8773	16.75	16.75	18.06
	425	425	459

Dimensions subject to change without notice

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	8.50	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	8.50	N/A	0.50	1.625	3/8 X 3/16	0.53
280TC	9.00	10.50	11.25	N/A	10.55	1.875	1/2 X 1/4	0.53
320TC	11.00	12.50	14.00	N/A	10.55	2.125	1/2 X 1/4	0.65
360TC	11.00	12.50	14.00	N/A	10.55	2.375	5/8 X 5/16	0.65

Output Style



H
Hollow Output



WARNING For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.



Helical - Worm Triple Reduction Dimensions Style SBN

BRAVO®
Single Reduction Reducers

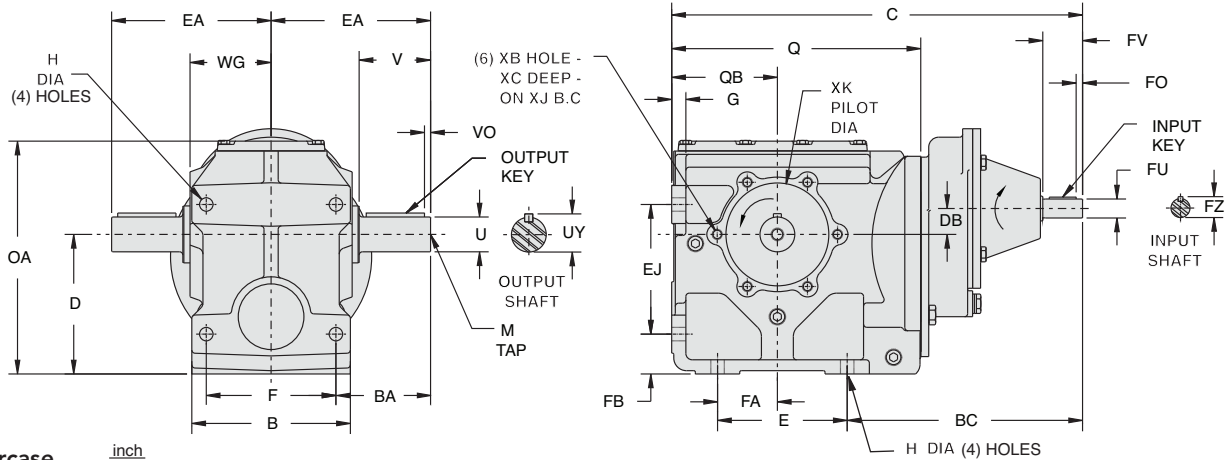
BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



Gearcase

Size	B	BA	BC	C	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
SBN8473	4.72	2.56	7.32	12.04	3.94	1.27	3.15	4.53	3.15	3.94	1.38	1.38	0.50	0.43	6.72	7.72
	120	65	186	306	100	32.2	80	115	80	100	35	35	13	11.0	171	196
SBN8573	5.34	3.15	7.32	12.64	4.41	0.78	3.94	5.31	3.94	4.33	1.77	1.38	0.50	0.43	7.45	8.32
	136	80	186	321	112	19.8	100	135	100	110	45	35	12.7	11.0	189	211
SBN8673	6.26	3.17	9.29	16.22	5.51	1.02	5.12	6.30	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	159	81	236	412	140	25.9	130	160	130	130	60	40	14	13.5	233	250
SBN8773	7.28	4.04	11.20	18.48	7.09	.53	5.32	7.68	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	185	103	284	469	180	13.5	135	195	135	150	75	70	24	17.5	299	319

Gearcase

Size	QB	WG	XB	XC	XJ	XK
SBN8473	2.95	2.30	-	0.63	3.56	2.952
	75	58.4	M8 X 1.25	16.0	90.4	74.98
SBN8573	3.15	2.85	-	0.63	3.88	3.228
	80	72.4	M8 X 1.25	16.0	98.6	81.99
SBN8673	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
SBN8773	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

Output Shaft

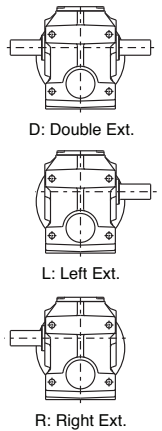
U $\pm \frac{0.000}{0.001}$	UY	V	VO	KEY	M
1.000	1.10	1.97	0.25	1/4 x 1/4 x 1-5/16	3/8 -16 x .87
-	-	50.0	6.4	-	-
1.250	1.36	2.36	0.29	1/4 x 1/4 x 1-11/16	1/2 -13 x 1.13
-	-	59.9	7.4	-	-
1.375	1.51	2.82	0.40	5/16 x 5/16 x 1-3/4	1/2 -13 x 1.13
-	-	71.6	10.2	-	-
1.750	1.91	3.54	0.43	3/8 x 3/8 x 2-1/4	5/8 -11 x 1.38
-	-	89.9	10.9	-	-

Input Shaft

Size	FU $\pm \frac{0.000}{0.001}$	FZ	FV	FO	KEY
SBN8473	0.500	0.55	1.50	---	1/8 x 1/8 x 1-1/4
	-	-	-	-	-
SBN8573	0.500	0.55	1.50	---	1/8 x 1/8 x 1-1/4
	-	-	-	-	-
SBN8673	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
SBN8773	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-

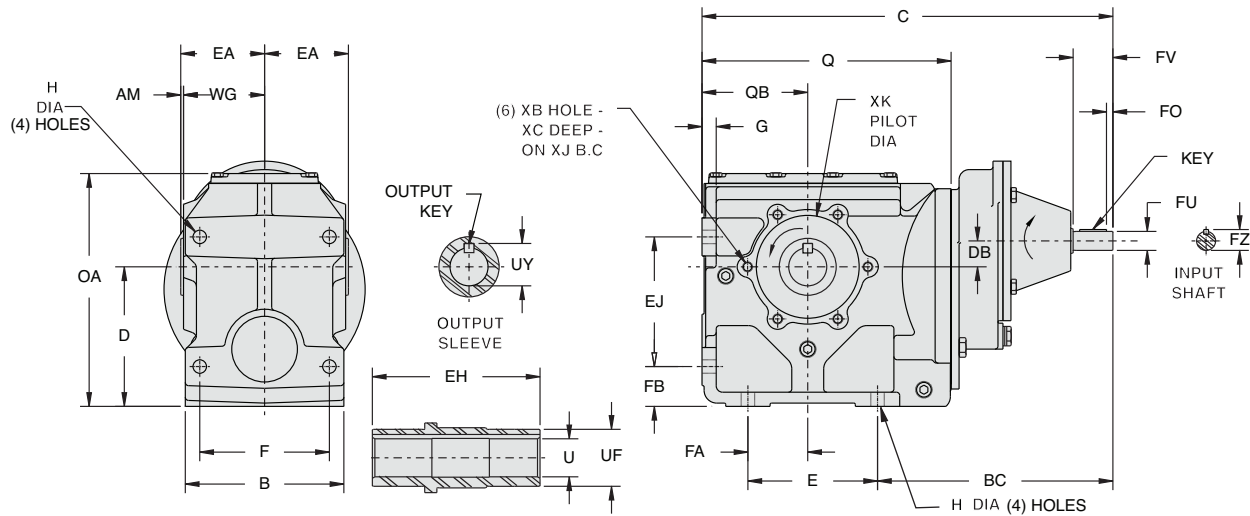
Dimensions subject to change without notice

Output Styles



WARNING For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

Helical - Worm Triple Reduction Dimensions Style SABN



Gearcase

Size	AM	B	BC	C	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
SABN8473	0.07	4.72	7.32	12.04	3.94	1.27	3.15	2.36	3.15	3.94	1.38	1.38	0.50	0.43	6.72	7.72
	1.8	120	186	306	100	32.2	80	60	80	100	35	35	13	11.0	171	196
SABN8573	0.10	5.34	7.32	12.64	4.41	0.78	3.94	2.96	3.94	4.33	1.77	1.38	0.50	0.43	7.45	8.32
	2.5	136	186	321	112	19.8	100	75	100	110	45	35	12.7	11.0	189	211
SABN8673	0.11	6.26	9.29	16.22	5.51	1.02	5.12	3.31	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	2.8	159	236	412	140	25.9	130	84	130	130	60	40	14	13.5	233	250
SABN8773	0.16	7.28	11.20	18.48	7.09	.53	5.32	4.14	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	4.1	185	284	469	180	13.5	135	105	135	150	75	70	24	17.5	299	319

Gearcase

Size	QB	WG	XB	XC	XJ	XK
SABN8473	2.95	2.30	-	0.63	3.56	2.952
	75	58.4	M8 X 1.25	16.0	90.4	74.98
SABN8573	3.15	2.85	-	0.63	3.88	3.228
	80	72.4	M8 X 1.25	16.0	98.6	81.99
SABN8673	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
SABN8773	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

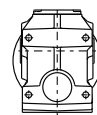
Output Sleeve

EH	U ^{+0.0025} / _{-0.0000}	UF	UY	KEY
4.72	1.250	1.77	1.37	(2) 1/4 x 1/4 x 1-11/16
-	-	-	-	-
5.91	1.375	1.97	1.52	(2) 5/16 x 5/16 x 1-3/4
-	-	-	-	-
6.62	1.500	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-
8.27	2.000	2.75	2.22	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-

Input Shaft

Size	FU ^{+0.000} / _{-0.001}	FZ	FV	FO	KEY
SABN8473	0.500	0.55	1.50	---	1/8 x 1/8 x 1-1/4
	-	-	-	-	-
SABN8573	0.500	0.55	1.50	---	1/8 x 1/8 x 1-1/4
	-	-	-	-	-
SABN8673	0.750	0.82	1.57	0.25	3/16 x 3/16 x 11/16
	-	-	-	-	-
SABN8773	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-

Output Style



H
Hollow Output

Dimensions subject to change without notice



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.



Helical - Worm Quad Reduction Dimensions Style SBQ

BRAVO®
Single Reduction Reducers

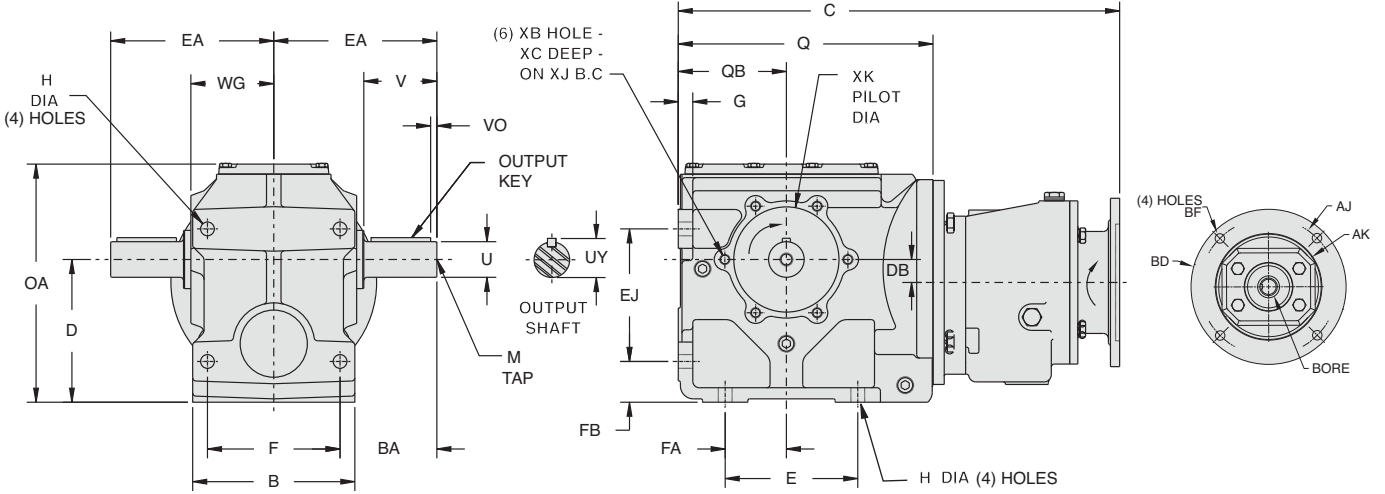
BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



Gearcase

Size	inch/mm													
	B	BA	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
SBQ8674	6.26	3.17	5.51	0.89	5.12	6.30	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	159	81	140	22.6	130	160	130	130	60	40	14	13.5	233	250
SBQ8774	7.28	4.04	7.09	1.38	5.32	7.68	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	185	103	180	35.0	135	195	135	150	75	70	24	17.5	299	319

Gearcase

Size	inch/mm					
	QB	WG	XB	XC	XJ	XK
SBQ8674	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
SBQ8774	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

Output Shaft

U ^{+0.000} -0.001	UY	V	VO	KEY	M
1.375	1.51	2.82	0.40	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
-	-	7.16	10.2	-	-
1.750	1.91	3.54	0.43	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
-	-	89.9	10.9	-	-

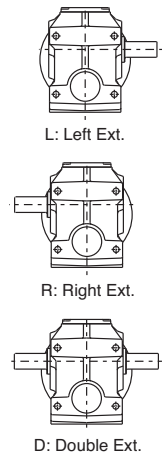
NEMA Motor Mounting Dimensions - inches

Size	Dimension "C"	
	56C 140TC	180TC
SBQ8674	17.08	-
	434	-
SBQ8774	20.91	21.93
	531	557

Dimensions subject to change without notice

Frame	AJ [⊗]	AK	BD	BE	BE1	Bore Dia.	Keyway▲	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	8.50	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	8.50	N/A	0.50	1.625	3/8 X 3/16	0.53
280TC	9.00	10.50	11.25	N/A	10.55	1.875	1/2 X 1/4	0.53
320TC	11.00	12.50	14.00	N/A	10.55	2.125	1/2 X 1/4	0.65
360TC	11.00	12.50	14.00	N/A	10.55	2.375	5/8 X 5/16	0.65

Output Styles



WARNING For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

Helical - Worm Quad Reduction Dimensions Style SABQ



Single Reduction Reducers

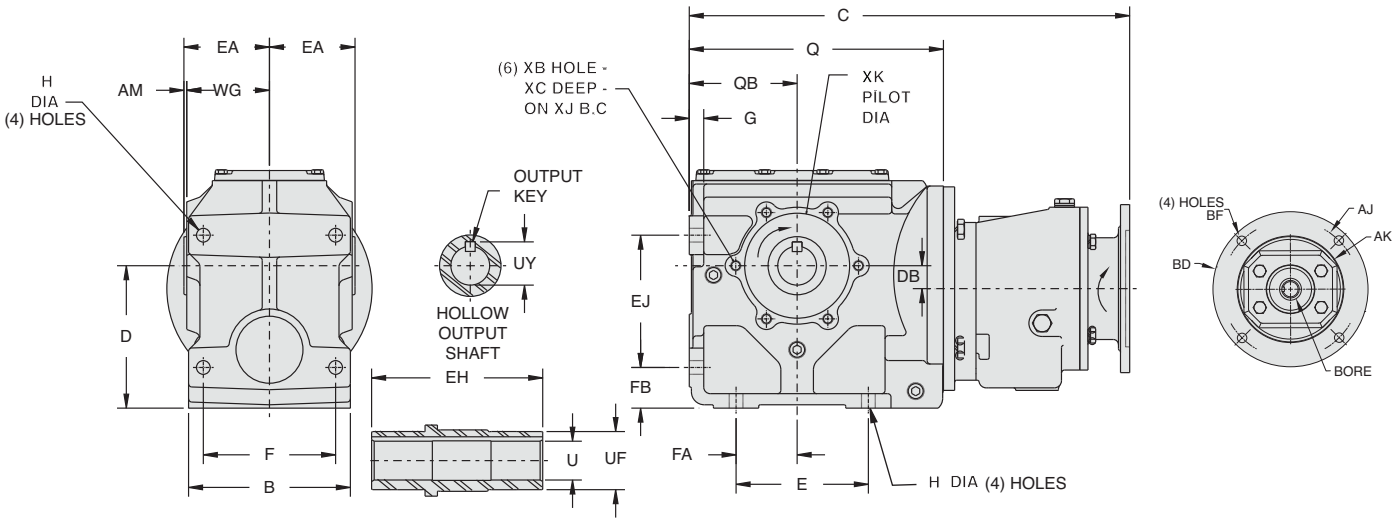
Double Reduction

Double Reduction

Accessory Kits

High Efficiency Helical - Inline Gear Reducers

High Efficiency Helical - Worm Gear Reducers



Gearcase

Size	inch mm													
	AM	B	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
SABQ8674	0.11	6.26	5.51	0.89	5.12	3.31	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	2.8	159	140	22.6	130	84	130	130	60	40	14	13.5	233	250
SABQ8774	0.16	7.28	7.09	1.38	5.32	4.14	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	4.1	185	180	35.0	135	105	135	150	75	70	24	17.5	299	319

Gearcase

Size	inch mm					
	QB	WG	XB	XC	XJ	XK
SABQ8674	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
SABQ8774	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

Hollow Output Shaft

EH	U ^{+0.0025} _{-0.0000}	UF	UY	KEY
6.62	1.500	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-
8.27	2.000	2.75	2.22	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-

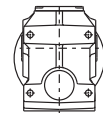
NEMA Motor Mounting Dimensions - inches

Size	Dimension "C"	
	56C 140TC	180TC
SABQ8674	17.08	-
	434	-
SABQ8774	20.91	21.93
	531	557

Dimensions subject to change without notice

Frame	AJ [⊙]	AK	BD	BE	BE1	Bore Dia.	Keyway [▲]	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	8.50	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	8.50	N/A	0.50	1.625	3/8 X 3/16	0.53
280TC	9.00	10.50	11.25	N/A	10.55	1.875	1/2 X 1/4	0.53
320TC	11.00	12.50	14.00	N/A	10.55	2.125	1/2 X 1/4	0.65
360TC	11.00	12.50	14.00	N/A	10.55	2.375	5/8 X 5/16	0.65

Output Style



H
Hollow Output



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

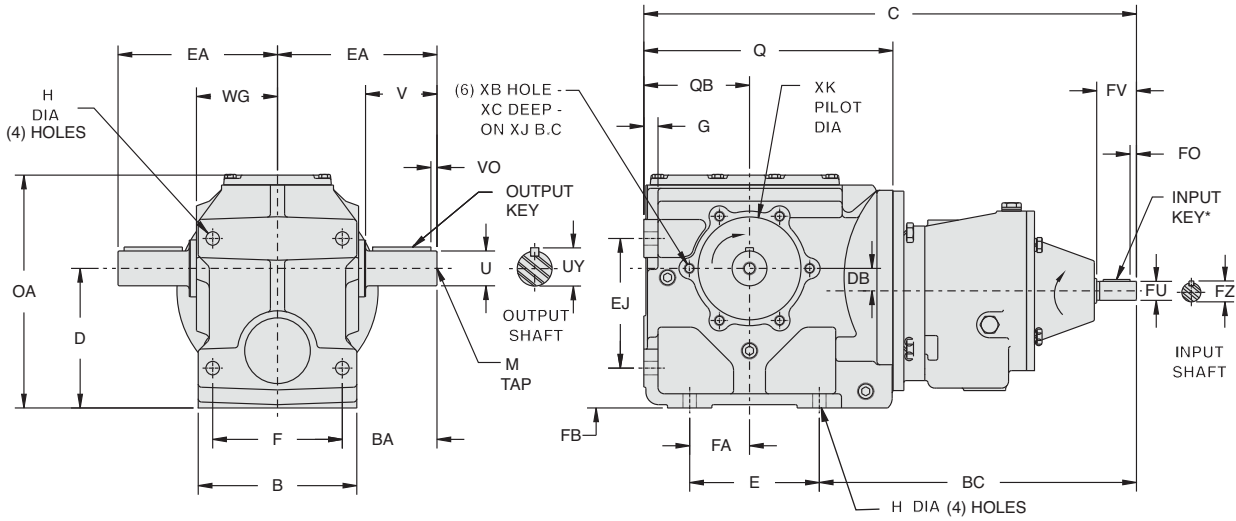


Helical - Worm Quad Reduction Dimensions Style SBN

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction



Gearcase

Size	inch mm															
	B	BA	BC	C	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
SBN8674	6.26	3.17	12.84	19.77	5.51	0.89	5.12	6.30	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	159	81	326	502	140	22.6	130	160	130	130	60	40	14	13.5	233	250
SBN8774	7.28	4.04	15.74	23.02	7.09	1.38	5.32	7.68	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	185	103	400	585	180	35.0	135	195	135	150	75	70	24	17.5	299	319

Gearcase

Size	inch mm					
	QB	WG	XB	XC	XJ	XK
SBN8674	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
SBN8774	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

Output Shaft

U +0.000 0.001	UY	V	VO	KEY	M
1.375	1.51	2.82	0.40	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
-	-	71.6	10.2	-	-
1.750	1.91	3.54	0.43	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
-	-	89.9	10.9	-	-

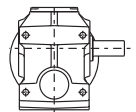
Input Shaft

Size	FU +0.000 0.001	FZ	FV	FO	KEY
SBN8674	0.625	NA	1.88	NA	NA
	-	-	-	-	-
SBN8774	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-

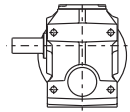
*INPUT KEY IS NOT FURNISHED WITH SBN8674
SHAFT HAS A 3/16 x 3/32 x 1-3/4 P&W KW.

Dimensions subject to change without notice

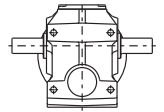
Output Styles



L: Left Ext.



R: Right Ext.



D: Double Ext.



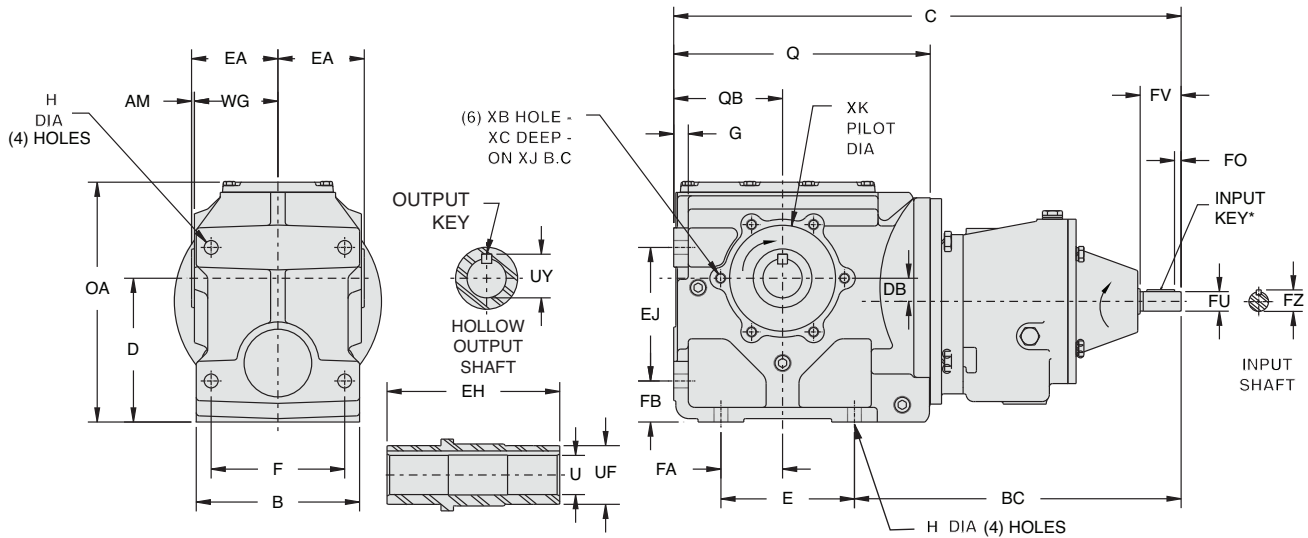
WARNING For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

BRAVO® Accessory Kits

Helical - Worm Quad Reduction Dimensions Style SABN



Gearcase

inch
mm

Size	AM	B	BC	C	D	DB	E	EA	EJ	F	FA	FB	G	H	OA	Q
SABN8674	0.11	6.26	12.84	19.77	5.51	0.89	5.12	3.31	5.12	5.12	2.36	1.57	0.56	0.53	9.18	9.83
	2.8	159	326	502	140	22.6	130	84	130	130	60	40	14	13.5	233	250
SABN8774	0.16	7.28	15.74	23.02	7.09	1.38	5.32	4.14	5.32	5.91	2.95	2.76	0.93	0.69	11.79	12.57
	4.1	185	400	585	180	35.0	135	105	135	150	75	70	24	17.5	299	319

Gearcase

inch
mm

Size	QB	WG	XB	XC	XJ	XK
SABN8674	4.17	3.20	-	0.66	4.75	4.002
	106	81.2	M10 X 1.5	16.7	120.7	101.7
SABN8774	4.92	3.98	-	0.95	5.38	4.331
	125	101	M12 X 1.75	24.1	136.6	110.00

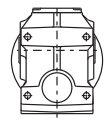
Hollow Output Shaft

EH	U ^{+0.0025} _{-0.0000}	UF	UY	KEY
6.62	1.500	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-
8.27	2.000	2.75	2.22	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-

Input Shaft

Size	FU ^{+0.000} _{-0.0001}	FZ	FV	FO	KEY
SABN8674	0.625	NA	1.88	NA	NA
	-	-	-	-	-
SABN8774	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-

Output Style



H
Hollow Output

*INPUT KEY IS NOT FURNISHED WITH SBN8674
SHAFT HAS A 3/16 x 3/32 x 1-3/4 P&W KW.

Dimensions subject to change without notice



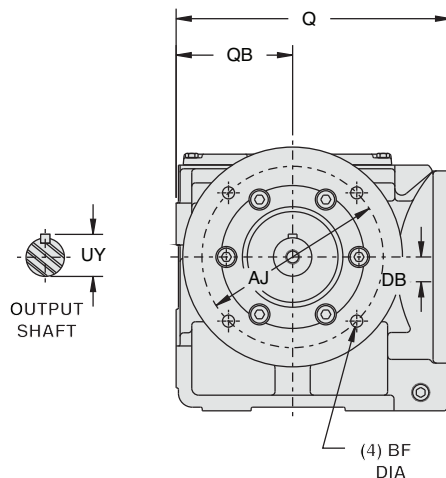
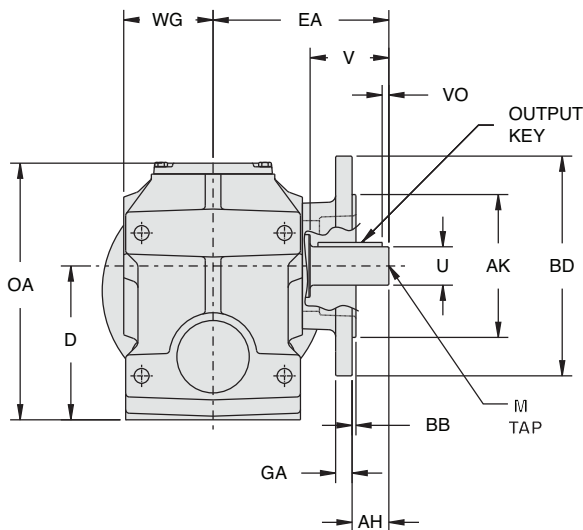
For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.



Helical - Worm Accessory Kits

Flange Mount Kit (Shown with Solid Output Shaft)

Output Flange Kits
create styles:
SFQ SFN



Gearcase

inch
mm

Size	D	DB	EA	OA	Q	QB	WG
S847	3.94	0.23	4.53	6.72	7.72	2.95	2.30
	100	5.8	115	171	196	75	58.4
S857	4.41	0.72	5.31	7.45	8.32	3.15	2.85
	112	18.2	135	189	211	80	72.4
S867	5.51	0.89	6.30	9.18	9.83	4.17	3.20
	140	22.6	160	233	250	106	81.2
S877	7.09	1.38	7.68	11.79	12.57	4.92	3.98
	180	35.0	195	299	319	125	101

Output Shaft

U +0.000 -0.001	UY	V	VO	KEY	M
1.000	1.10	1.97	0.25	1/4 x 1/4 x 1-5/16	3/8-16 x .87
-	-	50.0	6.4	-	-
1.250	1.36	2.36	0.29	1/4 x 1/4 x 1-11/16	1/2-13 x 1.13
-	-	59.9	7.4	-	-
1.375	1.51	2.82	0.40	5/16 x 5/16 x 1-3/4	1/2-13 x 1.13
-	-	7.16	10.2	-	-
1.750	1.91	3.54	0.43	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
-	-	89.9	10.9	-	-

Output Flange

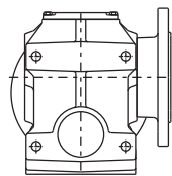
Size	AH	AJ	AK	BB	BD	BF	GA	Weight	Kit Number
S847	1.23	5.12	4.331 ⁺⁰ _{-0.002}	0.14	6.30	0.34	0.37	7 lbs.	0259-00013
	31	130	110 ^{-0.003} _{-0.054}	3.5	160	8.6	9.4		
S857	1.38	6.50	5.118 ⁺⁰ _{-0.002}	0.14	7.87	0.43	0.47	11 lbs.	0259-00010
	35	165	130 ^{-0.003} _{-0.054}	3.5	200	11	12		
S867	1.32	6.50	5.118 ⁺⁰ _{-0.002}	0.14	7.87	0.43	0.59	11 lbs.	0259-00012
	34	165	130 ^{-0.003} _{-0.054}	3.5	200	11	15		
S877	1.76	8.46	7.087 ⁺⁰ _{-0.002}	0.16	9.84	0.53	0.59	17 lbs.	0259-00014
	45	215	180 ^{+0.010} _{-0.041}	4	250	13.5	15		

Consult factory if flange mount kit is going to be installed on non-shaft extension side.

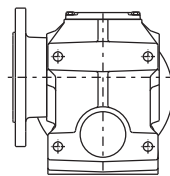
Grove Gear will mount the output flange at no charge - specify suffix FL or FR in part number.

Dimensions subject to change without notice

If Flange Mount Kit is to be factory assembled to unit a mounting location must be specified as shown:



FL



FR



WARNING For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

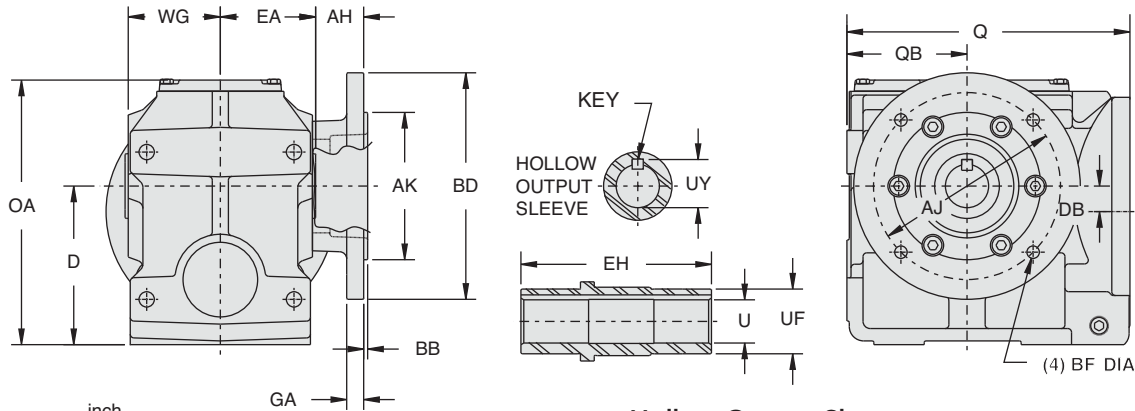
High Efficiency Helical - In-line
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers



Flange Mount Kit (Shown with Solid Output Shaft)

Output Flange Kits
create styles:
SAFQ SAFN



Gearcase	inch mm		D	DB	EA	OA	Q	QB	WG
S847	3.94	0.23	2.36	6.72	7.72	2.95	2.30		
	100	5.8	60	171	196	75	58.4		
S857	4.41	0.72	2.96	7.45	8.32	3.15	2.85		
	112	18.2	75	189	211	80	72.4		
S867	5.51	0.89	3.31	9.18	9.83	4.17	3.20		
	140	22.6	84	233	250	106	81.2		
S877	7.09	1.38	4.14	11.79	12.57	4.92	3.98		
	180	35.0	105	299	319	125	101		

Hollow Output Sleeve	EH	U(MAX) <small>+0.0025 -0.0000</small>	UF	UY	KEY
S847	4.72	1.250	1.77	1.37	(2) 1/4 x 1/4 x 1-11/16
	-	-	-	-	-
S857	5.91	1.375	1.97	1.52	(2) 5/16 x 5/16 x 1-3/4
	-	-	-	-	-
S867	6.62	1.500	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
	-	-	-	-	-
S877	8.27	2.000	2.75	2.22	(2) 1/2 x 1/2 x 2-5/8
	-	-	-	-	-

Output Flange

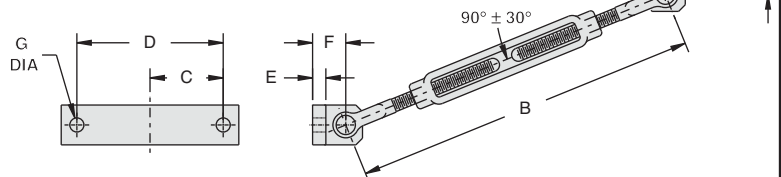
Size	AH	AJ	AK	BB	BD	BF	GA	Weight	Kit Number
S847	.94	5.12	4.331 ⁺⁰ _{-.002}	0.14	6.30	0.34	0.37	7 lbs.	0259-00013
	24	130	110 ^{-.003} _{-.054}	3.5	160	8.6	9.4		
S857	.97	6.50	5.118 ⁺⁰ _{-.002}	0.14	7.87	0.43	0.47	11 lbs.	0259-00010
	25	165	130 ^{-.003} _{-.054}	3.5	200	11	12		
S867	1.67	6.50	5.118 ⁺⁰ _{-.002}	0.14	7.87	0.43	0.59	11 lbs.	0259-00012
	42	165	130 ^{-.003} _{-.054}	3.5	200	11	15		
S877	1.78	8.46	7.087 ⁺⁰ _{-.002}	0.16	9.84	0.53	0.59	17 lbs.	0259-00014
	45	215	180 ^{+0.10} _{-.041}	4	250	13.5	15		

Grove Gear will mount the output flange at no charge - specify suffix FL or FR in part number.

Torque Arm Kit

Size	Weight	Kit Number	A	B	C	D	E	F	G
S847	4 lbs.	0259-00015	1.13	12.50 MIN.	1.97	3.94	0.38	1.13	0.43
				18.38 MAX.					
S857	4 lbs.	0259-00016	1.13	12.50 MIN.	2.17	4.33	0.38	1.13	0.43
				18.38 MAX.					
S867	5.6 lbs.	0259-00011	1.25	12.50 MIN.	2.56	5.12	0.50	1.25	0.53
				18.38 MAX.					
S877	12.8 lbs.	0259-00017	2.00	14.88 MIN.	2.96	5.91	0.75	2.00	0.69
				20.88 MAX.					

Dimensions subject to change without notice



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.



BRAVO®
Single Reduction Reducers

BRAVO® Worm - Worm
Double Reduction

BRAVO® Helical - Worm
Double Reduction

BRAVO® Accessory Kits

High Efficiency Helical - Inline
Gear Reducers

High Efficiency Helical - Worm
Gear Reducers

REDUCER WEIGHTS (lbs.) - SOLID OUTPUT SHAFT

Size	Solid Input Shaft (Mounting Type A)	C-Frame Quill input (Mounting Type E)			
		56C	143TC 145TC	182TC 184TC	213TC 215TC
S8472	45	47	47	52	--
S8473	51	55	--	--	--
S8572	51	53	53	58	--
S8573	57	61	61	--	--
S8672	84	87	87	93	--
S8673	97	99	99	104	--
S8674	103	105	105	--	--
S8772	173	180	180	180	180
S8773	192	194	194	200	--
S8774	197	200	200	206	--

REDUCER WEIGHTS (lbs.) - HOLLOW OUTPUT SHAFT

Size	Solid Input Shaft (Mounting Type A)	C-Frame Quill input (Mounting Type E)			
		56C	143TC 145TC	182TC 184TC	213TC 215TC
S8472	43	45	45	50	--
S8473	49	53	--	--	--
S8572	48	50	50	55	--
S8573	54	58	--	--	--
S8672	81	84	84	90	--
S8673	94	96	96	101	--
S8674	100	102	102	--	--
S8772	166	173	173	173	173
S8773	185	187	187	192	--
S8774	190	193	193	200	--

NEMA MOTOR FRAME AVAILABILITY - C-FRAME QUILL REDUCERS

Size	56C	143TC 145TC	182TC 184TC	213TC 215TC
S8472	X	X	X	-
S8473	X	-	-	-
S8572	X	X	X	-
S8573	X	-	-	-
S8672	X	X	X	-
S8673	X	X	X	-
S8674	X	X	-	-
S8772	X	X	X	X
S8773	X	X	X	-
S8774	X	X	X	-



Mounting position must be specified on all orders, and included in the reducer description, so the correct amount of oil is installed at the Factory.

Double Reduction Mounting Positions

<p>Standard mounting position is B3. All reducers will be filled to this level, unless otherwise specified.</p> <p>B3</p>	<p>B3 I</p>	<p>CONSULT FACTORY REQUIRES MODIFIED UNIT</p> <p>B6</p>	<p>○ VENT LOCATION ● OIL LEVEL ● DRAIN PLUG</p>
<p>B6 I</p>	<p>B6 II</p>	<p>CONSULT FACTORY REQUIRES MODIFIED UNIT</p> <p>B8 I</p>	<p>B8</p>
<p>Standard mounting position is B3. All reducers will be filled to this level, unless otherwise specified.</p> <p>V5</p>	<p>V5 I</p>	<p>V6</p>	<p>V6 I</p>

Triple Reduction Mounting Positions

<p>Standard mounting position is B3. All reducers will be filled to this level, unless otherwise specified.</p> <p>B3</p>	<p>(SHAFT & QUILL INPUT UNITS) B3 I (GEARMOTORS)</p>	<p>CONSULT FACTORY REQUIRES MODIFIED UNIT</p> <p>B6</p>	<p>○ VENT LOCATION ● OIL LEVEL ● DRAIN PLUG</p>
<p>B6 I</p>	<p>(SHAFT & QUILL INPUT UNITS) B6 II (GEARMOTORS)</p>	<p>CONSULT FACTORY REQUIRES MODIFIED UNIT</p> <p>B8 I</p>	<p>B8</p>
<p>V5</p>	<p>V5 I</p>	<p>V6</p>	<p>V6 I</p>

Quad Reduction Mounting Positions

For mounting position refer to double reduction chart above.

Grove Gear IRONMAN High Efficiency Helical - Bevel Gear Reducers

K Series Features and Benefits



High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

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STANDARD DOUBLE LIP SEALS
provide extra protection against entry of contaminants or loss of lubrication.

BEARING SPANS OPTIMIZED
to allow for maximum overhung load capacity, enhanced durability and reliability—while minimizing shaft deflection.

ALL HELICAL GEARING IS HARDENED AND GROUND
(AGMA class 10 or better) for enhanced efficiency and noise reduction. Precision carburized and hardened spiral bevel gearing for quiet, efficient, right angle speed reduction.

ROBUST OUTPUT SHAFT
Oversized steel output shaft of high strength steel alloy provides superior overhung load and torque capacities. Hollow output shaft styles also available.

HOUSING
Precision machined rugged cast iron housings give you the industrial strength and durability you've come to expect from Grove Gear.



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON or Lincoln industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.



Additional K Series Helical - Bevel Gear Reducer Features

6 SIZES AVAILABLE in reducer, GEAR+MOTOR™, and integral gearmotor designs.

INPUT HORSEPOWER ratings to 130 HP.

AVAILABLE IN TRIPLE AND QUINTUPLE REDUCTION with ratios from 6.2:1 to 3400:1.

SOLID OUTPUT SHAFT and hollow output shaft available in all sizes.

HIGH CAPACITY BALL AND TAPERED BEARINGS provide long life and trouble free operation.

MOUNTING DIMENSIONS ALLOW INTERCHANGE with many popular reducers including SEW, David Brown, Nord and Dodge.

PERMANENTLY MARKED NAMEPLATE with output torque ratio and maximum input horsepower.

CAST IRON INPUT FLANGE (motorized quill input styles) with machined fits for precision alignment of motor and bearings.

MODULAR DESIGN

Innovative design includes double reduction, triple reduction and quin reduction reducers assembled from standard components.

LUBRICATION

All Ironman reducers are filled with high quality gear oil at the factory.

INTEGRAL MOUNTING BASE

designed to interchange with dozens of competitive units. Output flange mounted styles also available.



Style KFN
Triple Reduction Reducer



Style KAFN
Triple Reduction Reducer



Style KABQ
Triple Reduction Reducer



Style KAFG
Triple Reduction Gearmotor



Helical - Bevel Gear Reducers Selection Guide

K Series

Stock Styles

Modified Stock Styles

Using off-the-shelf accessories, any stock reducer can be field or Factory modified into a wide range of styles.

**Base Mount
Solid Output Shaft
Quill "C" Face Input**

**Output Flange Mount
Solid Output Shaft
Quill "C" Face Input**

Style KBQ

Style KFQ

**TRIPLE
REDUCTION**



Ratings Pages 557-569
Dimension Page 570

Ratings Pages Contact Factory
Dimension Pages Contact Factory

**QUINTUPLE
REDUCTION**



Ratings Pages 557-569
Dimension Page 574

Ratings Pages Contact Factory
Dimension Pages Contact Factory

**Hollow Output Shaft
Base or Shaft Mount
Quill "C" Face Input**

**Hollow Output Shaft
Output Flange Mount
Quill "C" Face Input**

Style KABQ

Style KAFQ

**TRIPLE
REDUCTION**



Ratings Pages 557-569
Dimension Page 571

Ratings Pages Contact Factory
Dimension Pages Contact Factory

**QUINTUPLE
REDUCTION**



Ratings Pages 557-569
Dimension Page 575

Ratings Pages Contact Factory
Dimension Pages Contact Factory

High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

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Helical - Bevel Gear Reducers Selection Guide

K Series



High Efficiency Helical - Bevel
Gear Reducers

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Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

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**Base Mount
Solid Output Shaft
Solid Input Shaft**

Style KBN



Ratings Pages 557-569
Dimension Page 572

**Output Flange Mount
Solid Output Shaft
Solid Input Shaft**

Style KFN



Ratings Pages Contact Factory
Dimension Pages Contact Factory



Ratings Pages 557-569
Dimension Page 576



Ratings Pages Contact Factory
Dimension Pages Contact Factory

**Hollow Output Shaft
Base or Shaft Mount
Solid Input Shaft**

Style KABN



Ratings Pages 557-569
Dimension Page 573

**Hollow Output Shaft
Output Flange Mount
Solid Input Shaft**

Style KAFN



Ratings Pages Contact Factory
Dimension Pages Contact Factory



Ratings Pages 557-569
Dimension Page 577



Ratings Pages Contact Factory
Dimension Pages Contact Factory

www.grovegear.com

GROVE GEAR

525



Model Number System

K Series • Helical - Bevel

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

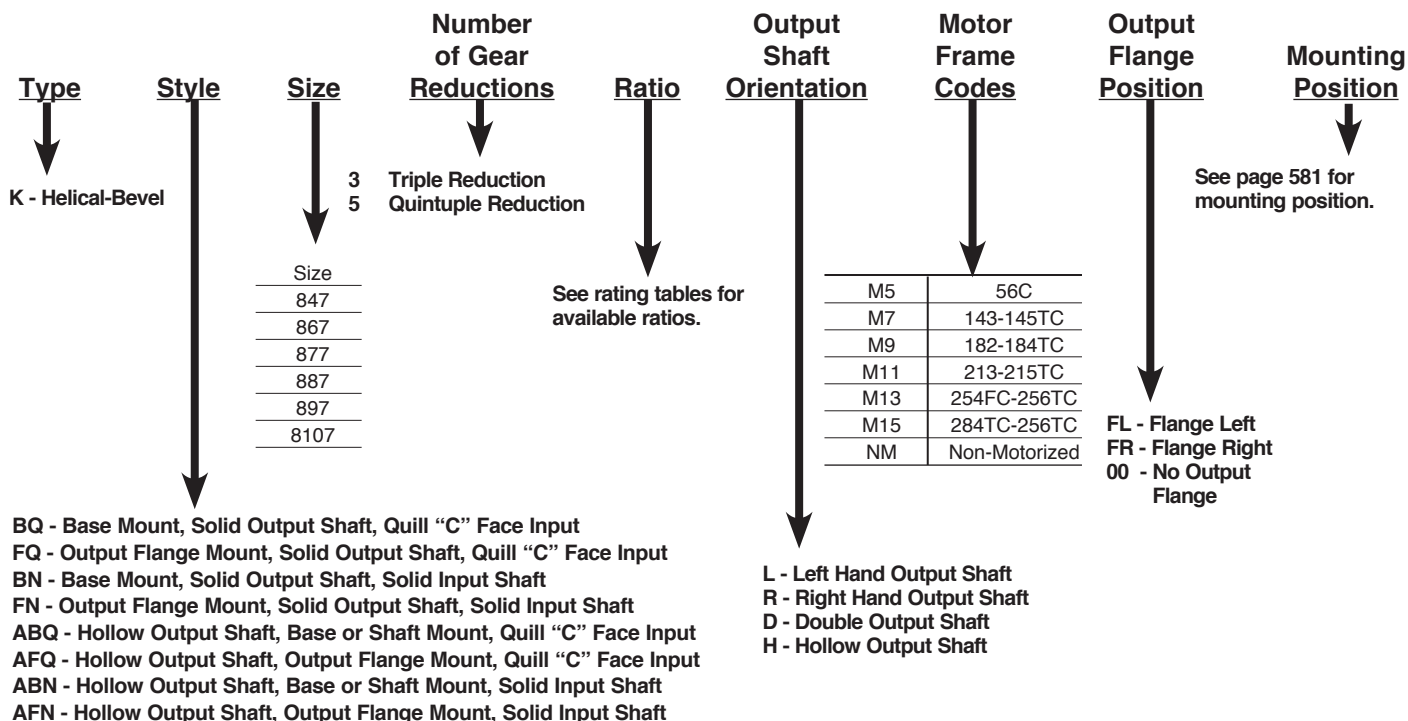
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Grove Gear IRONMAN Helical-Bevel Model Number System

The Mounting position must be specified on all orders, and included in the reducer description. To order Motorized Reducers, simply specify the reducer, indicate the motor description or catalog number and specify "Motorized Assembly". To order Integral Gearmotors, simply specify the reducer, motor horsepower and "Integral Gearmotor". Integral Gearmotors in this catalog are supplied with 3 phase 230/460v totally enclosed 1750 rpm general purpose motors.



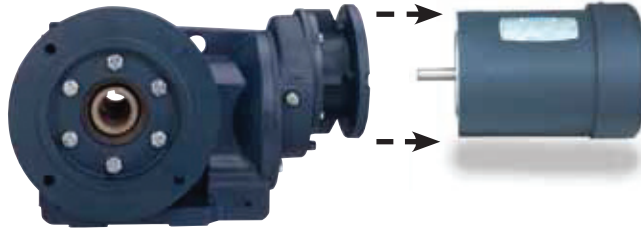
Sample Model Numbers

Cast iron, base mount unit with quill input, 6.53:1 ratio, 182TC motor frame

K	- BQ	827	- 3	- 6.53	- L	- M9	- B3
Type	Style	Size	Number of Reductions	Ratio	Shaft Orientation	Motor Frame	Mounting

"HOW TO USE" Quick Selections

K Series Helical - Bevel



How To Use Quick Selections

Maximum Rating Tables for Triple and Quin Reduction Gear Reducers start on page 557. Selection of the appropriate gear reducer can be made using those tables or the Quick Selections on the following pages.

BEFORE YOU START:

Identify the Service Factor of the application.
Determine the actual input horsepower of the

motor by multiplying the motor's nameplate horsepower by the Service Factor.

Determine the output speed (RPM) required at output shaft of reducer.

Identify the mounting style required by your application from the style charts shown on pages 524-525. Note the different bases and flanges to interchange with various competitive units.

To select the proper gear reducer size, use the Quick Selections as shown:

STOCK GEAR+MOTOR™

Start with a reducer and add a LEESON or Lincoln industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

A wide variety of single phase, three phase and DC motors—suitable for almost every industrial application need—have been pre-selected and assembled to reducers to provide a variety of torque and output speed combinations...ready for shipment. Saves time and expense.

Quick Selections

1 Find the appropriate Quick Selections page. The tables begin on page 528 and are organized by motor HP. The reducer should be selected first; GEAR+MOTOR™ combinations follow.

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

.25 HP Gear Reducer Quick Selections												
Output Speed (RPM)	Service Factor ▼	Output Torque (lb-in)	Overhung Load (lbs.)	Ratio							Reducer Only Catalog Number	
258	40.00	55	650	6.53							KB473001.00	
239	36.00	62	675	7.31							KB473002.00	
189	30.00	78	700	9.24							KB473003.00	
155	30.40	102	800	12.07							KB473004.00	
130	27.60	114	770	13.51							KB473005.00	
102	23.20	144	830	17.08							KB473006.00	
80	19.20	184	930	23.94	3	61	56C	KBQ8473-21.94-M5			KB473007.00	
70	16.80	211	1050	25.10	3	61	56C	KBQ8473-25.10-M5			KB473008.00	
				30.37	3	61	56C	KBQ8473-30.37-M5			KB473009.00	
				38.38	3	61	56C	KBQ8473-38.38-M5			KB473010.00	
				38.61	3	94	56C	KBQ8673-38.61-M5			KB673010.00	
				44.81	3	94	56C	KBQ8673-44.81-M5			KB673011.00	
				49.31	3	61	56C	KBQ8473-49.31-M5			KB473011.00	
				56.41	3	61	56C	KBQ8473-56.41-M5			KB473012.00	
				73.75	3	61	56C	KBQ8473-73.75-M5			KB473014.00	
				74.56	3	94	56C	KBQ8673-74.56-M5			KB673014.00	
				85.21	3	94	56C	KBQ8673-85.21-M5			KB673015.00	
							56C	KBQ8473-91.94-M5			KB473014.00	
							56C	KBQ8473-110.88-M5			KB473015.00	
							56C	KBQ8673-115.84			KB473015.00	

2 Locate output RPM column on left side of the table. All ratings are based on an input speed of 1750 RPM. Scroll down to the output speed (RPM) required. Output speeds are rounded to the nearest whole number. For exact output speed, divide 1750 by the ratio listed.

3 Move to the Service Factor column and find one suitable to meet the application requirements. Refer to page 644 for AGMA recommended service factors.

4 Check load capacities against the needs of your application. Do not exceed the overhung load (OHL) shown in the table. Detailed instructions for calculating the actual overhung load are shown on page 645. If overhung and thrust loads will be applied simultaneously or if the load exceeds listed capacities, contact Factory.

5 Select motor frame size.

6 Identify the catalog number of the reducer by continuing to the right. See page 526 for detailed information on building an exact catalog number.

7 Identify reducer mounting position on page 581.

8 Verify physical dimensions using the dimensional drawings shown on pages 570-579.

9 Add a motor

GEAR+MOTOR™ Part Number

3. Order reducer and motor

Example: KB473001.00-115.84

MOTOR SELECTIONS

1/4 HP LEESON ELECTRIC MOTORS

Motor Type Voltage Enclosure Frame Number

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

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Quick Selections

K Series Helical - Bevel

1750 RPM Input

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

.25 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor ▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
268	40.00	55	650	6.53	3	61	56C	KBQ8473-6.53-M5	K8473001.00
239	36.00	62	675	7.31	3	61	56C	KBQ8473-7.31-M5	K8473002.00
189	30.00	78	700	9.24	3	61	56C	KBQ8473-9.24-M5	K8473003.00
145	30.40	102	800	12.07	3	61	56C	KBQ8473-12.07-M5	K8473004.00
130	27.60	114	770	13.51	3	61	56C	KBQ8473-13.51-M5	K8473005.00
102	23.20	144	830	17.08	3	61	56C	KBQ8473-17.08-M5	K8473006.00
80	19.20	184	930	21.94	3	61	56C	KBQ8473-21.94-M5	K8473007.00
70	16.80	211	1050	25.10	3	61	56C	KBQ8473-25.10-M5	K8473008.00
58	13.60	260	1150	30.37	3	61	56C	KBQ8473-30.37-M5	K8473009.00
46	10.80	328	1250	38.38	3	61	56C	KBQ8473-38.38-M5	K8473010.00
45	22.00	325	2050	38.61	3	94	56C	KBQ8673-38.61-M5	K8673010.00
39	19.20	378	2050	44.81	3	94	56C	KBQ8673-44.81-M5	K8673011.00
35	8.40	421	1250	49.31	3	61	56C	KBQ8473-49.31-M5	K8473011.00
31	7.60	466	1250	56.41	3	61	56C	KBQ8473-56.41-M5	K8473012.00
24	5.60	632	1250	73.76	3	61	56C	KBQ8473-73.76-M5	K8473013.00
23	11.60	626	2050	74.56	3	94	56C	KBQ8673-74.56-M5	K8673014.00
21	10.00	726	2050	85.21	3	94	56C	KBQ8673-85.21-M5	K8673015.00
19	4.40	805	1250	91.94	3	61	56C	KBQ8473-91.94-M5	K8473014.00
16	3.60	983	1250	110.88	3	61	56C	KBQ8473-110.88-M5	K8473015.00
15	7.60	955	2050	115.64	3	94	56C	KBQ8673-115.64-M5	K8673018.00
14	3.20	1106	1250	127.45	3	61	56C	KBQ8473-127.45-M5	K8473016.00
13	6.00	1210	2050	138.46	3	94	56C	KBQ8673-138.46-M5	K8673020.00
12	5.60	1296	2050	150.16	5	122	56C	KBQ8675-150.16-M5	K8675001.00
9.2	4.40	1650	2050	190.00	5	122	56C	KBQ8675-190.00-M5	K8675002.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
K8473001.00-102868



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1/4 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TENV	56C	102868
General Purpose, C Face	208-230/460 3-PH	TENV	56C	101648
CR Rated DC Motor	90 VDC	TEFC	56C	098002
SCR Rated DC Motor	90 VDC	TEFC	56C	098003

Quick Selections

K Series Helical - Bevel

1750 RPM Input



High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

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This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

.25 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
7.5	3.68	1973	2050	233.62	5	122	56C	KBQ8675-233.62-M5	K8675003.00
6.2	3.00	2420	2050	284.24	5	122	56C	KBQ8675-284.24-M5	K8675004.00
4.9	2.44	2975	2050	354.30	5	122	56C	KBQ8675-354.30-M5	K8675005.00
4.1	2.00	3630	2050	427.28	5	122	56C	KBQ8675-427.28-M5	K8675006.00
4.1	3.76	3644	3300	430.02	5	200	56C	KBQ8775-430.02-M5	K8775006.00
3.3	1.64	4427	2050	528.68	5	122	56C	KBQ8675-528.68-M5	K8675007.00
3.3	3.04	4507	3300	531.87	5	200	56C	KBQ8775-531.87-M5	K8775007.00
2.7	2.48	5524	3300	652.45	5	200	56C	KBQ8775-652.45-M5	K8775008.00
2.7	1.32	5500	2050	643.23	5	122	56C	KBQ8675-643.23-M5	K8675008.00
2.2	3.56	6713	4800	794.13	5	385	56C	KBQ8875-794.13-M5	K8875009.00
2.2	1.08	6722	2050	801.79	5	122	56C	KBQ8675-801.79-M5	K8675019.00
2.2	2.00	6850	3300	813.78	5	200	56C	KBQ8775-813.78-M5	K8775009.00
1.8	2.88	8299	4800	987.16	5	385	56C	KBQ8875-987.16-M5	K8875010.00
1.8	1.64	8354	3300	981.05	5	200	56C	KBQ8775-981.05-M5	K8775010.00
1.5	2.36	10127	4800	1190.00	5	385	56C	KBQ8875-1190-M5	K8875011.00
1.4	1.32	10379	3300	1215.00	5	200	56C	KBQ8775-1215-M5	K8775011.00
1.2	1.92	12448	4800	1474.00	5	385	56C	KBQ8875-1474-M5	K8875012.00
1.2	1.08	12685	3300	1488.00	5	200	56C	KBQ8775-1488-M5	K8775012.00
0.9	1.52	15724	4800	1868.00	5	385	56C	KBQ8875-1868-M5	K8875013.00
0.8	1.00	23900	4800	2252.00	5	385	56C	KBQ8875-2252-M5	K8875014.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
K8473001.00-102868



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1/4 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TENV	56C	102868
General Purpose, C Face	208-230/460 3-PH	TENV	56C	101648
CR Rated DC Motor	90 VDC	TEFC	56C	098002
SCR Rated DC Motor	90 VDC	TEFC	56C	098003



Quick Selections

K Series Helical - Bevel

1750 RPM Input

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

.33 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
268	30.03	74	650	6.53	3	61	56C	KBQ8473-6.53-M5	K8473001.00
239	27.03	83	675	7.31	3	61	56C	KBQ8473-7.31-M5	K8473002.00
189	22.52	104	700	9.24	3	61	56C	KBQ8473-9.24-M5	K8473003.00
145	22.82	136	800	12.07	3	61	56C	KBQ8473-12.07-M5	K8473004.00
130	20.72	152	770	13.51	3	61	56C	KBQ8473-13.51-M5	K8473005.00
102	17.42	192	830	17.08	3	61	56C	KBQ8473-17.08-M5	K8473006.00
80	14.41	246	930	21.94	3	61	56C	KBQ8473-21.94-M5	K8473007.00
70	12.61	281	1050	25.10	3	61	56C	KBQ8473-25.10-M5	K8473008.00
58	10.21	347	1150	30.37	3	61	56C	KBQ8473-30.37-M5	K8473009.00
46	8.11	437	1250	38.38	3	61	56C	KBQ8473-38.38-M5	K8473010.00
39	14.41	503	2050	44.81	3	94	56C	KBQ8673-44.81-M5	K8673011.00
35	6.31	561	1250	49.31	3	61	56C	KBQ8473-49.31-M5	K8473011.00
31	5.71	620	1250	56.41	3	61	56C	KBQ8473-56.41-M5	K8473012.00
24	4.20	842	1250	73.76	3	61	56C	KBQ8473-73.76-M5	K8473013.00
21	7.51	967	2050	85.21	3	94	56C	KBQ8673-85.21-M5	K8673015.00
19	3.30	1072	1250	91.94	3	61	56C	KBQ8473-91.94-M5	K8473014.00
16	2.70	1310	1250	110.88	3	61	56C	KBQ8473-110.88-M5	K8473015.00
15	5.71	1272	2050	115.64	3	94	56C	KBQ8673-115.64-M5	K8673018.00
14	2.40	1474	1250	127.45	3	61	56C	KBQ8473-127.45-M5	K8473016.00
13	4.50	1612	2050	138.46	3	94	56C	KBQ8673-138.46-M5	K8673020.00

♦ Weight does not include oil.
 ▼ Service Factor is based on maximum torque rating of reducer.
 ● Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
K8473001.00-102867



STOCK GEAR+MOTOR™
 Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1/3 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TENV	56C	102867
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	101769
WATTS AVER® Premium Efficiency Motor	208-230/460	TEFC	56C	102696
SCR Rated DC Motor	90 VDC	TEFC	56C	098004
SCR Rated DC Motor	180 VDC	TEFC	56C	098005

Quick Selections

K Series Helical - Bevel

1750 RPM Input



High Efficiency Helical - Bevel
Gear Reducers

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

.33 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
12	4.20	1727	2050	150.16	5	122	56C	KBQ8675-150.16-M5	K8675001.00
9.2	3.30	2198	2050	190.00	5	122	56C	KBQ8675-190.00-M5	K8675002.00
7.5	2.76	2628	2050	233.62	5	122	56C	KBQ8675-233.62-M5	K8675003.00
6.2	2.25	3223	2050	284.24	5	122	56C	KBQ8675-284.24-M5	K8675004.00
5.0	3.60	3802	3300	350.55	5	200	56C	KBQ8775-350.55-M5	K8775005.00
4.9	1.83	3963	2050	354.30	5	122	56C	KBQ8675-354.30-M5	K8675005.00
4.1	1.50	4835	2050	427.28	5	122	56C	KBQ8675-427.28-M5	K8675006.00
4.1	2.82	4853	3300	430.02	5	200	56C	KBQ8775-430.02-M5	K8775006.00
3.3	1.23	5897	2050	528.68	5	122	56C	KBQ8675-528.68-M5	K8675007.00
3.3	2.28	6003	3300	531.87	5	200	56C	KBQ8775-531.87-M5	K8775007.00
2.7	3.30	7235	4800	641.10	5	385	56C	KBQ8875-663.74-M5	K8875008.00
2.7	1.86	7358	3300	652.45	5	200	56C	KBQ8775-652.45-M5	K8775008.00
2.2	2.64	9044	4800	804.72	5	385	56C	KBQ8875-804.72-M5	K8875009.00
2.2	1.50	9124	3300	813.78	5	200	56C	KBQ8775-813.78-M5	K8775009.00
1.8	2.16	11054	4800	987.16	5	385	56C	KBQ8875-987.16-M5	K8875010.00
1.8	1.23	11127	3300	981.05	5	200	56C	KBQ8775-981.05-M5	K8775010.00
1.5	1.77	13489	4800	1190.00	5	385	56C	KBQ8875-1190-M5	K8875011.00
1.4	0.99	13825	3300	1215.00	5	200	56C	KBQ8775-1215-M5	K8775011.00
1.2	1.44	16581	4800	1474.00	5	385	56C	KBQ8875-1474-M5	K8875012.00
0.9	1.14	20944	4800	1868.00	5	385	56C	KBQ8875-1868-M5	K8875013.00

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
K8473001.00-102867

MOTOR SELECTIONS



1/3 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TENV	56C	102867
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	101769
WATSAVER® Premium Efficiency Motor	208-230/460	TEFC	56C	102696
SCR Rated DC Motor	90 VDC	TEFC	56C	098004
SCR Rated DC Motor	180 VDC	TEFC	56C	098005



Quick Selections

K Series Helical - Bevel

1750 RPM Input

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

.50 HP Gear Reducer Quick Selections									
Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
268	20.00	111	650	6.53	3	61	143-5TC	KBQ8473-6.53-M7	K8473017.00
239	18.00	124	675	7.31	3	61	143-5TC	KBQ8473-7.31-M7	K8473018.00
189	15.00	157	700	9.24	3	61	143-5TC	KBQ8473-9.24-M7	K8473019.00
145	15.20	204	800	12.07	3	61	143-5TC	KBQ8473-12.07-M7	K8473020.00
130	13.80	228	770	13.51	3	61	143-5TC	KBQ8473-13.51-M7	K8473021.00
102	11.60	289	830	17.08	3	61	143-5TC	KBQ8473-17.08-M7	K8473022.00
80	9.60	369	930	21.94	3	61	143-5TC	KBQ8473-21.94-M7	K8473023.00
70	8.40	421	1050	25.10	3	61	143-5TC	KBQ8473-25.10-M7	K8473024.00
58	6.80	521	1150	30.37	3	61	143-5TC	KBQ8473-30.37-M7	K8473025.00
46	5.40	656	1250	38.38	3	61	143-5TC	KBQ8473-38.38-M7	K8473026.00
35	4.20	843	1250	49.31	3	61	143-5TC	KBQ8473-49.31-M7	K8473027.00
31	3.80	932	1250	56.41	3	61	143-5TC	KBQ8473-56.41-M7	K8473028.00
24	2.80	1264	1250	73.76	3	61	143-5TC	KBQ8473-73.76-M7	K8473029.00
19	2.20	1609	2050	91.94	3	61	143-5TC	KBQ8473-91.94-M7	K8473030.00
16	4.00	1815	1250	106.51	3	94	143-5TC	KBQ8673-106.51-M7	K8673037.00
16	1.80	1967	2050	110.88	3	61	143-5TC	KBQ8473-110.88-M7	K8473031.00
15	3.80	1911	2050	115.64	3	94	143-5TC	KBQ8673-115.64-M7	K8673038.00
14	3.40	2135	2050	126.17	3	94	143-5TC	KBQ8673-126.17-M7	K8673039.00
14	1.60	2213	1250	127.45	3	61	143-5TC	KBQ8473-127.45-M7	K8473032.00
13	3.00	2420	2050	138.46	3	94	143-5TC	KBQ8673-138.46-M7	K8673040.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1/2 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	102862
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	102860
WATTS-AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	101780
575 Volt Motor	575 3-PH	TENV	56C	110176
SCR Rated DC Motor	90 VDC	TEFC	56C	098000
SCR Rated DC Motor	180 VDC	TEFC	56C	098008

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
K8473017.00-102862

Quick Selections

K Series Helical - Bevel

1750 RPM Input



High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

.50 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
12	2.80	2593	2050	150.16	5	122	143-5TC	KBQ8675-150.16-M7	K8675017.00
11	5.20	2635	3300	155.99	5	200	143-5TC	KBQ8775-155.99-M7	K8775017.00
9.2	2.20	3300	2050	190.00	5	122	143-5TC	KBQ8675-190.00-M7	K8675018.00
7.5	1.84	3946	2050	233.62	5	122	143-5TC	KBQ8675-233.62-M7	K8675019.00
7.6	3.60	3806	3300	231.14	5	200	143-5TC	KBQ8775-231.14-M7	K8775019.00
6.2	1.50	4840	2050	284.24	5	122	143-5TC	KBQ8675-284.24-M7	K8675020.00
6.0	2.80	4893	3300	290.33	5	200	143-5TC	KBQ8775-290.33-M7	K8775020.00
5.0	2.40	5708	3300	350.55	5	200	143-5TC	KBQ8775-350.55-M7	K8775021.00
4.9	1.22	5951	2050	354.30	5	122	56C	KBQ8675-354.30-M5	K8675005.00
4.9	4.00	5975	4800	357.41	5	385	143-5TC	KBQ8875-357.41-M7	K8875021.00
3.9	3.14	7611	4800	449.80	5	385	143-5TC	KBQ8875-449.80-M7	K8875022.00
4.1	1.88	7287	3300	430.02	5	200	143-5TC	KBQ8775-430.02-M7	K8775022.00
3.3	2.66	8985	4800	531.79	5	385	143-5TC	KBQ8875-531.79-M7	K8875023.00
3.3	1.52	9013	3300	531.87	5	200	143-5TC	KBQ8775-531.87-M7	K8775023.00
2.7	2.20	10864	4800	641.10	5	385	143-5TC	KBQ8875-641.10-M7	K8875024.00
2.7	1.24	11048	3300	652.45	5	200	56C	KBQ8775-652.45-M5	K8775008.00
2.2	1.78	13427	4800	794.13	5	385	143-5TC	KBQ8875-794.13-M7	K8875025.00
2.2	1.00	13700	3300	813.78	5	200	56C	KBQ8775-813.78-M5	K8775009.00
1.8	1.44	16597	4800	987.16	5	385	143-5TC	KBQ8875-987.16-M7	K8875010.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
K8473017.00-102862

MOTOR SELECTIONS



1/2 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	102862
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	102860
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	101780
575 Volt Motor	575 3-PH	TENV	56C	110176
SCR Rated DC Motor	90 VDC	TEFC	56C	098000
SCR Rated DC Motor	180 VDC	TEFC	56C	098008



Quick Selections

K Series Helical - Bevel

1750 RPM Input

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

.75 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
268	13.33	166	650	6.53	3	61	143-5TC	KBQ8473-6.53-M7	K8473017.00
239	12.00	186	675	7.31	3	61	143-5TC	KBQ8473-7.31-M7	K8473018.00
189	10.00	235	700	9.24	3	61	143-5TC	KBQ8473-9.24-M7	K8473019.00
145	10.13	306	800	12.07	3	61	143-5TC	KBQ8473-12.07-M7	K8473020.00
130	9.20	342	770	13.51	3	61	143-5TC	KBQ8473-13.51-M7	K8473021.00
102	7.73	433	830	17.08	3	61	143-5TC	KBQ8473-17.08-M7	K8473022.00
80	6.40	553	930	21.94	3	61	143-5TC	KBQ8473-21.94-M7	K8473023.00
70	5.60	632	1050	25.10	3	61	143-5TC	KBQ8473-25.10-M7	K8473024.00
58	4.53	781	1150	30.37	3	61	143-5TC	KBQ8473-30.37-M7	K8473025.00
46	3.60	983	1250	38.38	3	61	143-5TC	KBQ8473-38.38-M7	K8473026.00
35	2.80	1264	1250	49.31	3	61	143-5TC	KBQ8473-49.31-M7	K8473027.00
31	2.53	1397	1250	56.41	3	61	143-5TC	KBQ8473-56.41-M7	K8473028.00
30	4.93	1472	2050	58.58	3	94	143-5TC	KBQ8673-69.99-M7	K8673032.00
25	4.13	1756	2050	69.99	3	94	143-5TC	KBQ8673-69.99-M7	K8673033.00
24	1.87	1896	1250	73.76	3	61	143-5TC	KBQ8473-73.76-M7	K8473029.00
23	3.87	1878	2050	74.56	3	94	143-5TC	KBQ8673-74.56-M7	K8673034.00
21	3.33	2178	2050	85.21	3	94	143-5TC	KBQ8673-85.21-M7	K8673035.00
19	1.47	2414	1250	91.94	3	61	56C	KBQ8473-91.94-M5	K8473014.00
19	3.07	2367	2050	91.47	3	94	143-5TC	KBQ8673-110.88-M7	K8673036.00
16	1.20	2950	1250	110.88	3	61	56C	KBQ8473-110.88-M5	K8473015.00
16	2.67	2723	2050	106.51	3	94	143-5TC	KBQ8673-106.51-M7	K8673037.00
15	2.53	2866	2050	115.64	3	94	143-5TC	KBQ8673-115.64-M7	K8673038.00
14	2.27	3203	2050	126.17	3	94	143-5TC	KBQ8673-126.17-M7	K8673039.00
14	1.07	3319	1250	127.45	3	61	56C	KBQ8473-127.45-M5	K8473016.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

K8473017.00-110057



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



3/4 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	110057
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	110047
WATTS AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	114213
575 Volt Motor	575 3-PH	TEFC	56C	110177
SCR Rated DC Motor	90 VDC	TEFC	56C	098032
SCR Rated DC Motor	180 VDC	TEFC	56C	098069

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

Quick Selections

K Series Helical - Bevel

1750 RPM Input



High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

.75 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
13	2.00	3630	2050	138.46	3	94	143-5TC	KBQ8673-138.46-M7	K8673040.00
13	4.00	3425	3300	134.10	3	170	143-5TC	KBQ8773-134.10-M7	K8773046.00
12	1.87	3889	2050	150.16	5	122	143-5TC	KBQ8675-150.16-M7	K8675017.00
11	3.47	3952	3300	155.99	5	200	143-5TC	KBQ8775-155.99-M7	K8775017.00
9.2	1.47	4950	2050	190.00	5	122	56C	KBQ8675-190.00-M5	K8675002.00
9.1	2.80	4893	3300	191.38	5	200	143-5TC	KBQ8775-191.38-M7	K8775018.00
7.5	1.23	5918	2050	233.62	5	122	56C	KBQ8675-233.62-M5	K8675003.00
7.6	2.40	5708	3300	231.14	5	200	143-5TC	KBQ8775-231.14-M7	K8775019.00
6.0	1.87	7339	3300	290.33	5	200	143-5TC	KBQ8775-290.33-M7	K8775020.00
5.8	3.07	7793	4800	300.73	5	385	143-5TC	KBQ8875-300.73-M7	K8875020.00
5.0	1.60	8563	3300	350.55	5	200	143-5TC	KBQ8775-350.55-M7	K8775021.00
4.9	2.67	8963	4800	357.41	5	385	143-5TC	KBQ8875-357.41-M7	K8875021.00
4.1	1.25	10918	3300	430.02	5	200	56C	KBQ8775-430.02-M5	K8775006.00
3.9	2.09	11417	4800	449.80	5	385	143-5TC	KBQ8875-449.80-M7	K8875022.00
3.3	1.01	13520	3300	531.87	5	200	56C	KBQ8775-531.87-M5	K8775007.00
3.3	1.79	13377	4800	531.79	5	385	143-5TC	KBQ8875-531.79-M7	K8875023.00
2.7	1.47	16295	4800	641.10	5	385	56C	KBQ8875-641.10-M5	K8875008.00
2.2	1.19	20140	4800	794.13	5	385	56C	KBQ8875-794.13-M5	K8875009.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



3/4 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	110057
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	110047
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	114213
575 Volt Motor	575 3-PH	TEFC	56C	110177
SCR Rated DC Motor	90 VDC	TEFC	56C	098032
SCR Rated DC Motor	180 VDC	TEFC	56C	098069

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

K8473017.00-110057



Quick Selections

K Series Helical - Bevel

1750 RPM Input

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

1 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
268	10.00	221	650	6.53	3	61	143-5TC	KBQ8473-6.53-M7	K8473017.00
239	9.00	248	675	7.31	3	61	143-5TC	KBQ8473-7.31-M7	K8473018.00
189	7.50	313	700	9.24	3	61	143-5TC	KBQ8473-9.24-M7	K8473019.00
145	7.60	408	800	12.07	3	61	143-5TC	KBQ8473-12.07-M7	K8473020.00
130	6.90	457	770	13.51	3	61	143-5TC	KBQ8473-13.51-M7	K8473021.00
102	5.80	578	830	17.08	3	61	143-5TC	KBQ8473-17.08-M7	K8473022.00
80	4.80	738	930	21.94	3	61	143-5TC	KBQ8473-21.94-M7	K8473023.00
70	4.20	843	1050	25.10	3	61	143-5TC	KBQ8473-25.10-M7	K8473024.00
58	3.40	1041	1150	30.37	3	61	143-5TC	KBQ8473-30.37-M7	K8473025.00
46	2.70	1311	1250	38.38	3	61	143-5TC	KBQ8473-38.38-M7	K8473026.00
35	2.10	1686	1250	49.31	3	61	143-5TC	KBQ8473-49.31-M7	K8473027.00
31	1.90	1863	1250	56.41	3	61	143-5TC	KBQ8473-56.41-M7	K8473028.00
30	3.70	1962	2050	58.58	3	94	143-5TC	KBQ8673-58.58-M7	K8673032.00
25	3.10	2342	2050	69.99	3	94	143-5TC	KBQ8673-69.99-M7	K8673033.00
24	1.40	2529	1250	73.76	3	61	56C	KBQ8473-73.76-M5	K8473013.00
23	2.90	2503	2050	74.56	3	94	143-5TC	KBQ8673-74.56-M7	K8673034.00
21	2.50	2904	2050	85.21	3	94	143-5TC	KBQ8673-85.21-M7	K8673035.00
19	2.30	3157	2050	91.47	3	94	143-5TC	KBQ8673-91.47-M7	K8673036.00
19	1.10	3218	1250	91.94	3	61	56C	KBQ8473-91.94-M5	K8473014.00
16	2.00	3630	2050	106.51	3	94	143-5TC	KBQ8673-106.51-M7	K8673037.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

K8473017.00-110058



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS

1 HP LEESON ELECTRIC MOTORS



Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	110058
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	110048
WATTS AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	1144638
575 Volt Motor	575 3-PH	TEFC	56C	110204
SCR Rated DC Motor	90 VDC	TEFC	56C	108022
SCR Rated DC Motor	180 VDC	TEFC	56C	108023

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions



This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

1 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
16	3.70	3703	3300	108.25	3	170	143-5TC	KBQ8773-108.25-M7	K8773045.00
15	1.90	3821	2050	115.64	3	94	143-5TC	KBQ8673-115.64-M7	K8673038.00
14	1.70	4271	2050	126.17	3	94	143-5TC	KBQ8673-126.17-M7	K8673039.00
13	3.00	4567	3300	134.10	3	170	143-5TC	KBQ8773-134.10-M7	K8773046.00
13	1.50	4840	2050	138.46	3	94	56C	KBQ8673-138.46-M5	K8673020.00
11.7	1.40	5186	2050	150.16	5	122	56C	KBQ8675-150.16-M5	K8675001.00
11.2	2.60	5269	3300	155.99	5	200	143-5TC	KBQ8775-155.99-M7	K8775017.00
9.0	3.60	6639	3300	194.60	5	385	143-5TC	KBQ8875-194.60-M7	K8875018.00
9.1	2.10	6524	3300	191.38	5	200	143-5TC	KBQ8775-191.38-M7	K8775018.00
9.2	1.10	6600	2050	190.00	5	122	56C	KBQ8675-190.00-M5	K8675002.00
7.7	3.10	7710	4800	226.57	5	385	143-5TC	KBQ8875-226.57-M7	K8875019.00
7.6	1.80	7611	3300	231.14	5	200	143-5TC	KBQ8775-231.14-M7	K8775019.00
6.0	1.40	9786	3300	290.33	5	200	56C	KBQ8775-290.33-M5	K8775004.00
5.8	2.30	10391	4800	300.73	5	385	143-5TC	KBQ8875-300.73-M7	K8875020.00
5.0	1.20	11417	3300	352.60	5	200	56C	KBQ8775-352.60-M5	K8775005.00
4.9	2.00	11950	4800	357.41	5	385	143-5TC	KBQ8875-357.41-M7	K8875021.00
3.9	1.57	15223	4800	449.80	5	385	143-5TC	KBQ8875-449.80-M7	K8875022.00
3.3	1.33	17970	4800	531.79	5	385	56C	KBQ8875-531.79-M5	K8875007.00
2.7	1.10	21727	4800	641.10	5	385	56C	KBQ8875-641.10-M5	K8875008.00

♦ Weight does not include oil.

▼ Service Factor is based on maximum torque rating of reducer.

● Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

K8473017.00-110058



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	110058
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	110048
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	1144638
575 Volt Motor	575 3-PH	TEFC	56C	110204
SCR Rated DC Motor	90 VDC	TEFC	56C	108022
SCR Rated DC Motor	180 VDC	TEFC	56C	108023



Quick Selections

K Series Helical - Bevel

1750 RPM Input

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

1.5 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight* (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
268	6.67	332	650	6.53	3	61	143-5TC	KBQ8473-6.53-M7	K8473017.00
239	6.00	372	675	7.31	3	61	143-5TC	KBQ8473-7.31-M7	K8473018.00
189	5.00	470	700	9.24	3	61	143-5TC	KBQ8473-9.24-M7	K8473019.00
145	5.07	612	800	12.07	3	61	143-5TC	KBQ8473-12.07-M7	K8473020.00
130	4.60	685	770	13.51	3	61	143-5TC	KBQ8473-13.51-M7	K8473021.00
102	3.87	866	830	17.08	3	61	143-5TC	KBQ8473-17.08-M7	K8473022.00
80	3.20	1106	930	21.94	3	61	143-5TC	KBQ8473-21.94-M7	K8473023.00
70	2.80	1264	1050	25.10	3	61	143-5TC	KBQ8473-25.10-M7	K8473024.00
58	2.27	1562	1150	30.37	3	61	143-5TC	KBQ8473-30.37-M7	K8473025.00
46	1.80	1967	1250	38.38	3	61	143-5TC	KBQ8473-38.38-M7	K8473026.00
45	3.67	1950	2050	38.61	3	94	143-5TC	KBQ8673-38.61-M7	K8673030.00
39	3.20	2266	2050	44.81	3	94	143-5TC	KBQ8673-44.81-M7	K8673031.00
35	1.40	2529	1250	49.31	3	61	56C	KBQ8473-49.31-M5	K8473011.00
32	5.00	2740	3300	54.07	3	170	143-5TC	KBQ8773-54.07-M7	K8773042.00
31	1.27	2795	1250	56.41	3	61	56C	KBQ8473-56.41-M5	K8473012.00
30	2.47	2943	2050	58.58	3	94	143-5TC	KBQ8673-58.58-M7	K8673032.00
25	2.07	3513	2050	69.99	3	94	143-5TC	KBQ8673-69.99-M7	K8673033.00
23	1.93	3755	2050	74.56	3	94	143-5TC	KBQ8673-74.56-M7	K8673034.00
21	1.67	4356	2050	85.21	3	94	143-5TC	KBQ8673-85.21-M7	K8673035.00
19	3.00	4567	3300	89.80	3	170	143-5TC	KBQ8773-89.80-M7	K8773044.00

- Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

K8473017.00-110420



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1.5 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	110420
General Purpose, C Face	208-230/460 3-PH	TEFC	140TC	120037
WATTS AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	116743
575 Volt Motor	575 3-PH	TEFC	56C	111444
SCR Rated DC Motor	180 VDC	TEFC	56C	108092

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

Quick Selections

K Series Helical - Bevel

1750 RPM Input



High Efficiency Helical - Bevel
Gear Reducers

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

1.5 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
19	1.53	4735	2050	91.47	3	94	143-5TC	KBQ8673-91.47-M7	K8673016.00
16	1.33	5445	2050	106.51	3	94	56C	KBQ8673-106.51-M5	K8673017.00
16	2.47	5554	3300	108.25	3	170	143-5TC	KBQ8773-108.25-M7	K8773045.00
15	1.27	5732	2050	115.64	3	94	56C	KBQ8673-115.64-M5	K8673018.00
14	1.13	6406	2050	126.17	3	94	56C	KBQ8673-126.17-M5	K8673019.00
13	2.00	6850	3300	134.10	3	170	143-5TC	KBQ8773-134.10-M7	K8773046.00
13	1.00	7260	2050	138.46	3	94	56C	KBQ8673-138.46-M5	K8673020.00
11.2	1.73	7904	3300	155.99	5	200	143-5TC	KBQ8775-155.99-M7	K8775017.00
10.9	2.93	8148	4800	161.29	5	385	143-5TC	KBQ8875-161.29-M7	K8875017.00
9.1	1.40	9786	3300	191.38	5	200	143-5TC	KBQ8775-191.38-M7	K8775018.00
8.6	2.33	10243	3300	202.99	5	385	143-5TC	KBQ8875-202.99-M7	K8875018.00
7.7	2.07	11565	4800	226.57	5	385	143-5TC	KBQ8875-226.57-M7	K8875019.00
7.6	1.20	11417	3300	231.14	5	200	56C	KBQ8775-231.14-M5	K8775003.00
5.8	1.53	15271	4800	300.73	5	385	143-5TC	KBQ8875-300.73-M7	K8875020.00
4.9	1.33	17925	4800	357.41	5	385	56C	KBQ8875-357.41-M5	K8875005.00
3.9	1.05	22834	4800	449.80	5	385	56C	KBQ8875-449.80-M5	K8875006.00

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

Technical Information



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1.5 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	110420
General Purpose, C Face	208-230/460 3-PH	TEFC	140TC	120037
WATSAVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	116743
575 Volt Motor	575 3-PH	TEFC	56C	111444
SCR Rated DC Motor	180 VDC	TEFC	56C	108092

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

K8473017.00-110420

Warnings and Cautions

Terms and Conditions



Quick Selections

K Series Helical - Bevel

1750 RPM Input

High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

2 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight* (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
268	5.00	442	650	6.53	3	61	143-5TC	KBQ8473-6.43-M7	K8473017.00
239	4.50	496	675	7.31	3	61	143-5TC	KBQ8473-7.31-M7	K8473018.00
189	3.75	627	700	9.24	3	61	143-5TC	KBQ8473-9.24-M7	K8473019.00
145	3.80	816	800	12.07	3	61	143-5TC	KBQ8473-12.07-M7	K8473020.00
130	3.45	913	770	13.51	3	61	143-5TC	KBQ8473-13.51-M7	K8473021.00
123	9.00	344	3300	14.20	3	170	143-5TC	KBQ8773-14.20-M7	K8773031.00
102	2.90	1155	830	17.08	3	61	143-5TC	KBQ8473-17.08-M7	K8473022.00
88	4.60	1348	2050	19.80	3	94	143-5TC	KBQ8673-19.80-M7	K8673027.00
80	2.40	1475	930	21.94	3	61	143-5TC	KBQ8473-21.94-M7	K8473023.00
70	2.10	1686	1050	25.10	3	61	143-5TC	KBQ8473-25.10-M7	K8473024.00
68	3.70	1757	2050	25.89	3	94	143-5TC	KBQ8673-25.89-M7	K8673028.00
58	1.70	2082	1150	30.37	3	61	143-5TC	KBQ8473-30.37-M7	K8473025.00
57	3.40	2059	2050	30.51	3	94	143-5TC	KBQ8673-30.51-M7	K8673029.00
46	1.35	2622	1250	38.38	3	61	143-5TC	KBQ8473-38.38-M7	K8473026.00
45	2.75	2600	2050	38.61	3	94	143-5TC	KBQ8673-38.61-M7	K8673030.00
39	2.40	3021	2050	44.81	3	94	143-5TC	KBQ8673-44.81-M7	K8673031.00
37	4.25	3224	3300	47.45	3	170	143-5TC	KBQ8773-47.45-M7	K8773041.00
35	1.05	3371	1250	49.31	3	61	143-5TC	KBQ8473-49.31-M7	K8473027.00
32	3.75	3653	3300	54.07	3	170	143-5TC	KBQ8773-54.07-M7	K8773042.00
30	1.85	3924	2050	58.58	3	94	143-5TC	KBQ8673-58.58-M7	K8673032.00

- Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

K8473017.00-112136



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



2 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	112136
General Purpose, C Face	208-230/460 3-PH	TEFC	140TC	120038
575 Volt Motor	575 3-PH	TEFC	145TC	120178
WATSAVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	145TC	121065
SCR Rated DC Motor	180 VDC	TEFC	145TC	128010

Quick Selections

K Series Helical - Bevel

1750 RPM Input



High Efficiency Helical - Bevel
Gear Reducers

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

2 HP con't		Gear Reducer Quick Selections							
Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
25	1.55	4684	2050	69.99	3	94	143-5TC	KBQ8673-69.99-M7	K8673033.00
23	1.45	5007	2050	74.56	3	94	143-5TC	KBQ8673-74.56-M7	K8673034.00
23	2.65	5170	3300	75.95	3	170	143-5TC	KBQ8773-75.95-M7	K8773043.00
21	1.25	5808	2050	85.21	3	94	143-5TC	KBQ8673-85.21-M7	K8673035.00
20	4.00	5975	4800	88.54	3	283	143-5TC	KBQ8873-88.54-M7	K8873021.00
19	2.25	6089	3300	89.80	3	170	143-5TC	KBQ8773-89.80-M7	K8773044.00
19	1.15	6313	2050	91.47	3	94	143-5TC	KBQ8673-91.47-M7	K8673036.00
16	1.00	7260	2050	106.51	3	94	143-5TC	KBQ8673-106.51-M7	K8673037.00
16	3.30	7242	4800	106.74	3	283	143-5TC	KBQ8873-106.74-M7	K8873022.00
16	1.85	7405	3300	108.25	3	170	143-5TC	KBQ8773-108.25-M7	K8773045.00
13	2.65	9019	4800	132.22	3	283	143-5TC	KBQ8873-132.22-M7	K8873023.00
13	1.50	9133	3300	134.10	3	170	143-5TC	KBQ8773-134.10-M7	K8773046.00
11.2	1.30	10538	3300	155.99	5	200	143-5TC	KBQ8775-155.99-M7	K8775017.00
10.9	2.20	10864	4800	161.29	5	385	143-5TC	KBQ8875-161.29-M7	K8875017.00
8.6	1.75	13657	4800	202.99	5	385	143-5TC	KBQ8875-202.99-M7	K8875018.00
9.1	1.05	13048	3300	191.38	5	200	143-5TC	KBQ8775-191.38-M7	K8775018.00
7.7	1.55	15419	4800	226.57	5	385	143-5TC	KBQ8875-226.57-M7	K8875019.00
5.8	1.15	20783	4800	300.73	5	385	143-5TC	KBQ8875-300.73-M7	K8875020.00
4.9	1.00	23900	4800	357.41	5	385	143-5TC	KBQ8875-357.41-M7	K8875021.00

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

Technical Information

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



2 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	112136
General Purpose, C Face	208-230/460 3-PH	TEFC	140TC	120038
575 Volt Motor	575 3-PH	TEFC	145TC	120178
WATTS-AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	145TC	121065
SCR Rated DC Motor	180 VDC	TEFC	145TC	128010

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
K8473017.00-112136

Warnings and Cautions

Terms and Conditions



Quick Selections

K Series Helical - Bevel

1750 RPM Input

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

3 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
268	3.33	663	650	6.53	3	66	182-4TC	KBQ8473-6.53-M9	K8473033.00
239	3.00	743	675	7.31	3	66	182-4TC	KBQ8473-7.31-M9	K8473034.00
189	2.50	940	700	9.24	3	66	182-4TC	KBQ8473-9.24-M9	K8473035.00
185	3.33	975	2050	9.44	3	100	182-4TC	KBQ8673-9.44-M9	K8673043.00
175	9.00	1000	3400	9.99	3	283	182-4TC	KBQ8873-9.99-M9	K8873028.00
156	3.67	1107	2050	11.25	3	100	182-4TC	KBQ8673-11.25-M9	K8673044.00
145	2.53	1224	800	12.07	3	66	182-4TC	KBQ8473-12.07-M9	K8473036.00
138	5.33	1320	3200	12.70	3	170	182-4TC	KBQ8773-12.70-M9	K8773053.00
130	2.30	1370	770	13.51	3	66	182-4TC	KBQ8473-13.51-M9	K8473037.00
123	6.00	1475	3100	14.20	3	170	182-4TC	KBQ8773-14.20-M9	K8773054.00
114	5.67	1594	3200	15.32	3	170	182-4TC	KBQ8773-15.32-M9	K8773055.00
103	3.30	1733	2050	17.06	3	100	182-4TC	KBQ8673-17.06-M9	K8673046.00
102	1.93	1733	830	17.08	3	66	182-4TC	KBQ8473-17.08-M9	K8473038.00
94	5.00	1924	3300	18.65	3	170	182-4TC	KBQ8773-18.65-M9	K8773057.00
88	3.07	2022	2050	19.80	3	100	182-4TC	KBQ8673-19.80-M9	K8673047.00
83	4.67	2128	3300	21.11	3	170	182-4TC	KBQ8773-21.11-M9	K8773058.00
80	1.60	2213	930	21.94	3	61	182-4TC	KBQ8473-21.94-M9	K8473039.00
76	27.17	2345	6900	23.10	3	600	182-4TC	KBQ81073-23.10-M9	K81073008.00
73	4.67	2404	3300	24.06	3	170	182-4TC	KBQ8773-24.06-M9	K8773059.00
70	1.40	2529	1050	25.10	3	61	143-5TC	KBQ8473-25.10-M7	K8473024.00
64	23.00	2770	7400	27.26	3	600	182-4TC	KBQ81073-27.26-M9	K81073009.00
68	2.47	2635	2050	25.89	3	100	182-4TC	KBQ8673-25.89-M9	K8673048.00
60	21.57	2954	7700	29.07	3	600	182-4TC	KBQ81073-29.07-M9	K81073010.00
58	1.13	3124	1150	30.37	3	61	143-5TC	KBQ8473-30.37-M7	K8473025.00
57	2.27	3088	2050	30.51	3	100	182-4TC	KBQ8673-30.51-M9	K8673049.00
55	3.67	3273	3300	31.90	3	170	182-4TC	KBQ8773-31.90-M9	K8773060.00
53	18.83	3382	8100	33.30	3	600	182-4TC	KBQ81073-33.30-M9	K81073011.00
51	3.33	3630	3300	34.42	3	170	182-4TC	KBQ8773-34.42-M9	K8773061.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

K8473033.00-131491

MOTOR SELECTIONS



3 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	182TC	131491
WATSAVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	182TC	131503
575 Volt Motor	575 3-PH	TEFC	182TC	131498

Quick Selections

K Series Helical - Bevel

1750 RPM Input



High Efficiency Helical - Bevel
Gear Reducers

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

3 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
45	1.83	3900	2050	38.61	3	100	182-4TC	KBQ8673-38.61-M9	K8673050.00
45	3.10	3928	3300	38.68	3	170	143-5TC	KBQ8773-38.68-M7	K8773039.00
42	3.23	4237	3300	41.90	3	170	182-4TC	KBQ8773-41.90-M9	K8773063.00
41	15.00	4340	8200	42.73	3	600	182-4TC	KBQ81073-42.73-M9	K81073012.00
39	1.60	4531	2050	44.81	3	100	182-4TC	KBQ8673-44.81-M9	K8673031.00
37	2.83	4835	3300	47.45	3	170	182-4TC	KBQ8773-47.45-M9	K8773064.00
34	13.23	5350	9500	51.77	3	600	182-4TC	KBQ81073-51.77-M9	K81073013.00
33	4.33	5423	4800	53.31	3	283	182-4TC	KBQ8873-53.31-M9	K8873042.00
32	2.50	5480	3300	54.07	3	170	182-4TC	KBQ8773-54.07-M9	K8773065.00
30	1.23	5886	2050	58.58	3	100	143-5TC	KBQ8673-58.58-M7	K8673032.00
29	11.40	6211	10200	61.11	3	600	182-4TC	KBQ81073-61.11-M9	K81073014.00
25	1.03	7026	2050	69.99	3	100	143-5TC	KBQ8673-69.99-M7	K8673033.00
23	1.77	7755	3300	75.95	3	170	182-4TC	KBQ8773-75.95-M9	K8773066.00
23	3.13	7628	4800	74.89	3	283	182-4TC	KBQ8873-74.89-M9	K8873043.00
21	8.20	8634	11300	84.94	3	600	182-4TC	KBQ81073-84.94-M9	K81073016.00
20	2.67	8963	4800	88.54	3	283	182-4TC	KBQ8873-88.54-M9	K8873044.00
19	7.37	9611	11900	94.53	3	600	182-4TC	KBQ81073-94.53-M9	K81073017.00
19	1.50	9133	3300	89.80	3	170	143-5TC	KBQ8773-89.80-M7	K8773044.00
17	3.67	10364	8000	103.07	3	430	182-4TC	KBQ8973-103.07-M9	K8973015.00
17	6.57	10782	11900	106.05	3	600	182-4TC	KBQ81073-106.05-M9	K81073018.00
16	1.23	11108	3300	108.25	3	170	143-5TC	KBQ8873-108.25-M7	K8773045.00
16	2.20	10864	4800	106.74	3	283	182-4TC	KBQ8873-106.74-M9	K8873045.00
15	5.80	12207	12500	120.12	3	600	182-4TC	KBQ81073-120.12-M9	K81073019.00
13	5.07	13974	13000	137.71	3	600	182-4TC	KBQ81073-137.71-M9	K81073020.00
13	1.77	13528	4800	132.22	3	283	182-4TC	KBQ8873-132.22-M9	K8873046.00
13	2.87	13256	8000	130.52	3	430	182-4TC	KBQ8973-130.52-M9	K8973017.00
10.9	1.47	16295	4800	161.29	5	385	182-4TC	KBQ8775-161.29-M9	K8875033.00
8.6	1.17	20486	4800	202.99	5	385	143-5TC	KBQ8875-202.99-M7	K8875018.00
7.7	1.03	23129	4800	226.57	5	385	143-5TC	KBQ8875-226.57-M7	K8875019.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
K8473033.00-131491

MOTOR SELECTIONS



3 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	182TC	131491
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	182TC	131503
575 Volt Motor	575 3-PH	TEFC	182TC	131498



Quick Selections

K Series Helical - Bevel

1750 RPM Input

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

5 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
269	4.00	1088	2750	6.51	3	170	182-4TC	KBQ8773-6.51-M9	K8773047.00
268	2.00	1105	650	6.53	3	66	182-4TC	KBQ8473-6.53-M9	K8473033.00
241	3.80	1211	2830	7.27	3	170	182-4TC	KBQ8773-7.27-M9	K8773048.00
239	1.80	1239	675	7.31	3	66	182-4TC	KBQ8473-7.31-M9	K8473034.00
235	2.20	1309	2050	7.46	3	100	182-4TC	KBQ8673-7.46-M9	K8673042.00
215	3.40	1388	2950	8.13	3	170	182-4TC	KBQ8773-8.13-M9	K8773049.00
200	3.40	1462	2970	8.77	3	170	182-4TC	KBQ8773-8.77-M9	K8773050.00
189	1.50	1567	700	9.24	3	66	182-4TC	KBQ8473-9.24-M9	K8473035.00
185	2.00	1625	2050	9.44	3	100	182-4TC	KBQ8673-9.44-M9	K8673043.00
177	3.20	1634	3070	9.86	3	170	182-4TC	KBQ8773-9.86-M9	K8773051.00
156	2.20	1845	2050	11.25	3	100	182-4TC	KBQ8673-11.25-M9	K8673044.00
145	1.52	2039	800	12.07	3	66	182-4TC	KBQ8473-12.07-M9	K8473036.00
138	3.20	2200	3200	12.70	3	170	182-4TC	KBQ8773-12.70-M9	K8773053.00
130	2.40	2217	2050	13.48	3	100	182-4TC	KBQ8673-13.48-M9	K8673045.00
130	1.38	2283	770	13.51	3	66	182-4TC	KBQ8473-13.51-M9	K8473037.00
123	3.60	2408	3100	14.20	3	170	182-4TC	KBQ8773-14.20-M9	K8773054.00
114	3.40	2656	3200	15.32	3	170	182-4TC	KBQ8773-15.32-M9	K8773055.00
103	1.98	2889	2050	17.06	3	100	182-4TC	KBQ8673-17.06-M9	K8673046.00
102	1.16	2888	830	17.08	3	66	182-4TC	KBQ8473-17.08-M9	K8473038.00
102	3.20	2963	3300	17.21	3	170	182-4TC	KBQ8773-17.21-M9	K8773056.00
94	3.00	3207	3300	18.65	3	170	182-4TC	KBQ8773-18.65-M9	K8773057.00
88	1.84	3370	2050	19.80	3	100	182-4TC	KBQ8673-19.80-M9	K8673047.00
83	2.80	3546	3300	21.11	3	170	182-4TC	KBQ8773-21.11-M9	K8773058.00
77	7.40	3824	3300	22.79	3	430	182-4TC	KBQ8973-22.79-M9	K8973007.00
76	16.30	3908	6900	23.10	3	600	182-4TC	KBQ81073-23.10-M9	K81073008.00
73	2.80	4007	3300	24.06	3	170	182-4TC	KBQ8773-24.06-M9	K8773059.00
68	1.48	4392	2050	25.89	3	100	182-4TC	KBQ8673-25.89-M9	K8673048.00
64	13.80	4616	7400	27.26	3	600	182-4TC	KBQ81073-27.26-M9	K81073009.00
60	12.94	4923	7700	29.07	3	600	182-4TC	KBQ81073-29.07-M9	K81073010.00
57	1.36	5147	2050	30.51	3	100	182-4TC	KBQ8673-30.51-M9	K8673049.00
55	2.20	5455	300	31.90	3	170	182-4TC	KBQ8773-31.90-M9	K8773060.00
53	11.30	5637	8100	33.30	3	600	182-4TC	KBQ81073-33.30-M9	K81073011.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

K8773047.00-131492

MOTOR SELECTIONS



5 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	184TC	131492
WATTS-AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	184TC	131501
575 Volt Motor	575 3-PH	TEFC	184TC	131499

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

Quick Selections

K Series Helical - Bevel

1750 RPM Input



High Efficiency Helical - Bevel
Gear Reducers

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

5 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
51	2.00	6050	3300	34.42	3	170	182-4TC	KBQ8773-34.42-M9	K8773061.00
45	1.10	6500	2050	38.61	3	100	182-4TC	KBQ8673-38.61-M9	K8673050.00
45	1.86	6559	3300	38.68	3	170	182-4TC	KBQ8773-38.68-M9	K8773062.00
44	3.40	6471	4700	39.69	3	283	182-4TC	KBQ8873-39.69-M9	K8873040.00
42	1.94	7062	3300	41.90	3	170	182-4TC	KBQ8773-41.90-M9	K8773063.00
41	9.00	7233	8200	42.73	3	600	182-4TC	KBQ81073-42.73-M9	K81073012.00
39	3.00	7500	4800	44.86	3	283	182-4TC	KBQ8873-44.86-M9	K8873041.00
37	1.70	8059	3300	47.45	3	170	182-4TC	KBQ8773-47.45-M9	K8773064.00
34	7.94	8917	9500	51.77	3	600	182-4TC	KBQ81073-51.77-M9	K81073013.00
33	2.60	9038	4800	53.31	3	283	182-4TC	KBQ8873-53.31-M9	K8873042.00
32	1.50	9152	3300	54.07	3	170	182-4TC	KBQ8773-54.07-M9	K8773065.00
29	6.84	10351	10200	61.11	3	600	182-4TC	KBQ81073-61.11-M9	K81073014.00
23	1.88	12713	4800	74.89	3	283	182-4TC	KBQ8873-74.89-M9	K8873043.00
23	1.06	12925	3300	75.95	3	170	182-4TC	KBQ8773-75.95-M9	K8773066.00
23	5.44	13015	10900	76.82	3	600	182-4TC	KBQ81073-76.82-M9	K81073015.00
21	2.60	14615	8000	84.07	3	430	182-4TC	KBQ8973-84.07-M9	K8973014.00
21	4.92	14390	11300	84.94	3	600	182-4TC	KBQ81073-84.94-M9	K81073016.00
20	1.60	14938	4800	88.54	3	283	182-4TC	KBQ8873-88.54-M9	K8873044.00
19	4.42	16018	11900	94.53	3	600	182-4TC	KBQ81073-94.53-M9	K81073017.00
17	2.20	17273	8000	103.07	3	430	182-4TC	KBQ8973-103.07-M9	K8973015.00
17	3.94	17970	11900	106.05	3	600	182-4TC	KBQ81073-106.05-M9	K81073018.00
16	1.32	18106	4800	106.74	3	283	182-4TC	KBQ8873-106.74-M9	K8873045.00
15	1.94	19588	8000	115.42	3	430	182-4TC	KBQ8973-115.42-M9	K8973016.00
15	3.48	20345	12500	120.12	3	600	182-4TC	KBQ81073-120.12-M9	K81073019.00
13	1.72	22093	8000	130.52	3	430	182-4TC	KBQ8973-130.52-M9	K8973017.00
13	1.06	22547	4800	132.22	3	283	182-4TC	KBQ8873-132.22-M9	K8873046.00
13	3.04	23289	13000	137.71	3	600	182-4TC	KBQ81073-137.71-M9	K81073020.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



5 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	184TC	131492
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	184TC	131501
575 Volt Motor	575 3-PH	TEFC	184TC	131499

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

K8773047.00-131492



Quick Selections

K Series Helical - Bevel

1750 RPM Input

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

7.5 HP

Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
269	2.67	1631	2750	6.51	3	170	213-5TC	KBQ8773-6.51-M11	K8773070.00
268	1.33	1658	650	6.53	3	66	182-5TC	KBQ8473-6.53-M9	K8473033.00
241	2.53	1816	2830	7.27	3	170	213-5TC	KBQ8773-7.27-M11	K8773071.00
239	1.20	1858	675	7.31	3	66	182-5TC	KBQ8473-7.31-M9	K8473034.00
235	1.47	1964	2050	7.46	3	100	182-5TC	KBQ8673-7.46-M9	K8673042.00
215	2.27	2082	2950	8.13	3	170	213-5TC	KBQ8773-8.13-M11	K8773072.00
200	2.27	2193	2970	8.77	3	170	213-5TC	KBQ8773-8.77-M11	K8773073.00
185	1.33	2438	2050	9.44	3	100	182-5TC	KBQ8673-9.44-M9	K8673043.00
177	2.13	2452	3070	9.86	3	170	213-5TC	KBQ8773-9.86-M11	K8773074.00
156	1.47	2768	2050	11.25	3	100	182-5TC	KBQ8673-11.25-M9	K8673044.00
154	2.27	2956	3100	11.37	3	170	213-5TC	KBQ8773-11.37-M11	K8773075.00
138	2.13	3300	3200	12.70	3	170	213-5TC	KBQ8773-12.70-M11	K8773076.00
130	1.60	3325	2050	13.48	3	100	182-5TC	KBQ8673-13.48-M9	K8673045.00
114	2.27	3984	3200	15.32	3	170	213-5TC	KBQ8773-15.32-M11	K8773078.00
103	1.32	4333	2050	17.06	3	100	182-5TC	KBQ8673-17.06-M9	K8673046.00
102	2.13	4444	3300	17.21	3	170	213-5TC	KBQ8773-17.21-M11	K8773079.00
94	2.00	4810	3300	18.65	3	170	213-5TC	KBQ8773-18.65-M11	K8773080.00
88	1.23	5054	2050	19.80	3	100	182-5TC	KBQ8673-19.80-M9	K8673047.00
86	3.33	4860	3900	20.24	3	283	213-5TC	KBQ8873-20.24-M11	K8873058.00
83	1.87	5320	3300	21.11	3	170	213-5TC	KBQ8773-21.11-M11	K8773081.00
76	10.87	5862	6900	23.10	3	600	213-5TC	KBQ81073-23.10-M11	K81073028.00
73	1.87	6011	3300	24.06	3	170	213-5TC	KBQ8773-24.06-M11	K8773082.00
73	2.93	5795	4000	24.06	3	283	213-5TC	KBQ8873-24.06-M11	K8873059.00
64	9.20	6924	7400	27.26	3	600	213-5TC	KBQ81073-27.26-M11	K81073029.00
60	8.63	7384	7700	29.07	3	600	213-5TC	KBQ81073-29.07-M11	K81073030.00
56	2.53	7105	4500	31.46	3	283	213-5TC	KBQ8873-31.46-M11	K8873060.00
55	1.47	8182	3300	31.90	3	170	182-5TC	KBQ8773-31.90-M9	K8773060.00
53	7.53	8456	8100	33.30	3	600	213-5TC	KBQ81073-33.30-M11	K81073031.00

♦ Weight does not include oil.

▼ Service Factor is based on maximum torque rating of reducer.

● Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

K8773070.00-131606



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS

7.5 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	184TC	131606
WATSAVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	213TC	140486



High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

Quick Selections

K Series Helical - Bevel

1750 RPM Input



High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

7.5 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
52	2.40	8542	4500	33.94	3	283	213-5TC	KBQ8873-33.94-M11	K8873061.00
51	1.33	9075	3300	34.42	3	170	182-5TC	KBQ8773-34.42-M9	K8773061.00
50	3.60	8889	3300	35.02	3	430	213-5TC	KBQ8973-35.02-M11	K8973026.00
46	2.27	9265	4600	38.14	3	283	213-5TC	KBQ8873-38.14-M11	K8873062.00
45	1.24	9839	3300	38.68	3	170	182-5TC	KBQ8773-38.68-M9	K8773062.00
44	2.27	9706	4700	39.69	3	283	213-5TC	KBQ8873-39.69-M11	K8873063.00
42	1.29	10593	3300	41.90	3	170	182-5TC	KBQ8773-41.90-M9	K8773063.00
41	6.00	10850	8200	42.73	3	600	213-5TC	KBQ81073-42.73-M11	K81073032.00
39	2.00	11250	4800	44.86	3	283	213-5TC	KBQ8873-44.86-M11	K8873064.00
37	1.13	12088	3300	47.45	3	170	182-5TC	KBQ8773-47.45-M9	K8773064.00
34	2.93	12955	3300	51.07	3	430	213-5TC	KBQ8973-51.07-M11	K8973028.00
34	5.29	13375	8600	51.77	3	600	213-5TC	KBQ81073-51.77-M11	K81073033.00
33	1.73	13558	4800	53.31	3	283	213-5TC	KBQ8873-53.31-M11	K8873042.00
29	2.53	15000	3300	59.48	3	430	213-5TC	KBQ8973-59.48-M11	K8973029.00
29	4.56	15526	10200	61.11	3	600	213-5TC	KBQ81073-61.11-M11	K81073034.00
23	1.25	19069	4800	74.89	3	283	182-5TC	KBQ8873-74.89-M9	K8873043.00
23	2.00	19000	3300	76.61	3	430	213-5TC	KBQ8973-76.61-M11	K8973030.00
23	3.63	19522	10900	76.82	3	600	213-5TC	KBQ81073-76.82-M11	K81073035.00
21	1.73	21923	3300	84.07	3	430	213-5TC	KBQ8973-84.07-M11	K8973031.00
21	3.28	21585	11300	84.94	3	600	213-5TC	KBQ81073-84.94-M11	K81073036.00
20	1.07	22406	4800	88.54	3	283	182-5TC	KBQ8873-88.54-M9	K8873044.00
19	2.95	24027	11900	94.53	3	600	213-5TC	KBQ81073-94.53-M11	K81073037.00
17	1.47	25909	8000	103.07	3	430	182-5TC	KBQ8973-103.07-M9	K8973015.00
17	2.63	26954	11900	106.05	3	600	213-5TC	KBQ81073-106.05-M11	K81073038.00
15	1.29	29381	8000	115.42	3	430	182-5TC	KBQ8973-115.42-M9	K8973016.00
15	2.32	30517	12500	120.12	3	600	213-5TC	KBQ81073-120.12-M11	K81073039.00
13	1.15	33140	8000	130.52	3	430	182-5TC	KBQ8973-130.52-M9	K8973017.00
13	2.03	34934	13000	137.71	3	600	213-5TC	KBQ81073-137.71-M11	K81073040.00

♦ Weight does not include oil.

▼ Service Factor is based on maximum torque rating of reducer.

● Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
K8773070.00-131606

MOTOR SELECTIONS



7.5 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	184TC	131606
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	213TC	140486



Quick Selections

K Series Helical - Bevel

1750 RPM Input

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

10 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
269	2.00	2175	2750	6.51	3	170	213-5TC	KBQ8773-6.51-M11	K8773070.00
265	3.40	2206	3100	6.60	3	283	213-5TC	KBQ8873-6.60-M11	K8873047.00
241	1.90	2421	2830	7.27	3	170	213-5TC	KBQ8773-7.27-M11	K8773071.00
237	3.20	2500	3200	7.37	3	283	213-5TC	KBQ8873-7.37-M11	K8873048.00
235	1.10	2618	2050	7.46	3	100	182-5TC	KBQ8673-7.46-M9	K8673042.00
215	1.70	2776	2950	8.13	3	170	213-5TC	KBQ8773-8.13-M11	K8773072.00
212	2.90	2759	3200	8.24	3	283	213-5TC	KBQ8873-8.24-M11	K8873049.00
200	1.70	2924	2970	8.77	3	170	213-5TC	KBQ8773-8.77-M11	K8773073.00
197	2.70	3037	3300	8.89	3	283	213-5TC	KBQ8873-8.89-M11	K8873050.00
177	1.60	3269	2970	9.86	3	170	213-5TC	KBQ8773-9.86-M11	K8773074.00
175	2.70	3333	3400	9.99	3	283	213-5TC	KBQ8873-9.99-M11	K8873051.00
156	1.10	3691	2050	11.25	3	100	182-5TC	KBQ8673-11.25-M9	K8673044.00
154	1.70	3941	3100	11.37	3	170	213-5TC	KBQ8773-11.37-M11	K8773075.00
154	2.60	3846	3500	11.37	3	283	213-5TC	KBQ8873-11.37-M11	K8873052.00
138	1.60	4400	3200	12.70	3	170	213-5TC	KBQ8773-12.70-M11	K8773076.00
138	3.30	4303	3400	12.70	3	283	213-5TC	KBQ8873-12.70-M11	K8873053.00
130	1.20	4433	2050	13.48	3	100	182-5TC	KBQ8673-13.48-M9	K8673045.00
123	3.10	4839	3500	14.20	3	283	213-5TC	KBQ8873-14.20-M11	K8873054.00
114	1.70	5312	3200	15.32	3	170	213-5TC	KBQ8773-15.32-M11	K8773078.00
114	3.00	5167	3600	15.32	3	283	213-5TC	KBQ8873-15.32-M11	K8873055.00
102	1.60	5925	3300	17.21	3	170	213-5TC	KBQ8773-17.21-M11	K8773079.00
102	2.70	5926	3700	17.21	3	283	213-5TC	KBQ8873-17.21-M11	K8873056.00
94	1.50	6413	3300	18.65	3	170	213-5TC	KBQ8773-18.65-M11	K8773080.00
86	2.50	6480	3900	20.24	3	283	213-5TC	KBQ8873-20.24-M11	K8873058.00
83	1.40	7093	3300	21.11	3	170	213-5TC	KBQ8773-21.11-M11	K8773081.00
77	3.70	7649	4750	22.79	3	430	213-5TC	KBQ8973-22.79-M11	K8973024.00
76	8.15	7816	6900	23.10	3	600	213-5TC	KBQ81073-23.10-M11	K81073028.00
73	1.40	8014	3300	24.06	3	170	213-5TC	KBQ8773-24.06-M11	K8773082.00
73	2.20	8142	4000	24.06	3	283	213-5TC	KBQ8873-24.06-M11	K8873059.00
66	3.30	9091	5250	26.55	3	430	213-5TC	KBQ8973-26.55-M11	K8973025.00
64	6.90	9232	7400	27.26	3	600	213-5TC	KBQ81073-27.26-M11	K81073029.00
60	6.47	9845	7700	29.07	3	600	213-5TC	KBQ81073-29.07-M11	K81073030.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

K8773070.00-140109

MOTOR SELECTIONS



10 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	215TC	140109
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	215TC	140484

Quick Selections

K Series Helical - Bevel

1750 RPM Input



High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

10 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
56	1.90	9474	4500	31.46	3	283	213-5TC	KBQ8873-31.46-M11	K8873060.00
55	1.10	10909	3300	31.90	3	170	213-5TC	KBQ8773-31.90-M11	K8773083.00
53	5.65	11274	8100	33.30	3	600	213-5TC	KBQ81073-33.30-M11	K81073031.00
52	1.80	11389	4500	33.94	3	283	213-5TC	KBQ8873-33.94-M11	K8873061.00
51	1.00	12100	3300	34.42	3	170	213-5TC	KBQ8773-34.42-M11	K8773084.00
50	2.70	11852	5750	35.02	3	430	213-5TC	KBQ8973-35.02-M11	K8973026.00
46	1.70	12353	4600	38.14	3	283	213-5TC	KBQ8873-38.14-M11	K8873062.00
44	1.70	12941	4700	39.69	3	283	213-5TC	KBQ8873-39.69-M11	K8873063.00
44	2.80	13571	5950	39.95	3	430	213-5TC	KBQ8973-39.95-M11	K8973027.00
41	4.50	14467	8200	42.73	3	600	213-5TC	KBQ81073-42.73-M11	K81073032.00
39	1.50	15000	4800	44.86	3	283	213-5TC	KBQ8873-44.86-M11	K8873064.00
34	2.20	17273	6250	51.07	3	430	213-5TC	KBQ8973-51.07-M11	K8973028.00
34	3.97	17834	8600	51.77	3	600	213-5TC	KBQ81073-51.77-M11	K81073033.00
33	1.30	18077	4800	53.31	3	283	213-5TC	KBQ8873-53.31-M11	K8873065.00
29	1.90	20000	6750	59.48	3	430	213-5TC	KBQ8973-59.48-M11	K8973029.00
29	3.42	20702	10200	61.11	3	600	213-5TC	KBQ81073-61.11-M11	K81073034.00
23	2.72	26029	10900	76.82	3	600	213-5TC	KBQ81073-76.82-M11	K81073035.00
23	1.50	25333	7550	76.61	3	430	213-5TC	KBQ8973-76.61-M11	K8973030.00
21	2.46	28780	11300	84.94	3	600	213-5TC	KBQ81073-84.94-M11	K81073036.00
21	1.30	29231	8000	84.07	3	430	213-5TC	KBQ8973-84.07-M11	K8973031.00
19	2.21	32036	11900	94.53	3	600	213-5TC	KBQ81073-94.53-M11	K81073037.00
17	1.10	34545	8000	103.07	3	430	213-5TC	KBQ8973-103.07-M11	K8973032.00
17	1.97	35939	11900	106.05	3	600	213-5TC	KBQ81073-106.05-M11	K81073038.00
15	1.74	40690	12500	120.12	3	600	213-5TC	KBQ81073-120.12-M11	K81073039.00
13	1.52	46579	13000	137.71	3	600	213-5TC	KBQ81073-137.71-M11	K81073040.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



10 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	215TC	140109
WATTS-AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	215TC	140484

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
K8773070.00-140109



Quick Selections

K Series Helical - Bevel

1750 RPM Input

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

15 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
269	1.33	3263	4350	6.51	3	170	213-5TC	KBQ8773-6.51-M11	K8773070.00
265	2.27	3309	7500	6.60	3	292	254TC	KBQ8873-6.60-M13	K8873070.00
241	1.27	3632	4600	7.27	3	170	213-5TC	KBQ8773-7.27-M11	K8773071.00
237	2.13	3750	8000	7.37	3	292	254TC	KBQ8873-7.37-M13	K8873071.00
230	3.53	3849	3750	7.61	3	434	254TC	KBQ8973-7.61-M13	K8973035.00
215	1.13	4165	4720	8.13	3	170	213-5TC	KBQ8773-8.13-M11	K8773072.00
212	1.93	4138	8000	8.24	3	292	254TC	KBQ8873-8.24-M13	K8873072.00
200	1.13	4385	4970	8.77	3	170	213-5TC	KBQ8773-8.77-M11	K8773073.00
197	1.80	4556	8200	8.89	3	292	254TC	KBQ8873-8.89-M13	K8873073.00
185	3.47	4846	3900	9.48	3	434	254TC	KBQ8973-9.48-M13	K8973036.00
177	1.07	4903	5230	9.86	3	170	213-5TC	KBQ8773-9.86-M11	K8773074.00
175	1.80	5000	9000	9.99	3	292	254TC	KBQ8873-9.99-M13	K8873074.00
162	3.53	5519	4000	10.82	3	434	254TC	KBQ8973-10.82-M13	K8973037.00
154	1.13	5912	6700	11.37	3	170	213-5TC	KBQ8773-11.37-M11	K8773075.00
154	1.73	5769	10000	11.37	3	292	254TC	KBQ8873-11.37-M13	K8873075.00
140	3.53	6368	4250	12.54	3	434	254TC	KBQ8973-12.54-M13	K8973038.00
138	1.07	6600	7040	12.70	3	170	213-5TC	KBQ8773-12.70-M11	K8773076.00
138	2.20	6455	14200	12.70	3	292	254TC	KBQ8873-12.70-M13	K8873076.00
123	2.07	7258	15000	14.20	3	292	254TC	KBQ8873-14.20-M13	K8873077.00
118	7.70	7545	6850	14.86	3	620	254TC	KBQ81073-14.86-M13	K81073046.00
114	1.13	7968	9030	15.32	3	170	213-5TC	KBQ8773-15.32-M11	K8773078.00
114	2.00	7750	15500	15.32	3	292	254TC	KBQ8873-15.32-M13	K8873078.00
112	3.33	7920	4500	15.63	3	434	254TC	KBQ8973-15.63-M13	K8973039.00
102	1.07	8888	9480	17.21	3	170	213-5TC	KBQ8873-17.21-M11	K8873079.00
102	1.80	8889	16000	17.21	3	292	254TC	KBQ8873-17.21-M13	K8873080.00
98	3.00	9133	4750	17.83	3	434	254TC	KBQ8973-17.83-M13	K8973040.00
92	6.48	9676	6350	19.06	3	620	254TC	KBQ81073-19.06-M13	K81073047.00
86	1.67	9720	17000	20.24	3	292	254TC	KBQ8873-20.24-M13	K8873081.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

K8773070.00-151350



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



15 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	254TC	151350
WATSAVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	254TC	171587

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

Quick Selections

K Series Helical - Bevel

1750 RPM Input



High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

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This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

15 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor ▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
77	2.47	11473	5000	22.79	3	434	254TC	KBQ8973-22.79-M13	K8973041.00
76	5.43	11724	6900	23.10	3	620	254TC	KBQ81073-23.10-M13	K81073048.00
73	1.47	11591	18000	24.06	3	283	213-5TC	KBQ8873-24.06-M11	K8873059.00
66	2.20	13636	5250	26.55	3	434	254TC	KBQ8973-26.55-M13	K8973042.00
64	4.60	13848	7400	27.26	3	620	254TC	KBQ81073-27.26-M13	K81073049.00
60	4.31	14768	7700	29.07	3	620	254TC	KBQ81073-29.07-M13	K81073050.00
56	1.27	14211	20500	31.46	3	283	213-5TC	KBQ8873-31.43-M11	K8873060.00
53	3.77	16912	8100	33.30	3	620	254TC	KBQ81073-33.30-M13	K81073051.00
52	1.20	17083	21000	33.94	3	283	213-5TC	KBQ8873-33.94-M11	K8873061.00
50	1.80	17778	5750	35.02	3	434	254TC	KBQ8973-35.02-M13	K8973043.00
46	1.13	18529	22000	38.14	3	283	213-5TC	KBQ8873-38.14-M11	K8873062.00
44	1.13	19412	22500	39.69	3	283	213-5TC	KBQ8873-39.69-M11	K8873063.00
44	1.87	20357	5950	39.95	3	434	254TC	KBQ8973-39.95-M13	K8973044.00
41	3.00	21700	8200	42.73	3	620	254TC	KBQ81073-42.73-M13	K81073052.00
34	2.65	26751	8600	51.77	3	620	254TC	KBQ81073-51.77-M13	K81073053.00
29	1.27	30000	6750	59.48	3	430	213-5TC	KBQ8973-59.48-M11	K8973029.00
29	2.28	31053	10200	61.11	3	620	254TC	KBQ81073-61.11-M13	K81073054.00
23	1.81	39044	10900	76.82	3	620	254TC	KBQ81073-76.82-M13	K81073055.00
23	1.00	38000	7550	76.61	3	430	213-5TC	KBQ8973-76.61-M11	K8973030.00
21	1.64	43171	11300	84.94	3	620	254TC	KBQ81073-84.94-M13	K81073056.00
19	1.47	48054	11900	94.53	3	620	254TC	KBQ81073-94.53-M13	K81073057.00
17	1.31	53909	11900	106.05	3	620	254TC	KBQ81073-106.05-M13	K81073058.00
15	1.16	61034	12500	120.12	3	620	254TC	KBQ81073-120.12-M13	K81073059.00
13	1.01	69868	13000	137.71	3	620	254TC	KBQ81073-137.71-M13	K81073060.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



15 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	254TC	151350
WATSAVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	254TC	171587

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

K8773070.00-151350



Quick Selections

K Series Helical - Bevel

1750 RPM Input

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

20 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight* (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
265	1.70	4412	3100	6.60	3	292	254TC	KBQ8873-6.60-M13	K8873070.00
237	1.60	5000	3200	7.37	3	292	254TC	KBQ8873-7.37-M13	K8873071.00
230	2.65	5132	3750	7.61	3	434	254TC	KBQ8973-7.61-M13	K8973035.00
212	1.45	5517	3200	8.24	3	292	213-5TC	KBQ8873-8.24-M11	K8873049.00
197	1.35	6074	3300	8.89	3	292	213-5TC	KBQ8873-8.89-M11	K8873050.00
185	2.60	6462	3900	9.48	3	434	254TC	KBQ8973-9.48-M13	K8973036.00
175	1.35	6667	3400	9.99	3	292	213-5TC	KBQ8873-9.99-M11	K8873051.00
162	2.65	7358	4000	10.82	3	434	254TC	KBQ8973-10.82-M13	K8973037.00
154	1.30	7692	3500	11.37	3	292	213-5TC	KBQ8873-11.37-M11	K8873052.00
154	4.89	7689	5750	11.36	3	620	254TC	KBQ81073-11.36-M13	K81073044.00
140	2.65	8491	4250	12.54	3	434	254TC	KBQ8973-12.54-M13	K8973038.00
138	1.65	8606	3400	12.70	3	292	254TC	KBQ8873-12.70-M13	K8873076.00
135	4.34	8779	6000	12.97	3	620	254TC	KBQ81073-12.97-M13	K81073045.00
123	1.55	9677	3500	14.20	3	292	254TC	KBQ8873-14.20-M13	K8873077.00
118	5.78	10061	6850	14.86	3	620	254TC	KBQ81073-14.86-M13	K81073046.00
114	1.50	10333	3600	15.32	3	283	213-5TC	KBQ8873-15.32-M11	K8873055.00
112	2.50	10560	4500	15.63	3	434	254TC	KBQ8973-15.63-M13	K8973039.00
102	1.35	11852	3700	17.21	3	283	213-5TC	KBQ8873-17.21-M11	K8873057.00
98	2.25	12178	4750	17.83	3	434	254TC	KBQ8973-17.83-M13	K8973040.00
92	4.86	12901	6350	19.06	3	620	254TC	KBQ81073-19.06-M13	K81073047.00
86	1.25	12960	3900	20.24	3	283	213-5TC	KBQ8873-20.24-M11	K8873058.00
77	1.85	15297	5000	22.79	3	620	254TC	KBQ8973-22.79-M13	K8973041.00
76	4.08	15632	6900	23.10	3	620	254TC	KBQ81073-23.10-M13	K81073048.00
73	1.10	15455	4000	24.06	3	283	213-5TC	KBQ8873-24.06-M11	K8873059.00
66	1.65	18182	5250	26.55	3	434	254TC	KBQ8973-26.55-M13	K8973042.00
64	3.45	18464	7400	27.26	3	620	254TC	KBQ81073-27.26-M13	K81073049.00
60	3.24	19691	7700	29.07	3	620	254TC	KBQ81073-29.07-M13	K81073050.00
53	2.83	22549	8100	33.30	3	620	254TC	KBQ81073-33.30-M13	K81073051.00
50	1.35	23704	5750	35.02	3	430	213-5TC	KBQ8973-35.02-M11	K8973026.00
44	1.40	27143	5950	39.95	3	430	213-5TC	KBQ8973-39.95-M11	K8973027.00
41	2.25	28933	8200	42.73	3	620	254TC	KBQ81073-42.73-M13	K81073052.00
34	1.10	34545	6250	51.07	3	430	213-5TC	KBQ8973-51.07-M11	K8973028.00
34	1.99	35668	8600	51.77	3	620	254TC	KBQ81073-51.77-M13	K81073053.00
29	1.71	41404	10200	61.11	3	620	254TC	KBQ81073-61.11-M13	K81073054.00
23	1.36	52059	10900	76.82	3	620	254TC	KBQ81073-76.82-M13	K81073055.00
21	1.23	57561	11300	84.94	3	620	254TC	KBQ81073-84.94-M13	K81073056.00
19	1.11	64072	11900	94.53	3	620	254TC	KBQ81073-94.53-M13	K81073057.00

* Weight does not include oil.

▼ Service Factor is based on maximum torque rating of reducer.

● Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



20 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	256TC	151352
WATSAVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	256TC	171589

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

K8873070.00-151352

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

Quick Selections

K Series Helical - Bevel

1750 RPM Input



High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

25 HP

Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
265	1.36	5515	3100	6.60	3	292	254TC	KBQ8873-6.60-M13	K8873070.00
245	5.22	6034	5550	7.13	2	620	284TC	KBQ81073-7.13-M15	K81073061.00
237	1.28	6250	3200	7.37	3	292	254TC	KBQ8873-7.37-M13	K8873071.00
230	2.12	6415	13600	7.61	3	434	284TC	KBQ8973-7.61-M15	K8973052.00
215	4.94	6888	5600	8.14	3	620	284TC	KBQ81073-7.13-M15	K81073062.00
212	1.16	6897	3200	8.24	3	292	254TC	KBQ8873-8.24-M13	K8873072.00
197	1.08	7593	3300	8.89	3	292	254TC	KBQ8873-8.89-M13	K8873073.00
188	4.62	7894	5650	9.33	3	620	284TC	KBQ81073-9.33-M15	K81073063.00
185	2.08	8077	16800	9.48	3	434	284TC	KBQ8973-9.48-M15	K8973053.00
175	1.08	8333	3400	9.99	3	292	254TC	KBQ8873-9.99-M13	K8873074.00
162	2.12	9198	19500	10.82	3	434	284TC	KBQ8973-10.82-M15	K8973054.00
154	1.04	9615	10000	11.37	3	292	254TC	KBQ8873-11.37-M13	K8873075.00
154	3.91	9611	5750	11.36	3	620	284TC	KBQ81073-11.36-M15	K81073064.00
140	2.12	10613	22500	12.54	3	434	284TC	KBQ8973-12.54-M15	K8973055.00
138	1.32	10758	14200	12.70	3	292	254TC	KBQ8873-12.70-M13	K8873076.00
135	3.47	10974	6000	12.97	3	620	284TC	KBQ81073-12.97-M15	K81073065.00
123	1.24	12097	15000	14.20	3	292	254TC	KBQ8873-14.20-M13	K8873077.00
118	4.62	12576	6850	14.86	3	620	284TC	KBQ81073-14.86-M15	K81073066.00
114	1.20	12917	15500	15.32	3	292	254TC	KBQ8873-15.32-M13	K8873078.00
112	2.00	13200	26400	15.63	3	434	284TC	KBQ8973-15.63-M15	K8973056.00
102	1.08	14815	16000	17.21	3	292	254TC	KBQ8873-17.21-M13	K8873079.00
98	1.80	15222	27400	17.83	3	434	284TC	KBQ8973-17.83-M15	K8973057.00
92	3.89	16127	6350	19.06	3	620	284TC	KBQ81073-19.06-M15	K81073067.00
77	1.48	19122	28300	22.79	3	434	254TC	KBQ8973-22.79-M13	K8973041.00
76	3.26	19540	6900	23.10	3	620	284TC	KBQ81073-23.10-M15	K81073068.00
66	1.32	22727	30000	26.55	3	434	254TC	KBQ8973-26.55-M13	K8973042.00
64	2.76	23080	7400	27.26	3	620	284TC	KBQ81073-27.26-M15	K81073069.00
60	2.59	24614	7700	29.07	3	620	284TC	KBQ81073-29.07-M15	K81073070.00
53	2.26	28186	8100	33.30	3	620	284TC	KBQ81073-33.30-M15	K81073071.00
50	1.08	29630	5750	35.02	3	434	254TC	KBQ8973-35.02-M13	K8973043.00
44	1.12	33929	5950	39.95	3	434	254TC	KBQ8973-39.95-M13	K8973044.00
41	1.80	36167	8200	42.73	3	620	284TC	KBQ81073-42.73-M15	K81073072.00
34	1.59	44584	8600	51.77	3	620	284TC	KBQ81073-51.77-M15	K81073073.00
29	1.37	51754	10200	61.11	3	620	254TC	KBQ81073-61.11-M13	K81073074.00
23	1.09	65074	10900	76.82	3	620	254TC	KBQ81073-76.82-M13	K81073075.00

♦ Weight does not include oil.

▼ Service Factor is based on maximum torque rating of reducer.

● Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

K8873070.00-151507

MOTOR SELECTIONS



25 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	284TC	151507
WATSAVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	284TC	171591



Quick Selections

K Series Helical - Bevel

1750 RPM Input

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

30 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
265	1.13	6618	3100	6.60	3	434	286TC	KBQ8873-6.60-M15	K8873093.00
245	4.35	7241	5550	7.13	3	620	286TC	KBQ81073-7.13-M15	K81073061.00
237	1.07	7500	3200	7.37	3	434	286TC	KBQ8873-7.37-M15	K8873094.00
230	1.77	7698	3750	7.61	3	434	286TC	KBQ8973-7.61-M15	K8973052.00
215	4.11	8266	5600	8.14	3	620	286TC	KBQ81073-8.14-M15	K81073062.00
188	3.85	9472	5650	9.33	3	620	286TC	KBQ81073-9.33-M15	K81073063.00
185	1.73	9692	3900	9.48	3	434	286TC	KBQ8973-9.48-M15	K8973053.00
162	1.77	11038	4000	10.82	3	434	286TC	KBQ8973-10.82-M15	K8973054.00
154	3.26	11534	5750	11.36	3	620	286TC	KBQ81073-11.36-M15	K81073064.00
140	1.77	12736	4250	12.54	3	434	286TC	KBQ8973-12.54-M15	K8973055.00
138	1.10	12909	3400	12.70	3	434	286TC	KBQ8873-12.70-M15	K8873099.00
135	2.89	13168	6000	12.97	3	620	286TC	KBQ81073-12.97-M15	K81073065.00
123	1.03	14516	3500	14.20	3	434	286TC	KBQ8873-14.20-M15	K8873100.00
118	3.85	15091	6850	14.86	3	620	286TC	KBQ81073-14.86-M15	K81073066.00
112	1.67	15840	4500	15.63	3	434	286TC	KBQ8973-15.63-M15	K8973056.00
98	1.50	18267	4750	17.83	3	434	286TC	KBQ8973-17.83-M15	K8973057.00
92	3.24	19352	6350	19.06	3	620	286TC	KBQ81073-19.06-M15	K81073067.00
77	1.23	22946	5000	22.79	3	434	286TC	KBQ8973-22.79-M15	K8973058.00
76	2.72	23448	6900	23.10	3	620	286TC	KBQ81073-23.10-M15	K81073068.00
66	1.10	27273	5250	26.55	3	434	286TC	KBQ8973-26.55-M15	K8973059.00
64	2.30	27696	7400	27.26	3	620	286TC	KBQ81073-27.26-M15	K81073069.00
60	2.16	29536	7700	29.07	3	620	286TC	KBQ81073-29.07-M15	K81073070.00
53	1.88	33823	8100	33.30	3	620	286TC	KBQ81073-33.30-M15	K81073071.00
41	1.50	43400	8200	42.73	3	620	286TC	KBQ81073-42.73-M15	K81073072.00
34	1.32	53501	8600	51.77	3	620	286TC	KBQ81073-51.77-M15	K81073073.00
29	1.14	62105	10200	61.11	3	620	286TC	KBQ81073-61.11-M15	K81073074.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

K8873093.00-151508

MOTOR SELECTIONS

30 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	286TC	151508
WATSAVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	286TC	171592



High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

Quick Selections

K Series Helical - Bevel

1750 RPM Input



High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

40 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor ▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
245	3.26	9655	5550	7.13	3	660	324TC	KBQ81073-7.13-M17-00	K81073081.00
215	3.09	11021	5600	8.14	3	660	324TC	KBQ81073-8.14-M17-00	K81073082.00
188	2.89	12630	5650	9.33	3	660	324TC	KBQ81073-9.33-M17-00	K81073083.00
154	2.45	15378	5750	11.36	3	660	324TC	KBQ81073-11.36-M17-00	K81073084.00
135	2.17	17558	6000	12.97	3	660	324TC	KBQ81073-12.97-M17-00	K81073085.00
118	1.89	20122	6000	14.86	3	660	324TC	KBQ81073-12.97-M17-00	K81073086.00
92	2.43	25802	6350	19.06	3	660	324TC	KBQ81073-19.06-M17-00	K81073087.00
76	2.04	31264	6900	23.10	3	660	324TC	KBQ81073-23.10-M17-00	K81073088.00
64	1.73	36928	7400	27.26	3	660	324TC	KBQ81073-27.26-M17-00	K81073089.00
60	1.62	39382	7700	29.07	3	660	324TC	KBQ81073-29.07-M17-00	K81073090.00
53	1.41	45097	8100	33.30	3	660	324TC	KBQ81073-33.30-M17-00	K81073091.00
41	1.13	57867	8200	42.73	3	660	324TC	KBQ81073-72.73-M17-00	K81073092.00

50 HP Gear Reducer Quick Selections

245	2.61	12069	5550	7.13	3	660	324TC	KBQ81073-7.13-M17	K81073081.00
215	2.47	13776	5600	8.14	3	660	324TC	KBQ81073-8.14-M17	K81073082.00
188	2.31	15787	5650	9.33	3	660	324TC	KBQ81073-9.33-M17	K81073083.00
154	1.96	19223	5750	11.36	3	660	324TC	KBQ81073-11.36-M17	K81073084.00
135	1.74	21947	6000	12.97	3	660	324TC	KBQ81073-12.97-M17	K81073085.00
118	2.31	25152	6850	14.86	3	660	324TC	KBQ81073-14.86-M17	K81073086.00
92	1.94	32253	6350	19.06	3	660	324TC	KBQ81073-19.06-M17	K81073087.00
76	1.63	39080	6900	23.10	3	660	324TC	KBQ81073-23.10-M17	K81073088.00
64	1.38	46159	7400	27.26	3	660	324TC	KBQ81073-27.26-M17	K81073089.00
60	1.29	49227	7700	29.07	3	660	324TC	KBQ81073-29.07-M17	K81073090.00
53	1.13	56372	8100	33.30	3	660	324TC	KBQ81073-33.30-M17	K81073091.00

♦ Weight does not include oil.

▼ Service Factor is based on maximum torque rating of reducer.

● Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTORS™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



40 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	324TC	151509
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	324TC	171593



50 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	326TC	151510
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	326TC	171594

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

K81073081.00-151509



Quick Selections

K Series Helical - Bevel

1750 RPM Input

This Quick Selection is only for motorized reducers with base mount (00 suffix). For other reducer configurations see the Maximum Rating Tables beginning on page 557.

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

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60 HP

Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
245	2.18	14483	5550	7.13	3	660	364TC	KBQ81073-7.13-M19	K81073101.00
215	2.06	16532	5600	8.14	3	660	364TC	KBQ81073-8.14-M19	K81073102.00
188	1.93	18945	5650	9.33	3	660	364TC	KBQ81073-9.33-M19	K81073103.00
154	1.63	23067	5750	11.36	3	660	364TC	KBQ81073-11.36-M19	K81073104.00
135	1.45	26336	6000	12.97	3	660	364TC	KBQ81073-12.97-M19	K81073105.00
118	1.93	30182	6850	14.86	3	660	364TC	KBQ81073-14.86-M19	K81073106.00
92	1.62	38704	6350	19.06	3	660	364TC	KBQ81073-19.06-M19	K81073107.00
76	1.36	46896	6900	23.10	3	660	364TC	KBQ81073-23.10-M19	K81073108.00
64	1.15	55391	7400	27.26	3	660	364TC	KBQ81073-27.26-M19	K81073109.00
60	1.08	59073	7700	29.07	3	660	364TC	KBQ81073-29.07-M19	K81073110.00

75 HP

Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
245	1.74	18103	5550	7.13	3	660	364TC	KBQ81073-7.13-M19	K81073101.00
215	1.65	20665	5600	8.14	3	660	364TC	KBQ81073-8.14-M19	K81073102.00
188	1.54	23681	5650	9.33	3	660	364TC	KBQ81073-9.33-M19	K81073103.00
154	1.30	28834	5750	11.36	3	660	364TC	KBQ81073-11.36-M19	K81073104.00
135	1.16	32921	6000	12.97	3	660	364TC	KBQ81073-12.97-M19	K81073105.00
118	1.54	37727	6850	14.86	3	660	364TC	KBQ81073-14.86-M19	K81073106.00
92	1.30	48380	6350	19.06	3	660	364TC	KBQ81073-19.06-M19	K81073107.00
76	1.09	58620	6900	23.10	3	660	364TC	KBQ81073-23.10-M19	K81073108.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

K81073101.00-151519



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



60 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	364TC	151519
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	364TC	171595



75 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	365TC	G150086
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	365TC	171596

"HOW TO USE" Maximum Rating Tables K Series Helical - Bevel 1750 RPM Input



High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

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How To Use Maximum Rating Tables

Maximum Rating Tables for Triple and Quin Reduction Gear Reducers start on page 558. Selection of the appropriate gear reducer can be made using these tables or the Quick Selections on pages 527-556.

BEFORE YOU START:

Identify the Service Factor of the application.

Determine the actual input horsepower of the motor by multiplying the motor's nameplate horsepower by the Service Factor.

Determine the output speed (RPM) required at output shaft of reducer.

Identify the mounting style required by your application from the style charts shown on pages 524-525.

To select the proper gear reducer size, use the Maximum Rating Tables as shown:

High Efficiency Helical - Bevel Gear Reducers

Maximum Rating Tables

K847 Series • Helical - Bevel
1750 RPM Input

High Efficiency Parallel Shaft Gear Reducers

STYLE KBN / KFN

STYLE KBQ / KFO

K8473 Series • TRIPLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output OHL (lbs.)
268	2210	10.00	6.53	650
239	2230	9.00	7.31	675
199	2350	7.50	9.24	700
145	3100	7.00	12.07	800
130	3150	6.90	13.51	770
102	3350	5.80	17.08	830
90				830
80				830
70				830
60				830
50				830
40				830
30				830
25				830
20				830
15				830
14				830
10				830
8				830
6				830
5				830
4				830
3				830
2				830
1				830

Motor Frame	NON-MOTORIZED	
	Left Hand Catalog No. ■	Right Hand Catalog No. ■
182-1TC	K8473033.XX	K8473081.XX
182-4TC	K8473034.XX	K8473082.XX
182-4TC	K8473035.XX	K8473083.XX
182-4TC	K8473036.XX	K8473084.XX
182-4TC	K8473037.XX	K8473085.XX
182-4TC	K8473038.XX	K8473086.XX
182-4TC	K8473039.XX	K8473087.XX
143-5TC	K8473029.XX	K8473077.XX
56C	K8473014.XX	K8473062.XX
143-5TC	K8473030.XX	K8473078.XX
56C	K8473015.XX	K8473063.XX
143-5TC	K8473031.XX	K8473079.XX
56C	K8473016.XX	K8473064.XX
143-5TC	K8473032.XX	K8473080.XX

2 Locate output RPM column on left side of the table. All ratings are based on an input speed of 1750 RPM. Scroll down to the output speed (RPM) required. Output speeds are rounded to the nearest whole number. For exact output speed, divide 1750 by the ratio listed.

6 Identify the catalog number of the reducer by continuing to the right. See page 526 for detailed information on building an exact catalog number.

3 Move across the table to the Input HP column until you find a rating that is equal to or greater than the actual input horsepower required. Once located, check the top of the table to identify the correct gear reducer size (K847, K867, etc.).

5 Select motor frame size if reducer is to have a motorized input.

4 Check load capacities against the needs of your application. Do not exceed the overhung load (OHL) capacity shown in the table. Detailed instructions for calculating the actual overhung load are shown on page 645. If overhung and thrust loads will be applied simultaneously or if the load exceeds listed capacities, contact Factory.

7 Verify physical dimensions using the dimensional drawings shown on pages 570-577.

8 Determine reducer mounting position from page 581.



Maximum Rating Tables

K847 Series • Helical - Bevel

1750 RPM Input

High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

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STYLE KBN / KFN

STYLE KABN / KAFN



K8473 Series • TRIPLE REDUCTION

NON-MOTORIZED INPUT

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■
268	2210	10.00	6.53	650	K8473145.XX	K8473161.XX	K8473177.XX	K8473241.XX
239	2230	9.00	7.31	675	K8473146.XX	K8473162.XX	K8473178.XX	K8473242.XX
189	2350	7.50	9.24	700	K8473147.XX	K8473163.XX	K8473179.XX	K8473243.XX
145	3100	7.60	12.07	800	K8473148.XX	K8473164.XX	K8473180.XX	K8473244.XX
130	3150	6.90	13.51	770	K8473149.XX	K8473165.XX	K8473181.XX	K8473245.XX
102	3350	5.80	17.08	830	K8473150.XX	K8473166.XX	K8473182.XX	K8473246.XX
80	3540	4.80	21.94	930	K8473151.XX	K8473167.XX	K8473183.XX	K8473247.XX
70	3540	4.20	25.10	1050	K8473152.XX	K8473168.XX	K8473184.XX	K8473248.XX
58	3540	3.40	30.37	1150	K8473153.XX	K8473169.XX	K8473185.XX	K8473249.XX
46	3540	2.70	38.38	1250	K8473154.XX	K8473170.XX	K8473186.XX	K8473250.XX
35	3540	2.10	49.31	1250	K8473155.XX	K8473171.XX	K8473187.XX	K8473251.XX
31	3540	1.90	56.41	1250	K8473156.XX	K8473172.XX	K8473188.XX	K8473252.XX
24	3540	1.40	73.76	1250	K8473157.XX	K8473173.XX	K8473189.XX	K8473253.XX
19	3540	1.10	91.94	1250	K8473158.XX	K8473174.XX	K8473190.XX	K8473254.XX
16	3540	0.90	110.88	1250	K8473159.XX	K8473175.XX	K8473191.XX	K8473255.XX
14	3540	0.80	127.45	1250	K8473160.XX	K8473176.XX	K8473192.XX	K8473256.XX

* Overhung load is calculated at centerline of output shaft.

NOTE: Styles KBN and KABN shown above.

AVAILABLE MOD-SQUAD™ CODES

- .00 - Base Mount
- .FL - Output Flange (Left)
- .FR - Output Flange (Right)

■ When ordering, substitute the XX suffix with the required Mod-Squad™ code.

Maximum Rating Tables

K847 Series • Helical - Bevel

1750 RPM Input



High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

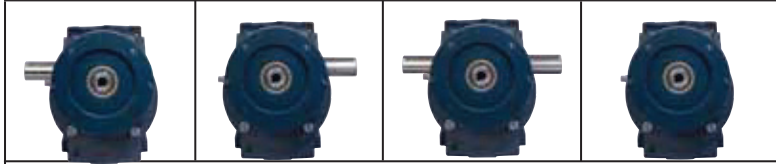
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STYLE KBQ / KFQ

STYLE KABQ / KAFQ



MOTORIZED QUILL INPUT

Motor Frame	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■	Output Speed (RPM)
182-4TC	K8473033.XX	K8473081.XX	K8473129.XX	K8473225.XX	268
182-4TC	K8473034.XX	K8473082.XX	K8473130.XX	K8473226.XX	239
182-4TC	K8473035.XX	K8473083.XX	K8473131.XX	K8473227.XX	189
182-4TC	K8473036.XX	K8473084.XX	K8473132.XX	K8473228.XX	145
182-4TC	K8473037.XX	K8473085.XX	K8473133.XX	K8473229.XX	130
182-4TC	K8473038.XX	K8473086.XX	K8473134.XX	K8473230.XX	102
182-4TC	K8473039.XX	K8473087.XX	K8473135.XX	K8473231.XX	80
182-4TC	K8473040.XX	K8473088.XX	K8473136.XX	K8473232.XX	70
143-5TC	K8473025.XX	K8473073.XX	K8473121.XX	K8473217.XX	58
182-4TC	K8473041.XX	K8473089.XX	K8473137.XX	K8473233.XX	58
143-5TC	K8473026.XX	K8473074.XX	K8473122.XX	K8473218.XX	46
143-5TC	K8473027.XX	K8473075.XX	K8473123.XX	K8473219.XX	35
143-5TC	K8473028.XX	K8473076.XX	K8473124.XX	K8473220.XX	31
56C	K8473013.XX	K8473061.XX	K8473109.XX	K8473205.XX	24
143-5TC	K8473029.XX	K8473077.XX	K8473125.XX	K8473221.XX	24
56C	K8473014.XX	K8473062.XX	K8473110.XX	K8473206.XX	19
143-5TC	K8473030.XX	K8473078.XX	K8473126.XX	K8473222.XX	19
56C	K8473015.XX	K8473063.XX	K8473111.XX	K8473207.XX	16
143-5TC	K8473031.XX	K8473079.XX	K8473127.XX	K8473223.XX	16
56C	K8473016.XX	K8473064.XX	K8473112.XX	K8473208.XX	14
143-5TC	K8473032.XX	K8473080.XX	K8473128.XX	K8473224.XX	14

* Overhung load is calculated at centerline of output shaft.

NOTE: Styles KBQ and KABQ shown above.

AVAILABLE MOD-SQUAD™ CODES

- .00 - Base Mount
- .FL - Output Flange (Left)
- .FR - Output Flange (Right)

■ When ordering, substitute the XX suffix with the required Mod-Squad™ code.



Maximum Rating Tables

K867 Series • Helical - Bevel

1750 RPM Input

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

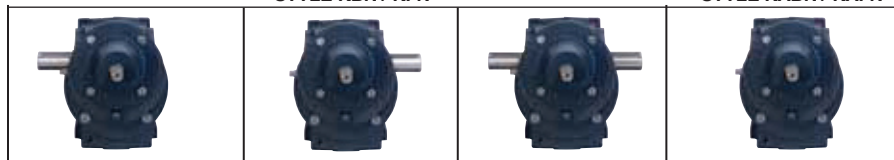
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STYLE KBN / KFN

STYLE KABN / KAFN



K8673 Series • TRIPLE REDUCTION

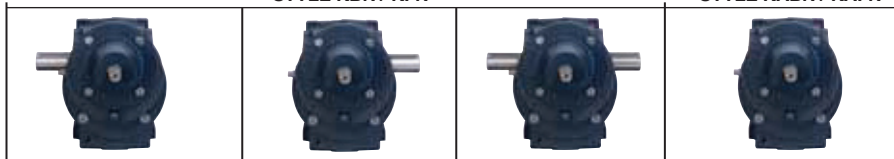
NON-MOTORIZED INPUT

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■
281	2530	12.00	6.22	2050	K8673181.XX	K8673201.XX	K8673221.XX	K8673301.XX
235	2880	11.00	7.46	2050	K8673182.XX	K8673202.XX	K8673222.XX	K8673302.XX
185	3250	10.00	9.44	2050	K8673183.XX	K8673203.XX	K8673223.XX	K8673303.XX
156	4060	11.00	11.25	2050	K8673184.XX	K8673204.XX	K8673224.XX	K8673304.XX
130	5320	12.00	13.48	2050	K8673185.XX	K8673205.XX	K8673225.XX	K8673305.XX
103	5720	9.90	17.06	2050	K8673186.XX	K8673206.XX	K8673226.XX	K8673306.XX
88	6200	9.20	19.80	2050	K8673187.XX	K8673207.XX	K8673227.XX	K8673307.XX
68	6500	7.40	25.89	2050	K8673188.XX	K8673208.XX	K8673228.XX	K8673308.XX
57	7000	6.80	30.51	2050	K8673189.XX	K8673209.XX	K8673229.XX	K8673309.XX
45	7150	5.50	38.61	2050	K8673190.XX	K8673210.XX	K8673230.XX	K8673310.XX
39	7250	4.80	44.81	2050	K8673191.XX	K8673211.XX	K8673231.XX	K8673311.XX
30	7260	3.70	58.58	2050	K8673192.XX	K8673212.XX	K8673232.XX	K8673312.XX
25	7260	3.10	69.99	2050	K8673193.XX	K8673213.XX	K8673233.XX	K8673313.XX
23	7260	2.90	74.56	2050	K8673194.XX	K8673214.XX	K8673234.XX	K8673314.XX
21	7260	2.50	85.21	2050	K8673195.XX	K8673215.XX	K8673235.XX	K8673315.XX
19	7260	2.30	91.47	2050	K8673196.XX	K8673216.XX	K8673236.XX	K8673316.XX
16	7260	2.00	106.51	2050	K8673197.XX	K8673217.XX	K8673237.XX	K8673317.XX
15	7260	1.90	115.64	2050	K8673198.XX	K8673218.XX	K8673238.XX	K8673318.XX
14	7260	1.70	126.17	2050	K8673199.XX	K8673219.XX	K8673239.XX	K8673319.XX
13	7260	1.50	138.46	2050	K8673200.XX	K8673220.XX	K8673240.XX	K8673320.XX

* Overhung load is calculated at centerline of output shaft.

STYLE KBN / KFN

STYLE KABN / KAFN



K8675 Series • QUIN REDUCTION

NON-MOTORIZED INPUT

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■
12.0	7260	1.40	150.16	2050	K8675097.XX	K8675113.XX	K8675129.XX	K8675177.XX
9.20	7260	1.10	190.00	2050	K8675098.XX	K8675114.XX	K8675130.XX	K8675178.XX
7.50	7260	0.92	233.62	2050	K8675099.XX	K8675115.XX	K8675131.XX	K8675179.XX
6.20	7260	0.75	284.24	2050	K8675100.XX	K8675116.XX	K8675132.XX	K8675180.XX
4.90	7260	0.61	354.30	2050	K8675101.XX	K8675117.XX	K8675133.XX	K8675181.XX
4.10	7260	0.50	427.28	2050	K8675102.XX	K8675118.XX	K8675134.XX	K8675182.XX
3.30	7260	0.41	528.68	2050	K8675103.XX	K8675119.XX	K8675135.XX	K8675183.XX
2.70	7260	0.33	643.23	2050	K8675104.XX	K8675120.XX	K8675136.XX	K8675184.XX
2.20	7260	0.27	801.79	2050	K8675105.XX	K8675121.XX	K8675137.XX	K8675185.XX
1.80	7260	0.22	975.94	2050	K8675106.XX	K8675122.XX	K8675138.XX	K8675186.XX
1.40	7260	0.18	1217.00	2050	K8675107.XX	K8675123.XX	K8675139.XX	K8675187.XX
1.20	7260	0.15	1467.00	2050	K8675108.XX	K8675124.XX	K8675140.XX	K8675188.XX
0.940	7260	0.11	1867.00	2050	K8675109.XX	K8675125.XX	K8675141.XX	K8675189.XX
0.790	7260	0.10	2212.00	2050	K8675110.XX	K8675126.XX	K8675142.XX	K8675190.XX
0.660	7260	0.08	2667.00	2050	K8675111.XX	K8675127.XX	K8675143.XX	K8675191.XX
0.530	7260	0.06	3329.00	2050	K8675112.XX	K8675128.XX	K8675144.XX	K8675192.XX

* Overhung load is calculated at centerline of output shaft.

NOTE: Styles KBN and KABN shown above.

AVAILABLE MOD-SQUAD™ CODES

- .00 - Base Mount
- .FL - Output Flange (Left)
- .FR - Output Flange (Right)

■ When ordering, substitute the XX suffix with the required Mod-Squad™ code.

Maximum Rating Tables

K867 Series • Helical - Bevel 1750 RPM Input



High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

Technical Information

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		STYLE KBQ / KFQ		STYLE KABQ / KAFQ	
MOTORIZED QUILL INPUT					
Motor Frame	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■	Output Speed (RPM)
182-4TC	K8673041.XX	K8673101.XX	K8673161.XX	K8673281.XX	281
182-4TC	K8673042.XX	K8673102.XX	K8673162.XX	K8673282.XX	235
182-4TC	K8673043.XX	K8673103.XX	K8673163.XX	K8673283.XX	185
182-4TC	K8673044.XX	K8673104.XX	K8673164.XX	K8673284.XX	156
182-4TC	K8673045.XX	K8673105.XX	K8673165.XX	K8673285.XX	130
182-4TC	K8673046.XX	K8673106.XX	K8673166.XX	K8673286.XX	103
182-4TC	K8673047.XX	K8673107.XX	K8673167.XX	K8673287.XX	88
182-4TC	K8673048.XX	K8673108.XX	K8673168.XX	K8673288.XX	68
182-4TC	K8673049.XX	K8673109.XX	K8673169.XX	K8673289.XX	57
182-4TC	K8673050.XX	K8673110.XX	K8673170.XX	K8673290.XX	45
182-4TC	K8673051.XX	K8673111.XX	K8673171.XX	K8673291.XX	39
182-4TC	K8673052.XX	K8673112.XX	K8673172.XX	K8673292.XX	30
182-4TC	K8673053.XX	K8673113.XX	K8673173.XX	K8673293.XX	25
182-4TC	K8673054.XX	K8673114.XX	K8673174.XX	K8673294.XX	23
143-5TC	K8673035.XX	K8673095.XX	K8673155.XX	K8673275.XX	21
143-5TC	K8673036.XX	K8673096.XX	K8673156.XX	K8673276.XX	19
143-5TC	K8673037.XX	K8673097.XX	K8673157.XX	K8673277.XX	16
143-5TC	K8673038.XX	K8673098.XX	K8673158.XX	K8673278.XX	15
143-5TC	K8673039.XX	K8673099.XX	K8673159.XX	K8673279.XX	14
143-5TC	K8673040.XX	K8673100.XX	K8673160.XX	K8673280.XX	13

* Overhung load is calculated at centerline of output shaft.

		STYLE KBQ / KFQ		STYLE KABQ / KAFQ	
MOTORIZED QUILL INPUT					
Motor Frame	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■	Output Speed (RPM)
56C	K8675001.XX	K8675033.XX	K8675065.XX	K8675145.XX	12.0
56C	K8675002.XX	K8675034.XX	K8675066.XX	K8675146.XX	9.20
56C	K8675003.XX	K8675035.XX	K8675067.XX	K8675147.XX	7.50
56C	K8675004.XX	K8675036.XX	K8675068.XX	K8675148.XX	6.20
56C	K8675005.XX	K8675037.XX	K8675069.XX	K8675149.XX	4.90
56C	K8675006.XX	K8675038.XX	K8675070.XX	K8675150.XX	4.10
56C	K8675007.XX	K8675039.XX	K8675071.XX	K8675151.XX	3.30
56C	K8675008.XX	K8675040.XX	K8675072.XX	K8675152.XX	2.70
56C	K8675009.XX	K8675041.XX	K8675073.XX	K8675153.XX	2.20
56C	K8675010.XX	K8675042.XX	K8675074.XX	K8675154.XX	1.80
56C	K8675011.XX	K8675043.XX	K8675075.XX	K8675155.XX	1.40
56C	K8675012.XX	K8675044.XX	K8675076.XX	K8675156.XX	1.20
56C	K8675013.XX	K8675045.XX	K8675077.XX	K8675157.XX	0.940
56C	K8675014.XX	K8675046.XX	K8675078.XX	K8675158.XX	0.790
56C	K8675015.XX	K8675047.XX	K8675079.XX	K8675159.XX	0.660
56C	K8675016.XX	K8675048.XX	K8675080.XX	K8675160.XX	0.530

* Overhung load is calculated at centerline of output shaft.
NOTE: Styles KBQ and KABQ shown above.

AVAILABLE MOD-SQUAD™ CODES

- .00 - Base Mount
- .FL - Output Flange (Left)
- .FR - Output Flange (Right)

■ When ordering, substitute the XX suffix with the required Mod-Squad™ code.



Maximum Rating Tables

K877 Series • Helical - Bevel

1750 RPM Input

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

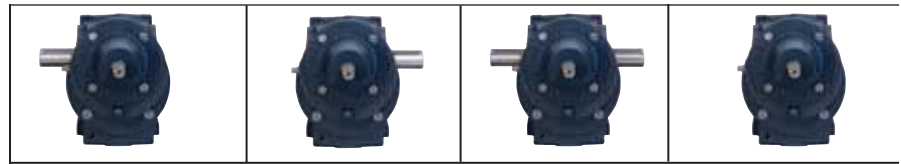
Technical Information

Warnings and Cautions

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STYLE KBN / KFN

STYLE KABN / KAFN



K8773 Series • TRIPLE REDUCTION

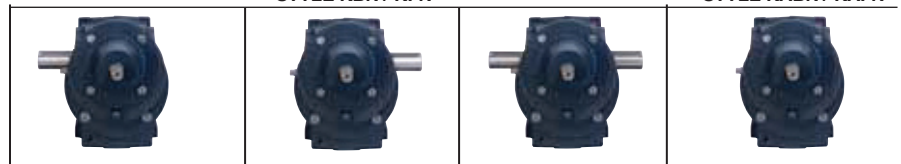
NON-MOTORIZED INPUT

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■
269	4350	20.00	6.51	2750	K8773277.XX	K8773300.XX	K8773323.XX	K8773438.XX
241	4600	19.00	7.27	2830	K8773278.XX	K8773301.XX	K8773324.XX	K8773439.XX
215	4720	17.00	8.13	2950	K8773279.XX	K8773302.XX	K8773325.XX	K8773440.XX
200	4970	17.00	8.77	2970	K8773280.XX	K8773303.XX	K8773326.XX	K8773441.XX
177	5230	16.00	9.86	3070	K8773281.XX	K8773304.XX	K8773327.XX	K8773442.XX
154	6700	17.00	11.37	3100	K8773282.XX	K8773305.XX	K8773328.XX	K8773443.XX
138	7040	16.00	12.70	3200	K8773283.XX	K8773306.XX	K8773329.XX	K8773444.XX
123	8670	18.00	14.20	3100	K8773284.XX	K8773307.XX	K8773330.XX	K8773445.XX
114	9030	17.00	15.32	3200	K8773285.XX	K8773308.XX	K8773331.XX	K8773446.XX
102	9480	16.00	17.21	3300	K8773286.XX	K8773309.XX	K8773332.XX	K8773447.XX
94	9620	15.00	18.65	3300	K8773287.XX	K8773310.XX	K8773333.XX	K8773448.XX
83	9930	14.00	21.11	3300	K8773288.XX	K8773311.XX	K8773334.XX	K8773449.XX
73	11220	14.00	24.06	3300	K8773289.XX	K8773312.XX	K8773335.XX	K8773450.XX
55	12000	11.00	31.90	3300	K8773290.XX	K8773313.XX	K8773336.XX	K8773451.XX
51	12100	10.00	34.42	3300	K8773291.XX	K8773314.XX	K8773337.XX	K8773452.XX
45	12200	9.30	38.68	3300	K8773292.XX	K8773315.XX	K8773338.XX	K8773453.XX
42	13700	9.70	41.90	3300	K8773293.XX	K8773316.XX	K8773339.XX	K8773454.XX
37	13700	8.50	47.45	3300	K8773294.XX	K8773317.XX	K8773340.XX	K8773455.XX
32	13700	7.50	54.07	3300	K8773295.XX	K8773318.XX	K8773341.XX	K8773456.XX
23	13700	5.30	75.95	3300	K8773296.XX	K8773319.XX	K8773342.XX	K8773457.XX
19	13700	4.50	89.80	3300	K8773297.XX	K8773320.XX	K8773343.XX	K8773458.XX
16	13700	3.70	108.25	3300	K8773298.XX	K8773321.XX	K8773344.XX	K8773459.XX
13	13700	3.00	134.10	3300	K8773299.XX	K8773322.XX	K8773345.XX	K8773460.XX

* Overhung load is calculated at centerline of output shaft.

STYLE KBN / KFN

STYLE KABN / KAFN



K8775 Series • QUIN REDUCTION

NON-MOTORIZED INPUT

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■
11.2	13700	2.60	155.99	3300	K8775145.XX	K8775161.XX	K8775177.XX	K8775241.XX
9.10	13700	2.10	191.38	3300	K8775146.XX	K8775162.XX	K8775178.XX	K8775242.XX
7.60	13700	1.80	231.14	3300	K8775147.XX	K8775163.XX	K8775179.XX	K8775243.XX
6.00	13700	1.40	290.33	3300	K8775148.XX	K8775164.XX	K8775180.XX	K8775244.XX
5.00	13700	1.20	350.55	3300	K8775149.XX	K8775165.XX	K8775181.XX	K8775245.XX
4.10	13700	0.94	430.02	3300	K8775150.XX	K8775166.XX	K8775182.XX	K8775246.XX
3.30	13700	0.76	531.87	3300	K8775151.XX	K8775167.XX	K8775183.XX	K8775247.XX
2.70	13700	0.62	652.45	3300	K8775152.XX	K8775168.XX	K8775184.XX	K8775248.XX
2.10	13700	0.50	813.78	3300	K8775153.XX	K8775169.XX	K8775185.XX	K8775249.XX
1.80	13700	0.41	981.05	3300	K8775154.XX	K8775170.XX	K8775186.XX	K8775250.XX
1.40	13700	0.33	1215.00	3300	K8775155.XX	K8775171.XX	K8775187.XX	K8775251.XX
1.20	13700	0.27	1488.00	3300	K8775156.XX	K8775172.XX	K8775188.XX	K8775252.XX
1.00	13700	0.23	1778.00	3300	K8775157.XX	K8775173.XX	K8775189.XX	K8775253.XX
0.750	13700	0.17	2324.00	3300	K8775158.XX	K8775174.XX	K8775190.XX	K8775254.XX
0.650	13700	0.15	2706.00	3300	K8775159.XX	K8775175.XX	K8775191.XX	K8775255.XX
0.520	13700	0.12	3352.00	3300	K8775160.XX	K8775176.XX	K8775192.XX	K8775256.XX

* Overhung load is calculated at centerline of output shaft.
NOTE: Styles KBN and KABN shown above.

AVAILABLE MOD-SQUAD™ CODES

- .00 - Base Mount
- .FL - Output Flange (Left)
- .FR - Output Flange (Right)

■ When ordering, substitute the XX suffix with the required Mod-Squad™ code.

Maximum Rating Tables

K877 Series • Helical - Bevel

1750 RPM Input



High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers





Technical Information

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		STYLE KBQ / KFQ		STYLE KABQ / KAFQ	
					
MOTORIZED QUILL INPUT					
Motor Frame	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■	Output Speed (RPM)
213-5TC	K8773070.XX	K8773162.XX	K8773254.XX	K8773415.XX	269
213-5TC	K8773071.XX	K8773163.XX	K8773255.XX	K8773416.XX	241
213-5TC	K8773072.XX	K8773164.XX	K8773256.XX	K8773417.XX	215
213-5TC	K8773073.XX	K8773165.XX	K8773257.XX	K8773418.XX	200
213-5TC	K8773074.XX	K8773166.XX	K8773258.XX	K8773419.XX	177
213-5TC	K8773075.XX	K8773167.XX	K8773259.XX	K8773420.XX	154
213-5TC	K8773076.XX	K8773168.XX	K8773260.XX	K8773421.XX	138
213-5TC	K8773077.XX	K8773169.XX	K8773261.XX	K8773422.XX	123
213-5TC	K8773078.XX	K8773170.XX	K8773262.XX	K8773423.XX	114
213-5TC	K8773079.XX	K8773171.XX	K8773263.XX	K8773424.XX	102
213-5TC	K8773080.XX	K8773172.XX	K8773264.XX	K8773425.XX	94
213-5TC	K8773081.XX	K8773173.XX	K8773265.XX	K8773426.XX	83
213-5TC	K8773082.XX	K8773174.XX	K8773266.XX	K8773427.XX	73
213-5TC	K8773083.XX	K8773175.XX	K8773267.XX	K8773428.XX	55
213-5TC	K8733084.XX	K8773176.XX	K8773268.XX	K8773429.XX	51
213-5TC	K8733085.XX	K8773177.XX	K8773269.XX	K8773430.XX	45
213-5TC	K8733086.XX	K8773178.XX	K8773270.XX	K8773431.XX	42
213-5TC	K8733087.XX	K8773179.XX	K8773271.XX	K8773432.XX	37
182-3TC	K8773065.XX	K8773157.XX	K8773249.XX	K8773410.XX	32
182-3TC	K8773066.XX	K8773158.XX	K8773250.XX	K8773411.XX	23
182-3TC	K8773067.XX	K8773159.XX	K8773251.XX	K8773412.XX	19
143-5TC	K8773045.XX	K8773137.XX	K8773229.XX	K8773390.XX	16
143-5TC	K8773046.XX	K8773138.XX	K8773230.XX	K8773391.XX	13

* Overhung load is calculated at centerline of output shaft.

		STYLE KBQ / KFQ		STYLE KABQ / KAFQ	
					
MOTORIZED QUILL INPUT					
Motor Frame	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■	Output Speed (RPM)
143-5TC	K8775017.XX	K8775065.XX	K8775113.XX	K8775209.XX	11.2
143-5TC	K8775018.XX	K8775066.XX	K8775114.XX	K8775210.XX	9.10
143-5TC	K8775019.XX	K8775067.XX	K8775115.XX	K8775211.XX	7.60
56C	K8775004.XX	K8775052.XX	K8775100.XX	K8775196.XX	6.00
56C	K8775005.XX	K8775053.XX	K8775101.XX	K8775197.XX	5.00
56C	K8775006.XX	K8775054.XX	K8775102.XX	K8775198.XX	4.10
56C	K8775007.XX	K8775055.XX	K8775103.XX	K8775199.XX	3.30
56C	K8775008.XX	K8775056.XX	K8775104.XX	K8775200.XX	2.70
56C	K8775009.XX	K8775057.XX	K8775105.XX	K8775201.XX	2.10
56C	K8775010.XX	K8775058.XX	K8775106.XX	K8775202.XX	1.80
56C	K8775011.XX	K8775059.XX	K8775107.XX	K8775203.XX	1.40
56C	K8775012.XX	K8775060.XX	K8775108.XX	K8775204.XX	1.20
56C	K8775013.XX	K8775061.XX	K8775109.XX	K8775205.XX	1.00
56C	K8775014.XX	K8775062.XX	K8775110.XX	K8775206.XX	0.750
56C	K8775015.XX	K8775063.XX	K8775111.XX	K8775207.XX	0.650
56C	K8775016.XX	K8775064.XX	K8775112.XX	K8775208.XX	0.520

* Overhung load is calculated at centerline of output shaft.

NOTE: Styles KBQ and KABQ shown above.

AVAILABLE MOD-SQUAD™ CODES

- .00 - Base Mount
- .FL - Output Flange (Left)
- .FR - Output Flange (Right)

■ When ordering, substitute the XX suffix with the required Mod-Squad™ code.



Maximum Rating Tables

K887 Series • Helical - Bevel

1750 RPM Input

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

STYLE KBN / KFN

STYLE KABN / KAFN



K8873 Series • TRIPLE REDUCTION

NON-MOTORIZED INPUT

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■
265	7500	34.00	6.60	3100	K8873346.XX	K8873369.XX	K8873392.XX	K8873530.XX
237	8000	32.00	7.37	3200	K8873347.XX	K8873370.XX	K8873393.XX	K8873531.XX
212	8000	29.00	8.24	3200	K8873348.XX	K8873371.XX	K8873394.XX	K8873532.XX
197	8200	27.00	8.89	3300	K8873349.XX	K8873372.XX	K8873395.XX	K8873533.XX
175	9000	27.00	9.99	3400	K8873350.XX	K8873373.XX	K8873396.XX	K8873534.XX
154	10000	26.00	11.37	3500	K8873351.XX	K8873374.XX	K8873397.XX	K8873535.XX
138	14200	33.00	12.70	3400	K8873352.XX	K8873375.XX	K8873398.XX	K8873536.XX
123	15000	31.00	14.20	3500	K8873353.XX	K8873376.XX	K8873399.XX	K8873537.XX
114	15500	30.00	15.32	3600	K8873354.XX	K8873377.XX	K8873400.XX	K8873538.XX
102	16000	27.00	17.21	3700	K8873355.XX	K8873378.XX	K8873401.XX	K8873539.XX
98	16200	27.00	17.91	3800	K8873356.XX	K8873379.XX	K8873402.XX	K8873540.XX
86	17000	25.00	20.24	3900	K8873357.XX	K8873380.XX	K8873403.XX	K8873541.XX
73	18000	22.00	24.06	4000	K8873358.XX	K8873381.XX	K8873404.XX	K8873542.XX
56	20500	19.00	31.46	4500	K8873359.XX	K8873382.XX	K8873405.XX	K8873543.XX
52	21000	18.00	33.94	4500	K8873360.XX	K8873383.XX	K8873406.XX	K8873544.XX
46	22000	17.00	38.14	4600	K8873361.XX	K8873384.XX	K8873407.XX	K8873545.XX
44	22500	17.00	39.69	4700	K8873362.XX	K8873385.XX	K8873408.XX	K8873546.XX
39	23500	15.00	44.86	4800	K8873363.XX	K8873386.XX	K8873409.XX	K8873547.XX
33	23900	13.00	53.31	4800	K8873364.XX	K8873387.XX	K8873410.XX	K8873548.XX
23	23900	9.40	74.89	4800	K8873365.XX	K8873388.XX	K8873411.XX	K8873549.XX
20	23900	8.00	88.54	4800	K8873366.XX	K8873389.XX	K8873412.XX	K8873550.XX
16	23900	6.60	106.74	4800	K8873367.XX	K8873390.XX	K8873413.XX	K8873551.XX
13	23900	5.30	132.22	4800	K8873368.XX	K8873391.XX	K8873414.XX	K8873552.XX

* Overhung load is calculated at centerline of output shaft.

STYLE KBN / KFN

STYLE KABN / KAFN



K8875 Series • QUIN REDUCTION

NON-MOTORIZED INPUT

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■
11.0	23900	4.40	161.29	4800	K8875145.XX	K8875161.XX	K8875177.XX	K8875241.XX
8.60	23900	3.50	202.99	4800	K8875146.XX	K8875162.XX	K8875178.XX	K8875242.XX
7.70	23900	3.10	226.57	4800	K8875147.XX	K8875163.XX	K8875179.XX	K8875243.XX
5.80	23900	2.30	300.73	4800	K8875148.XX	K8875164.XX	K8875180.XX	K8875244.XX
4.90	23900	2.00	357.41	4800	K8875149.XX	K8875165.XX	K8875181.XX	K8875245.XX
3.90	23900	1.57	449.80	4800	K8875150.XX	K8875166.XX	K8875182.XX	K8875246.XX
3.30	23900	1.33	531.79	4800	K8875151.XX	K8875167.XX	K8875183.XX	K8875247.XX
2.70	23900	1.10	641.10	4800	K8875152.XX	K8875168.XX	K8875184.XX	K8875248.XX
2.20	23900	0.89	794.13	4800	K8875153.XX	K8875169.XX	K8875185.XX	K8875249.XX
1.80	23900	0.72	987.16	4800	K8875154.XX	K8875170.XX	K8875186.XX	K8875250.XX
1.50	23900	0.59	1190.00	4800	K8875155.XX	K8875171.XX	K8875187.XX	K8875251.XX
1.20	23900	0.48	1474.00	4800	K8875156.XX	K8875172.XX	K8875188.XX	K8875252.XX
0.900	23900	0.38	1868.00	4800	K8875157.XX	K8875173.XX	K8875189.XX	K8875253.XX
0.780	23900	0.31	2252.00	4800	K8875158.XX	K8875174.XX	K8875190.XX	K8875254.XX
0.630	23900	0.25	2791.00	4800	K8875159.XX	K8875175.XX	K8875191.XX	K8875255.XX
0.520	23900	0.21	3363.00	4800	K5575160.XX	K8875176.XX	K8875192.XX	K8875256.XX

* Overhung load is calculated at centerline of output shaft.
NOTE: Styles KBN and KABN shown above.

AVAILABLE MOD-SQUAD™ CODES

- .00 - Base Mount
- .FL - Output Flange (Left)
- .FR - Output Flange (Right)

■ When ordering, substitute the XX suffix with the required Mod-Squad™ code.

Maximum Rating Tables

K887 Series • Helical - Bevel
1750 RPM Input



High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers



Technical Information

Warnings and Cautions

Terms and Conditions

	STYLE KBQ / KFQ		STYLE KABQ / KAFQ		
					
	MOTORIZED QUILL INPUT				
Motor Frame	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■	Output Speed (RPM)
254-6TC	K8873070.XX	K8873162.XX	K8873300.XX	K8873484.XX	265
254-6TC	K8873071.XX	K8873163.XX	K8873301.XX	K8873485.XX	237
254-6TC	K8873072.XX	K8873164.XX	K8873302.XX	K8873486.XX	212
254-6TC	K8873073.XX	K8873165.XX	K8873303.XX	K8873487.XX	197
254-6TC	K8873074.XX	K8873166.XX	K8873304.XX	K8873488.XX	175
254-6TC	K8873075.XX	K8873167.XX	K8873305.XX	K8873489.XX	154
254-6TC	K8873076.XX	K8873168.XX	K8873306.XX	K8873490.XX	138
254-6TC	K8873077.XX	K8873169.XX	K8873307.XX	K8873491.XX	123
254-6TC	K8873078.XX	K8873170.XX	K8873308.XX	K8873492.XX	114
254-6TC	K8873079.XX	K8873171.XX	K8873309.XX	K8873493.XX	102
254-6TC	K8873080.XX	K8873172.XX	K8873310.XX	K8873494.XX	98
254-6TC	K8873081.XX	K8873173.XX	K8873311.XX	K8873495.XX	86
254-6TC	K8873082.XX	K8873174.XX	K8873312.XX	K8873496.XX	73
254-6TC	K8873083.XX	K8873175.XX	K8873313.XX	K8873497.XX	56
254-6TC	K8873084.XX	K8873176.XX	K8873314.XX	K8873498.XX	52
254-6TC	K8873085.XX	K8873177.XX	K8873315.XX	K8873499.XX	46
254-6TC	K8873086.XX	K8873178.XX	K8873316.XX	K8873500.XX	44
254-6TC	K8873087.XX	K8873179.XX	K8873317.XX	K8873501.XX	39
254-6TC	K8873088.XX	K8873180.XX	K8873318.XX	K8873502.XX	33
213-5TC	K8873066.XX	K8873181.XX	K8873296.XX	K8873480.XX	23
182-4TC	K8873044.XX	K8873159.XX	K8873274.XX	K8873458.XX	20
182-4TC	K8773045.XX	K8873160.XX	K8873275.XX	K8873459.XX	16
182-4TC	K8773046.XX	K8873161.XX	K8873276.XX	K8873460.XX	13

* Overhung load is calculated at centerline of output shaft.

	STYLE KBQ / KFQ		STYLE KABQ / KAFQ		
					
	MOTORIZED QUILL INPUT				
Motor Frame	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■	Output Speed (RPM)
182-4TC	K8875033.XX	K8875081.XX	K8875129.XX	K8875225.XX	11.0
182-4TC	K8875034.XX	K8875082.XX	K8875130.XX	K8875226.XX	8.60
182-4TC	K8875035.XX	K8875083.XX	K8875131.XX	K8875227.XX	7.70
143-5TC	K8875020.XX	K8875068.XX	K8875116.XX	K8875212.XX	5.80
143-5TC	K8875021.XX	K8875069.XX	K8875117.XX	K8875213.XX	4.90
143-5TC	K8875022.XX	K8875070.XX	K8875118.XX	K8875214.XX	3.90
56C	K8875007.XX	K8875055.XX	K8875103.XX	K8875199.XX	3.30
56C	K8875008.XX	K8875056.XX	K8875104.XX	K8875200.XX	2.70
56C	K8875009.XX	K8875057.XX	K8875105.XX	K8875201.XX	2.20
56C	K8875010.XX	K8875058.XX	K8875106.XX	K8875202.XX	1.80
56C	K8875011.XX	K8875059.XX	K8875107.XX	K8875203.XX	1.50
56C	K8875012.XX	K8875060.XX	K8875108.XX	K8875204.XX	1.20
56C	K8875013.XX	K8875061.XX	K8875109.XX	K8875205.XX	0.900
56C	K8875014.XX	K8875062.XX	K8875110.XX	K8875206.XX	0.780
56C	K8875015.XX	K8875063.XX	K8875111.XX	K8875207.XX	0.630
56C	K8875016.XX	K8875064.XX	K8875112.XX	K8875208.XX	0.520

* Overhung load is calculated at centerline of output shaft.
NOTE: Styles KBQ and KABQ shown above.

AVAILABLE MOD-SQUAD™ CODES

- .00 - Base Mount
- .FL - Output Flange (Left)
- .FR - Output Flange (Right)

■ When ordering, substitute the XX suffix with the required Mod-Squad™ code.



Maximum Rating Tables

K897 Series • Helical - Bevel

1750 RPM Input

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

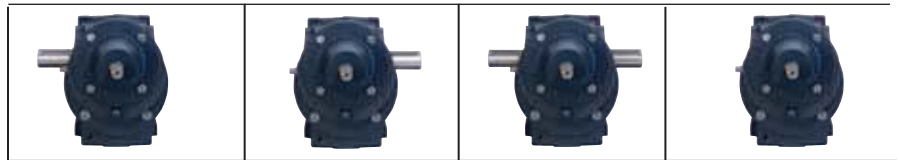
Technical Information

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STYLE KBN / KFN

STYLE KABN / KAFN



K8973 Series • TRIPLE REDUCTION

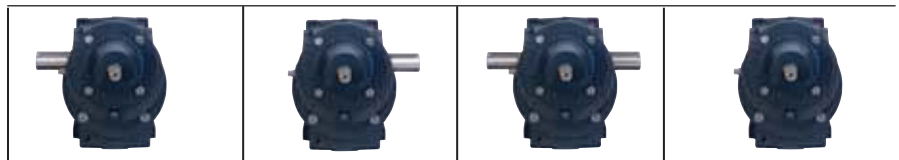
NON-MOTORIZED INPUT

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■
230	13600	53	7.61	3750	K8973205.XX	K8973222.XX	K8973239.XX	K8973324.XX
185	16800	52	9.48	3900	K8973206.XX	K8973223.XX	K8973240.XX	K8973325.XX
162	19500	53	10.82	4000	K8973207.XX	K8973224.XX	K8973241.XX	K8973326.XX
140	22500	53	12.54	4250	K8973208.XX	K8973225.XX	K8973242.XX	K8973327.XX
112	26400	50	15.63	4500	K8973209.XX	K8973226.XX	K8973243.XX	K8973328.XX
98	27400	45	17.83	4750	K8973210.XX	K8973227.XX	K8973244.XX	K8973329.XX
77	28300	37	22.79	5000	K8973211.XX	K8973228.XX	K8973245.XX	K8973330.XX
66	30000	33	26.55	5250	K8973212.XX	K8973229.XX	K8973246.XX	K8973331.XX
50	32000	27	35.02	5750	K8973213.XX	K8973230.XX	K8973247.XX	K8973332.XX
44	38000	28	39.95	5950	K8973214.XX	K8973231.XX	K8973248.XX	K8973333.XX
34	38000	22	51.07	6250	K8973215.XX	K8973232.XX	K8973249.XX	K8973334.XX
29	38000	19	59.48	6750	K8973216.XX	K8973233.XX	K8973250.XX	K8973335.XX
23	38000	15	76.61	7550	K8973217.XX	K8973234.XX	K8973251.XX	K8973336.XX
21	38000	13	84.07	8000	K8973218.XX	K8973235.XX	K8973252.XX	K8973337.XX
17	38000	11	103.07	8000	K8973219.XX	K8973236.XX	K8973253.XX	K8973338.XX
15	38000	9.7	115.42	8000	K8973220.XX	K8973237.XX	K8973254.XX	K8973339.XX
13	38000	8.6	130.52	8000	K8973221.XX	K8973238.XX	K8973255.XX	K8973340.XX

* Overhung load is calculated at centerline of output shaft.

STYLE KBN / KFN

STYLE KABN / KAFN



K8975 Series • QUIN REDUCTION

NON-MOTORIZED INPUT

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■
11.0	38000	7.4	159.26	8000	K8975145.XX	K8975161.XX	K8975177.XX	K8975241.XX
9.00	38000	5.9	198.56	8000	K8975146.XX	K8975162.XX	K8975178.XX	K8975242.XX
7.20	38000	4.8	243.65	8000	K8975147.XX	K8975163.XX	K8975179.XX	K8975243.XX
5.80	38000	3.9	300.28	8000	K8975148.XX	K8975164.XX	K8975180.XX	K8975244.XX
4.90	38000	3.3	356.87	8000	K8975149.XX	K8975165.XX	K8975181.XX	K8975245.XX
3.90	38000	2.6	444.92	8000	K8975150.XX	K8975166.XX	K8975182.XX	K8975246.XX
3.50	38000	2.3	501.29	8000	K8975151.XX	K8975167.XX	K8975183.XX	K8975247.XX
2.80	38000	1.9	624.98	8000	K8975152.XX	K8975168.XX	K8975184.XX	K8975248.XX
2.10	38000	1.4	842.88	8000	K8975153.XX	K8975169.XX	K8975185.XX	K8975249.XX
1.60	38000	1.1	1077.55	8000	K8975154.XX	K8975170.XX	K8975186.XX	K8975250.XX
1.40	38000	0.93	1255.00	8000	K8975155.XX	K8975171.XX	K8975187.XX	K8975251.XX
1.20	38000	0.77	1513.00	8000	K8975156.XX	K8975172.XX	K8975188.XX	K8975252.XX
1.00	38000	0.66	1774.00	8000	K8975157.XX	K8975173.XX	K8975189.XX	K8975253.XX
0.820	38000	0.55	2138.00	8000	K8975158.XX	K8975174.XX	K8975190.XX	K8975254.XX
0.670	38000	0.45	2622.00	8000	K8975159.XX	K8975175.XX	K8975191.XX	K8975255.XX
0.530	38000	0.35	3320.00	8000	K8975160.XX	K8975176.XX	K8975192.XX	K8975256.XX

* Overhung load is calculated at centerline of output shaft.

NOTE: Styles KBN and KABN shown above.

AVAILABLE MOD-SQUAD™ CODES

- .00 - Base Mount
- .FL - Output Flange (Left)
- .FR - Output Flange (Right)

■ When ordering, substitute the XX suffix with the required Mod-Squad™ code.

Maximum Rating Tables

K897 Series • Helical - Bevel 1750 RPM Input



High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

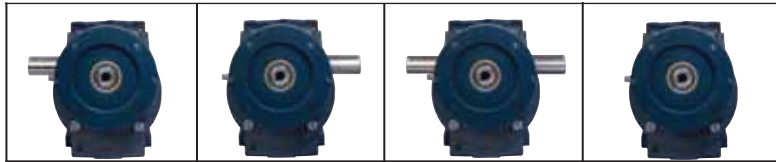
Technical Information

Warnings and Cautions

Terms and Conditions

STYLE KBQ / KFQ

STYLE KABQ / KAFQ



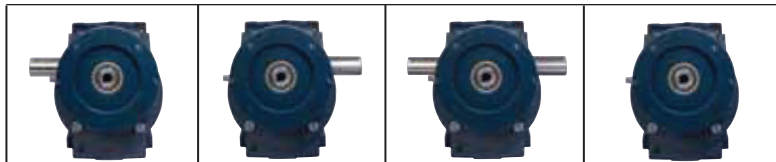
MOTORIZED QUILL INPUT

Motor Frame	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■	Output Speed (RPM)
284-6TC	K8973052.XX	K8973120.XX	K8973188.XX	K8973307.XX	230
284-6TC	K8973053.XX	K8973121.XX	K8973189.XX	K8973308.XX	185
284-6TC	K8973054.XX	K8973122.XX	K8973190.XX	K8973309.XX	162
284-6TC	K8973055.XX	K8973123.XX	K8973191.XX	K8973310.XX	140
284-6TC	K8973056.XX	K8973124.XX	K8973192.XX	K8973311.XX	112
284-6TC	K8973057.XX	K8973125.XX	K8973193.XX	K8973312.XX	98
284-6TC	K8973058.XX	K8973126.XX	K8973194.XX	K8973313.XX	77
284-6TC	K8973059.XX	K8973127.XX	K8973195.XX	K8973314.XX	66
254-6TC	K8793043.XX	K8973111.XX	K8973179.XX	K8973298.XX	50
254-6TC	K8973044.XX	K8973112.XX	K8973180.XX	K8973299.XX	44
254-6TC	K8973045.XX	K8973113.XX	K8973181.XX	K8973300.XX	34
254-6TC	K8973046.XX	K8973114.XX	K8973182.XX	K8973301.XX	29
254-6TC	K8973047.XX	K8973115.XX	K8973183.XX	K8973302.XX	23
254-6TC	K8973048.XX	K8973116.XX	K8973184.XX	K8973303.XX	21
213-5TC	K8973032.XX	K8973100.XX	K8973168.XX	K8973287.XX	17
213-5TC	K8973033.XX	K8973101.XX	K8973169.XX	K8973288.XX	15
213-5TC	K8973034.XX	K8973102.XX	K8973170.XX	K8973289.XX	13

* Overhung load is calculated at centerline of output shaft.

STYLE KBQ / KFQ

STYLE KABQ / KAFQ



MOTORIZED QUILL INPUT

Motor Frame	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■	Output Speed (RPM)
182-4TC	K8975033.XX	K8975081.XX	K8975129.XX	K8975225.XX	11.0
182-4TC	K8975034.XX	K8975082.XX	K8975130.XX	K8975226.XX	9.00
182-4TC	K8975035.XX	K8975083.XX	K8975131.XX	K8975227.XX	7.20
182-4TC	K8975036.XX	K8975084.XX	K8975132.XX	K8975228.XX	5.80
182-4TC	K8975037.XX	K8975085.XX	K8975133.XX	K8975229.XX	4.90
143-5TC	K8975022.XX	K8975070.XX	K8975118.XX	K8975214.XX	3.90
143-5TC	K8975023.XX	K8975071.XX	K8975119.XX	K8975215.XX	3.50
143-5TC	K8975024.XX	K8975072.XX	K8975120.XX	K8975216.XX	2.80
56C	K8975009.XX	K8975057.XX	K8975121.XX	K8975201.XX	2.10
56C	K8975010.XX	K8975058.XX	K8975122.XX	K8975202.XX	1.60
56C	K8975011.XX	K8975050.XX	K8975123.XX	K8975203.XX	1.40
56C	K8975012.XX	K8975060.XX	K8975124.XX	K8975204.XX	1.20
56C	K8975013.XX	K8975061.XX	K8975125.XX	K8975205.XX	1.00
56C	K8975014.XX	K8975062.XX	K8975126.XX	K8975206.XX	0.820
56C	K8975015.XX	K8975063.XX	K8975127.XX	K8975207.XX	0.670
56C	K8975016.XX	K8975064.XX	K8975128.XX	K8975208.XX	0.530

* Overhung load is calculated at centerline of output shaft.

NOTE: Styles KBQ and KABQ shown above.

AVAILABLE MOD-SQUAD™ CODES

- .00 - Base Mount
- .FL - Output Flange (Left)
- .FR - Output Flange (Right)

■ When ordering, substitute the XX suffix with the required Mod-Squad™ code.



Maximum Rating Tables

K8107 Series • Helical - Bevel

1750 RPM Input

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

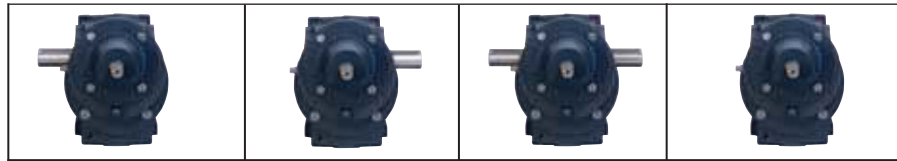
Technical Information

Warnings and Cautions

Terms and Conditions

STYLE KBN / KFN

STYLE KABN / KAFN



K8107S Series • TRIPLE REDUCTION

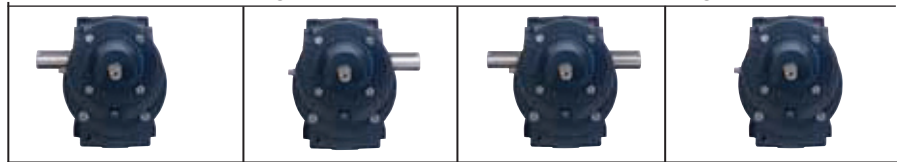
NON-MOTORIZED INPUT

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■
245	31500	130.50	7.13	5550	K81073361.XX	K81073381.XX	K81073401.XX	K81073541.XX
215	34000	123.40	8.14	5600	K81073362.XX	K81073382.XX	K81073402.XX	K81073542.XX
188	36500	115.60	9.33	5650	K81073363.XX	K81073383.XX	K81073403.XX	K81073543.XX
154	37600	97.80	11.36	5750	K81073364.XX	K81073384.XX	K81073404.XX	K81073544.XX
135	38100	86.80	12.97	6000	K81073365.XX	K81073385.XX	K81073405.XX	K81073545.XX
118	58100	115.50	14.86	6850	K81073366.XX	K81073386.XX	K81073406.XX	K81073546.XX
92	62700	97.20	19.06	6350	K81073367.XX	K81073387.XX	K81073407.XX	K81073547.XX
76	63700	81.50	23.10	6900	K81073368.XX	K81073388.XX	K81073408.XX	K81073548.XX
64	63700	69.00	27.26	7400	K81073369.XX	K81073389.XX	K81073409.XX	K81073549.XX
60	63700	64.70	29.07	7700	K81073370.XX	K81073390.XX	K81073410.XX	K81073550.XX
53	63700	56.50	33.30	8100	K81073371.XX	K81073391.XX	K81073411.XX	K81073551.XX
41	65100	45.00	42.73	8200	K81073372.XX	K81073392.XX	K81073412.XX	K81073552.XX
34	69500	39.70	51.77	8600	K81073373.XX	K81073393.XX	K81073413.XX	K81073553.XX
29	70800	34.20	61.11	9500	K81073374.XX	K81073394.XX	K81073414.XX	K81073554.XX
23	70800	27.20	76.82	10200	K81073375.XX	K81073395.XX	K81073415.XX	K81073555.XX
21	70800	24.60	84.94	10900	K81073376.XX	K81073396.XX	K81073416.XX	K81073556.XX
19	70800	22.10	94.53	11300	K81073377.XX	K81073397.XX	K81073417.XX	K81073557.XX
17	70800	19.70	106.05	11900	K81073378.XX	K81073398.XX	K81073418.XX	K81073558.XX
15	70800	17.40	120.12	12500	K81073379.XX	K81073399.XX	K81073419.XX	K81073559.XX
13	70800	15.20	137.71	13000	K81073380.XX	K81073400.XX	K81073420.XX	K81073560.XX

* Overhung load is calculated at centerline of output shaft.

STYLE KBN / KFN

STYLE KABN / KAFN



K8107S Series • QUIN REDUCTION

NON-MOTORIZED INPUT

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■
11.0	70800	13.30	164.81	13000	K81075145.XX	K81075161.XX	K81075177.XX	K81075241.XX
9.30	70800	11.60	188.77	13000	K81075146.XX	K81075162.XX	K81075178.XX	K81075242.XX
7.20	70800	9.00	242.24	13000	K81075147.XX	K81075163.XX	K81075179.XX	K81075243.XX
5.60	70800	7.00	310.74	13000	K81075148.XX	K81075164.XX	K81075180.XX	K81075244.XX
4.70	70800	5.90	369.30	13000	K81075149.XX	K81075165.XX	K81075181.XX	K81075245.XX
3.80	70800	4.80	456.72	13000	K81075150.XX	K81075166.XX	K81075182.XX	K81075246.XX
3.20	70800	4.00	542.79	13000	K81075151.XX	K81075167.XX	K81075183.XX	K81075247.XX
2.70	70800	3.30	657.70	13000	K81075152.XX	K81075168.XX	K81075184.XX	K81075248.XX
2.30	70800	2.80	776.32	13000	K81075153.XX	K81075169.XX	K81075185.XX	K81075249.XX
1.80	70800	2.20	975.92	13000	K81075154.XX	K81075170.XX	K81075186.XX	K81075250.XX
1.50	70800	1.80	1201	13000	K81075155.XX	K81075171.XX	K81075187.XX	K81075251.XX
1.20	70800	1.40	1516	13000	K81075156.XX	K81075172.XX	K81075188.XX	K81075252.XX
0.980	70800	1.20	1792	13000	K81075157.XX	K81075173.XX	K81075189.XX	K81075253.XX
0.810	70800	1.00	2160	13000	K81075158.XX	K81075174.XX	K81075190.XX	K81075254.XX
0.650	70800	0.81	2697	13000	K81075159.XX	K81075175.XX	K81075191.XX	K81075255.XX
0.520	70800	0.65	3341	13000	K81075160.XX	K81075176.XX	K81075192.XX	K81075256.XX

* Overhung load is calculated at centerline of output shaft.

NOTE: Styles KBN and KABN shown above.

AVAILABLE MOD-SQUAD™ CODES

- .00 - Base Mount
- .FL - Output Flange (Left)
- .FR - Output Flange (Right)

■ When ordering, substitute the XX suffix with the required Mod-Squad™ code.

Maximum Rating Tables

K8107 Series • Helical - Bevel

1750 RPM Input



High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

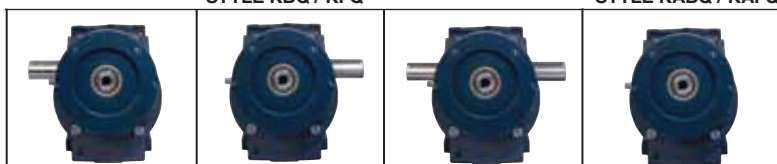
Technical Information

Warnings and Cautions

Terms and Conditions

STYLE KBQ / KFQ

STYLE KABQ / KAFQ



MOTORIZED QUILL INPUT

Motor Frame	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■	Output Speed (RPM)
364-6TC	K81073101.XX	K81073221.XX	K81073341.XX	K81073521.XX	245
364-6TC	K81073102.XX	K81073222.XX	K81073342.XX	K81073522.XX	215
364-6TC	K81073103.XX	K81073223.XX	K81073343.XX	K81073523.XX	188
364-6TC	K81073104.XX	K81073224.XX	K81073344.XX	K81073524.XX	154
364-6TC	K81073105.XX	K81073225.XX	K81073345.XX	K81073525.XX	135
364-6TC	K81073106.XX	K81073226.XX	K81073346.XX	K81073526.XX	118
364-6TC	K81073107.XX	K81073227.XX	K81073347.XX	K81073527.XX	92
364-6TC	K81073108.XX	K81073228.XX	K81073348.XX	K81073528.XX	76
364-6TC	K81073109.XX	K81073229.XX	K81073349.XX	K81073529.XX	64
364-6TC	K81073110.XX	K81073230.XX	K81073350.XX	K81073530.XX	60
324-6TC	K81093091.XX	K81073211.XX	K81073331.XX	K81073511.XX	53
324-6TC	K81073072.XX	K81073192.XX	K81073312.XX	K81073492.XX	41
284-6TC	K81073073.XX	K81073193.XX	K81073313.XX	K81073493.XX	34
284-6TC	K81073074.XX	K81073194.XX	K81073314.XX	K81073494.XX	29
284-6TC	K81073055.XX	K81073175.XX	K81073295.XX	K81073475.XX	23
254-6TC	K81073056.XX	K81073176.XX	K81073296.XX	K81073476.XX	21
254-6TC	K81073057.XX	K81073177.XX	K81073297.XX	K81073477.XX	19
254-6TC	K81073058.XX	K81073178.XX	K81073298.XX	K81073478.XX	17
254-6TC	K81073059.XX	K81073179.XX	K81073299.XX	K81073479.XX	15
254-6TC	K81073060.XX	K81073180.XX	K81073300.XX	K81073480.XX	13

* Overhung load is calculated at centerline of output shaft.

STYLE KBQ / KFQ

STYLE KABQ / KAFQ



MOTORIZED QUILL INPUT

Motor Frame	Left Hand Catalog No. ■	Right Hand Catalog No. ■	Double Extension Catalog No. ■	Hollow Output Catalog No. ■	Output Speed (RPM)
213-15TC	K81705273.00	K81705289.00	K81705305.00	K81705257.00	11.0
213-15TC	K81705274.00	K81705290.00	K81705306.00	K81705258.00	9.30
213-15TC	K81705275.00	K81705291.00	K81705307.00	K81705259.00	7.20
182-4TC	K81075036.00	K81075084.00	K81075132.00	K81075225.00	5.60
182-4TC	K81075037.00	K81075085.00	K81075133.00	K81075226.00	4.70
182-4TC	K81075038.00	K81075086.00	K81075134.00	K81075227.00	3.80
182-4TC	K81075039.00	K81075087.00	K81075135.00	K81075228.00	3.20
182-4TC	K81075040.00	K81075088.00	K81075136.00	K81075229.00	2.70
143-5TC	K81075025.00	K81075073.00	K81075121.00	K81075217.00	2.30
143-5TC	K81075026.00	K81075074.00	K81075122.00	K81075218.00	1.80
143-5TC	K81075027.00	K81075075.00	K81075123.00	K81075219.00	1.50
56C	K81075012.00	K81075060.00	K81075108.00	K81075204.00	1.20
143-5TC	K81075028.00	K81075076.00	K81075124.00	K81075220.00	
56C	K81075013.00	K81075061.00	K81075109.00	K81075205.00	0.980
143-5TC	K81075029.00	K81075077.00	K81075125.00	K81075221.00	
56C	K81075014.00	K81075062.00	K81075110.00	K81075206.00	0.810
143-5TC	K81075030.00	K81075078.00	K81075126.00	K81075222.00	
56C	K81075015.00	K81075063.00	K81075111.00	K81075207.00	0.650
143-5TC	K81075031.00	K81075079.00	K81075127.00	K81075223.00	
56C	K81075016.00	K81075064.00	K81075112.00	K81075208.00	0.520
143-5TC	K81075032.00	K81075080.00	K81075128.00	K81075224.00	

* Overhung load is calculated at centerline of output shaft.

NOTE: Styles KBQ and KABQ shown above.

AVAILABLE MOD-SQUAD™ CODES

- .00 - Base Mount
- .FL - Output Flange (Left)
- .FR - Output Flange (Right)

■ When ordering, substitute the XX suffix with the required Mod-Squad™ code.



Helical - Bevel Triple Reduction Dimensions Style KBQ

High Efficiency Helical - Bevel
Gear Reducers

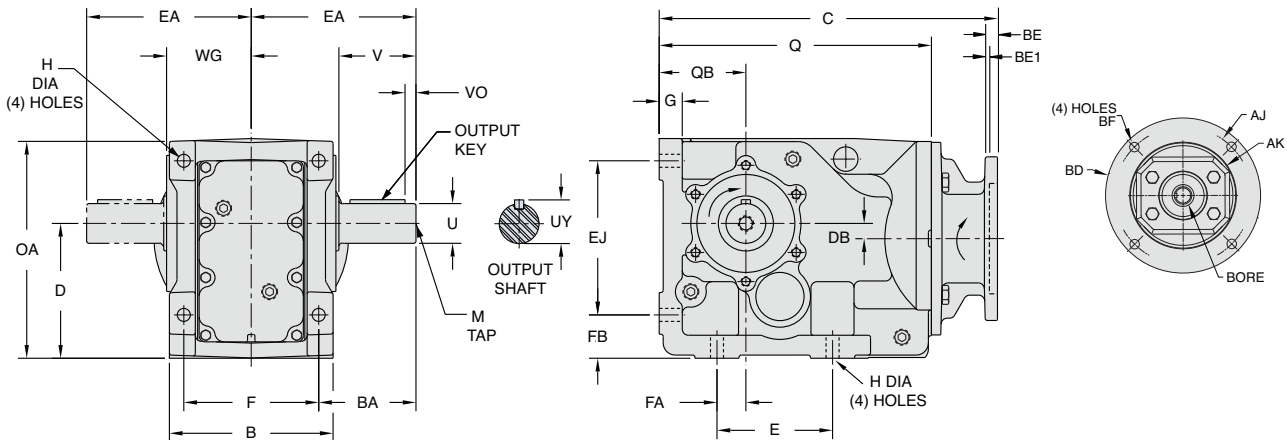
High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions



Gearcase

Size	B	BA	D	DB	E	EA	EJ	F	FA	FB	G	H
KBQ8473	5.71	2.95	4.41	0.47	5.12	5.31	5.12	4.72	1.38	1.46	0.71	0.43
	145	75	112	12.0	130	135	130	120	35	37	18	11.0
KBQ8673	6.69	3.98	5.51	0.62	4.72	6.73	6.30	5.51	1.18	1.77	0.94	0.53
	170	101	140	15.8	120	171	160	140	30	45	24	13.5
KBQ8773	7.87	4.86	7.09	1.08	5.91	8.11	7.87	6.50	1.57	2.17	1.06	0.69
	200	123.5	180	27.3	150	206	200	165	40	55	27	17.5
KBQ8873	9.06	5.91	8.35	1.22	7.09	9.45	9.17	7.09	2.17	2.76	1.26	0.87
	230	150	212	30.9	180	240	233	180	55	70	32	22
KBQ8973	11.42	6.73	10.43	1.15	9.45	11.46	11.61	9.45	2.95	2.95	1.42	1.02
	290	171	265	29.2	240	291	295	240	75	75	36	26
KBQ81073	13.38	8.34	12.40	N/A	11.02	13.65	14.17	10.23	N/A	3.74	1.57	1.31
	340	212	315	N/A	280	347	360	270	N/A	95	40	33

Gearcase

Size	OA	Q	QB	WG
KBQ8473	7.48	9.82	2.80	2.85
	190	249	71	72.5
KBQ8673	8.98	11.13	3.54	3.46
	228	283	90	87.9
KBQ8773	11.34	13.21	4.41	3.98
	288	335	112	101
KBQ8873	13.54	16.61	5.20	4.57
	344	422	132	116
KBQ8973	16.56	20.29	6.30	5.75
	421	515	160	146
KBQ81073	19.82	23.56	7.84	6.81
	503	601	200	173

Output Shaft - Inches

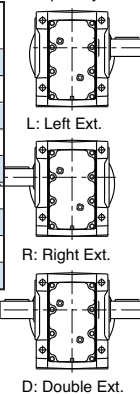
U +0.000 -0.001	UY	V	VO	KEY	M
1.250	1.36	2.36	0.29	1/4 x 1/4 x 1-11/16	1/2-13 x 1.13
-	-	-	-	-	-
1.625	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
-	-	-	-	-	-
2.000	2.21	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
-	-	-	-	-	-
2.375	2.64	4.72	0.51	5/8 x 5/8 x 3-5/8	3/4-10 x 1.61
-	-	-	-	-	-
2.875	3.20	5.51	0.67	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61
-	-	-	-	-	-
3.625	N/A	6.31	N/A	7/8 x 7/16 x 4-1/8	N/A
-	-	-	-	-	-

NEMA Motor Mounting Dimensions - Inches

Size	DIMENSION "C"				
	56C	180TC	210TC	280TC	324TC
KBQ8473	140TC				
	12.43	13.74	-	-	-
KBQ8673	316	349	-	-	-
	13.83	14.85	-	-	-
KBQ8773	351	377	-	-	-
	16.57	17.25	17.25	-	-
KBQ8873	421	438	438	-	-
	-	22.07	22.07	22.63	-
KBQ8973	-	561	561	575	-
	-	24.78	24.78	24.78	-
KBQ81073	-	629	629	629	-
	-	28.15	28.15	28.15	29.41

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	8.50	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	8.50	N/A	0.50	1.625	3/8 X 3/16	0.53
280TC	9.00	10.50	11.25	N/A	0.55	1.875	1/2 X 1/4	0.55
320TC	11.00	12.50	14.00	N/A	0.55	2.125	1/2 X 1/4	0.65
360TC	11.00	12.50	14.00	N/A	0.55	2.375	5/8 X 5/16	0.65

* Output Styles



Dimensions subject to change without notice
* 250TC not available.



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

Helical - Bevel Triple Reduction Dimensions Style KABQ



High Efficiency Helical - Bevel
Gear Reducers

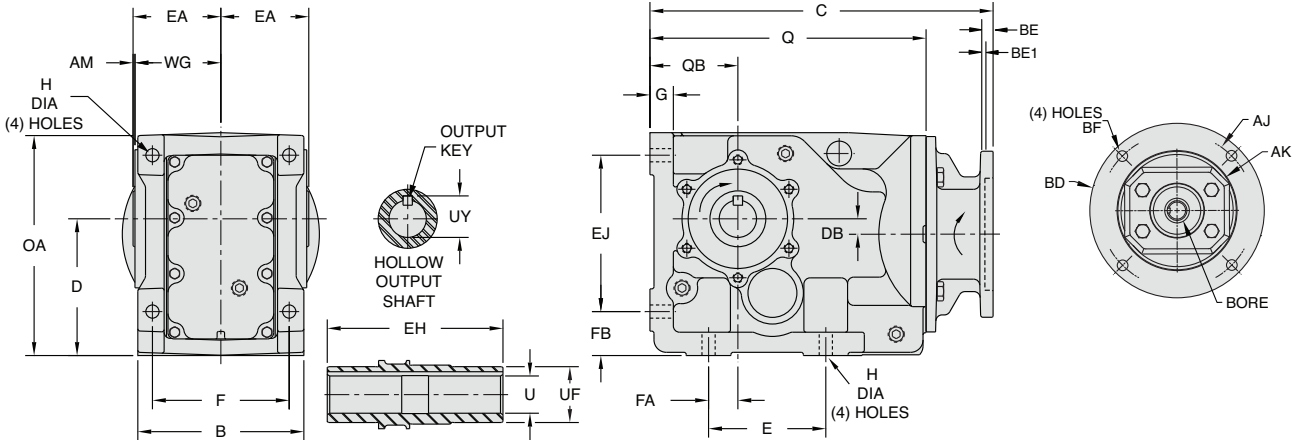
High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions



Gearcase

Size	AM	B	D	DB	E	EA	EJ	F	FA	FB	G	H
KABQ8473	0.10	5.71	4.41	0.47	5.12	2.95	5.12	4.72	1.38	1.46	0.71	0.43
	2.5	145	112	12.0	130	75	130	120	35	37	18	11.0
KABQ8673	0.08	6.69	5.51	0.62	4.72	3.54	6.30	5.51	1.18	1.77	0.94	0.53
	2.0	170	140	15.8	120	90	160	140	30	45	24	13.5
KABQ8773	0.16	7.87	7.09	1.08	5.91	4.14	7.87	6.50	1.57	2.17	1.06	0.69
	4	200	180	27.3	150	105	200	165	40	55	27	17.5
KABQ8873	0.16	9.06	8.35	1.22	7.09	4.73	9.17	7.09	2.17	2.76	1.26	0.87
	4	230	212	30.9	180	120	233	180	55	70	32	22
KABQ8973	0.16	11.42	10.43	1.15	9.45	5.91	11.61	9.45	2.95	2.95	1.42	1.02
	4	290	265	29.2	240	150	295	240	75	75	36	26
KABQ81073	N/A	13.58	12.402	N/A	11.024	6.81	14.173	10.63	N/A	3.74	1.57	1.31
	N/A	340	315	N/A	280	173	360	270	N/A	95	40	33

Gearcase

Size	OA	Q	QB	WG
KABQ8473	7.48	9.82	2.80	2.85
	190	249	71	72.5
KABQ8673	8.98	11.13	3.54	3.46
	228	283	90	87.9
KABQ8773	11.34	13.21	4.41	3.98
	288	335	112	101
KABQ8873	13.54	16.61	5.20	4.57
	344	422	132	116
KABQ8973	16.56	20.29	6.30	5.75
	421	515	160	146
KABQ81073	19.82	23.86	7.84	6.87
	503	601	200	173

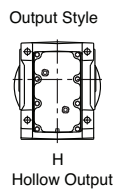
Hollow Output Shaft

EH	U (MAX) ^{+0.025} / _{-0.000}	UF	UY	KEY
5.91	1.375	1.97	1.52	(2) 5/16 x 5/16 x 1-3/4
-	-	-	-	-
7.08	1.500	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-
8.27	2.000	2.75	2.23	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-
9.45	2.375	3.34	2.65	(2) 5/8 x 5/8 x 3-5/8
-	-	-	-	-
11.81	2.750	3.74	3.04	(2) 5/8 x 5/8 x 3-5/8
-	-	-	-	-
13.61	3.6250	N/A	N/A	(2) 7/8 x 7/16 x 3-5/8
-	-	-	-	-

NEMA Motor Mounting Dimensions - Inches

Size	DIMENSION "C"				
	56C 140TC	180TC	210TC 250TC	280TC	324TC 364TC
KBQ8473	12.43	13.74	-	-	-
	316	349	-	-	-
KBQ8673	13.83	14.85	-	-	-
	351	377	-	-	-
KBQ8773	16.57	17.25	17.25	-	-
	421	438	438	-	-
KBQ8873	-	22.07	22.07	22.63	-
	-	561	561	575	-
KBQ8973	-	24.78	24.78	24.78	-
	-	629	629	629	-
KBQ81073	-	28.15	28.15	28.15	29.41
	-	-	-	-	-

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	8.50	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	8.50	N/A	0.50	1.625	3/8 X 3/16	0.53
280TC	9.00	10.50	11.25	N/A	0.55	1.875	1/2 X 1/4	0.55
320TC	11.00	12.50	14.00	N/A	0.55	2.125	1/2 X 1/4	0.65
360TC	11.00	12.50	14.00	N/A	0.55	2.375	5/8 X 5/16	0.65



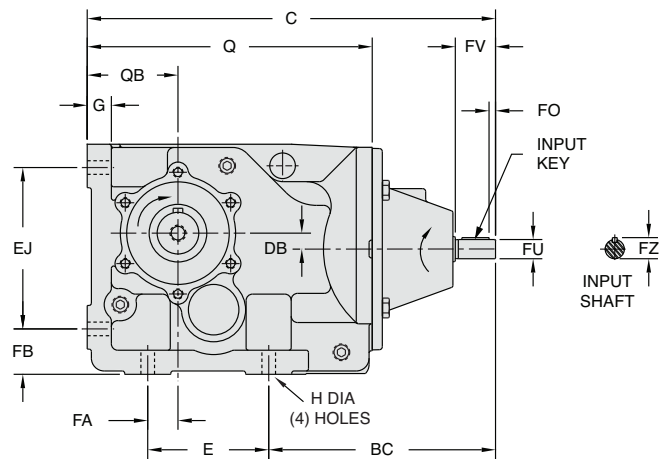
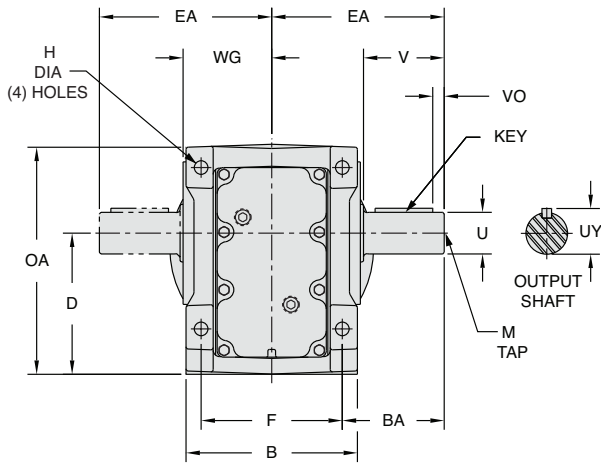
Dimensions subject to change without notice
* 250TC not available.



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.



Helical - Bevel Triple Reduction Dimensions Style KBN



Gearcase

Size	B	BA	BC	C	D	DB	E	EA	EJ	F	FA	FB	G	H
KBQ8473	5.71	2.95	7.62	14.16	4.41	0.47	5.12	5.31	5.12	4.72	1.38	1.46	0.71	0.43
	145	75	194	360	112	12.0	130	135	130	120	35	37	18	11.0
KBQ8673	6.69	3.98	8.85	15.94	5.51	0.62	4.72	6.73	6.30	5.51	1.18	1.77	0.94	0.53
	170	101	225	405	140	15.8	120	171	160	140	30	45	24	13.5
KBQ8773	7.87	4.86	10.66	19.40	7.09	1.08	5.91	8.11	7.87	6.50	1.57	2.17	1.06	0.69
	200	123.5	271	493	180	27.3	150	206	200	165	40	55	27	17.5
KBQ8873	9.06	5.91	14.29	24.40	8.35	1.22	7.09	9.45	9.17	7.09	2.17	2.76	1.26	0.87
	230	150	363	620	212	30.9	180	240	233	180	55	70	32	22
KBQ8973	11.42	6.73	15.82	28.62	10.43	1.15	9.45	11.46	11.61	9.45	2.95	2.95	1.42	1.02
	290	171	402	727	265	29.2	240	291	295	240	75	75	36	26
KBQ81073	13.38	8.34	17.43	32.59	12.40	N/A	11.02	13.65	14.17	10.23	N/A	3.74	1.57	1.31
	340	212	443	828	315	N/A	280	347	360	270	N/A	95	40	33

Gearcase

Size	OA	Q	QB	WG
KBQ8473	7.48	9.82	2.80	2.85
	190	249	71	72.5
KBQ8673	8.98	11.13	3.54	3.46
	228	283	90	87.9
KBQ8773	11.34	13.21	4.41	3.98
	288	335	112	101
KBQ8873	13.54	16.61	5.20	4.57
	344	422	132	116
KBQ8973	16.56	20.29	6.30	5.75
	421	515	160	146
KBQ81073	19.82	23.86	7.84	6.81
	503	601	200	173

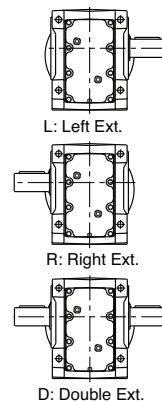
Output Shaft

Size	U +0.000 -0.001	UY	V	VO	KEY	M
KBQ8473	1.250	1.36	2.36	0.29	1/4 x 1/4 x 1-11/16	1/2-13 x 1.13
	-	-	-	-	-	-
KBQ8673	1.625	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
	-	-	-	-	-	-
KBQ8773	2.000	2.21	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
	-	-	-	-	-	-
KBQ8873	2.375	2.64	4.72	0.51	5/8 x 5/8 x 3-5/8	3/4-10 x 1.61
	-	-	-	-	-	-
KBQ8973	2.875	3.20	5.51	0.67	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61
	-	-	-	-	-	-
KBQ81073	3.625	N/A	6.31	N/A	7/8 x 7/16 x 4-1/8	N/A
	-	-	-	-	-	-

Input Shaft

Size	FU +0.000 -0.001	FZ	FV	FO	KEY
KBN8473	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-11/16
	-	-	-	-	-
KBN8673	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-11/16
	-	-	-	-	-
KBN8773	0.875	0.95	1.97	0.28	3/16 x 3/16 x 1-1/4
	-	-	-	-	-
KBN8873	1.125	1.23	2.36	0.32	1/4 x 1/4 x 1-11/16
	-	-	-	-	-
KBN8973	1.375	1.51	3.15	0.35	5/16 x 5/16 x 2-3/8
	-	-	-	-	-
KBN81073	1.875	N/A	3.75	N/A	1/2 x 1/4 x 2-3/8
	-	-	-	-	-

* Output Styles

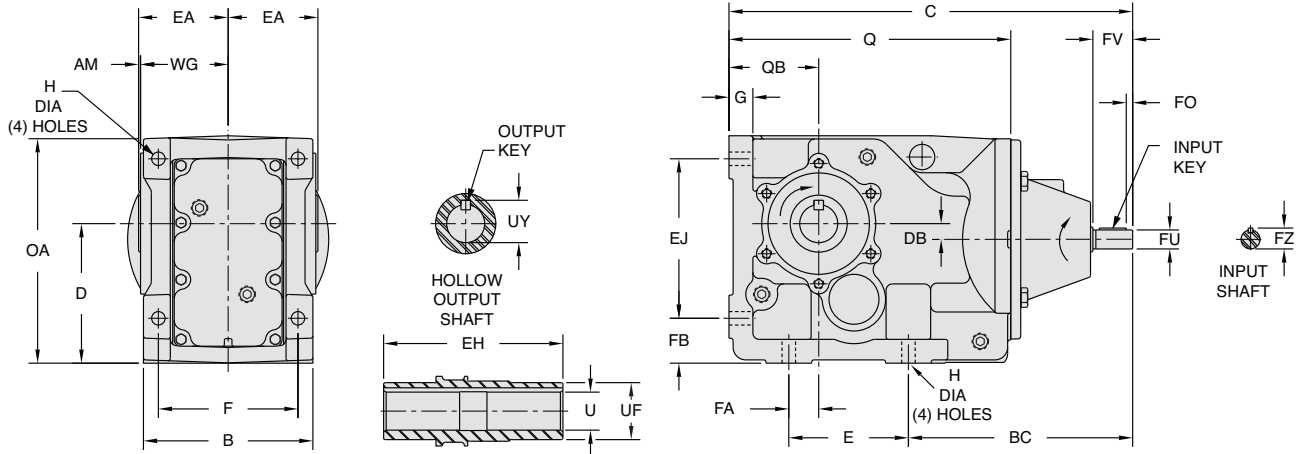


Dimensions subject to change without notice



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

Helical - Bevel Triple Reduction Dimensions Style KABN



High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

Gearcase

inch
mm

Size	AM	B	BC	C	D	DB	E	EA	EJ	F	FA	FB	G	H
KABQ8473	0.10	5.71	7.62	14.16	4.41	0.47	5.12	2.95	5.12	4.72	1.38	1.46	0.71	0.43
	2.5	145	194	360	112	12.0	130	75	130	120	35	37	18	11.0
KABQ8673	0.08	6.69	8.85	15.94	5.51	0.62	4.72	3.54	6.30	5.51	1.18	1.77	0.94	0.53
	2.0	170	225	405	140	15.8	120	90	160	140	30	45	24	13.5
KABQ8773	0.16	7.87	10.66	19.40	7.09	1.08	5.91	4.14	7.87	6.50	1.57	2.17	1.06	0.69
	4	200	271	493	180	27.3	150	105	200	165	40	55	27	17.5
KABQ8873	0.16	9.06	14.29	24.40	8.35	1.22	7.09	4.73	9.17	7.09	2.17	2.76	1.26	0.87
	4	230	363	620	212	30.9	180	120	233	180	55	70	32	22
KABQ8973	0.16	11.42	15.82	28.62	10.43	1.15	9.45	5.91	11.61	9.45	2.95	2.95	1.42	1.02
	4	290	402	727	265	29.2	240	150	295	240	75	75	36	26
KABQ81073	N/A	13.38	17.43	32.59	12.40	N/A	11.02	6.81	14.17	10.63	N/A	3.74	1.57	1.31
	N/A	340	443	828	315	N/A	280	173	360	270	N/A	95	40	33

Gearcase

inch
mm

Size	OA	Q	QB	WG
KABQ8473	7.48	9.82	2.80	2.85
	190	249	71	72.5
KABQ8673	8.98	11.13	3.54	3.46
	228	283	90	87.9
KABQ8773	11.34	13.21	4.41	3.98
	288	335	112	101
KABQ8873	13.54	16.61	5.20	4.57
	344	422	132	116
KABQ8973	16.56	20.29	6.30	5.75
	421	515	160	146
KABQ81073	19.82	23.86	7.84	6.87
	503	601	200	173

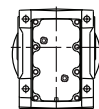
Hollow Output Shaft

EH	U (MAX) ^{+0.0025} _{-0.0000}	UF	UY	KEY
5.91	1.375	1.97	1.52	(2) 5/16 x 5/16 x 1-3/4
-	-	-	-	-
7.08	1.500	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-
8.27	2.000	2.75	2.23	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-
9.45	2.375	3.34	2.65	(2) 5/8 x 5/8 x 3-5/8
-	-	-	-	-
11.81	2.750	3.74	3.04	(2) 5/8 x 5/8 x 3-5/8
-	-	-	-	-
13.61	3.6250	N/A	N/A	(2) 7/8 x 7/16 x 3-5/8
-	-	-	-	-

Input Shaft

Size	FU ^{+0.000} _{-0.001}	FZ	FV	FO	KEY
KBN8473	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
KBN8673	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
KBN8773	0.875	0.95	1.97	0.28	3/16 x 3/16 x 1-1/4
	-	-	-	-	-
KBN8873	1.125	1.23	2.36	0.32	1/4 x 1/4 x 1-11/16
	-	-	-	-	-
KBN8973	1.375	1.51	3.15	0.35	5/16 x 5/16 x 2-3/8
	-	-	-	-	-
KBN81073	1.875	N/A	3.75	N/A	1/2 x 1/4 x 2-3/8
	-	-	-	-	-

Output Style



H
Hollow Output

Dimensions subject to change without notice



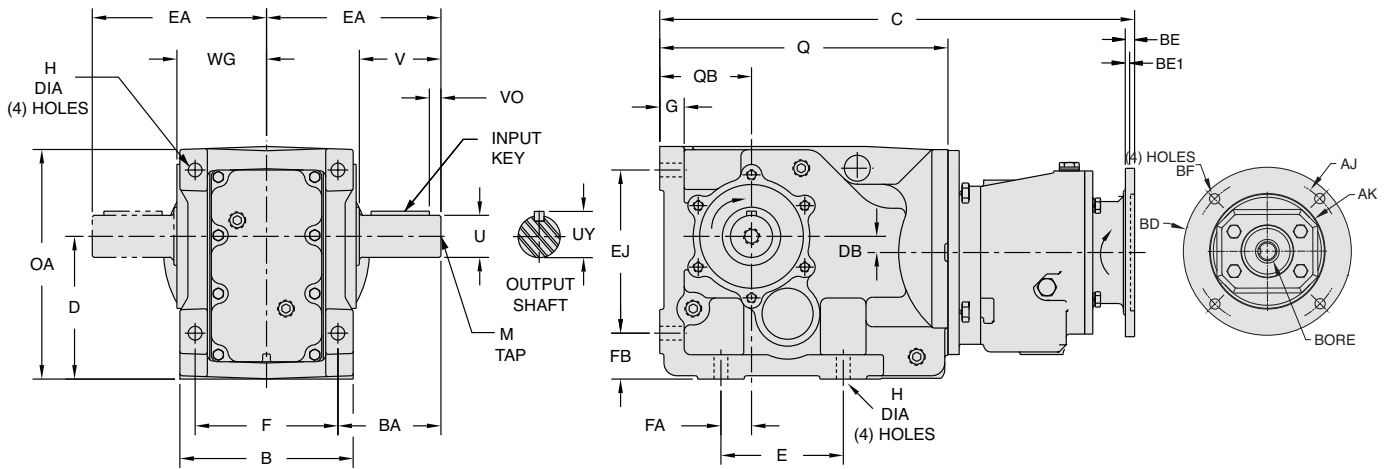
For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.



Helical - Bevel Quin Reduction Dimensions

Style KBQ

DIMENSIONS SHOWN ARE FOR REFERENCE ONLY.
CERTIFIED PRINTS ARE AVAILABLE UPON REQUEST.



Gearcase

Size	B	BA	D	DB	E	EA	EJ	F	FA	FB	G	H
KBQ8675	6.69	3.98	5.51	0.62	4.72	6.73	6.30	5.51	1.18	1.77	0.94	0.53
	170	101	140	15.8	120	171	160	140	30	45	24	13.5
KBQ8775	7.87	4.86	7.09	1.08	5.91	8.11	7.87	6.50	1.57	2.17	1.06	0.69
	200	123.5	180	27.3	150	206	200	165	40	55	27	17.5
KBQ8875	9.06	5.91	8.35	1.22	7.09	9.45	9.17	7.09	2.17	2.76	1.26	0.87
	230	150	212	30.9	180	240	233	180	55	70	32	22

Gearcase

Size	OA	Q	QB	WG
KBQ8675	8.98	11.13	3.54	3.46
	228	283	90	87.9
KBQ8775	11.34	13.21	4.41	3.98
	288	335	112	101
KBQ8875	13.54	16.61	5.20	4.57
	344	422	132	116

Output Shaft

U ^{+0.000} / _{-0.001}	UY	V	VO	KEY	M
1.625	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
-	-	-	-	-	-
2.000	2.21	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
-	-	-	-	-	-
2.375	2.64	4.72	0.51	5/8 x 5/8 x 3-5/8	3/4-10 x 1.61
-	-	-	-	-	-

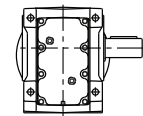
NEMA Motor Mounting Dimensions - Inches

Size	DIMENSION "C"	
	56C	180TC
KBQ8675	18.38	-
	467	-
KBQ8775	21.55	22.57
	547	573
KBQ8875	27.61	28.29
	701	719

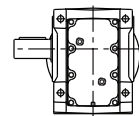
Dimensions subject to change without notice

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	8.50	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	8.50	N/A	0.50	1.625	3/8 X 3/16	0.53
280TC	9.00	10.50	11.25	N/A	0.55	1.875	1/2 X 1/4	0.55
320TC	11.00	12.50	14.00	N/A	0.55	2.125	1/2 X 1/4	0.65
360TC	11.00	12.50	14.00	N/A	0.55	2.375	5/8 X 5/16	0.65

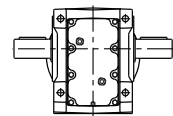
*Output Styles



L: Left Ext.



R: Right Ext.



D: Double Ext.



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

Helical - Bevel Quin Reduction Dimensions Style KABQ



High Efficiency Helical - Bevel
Gear Reducers

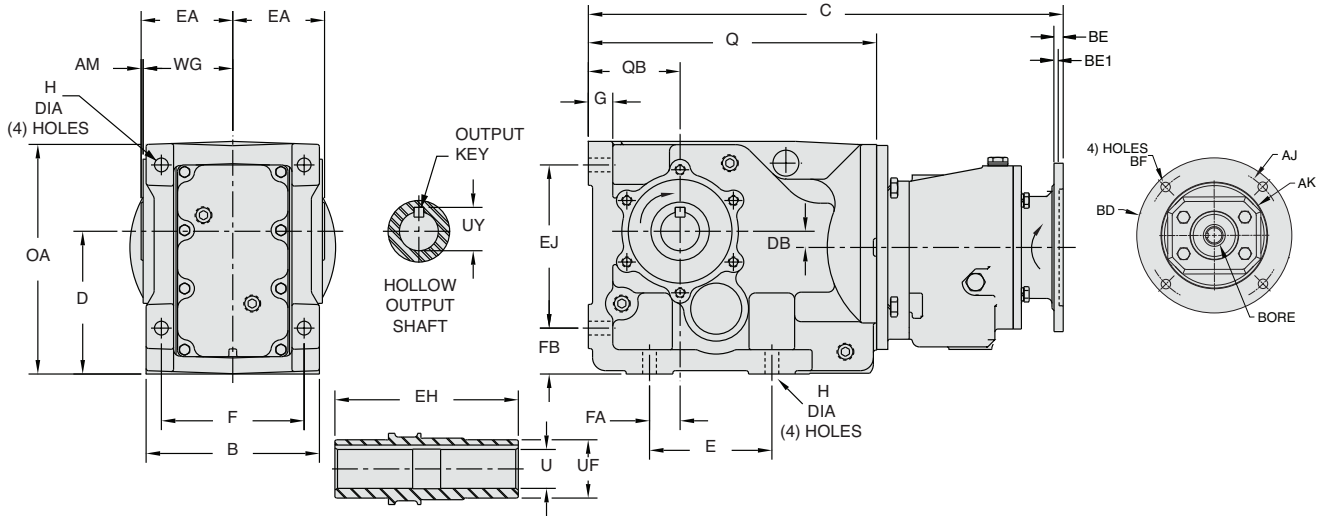
High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions



Gearcase

Size	inch		mm									
	AM	B	D	DB	E	EA	EJ	F	FA	FB	G	H
KABQ8675	0.08	6.69	5.51	0.62	4.72	3.54	6.30	5.51	1.18	1.77	0.94	0.53
	2.0	170	140	15.8	120	90	160	140	30	45	24	13.5
KABQ8775	0.16	7.87	7.09	1.08	5.91	4.14	7.87	6.50	1.57	2.17	1.06	0.69
	4	200	180	27.3	150	105	200	165	40	55	27	17.5
KABQ8875	0.16	9.06	8.35	1.22	7.09	4.73	9.17	7.09	2.17	2.76	1.26	0.87
	4	230	212	30.9	180	120	233	180	55	70	32	22

Gearcase

Size	inch			
	OA	Q	QB	WG
KABQ8675	8.98	11.13	3.54	3.46
	228	283	90	87.9
KABQ8775	11.34	13.21	4.41	3.98
	288	335	112	101
KABQ8875	13.54	16.61	5.20	4.57
	344	422	132	116

Hollow Output Shaft

EH	U (MAX) ^{+0.0025} / _{-0.0000}	UF	UY	KEY
7.08	1.500	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-
8.27	2.000	2.75	2.23	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-
9.45	2.375	3.34	2.65	(2) 5/8 x 5/8 x 3-5/8
-	-	-	-	-

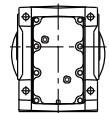
NEMA Motor Mounting Dimensions - Inches

Size	DIMENSION "C"	
	56C	180TC
KABQ8675	18.38	-
	467	-
KABQ8775	21.55	22.57
	547	573
KABQ8875	27.61	28.29
	701	719

Dimensions subject to change without notice

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	8.50	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	8.50	N/A	0.50	1.625	3/8 X 3/16	0.53
280TC	9.00	10.50	11.25	N/A	0.55	1.875	1/2 X 1/4	0.55
320TC	11.00	12.50	14.00	N/A	0.55	2.125	1/2 X 1/4	0.65
360TC	11.00	12.50	14.00	N/A	0.55	2.375	5/8 X 5/16	0.65

Output Style



H
Hollow Output



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.



Helical - Bevel Quin Reduction Dimensions Style KBN

High Efficiency Helical - Bevel
Gear Reducers

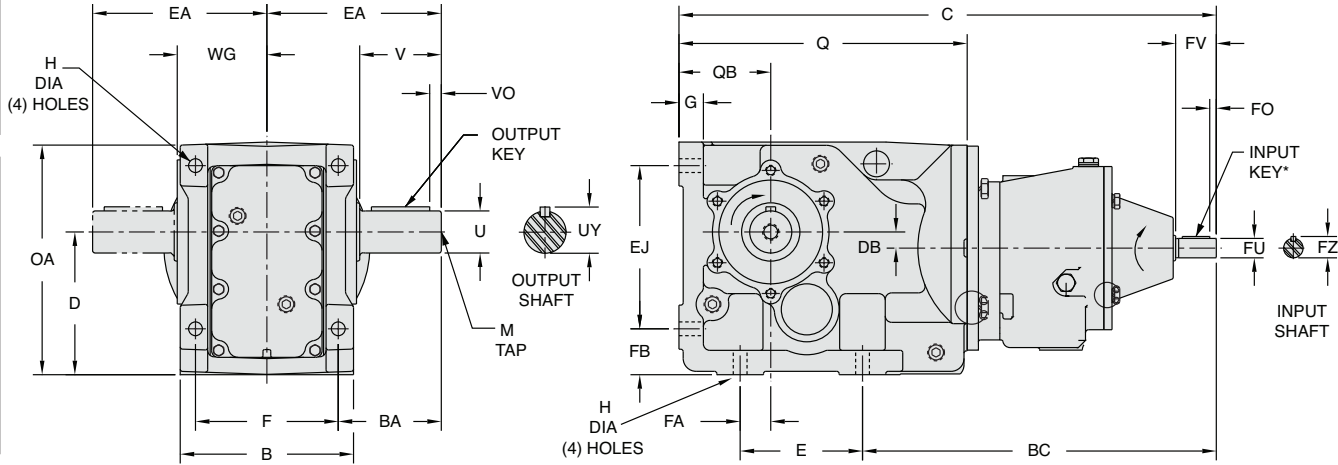
High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions



Gearcase

Size	inch		mm		D	DB	E	EA	EJ	F	FA	FB	G	H
	B	BA	BC	C										
KBN8675	6.69	3.98	13.98	21.07	5.51	0.62	4.72	6.73	6.30	5.51	1.18	1.77	0.94	0.53
	170	101	355	535	140	15.8	120	171	160	140	30	45	24	13.5
KBN8775	7.87	4.86	14.92	23.66	7.09	1.08	5.91	8.11	7.87	6.50	1.57	2.17	1.06	0.69
	200	123.5	379	601	180	27.3	150	206	200	165	40	55	27	17.5
KBN8875	9.06	5.91	20.33	30.45	8.35	1.22	7.09	9.45	9.17	7.09	2.17	2.76	1.26	0.87
	230	150	516	773	212	30.9	180	240	233	180	55	70	32	22

Gearcase

Size	inch		mm	
	OA	Q	QB	WG
KBN8675	8.98	11.13	3.54	3.46
	228	283	90	87.9
KBN8775	11.34	13.21	4.41	3.98
	288	335	112	101
KBN8875	13.54	16.61	5.20	4.57
	344	422	132	116

Output Shaft

Size	UY	V	VO	KEY	M
U ^{+0.000} _{-0.001}	1.625	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4
-	-	-	-	-	-
2.000	2.21	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
-	-	-	-	-	-
2.375	2.64	4.72	0.51	5/8 x 5/8 x 3-5/8	3/4-10 x 1.61
-	-	-	-	-	-

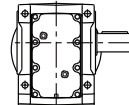
Input Shaft

Size	FU ^{+0.000} _{-0.001}	FZ	FV	FO	KEY*
KBN8675	0.625	N/A	1.88	N/A	N/A
	-	-	-	-	-
KBN8775	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
KBN8875	0.875	0.95	1.97	0.28	3/16 x 3/16 x 1-1/4
	-	-	-	-	-

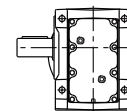
*INPUT KEY IS NOT FURNISHED WITH KBN8675 SHAFT HAS A 3/16 x 3/32 x 1-3/4 KEYWAY.

Dimensions subject to change without notice

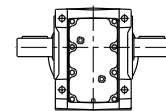
* Output Styles



L: Left Ext.



R: Right Ext.



D: Double Ext.



WARNING For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

Helical - Bevel Quin Reduction Dimensions Style KABN



High Efficiency Helical - Bevel
Gear Reducers

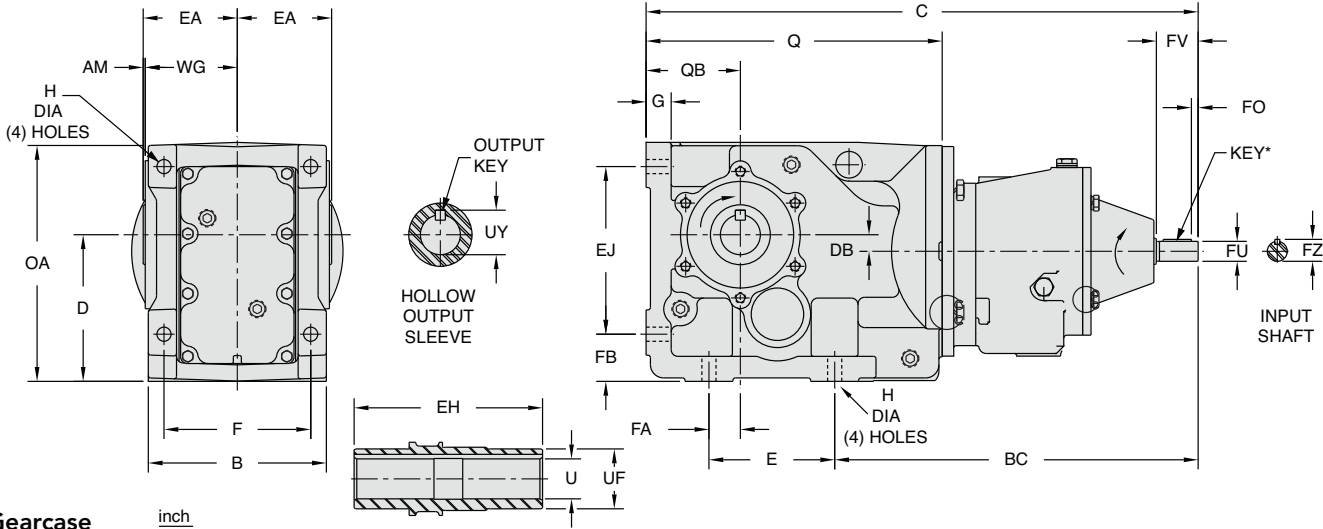
High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions



Gearcase

Size	AM	B	BC	C	D	DB	E	EA	EJ	F	FA	FB	G	H
KABN8675	0.08	6.69	13.98	21.07	5.51	0.62	4.72	3.54	6.30	5.51	1.18	1.77	0.94	0.53
	2.0	170	355	535	140	15.8	120	90	160	140	30	45	24	13.5
KABN8775	0.16	7.87	14.92	23.66	7.09	1.08	5.91	4.14	7.87	6.50	1.57	2.17	1.06	0.69
	4	200	379	601	180	27.3	150	105	200	165	40	55	27	17.5
KABN8875	0.16	9.06	20.33	30.45	8.35	1.22	7.09	4.73	9.17	7.09	2.17	2.76	1.26	0.87
	4	230	516	773	212	30.9	180	120	233	180	55	70	32	22

Gearcase

Size	OA	Q	QB	WG
KABN8675	8.98	11.13	3.54	3.46
	228	283	90	87.9
KABN8775	11.34	13.21	4.41	3.98
	288	335	112	101
KABN8875	13.54	16.61	5.20	4.57
	344	422	132	116

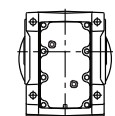
Hollow Output Shaft

EH	U (MAX) ^{+0.0025} / _{-0.0000}	UF	UY	KEY
7.08	1.500	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-
8.27	2.000	2.75	2.23	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-
9.45	2.375	3.34	2.65	(2) 5/8 x 5/8 x 3-5/8
-	-	-	-	-

Input Shaft

Size	FU ^{+0.000} / _{-0.001}	FZ	FV	FO	KEY*
KABN8675	0.625	N/A	1.88	N/A	N/A
	-	-	-	-	-
KABN8775	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
KABN8875	0.875	0.95	1.97	0.28	3/16 x 3/16 x 1-1/4
	-	-	-	-	-

Output Style



H
Hollow Output

*INPUT KEY IS NOT FURNISHED WITH KABN8675
SHAFT HAS A 3/16 x 3/32 x 1-3/4 KEYWAY.

Dimensions subject to change without notice



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.



Helical - Bevel Accessory Kits

High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

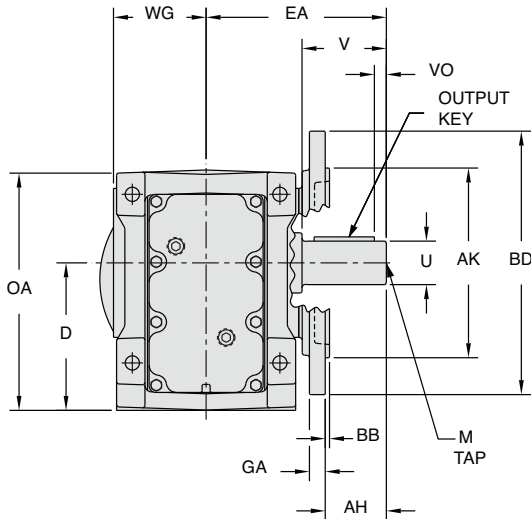
Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

Technical Information

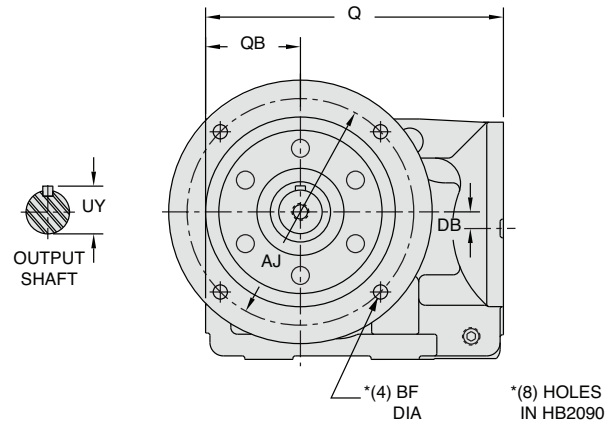
Warnings and Cautions

Terms and Conditions

Flange Mount Kit (Shown with Solid Output Shaft)



**Output Flange Kits with
Solid Output Shaft
create styles:
KFQ KFN**



Dimensions are $\frac{\text{inch}}{\text{mm}}$

Gearcase

Size	D	DB	EA	OA	Q	QB	WG
K847	4.41	0.47	5.31	7.48	9.82	2.80	2.85
	112	12.0	135	190	249	71	72.5
K867	5.51	0.62	6.73	8.98	11.13	3.54	3.46
	140	15.8	171	228	283	90	87.9
K877	7.09	1.08	8.11	11.34	13.21	4.41	3.98
	180	27.3	206	288	335	112	101
K887	8.35	1.22	9.45	13.54	16.61	5.20	4.57
	212	30.9	240	344	422	132	116
K897	10.43	1.15	11.46	16.56	20.29	6.30	5.75
	265	29.2	291	421	515	160	146

Output Shaft

U	UY	V	VO	KEY	M
$1.250^{+0.000}_{-0.001}$	1.36	2.36	0.29	1/4 x 1/4 x 1-11/16	1/2-13 x 1.13
-	-	-	-	-	-
1.625	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8-11 x 1.38
-	-	-	-	-	-
2.000	2.21	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4-10 x 1.61
-	-	-	-	-	-
2.375	2.64	4.72	0.51	5/8 x 5/8 x 3-5/8	3/4-10 x 1.61
-	-	-	-	-	-
2.875	3.20	5.51	0.67	3/4 x 3/4 x 4-1/8	3/4-10 x 1.61
-	-	-	-	-	-

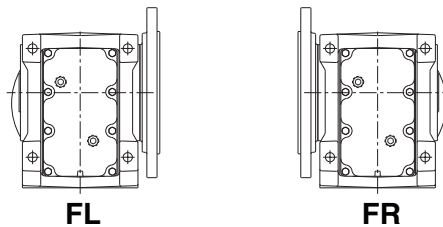
Output Flange

Size	AH	AJ	AK	BB	BD	BF	GA	Weight	Accessory Kit Catalog No.
K847	1.38	6.50	$5.118^{+0}_{-0.002}$	0.14	7.87	0.43	0.47	11 lbs.	0259-00010
	35	165	$130^{-0.003}_{-0.054}$	3.5	200	11	12		
K867	2.28	8.46	$7.087^{+0}_{-0.002}$	0.16	9.84	0.53	0.59	15 lbs.	0259-00005
	58	215	$180^{+0.010}_{-0.041}$	4	250	13.5	15		
K877	2.52	10.43	$9.055^{+0}_{-0.002}$	0.16	11.81	0.53	0.63	18 lbs.	0259-00006
	64	265	$230^{-0.003}_{-0.054}$	4	300	13.5	16		
K887	3.55	11.81	$9.843^{+0}_{-0.002}$	0.20	13.78	0.69	0.71	25 lbs.	0259-00007
	90	300	$250^{+0}_{-0.051}$	5	350	17.5	18		
K897	3.92	15.75	$13.780^{+0}_{-0.002}$	0.20	17.72	0.69	0.87	45 lbs.	0259-00008
	99	400	$350^{+0}_{-0.051}$	5	450	17.5	22		

Dimensions subject to change without notice

If Flange Mount Kit is to be factory assembled to unit a mounting location must be specified as shown:

Grove Gear will mount the output flange at No Charge - Specify suffix FL or FR in part number.



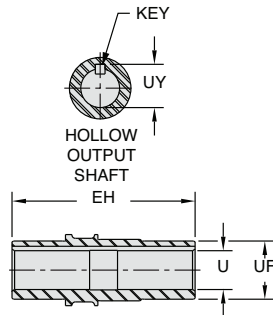
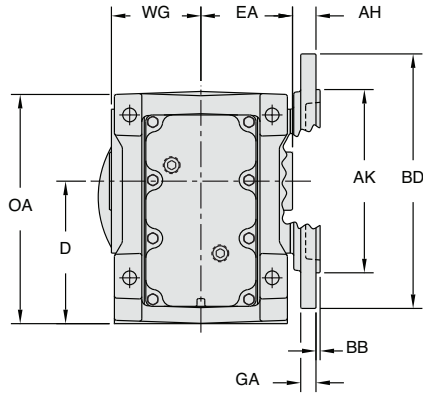
Consult factory if flange mount kit is going to be installed on non-shaft extension side.



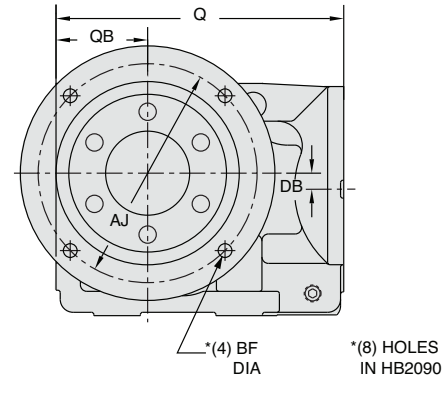
WARNING For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.



Output Flange Mount Kit (Shown with Hollow Output Shaft)



Output Flange Kits with
Hollow Output Shaft
create styles:
KAFQ KAFN



Gearcase	inch mm						
Size	D	DB	EA	OA	Q	QB	WG
K847	4.41	0.47	2.95	7.48	9.82	2.80	2.85
	112	12.0	75	190	249	71	72.5
K867	5.51	0.62	3.54	8.98	11.13	3.54	3.46
	140	15.8	90	228	283	90	87.9
K877	7.09	1.08	4.14	11.34	13.21	4.41	3.98
	180	27.3	105	288	335	112	101
K887	8.35	1.22	4.73	13.54	16.61	5.20	4.57
	212	30.9	120	344	422	132	116
K897	10.43	1.15	5.91	16.56	20.29	6.30	5.75
	265	29.2	150	421	515	160	146

Hollow Output Shaft

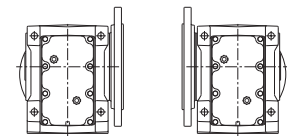
EH	U (MAX)	UF	UY	KEY
5.91	1.375	1.97	1.52	(2) 5/16 x 5/16 x 1-3/4
-	-	-	-	-
7.08	1.500	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-
8.27	2.000	2.75	2.23	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-
9.45	2.375	3.34	2.65	(2) 5/8 x 5/8 x 3-5/8
-	-	-	-	-
11.81	2.750	3.74	3.04	(2) 5/8 x 5/8 x 3-5/8
-	-	-	-	-

Flange

Size	AH	AJ	AK	BB	BD	BF	GA	Weight	Accessory Kit Catalog No.
K847	0.98	6.50	5.118 ⁺⁰ _{-0.002}	0.14	7.87	0.43	0.47	11 lbs.	0259-00010
	25	165	130 ^{-0.003} _{-0.054}	3.5	200	11	12		
K867	0.91	8.46	7.087 ⁺⁰ _{-0.002}	0.16	9.84	0.53	0.59	15 lbs.	0259-00005
	23	215	180 ^{+0.010} _{-0.041}	4	250	13.5	15		
K877	1.46	10.43	9.055 ⁺⁰ _{-0.002}	0.16	11.81	0.53	0.63	18 lbs.	0259-00006
	37	265	230 ^{-0.003} _{-0.054}	4	300	13.5	16		
K887	1.18	11.81	9.843 ⁺⁰ _{-0.002}	0.20	13.78	0.69	0.71	25 lbs.	0259-00007
	30	300	250 ⁺⁰ _{-0.051}	5	350	17.5	18		
K897	1.63	15.75	13.780 ⁺⁰ _{-0.002}	0.20	17.72	0.69	0.87	45 lbs.	0259-00008
	41	400	350 ⁺⁰ _{-0.051}	5	450	17.5	22		

If Flange Mount Kit is to be factory assembled to unit a mounting location must be specified as shown.

Grove Gear will mount the output flange at No Charge - Specify suffix FL or FR in part number.



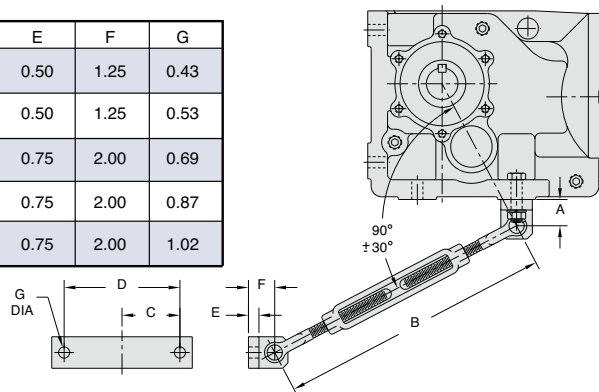
FL

FR

Torque Arm Kits

Size	Accessory Kit Catalog No.	A	B	C	D	E	F	G
K847	0259-00009	1.25	12.50 MIN.	2.36	4.72	0.50	1.25	0.43
			18.38 MAX.					
K867	0259-00001	1.25	12.50 MIN.	2.76	5.51	0.50	1.25	0.53
			18.38 MAX.					
K877	0259-00002	2.00	14.88 MIN.	3.25	6.50	0.75	2.00	0.69
			20.88 MAX.					
K887	0259-00007	2.00	17.69 MIN.	3.54	7.09	0.75	2.00	0.87
			23.69 MAX.					
K897	0259-00004	2.00	17.69 MIN.	4.73	9.45	0.75	2.00	1.02
			23.69 MAX.					

Dimensions subject to change without notice



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.



Helical - Bevel Shipping Weights and Motor Compatibility

High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

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REDUCER WEIGHTS (lbs) SOLID OUTPUT SHAFT

Size	Solid Input Shaft (Mounting Type A)	C-Frame Quill input (Mounting Type E)					
		56C	143TC 145TC	182TC 184TC	213TC 215TC	254TC 256TC	284TC 286TC
K8473	59	61	61	66	-	-	-
K8673	93	94	94	100	-	-	-
K8773	163	170	170	170	170	-	-
K8873	280	-	-	283	283	292	292
K8973	434	-	-	430	430	434	434
K8675	122	122	122	-	-	-	-
K8775	198	200	200	204	-	-	-
K8875	378	385	385	385	-	-	-

REDUCER WEIGHTS (lbs) HOLLOW OUTPUT SHAFT

Size	Solid Input Shaft (Mounting Type A)	C-Frame Quill input (Mounting Type E)					
		56C	143TC 145TC	182TC 184TC	213TC 215TC	254TC 256TC	284TC 286TC
K8473	56	58	58	63	-	-	-
K8673	89	90	90	96	-	-	-
K8773	154	161	161	161	161	-	-
K8873	265	-	-	268	268	277	277
K8973	407	-	-	403	403	407	407
K8675	118	118	118	-	-	-	-
K8775	189	191	191	195	-	-	-
K8875	363	370	370	370	-	-	-

NEMA MOTOR FRAME AVAILABILITY - QUILL INPUT REDUCERS

Size	56C	143TC 145TC	182TC 184TC	213TC 215TC	254TC 256TC	284TC 286TC	324TC	364TC
K8473	X	X	X	-	-	-	-	-
K8673	X	X	X	-	-	-	-	-
K8773	X	X	X	X	-	-	-	-
K8873	-	-	X	X	X	X	-	-
K8973	-	-	X	X	X	X	-	-
K1073	-	-	X	X	X	X	X	X
K8675	X	X	-	-	-	-	-	-
K8775	X	X	X	-	-	-	-	-
K8875	X	X	X	-	-	-	-	-



Mounting position must be specified on all orders, and included in the reducer description, so the correct amount of oil is installed at the Factory.

Mounting Positions

<p>Standard mounting position is B3. All reducers will be filled to this level, unless otherwise specified.</p> <p>B3</p>	<p>B3 I</p>	<p>B6</p>	<ul style="list-style-type: none"> ○ VENT LOCATION ◐ OIL LEVEL ● DRAIN PLUG
<p>B6 I</p>	<p>B6 II</p>	<p>B8 I</p>	<p>B8</p>
<p>V5</p>	<p>V5 I</p>	<p>V6</p>	<p>V6 I</p>

Grove Gear IRONMAN High Efficiency Parallel Shaft Gear Reducers

F Series Features and Benefits

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

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MODULAR DESIGN

Innovative design includes double reduction, triple reduction and quad reduction reducers assembled from standard components.

STANDARD DOUBLE LIP SEALS

provide extra protection against entry of contaminants or loss of lubrication.

BEARING SPANS OPTIMIZED

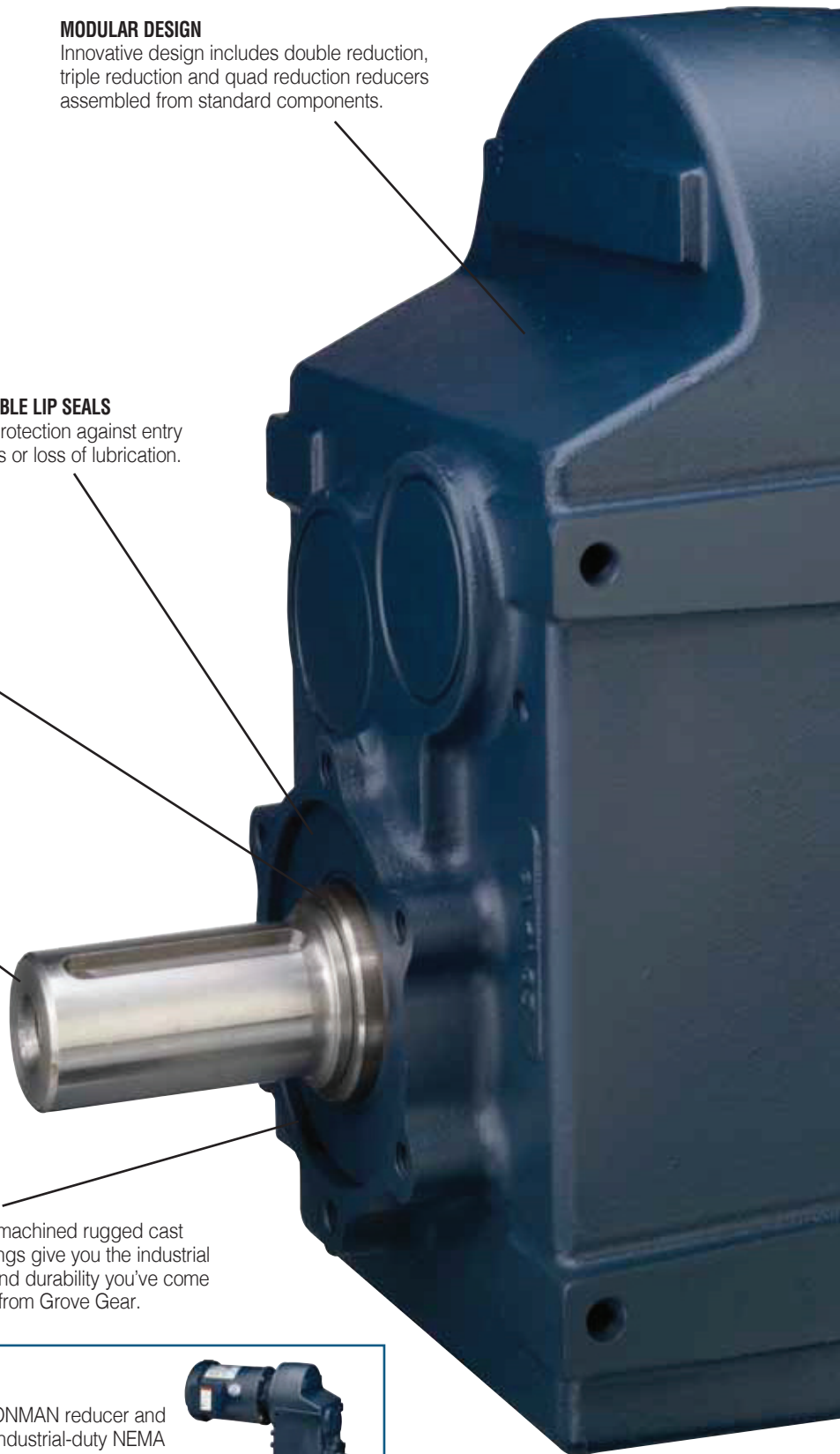
to allow for maximum overhung load capacity, enhanced durability and reliability—while minimizing shaft deflection.

ROBUST OUTPUT SHAFT

Oversized steel output shaft of high strength steel alloy provides superior overhung load and torque capacities.

HOUSING

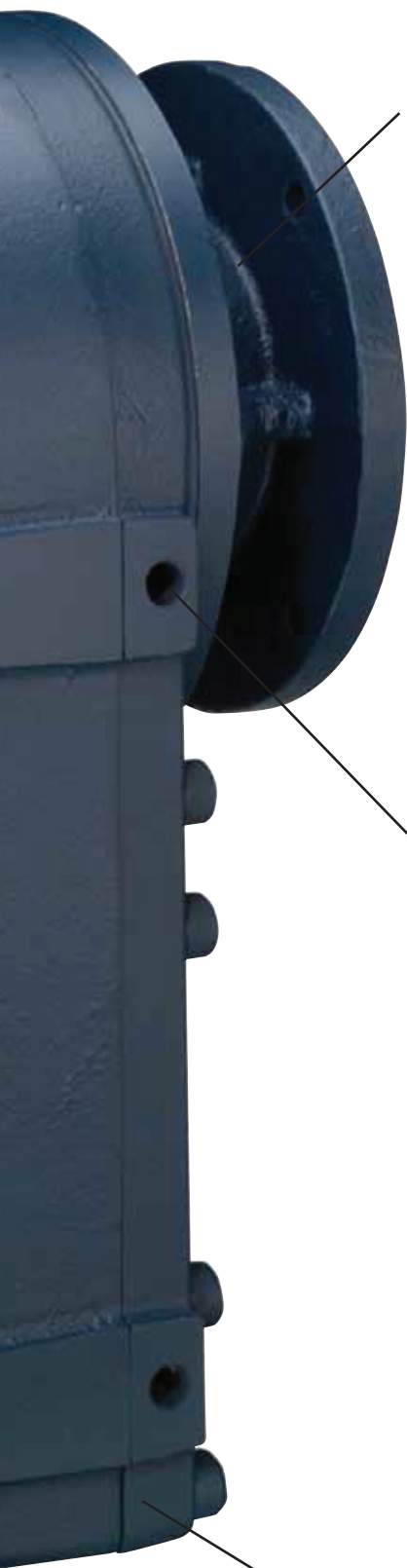
Precision machined rugged cast iron housings give you the industrial strength and durability you've come to expect from Grove Gear.



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON or Lincoln industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.





ALL GEARING IS HARDENED AND GROUND (AGMA class 10 or better) for enhanced efficiency and noise reduction. Double reduction units are 96-97% efficient.

LUBRICATION
All Ironman reducers are filled with high quality gear oil at the factory.

INTEGRAL MOUNTING BASE
designed to interchange with dozens of competitive units.

Additional F Series Parallel Shaft Gear Reducer Features

4 SIZES AVAILABLE in reducer, GEAR+MOTOR™, and integral gearmotor designs.

INPUT HORSEPOWER ratings to 20 HP.

AVAILABLE IN DOUBLE, TRIPLE AND QUINTUPLE REDUCTION with ratios from 3.42:1 to 3333:1.

BASE MOUNT AND OUTPUT FLANGE DESIGNS available in all sizes.

HIGH CAPACITY BALL AND TAPERED BEARINGS provide long life and trouble free operation.

MOUNTING DIMENSIONS ALLOW INTERCHANGE with many popular reducers including SEW, David Brown, Nord and Dodge.

PERMANENTLY MARKED NAMEPLATE with output torque ratio and maximum input horsepower.

CAST IRON INPUT FLANGE (motorized quill input styles) with machined fits for precision alignment of motor and bearings.



Style FFQ
Double Reduction Reducer



Style FBN
Double Reduction Reducer



Style FFN
Double Reduction Reducer



Style FABQ
Quin Reduction Reducer

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

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Parallel Shaft Gear Reducers

Selection Guide

F Series

Modified Stock Style Reducers

Using off-the-shelf accessories, any stock style reducer can be field or Factory modified into a wide range of styles.

**Base Mount
Quill "C" Face Input**

**Output Flange Mount
Solid Output Flange
Quill "C" Face Input**

**Base Mount
Solid Input Shaft**

**Output Flange Mount
Solid Input Shaft**

Style FBQ

Style FFQ

Style FBN

Style FFN



Ratings Pages 609-621
Dimension Page 622

Ratings Pages 609-621
Dimension Page Contact Factory

Ratings Pages 609-621
Dimension Page 624

Ratings Pages 609-621
Dimension Page Contact Factory

Style FABQ

Style FAFQ

Style FABN

Style FAFN



Ratings Pages 609-621
Dimension Page 623

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Dimension Page 625

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Style FBQ

Style FFQ

Style FBN

Style FFN



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Style FABQ

Style FAFQ

Style FABN

Style FAFN



Ratings Pages 609-621
Dimension Page 627

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Dimension Page 629

Ratings Pages 609-621
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*Additional accessories, options and assembly services are available, Contact Factory for details.

High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

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DOUBLE AND TRIPLE
REDUCTION
SOLID OUTPUT SHAFT

DOUBLE AND TRIPLE
REDUCTION
HOLLOW OUTPUT SHAFT

QUINTUPLE
REDUCTION
SOLID OUTPUT SHAFT

QUINTUPLE
REDUCTION
HOLLOW OUTPUT SHAFT

Model Number System

F Series • Parallel Shaft Drives



High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

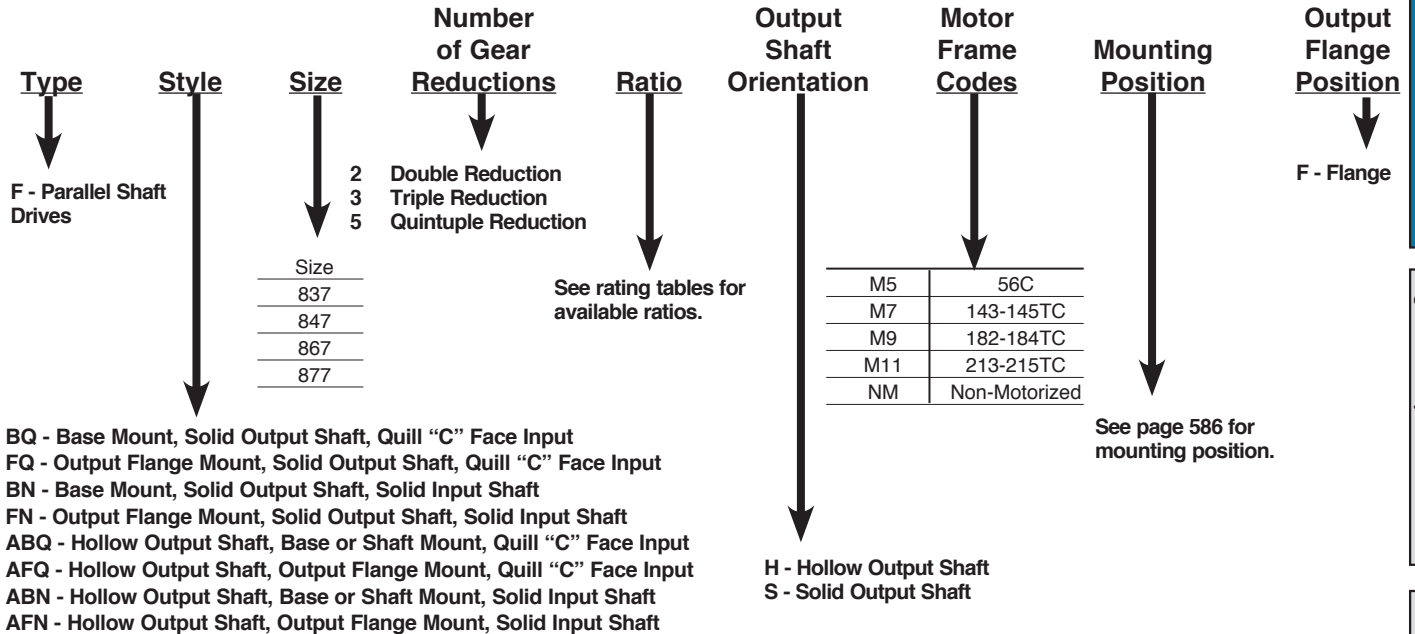
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Grove Gear IRONMAN Parallel Shaft Model Number System

The Mounting position must be specified on all orders, and included in the reducer description. To order Motorized Reducers, simply specify the reducer, indicate the motor description or catalog number and specify "Motorized Assembly". To order Integral Gearmotors, simply specify the reducer, motor horsepower and "Integral Gearmotor". Integral Gearmotors in this catalog are supplied with 3 phase 230/460v totally enclosed 1750 rpm general purpose motors.



Sample Model Numbers

Cast iron, solid output shaft base mount unit with motorized c-faced quill input, 34.29:1 ratio, 56C motor frame.

F	-	BQ	827	3	-	34.29	-	M5	-	B3
Type		Style	Size	Reductions		Ratio		Motor Frame		Mounting

Cast iron, hollow output shaft base mount unit with motorized c-faced quill input, 127.21:1 ratio, 56C motor frame.

F	-	ABQ	837	3	-	127.21	-	M5	-	B3
Type		Style	Size	Reductions		Ratio		Motor Frame		Mounting



Parallel Shaft Mounting Positions and Weights

High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

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Mounting position must be specified on all orders, and included in the reducer description, so the correct amount of oil is installed at the Factory.

Mounting Positions

 B3	 B6	 V5
 B3 I	 B6 II	 V6
<p>Standard mounting position is B3. All reducers will be filled to this level, unless otherwise specified.</p> <p>○ VENT LOCATION ◐ OIL LEVEL ● DRAIN PLUG</p>		

Reducer Weights

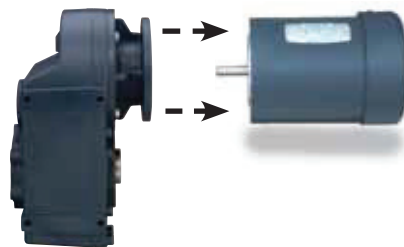
Size	Solid Input Shaft (Mounting Type A)	C-Frame Quill input (Mounting Type E)			
		56C	143TC 145TC	182TC 184TC	213TC 215TC
F8372	48	50	50		
F8373	50	52	52		
F8472	65	67	67		
F8473	67	69	69		
F8672	95	97	97	105	
F8673	98	100	100	108	
F8675	126	128	128		
F8772	143	146	146	155	155
F8773	148	151	151	160	160
F8775	183	186	186		

Motor Compatibility

C-Frame Quill Reducers

Size	56C	143TC 145TC	182TC 184TC	213TC 215TC
F8372	X	X	-	-
F8373	X	X	-	-
F8472	X	X	-	-
F8473	X	X	-	-
F8672	X	X	X	-
F8673	X	X	X	-
F8675	X	X	-	-
F8772	X	X	X	X
F8773	X	X	X	X
F8775	X	X	-	-

"HOW TO USE" Quick Selections F Series Parallel Shaft Drives



High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

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How To Use Quick Selections

Maximum Rating Tables for Double, Triple and Quin Reduction Gear Reducers start on page 609. Selection of the appropriate gear reducer can be made using those tables or the Quick Selections on the following pages.

BEFORE YOU START:

- Identify the Service Factor of the application.
- Determine the actual input horsepower of the

motor by multiplying the motor's nameplate horsepower by the Service Factor.

Determine the output speed (RPM) required at output shaft of reducer.

Identify the mounting style required by your application from the style charts shown on page 584. Note the different bases and flanges to interchange with various competitive units.

To select the proper gear reducer size, use the Quick Selections as shown:

STOCK GEAR+MOTOR™

Start with a reducer and add a LEESON or Lincoln industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

A wide variety of single phase, three phase and DC motors—suitable for almost every industrial application need—have been pre-selected and assembled to reducers to provide a variety of torque and output speed combinations...ready for shipment. Saves time and expense.

1 Find the appropriate Quick Selections page. The tables begin on page 588 and are organized by motor HP. The reducer should be selected first; Gear+Motor™ combinations follow.

2 Locate output RPM column on left side of the table. All ratings are based on an input speed of 1750 RPM. Scroll down to the output speed (RPM) required. Output speeds are rounded to the nearest whole number. For exact output speed, divide 1750 by the ratio listed.

3 Move to the Service Factor column and find one suitable to meet the application requirements. Refer to page 644 for AGMA recommended service factors.

4 Check load capacities against the needs of your application. Do not exceed the overhung load (OHL) shown in the table. Detailed instructions for calculating the actual overhung load are shown on page 645. If overhung and thrust loads will be applied simultaneously or if the load exceeds listed capacities, contact Factory.

5 Select motor frame size.

6 Identify the catalog number of the reducer by continuing to the right. See page 585 for detailed information on building an exact catalog number.

7 Identify reducer mounting position on page 586.

8 Verify physical dimensions using the dimensional drawings shown on pages 622-631.

9 Add a motor

How To Create a GEAR+MOTOR™ Part Number

GEAR+MOTOR
STOCK GEAR+MOTOR™
Start with a Grove Gear IRON and add a LEESON industrial face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS
1/4 HP LEESON ELECTRIC MOTORS

Output Speed (RPM)	Service Factor	Output Torque (lb-in)	Overhung Load (lbs.)	Ratio	Number of Stages	Motor Frame Size	Catalog Number
511	28.72	30	380	3.42	2	56C	F8372106
456	28.35	33	400	3.63	2	56C	F8372107
407	26.34	37	410	4.30	2	56C	F8372108
361	25.31	42	420	4.85	2	56C	F8372109
319	24.29	47	430	5.48	2	56C	F8372110
281	22.30	54	450	6.23	2	56C	F8372111
246	19.98	62	560	7.12	2	56C	F8372112
229	18.03	66	580	7.64	2	56C	F8372113
185	24.09	82	700	9.46	2	56C	F8372114
178	12.47	66	625	9.93	2	56C	F8372115
				11.23	2	56C	F8372116
				12.76	2	56C	F8372117
				14.60	2	56C	F8372118
				15.66	2	56C	F8372119
				19.09	2	56C	F8372120
				23.80	2	56C	F8372121
				28.70	2	56C	F8372122
				32.99	2	56C	F8372123
				34.29	3	50	F8372124
				39.63	3	50	F8372125
				45.73	3	50	F8372126
41	4.89	362	960	42.73	3	56C	F8372127
38	8.61					56C	F8372128
29	3.48					56C	F8372129
25	3.01					56C	F8372130
25	5.86					56C	F8372131
23	2.79					56C	F8372132
22	5.34					56C	F8372133
21	4.97					56C	F8372134

Weight does not include oil.
Service Factor is based on maximum torque rating of reducer.
Overhung load is calculated at centerline of output shaft.



Quick Selections

F Series Parallel Shaft Drives

1750 RPM Input

This Quick Selection is only for motorized F Series Parallel Shaft Drives base mount reducers with hollow output shaft (Style FABQ). For other reducer configurations see the Maximum Rating Tables beginning on page 609.

.25 HP

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
511	28.72	30	380	3.42	2	48	56C	FABQ8372-3.42-M5	F8372103
456	28.36	33	400	3.83	2	48	56C	FABQ8372-3.83-M5	F8372104
407	26.34	37	410	4.30	2	48	56C	FABQ8372-4.30-M5	F8372105
361	25.31	42	420	4.85	2	48	56C	FABQ8372-4.85-M5	F8372106
319	24.29	47	430	5.48	2	48	56C	FABQ8372-5.48-M5	F8372107
281	22.30	54	450	6.23	2	48	56C	FABQ8372-6.23-M5	F8372108
246	19.98	62	560	7.12	2	48	56C	FABQ8372-7.12-M5	F8372109
229	18.93	66	580	7.64	2	48	56C	FABQ8372-7.64-M5	F8372110
185	24.09	82	700	9.46	2	65	56C	FABQ8472-9.46-M5	F8472083
176	17.47	86	525	9.93	2	48	56C	FABQ8372-9.93-M5	F8372111
156	17.00	97	530	11.23	2	48	56C	FABQ8372-11.23-M5	F8372112
137	15.86	110	550	12.76	2	48	56C	FABQ8372-12.76-M5	F8372113
120	14.03	126	580	14.60	2	48	56C	FABQ8372-14.60-M5	F8372114
112	13.07	135	620	15.66	2	48	56C	FABQ8372-15.66-M5	F8372115
92	10.73	165	680	19.09	2	48	56C	FABQ8372-19.09-M5	F8372116
74	8.60	206	760	23.80	2	48	56C	FABQ8372-23.08-M5	F8372117
61	7.13	248	850	28.70	2	48	56C	FABQ8372-28.70-M5	F8372118
53	6.21	285	900	32.99	2	48	56C	FABQ8372-32.99-M5	F8372119
51	6.10	290	960	34.29	3	50	56C	FABQ8373-34.29-M5	F8373067
44	5.28	335	960	39.63	3	50	56C	FABQ8373-39.63-M5	F8373068
41	4.89	362	960	42.79	3	50	56C	FABQ8373-42.79-M5	F8373069
36	8.61	411	1250	48.59	3	67	56C	FABQ8473-48.59-M5	F8473088
29	3.48	509	960	60.16	3	50	56C	FABQ8373-60.16-M5	F8373070
25	3.01	588	960	69.52	3	50	56C	FABQ8373-69.52-M5	F8373071
25	5.86	604	1250	71.40	3	67	56C	FABQ8473-71.40-M5	F8473092
23	2.79	635	960	75.07	3	50	56C	FABQ8373-75.07-M5	F8373072
22	5.34	664	1250	78.40	3	67	56C	FABQ8473-78.40-M5	F8473093
21	4.97	712	1250	84.11	3	67	56C	FABQ8473-84.11-M5	F8473094

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

F8372103 – 102868



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1/4 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TENV	56C	102868
General Purpose, C Face	208-230/460 3-PH	TENV	56C	101648
CR Rated DC Motor	90 VDC	TEFC	56C	098002
SCR Rated DC Motor	90 VDC	TEFC	56C	098003

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

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Quick Selections

F Series Parallel Shaft Drives

1750 RPM Input



This Quick Selection is only for motorized F Series Parallel Shaft Drives base mount reducers with hollow output shaft (Style FABQ). For other reducer configurations see the Maximum Rating Tables beginning on page 609.

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGARD® High Efficiency Gear Reducers

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.25 HP con't		Gear Reducer Quick Selections							
Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
21	2.45	722	960	85.34	3	50	56C	FABQ8373-85.34-M5	F8373073
19.0	2.27	780	960	92.16	3	50	56C	FABQ8373-92.16-M5	F8373074
17.2	2.05	863	960	101.94	3	50	56C	FABQ8373-101.94-M5	F8373075
17.1	4.08	868	1250	102.52	3	67	56C	FABQ8473-102.52-M5	F8473095
14.9	1.78	997	960	117.80	3	50	56C	FABQ8373-117.80-M5	F8373076
13.8	1.64	1077	960	127.21	3	50	56C	FABQ8373-127.21-M5	F8373077
13.7	3.27	1082	1250	127.79	3	67	56C	FABQ8473-127.79-M5	F8473096
11.4	2.71	1304	1250	154.12	3	67	56C	FABQ8473-154.12-M5	F8473097
9.9	2.36	1500	1250	177.15	3	67	56C	FABQ8473-177.15-M5	F8473098
9.4	4.62	1573	2050	185.82	3	98	56C	FABQ8673-185.82-M5	F8673133
8.6	4.23	1716	2050	202.75	3	98	56C	FABQ8673-202.75-M5	F8673134
7.9	3.86	1883	2050	222.50	3	98	56C	FABQ8673-222.50-M5	F8673135
6.5	5.88	2263	3300	267.36	3	148	56C	FABQ8773-267.36-M5	F8773165
6.3	3.24	2241	2050	275.81	5	126	56C	FABQ8675-275.81-M5	F8675079
5.8	5.44	2445	3300	302.64	5	183	56C	FABQ8775-302.64-M5	F8775079
5.2	4.84	2748	3300	338.43	5	183	56C	FABQ8775-338.43-M5	F8775080
4.9	2.52	2881	2050	354.30	5	126	56C	FABQ8675-354.30-M5	F8675080
4.1	2.12	3425	2050	424.65	5	126	56C	FABQ8675-424.65-M5	F8675081
3.9	3.68	3614	3300	444.42	5	183	56C	FABQ8775-444.42-M5	F8775081
3.4	3.16	4209	3300	519.18	5	183	56C	FABQ8775-519.18-M5	F8775082
3.3	1.68	4321	2050	537.33	5	126	56C	FABQ8675-537.33-M5	F8675082
2.8	1.40	5186	2050	634.64	5	126	56C	FABQ8675-634.64-M5	F8675083
2.7	2.56	5195	3300	636.89	5	183	56C	FABQ8775-636.89-M5	F8775083
2.2	2.04	6520	3300	805.67	5	183	56C	FABQ8775-805.67-M5	F8775084
2.2	1.12	6482	2050	807.73	5	126	56C	FABQ8675-807.73-M5	F8675084
1.8	1.68	7917	3300	966.32	5	183	56C	FABQ8775-966.32-M5	F8775085
1.5	1.36	9779	3300	1205.25	5	183	56C	FABQ8775-1205.25-M5	F8775086
1.2	1.12	11875	3300	1453.00	5	183	56C	FABQ8775-1453-M5	F8775087

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
F8372103 – 102868

MOTOR SELECTIONS



1/4 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TENV	56C	102868
General Purpose, C Face	208-230/460 3-PH	TENV	56C	101648
CR Rated DC Motor	90 VDC	TEFC	56C	098002
SCR Rated DC Motor	90 VDC	TEFC	56C	098003



Quick Selections

F Series Parallel Shaft Drives

1750 RPM Input

This Quick Selection is only for motorized F Series Parallel Shaft Drives base mount reducers with hollow output shaft (Style FABQ). For other reducer configurations see the Maximum Rating Tables beginning on page 609.

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

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.33 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor ▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
511	21.56	39	380	3.42	2	48	56C	FABQ8372-3.42-M5	F8372103
456	21.29	44	400	3.83	2	48	56C	FABQ8372-3.83-M5	F8372104
407	19.78	50	410	4.30	2	48	56C	FABQ8372-4.30-M5	F8372105
361	19.00	56	420	4.85	2	48	56C	FABQ8372-4.85-M5	F8372106
319	18.23	63	430	5.48	2	48	56C	FABQ8372-5.48-M5	F8372107
281	16.74	72	450	6.23	2	48	56C	FABQ8372-6.23-M5	F8372108
246	15.00	82	560	7.12	2	48	56C	FABQ8372-7.12-M5	F8372109
229	14.21	88	580	7.64	2	48	56C	FABQ8372-7.64-M5	F8372110
185	18.08	109	700	9.46	2	65	56C	FABQ8472-9.46-M5	F8472083
176	13.11	114	525	9.93	2	48	56C	FABQ8372-9.93-M5	F8372111
156	12.76	129	530	11.23	2	48	56C	FABQ8372-11.23-M5	F8372112
137	11.91	147	550	12.76	2	48	56C	FABQ8372-12.76-M5	F8372113
120	10.53	1678	580	14.60	2	48	56C	FABQ8372-14.60-M5	F8372114
112	9.81	180	620	15.66	2	48	56C	FABQ8372-15.66-M5	F8372115
92	8.05	220	680	19.09	2	48	56C	FABQ8372-19.09-M5	F8372116
74	6.46	274	760	23.80	2	48	56C	FABQ8372-23.08-M5	F8372117
61	5.36	330	850	28.70	2	48	56C	FABQ8372-28.70-M5	F8372118
53	4.66	380	900	32.99	2	48	56C	FABQ8372-32.99-M5	F8372119
51	4.58	387	960	34.29	3	50	56C	FABQ8373-34.29-M5	F8373067
44	3.96	447	960	39.63	3	50	56C	FABQ8373-39.63-M5	F8373068
41	3.67	482	960	42.79	3	50	56C	FABQ8373-42.79-M5	F8373069
36	6.46	548	1250	48.59	3	67	56C	FABQ8473-48.59-M5	F8473088
29	2.61	578	960	60.16	3	50	56C	FABQ8373-60.16-M5	F8373070
26	4.58	773	1250	68.53	3	69	56C	FABQ8473-68.53-M5	F8473091
25	2.26	784	960	69.52	3	52	56C	FABQ8373-69.52-M5	F8373071
25	4.40	805	1250	71.40	3	69	56C	FABQ8473-71.40-M5	F8473092
23	2.09	846	960	75.07	3	52	56C	FABQ8373-75.07-M5	F8373072
22	4.01	884	1250	78.40	3	69	56C	FABQ8473-78.40-M5	F8473093

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1/3 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TENV	56C	102867
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	101769
WATTS-AVER® Premium Efficiency Motor	208-230/460	TEFC	56C	102696
SCR Rated DC Motor	90 VDC	TEFC	56C	098004
SCR Rated DC Motor	180 VDC	TEFC	56C	098005

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

F8372103 – 102867

Quick Selections

F Series Parallel Shaft Drives

1750 RPM Input



This Quick Selection is only for motorized F Series Parallel Shaft Drives base mount reducers with hollow output shaft (Style FABQ). For other reducer configurations see the Maximum Rating Tables beginning on page 609.

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

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.33 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
21	3.73	948	1250	84.11	3	69	56C	FABQ8473-84.11-M5	F8473094
21	1.84	962	960	85.34	3	52	56C	FABQ8373-85.34-M5	F8373073
19.0	1.70	1039	960	92.16	3	52	56C	FABQ8373-92.16-M5	F8373074
17.2	1.54	1149	960	101.94	3	52	56C	FABQ8373-101.94-M5	F8373075
17.1	3.06	1156	1250	102.52	3	69	56C	FABQ8473-102.52-M5	F8473095
14.9	1.33	1328	960	117.80	3	52	56C	FABQ8373-117.80-M5	F8373076
13.8	1.23	1434	960	127.21	3	52	56C	FABQ8373-127.21-M5	F8373077
13.7	2.46	1441	1250	127.79	3	69	56C	FABQ8473-127.79-M5	F8473096
12.8	4.70	1544	2050	136.92	3	100	56C	FABQ8673-136.92-M5	F8673130
11.9	4.38	1657	2050	146.99	3	100	56C	FABQ8673-146.99-M5	F8673131
11.4	2.04	1737	1250	154.12	3	69	56C	FABQ8473-154.12-M5	F8473097
10.2	3.76	1929	2050	171.15	3	100	56C	FABQ8473-154.12-M5	F8473097
9.9	1.77	1998	1250	177.15	3	69	56C	FABQ8473-177.15-M5	F8473098
9.4	3.47	2095	2050	185.82	3	100	56C	FABQ8673-185.82-M5	F8673133
7.9	2.89	2508	2050	222.50	3	100	56C	FABQ8673-222.50-M5	F8673135
6.5	4.41	3014	3300	267.36	3	151	56C	FABQ8773-267.36-M5	F8773165
6.3	2.43	2985	2050	275.81	5	128	56C	FABQ8675-275.81-M5	F8675079
5.8	4.08	3257	3300	302.64	5	186	56C	FABQ8775-302.64-M5	F8775079
5.2	3.63	3660	3300	338.43	5	186	56C	FABQ8775-338.43-M5	F8775080
4.9	1.89	3837	2050	354.30	5	128	56C	FABQ8675-354.30-M5	F8675080
4.1	1.59	4561	2050	424.65	5	128	56C	FABQ8675-424.65-M5	F8675081
3.9	2.76	4814	3300	444.42	5	186	56C	FABQ8775-444.42-M5	F8775081
3.4	2.37	5606	3300	519.18	5	186	56C	FABQ8775-519.18-M5	F8775082
3.3	1.26	5756	2050	537.33	5	128	56C	FABQ8675-537.33-M5	F8675082
2.8	1.05	6907	2050	634.64	5	128	56C	FABQ8675-634.64-M5	F8675083
2.7	1.92	6920	3300	636.89	5	186	56C	FABQ8775-636.89-M5	F8775083
2.2	1.53	8684	3300	805.67	5	186	56C	FABQ8775-805.67-M5	F8775084
1.8	1.26	10545	3300	966.32	5	186	56C	FABQ8775-966.32-M5	F8775085
1.5	1.02	13026	3300	1205.25	5	186	56C	FABQ8775-1205.25-M5	F8775086

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

F8372103 – 102867



STOCK GEAR+MOTOR™

MOTOR SELECTIONS



1/3 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TENV	56C	102867
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	101769
WATTSaver® Premium Efficiency Motor	208-230/460	TEFC	56C	102696
SCR Rated DC Motor	90 VDC	TEFC	56C	098004
SCR Rated DC Motor	180 VDC	TEFC	56C	098005



Quick Selections

F Series Parallel Shaft Drives

1750 RPM Input

This Quick Selection is only for motorized F Series Parallel Shaft Drives base mount reducers with hollow output shaft (Style FABQ). For other reducer configurations see the Maximum Rating Tables beginning on page 609.

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

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.50 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
511	14.36	59	380	3.42	2	48	56C	FABQ8372-3.42-M5	F8372103
456	14.18	66	400	3.83	2	48	56C	FABQ8372-3.83-M5	F8372104
407	13.17	74	410	4.30	2	48	56C	FABQ8372-4.30-M5	F8372105
361	12.65	84	420	4.85	2	48	56C	FABQ8372-4.85-M5	F8372106
319	12.14	95	430	5.48	2	48	56C	FABQ8372-5.48-M5	F8372107
281	11.15	108	450	6.23	2	48	56C	FABQ8372-6.23-M5	F8372108
246	9.99	123	560	7.12	2	48	56C	FABQ8372-7.12-M5	F8372109
229	9.46	132	580	7.64	2	48	56C	FABQ8372-7.64-M5	F8372110
185	12.04	164	700	9.46	2	65	56C	FABQ8472-9.46-M5	F8472083
176	8.73	172	525	9.93	2	48	56C	FABQ8372-9.93-M5	F8372111
156	8.50	194	530	11.23	2	48	56C	FABQ8372-11.23-M5	F8372112
137	7.93	221	550	12.76	2	48	56C	FABQ8372-12.76-M5	F8372113
120	7.01	252	580	14.60	2	48	56C	FABQ8372-14.60-M5	F8372114
112	6.54	271	620	15.66	2	48	56C	FABQ8372-15.66-M5	F8372115
92	5.36	330	680	19.09	2	48	56C	FABQ8372-19.09-M5	F8372116
74	4.30	411	760	23.80	2	48	56C	FABQ8372-23.08-M5	F8372117
61	3.57	496	850	28.70	2	48	56C	FABQ8372-28.70-M5	F8372118
53	3.10	570	900	32.99	2	48	56C	FABQ8372-32.99-M5	F8372119
51	3.05	580	960	34.29	3	50	56C	FABQ8373-34.29-M5	F8373067
44	2.64	671	960	39.63	3	50	56C	FABQ8373-39.63-M5	F8373068
41	2.44	724	960	42.79	3	50	56C	FABQ8373-42.79-M5	F8373069
41	4.85	730	1250	43.15	3	67	56C	FABQ8473-43.15-M5	F8473087
36	4.30	822	1250	48.59	3	67	56C	FABQ8473-48.59-M5	F8473088
32	3.81	930	1250	54.92	3	67	56C	FABQ8473-54.92-M5	F8473089
29	1.74	1018	960	60.16	3	50	56C	FABQ8373-60.16-M5	F8373070
28	3.35	1056	1250	62.41	3	67	56C	FABQ8473-62.41-M5	F8473090
26	3.05	1160	1250	68.53	3	67	56C	FABQ8473-68.53-M5	F8473091
25	1.50	1177	960	69.52	3	50	56C	FABQ8373-69.52-M5	F8373071
25	2.93	1209	1250	71.40	3	67	56C	FABQ8473-71.40-M5	F8473092
23	1.39	1271	960	75.07	3	50	56C	FABQ8373-75.07-M5	F8373072
22	2.67	1327	1250	78.40	3	67	56C	FABQ8473-78.40-M5	F8473093
21	2.49	1424	1250	84.11	3	67	56C	FABQ8473-84.11-M5	F8473094

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
F8372103 – 102862



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1/2 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	102862
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	102860
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	101780
575 Volt Motor	575 3-PH	TENV	56C	110176
SCR Rated DC Motor	90 VDC	TEFC	56C	098000
SCR Rated DC Motor	180 VDC	TEFC	56C	098008

Quick Selections

F Series Parallel Shaft Drives

1750 RPM Input



This Quick Selection is only for motorized F Series Parallel Shaft Drives base mount reducers with hollow output shaft (Style FABQ). For other reducer configurations see the Maximum Rating Tables beginning on page 609.

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

.50 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
21	1.23	1444	960	85.34	3	50	56C	FABQ8373-85.34-M5	F8373073
19.0	1.13	1560	960	92.16	3	50	56C	FABQ8373-92.16-M5	F8373074
18.8	4.60	1577	2050	93.17	3	98	56C	FABQ8673-93.17-M5	F8673126
17.2	1.03	1726	960	101.94	3	50	56C	FABQ8373-101.94-M5	F8373075
17.1	2.04	1735	1250	102.52	3	67	56C	FABQ8473-102.52-M5	F8473095
16.4	4.03	1802	2050	106.48	3	98	56C	FABQ8673-106.48-M5	F8673127
15.6	3.81	1904	2050	112.47	3	98	56C	FABQ8673-112.47-M5	F8673128
14.6	3.58	2028	2050	119.81	3	98	56C	FABQ8673-119.81-M5	F8673129
13.7	1.64	2163	1250	127.79	3	67	56C	FABQ8473-127.79-M5	F8473096
12.8	3.13	2318	2050	136.92	3	98	56C	FABQ8673-136.92-M5	F8673130
11.9	2.92	2488	2050	146.99	3	67	56C	FABQ8673-146.99-M5	F8673131
11.4	1.36	2609	1250	154.12	3	67	56C	FABQ8473-154.12-M5	F8473097
10.2	2.51	2897	2050	171.15	3	98	56C	FABQ8673-171.15-M5	F8673132
9.9	1.18	3000	1250	177.15	3	67	56C	FABQ8473-177.15-M5	F8473098
9.4	2.31	3145	2050	185.82	3	98	56C	FABQ8673-185.82-M5	F8673133
8.6	2.12	3432	2050	202.75	3	98	56C	FABQ8673-202.75-M5	F8673134
8.1	3.64	3653	3300	215.84	3	148	56C	FABQ8773-215.84-M5	F8773164
7.9	1.93	3766	2050	222.50	3	98	56C	FABQ8673-222.50-M5	F8673135
6.5	2.94	4526	3300	267.36	3	148	56C	FABQ8773-267.36-M5	F8773165
6.3	1.62	4481	2050	275.81	5	98	56C	FABQ8675-275.81-M5	F8675079
5.8	2.72	4890	3300	302.64	5	183	56C	FABQ8775-302.64-M5	F8775079
5.2	2.42	5496	3300	338.43	5	183	56C	FABQ8775-338.43-M5	F8775080
4.9	1.26	5762	2050	354.30	5	98	56C	FABQ8675-354.30-M5	F8675080
4.1	1.06	6849	2050	424.65	5	126	56C	FABQ8675-424.65-M5	F8675081
3.9	1.84	7228	3300	444.42	5	183	56C	FABQ8775-444.42-M5	F8775081
3.4	1.58	8418	3300	519.18	5	183	56C	FABQ8775-519.18-M5	F8775082
2.7	1.28	10391	3300	636.89	5	183	56C	FABQ8775-636.89-M5	F8775083
2.2	1.02	13039	3300	805.67	5	183	56C	FABQ8775-805.67-M5	F8775084

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1/2 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	102862
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	102860
WATSAVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	101780
575 Volt Motor	575 3-PH	TENV	56C	110176
SCR Rated DC Motor	90 VDC	TEFC	56C	098000
SCR Rated DC Motor	180 VDC	TEFC	56C	098008

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

F8372103 – 102862



Quick Selections

F Series Parallel Shaft Drives

1750 RPM Input

This Quick Selection is only for motorized F Series Parallel Shaft Drives base mount reducers with hollow output shaft (Style FABQ). For other reducer configurations see the Maximum Rating Tables beginning on page 609.

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

.75 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
511	3.42	89	380	3.42	2	48	56C	FABQ8372-3.42-M5	F8372103
456	3.83	99	400	3.83	2	48	56C	FABQ8372-3.83-M5	F8372104
407	4.3	112	410	4.30	2	48	56C	FABQ8372-4.30-M5	F8372105
361	4.85	126	420	4.85	2	48	56C	FABQ8372-4.85-M5	F8372106
319	5.48	142	430	5.48	2	48	56C	FABQ8372-5.48-M5	F8372107
281	6.23	161	450	6.23	2	48	56C	FABQ8372-6.23-M5	F8372108
246	7.12	185	560	7.12	2	48	56C	FABQ8372-7.12-M5	F8372109
229	7.64	198	580	7.64	2	48	56C	FABQ8372-7.64-M5	F8372110
185	9.46	245	700	9.46	2	65	56C	FABQ8472-9.46-M5	F8472083
176	9.93	258	525	9.93	2	48	56C	FABQ8372-9.93-M5	F8372111
156	11.23	291	530	11.23	2	48	56C	FABQ8372-11.23-M5	F8372112
137	12.76	331	550	12.76	2	48	56C	FABQ8372-12.76-M5	F8372113
120	14.6	379	580	14.60	2	48	56C	FABQ8372-14.60-M5	F8372114
112	15.66	406	620	15.66	2	48	56C	FABQ8372-15.66-M5	F8372115
92	19.09	495	680	19.09	2	48	56C	FABQ8372-19.09-M5	F8372116
74	8.60	617	760	23.80	2	48	56C	FABQ8372-23.08-M5	F8372117
63	4.92	719	1100	27.75	2	67	56C	FABQ8472-27.75-M5	F8472090
61	2.38	744	850	28.70	2	50	56C	FABQ8372-28.70-M5	F8372118
54	4.23	838	1200	32.31	2	67	56C	FABQ8472-32.31-M5	F8472091
53	2.07	855	900	32.99	2	50	56C	FABQ8372-32.99-M5	F8372119
51	2.03	871	960	34.29	3	69	56C	FABQ8373-34.29-M5	F8373067
51	4.06	872	1200	34.33	3	69	56C	FABQ8473-34.33-M5	F8473085
46	3.63	976	1250	38.45	3	69	56C	FABQ8473-38.45-M5	F8473086
44	1.76	1006	960	39.63	3	52	56C	FABQ8373-39.63-M5	F8373068
41	1.63	1087	960	42.79	3	52	56C	FABQ8373-42.79-M5	F8373069
41	3.23	1096	1250	43.15	3	69	56C	FABQ8473-43.15-M5	F8473087
36	2.87	1234	1250	48.59	3	69	56C	FABQ8473-48.59-M5	F8473088
32	2.54	1395	1250	54.92	3	69	56C	FABQ8473-54.92-M5	F8473089
29	1.16	1527	960	60.16	3	52	56C	FABQ8373-60.16-M5	F8373070
28	2.23	1585	1250	62.41	3	69	56C	FABQ8473-62.41-M5	F8473090
26	2.03	1740	1250	68.53	3	69	56C	FABQ8473-68.53-M5	F8473091
25	1.00	1765	960	69.52	3	52	56C	FABQ8373-69.52-M5	F8373071

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
F8372103 – 110057



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



3/4 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	110057
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	110047
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	114213
575 Volt Motor	575 3-PH	TEFC	56C	110177
SCR Rated DC Motor	90 VDC	TEFC	56C	098032
SCR Rated DC Motor	180 VDC	TEFC	56C	098069

Quick Selections

F Series Parallel Shaft Drives

1750 RPM Input



High Efficiency Helical - Bevel Gear Reducers

This Quick Selection is only for motorized F Series Parallel Shaft Drives base mount reducers with hollow output shaft (Style FABQ). For other reducer configurations see the Maximum Rating Tables beginning on page 609.

.75 HP con't									
Gear Reducer Quick Selections									
Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
25	1.95	1813	1250	71.40	3	69	56C	FABQ8473-71.40-M5	F8473092
24	3.91	1859	2050	73.21	3	100	56C	FABQ8673-73.21-M5	F8673124
22	1.78	1991	1250	78.40	3	69	56C	FABQ8473-78.40-M5	F8473093
21	1.66	2136	1250	84.11	3	69	56C	FABQ8473-84.11-M5	F8473094
20	3.27	2221	2050	87.47	3	100	56C	FABQ8673-87.47-M5	F8673125
18.8	3.07	2366	2050	93.17	3	100	56C	FABQ8673-93.17-M5	F8673126
17.1	1.36	2603	1250	102.52	3	69	56C	FABQ8473-102.52-M5	F8473095
16.4	2.69	2704	2050	106.48	3	100	56C	FABQ8673-106.48-M5	F8673127
15.6	2.54	2856	2050	112.47	3	100	56C	FABQ8673-112.47-M5	F8673128
14.6	2.39	3042	2050	119.81	3	100	56C	FABQ8673-119.81-M5	F8673129
13.7	1.09	3245	1250	127.79	3	69	56C	FABQ8473-127.79-M5	F8473096
12.8	2.09	3476	2050	136.92	3	100	56C	FABQ8673-136.92-M5	F8673130
11.9	1.95	3732	2050	146.99	3	100	56C	FABQ8673-146.99-M5	F8673131
11.6	3.46	3845	3300	151.44	3	151	56C	FABQ8773-151.44-M5	F8773162
10.2	1.67	4346	2050	171.15	3	100	56C	FABQ8673-171.15-M5	F8673132
9.8	2.93	4546	3300	179.04	3	151	56C	FABQ8773-179.04-M5	F8773163
9.4	1.54	4718	2050	185.82	3	100	56C	FABQ8673-185.82-M5	F8673133
8.6	1.41	5148	2050	202.75	3	100	56C	FABQ8673-202.75-M5	F8673134
8.1	2.43	5480	3300	215.84	3	151	56C	FABQ8773-215.84-M5	F8773164
7.9	1.29	5649	2050	222.50	3	100	56C	FABQ8673-222.50-M5	F8673135
6.5	1.96	6788	3300	267.36	3	151	56C	FABQ8773-267.36-M5	F8773165
6.3	1.08	6722	2050	275.81	5	128	56C	FABQ8675-275.81-M5	F8675079
5.8	1.81	7335	3300	302.64	5	186	56C	FABQ8775-302.64-M5	F8775079
5.2	1.61	8244	3300	338.43	5	186	56C	FABQ8775-338.43-M5	F8775080
3.9	1.23	10842	3300	444.42	5	186	56C	FABQ8775-444.42-M5	F8775081
3.4	1.05	12627	3300	519.18	5	186	56C	FABQ8775-519.18-M5	F8775082
511	7.18	118	380	3.42	2	50	56C	FABQ8372-3.42-M5	F8372103
456	7.09	133	400	3.83	2	50	56C	FABQ8372-3.83-M5	F8372104
407	6.59	149	410	4.30	2	50	56C	FABQ8372-4.30-M5	F8372105
361	6.33	168	420	4.85	2	50	56C	FABQ8372-4.85-M5	F8372106
319	6.07	189	430	5.48	2	50	56C	FABQ8372-5.48-M5	F8372107

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
F8372103 – 110057



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



3/4 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	110057
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	110047
WATSAVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	114213
575 Volt Motor	575 3-PH	TEFC	56C	110177
SCR Rated DC Motor	90 VDC	TEFC	56C	098032
SCR Rated DC Motor	180 VDC	TEFC	56C	098069



Quick Selections

F Series Parallel Shaft Drives

1750 RPM Input

This Quick Selection is only for motorized F Series Parallel Shaft Drives base mount reducers with hollow output shaft (Style FABQ). For other reducer configurations see the Maximum Rating Tables beginning on page 609.

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

1.0 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
511	7.18	118	380	3.42	2	50	56C	FABQ8372-3.42-M5	F8372103
456	7.09	133	400	3.83	2	50	56C	FABQ8372-3.83-M5	F8372104
407	6.59	149	410	4.30	2	50	56C	FABQ8372-4.30-M5	F8372105
361	6.33	168	420	4.85	2	50	56C	FABQ8372-4.85-M5	F8372106
319	6.07	189	430	5.48	2	50	56C	FABQ8372-5.48-M5	F8372107
281	5.58	215	450	6.23	2	50	56C	FABQ8372-6.23-M5	F8372108
246	5.00	246	560	7.12	2	50	56C	FABQ8372-7.12-M5	F8372109
229	4.73	264	580	7.64	2	50	56C	FABQ8372-7.64-M5	F8372110
185	6.02	327	700	9.46	2	67	56C	FABQ8472-9.46-M5	F8472083
176	4.37	343	525	9.93	2	50	56C	FABQ8372-9.93-M5	F8372111
156	4.25	388	530	11.23	2	50	56C	FABQ8372-11.23-M5	F8372112
137	3.97	441	550	12.76	2	50	56C	FABQ8372-12.76-M5	F8372113
120	3.51	505	580	14.60	2	50	56C	FABQ8372-14.60-M5	F8372114
112	3.27	542	620	15.66	2	50	56C	FABQ8372-15.66-M5	F8372115
92	2.68	660	680	19.09	2	50	56C	FABQ8372-19.09-M5	F8372116
82	4.82	734	930	21.23	2	67	56C	FABQ8472-21.23-M5	F8472087
77	4.53	782	930	22.62	2	67	56C	FABQ8472-22.62-M5	F8472088
74	2.15	823	760	23.80	2	50	56C	FABQ8372-23.08-M5	F8372117
68	3.96	894	1050	25.85	2	67	56C	FABQ8472-25.85-M5	F8472089
63	3.69	959	1100	27.75	2	67	56C	FABQ8472-27.75-M5	F8472090
61	1.78	992	850	28.70	2	50	56C	FABQ8372-28.70-M5	F8372118
54	3.17	1117	1200	32.31	2	67	56C	FABQ8472-32.31-M5	F8472091
53	1.55	1141	900	32.99	2	50	56C	FABQ8372-32.99-M5	F8372119
51	1.52	1161	960	34.29	3	50	56C	FABQ8373-34.29-M5	F8373067
51	3.05	1162	1200	34.33	3	69	56C	FABQ8473-34.33-M5	F8473085
46	2.72	1302	1250	38.45	3	69	56C	FABQ8473-38.45-M5	F8473086
44	1.32	1342	960	39.63	3	52	56C	FABQ8373-39.63-M5	F8373068
41	1.22	1449	960	42.79	3	52	56C	FABQ8373-42.79-M5	F8373069

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
F8372103 – 110058



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	110058
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	110048
WATTS AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	1144638
575 Volt Motor	575 3-PH	TEFC	56C	110204
SCR Rated DC Motor	90 VDC	TEFC	56C	108022
SCR Rated DC Motor	180 VDC	TEFC	56C	108023

Quick Selections

F Series Parallel Shaft Drives

1750 RPM Input



This Quick Selection is only for motorized F Series Parallel Shaft Drives base mount reducers with hollow output shaft (Style FABQ). For other reducer configurations see the Maximum Rating Tables beginning on page 609.

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

1.0 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
41	2.42	1461	1250	43.15	3	69	56C	FABQ8473-43.15-M5	F8473087
36	4.29	1633	2050	48.25	3	100	56C	FABQ8673-48.25-M5	F8673122
36	2.15	1645	1250	48.59	3	69	56C	FABQ8473-48.59-M5	F8473088
32	1.90	1859	1250	54.92	3	69	56C	FABQ8473-54.92-M5	F8473089
31	3.83	1896	2050	55.99	3	100	56C	FABQ8673-55.99-M5	F8673123
28	1.68	2113	1250	62.41	3	69	56C	FABQ8473-62.41-M5	F8473090
26	1.53	2320	1250	68.53	3	69	56C	FABQ8473-68.53-M5	F8473091
25	1.46	2417	1250	71.40	3	69	56C	FABQ8473-71.40-M5	F8473092
24	2.93	2478	2050	73.21	3	100	56C	FABQ8673-73.21-M5	F8673124
22	1.33	2654	1250	78.40	3	69	56C	FABQ8473-78.40-M5	F8473093
21	1.24	2848	1250	84.11	3	69	56C	FABQ8473-84.11-M5	F8473094
20	2.45	2961	2050	87.47	3	100	56C	FABQ8673-87.47-M5	F8673125
18.8	2.30	3154	2050	93.17	3	100	56C	FABQ8673-93.17-M5	F8673126
17.1	1.02	3471	1250	102.52	3	69	56C	FABQ8473-102.52-M5	F8473095
16.4	2.01	3605	2050	106.48	3	100	56C	FABQ8673-106.48-M5	F8673127
16.2	3.64	3650	3300	107.81	3	151	56C	FABQ8773-107.81-M5	F8773161
15.6	1.91	3808	2050	112.47	3	100	56C	FABQ8673-112.47-M5	F8673128
14.6	1.79	4056	2050	119.81	3	100	56C	FABQ8673-119.81-M5	F8673129
12.8	1.57	4635	2050	136.92	3	100	56C	FABQ8673-136.92-M5	F8673130
11.9	1.46	4976	2050	146.99	3	100	56C	FABQ8673-146.99-M5	F8673131
11.6	2.59	5127	3300	151.44	3	151	56C	FABQ8773-151.44-M5	F8773162
10.2	1.25	5794	2050	171.15	3	100	56C	FABQ8673-171.15-M5	F8673132
9.8	2.19	6061	3300	179.04	3	151	56C	FABQ8773-179.04-M5	F8773163
9.4	1.15	6291	2050	185.82	3	100	56C	FABQ8673-185.82-M5	F8673133
8.6	1.06	6864	2050	202.75	3	100	56C	FABQ8673-202.75-M5	F8673134
8.1	1.82	7307	3300	215.84	3	151	56C	FABQ8773-215.84-M5	F8773164
6.5	1.47	9051	3300	267.36	3	151	56C	FABQ8773-267.36-M5	F8773165
5.8	1.36	9779	3300	302.64	5	186	56C	FABQ8775-302.64-M5	F8775079
5.2	1.21	10992	3300	338.43	5	186	56C	FABQ8775-338.43-M5	F8775080

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	110058
General Purpose, C Face	208-230/460 3-PH	TEFC	56C	110048
WATTS-AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	1144638
575 Volt Motor	575 3-PH	TEFC	56C	110204
SCR Rated DC Motor	90 VDC	TEFC	56C	108022
SCR Rated DC Motor	180 VDC	TEFC	56C	108023

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

F8372103 – 110058



Quick Selections

F Series Parallel Shaft Drives

1750 RPM Input

This Quick Selection is only for motorized F Series Parallel Shaft Drives base mount reducers with hollow output shaft (Style FABQ). For other reducer configurations see the Maximum Rating Tables beginning on page 609.

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

1.5 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
511	4.79	178	380	3.42	2	50	56C	FABQ8372-3.42-M5	F8372103
456	4.73	199	400	3.83	2	50	56C	FABQ8372-3.83-M5	F8372104
407	4.39	223	410	4.30	2	50	56C	FABQ8372-4.30-M5	F8372105
361	4.22	251	420	4.85	2	50	56C	FABQ8372-4.85-M5	F8372106
319	4.05	284	430	5.48	2	50	56C	FABQ8372-5.48-M5	F8372107
281	3.72	323	450	6.23	2	50	56C	FABQ8372-6.23-M5	F8372108
246	3.33	369	560	7.12	2	50	56C	FABQ8372-7.12-M5	F8372109
229	3.15	396	580	7.64	2	50	56C	FABQ8372-7.64-M5	F8372110
185	4.01	491	700	9.46	2	67	56C	FABQ8472-9.46-M5	F8472083
176	2.91	515	525	9.93	2	50	56C	FABQ8372-9.93-M5	F8372111
156	2.83	582	530	11.23	2	50	56C	FABQ8372-11.23-M5	F8372112
137	2.64	662	550	12.76	2	50	56C	FABQ8372-12.76-M5	F8372113
129	5.02	705	770	13.59	2	67	56C	FABQ8472-13.59-M5	F8472085
120	2.34	757	580	14.60	2	50	56C	FABQ8372-14.60-M5	F8372114
112	2.18	812	620	15.66	2	50	56C	FABQ8372-15.66-M5	F8372115
98	3.84	922	830	17.77	2	67	56C	FABQ8472-17.77-M5	F8472086
92	1.79	990	680	19.09	2	50	56C	FABQ8372-19.09-M5	F8372116
82	3.22	1101	930	21.23	2	67	56C	FABQ8472-21.23-M5	F8472087
77	3.02	1173	930	22.62	2	67	56C	FABQ8472-22.62-M5	F8472088
74	1.43	1234	760	23.80	2	50	56C	FABQ8372-23.08-M5	F8372117
68	2.64	1340	1050	25.85	2	67	56C	FABQ8472-25.85-M5	F8472089
64	4.52	1413	2050	27.24	2	97	56C	F8Q8672-27.24-M5	F8672016
63	2.46	1439	1100	27.75	2	67	56C	FABQ8472-27.75-M5	F8472090
61	1.19	1488	850	28.70	2	50	56C	FABQ8372-28.70-M5	F8372118
54	2.11	1675	1200	32.31	2	67	56C	FABQ8472-32.31-M5	F8472091
53	3.90	1703	2050	32.85	2	97	56C	FABQ8672-32.85-M5	F8672153
53	1.03	1711	900	32.99	2	50	56C	FABQ8372-32.99-M5	F8372119
51	1.02	1741	960	34.29	3	52	56C	FABQ8373-34.29-M5	F8373067

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1.5 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	110420
General Purpose, C Face	208-230/460 3-PH	TEFC	140TC	120037
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	116743
575 Volt Motor	575 3-PH	TEFC	56C	111444
SCR Rated DC Motor	180 VDC	TEFC	56C	108092

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

F8372103 – 110420

Quick Selections

F Series Parallel Shaft Drives

1750 RPM Input



This Quick Selection is only for motorized F Series Parallel Shaft Drives base mount reducers with hollow output shaft (Style FABQ). For other reducer configurations see the Maximum Rating Tables beginning on page 609.

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGWARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

1.5 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
51	2.03	1743	1200	34.33	3	69	56C	FABQ8473-34.33-M5	F8473085
46	3.46	1936	2050	38.13	3	100	56C	FABQ8673-38.13-M5	F8673121
46	1.81	1952	1250	38.45	3	69	56C	FABQ8473-38.45-M5	F8473086
41	1.62	2191	1250	43.15	3	69	56C	FABQ8473-43.15-M5	F8473087
36	2.86	2450	2050	48.25	3	100	56C	FABQ8673-48.25-M5	F8673122
36	1.43	2467	1250	48.59	3	69	56C	FABQ8473-48.59-M5	F8473088
32	1.27	2789	1250	54.92	3	69	56C	FABQ8473-54.92-M5	F8473089
31	2.55	2843	2050	55.99	3	100	56C	FABQ8673-55.99-M5	F8673123
28	1.12	3169	1250	62.41	3	69	56C	FABQ8473-62.41-M5	F8473090
26	1.02	3480	1250	68.53	3	69	56C	FABQ8473-68.53-M5	F8473091
25	3.73	3569	3300	70.28	3	100	56C	FABQ8773-70.28-M5	F8773157
24	1.95	3717	2050	73.21	3	100	56C	FABQ8673-73.21-M5	F8673124
23	3.40	3916	3300	77.12	3	151	56C	FABQ8773-77.12-M5	F8773158
21	3.13	4243	3300	83.55	3	151	56C	FABQ8773-83.55-M5	F8773159
20	1.63	4442	2050	87.47	3	100	56C	FABQ8673-87.47-M5	F8673125
18.8	1.53	4731	2050	93.17	3	100	56C	FABQ8673-93.17-M5	F8673126
18.5	2.77	4804	3300	94.61	3	151	56C	FABQ8773-94.61-M5	F8773160
16.4	1.34	5407	2050	106.48	3	100	56C	FABQ8673-106.48-M5	F8673127
16.2	2.43	5474	3300	107.81	3	151	56C	FABQ8773-107.81-M5	F8773161
15.6	1.27	5711	2050	112.47	3	100	56C	FABQ8673-112.47-M5	F8673128
14.6	1.19	6084	2050	119.81	3	100	56C	FABQ8673-119.81-M5	F8673129
12.8	1.04	6953	2050	136.92	3	100	56C	FABQ8673-136.92-M5	F8673130
11.6	1.73	7690	3300	151.44	3	151	56C	FABQ8773-151.44-M5	F8773162
9.8	1.46	9092	3300	179.04	3	151	56C	FABQ8773-179.04-M5	F8773163
8.1	1.21	10960	3300	215.84	3	151	56C	FABQ8773-215.84-M5	F8773164

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



1.5 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	110420
General Purpose, C Face	208-230/460 3-PH	TEFC	140TC	120037
WATSAVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	56C	116743
575 Volt Motor	575 3-PH	TEFC	56C	111444
SCR Rated DC Motor	180 VDC	TEFC	56C	108092

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

F8372103 – 110420



Quick Selections

F Series Parallel Shaft Drives

1750 RPM Input

This Quick Selection is only for motorized F Series Parallel Shaft Drives base mount reducers with hollow output shaft (Style FABQ). For other reducer configurations see the Maximum Rating Tables beginning on page 609.

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

2.0 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
511	3.59	237	380	3.42	2	50	140TC	FABQ8372-3.42-M7	F8372120
456	3.54	265	400	3.83	2	50	140TC	FABQ8372-3.83-M7	F8372121
424	4.49	285	650	4.13	2	67	140TC	FABQ8472-4.13-M7	F8472092
407	3.29	298	410	4.30	2	50	140TC	FABQ8372-4.30-M7	F8372122
361	3.16	335	420	4.85	2	50	140TC	FABQ8372-4.85-M7	F8372123
335	4.16	361	650	5.22	2	67	140TC	FABQ8472-5.22-M7	F8472093
319	3.04	379	430	5.48	2	50	140TC	FABQ8372-5.48-M7	F8372124
289	3.94	419	650	6.06	2	67	140TC	FABQ8472-6.06-M7	F8472094
281	2.79	430	450	6.23	2	50	140TC	FABQ8372-6.23-M7	F8372125
246	2.50	492	560	7.12	2	50	140TC	FABQ8372-7.12-M7	F8372126
229	2.37	528	580	7.64	2	50	140TC	FABQ8372-7.64-M7	F8372127
221	3.51	548	650	7.92	2	67	140TC	FABQ8472-7.92-M7	F8472095
185	3.01	654	700	9.46	2	67	140TC	FABQ8472-9.46-M7	F8472096
176	2.18	687	525	9.93	2	50	140TC	FABQ8372-9.93-M7	F8372128
156	2.12	777	530	11.23	2	50	140TC	FABQ8372-11.23-M7	F8372129
149	4.37	810	800	11.71	2	67	140TC	FABQ8472-11.71-M7	F8472097
137	1.98	882	550	12.76	2	50	140TC	FABQ8372-12.76-M7	F8372130
129	3.77	940	770	13.59	2	67	140TC	FABQ8472-13.59-M7	F8472098
120	1.75	1010	580	14.60	2	50	140TC	FABQ8372-14.60-M7	F8372131
112	1.63	1083	620	15.66	2	50	140TC	FABQ8372-15.66-M7	F8372132
107	4.84	1134	2050	16.41	2	97	140TC	FABQ8672-16.41-M7	F8672167
98	2.88	1229	830	17.77	2	67	140TC	FABQ8472-17.77-M7	F8472099
92	1.34	1320	680	19.09	2	50	140TC	FABQ8372-19.09-M7	F8372133
82	2.41	1468	930	21.23	2	67	140TC	FABQ8472-21.23-M7	F8472100
77	2.26	1564	930	22.62	2	67	140TC	FABQ8472-22.62-M7	F8472101
76	3.77	1593	2050	23.04	2	97	140TC	FABQ8672-23.04-M7	F8672168
74	1.08	1646	760	23.80	2	50	140TC	FABQ8372-23.80-M7	F8372134
68	1.98	1787	1050	25.85	2	67	140TC	FABQ8472-25.85-M7	F8472102

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
F8372120 – 112136



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MOTOR SELECTIONS



2 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	112136
General Purpose, C Face	208-230/460 3-PH	TEFC	140TC	120038
575 Volt Motor	575 3-PH	TEFC	145TC	120178
WATSAVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	145TC	121065
SCR Rated DC Motor	180 VDC	TEFC	145TC	128010

Quick Selections

F Series Parallel Shaft Drives

1750 RPM Input



High Efficiency Helical - Bevel Gear Reducers

This Quick Selection is only for motorized F Series Parallel Shaft Drives base mount reducers with hollow output shaft (Style FABQ). For other reducer configurations see the Maximum Rating Tables beginning on page 609.

2.0 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
64	3.39	1884	2050	27.24	2	97	140TC	FAFQ8672-27.24-M7	F8672220
63	1.85	1919	1100	27.75	2	67	140TC	FABQ8472-27.75-M7	F8472103
54	1.58	2234	1200	32.31	2	67	140TC	FABQ8472-32.31-M7	F8472104
53	2.93	2271	2050	32.85	2	97	140TC	FAFQ8672-32.85-M7	F8672221
51	1.52	2324	1200	34.33	3	69	140TC	FABQ8473-34.33-M7	F8473099
46	2.60	2582	2050	38.13	3	100	140TC	FABQ8673-38.13-M7	F8673136
46	1.36	2603	1250	38.45	3	69	140TC	FABQ8473-38.45-M7	F8473100
41	1.21	2922	1250	43.15	3	69	140TC	FABQ8473-43.15-M7	F8473101
36	2.14	3267	2050	48.25	3	100	140TC	FABQ8673-48.25-M7	F8673137
36	1.08	3290	1250	48.59	3	69	140TC	FABQ8473-48.59-M7	F8473102
34	3.85	3452	3300	50.98	3	151	140TC	FABQ8773-50.98-M7	F8773169
31	1.91	3791	2050	55.99	3	100	140TC	FABQ8673-55.99-M7	F8673138
31	3.43	3879	3300	57.29	3	151	140TC	FABQ8773-57.29-M7	F8773170
28	3.17	4202	3300	62.06	3	151	140TC	FABQ8773-62.06-M7	F8773171
25	2.80	4758	3300	70.28	3	151	140TC	FABQ8773-70.28-M7	F8773172
24	1.46	4957	2050	73.21	3	100	140TC	FABQ8673-73.21-M7	F8673139
23	2.55	5222	3300	77.12	3	151	140TC	FABQ8773-77.12-M7	F8773173
21	2.35	5657	3300	83.55	3	151	140TC	FABQ8773-83.55-M7	F8773174
20	1.23	5922	2050	87.47	3	100	140TC	FABQ8673-87.47-M7	F8673140
18.8	1.15	6308	2050	93.17	3	100	140TC	FABQ8673-93.17-M7	F8673141
18.5	2.08	6406	3300	94.61	3	151	140TC	FABQ8773-94.61-M7	F8773175
16.4	1.01	7210	2050	106.48	3	100	140TC	FABQ8673-106.48-M7	F8673142
16.2	1.82	7299	3300	107.81	3	151	140TC	FABQ8773-107.81-M7	F8773176
11.6	1.30	10253	3300	151.44	3	151	140TC	FABQ8773-151.44-M7	F8773177
9.8	1.10	12122	3300	179.04	3	151	140TC	FABQ8773-179.04-M7	F8773178

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™

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MOTOR SELECTIONS



2 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	115/208-230 1-PH	TEFC	56C	112136
General Purpose, C Face	208-230/460 3-PH	TEFC	140TC	120038
575 Volt Motor	575 3-PH	TEFC	145TC	120178
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	145TC	121065
SCR Rated DC Motor	180 VDC	TEFC	145TC	128010

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

F8372120 – 112136



Quick Selections

F Series Parallel Shaft Drives

1750 RPM Input

This Quick Selection is only for motorized F Series Parallel Shaft Drives base mount reducers with hollow output shaft (Style FABQ). For other reducer configurations see the Maximum Rating Tables beginning on page 609.

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

3.0 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
511	2.39	355	380	3.42	2	50	140TC	FABQ8372-3.42-M7	F8372120
456	2.36	398	400	3.83	2	50	140TC	FABQ8372-3.83-M7	F8372121
424	2.99	428	650	4.13	2	67	140TC	FABQ8472-4.13-M7	F8472092
407	2.20	446	410	4.30	2	50	140TC	FABQ8372-4.30-M7	F8372122
361	2.11	503	420	4.85	2	50	140TC	FABQ8372-4.85-M7	F8372123
349	3.69	520	2050	5.01	2	97	140TC	FABQ8672-5.01-M7	F8672156
335	2.77	541	650	5.22	2	67	140TC	FABQ8472-5.22-M7	F8472093
324	3.67	561	2050	5.41	2	97	140TC	FABQ8672-5.41-M7	F8672157
319	2.02	568	430	5.48	2	50	140TC	FABQ8372-5.48-M7	F8372124
289	2.63	628	650	6.06	2	67	140TC	FABQ8472-6.06-M7	F8472094
288	3.41	630	2050	6.08	2	97	140TC	FABQ8672-6.08-M7	F8672158
281	1.86	646	450	6.23	2	50	140TC	FABQ8372-6.23-M7	F8372125
266	3.30	683	2050	6.58	2	97	140TC	FABQ8672-6.58-M7	F8672159
246	1.67	739	560	7.12	2	50	140TC	FABQ8372-7.12-M7	F8372126
235	3.30	773	2050	7.45	2	97	140TC	FABQ8672-7.45-M7	F8672160
229	1.58	793	580	7.64	2	50	140TC	FABQ8372-7.64-M7	F8372127
221	2.34	821	650	7.92	2	67	140TC	FABQ8472-7.92-M7	F8472095
206	2.89	881	2050	8.49	2	97	140TC	FABQ8672-8.49-M7	F8672161
185	2.01	981	700	9.46	2	67	140TC	FABQ8472-9.46-M7	F8472096
181	3.98	1004	2050	9.68	2	97	140TC	FABQ8672-9.68-M7	F8672162
176	1.46	1030	525	9.93	2	50	140TC	FABQ8372-9.93-M7	F8372128
168	3.88	1083	2050	10.44	2	97	140TC	FABQ8672-10.44-M7	F8672163
156	1.42	1165	530	11.23	2	50	140TC	FABQ8372-11.23-M7	F8372129
149	2.91	1215	800	11.71	2	67	140TC	FABQ8472-11.71-M7	F8472097
138	3.79	1319	2050	12.71	2	97	140TC	FABQ8672-12.71-M7	F8672165
137	1.32	1324	550	12.76	2	50	140TC	FABQ8372-12.76-M7	F8372130
129	2.51	1410	770	13.59	2	67	140TC	FABQ8472-13.59-M7	F8472098
122	3.55	1493	2050	14.40	2	97	140TC	FABQ8672-14.40-M7	F8672166

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
F8372120 – 131491



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



3 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	182TC	131491
WATTS AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	182TC	131503
575 Volt Motor	575 3-PH	TEFC	182TC	131498

Quick Selections

F Series Parallel Shaft Drives

1750 RPM Input



This Quick Selection is only for motorized F Series Parallel Shaft Drives base mount reducers with hollow output shaft (Style FABQ). For other reducer configurations see the Maximum Rating Tables beginning on page 609.

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

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3.0 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
120	1.17	1514	580	14.60	2	50	140TC	FABQ8372-14.60-M7	F8372131
112	1.09	1625	620	15.66	2	50	140TC	FABQ8372-15.66-M7	F8372132
107	3.23	1702	2050	16.41	2	97	140TC	FABQ8672-16.41-M7	F8672167
98	1.92	1843	830	17.77	2	67	140TC	FABQ8472-17.77-M7	F8472099
82	1.61	2202	930	21.23	2	67	140TC	FABQ8472-21.23-M7	F8472100
77	1.51	2346	930	22.62	2	67	140TC	FABQ8472-22.62-M7	F8472101
76	2.51	2390	2050	23.04	2	97	140TC	FABQ8672-23.04-M7	F8672168
68	1.32	2681	1050	25.85	2	67	140TC	FABQ8472-25.85-M7	F8472102
64	2.26	2826	2050	27.24	2	97	140TC	FABQ8672-27.24-M7	F8672169
63	1.23	2878	1100	27.75	2	67	140TC	FABQ8472-27.75-M7	F8472103
62	3.68	2921	3300	28.16	2	146	140TC	FABQ8772-28.16-M7	F8772143
54	1.06	3351	1200	32.31	2	67	140TC	FABQ8472-32.31-M7	F8472104
53	1.95	3407	2050	32.85	2	97	140TC	FABQ8672-32.85-M7	F8672170
52	2.77	3522	3300	33.95	2	146	140TC	FABQ8772-33.95-M7	F8772144
51	1.02	3486	1200	34.33	3	69	140TC	FABQ8473-34.33-M7	F8473099
46	3.46	3845	3300	37.86	3	151	140TC	FABQ8773-37.86-M7	F8773166
46	1.73	3873	2050	38.13	3	100	140TC	FABQ8673-38.13-M7	F8673136
41	3.10	4292	3300	42.26	3	151	140TC	FABQ8773-42.26-M7	F8773167
37	2.77	4799	3300	47.25	3	151	140TC	FABQ8773-47.25-M7	F8773168
36	1.43	4900	2050	48.25	3	100	140TC	FABQ8673-48.25-M7	F8673137
34	2.57	5178	3300	50.98	3	151	140TC	FABQ8773-50.98-M7	F8773169
31	1.28	5687	2050	55.99	3	100	140TC	FABQ8673-55.99-M7	F8673138
31	2.29	5818	3300	57.29	3	151	140TC	FABQ8773-57.29-M7	F8773170
28	2.11	6303	3300	62.06	3	151	140TC	FABQ8773-62.06-M7	F8773171
25	1.86	7137	3300	70.28	3	151	140TC	FABQ8773-70.28-M7	F8773172
23	1.70	7833	3300	77.12	3	151	140TC	FABQ8773-77.12-M7	F8773173
21	1.57	8485	3300	83.55	3	151	140TC	FABQ8773-83.55-M7	F8773174
18.5	1.38	9609	3300	94.61	3	151	140TC	FABQ8773-94.61-M7	F8773175
16.2	1.21	10949	3300	107.81	3	151	140TC	FABQ8773-107.81-M7	F8773176

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



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Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



3 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	182TC	131491
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	182TC	131503
575 Volt Motor	575 3-PH	TEFC	182TC	131498

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

F8372120 – 131491



Quick Selections

F Series Parallel Shaft Drives

1750 RPM Input

This Quick Selection is only for motorized F Series Parallel Shaft Drives base mount reducers with hollow output shaft (Style FABQ). For other reducer configurations see the Maximum Rating Tables beginning on page 609.

5.0 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
511	1.44	592	380	3.42	2	50	140TC	FABQ8372-3.42-M7	F8372120.00
456	1.42	663	400	3.83	2	50	140TC	FABQ8372-3.83-M7	F8372121.00
436	2.41	694	2050	4.02	2	97	180TC	FABQ8672-4.02-M9	F8672171.00
424	1.79	713	650	4.13	2	67	140TC	FABQ8472-4.13-M7	F8472092.00
407	1.32	744	410	4.30	2	50	140TC	FABQ8372-4.30-M7	F8372122.00
397	4.01	763	2750	4.41	2	146	180TC	FABQ8772-4.41-M9	F8772145.00
390	2.40	775	2050	4.48	2	97	180TC	FABQ8672-4.48-M9	F8672172.00
361	1.27	838	420	4.85	2	50	140TC	FABQ8372-4.85-M7	F8372123.00
349	2.22	866	2050	5.01	2	97	180TC	FABQ8672-5.01-M9	F8672173.00
335	1.66	902	650	5.22	2	67	140TC	FABQ8472-5.22-M7	F8472093.00
329	3.80	920	2750	5.32	2	146	180TC	FABQ8772-5.32-M9	F8772146.00
324	2.20	935	2050	5.41	2	97	180TC	FABQ8672-5.41-M9	F8672174.00
319	1.21	947	430	5.48	2	50	140TC	FABQ8372-5.48-M7	F8372124.00
289	1.58	1047	650	6.06	2	67	140TC	FABQ8472-6.06-M7	F8472094.00
288	2.05	1051	2050	6.08	2	97	180TC	FABQ8672-6.08-M9	F8672175.00
281	3.44	1076	2750	6.22	2	146	180TC	FABQ8772-6.22-M9	F8772147.00
281	1.12	1076	450	6.23	2	50	140TC	FABQ8372-6.23-M7	F8372125.00
266	1.98	1138	2050	6.58	2	97	180TC	FABQ8672-6.58-M9	F8672176.00
249	3.17	1216	2830	7.04	2	146	180TC	FABQ8772-7.04-M9	F8772148.00
246	1.00	1231	560	7.12	2	50	140TC	FABQ8372-7.12-M7	F8372126.00
235	1.98	1289	2050	7.45	2	97	180TC	FABQ8672-7.45-M9	F8672177.00
221	1.40	1369	650	7.92	2	67	140TC	FABQ8472-7.92-M7	F8472095.00
209	2.77	1445	2950	8.36	2	146	180TC	FABQ8772-8.36-M9	F8772149.00
206	1.74	1468	2050	8.49	2	97	180TC	FABQ8672-8.49-M9	F8672178.00
185	1.20	1636	700	9.46	2	67	140TC	FABQ8472-9.46-M7	F8472096.00
181	2.39	1673	2050	9.68	2	97	180TC	FABQ8672-9.68-M9	F8672179.00
168	2.33	1805	2050	10.44	2	97	180TC	FABQ8672-10.44-M9	F8672180.00
162	3.91	1866	3000	10.80	2	146	180TC	FABQ8772-10.80-M9	F8772150.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
F8372120 – 131492



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Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS

5 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	184TC	131492
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	184TC	131501
575 Volt Motor	575 3-PH	TEFC	184TC	131499



High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

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Quick Selections

F Series Parallel Shaft Drives

1750 RPM Input



This Quick Selection is only for motorized F Series Parallel Shaft Drives base mount reducers with hollow output shaft (Style FABQ). For other reducer configurations see the Maximum Rating Tables beginning on page 609.

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

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5.0 HP con't Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
149	1.75	2025	800	11.71	2	67	140TC	FABQ8472-11.71-M7	F8472097.00
149	2.27	2029	2050	11.74	2	97	180TC	FABQ8672-11.74-M9	F8672181.00
139	3.51	2182	3200	12.62	2	146	180TC	FABQ8772-12.62-M9	F8772151.00
138	2.27	2198	2050	12.71	2	97	180TC	FABQ8672-12.71-M9	F8672182.00
129	1.51	2350	770	13.59	2	67	140TC	FABQ8472-13.59-M7	F8472098.00
123	3.24	2467	3100	14.27	2	146	180TC	FABQ8772-14.27-M9	F8772152.00
122	2.13	2489	2050	14.40	2	97	180TC	FABQ8672-14.40-M9	F8672183.00
107	1.94	2836	2050	16.41	2	97	180TC	FABQ8672-16.41-M9	F8672184.00
103	2.90	2932	3200	16.96	2	146	180TC	FABQ8772-16.96-M9	F8772153.00
98	1.15	3072	830	17.77	2	97	180TC	FABQ8472-17.77-M7	F8472099.00
76	1.51	3984	2050	23.04	2	97	180TC	FABQ8672-23.04-M9	F8672185.00
73	2.43	4118	3300	23.82	2	146	180TC	FABQ8772-23.82-M9	F8772154.00
64	1.35	4710	2050	27.24	2	97	180TC	FABQ8672-27.24-M9	F8672186.00
62	2.21	4869	3300	28.16	2	146	180TC	FABQ8772-28.16-M9	F8772155.00
53	1.17	5678	2050	32.85	2	97	180TC	FABQ8672-32.85-M9	F8672187.00
52	1.66	5869	3300	33.95	2	146	180TC	FABQ8772-33.95-M9	F8772156.00
46	2.08	6408	3300	37.86	3	151	180TC	FABQ8773-37.86-M9	F8773181.00
46	1.04	6455	2050	38.13	3	100	180TC	FABQ8673-38.13-M9	F8673151.00
41	1.86	7153	3300	42.26	3	151	180TC	FABQ8773-42.26-M9	F8773182.00
37	1.66	7998	3300	47.25	3	151	180TC	FABQ8773-47.25-M9	F8773183.00
34	1.54	8629	3300	50.98	3	151	180TC	FABQ8773-50.98-M9	F8773184.00
31	1.37	9697	3300	57.29	3	151	180TC	FABQ8773-57.29-M9	F8773185.00
28	1.27	10505	3300	62.06	3	151	180TC	FABQ8773-62.06-M9	F8773186.00
25	1.12	11896	3300	70.28	3	151	180TC	FABQ8773-70.28-M9	F8773187.00
23	1.02	13055	3300	77.12	3	151	180TC	FABQ8773-77.12-M9	F8773188.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™
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MOTOR SELECTIONS



5 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	184TC	131492
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	184TC	131501
575 Volt Motor	575 3-PH	TEFC	184TC	131499

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
F8372120 – 131492



Quick Selections

F Series Parallel Shaft Drives

1750 RPM Input

This Quick Selection is only for motorized F Series Parallel Shaft Drives base mount reducers with hollow output shaft (Style FABQ). For other reducer configurations see the Maximum Rating Tables beginning on page 609.

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

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7.5 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
436	1.60	1041	2050	4.02	2	97	180TC	FABQ8672-4.02-M9	F8672171.00
424	1.20	1070	650	4.13	2	67	140TC	FABQ8472-4.13-M7	F8472092.00
397	2.67	1144	2750	4.41	2	146	180TC	FABQ8772-4.41-M9	F8772145.00
390	1.60	1162	2050	4.48	2	97	180TC	FABQ8672-4.48-M9	F8672172.00
349	1.48	1300	2050	5.01	2	97	180TC	FABQ8672-5.01-M9	F8672173.00
335	1.11	1354	650	5.22	2	67	140TC	FABQ8472-5.22-M7	F8472093.00
329	2.54	1380	2750	5.32	2	146	180TC	FABQ8772-5.32-M9	F8772146.00
324	1.47	1402	2050	5.41	2	97	180TC	FABQ8672-5.41-M9	F8672174.00
289	1.05	1571	650	6.06	2	67	140TC	FABQ8472-6.06-M7	F8472094.00
288	1.36	1576	2050	6.08	2	97	180TC	FABQ8672-6.08-M9	F8672175.00
281	2.29	1614	2750	6.22	2	146	180TC	FABQ8772-6.22-M9	F8772147.00
266	1.32	1707	2050	6.58	2	97	180TC	FABQ8672-6.58-M9	F8672176.00
249	2.11	1824	2830	7.04	2	146	180TC	FABQ8772-7.04-M9	F8772148.00
235	1.32	1933	2050	7.45	2	97	180TC	FABQ8672-7.45-M9	F8672177.00
209	1.84	2168	2950	8.36	2	146	180TC	FABQ8772-8.36-M9	F8772149.00
206	1.16	2203	2050	8.49	2	97	180TC	FABQ8672-8.49-M9	F8672178.00
181	1.59	2510	2050	9.68	2	97	180TC	FABQ8672-9.68-M9	F8672179.00
168	1.55	2708	2050	10.44	2	97	180TC	FABQ8672-10.44-M9	F8672180.00
162	2.61	2799	3000	10.80	2	146	180TC	FABQ8772-10.80-M9	F8772150.00
149	1.17	3037	800	11.71	2	67	140TC	FABQ8472-11.71-M7	F8472097.00
149	1.51	3043	2050	11.74	2	97	180TC	FABQ8672-11.74-M9	F8672181.00
139	2.34	3273	3200	12.62	2	146	180TC	FABQ8772-12.62-M9	F8772151.00
138	1.52	3297	2050	12.71	2	97	180TC	FABQ8672-12.71-M9	F8672182.00
129	1.00	3524	770	13.59	2	67	140TC	FABQ8472-13.59-M7	F8472098.00
123	2.16	3700	3100	14.27	2	146	180TC	FABQ8772-14.27-M9	F8772152.00
122	1.42	3733	2050	14.40	2	97	180TC	FABQ8672-14.40-M9	F8672183.00
107	1.29	4254	2050	16.41	2	97	180TC	FABQ8672-16.41-M9	F8672184.00
103	1.93	4397	3200	16.96	2	146	180TC	FABQ8772-16.96-M9	F8772153.00
76	1.00	5976	2050	23.04	2	97	180TC	FABQ8672-23.04-M9	F8672185.00
73	1.62	6177	3300	23.82	2	146	180TC	FABQ8772-23.82-M9	F8772154.00
62	1.47	7303	3300	28.16	2	146	180TC	FABQ8772-28.16-M9	F8772155.00
52	1.11	8804	3300	33.95	2	146	180TC	FABQ8772-33.95-M9	F8772156.00
46	1.38	9612	3300	37.86	3	151	180TC	FABQ8773-37.86-M9	F8773181.00
41	1.24	10729	3300	42.26	3	151	180TC	FABQ8773-42.26-M9	F8773182.00
37	1.11	11998	3300	47.25	3	151	180TC	FABQ8773-47.25-M9	F8773183.00
34	1.03	12944	3300	50.98	3	151	180TC	FABQ8773-50.98-M9	F8773184.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



7.5 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	184TC	131606
WATTS-AVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	213TC	140486

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
F8372171 – 131606

Quick Selections

F Series Parallel Shaft Drives

1750 RPM Input



This Quick Selection is only for motorized F Series Parallel Shaft Drives base mount reducers with hollow output shaft (Style FABQ). For other reducer configurations see the Maximum Rating Tables beginning on page 609.

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

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10 HP

Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
436	1.20	1388	2050	4.02	2	97	180TC	FABQ8672-4.02-M9	F8672171.00
397	2.01	1525	2750	4.41	2	155	210TC	FABQ8772-4.41-M11	F8772157.00
390	1.20	1550	2050	4.48	2	97	180TC	FABQ8672-4.48-M9	F8672172.00
349	1.11	1733	2050	5.01	2	97	180TC	FABQ8672-5.01-M9	F8672173.00
329	1.90	1840	2750	5.32	2	155	210TC	FABQ8772-5.32-M11	F8772158.00
324	1.10	1870	2050	5.41	2	97	180TC	FABQ8672-5.41-M9	F8672174.00
288	1.02	2101	2050	6.08	2	97	180TC	FABQ8672-6.08-M9	F8672175.00
281	1.72	2152	2750	6.22	2	155	210TC	FABQ8772-6.22-M11	F8772159.00
249	1.58	2432	2830	7.04	2	155	210TC	FABQ8772-7.04-M11	F8772160.00
209	1.38	2891	2950	8.36	2	155	210TC	FABQ8772-8.36-M11	F8772161.00
181	1.20	3347	2050	9.68	2	97	180TC	FABQ8672-9.68-M9	F8672179.00
168	1.16	3611	2050	10.44	2	97	180TC	FABQ8672-10.44-M9	F8672180.00
162	1.96	3733	3000	10.80	2	155	210TC	FABQ8772-10.80-M11	F8772162.00
149	1.13	4058	2050	11.74	2	97	180TC	FABQ8672-11.74-M9	F8672181.00
139	1.75	4365	3200	12.62	2	155	210TC	FABQ8772-12.62-M11	F8772163.00
138	1.14	4396	2050	12.71	2	97	180TC	FABQ8672-12.71-M9	F8672182.00
123	1.62	4933	3100	14.27	2	155	210TC	FABQ8772-14.27-M11	F8772164.00
122	1.06	4978	2050	14.40	2	97	180TC	FABQ8672-14.40-M9	F8672183.00
103	1.45	5863	3200	16.96	2	155	210TC	FABQ8772-16.96-M11	F8772165.00
73	1.21	8236	3300	23.82	2	155	210TC	FABQ8772-23.82-M11	F8772166.00
62	1.10	9737	3300	28.16	2	155	210TC	FABQ8772-28.16-M11	F8772167.00
46	1.04	12816	3300	37.86	3	160	210TC	FABQ8773-37.86-M11	F8773196.00

♦ Weight does not include oil.

▼ Service Factor is based on maximum torque rating of reducer.

● Overhung load is calculated at centerline of output shaft.



STOCK GEAR+MOTOR™

Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



10 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number
General Purpose, C Face	208-230/460 3-PH	TEFC	215TC	140109
WATTSaver® Premium Efficiency Motor	208-230/460 3-PH	TEFC	215TC	140484

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:

F8672171 – 140109



Quick Selections

F Series Parallel Shaft Drives

1750 RPM Input

This Quick Selection is only for motorized F Series Parallel Shaft Drives base mount reducers with hollow output shaft (Style FABQ). For other reducer configurations see the Maximum Rating Tables beginning on page 609.

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

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15 HP Gear Reducer Quick Selections

Output Speed (RPM)	Service Factor▼	Output Torque (lb-in)	Overhung Load ● (lbs.)	Ratio	Number of Stages	Reducer Weight ♦ (lbs.)	Motor Frame	Model Number	Reducer Only Catalog Number
397	1.34	2288	2750	4.41	2	155	210TC	FABQ8772-4.41-M11	F8772157.00
329	1.27	2760	2750	5.32	2	155	210TC	FABQ8772-5.32-M11	F8772158.00
281	1.15	3228	2750	6.22	2	155	210TC	FABQ8772-6.22-M11	F8772159.00
249	1.06	3649	2830	7.04	2	155	210TC	FABQ8772-7.04-M11	F8772160.00
162	1.30	5599	3000	10.80	2	155	210TC	FABQ8772-10.80-M11	F8772162.00
139	1.17	6547	3200	12.62	2	155	210TC	FABQ8772-12.62-M11	F8772163.00
123	1.08	7400	3100	14.27	2	155	210TC	FABQ8772-14.27-M11	F8772164.00

- ♦ Weight does not include oil.
- ▼ Service Factor is based on maximum torque rating of reducer.
- Overhung load is calculated at centerline of output shaft.

How To Create a GEAR+MOTOR™ Part Number

1. Select reducer catalog number
2. Select motor catalog number
3. Order reducer and motor as one line item as shown below

Example:
F8772157 – 151350



STOCK GEAR+MOTOR™
Start with a Grove Gear IRONMAN reducer and add a LEESON industrial-duty NEMA C face motor to produce a GEAR+MOTOR™.

MOTOR SELECTIONS



15 HP LEESON ELECTRIC MOTORS

Motor Type	Voltage	Enclosure	Frame	Catalog Number	LEESON 1050 Catalog Page
General Purpose, C Face	208-230/460 3-PH	TEFC	254TC	151350	25
WATSAVER® Premium Efficiency Motor	208-230/460 3-PH	TEFC	254TC	171587	18, 27

"HOW TO USE" Maximum Rating Tables F Series • Parallel Shaft Drive 1750 RPM Input



High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

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How To Use Maximum Rating Tables

Maximum Rating Tables for Double, Triple and Quin Reduction Gear Reducers start on page 610 Selection of the appropriate gear reducer can be made using these tables or the Quick Selections on pages 587-608.

BEFORE YOU START:

Identify the Service Factor of the application.

Determine the actual input horsepower of the motor by multiplying the motor's nameplate horsepower by the Service Factor.

Determine the output speed (RPM) required at output shaft of reducer.

Identify the mounting style required by your application from the style charts shown on page 584.

To select the proper gear reducer size, use the Maximum Rating Tables as shown:

1 Find the appropriate Maximum Rating Tables pages for your basic mounting style. The tables begin on page 610.

5 Select motor frame size if reducer is to have a motorized input.

6 Identify the catalog number of the reducer by continuing to the right. See page 585 for detailed information on building an exact catalog number. The XX suffix will be replaced with optional Mod-Squad codes as detailed on page 585.

Maximum Rating Tables F837 Series • Parallel Shaft Drives 1750 RPM Input

					STYLE FBN	STYLE FABN	STYLE FF
F8372 Series • DOUBLE REDUCTION					NON-MOTORIZED		
Output Speed (RPM)	Output Torque (ft-lb)	Input HP	Ratio	Output O.H.L. (ft-lb)	Base Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Base or Shaft Mount Catalog No.	Output Flange & Solid Output Shaft Catalog No.
511	850	7.18	3.42	380	F8372069	F8372171	F8372099
456	940	7.99	3.83	400	F8372070	F8372172	F8372099
407	980	8.59	4.35	410	F8372071	F8372173	F8372099
361					F8372174	F8372099	
319					F8372175	F8372099	
281					F8372176	F8372099	
246					F8372177	F8372099	
229					F8372178	F8372099	
178					F8372179	F8372099	
156					F8372180	F8372099	
137					F8372181	F8372099	
120					F8372182	F8372099	
112					F8372183	F8372099	
92					F8372184	F8372099	
74					F8372185	F8372100	
61	1770	1.78	28.70	830	F8372084	F8372186	F8372100
53	1770	1.57	32.99	900	F8372085	F8372187	F8372100

					STYLE FBN	STYLE FABN	STYLE FF
F8373 Series • TRIPLE REDUCTION					NON-MOTORIZED		
Output Speed (RPM)	Output Torque (ft-lb)	Input HP	Ratio	Output O.H.L. (ft-lb)	Base Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Base or Shaft Mount Catalog No.	Output Flange & Solid Output Shaft Catalog No.
19.0	1770	0.57	92.16	105	F8373045	F8373111	F8373059
17.2	1770	0.51	101.94	105	F8373046	F8373112	F8373059
14.9	1770	0.44	117.80	105	F8373048	F8373114	F8373059
13.8	1770	0.41	127.21	105	F8373049	F8373115	F8373060
					F8373050	F8373116	F8373060
					F8373051	F8373117	F8373060
					F8373052	F8373118	F8373060
					F8373053	F8373119	F8373060
					F8373054	F8373120	F8373060
					F8373055	F8373121	F8373060

			STYLE FBQ	STYLE FABQ
F8372 Series • DOUBLE REDUCTION			MOTORIZED	
Motor Frame	Base Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Base or Shaft Mount Catalog No.		
56C	F8372001	F8372103		
56C	F8372002	F8372104		
56C	F8372003	F8372105		
56C	F8372004	F8372106		
56C	F8372005	F8372107		
56C	F8372006	F8372108		
56C	F8372007	F8372109		
56C	F8372008	F8372110		
56C	F8372009	F8372111		
56C	F8372010	F8372112		

			STYLE FBQ	STYLE FABQ
F8373 Series • TRIPLE REDUCTION			MOTORIZED	
Motor Frame	Base Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Base or Shaft Mount Catalog No.		
56C	F8373001	F8373067		
56C	F8373002	F8373068		
56C	F8373003	F8373069		
56C	F8373004	F8373070		
		F8373071		
		F8373072		
		F8373073		
		F8373074		
		F8373075		
		F8373076		

4 Check load capacities against the needs of your application. Do not exceed the overhung load (OHL) capacity shown in the table. Detailed instructions for calculating the actual overhung load are shown on page 645. If overhung and thrust loads will be applied simultaneously or if the load exceeds listed capacities, contact factory.

7 Verify physical dimensions using the dimensional drawings shown on pages 622-631.

8 Determine reducer mounting position from page 584.



Maximum Rating Tables

F837 Series • Parallel Shaft Drives 1750 RPM Input

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

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STYLE FBN

STYLE FABN

STYLE FFN

STYLE FAFN



F8372 Series • DOUBLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED			
					Base Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Base or Shaft Mount Catalog No.	Output Flange Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Solid Output Shaft Catalog No.
511	850	7.18	3.42	380	F8372069	F8372171	F8372086	F8372188
456	940	7.09	3.83	400	F8372070	F8372172	F8372087	F8372189
407	980	6.59	4.30	410	F8372071	F8372173	F8372088	F8372190
361	1060	6.33	4.85	420	F8372072	F8372174	F8372089	F8372191
319	1150	6.07	5.48	430	F8372073	F8372175	F8372090	F8372192
281	1200	5.58	6.23	450	F8372074	F8372176	F8372091	F8372193
246	1230	5.00	7.12	560	F8372075	F8372177	F8372092	F8372194
229	1250	4.73	7.64	580	F8372076	F8372178	F8372093	F8372195
176	1500	4.37	9.93	525	F8372077	F8372179	F8372094	F8372196
156	1650	4.25	11.23	530	F8372078	F8372180	F8372095	F8372197
137	1750	3.97	12.76	550	F8372079	F8372181	F8372096	F8372198
120	1770	3.51	14.60	580	F8372080	F8372182	F8372097	F8372199
112	1770	3.27	15.66	620	F8372081	F8372183	F8372098	F8372200
92	1770	2.68	19.09	680	F8372082	F8372184	F8372099	F8372201
74	1770	2.15	23.08	760	F8372083	F8372185	F8372100	F8372202
61	1770	1.78	28.70	850	F8372084	F8372186	F8372101	F8372203
53	1770	1.55	32.99	900	F8372085	F8372187	F8372102	F8372204

* Overhung load is calculated at centerline of output shaft.

STYLE FBN

STYLE FABN

STYLE FFN

STYLE FAFN



F8373 Series • TRIPLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED			
					Base Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Base or Shaft Mount Catalog No.	Output Flange Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Solid Output Shaft Catalog No.
51.0	1770	1.52	34.29	105	F8373045	F8373111	F8373056	F8373122
44.2	1770	1.32	39.63	105	F8373046	F8373112	F8373057	F8373123
40.9	1770	1.22	42.79	105	F8373047	F8373113	F8373058	F8373124
29.1	1770	0.87	60.16	105	F8373048	F8373114	F8373059	F8373125
25.2	1770	0.75	69.52	105	F8373049	F8373115	F8373060	F8373126
23.3	1770	0.70	75.07	105	F8373050	F8373116	F8373061	F8373127
20.5	1770	0.61	85.34	105	F8373051	F8373117	F8373062	F8373128
19.0	1770	0.57	92.16	105	F8373052	F8373118	F8373063	F8373129
17.2	1770	0.51	101.94	105	F8373053	F8373119	F8373064	F8373130
14.9	1770	0.44	117.80	105	F8373054	F8373120	F8373065	F8373131
13.8	1770	0.41	127.21	105	F8373055	F8373121	F8373066	F8373132

* Overhung load is calculated at centerline of output shaft.

Maximum Rating Tables

F837 Series • Parallel Shaft Drives

1750 RPM Input



High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

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	STYLE FBQ	STYLE FABQ	STYLE FFQ	STYLE FAFQ	
	MOTORIZED QUILL INPUT				
Motor Frame	Base Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Base or Shaft Mount Catalog No.	Output Flange Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Solid Output Shaft Catalog No.	Output Speed (RPM)
56C	F8372001	F8372103	F8372035	F8372137	511
56C	F8372002	F8372104	F8372036	F8372138	456
56C	F8372003	F8372105	F8372037	F8372139	407
56C	F8372004	F8372106	F8372038	F8372140	361
56C	F8372005	F8372107	F8372039	F8372141	319
56C	F8372006	F8372108	F8372040	F8372142	281
56C	F8372007	F8372109	F8372041	F8372143	246
56C	F8372008	F8372110	F8372042	F8372144	229
56C	F8372009	F8372111	F8372043	F8372145	176
56C	F8372010	F8372112	F8372044	F8372146	156
56C	F8372011	F8372113	F8372045	F8372147	137
56C	F8372012	F8372114	F8372046	F8372148	120
56C	F8372013	F8372115	F8372047	F8372149	112
56C	F8372014	F8372116	F8372048	F8372150	92
56C	F8372015	F8372117	F8372049	F8372151	74
56C	F8372016	F8372118	F8372050	F8372152	61
56C	F8372017	F8372119	F8372051	F8372153	53

	STYLE FBQ	STYLE FABQ	STYLE FFQ	STYLE FAFQ	
	MOTORIZED QUILL INPUT				
Motor Frame	Base Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Base or Shaft Mount Catalog No.	Output Flange Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Solid Output Shaft Catalog No.	Output Speed (RPM)
56C	F8373001	F8373067	F8373023	F8373089	51.0
56C	F8373002	F8373068	F8373024	F8373090	44.2
56C	F8373003	F8373069	F8373025	F8373091	40.9
56C	F8373004	F8373070	F8373026	F8373092	29.1
56C	F8373005	F8373071	F8373027	F8373093	25.2
56C	F8373006	F8373072	F8373028	F8373094	23.3
56C	F8373007	F8373073	F8373029	F8373095	20.5
56C	F8373008	F8373074	F8373030	F8373096	19.0
56C	F8373009	F8373075	F8373031	F8373097	17.2
56C	F8373010	F8373076	F8373032	F8373098	14.9
56C	F8373011	F8373077	F8373033	F8373099	13.8



Maximum Rating Tables

F847 Series • Parallel Shaft Drives

1750 RPM Input

High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

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STYLE FBN

STYLE FABN

STYLE FFN

STYLE FAFN



F8472 Series • DOUBLE REDUCTION

NON-MOTORIZED

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Base Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Base or Shaft Mount Catalog No.	Output Flange Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Solid Output Shaft Catalog No.
424	1280	8.97	4.13	650	F8472053	F8472131	F8472066	F8472144
335	1500	8.31	5.22	650	F8472054	F8472132	F8472067	F8472145
289	1650	7.88	6.06	650	F8472055	F8472133	F8472068	F8472146
221	1920	7.01	7.92	650	F8472056	F8472134	F8472069	F8472147
185	1970	6.02	9.46	700	F8472057	F8472135	F8472070	F8472148
149	3540	8.74	11.71	800	F8472058	F8472136	F8472071	F8472149
129	3540	7.53	13.59	770	F8472059	F8472137	F8472072	F8472150
98	3540	5.76	17.77	830	F8472060	F8472138	F8472073	F8472151
82	3540	4.82	21.23	930	F8472061	F8472139	F8472074	F8472152
77	3540	4.53	22.62	930	F8472062	F8472140	F8472075	F8472153
68	3540	3.96	25.85	1050	F8472063	F8472141	F8472076	F8472154
63	3540	3.69	27.75	1100	F8472064	F8472142	F8472077	F8472155
54	3540	3.17	32.31	1200	F8472065	F8472143	F8472078	F8472156

* Overhung load is calculated at centerline of output shaft.

STYLE FBN

STYLE FABN

STYLE FFN

STYLE FAFN



F8473 Series • TRIPLE REDUCTION

NON-MOTORIZED

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Base Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Base or Shaft Mount Catalog No.	Output Flange Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Solid Output Shaft Catalog No.
51.0	3540	3.05	34.33	1200	F8473057	F8473141	F8473071	F8473155
45.5	3540	2.72	38.45	1250	F8473058	F8473142	F8473072	F8473156
40.6	3540	2.42	43.15	1250	F8473059	F8473143	F8473073	F8473157
36.0	3540	2.15	48.59	1250	F8473060	F8473144	F8473074	F8473158
31.9	3540	1.9	54.92	1250	F8473061	F8473145	F8473075	F8473159
28.0	3540	1.68	62.41	1250	F8473062	F8473146	F8473076	F8473160
25.5	3540	1.53	68.53	1250	F8473063	F8473147	F8473077	F8473161
24.5	3540	1.46	71.40	1250	F8473064	F8473148	F8473078	F8473162
22.3	3540	1.33	78.40	1250	F8473065	F8473149	F8473079	F8473163
20.8	3540	1.24	84.11	1250	F8473066	F8473150	F8473080	F8473164
17.1	3540	1.02	102.52	1250	F8473067	F8473151	F8473081	F8473165
13.7	3540	0.82	127.79	1250	F8473068	F8473152	F8473082	F8473166
11.4	3540	0.68	154.12	1250	F8473069	F8473153	F8473083	F8473167
9.9	3540	0.59	177.15	1250	F8473070	F8473154	F8473084	F8473168

* Overhung load is calculated at centerline of output shaft.

Maximum Rating Tables

F847 Series • Parallel Shaft Drives

1750 RPM Input



High Efficiency Helical - Bevel
Gear Reducers


High Efficiency Parallel Shaft
Gear Reducers





Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

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	STYLE FBQ	STYLE FABQ	STYLE FFQ	STYLE FAFQ	
					
MOTORIZED QUILL INPUT					
Motor Frame	Base Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Base or Shaft Mount Catalog No.	Output Flange Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Solid Output Shaft Catalog No.	Output Speed (RPM)
56C	F8472001	F8472079	F8472027	F8472105	424
56C	F8472002	F8472080	F8472028	F8472106	335
56C	F8472003	F8472081	F8472029	F8472107	289
56C	F8472004	F8472082	F8472030	F8472108	221
56C	F8472005	F8472083	F8472031	F8472109	185
56C	F8472006	F8472084	F8472032	F8472110	149
56C	F8472007	F8472085	F8472033	F8472111	129
56C	F8472008	F8472086	F8472034	F8472112	98
56C	F8472009	F8472087	F8472035	F8472113	82
56C	F8472010	F8472088	F8472036	F8472114	77
56C	F8472011	F8472089	F8472037	F8472115	68
56C	F8472012	F8472090	F8472038	F8472116	63
56C	F8472013	F8472091	F8472039	F8472117	54

	STYLE FBQ	STYLE FABQ	STYLE FFQ	STYLE FAFQ	
					
MOTORIZED QUILL INPUT					
Motor Frame	Base Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Base or Shaft Mount Catalog No.	Output Flange Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Solid Output Shaft Catalog No.	Output Speed (RPM)
56C	F8473001	F8473085	F8473029	F8473113	51.0
56C	F8473002	F8473086	F8473030	F8473114	45.5
56C	F8473003	F8473087	F8473031	F8473115	40.6
56C	F8473004	F8473088	F8473032	F8473116	36.0
56C	F8473005	F8473089	F8473033	F8473117	31.9
56C	F8473006	F8473090	F8473034	F8473118	28.0
56C	F8473007	F8473091	F8473035	F8473119	25.5
56C	F8473008	F8473092	F8473036	F8473120	24.5
56C	F8473009	F8473093	F8473037	F8473121	22.3
56C	F8473010	F8473094	F8473038	F8473122	20.8
56C	F8473011	F8473095	F8473039	F8473123	17.1
56C	F8473012	F8473096	F8473040	F8473124	13.7
56C	F8473013	F8473097	F8473041	F8473125	11.4
56C	F8473014	F8473098	F8473042	F8473126	9.9



Maximum Rating Tables

F867 Series • Parallel Shaft Drives

1750 RPM Input

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

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STYLE FBN

STYLE FABN

STYLE FFN

STYLE FAFN



F8672 Series • DOUBLE REDUCTION

					NON-MOTORIZED			
Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Base Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Base or Shaft Mount Catalog No.	Output Flange Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Solid Output Shaft Catalog No.
436	1670	12.03	4.02	2050	F8672103	F8672239	F8672120	F8672256
390	1860	12	4.48	2050	F8672104	F8672240	F8672121	F8672257
349	1920	11.08	5.01	2050	F8672105	F8672241	F8672122	F8672258
324	2060	11.02	5.41	2050	F8672106	F8672242	F8672123	F8672259
288	2150	10.23	6.08	2050	F8672107	F8672243	F8672124	F8672260
266	2250	9.89	6.58	2050	F8672108	F8672244	F8672125	F8672261
235	2550	9.89	7.45	2050	F8672109	F8672245	F8672126	F8672262
206	2550	8.68	8.49	2050	F8672110	F8672246	F8672127	F8672263
181	4000	11.95	9.68	2050	F8672111	F8672247	F8672128	F8672264
168	4200	11.63	10.44	2050	F8672112	F8672248	F8672129	F8672265
149	4600	11.34	11.74	2050	F8672113	F8672249	F8672130	F8672266
138	5000	11.37	12.71	2050	F8672114	F8672250	F8672131	F8672267
122	5300	10.65	14.40	2050	F8672115	F8672251	F8672132	F8672268
107	5490	9.68	16.41	2050	F8672116	F8672252	F8672133	F8672269
76	6000	7.53	23.04	2050	F8672117	F8672253	F8672134	F8672270
64	6380	6.77	27.24	2050	F8672118	F8672254	F8672135	F8672271
53	6650	5.86	32.85	2050	F8672119	F8672255	F8672136	F8672272

* Overhung load is calculated at centerline of output shaft.

STYLE FBN

STYLE FABN

STYLE FFN

STYLE FAFN



F8673 Series • TRIPLE REDUCTION

					NON-MOTORIZED			
Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Base Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Base or Shaft Mount Catalog No.	Output Flange Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Solid Output Shaft Catalog No.
45.9	6700	5.19	38.13	2050	F8673091	F8673211	F8673106	F8673226
36.3	7000	4.29	48.25	2050	F8673092	F8673212	F8673107	F8673227
31.3	7260	3.83	55.99	2050	F8673093	F8673213	F8673108	F8673228
23.9	7260	2.93	73.21	2050	F8673094	F8673214	F8673109	F8673229
20.0	7260	2.45	87.47	2050	F8673095	F8673215	F8673110	F8673230
18.8	7260	2.3	93.17	2050	F8673096	F8673216	F8673111	F8673231
16.4	7260	2.01	106.48	2050	F8673097	F8673217	F8673112	F8673232
15.6	7260	1.91	112.47	2050	F8673098	F8673218	F8673113	F8673233
14.6	7260	1.79	119.81	2050	F8673099	F8673219	F8673114	F8673234
12.8	7260	1.57	136.92	2050	F8673100	F8673220	F8673115	F8673235
11.9	7260	1.46	146.99	2050	F8673101	F8673221	F8673116	F8673236
10.2	7260	1.25	171.15	2050	F8673102	F8673222	F8673117	F8673237
9.4	7260	1.15	185.82	2050	F8673103	F8673223	F8673118	F8673238
8.6	7260	1.06	202.75	2050	F8673104	F8673224	F8673119	F8673239
7.9	7260	0.96	222.50	2050	F8673105	F8673225	F8673120	F8673240

* Overhung load is calculated at centerline of output shaft.

Maximum Rating Tables

F867 Series • Parallel Shaft Drives

1750 RPM Input



High Efficiency Helical - Bevel
Gear Reducers





High Efficiency Parallel Shaft
Gear Reducers





Stainless Steel & WASHGARD®
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	STYLE FBQ	STYLE FABQ	STYLE FFQ	STYLE FAFQ	
					
	MOTORIZED QUILL INPUT				
Motor Frame	Base Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Base or Shaft Mount Catalog No.	Output Flange Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Solid Output Shaft Catalog No.	Output Speed (RPM)
140TC	F8672018	F8672154	F8672069	F8672196	436
140TC	F8672019	F8672155	F8672070	F8672197	390
140TC	F8672020	F8672156	F8672071	F8672198	349
140TC	F8672021	F8672157	F8672072	F8672199	324
140TC	F8672022	F8672158	F8672073	F8672200	288
140TC	F8672023	F8672159	F8672074	F8672201	266
140TC	F8672024	F8672160	F8672075	F8672202	235
140TC	F8672025	F8672161	F8672076	F8672203	206
56C	F8672009	F8672145	F8672060	F8672196	181
56C	F8672010	F8672146	F8672061	F8672197	168
56C	F8672011	F8672147	F8672062	F8672198	149
56C	F8672012	F8672148	F8672063	F8672199	138
56C	F8672013	F8672149	F8672064	F8672200	122
56C	F8672014	F8672150	F8672065	F8672201	107
56C	F8672015	F8672151	F8672066	F8672202	76
56C	F8672016	F8672152	F8672067	F8672203	64
56C	F8672017	F8672153	F8672068	F8672204	53

	STYLE FBQ	STYLE FABQ	STYLE FFQ	STYLE FAFQ	
					
	MOTORIZED QUILL INPUT				
Motor Frame	Base Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Base or Shaft Mount Catalog No.	Output Flange Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Solid Output Shaft Catalog No.	Output Speed (RPM)
56C	F8673001	F8673121	F8673046	F8673166	45.9
56C	F8673002	F8673122	F8673047	F8673167	36.3
56C	F8673003	F8673123	F8673048	F8673168	31.3
56C	F8673004	F8673124	F8673049	F8673169	23.9
56C	F8673005	F8673125	F8673050	F8673170	20.0
56C	F8673006	F8673126	F8673051	F8673171	18.8
56C	F8673007	F8673127	F8673052	F8673172	16.4
56C	F8673008	F8673128	F8673053	F8673173	15.6
56C	F8673009	F8673129	F8673054	F8673174	14.6
56C	F8673010	F8673130	F8673055	F8673175	12.8
56C	F8673011	F8673131	F8673056	F8673176	11.9
56C	F8673012	F8673132	F8673057	F8673177	10.2
56C	F8673013	F8673133	F8673058	F8673178	9.4
56C	F8673014	F8673134	F8673059	F8673179	8.6
56C	F8673015	F8673135	F8673060	F8673180	7.9



Maximum Rating Tables

F867 Series • Parallel Shaft Drives

1750 RPM Input

High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
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STYLE FBN

STYLE FABN

STYLE FFN

STYLE FAFN



F8675 Series • QUINT REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED			
					Base Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Base or Shaft Mount Catalog No.	Output Flange Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Solid Output Shaft Catalog No.
6.3	7260	0.81	275.81	2050	F8675053	F8675131	F8675066	F8675144
4.9	7260	0.63	354.80	2050	F8675054	F8675132	F8675067	F8675145
4.1	7260	0.53	414.65	2050	F8675055	F8675133	F8675068	F8675146
3.3	7260	0.42	537.33	2050	F8675056	F8675134	F8675069	F8675147
2.8	7260	0.35	634.64	2050	F8675057	F8675135	F8675070	F8675148
2.2	7260	0.278	807.73	2050	F8675058	F8675136	F8675071	F8675149
1.8	7260	0.23	947.07	2050	F8675059	F8675137	F8675072	F8675150
1.5	7260	0.19	1187.01	2050	F8675060	F8675138	F8675073	F8675151
1.2	7260	0.15	1482.28	2050	F8675061	F8675139	F8675074	F8675152
1.0	7260	0.12	1841.0	2050	F8675062	F8675140	F8675075	F8675153
0.7	7260	0.10	2333.0	2050	F8675063	F8675141	F8675076	F8675154
0.6	7260	0.08	2863.0	2050	F8675064	F8675142	F8675077	F8675155
0.5	7260	0.07	3333.0	2050	F8675065	F8675143	F8675078	F8675156

* Overhung load is calculated at centerline of output shaft.

Maximum Rating Tables

F867 Series • Parallel Shaft Drives

1750 RPM Input



High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
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	STYLE FBQ	STYLE FABQ	STYLE FFQ	STYLE FAFQ	
	MOTORIZED QUILL INPUT				
Motor Frame	Base Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Base or Shaft Mount Catalog No.	Output Flange Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Solid Output Shaft Catalog No.	Output Speed (RPM)
56C	F8675001	F8675079	F8675027	F8675105	6.3
56C	F8675002	F8675080	F8675028	F8675106	4.9
56C	F8675003	F8675081	F8675029	F8675107	4.1
56C	F8675004	F8675082	F8675030	F8675108	3.3
56C	F8675005	F8675083	F8675031	F8675109	2.8
56C	F8675006	F8675084	F8675032	F8675110	2.2
56C	F8675007	F8675085	F8675033	F8675111	1.8
56C	F8675008	F8675086	F8675034	F8675112	1.5
56C	F8675009	F8675087	F8675035	F8675113	1.2
56C	F8675010	F8675088	F8675036	F8675114	1.0
56C	F8675011	F8675089	F8675037	F8675115	0.7
56C	F8675012	F8675090	F8675038	F8675116	0.6
56C	F8675013	F8675091	F8675039	F8675117	0.5



Maximum Rating Tables

F877 Series • Parallel Shaft Drives

1750 RPM Input

High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

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STYLE FBN STYLE FABN STYLE FFN STYLE FAFN



F877 Series • DOUBLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED			
					Base Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Base or Shaft Mount Catalog No.	Output Flange Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Solid Output Shaft Catalog No.
397.0	3060	20.06	4.41	2750	F8772097	F8772217	F8772109	F8772229
329.0	3500	19.02	5.32	2750	F8772098	F8772218	F8772110	F8772230
281.0	3700	17.19	6.22	2750	F8772099	F8772219	F8772111	F8772231
249.0	3850	15.83	7.04	2830	F8772100	F8772220	F8772112	F8772232
209.0	4000	13.84	8.36	2950	F8772101	F8772221	F8772113	F8772233
162.0	7300	19.56	10.80	3000	F8772102	F8772222	F8772114	F8772234
139.0	7650	17.53	12.62	3200	F8772103	F8772223	F8772115	F8772235
123.0	8000	16.22	14.27	3100	F8772104	F8772224	F8772116	F8772236
103.0	8500	14.50	16.96	3200	F8772105	F8772225	F8772117	F8772237
73.0	10000	12.14	23.82	3300	F8772106	F8772226	F8772118	F8772238
62.0	10750	11.04	28.16	3300	F8772107	F8772227	F8772119	F8772239
52.0	9750	8.31	33.95	3300	F8772108	F8772228	F8772120	F8772240

* Overhung load is calculated at centerline of output shaft.

STYLE FBN STYLE FABN STYLE FFN STYLE FAFN



F877 Series • TRIPLE REDUCTION

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	NON-MOTORIZED			
					Base Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Base or Shaft Mount Catalog No.	Output Flange Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Solid Output Shaft Catalog No.
46.2	13300	10.38	37.86	3300	F8773121	F8773271	F8773136	F8773286
41.4	13300	9.30	42.26	3300	F8773122	F8773272	F8773137	F8773287
37.0	13300	8.31	47.25	3300	F8773123	F8773273	F8773138	F8773288
34.3	13300	7.71	50.98	3300	F8773124	F8773274	F8773139	F8773289
30.5	13300	6.86	57.29	3300	F8773125	F8773275	F8773140	F8773290
28.2	13300	6.33	62.06	3300	F8773126	F8773276	F8773141	F8773291
24.9	13300	5.59	70.28	3300	F8773127	F8773277	F8773142	F8773292
22.7	13300	5.09	77.12	3300	F8773128	F8773278	F8773143	F8773293
20.9	13300	4.70	83.55	3300	F8773129	F8773279	F8773144	F8773294
18.5	13300	4.15	94.61	3300	F8773130	F8773280	F8773145	F8773295
16.2	13300	3.64	107.81	3300	F8773131	F8773281	F8773146	F8773296
11.6	13300	2.59	151.44	3300	F8773132	F8773282	F8773147	F8773297
9.8	13300	2.19	179.04	3300	F8773133	F8773283	F8773148	F8773298
8.1	13300	1.82	215.84	3300	F8773134	F8773284	F8773149	F8773299
6.6	13300	1.47	267.36	3300	F8773135	F8773285	F8773150	F8773300

* Overhung load is calculated at centerline of output shaft.

Maximum Rating Tables

F877 Series • Parallel Shaft Drives

1750 RPM Input



High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
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	STYLE FBQ	STYLE FABQ	STYLE FFQ	STYLE FAFQ	
	MOTORIZED QUILL INPUT				
Motor Frame	Base Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Base or Shaft Mount Catalog No.	Output Flange Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Solid Output Shaft Catalog No.	Output Speed (RPM)
140TC	F8772013	F8772133	F8772061	F8772181	397.0
140TC	F8772014	F8772134	F8772062	F8772182	329.0
140TC	F8772015	F8772135	F8772063	F8772183	281.0
140TC	F8772016	F8772136	F8772064	F8772184	249.0
140TC	F8772017	F8772137	F8772065	F8772185	209.0
140TC	F8772018	F8772138	F8772066	F8772186	162.0
140TC	F8772019	F8772139	F8772067	F8772187	139.0
140TC	F8772020	F8772140	F8772068	F8772188	123.0
140TC	F8772021	F8772141	F8772069	F8772189	103.0
140TC	F8772022	F8772142	F8772070	F8772190	73.0
140TC	F8772023	F8772143	F8772071	F8772191	62.0
140TC	F8772024	F8772144	F8772072	F8772192	52.0

	STYLE FBQ	STYLE FABQ	STYLE FFQ	STYLE FAFQ	
	MOTORIZED QUILL INPUT				
Motor Frame	Base Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Base or Shaft Mount Catalog No.	Output Flange Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Solid Output Shaft Catalog No.	Output Speed (RPM)
140TC	F8773016	F8773166	F8773076	F8773226	46.2
140TC	F8773017	F8773167	F8773077	F8773227	41.4
140TC	F8773018	F8773168	F8773078	F8773228	37.0
56C	F8773004	F8773154	F8773064	F8773214	34.3
56C	F8773005	F8773155	F8773065	F8773215	30.5
56C	F8773006	F8773156	F8773066	F8773216	28.2
56C	F8773007	F8773157	F8773067	F8773217	24.9
56C	F8773008	F8773158	F8773068	F8773218	22.7
56C	F8773009	F8773159	F8773069	F8773219	20.9
56C	F8773010	F8773160	F8773070	F8773220	18.5
56C	F8773011	F8773161	F8773071	F8773221	16.2
56C	F8773012	F8773162	F8773072	F8773222	11.6
56C	F8773013	F8773163	F8773073	F8773223	9.8
56C	F8773014	F8773164	F8773074	F8773224	8.1
56C	F8773015	F8773165	F8773075	F8773225	6.6



Maximum Rating Tables

F877 Series • Parallel Shaft Drives 1750 RPM Input

High Efficiency Helical - Bevel
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High Efficiency Parallel Shaft
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STYLE FBN

STYLE FABN

STYLE FFN

STYLE FAFN



F8775 Series • QUINT REDUCTION

NON-MOTORIZED

Output Speed (RPM)	Output Torque (lb-in.)	Input HP	Ratio	Output* OHL (lbs.)	Base Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Base or Shaft Mount Catalog No.	Output Flange Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Solid Output Shaft Catalog No.
5.8	13300	1.36	302.64	3300	F8775053	F8775131	F8775066	F8775144
5.2	13300	1.21	338.64	3300	F8775054	F8775132	F8775067	F8775145
3.9	13300	0.92	444.42	3300	F8775055	F8775133	F8775068	F8775146
3.4	13300	0.79	591.18	3300	F8775056	F8775134	F8775069	F8775147
2.7	13300	0.64	636.89	3300	F8775057	F8775135	F8775070	F8775148
2.2	13300	0.51	805.67	3300	F8775058	F8775136	F8775071	F8775149
1.8	13300	0.42	966.32	3300	F8775059	F8775137	F8775072	F8775150
1.5	13300	0.34	1205.25	3300	F8775060	F8775138	F8775073	F8775151
1.2	13300	0.28	1453.00	3300	F8775061	F8775139	F8775074	F8775152
1.0	13300	0.22	1829.00	3300	F8775062	F8775140	F8775075	F8775153
0.8	13300	0.19	2205.00	3300	F8775063	F8775141	F8775076	F8775154
0.6	13300	0.15	2806.00	3300	F8775064	F8775142	F8775077	F8775155
0.5	13300	0.12	3325.00	3300	F8775065	F8775143	F8775078	F8775156

* Overhung load is calculated at centerline of output shaft.

Maximum Rating Tables

F877 Series • Parallel Shaft Drives

1750 RPM Input



High Efficiency Helical - Bevel
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High Efficiency Parallel Shaft
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	STYLE FBQ	STYLE FABQ	STYLE FFQ	STYLE FAFQ	
	MOTORIZED QUILL INPUT				
Motor Frame	Base Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Base or Shaft Mount Catalog No.	Output Flange Mount Solid Output Shaft Catalog No.	Hollow Output Shaft Solid Output Shaft Catalog No.	Output Speed (RPM)
56C	F8775001	F8775079	F8775027	F8775105	5.8
56C	F8775002	F8775080	F8775028	F8775106	5.2
56C	F8775003	F8775081	F8775029	F8775107	3.9
56C	F8775004	F8775082	F8775030	F8775108	3.4
56C	F8775005	F8775083	F8775031	F8775109	2.7
56C	F8775006	F8775084	F8775032	F8775110	2.2
56C	F8775007	F8775085	F8775033	F8775111	1.8
56C	F8775008	F8775086	F8775034	F8775112	1.5
56C	F8775009	F8775087	F8775035	F8775113	1.2
56C	F8775010	F8775088	F8775036	F8775114	1.0
56C	F8775011	F8775089	F8775037	F8775115	0.8
56C	F8775012	F8775090	F8775038	F8775116	0.6
56C	F8775013	F8775091	F8775039	F8775117	0.5



Helical Parallel Drives

Double and Triple Reduction Dimensions

Style FBQ

High Efficiency Helical - Bevel Gear Reducers

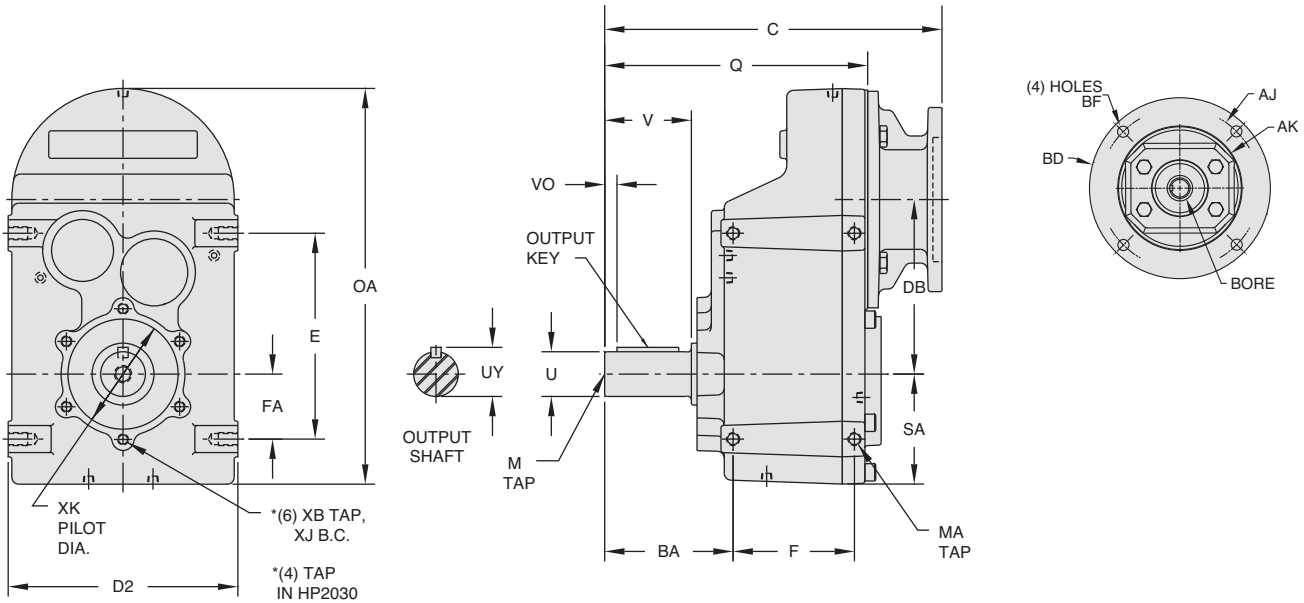
High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions



Gearcase

SIZE	BA	D2	DB	E	F	FA	MA	OA	Q	SA
FBQ837	2.85	6.50	4.56	4.53	3.03	1.22	M8 x 1.25 x .47	10.55	6.46	3.10
	72.4	165	115.8	115	77	31	M8 x 1.25 x 12	268	164	79
FBQ847	3.58	7.09	5.33	5.71	3.66	1.69	M10 x 1.5 x .59	12.22	7.87	3.45
	91	180	135.4	145	93	43	M10 x 1.5 x 15	310	200	88
FBQ867	4.67	8.35	6.34	7.48	4.41	2.36	M12 x 1.75 x .71	14.37	9.56	4.00
	118.5	212	161.1	190	112	60	M12 x 1.75 x 18	365	243	101
FBQ877	5.41	10.63	7.71	9.45	5.51	2.76	M16 x 2.0 x 1.02	17.82	11.59	4.94
	137.5	270	195.8	240	140	70	M16 x 2.0 x 26	453	294	125

Gearcase

SIZE	XB	XJ	XK
FBQ837	M8 x 1.25 x .63	3.875	3.1255 ⁻⁰ / _{+0.02}
	M8 x 1.25 x 16.0	98.43	79.388 ⁻⁰ / _{+0.051}
FBQ847	M8 x 1.25 x .63	3.875	3.2288 ⁻⁰ / _{+0.02}
	M8 x 1.25 x 16.0	98.43	82.012 ⁻⁰ / _{+0.051}
FBQ867	M10 x 1.5 x .66	4.750	4.0020 ⁻⁰ / _{+0.02}
	M10 x 1.5 x 16.7	120.65	101.651 ⁻⁰ / _{+0.051}
FBQ877	M12 x 1.75 x .95	5.375	4.3310 ⁻⁰ / _{+0.02}
	M12 x 1.75 x 24.1	136.53	110.007 ⁻⁰ / _{+0.051}

Output Shaft

U MAX ^{+0.000} / _{-0.001}	UY	V	VO	KEY	M
1.000	1.10	1.97	0.29	1/4 x 1/4 x 1-5/16	3/8 - 16 x 0.88
-	-	-	-	-	-
1.250	1.36	2.36	0.29	1/4 x 1/4 x 1-11/16	1/2 - 13 x 1.13
-	-	-	-	-	-
1.625	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8 - 11 x 1.38
-	-	-	-	-	-
2.000	2.21	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4 - 10 x 1.61
-	-	-	-	-	-

NEMA Motor Mounting Dimensions - Inches

SIZE	DIMENSION "C"		
	56C 140TC	180TC	210TC 250TC
FB837	9.26	-	-
	235	-	-
FB847	10.48	-	-
	266	-	-
FB867	12.26	13.28	-
	311	337	-
FB877	14.95	15.64	15.64
	380	397	397

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	8.50	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	8.50	N/A	0.50	1.625	3/8 X 3/16	0.53

Dimensions subject to change without notice.



WARNING For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

Helical Parallel Drives Double and Triple Reduction Dimensions

Style FABQ



High Efficiency Helical - Bevel
Gear Reducers

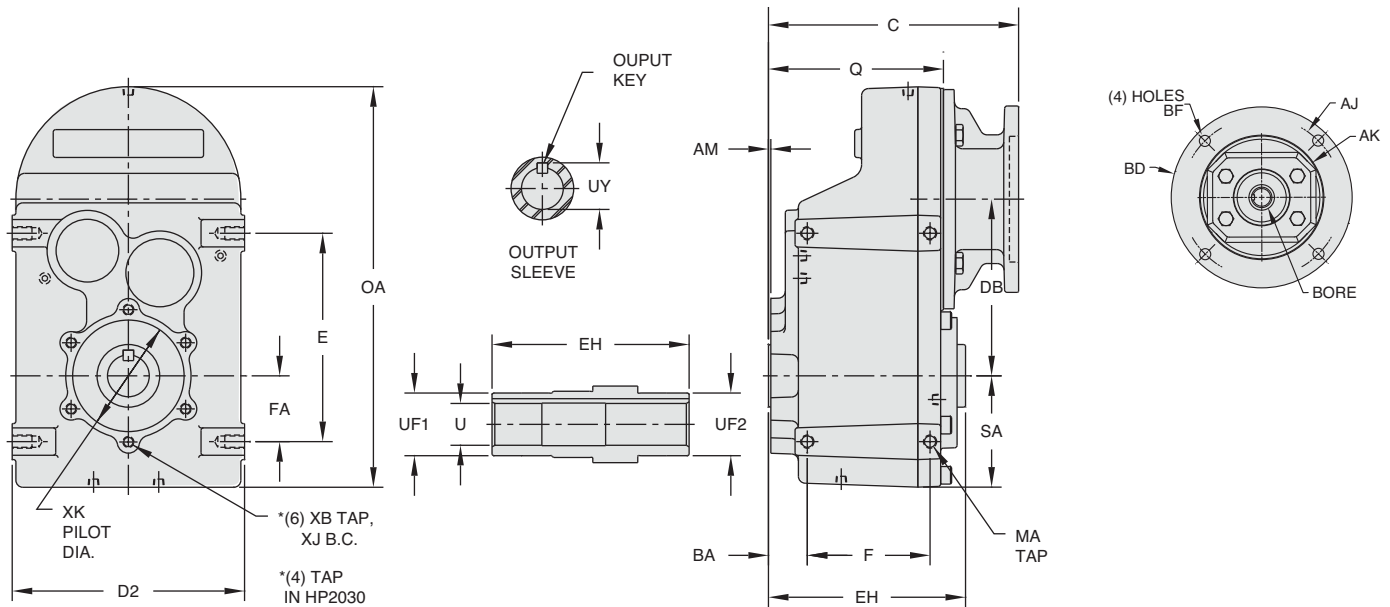
High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGWARD®
High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions



Gearcase

INCH
mm

SIZE	AM	BA	D2	DB	E	F	FA	MA	OA	Q	SA
FABQ837	.10	0.89	6.50	4.56	4.53	3.03	1.22	M8x1.25 x .47	10.55	4.50	3.10
	2.5	22.6	165	115.8	115	77	31	M8x1.25 x 12	268	114	79
FABQ847	.10	1.22	7.09	5.33	5.71	3.66	1.69	M10x1.5 x .59	12.22	5.51	3.45
	2.6	31	180	135.4	145	93	43	M10x1.5 x 15	310	140	88
FABQ867	.09	1.40	8.35	6.34	7.48	4.41	2.36	M12x1.75 x .71	14.37	6.29	4.00
	2.2	35.5	212	161.1	190	112	60	M12x1.75 x 18	365	160	101
FABQ877	.16	1.44	10.63	7.71	9.45	5.51	2.76	M16x2.0 x 1.02	17.82	7.62	4.94
	4.0	36.6	270	195.8	240	140	70	M16x2.0 x 26	453	193	125

Gearcase

INCH
mm

SIZE	XB	XJ	XK
FABQ837	M8x1.25 x .63	3.875	3.1255 ⁻⁰ / _{+0.02}
	M8x1.25 x 16.0	98.43	79.388 ⁻⁰ / _{+0.51}
FABQ847	M8x1.25 x .63	3.875	3.2288 ⁻⁰ / _{+0.02}
	M8x1.25 x 16.0	98.43	82.012 ⁻⁰ / _{+0.51}
FABQ867	M10x1.5 x .66	4.750	4.0020 ⁻⁰ / _{+0.02}
	M10x1.5 x 16.7	120.65	101.651 ⁻⁰ / _{+0.51}
FABQ877	M12x1.75 x .95	5.375	4.3310 ⁻⁰ / _{+0.02}
	M12x1.75 x 24.1	136.53	110.007 ⁻⁰ / _{+0.51}

Output Sleeve

EH	U MAX ^{+0.000} / _{-0.001}	UF1	UF2	UY	KEY
4.72	1.250	1.77	1.75	1.37	(2) 1/4 x 1/4 x 1-11/16
-	-	-	-	-	-
5.91	1.375	1.97	1.94	1.52	(2) 5/16 x 5/16 x 1-3/4
-	-	-	-	-	-
7.08	1.500	2.25	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-	-
8.27	2.000	2.75	2.75	2.23	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-	-

NEMA Motor Mounting Dimensions - Inches

SIZE	DIMENSION "C"		
	56C 143-5TC	180TC	210TC 250TC
FABQ837	7.30	-	-
	185	-	-
FABQ847	8.12	-	-
	206	-	-
FABQ867	8.99	10.01	-
	228	254	-
FABQ877	10.98	11.66	11.66
	279	296	296

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	8.50	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	8.50	N/A	0.50	1.625	3/8 X 3/16	0.53

Dimensions subject to change without notice.



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.



Helical Parallel Drives

Double and Triple Reduction Dimensions

Style FBN

High Efficiency Helical - Bevel Gear Reducers

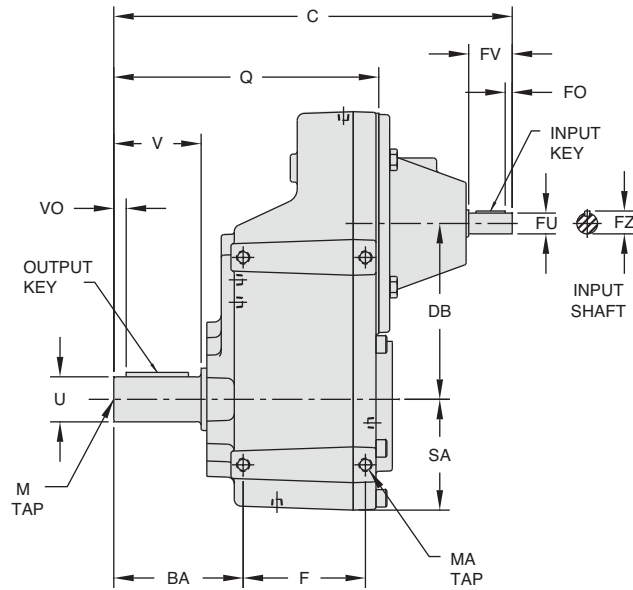
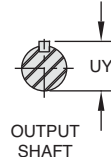
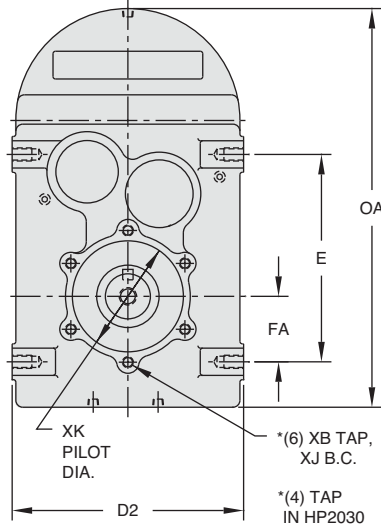
High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions



Gearcase

INCH
mm

SIZE	BA	C	D2	DB	E	F	FA	MA	OA	Q	SA
FBN837	2.85	10.77	6.50	4.56	4.53	3.03	1.22	M8x1.25 x .47	10.55	6.46	3.10
	72.4	274	165	115.8	115	77	31	M8x1.25 x 12	268	164	79
FBN847	3.58	12.21	7.09	5.33	5.71	3.66	1.69	M10x1.5 x .59	12.22	7.87	3.45
	91	310	180	135.4	145	93	43	M10x1.5 x 15	310	200	88
FBN867	4.67	14.37	8.35	6.34	7.48	4.41	2.36	M12x1.75 x .71	14.37	9.56	4.00
	118.5	365	212	161.1	190	112	60	M12x1.75 x 18	365	243	101
FBN877	5.41	17.79	10.63	7.71	9.45	5.51	2.76	M16x2.0 x 1.02	17.82	11.59	4.94
	137.5	452	270	195.8	240	140	70	M16x2.0 x 26	453	294	125

Gearcase

INCH
mm

SIZE	XB	XJ	XK
FBN837	M8x1.25 x .63	3.875	3.1255 ⁻⁰ / _{+0.002}
	M8x1.25 x 16.0	98.43	79.388 ⁻⁰ / _{+0.051}
FBN847	M8x1.25 x .63	3.875	3.2288 ⁻⁰ / _{+0.002}
	M8x1.25 x 16.0	98.43	82.012 ⁻⁰ / _{+0.051}
FBN867	M10x1.5 x .66	4.750	4.0020 ⁻⁰ / _{+0.002}
	M10x1.5 x 16.7	120.65	101.651 ⁻⁰ / _{+0.051}
FBN877	M12x1.75 x .95	5.375	4.3310 ⁻⁰ / _{+0.002}
	M12x1.75 x 24.1	136.53	110.007 ⁻⁰ / _{+0.051}

Output Shaft

U MAX ^{+0.000} / _{-0.001}	UY	V	VO	KEY	M
1.000	1.10	1.97	0.29	1/4 x 1/4 x 1-5/16	3/8 - 16 x 0.88
-	-	-	-	-	-
1.250	1.36	2.36	0.29	1/4 x 1/4 x 1-11/16	1/2 - 13 x 1.13
-	-	-	-	-	-
1.625	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8 - 11 x 1.38
-	-	-	-	-	-
2.000	2.21	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4 - 10 x 1.61
-	-	-	-	-	-

Input Shaft

SIZE	FU ^{+0.0000} / _{-0.0005}	FZ	FV	FO	KEY
FBN837	0.625	0.69	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
FBN847	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
FBN867	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
FBN877	0.875	0.95	1.97	0.28	3/16 x 3/16 x 1-1/4
	-	-	-	-	-

Dimensions subject to change without notice.

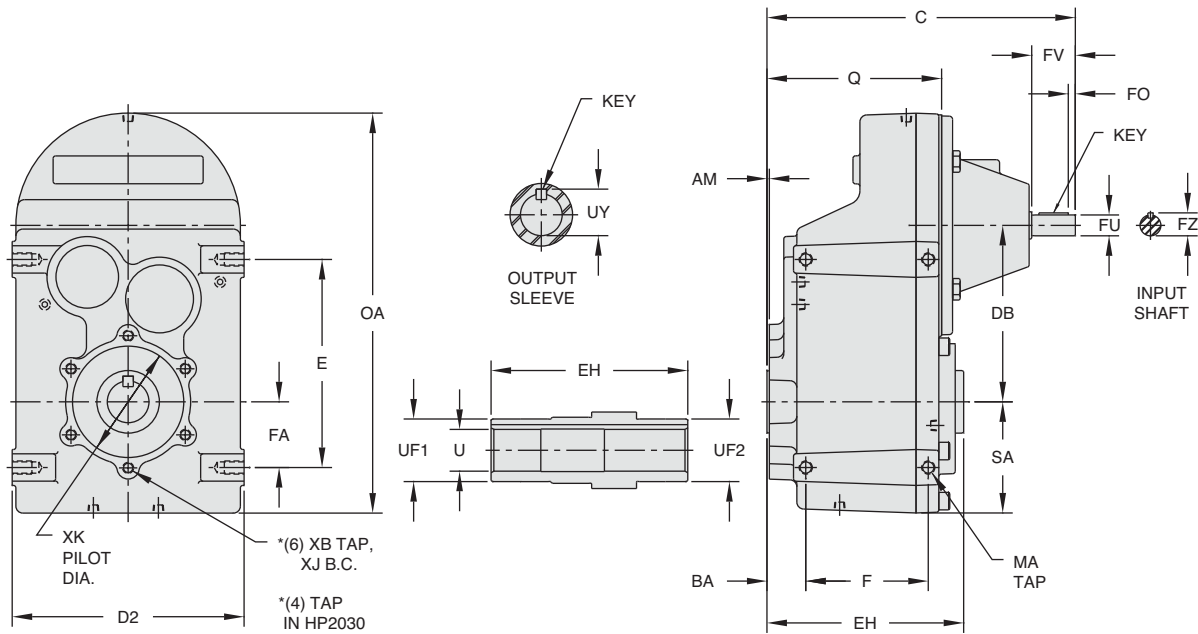


For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

Helical Parallel Drives Double and Triple Reduction Dimensions



Style FABN



Gearcase

INCH
mm

SIZE	AM	BA	C	D2	DB	E	F	FA	MA	OA	Q	SA
FABN837	.10	0.89	8.81	6.50	4.56	4.53	3.03	1.22	M8x1.25 x .47	10.55	4.50	3.10
	2.5	22.6	224	165	115.8	115	77	31	M8x1.25 x 12	268	114	79
FABN847	.10	1.22	9.85	7.09	5.33	5.71	3.66	1.69	M10x1.5 x .59	12.22	5.51	3.45
	2.6	31	250	180	135.4	145	93	43	M10x1.5 x 15	310	140	88
FABN867	.09	1.40	11.10	8.35	6.34	7.48	4.41	2.36	M12x1.75 x .71	14.37	6.29	4.00
	2.2	35.5	282	212	161.1	190	112	60	M12x1.75 x 18	365	160	101
FABN877	.16	1.44	13.81	10.63	7.71	9.45	5.51	2.76	M16x2.0 x 1.02	17.82	7.62	4.94
	4.0	36.6	351	270	195.8	240	140	70	M16x2.0 x 26	453	193	125

Gearcase

INCH
mm

SIZE	XB	XJ	XK
FABN837	M8x1.25 x .63	3.875	3.1255 ⁻⁰ _{+0.002}
	M8x1.25 x 16.0	98.43	79.388 ⁻⁰ _{+0.051}
FABN847	M8x1.25 x .63	3.875	3.2288 ⁻⁰ _{+0.002}
	M8x1.25 x 16.0	98.43	82.012 ⁻⁰ _{+0.051}
FABN867	M10x1.5 x .66	4.750	4.0020 ⁻⁰ _{+0.002}
	M10x1.5 x 16.7	120.65	101.651 ⁻⁰ _{+0.051}
FABN877	M12x1.75 x .95	5.375	4.3310 ⁻⁰ _{+0.002}
	M12x1.75 x 24.1	136.53	110.007 ⁻⁰ _{+0.051}

Output Sleeve

EH	U MAX ^{+0.0025} _{-0.0000}	UF1	UF2	UY	KEY
4.72	1.250	1.77	1.75	1.37	(2) 1/4 x 1/4 x 1-11/16
-	-	-	-	-	-
5.91	1.375	1.97	1.94	1.52	(2) 5/16 x 5/16 x 1-3/4
-	-	-	-	-	-
7.08	1.500	2.25	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-	-
8.27	2.000	2.75	2.75	2.23	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-	-

Input Shaft

SIZE	FU ^{+0.0000} _{-0.0005}	FZ	FV	FO	KEY
FABN837	0.625	0.69	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
FABN847	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
FABN867	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
FABN877	0.875	0.95	1.97	0.28	3/16 x 3/16 x 1-1/4
	-	-	-	-	-

Dimensions subject to change without notice.



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

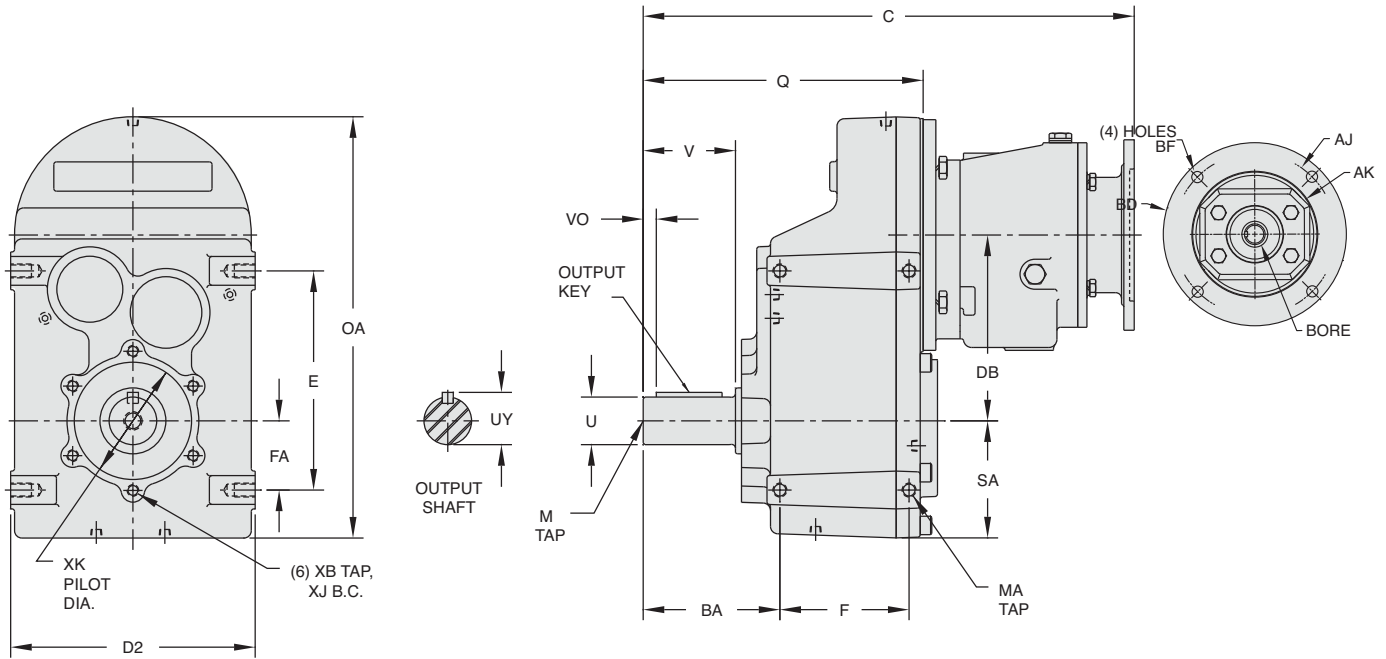


Helical Parallel Drives Quin Reduction Dimensions Style FBQ

High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers



Gearcase

SIZE	BA	D2	DB	E	F	FA	MA	OA	Q	SA
FBQ867	4.67	8.35	6.34	7.48	4.41	2.36	M12x1.75 x .71	14.37	9.56	4.00
	118.5	212	161.1	190	112	60	M12x1.75 x 18	365	243	101
FBQ877	5.41	10.63	7.71	9.45	5.51	2.76	M16x2.0 x 1.02	17.82	11.59	4.94
	137.5	270	195.8	240	140	70	M16x2.0 x 26	453	294	125

Gearcase

SIZE	XB	XJ	XK
FBQ867	M10x1.5 x .66	4.750	4.0020 ⁻⁰ _{+0.002}
	M10x1.5 x 16.7	120.65	101.651 ⁻⁰ _{+0.051}
FBQ877	M12x1.75 x .95	5.375	4.3310 ⁻⁰ _{+0.002}
	M12x1.75 x 24.1	136.53	110.007 ⁻⁰ _{+0.051}

Output Shaft

U MAX ^{+0.000} _{-0.001}	UY	V	VO	KEY	M
1.625	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8 - 11 x 1.38
-	-	-	-	-	-
2.000	2.21	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4 - 10 x 1.61
-	-	-	-	-	-

NEMA Motor Mounting Dimensions - Inches

SIZE	DIMENSION "C"	
	56C	140TC
FBQ867	17.49	444
	19.93	506

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41

Dimensions subject to change without notice.



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

Technical Information

Warnings and Cautions

Terms and Conditions

Helical Parallel Drives Quin Reduction Dimensions Style FABQ



High Efficiency Helical - Bevel
Gear Reducers

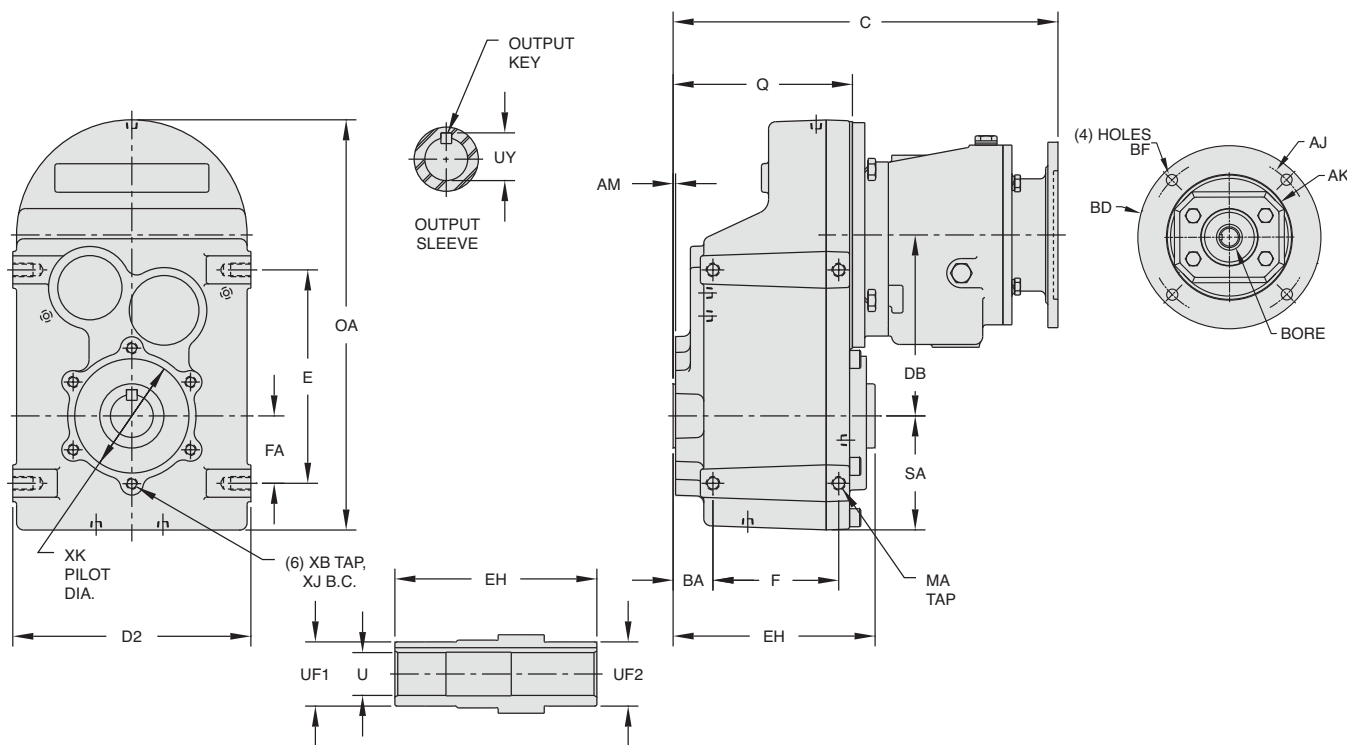
High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions



Gearcase	INCH mm											
SIZE	AM	BA	D2	DB	E	F	FA	MA	OA	Q	SA	
FABQ867	.09	1.40	8.35	6.34	7.48	4.41	2.36	M12x1.75 x .71	14.37	6.29	4.00	
	2.2	35.5	212	161.1	190	112	60	M12x1.75 x 18	365	160	101	
FABQ877	.16	1.44	10.63	7.71	9.45	5.51	2.76	M16x2.0 x 1.02	17.82	7.62	4.94	
	4.0	36.6	270	195.8	240	140	70	M16x2.0 x 26	453	193	125	

Gearcase	INCH mm		
SIZE	XB	XJ	XK
FABQ867	M10x1.5 x .66	4.750	4.0020 ⁰ _{+.002}
	M10x1.5 x 16.7	120.65	101.651 ⁰ _{+.051}
FABQ877	M12x1.75 x .95	5.375	4.3310 ⁰ _{+.002}
	M12x1.75 x 24.1	136.53	110.007 ⁰ _{+.051}

Output Sleeve	INCH mm					
EH	U MAX ^{+0.0025} -0.0000	UF1	UF2	UY	KEY	
7.08	1.500	2.25	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4	
-	-	-	-	-	-	
8.27	2.000	2.75	2.75	2.23	(2) 1/2 x 1/2 x 2-5/8	
-	-	-	-	-	-	

NEMA Motor Mounting Dimensions - Inches

SIZE	DIMENSION "C"	
	56C	145TC
FABQ867	14.22	361
	15.96	405
FABQ877	405	

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway	BF
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	8.50	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	8.50	N/A	0.50	1.625	3/8 X 3/16	0.53

Dimensions subject to change without notice.



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

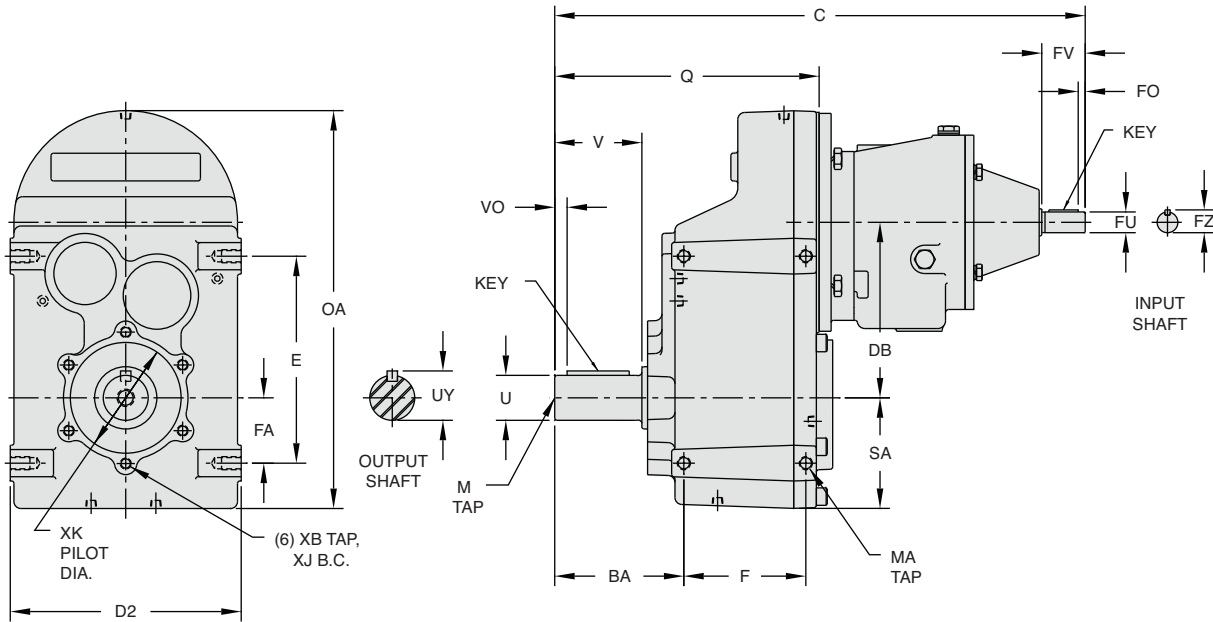


Helical Parallel Drives Quin Reduction Dimensions Style FBN

High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers



Gearcase

SIZE	BA	C	D2	DB	E	F	FA	MA	OA	Q	SA
FBN867	4.67	19.53	8.35	6.34	7.48	4.41	2.36	M12x1.75 x .71	14.37	9.56	4.00
	118.5	496	212	161.1	190	112	60	M12x1.75 x 18	365	243	101
FBN877	5.41	22.05	10.63	7.71	9.45	5.51	2.76	M16x2.0 x 1.02	17.82	11.59	4.94
	137.5	560	270	195.8	240	140	70	M16x2.0 x 26	453	294	125

Gearcase

SIZE	XB	XJ	XK
FBN867	M10x1.5 x .66	4.750	4.0020 ⁻⁰ _{+0.002}
	M10x1.5 x 16.7	120.65	101.651 ⁻⁰ _{+0.051}
FBN877	M12x1.75 x .95	5.375	4.3310 ⁻⁰ _{+0.002}
	M12x1.75 x 24.1	136.53	110.007 ⁻⁰ _{+0.051}

Output Shaft

U MAX ^{+0.0025} _{-0.0000}	UY	V	VO	KEY	M
1.625	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8 - 11 x 1.38
-	-	-	-	-	-
2.000	2.21	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4 - 10 x 1.61
-	-	-	-	-	-

Input Shaft

SIZE	FU ^{+0.0000} _{-0.0005}	FZ	FV	FO	KEY
FBN867	0.625	N/A	1.88	N/A	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
FBN877	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-

Dimensions subject to change without notice.



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

Warnings and Cautions

Technical Information

Terms and Conditions

Helical Parallel Drives Quin Reduction Dimensions Style FABN



High Efficiency Helical - Bevel
Gear Reducers

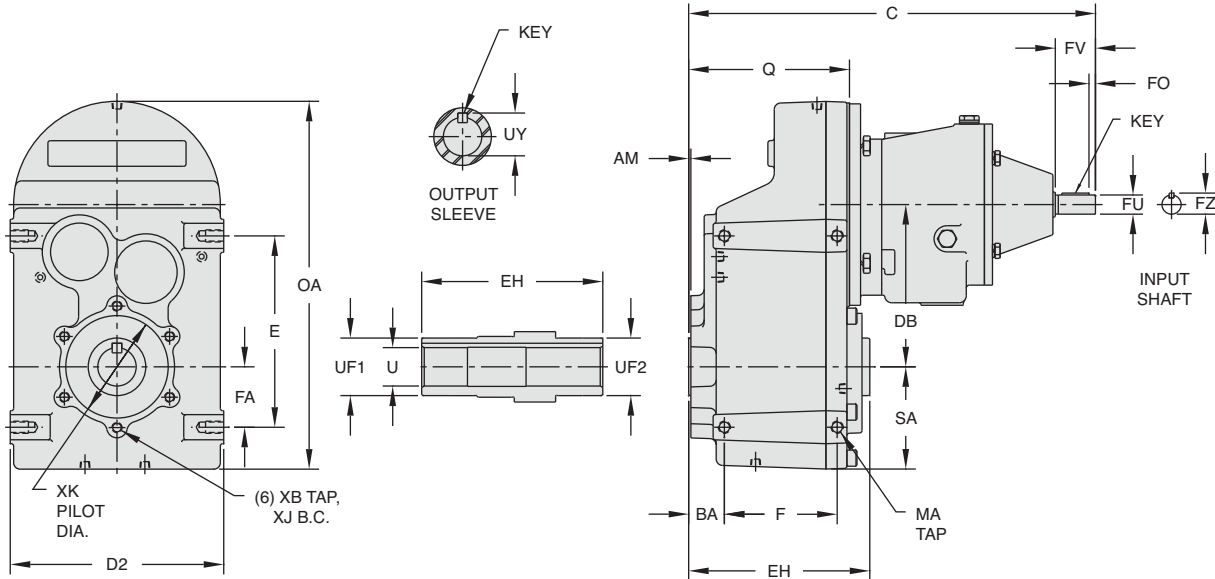
High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

Technical Information

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Terms and Conditions



Gearcase

INCH
mm

SIZE	AM	BA	C	D2	DB	E	F	FA	MA	OA	Q	SA
FABN867	.09	1.40	16.26	8.35	6.34	7.48	4.41	2.36	M12x1.75 x .71	14.37	6.29	4.00
	2.2	35.5	413	212	161.1	190	112	60	M12x1.75 x 18	365	160	101
FABN877	.16	1.44	18.07	10.63	7.71	9.45	5.51	2.76	M16x2.0 x 1.02	17.82	7.62	4.94
	4.0	36.6	459	270	195.8	240	140	70	M16x2.0 x 26	453	193	125

Gearcase

INCH
mm

SIZE	XB	XJ	XK
FABN867	M10x1.5 x .66	4.750	4.0020 ⁻⁰ _{+0.002}
	M10x1.5 x 16.7	120.65	101.651 ⁻⁰ _{+0.051}
FABN877	M12x1.75 x .95	5.375	4.3310 ⁻⁰ _{+0.002}
	M12x1.75 x 24.1	136.53	110.007 ⁻⁰ _{+0.051}

Output Sleeve

EH	U MAX ^{+0.0025} _{-0.0000}	UF1	UF2	UY	KEY
7.08	1.500	2.25	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-	-
8.27	2.000	2.75	2.75	2.23	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-	-

Input Shaft

SIZE	FU ^{+0.0000} _{-0.0005}	FZ	FV	FO	KEY
FABN867	0.625	N/A	1.88	N/A	3/16 x 3/16 x 1-1/16
	-	-	-	-	-
FABN877	0.750	0.82	1.57	0.25	3/16 x 3/16 x 1-1/16
	-	-	-	-	-

Dimensions subject to change without notice.



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.



Helical Parallel Drives Accessory Kits

Flange Mount With Output Shaft

Output Flange Kits with
Solid Output Shaft
create styles:
FFQ FFN

High Efficiency Helical - Bevel
Gear Reducers

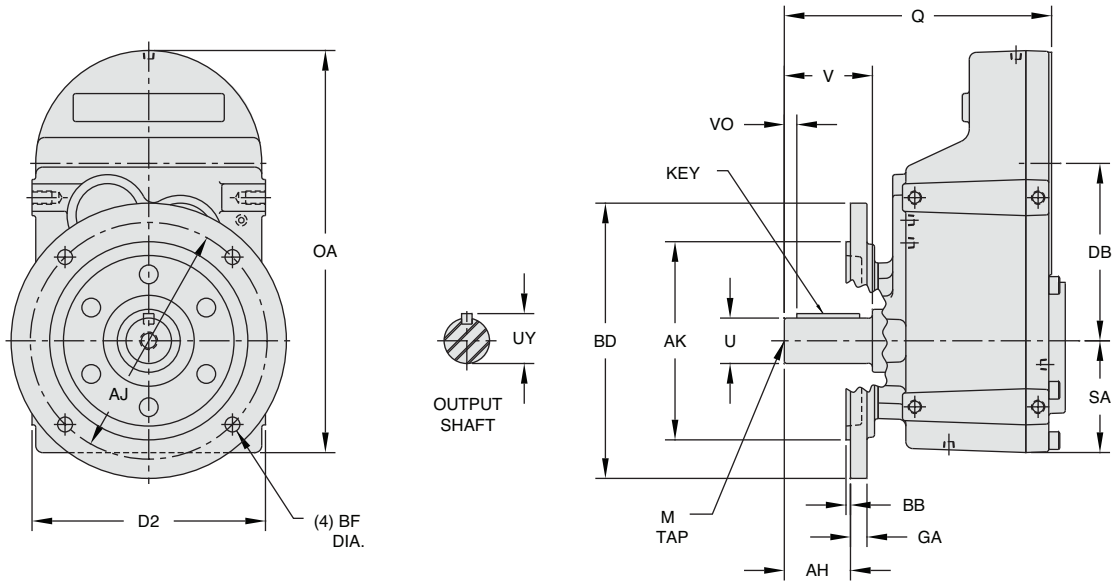
High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions



Gearcase

SIZE	INCH		DB	OA	Q	SA
	D2	mm				
F837	6.50	165	4.56	10.55	6.46	3.10
		115.8	268	164	79	
F847	7.09	180	5.33	12.22	7.87	3.45
		135.4	310	200	88	
F867	8.35	212	6.34	14.37	9.56	4.00
		161.1	365	243	101	
F877	10.63	270	7.71	17.82	11.59	4.94
		195.8	453	294	125	

Output Flange

AH	AJ	AK	BB	BD	BF	GA
1.02	5.12	4.331 ^{-0.003} _{-0.024}	0.14	6.30	0.35	0.39
26	130	110 ⁺⁰ _{-0.054}	3.5	160	9	10
1.38	6.50	5.118 ⁺⁰ _{-0.002}	0.14	7.87	0.43	0.47
35	165	130 ^{-0.003} _{-0.054}	3.5	200	11	12
2.37	8.46	7.087 ⁺⁰ _{-0.002}	0.16	9.84	0.53	0.59
60	215	180 ^{+0.010} _{-0.041}	4	250	13.5	15
2.52	10.43	9.055 ⁺⁰ _{-0.002}	0.16	11.81	0.53	0.63
64	265	230 ^{-0.003} _{-0.054}	4	300	13.5	16

Output Shaft

SIZE	U	UY	V	VO	KEY	M	WEIGHT	ACCESSORY KIT CATALOG NO.
F837	1.000 ⁺⁰ _{-0.001}	1.10	1.97	0.29	1/4 x 1/4 x 1-5/16	3/8 - 16 x 0.88	7 lbs.	0259-00040
	-	-	-	-	-	-		
F847	1.250 ⁺⁰ _{-0.001}	1.36	2.36	0.29	1/4 x 1/4 x 1-11/16	1/2 - 13 x 1.13	11 lbs.	0259-00010
	-	-	-	-	-	-		
F867	1.625 ⁺⁰ _{-0.001}	1.78	3.15	0.45	3/8 x 3/8 x 2-1/4	5/8 - 11 x 1.38	15 lbs.	0259-00005
	-	-	-	-	-	-		
F877	2.000 ⁺⁰ _{-0.001}	2.21	3.94	0.64	1/2 x 1/2 x 2-5/8	3/4 - 10 x 1.61	18 lbs.	0259-00006
	-	-	-	-	-	-		

Dimensions subject to change without notice.
Flange Mount Kits are designed to be installed by the customer.



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.

Helical Parallel Drives Accessory Kits



High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGARD®
High Efficiency Gear Reducers

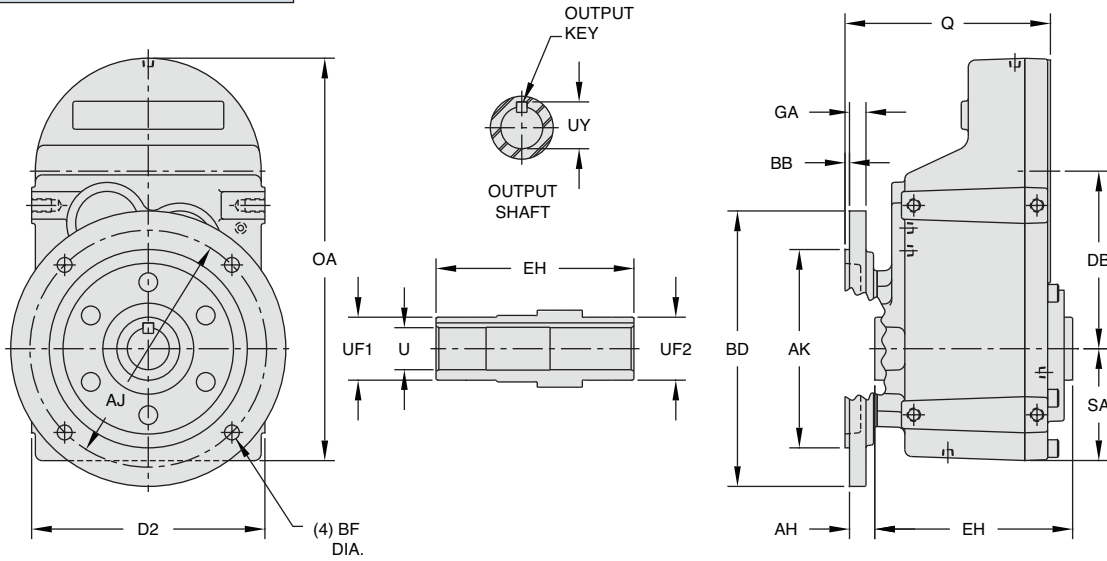
Technical Information

Warnings and Cautions

Terms and Conditions

Flange Mount With Output Sleeve

Output Flange Kits with
Hollow Output Shaft
create styles:
FAFQ FAFN



Gearcase

SIZE	INCH mm		OA	Q	SA
F837	6.50	4.56	10.55	5.58	3.10
	165	115.8	268	142	79
F847	7.09	5.33	12.22	6.63	3.45
	180	135.4	310	168	88
F867	8.35	6.34	14.37	7.35	4.00
	212	161.1	365	187	101
F877	10.63	7.71	17.82	9.23	4.94
	270	195.8	453	234	125

Hollow Output Shaft

EH	U ^{+0.0025} -0.0000	UF1	UF2	UY	KEY
4.72	1.250	1.77	1.75	1.37	(2) 1/4 x 1/4 x 1-11/16
-	-	-	-	-	-
5.91	1.375	1.97	1.94	1.52	(2) 5/16 x 5/16 x 1-3/4
-	-	-	-	-	-
7.08	1.500	2.25	2.25	1.67	(2) 3/8 x 3/8 x 2-1/4
-	-	-	-	-	-
8.27	2.000	2.75	2.75	2.23	(2) 1/2 x 1/2 x 2-5/8
-	-	-	-	-	-

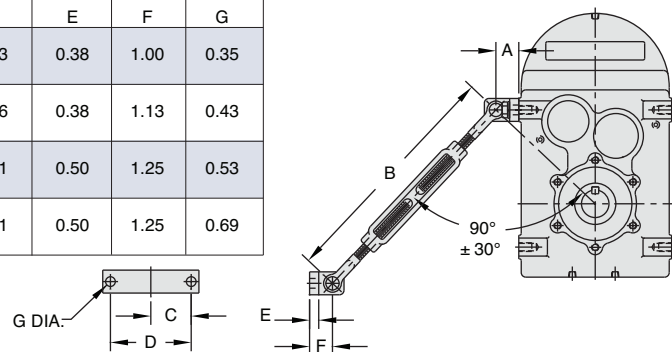
Flange

SIZE	AH	AJ	AK	BB	BD	BF	GA	WEIGHT	ACCESSORY KIT CATALOG NO.
F837	0.94	5.12	4.331 ^{-0.0003} -0.0024	0.14	6.30	0.35	0.39	7 lbs.	0259-00040
	24	130	110 ⁺⁰ -0.054	3.5	160	9	10		
F847	0.98	6.50	5.118 ⁺⁰ -0.002	0.14	7.87	0.43	0.47	11 lbs.	0259-00010
	25	165	130 ^{-0.003} -0.054	3.5	200	11	12		
F867	0.90	8.46	7.087 ⁺⁰ -0.002	0.16	9.84	0.53	0.59	15 lbs.	0259-00005
	23	215	180 ^{+0.010} -0.041	4	250	13.5	15		
F877	1.45	10.43	9.055 ⁺⁰ -0.002	0.16	11.81	0.53	0.63	18 lbs.	0259-00006
	37	265	230 ^{-0.003} -0.054	4	300	13.5	16		

Torque Arm Kit

SIZE	KIT NUMBER	A	B	C	D	E	F	G
F837	0259-00018	1.00	11.13 MIN.	1.52	3.03	0.38	1.00	0.35
			17.00 MAX.					
F847	0259-00019	1.13	12.50 MIN.	1.83	3.66	0.38	1.13	0.43
			18.38 MAX.					
F867	0259-00020	1.25	12.50 MIN.	2.20	4.41	0.50	1.25	0.53
			18.38 MAX.					
F877	0259-00021	1.25	12.50 MIN.	2.76	5.51	0.50	1.25	0.69
			18.38 MAX.					

Dimensions subject to change without notice.
Flange Mount Kits are designed to be installed by the customer.



For safety and to comply with local and national safety codes, the purchaser or user must provide protective guards over all shaft extensions and devices mounted thereon.



Grove Gear IRONMAN High Efficiency Stainless Steel and WASHGUARD® Gear Reducers

High Efficiency Helical - Bevel
Gear Reducers

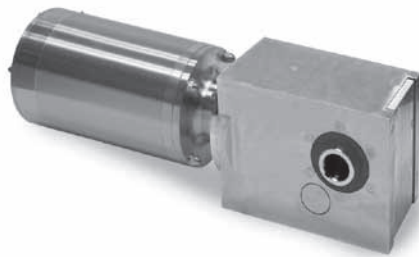


STAINLESS STEEL HELICAL - INLINE DRIVE FEATURES R SERIES

- Ratios from 2.57:1 to 51.25:1
- Power Ratings to 18HP
- 93 to 97% Efficient
- Four Models Available
- Factory Filled with USDA H1 Lubricant
- 316 Stainless Steel Housings & Shafts
- Smooth Cast Surface Finish
- BISSC Certified
- High Pressure Dual Lip Seals Configured for Severe High Pressure & Chemical Washdown Environments
- Packaged with LEESON Washguard® All-Stainless Motors

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers



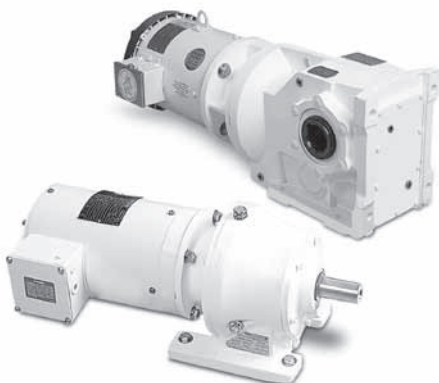
STAINLESS STEEL HELICAL BEVEL DRIVE FEATURES K SERIES

- Ratios from 6:1 to 140:1
- Power Ratings from 3/4 to 12 hp
- 93 to 97% Efficient
- Two Models Available
- Factory Filled with USDA H1 Lubricant
- 316 Stainless Steel Housings & Shafts
- Smooth Cast Surface Finish
- BISSC Certified
- High Pressure Dual Lip Seals Configured for Severe High Pressure & Chemical Washdown Environments
- Packaged with LEESON Washguard® All-Stainless Motors

Technical Information

Warnings and Cautions

Terms and Conditions



WASHGUARD HIGH EFFICIENCY REDUCERS

- FDA Approved White Acrylic Paint
- 303 Stainless Steel Output Shafts
- Stainless Steel Hardware and Nameplate
- BISSC Certification Optional
- Available in Standard Models of Helical - Bevel, Helical - Worm, Helical - InLine and Parallel Shaft
- USDA/FDA Approved Stainless Steel Paint Optional

Maximum Rating Tables

Stainless Steel Helical - Inline



High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

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RATING TABLE - 8372

RATIO	OUTPUT SPEED	INPUT H.P.	OUTPUT TORQUE	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
2.63	665	11.2	1020	530	140	610
2.95	593	10.4	1060	550	140	630
3.31	529	9.61	1100	570	140	650
3.72	470	9.10	1170	580	140	660
4.21	416	8.79	1280	590	140	650
4.78	366	7.75	1280	620	140	690
5.47	320	6.77	1280	650	140	730
5.87	298	6.31	1280	680	140	780
6.13	285	6.79	1440	710	140	840
6.86	255	6.16	1460	740	140	880
7.70	227	5.56	1480	770	140	920
8.67	202	5.17	1550	790	140	950
9.80	179	4.75	1610	820	140	980
11.14	157	4.41	1700	850	140	1010
12.74	137	3.95	1740	890	140	1060
13.67	128	3.77	1780	920	140	1100
16.66	105	3.13	1800	980	140	1250
20.77	84	2.52	1810	1050	140	1250
25.04	70	2.10	1820	1150	140	1250
28.79	61	1.84	1830	1150	140	1250
36.56	48	1.46	1840	1150	140	1250
44.10	40	1.21	1850	1150	140	1250
50.47	35	1.01	1770	1150	140	1250



RATING TABLE - 8572

RATIO	OUTPUT SPEED	INPUT H.P.	OUTPUT TORQUE	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
22.57	681	18.6	1650	960	200	890
3.08	568	16.5	1760	1010	200	930
3.90	449	13.9	1880	1090	200	1000
4.52	387	12.6	1970	1140	200	1050
5.98	293	15.8	3260	1080	200	870
7.16	244	13.5	3340	1180	200	990
9.06	193	11.0	3450	1290	200	1110
10.52	166	10.1	3680	1340	200	1140
13.75	127	8.22	3910	1470	200	1260
16.43	107	7.04	4000	1560	200	1370
17.50	100	6.63	4010	1600	200	1400
20.00	88	5.83	4030	1600	200	1400
21.47	82	5.44	4040	1600	200	1400
25.00	70	4.69	4050	1600	200	1400
27.14	64	4.33	4060	1600	200	1400
29.62	59	3.97	4070	1600	200	1400
32.50	54	3.64	4090	1600	200	1400
35.91	48.7	3.30	4100	1600	200	1400
45.00	38.9	2.64	4110	1600	200	1400
51.25	34.1	2.33	4120	1600	200	1400

All torque values listed in inch-pounds, all overhung load and thrust load values listed in pounds.
 The point of application of OHL is considered to be applied at the midpoint of shaft extension. Input OHL applies only to shaft input models.
 OHL and thrust ratings cannot be applied simultaneously. Consult the factory for applications with combined OHL and thrust load.
 At speeds above 1750 RPM, units may become thermally limited. For extended operation, limit HP to 1750 RPM rating.



Stainless Steel Helical - Inline Dimensions

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

MODELS - SRBQ8372 & SRBQ8572

Gearcase

MODEL	A	AD	B	BA	D	E	F	H	OA
SRBQ8372	5.72	6.61	6.30	2.95	3.54	4.33	5.12	0.39	6.68
SRBQ8572	7.48	7.93	7.87	3.94	4.53	5.32	6.50	0.53	8.48

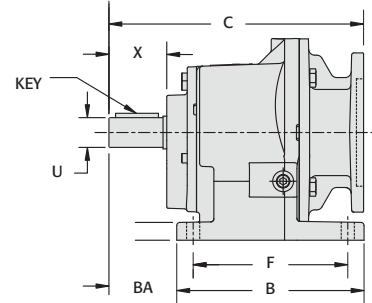
Output Shaft

MODEL	U	X	KEY
SRBQ8372	1.000	2.12	1/4 x 1/4 x 1-1/2
SRBQ8572	1.375	2.83	5/16 x 5/16 x 1-3/4

NEMA Motor Compatibility

MODEL	NEMA			
	56C	143TC 145TC	182TC 184TC	213TC 215TC
SRBQ8372	9.90	9.90	11.21	-
SRBQ8572	11.10	11.10	12.12	12.12

SRBQ8572 also available with 1.250" output shaft



DIMENSIONS ARE INCH

MODELS - SRBN8372 & SRBN8572

Gearcase

MODEL	A	AD	B	BA	D	E	F	H	OA
SRBN8372	5.72	6.61	6.30	2.95	3.54	4.33	5.12	0.39	6.68
SRBN8572	7.48	7.93	7.87	3.94	4.53	5.32	6.50	0.53	8.48

Output Shaft

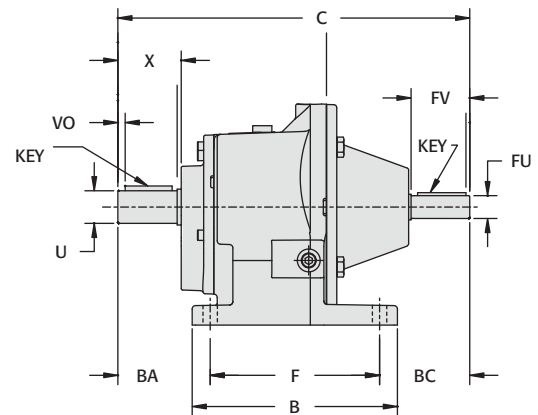
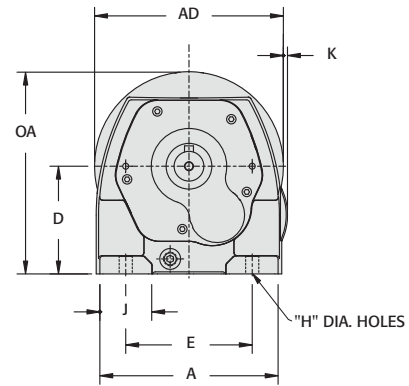
MODEL	U	X	KEY
SRBN8372	1.000	2.12	1/4 x 1/4 x 1-1/2
SRBN8572	1.375	2.83	5/16 x 5/16 x 1-3/4

Input Shaft

MODEL	FU	FV	KEY
SRBN8372	0.750	1.57	3/16 x 3/16 x 1-1/16
SRBN8572	0.875	2.25	3/16 x 3/16 x 2

Gearcase/Input

MODEL	BC	C
SRBN8372	3.56	11.63
SRBN8472	3.45	13.89



DIMENSIONS ARE INCH

Stainless Steel Helical - Inline Dimensions



High Efficiency Helical - Bevel
Gear Reducers

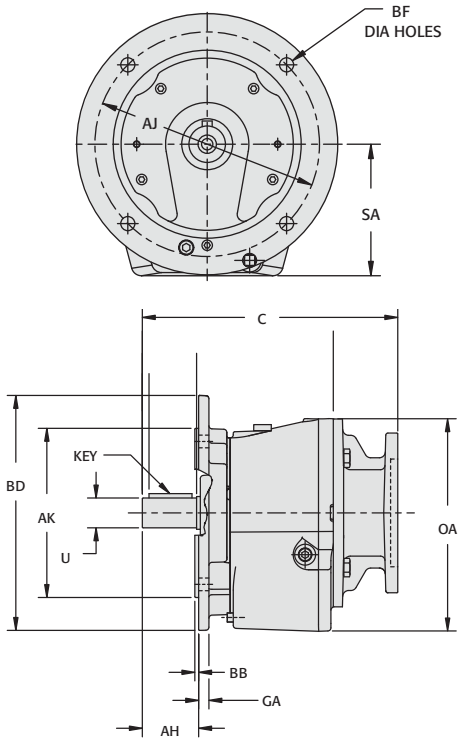
High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

Technical Information

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MODELS - SRFQ8372 & SRFQ8572

Gearcase

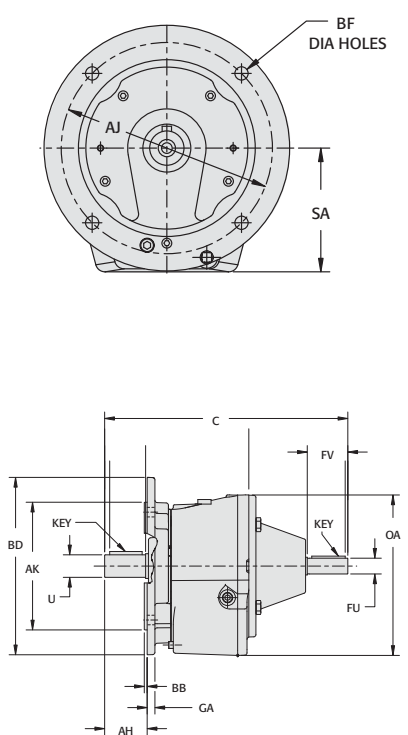
MODEL	OA	SA
SRFQ8372	7.22	4.04
SRFQ8572	8.92	4.96

Output Shaft

MODEL	AH	AJ	AK	BB	BD	BF	U	KEY
SRFQ8372	1.97	6.50	5.118	0.14	7.90	0.47	1.000	1/4 x 1/4 x 1-1/2
SRFQ8572	2.76	8.46	7.087	0.16	9.84	0.53	1.375	5/16 x 5/16 x 1-3/4

NEMA Motor Compatibility

MODEL	56C	NEMA		
		143TC 145TC	182TC 184TC	213TC 215TC
SRFQ8372	9.90	9.90	11.21	-
SRFQ8572	11.10	11.10	12.12	12.12



MODELS - SRFN8372 & SRFN8572

Gearcase

MODEL	OA	SA
SRFN8372	7.22	4.04
SRFN8572	8.92	4.96

Output Shaft

MODEL	AH	AJ	AK	BB	BD	BF	U	KEY
SRFN8372	1.97	6.50	5.118	0.14	7.90	0.47	1.000	1/4 x 1/4 x 1-1/2
SRFN8572	2.76	8.46	7.087	0.16	9.84	0.53	1.375	5/16 x 5/16 x 1-3/4

Input Shaft

MODEL	FU	FV	KEY
SRFN8372	0.750	1.57	3/16 x 3/16 x 1-1/16
SRFN8572	0.875	2.25	3/16 x 3/16 x 2

Gearcase/Input

MODEL	C
SRFN8372	11.63
SRFN8472	13.89



Maximum Rating Tables

Stainless Steel Helical - Bevel

High Efficiency Helical - Bevel
Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

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RATING TABLE - 8473

RATIO	OUTPUT SPEED	INPUT H.P.	OUTPUT TORQUE	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
6.53	268	10	2210	650	140	1730
7.31	239	9.0	2230	675	140	1730
9.24	189	7.5	2350	700	140	1730
12.07	145	7.6	3100	800	140	1950
13.51	130	6.9	3150	770	140	1950
17.08	102	5.8	3350	830	140	1950
21.94	80	4.8	3540	930	140	1950
25.10	70	4.2	3540	1050	140	1950
30.37	58	3.4	3540	1150	140	1950
38.38	46	2.7	3540	1250	140	1950
49.31	35	2.1	3540	1250	140	1950
56.41	31	1.9	3540	1250	140	1950
73.76	24	1.4	3540	1250	140	1950
91.94	19	1.1	3540	1250	140	1950
110.88	16	0.9	3540	1250	140	1950
127.45	14	0.8	3540	1250	140	1950

RATING TABLE - 8673

RATIO	OUTPUT SPEED	INPUT H.P.	OUTPUT TORQUE	OUTPUT OHL	INPUT OHL	OUTPUT THRUST
6.22	281	12	2530	2050	200	2850
7.46	235	11	2880	2050	200	2850
9.44	185	10	3250	2050	200	2850
11.25	156	11	4060	2050	200	2850
13.48	130	12	5320	2050	200	2850
17.06	103	9.9	5720	2050	200	2850
19.80	88	9.2	6200	2050	200	2850
25.89	68	7.4	6500	2050	200	2850
30.51	57	6.8	7000	2050	200	2850
38.61	45	5.5	7150	2050	200	2850
44.81	39	4.8	7250	2050	200	2850
58.58	30	3.7	7260	2050	200	2850
69.99	25	3.1	7260	2050	200	2850
74.56	23	2.9	7260	2050	200	2850
85.21	21	2.5	7260	2050	200	2850
91.47	19	2.3	7260	2050	200	2850
106.51	16	2.0	7260	2050	200	2850
115.64	15	1.9	7260	2050	200	2850
126.17	14	1.7	7260	2050	200	2850
138.46	13	1.5	7260	2050	200	2850

All torque values listed in inch-pounds, all overhung load and thrust load values listed in pounds. The point of application of OHL is considered to be applied at the midpoint of shaft extension. Input OHL applies only to shaft input models. OHL and thrust ratings cannot be applied simultaneously. Consult the factory for applications with combined OHL and thrust load. At speeds above 1750 RPM, units may become thermally limited. For extended operation, limit HP to 1750 RPM rating.

Stainless Steel Helical - Bevel Dimensions



High Efficiency Helical - Bevel Gear Reducers

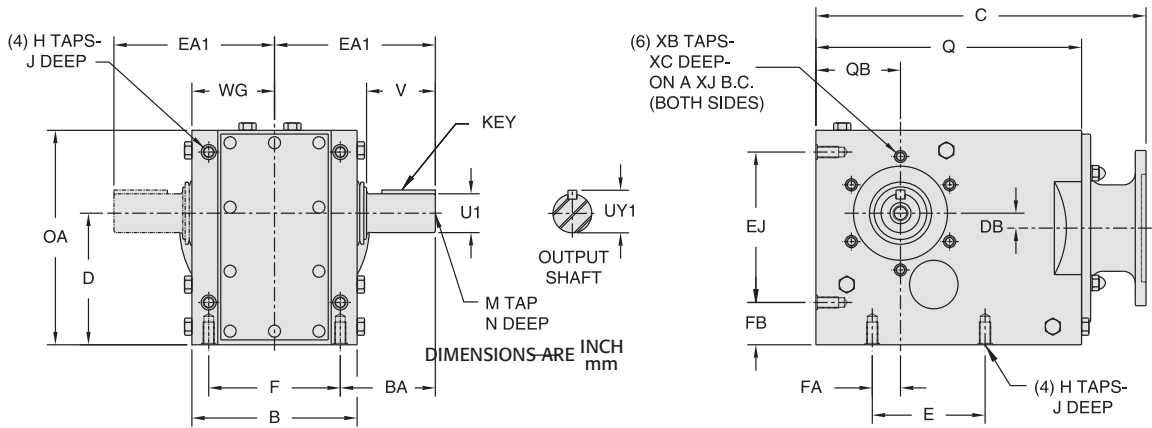
High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

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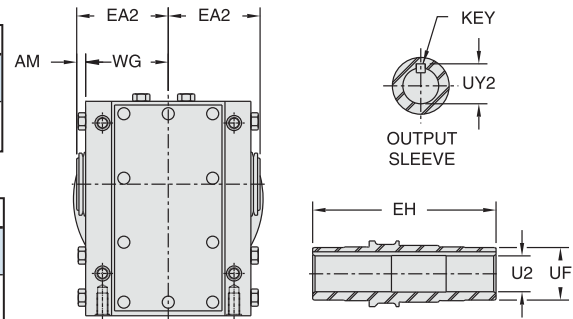


Gearcase

MODEL	B	D	DB	E	EJ	F	FA
SKBQ8473 & SKABQ8473	5.71 145	4.41 112	0.47 12.0	5.12 130	5.12 130	4.72 120	1.38 35
SKBQ8673 & SKABQ8673	6.92 176	5.51 140	0.62 15.8	4.72 120	6.30 160	5.51 140	1.18 30

Gearcase

MODEL	FB	H	J	OA	Q	QB	WG
SKBQ8473 & SKABQ8473	1.46 37	- M10 x 1.5	0.63 16	7.48 190	9.82 249	2.80 71	2.85 72.5
SKBQ8673 & SKABQ8673	1.77 45	- M12 x 1.75	0.95 24	8.98 228	11.13 283	3.54 90	3.46 87.9



Gearcase

MODEL	XB	XC	XJ
SKBQ8473 & SKABQ8473	- M8 x 1.25	0.63 16.0	3.875 98.43
SKBQ8673 & SKABQ8673	- M10 x 1.5	0.66 16.8	4.750 120.65

Output Shaft

MODEL	BA	EA1	U1	UV1	V	KEY	M	N
SKBQ8473	2.95 75	5.31 135	1.250 -	1.36 -	2.04 -	1/4 x 1/4 x 1-1/2 -	1/2 - 13UNC -	1.20 -
SKBQ8673	3.98 101	6.73 171	1.625 -	1.78 -	2.88 -	3/8 x 3/8 x 2-1/4 -	5/8 - 11UNC -	1.38 -

Hollow Output Shaft

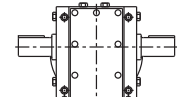
MODEL	AM	EA2	EH	U2	UF	UY2	KEY
SKABQ8473	0.48 12	3.34 -	6.67 84.7	1.375 -	1.97 -	1.52 -	(2) 5/16 x 5/16 x 1-13/16 -
SKABQ8673	0.38 10	3.84 97.5	7.68 -	1.500 -	2.20 -	1.67 -	(2) 3/8 x 3/8 x 2-1/4 -

NEMA Motor Compatibility

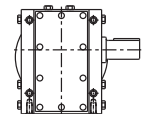
MODEL	56C	NEMA 143TC 145TC	182TC 184TC
SKBQ8473 & SKABQ8473	12.43 316	12.43 316	13.80 351
SKBQ8673 & SKABQ8673	13.83 351	13.83 351	14.85 377

Shaft Input Versions and Stainless Steel Accessories Available, Consult Factory.

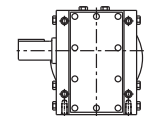
*OUTPUT STYLES



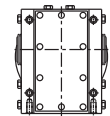
D: Double Ext.



L: Left Ext.



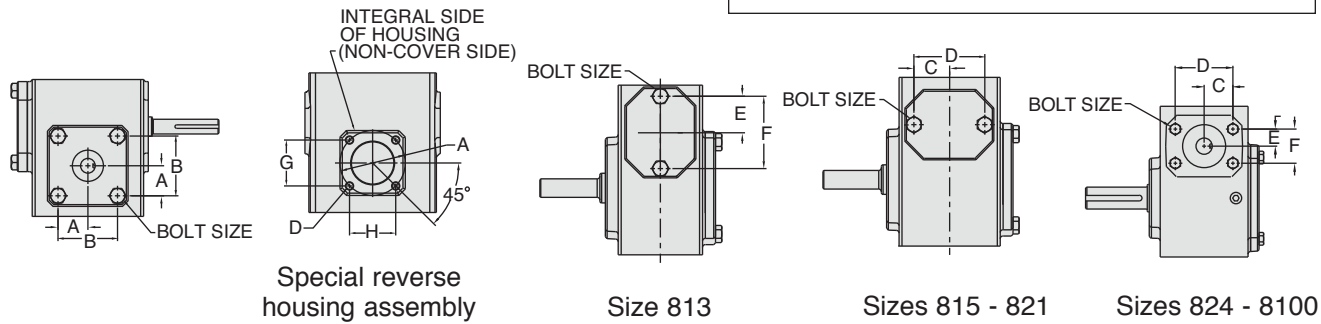
R: Right Ext.



H: Hollow

Bolt Circle Dimensions

Series GR & NH reducers do not have tapped holes on "integral cover side" of reducer. Integral side of reducer can be machined with tapped holes. See reverse housing assembly below for dimensions.



Special reverse housing assembly

Size 813

Sizes 815 - 821

Sizes 824 - 8100

Special reverse housing assembly - Contact Factory for availability.

GR & NH SERIES OUTPUT COVER DIMENSIONS

UNIT	A	B	G	H	BOLT SIZE
813	1.016	2.033	1.768	1.768	.312-18
815	1.016	2.033	1.768	1.768	.312-18
818	1.480	2.961	2.051	2.051	.312-18
821	1.480	2.961	2.652	2.652	.312-18
824	1.856	3.712	2.652	2.652	.312-18
826	1.856	3.712	2.652	2.652	.312-18
830	2.298	4.596	3.536	3.536	.375-16
832	2.298	4.596	3.536	3.536	.375-16
842	2.939	5.877	3.712	3.712	.438-14
852	3.359	6.717	5.303	5.303	.438-14
860	Consult Factory				.500-13
870	Consult Factory				.500-13
880	Consult Factory				.500-13
8100	Consult Factory				.500-13

GR SERIES INPUT COVER DIMENSIONS

UNIT	C	D	E	F	BOLT SIZE
813	1.219	2.438	N/A	N/A	.312-18
815	1.219	2.438	N/A	N/A	.312-18
818	1.219	2.438	N/A	N/A	.312-18
821	1.219	2.438	N/A	N/A	.312-18
824	1.313	2.625	0.781	1.562	.312-18
826	1.313	2.625	0.781	1.562	.312-18
830	1.600	3.200	1.050	2.100	.438-14
832	1.600	3.200	1.050	2.100	.438-14
842	1.600	3.200	1.050	2.100	.438-14
852	1.600	3.200	1.050	2.100	.438-14
860	1.370	2.740	1.370	2.740	.438-14
870	2.033	4.066	2.033	4.066	.438-14
880	2.121	4.242	2.121	4.242	.500-13
8100	Consult Factory				.625-11

GR & NH SERIES INTEGRAL SIDE OF HOUSING

UNIT	A	G	H	BOLT SIZE
813	2.500	1.768	1.768	.312-18
815	2.500	1.768	1.768	.312-18
818	2.900	2.051	2.051	.312-18
821	3.750	2.652	2.652	.312-18
824	3.750	2.652	2.652	.312-18
826	3.750	2.652	2.652	.312-18
830	5.000	3.536	3.536	.375-16
832	5.000	3.536	3.536	.375-16
842	5.250	3.712	3.712	.438-14
852	7.500	5.303	5.303	.438-14

NH SERIES INPUT COVER DIMENSIONS

UNIT	C	D	E	F	BOLT SIZE
813	1.219	2.438	N/A	N/A	.312-18
815	1.219	2.438	N/A	N/A	.312-18
818	1.219	2.438	N/A	N/A	.312-18
821	1.219	2.438	N/A	N/A	.312-18
824	1.313	2.625	0.781	1.562	.312-18
826	1.313	2.625	0.781	1.562	.312-18
830	1.313	2.625	0.781	1.562	.312-18
832	1.313	2.625	0.781	1.562	.312-18
842	1.600	3.200	1.050	2.100	.438-14
852	1.600	3.200	1.050	2.100	.438-14

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

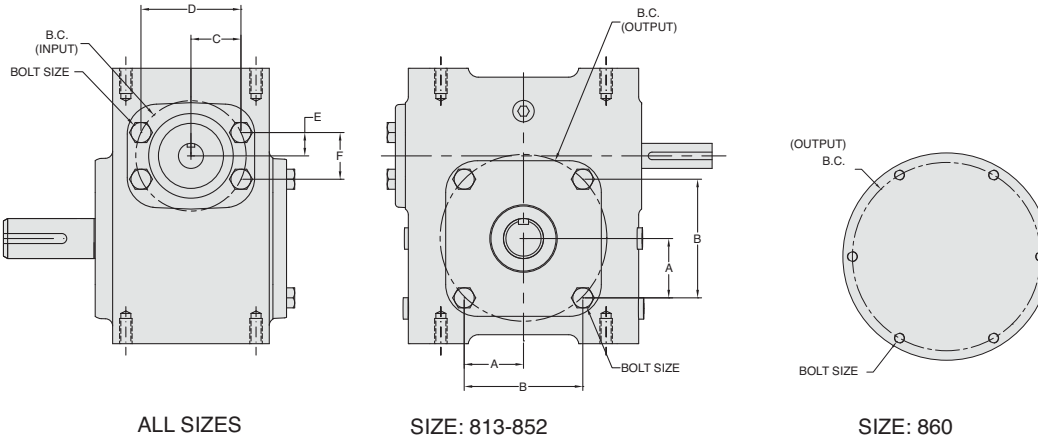
Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

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Bolt Circle Dimensions



ALL SIZES

SIZE: 813-852

SIZE: 860

EL SERIES INPUT COVER DIMENSIONS

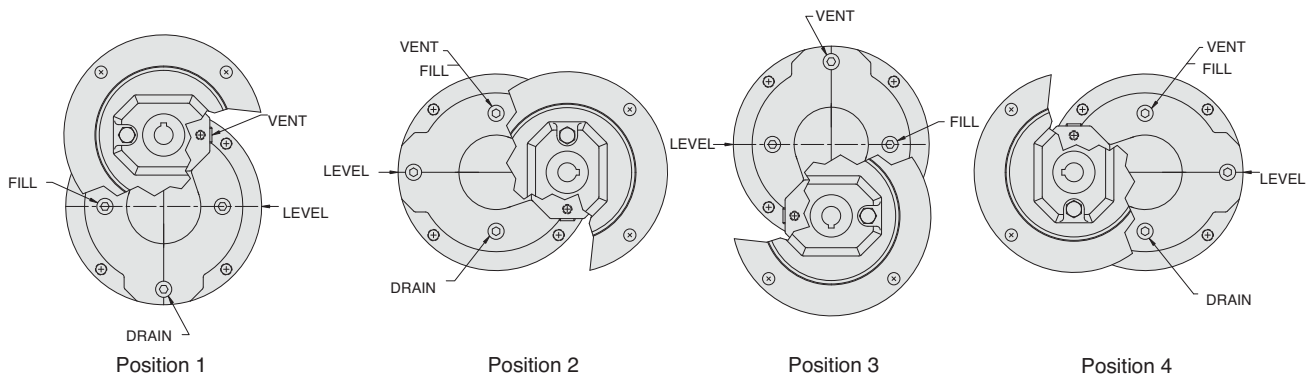
UNIT	C	D	E	F	Input B.C.	BOLT SIZE
813	0.583	1.166	1.248	2.496	N/A	5/16-18
818	1.248	2.496	0.583	1.166	N/A	5/16-18
821	1.248	2.496	0.583	1.166	N/A	5/16-18
824	1.010	2.020	1.510	3.020	N/A	5/16-18
826	1.010	2.020	1.510	3.020	N/A	5/16-18
830	1.010	2.020	1.510	3.020	N/A	5/16-18
832	1.010	2.020	1.510	3.020	N/A	5/16-18
842	1.600	3.200	1.050	2.100	N/A	7/16-14
852	1.600	3.200	1.050	2.100	N/A	7/16-14
860	1.724	3.447	1.724	3.447	4.875	1/2-13

EL SERIES OUTPUT COVER DIMENSIONS

UNIT	A*	B*	Output B.C.*	BOLT SIZE
813	1.016	2.033	2.875	5/16-18
818	1.480	2.961	4.188	5/16-18
821	1.480	2.961	4.188	5/16-18
824	1.856	3.712	5.250	5/16-18
826	1.856	3.712	5.250	5/16-18
830	2.298	4.596	6.500	3/8-16
832	2.298	4.596	6.500	3/8-16
842	2.939	5.877	8.312	7/16-14
852	3.359	6.717	9.500	1/2-13
860	N/A	N/A	11.750	1/2-13

* Housing has exactly the same tapped holes on both sides of reducer as standard for mounting EL Series accessories in field.

Ratio Multiplier Vent Plug Location



- Units are factory filled for Position 1 (input over mounting position). Verify proper oil level for other mountings.
- The "Input Under" mounting position is not recommended due to the increased probability of leakage from the high speed shaft seals.
- Special provisions are required for vertical shaft mountings. Consult factory for details.

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

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The precision-made gears and bearings in Grove Gear/Electra-Gear Speed Reducers require high-grade lubricants of the proper viscosity to maintain trouble-free performance. Synthetic lubricants provide the potential for numerous benefits including wider operating temperature range and increased interval between changes. For normal ambient temperatures (-10°F to 105°F)▲ we recommend the use of ISO viscosity grade Mobile Glygoyle 460 polyalkalene glycol (PAG) lubricant which is the standard oil shipped in our product and is compatible with the Viton® seal material used through size 852. For other temperatures, contact Factory for a recommendation. For synthetic lubrication to be used in helical reducers (primaries of helical-worm reducers and ratio multipliers), contact Factory.

▲ Temperature range for continuous duty. For intermittent duty, contact Factory.

Oil Capacities (ounces) - Standard Units

Mounting Position	UNIT SIZE													
	813	815	818	821	824	826	830	832	842	852	860	870*	880*	8100*
Worm Over	4	12	12	20	24	40	56	72	112	188	312	560	768	1152
Worm Under	8	16	20	28	40	60	84	108	152	304	328	524	820	1280
Vertical Output	4	16	16	28	32	48	68	88	128	248	320	332	460	640
Vertical Input	4	16	16	24	32	48	72	92	128	248	325	584	800	1200
Extended Bearing	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8	12	17	27	640	1008	1632
Worm Over on Secondary Unit of Double Reduction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	192	308	320	485	805	1144	1716
Stainless Steel and Washguard - All Mounting Positions	6	14	18	26	32	50	78	98	N/A	N/A	N/A	N/A	N/A	N/A

* Shipped Dry

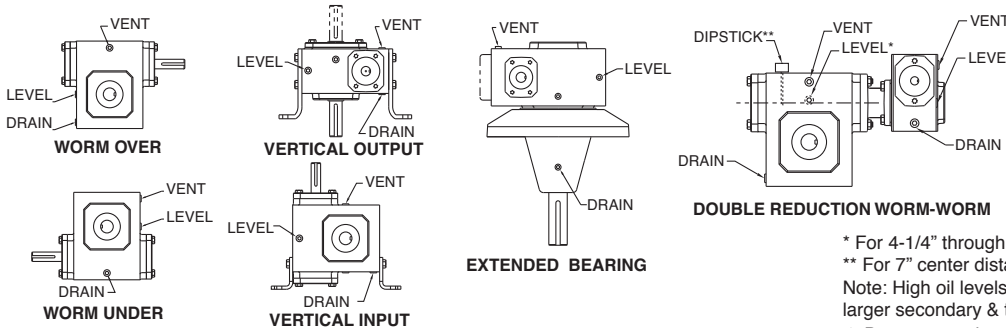


Always check for proper oil level after filling. Capacities vary somewhat with model and mounting position. Oil should rise to bottom edge of level hole. Do not overfill.



Do not operate the reducer without making sure it contains the correct amount of oil. Do not overfill or underfill with oil, or injury to personnel, reducer or other equipment may result.

Standard Gear Reducer Mounting Positions & Vent Plug, Level and Drain Locations ▲



16 oz. = 1 pint
 2 pints = 1 quart
 4 quarts = 1 gallon
 1 gallon = 128 oz. = 231 cu. in.

* For 4-1/4" through 6" center distance units (far side plug).

** For 7" center distance & larger units.

Note: High oil levels applies to all 4-1/4" center distance & larger secondary & tertiary units regardless of primary unit type.

▲ Does not apply to Stainless Steel, WASHGUARD or units with Enviroseal option.

Lubrication

Units shipped from Factory are assembled to properly lubricate all internal components based on a specific assumed mounting orientation. Factory assumed mounting orientations are given below. If a size 818 or larger unit will be mounted in a different orientation than listed below, or run with sustained input speeds less than 1200 RPM, it should be specified with the order. The unit can then be modified to assure proper lubrication.

Factory Assumed Mounting Orientation	Applicable Unit Styles*
Worm Over	B, T, F, H, FH, C, D, DT, DF, DH, DFH, DX, DXT, DXH, DXFH, TT
Worm Under	U, DU
Vertical Output	VL/VH, FE, DVL/DVH, DFE, DXVL/DXVH, DXFE
Vertical Input	J, DJ, DXJ

* Includes "M" and "MQ" versions of all styles listed

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

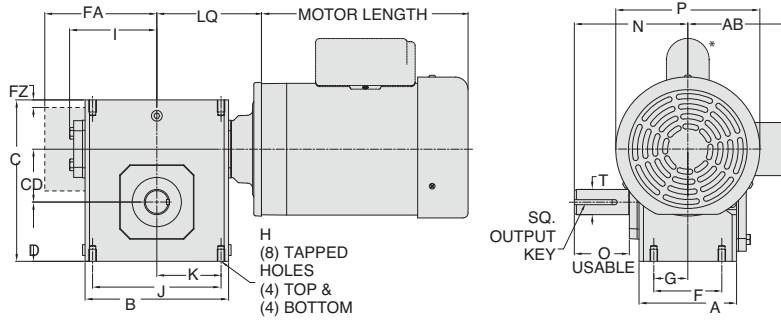
Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

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GEAR+MOTOR™ Dimensions



STYLE BMQ & BM GEARMOTOR DIMENSIONS (Inches)

Series	A	B	C	D	CD	F	FA	FZ	G	Tap ^H	Depth	I	J	K	N	O	T	Output Key
GR813	2.82	3.80	4.66	1.72	1.33	2.00	N/A	N/A	1.00	5/16-18	0.50	2.61	3.25	1.63	4.00	2.16	0.625	3/16 X 1.50
GR815	3.44	4.88	5.38	1.91	1.54	2.75	N/A	N/A	1.38	5/16-18	0.63	3.14	4.19	2.09	4.31	2.11	0.750	3/16 X 1.50
GR818	3.56	5.06	5.75	2.06	1.75	2.75	N/A	N/A	1.38	5/16-18	0.63	3.24	4.19	2.09	4.31	2.05	0.875	3/16 X 1.38
GR821	3.81	5.80	6.38	2.28	2.06	2.88	N/A	N/A	1.44	3/8-16	0.60	3.61	5.00	2.50	4.68	2.29	1.000	1/4 X 1.44
GR824	4.06	6.12	6.94	2.50	2.38	2.88	N/A	N/A	1.44	3/8-16	0.69	3.77	5.00	2.50	5.14	2.66	1.125	1/4 X 1.75
GR826	4.84	7.12	8.00	2.94	2.63	3.38	N/A	N/A	1.69	3/8-16	0.69	4.34	6.38	3.19	5.63	2.73	1.125	1/4 X 1.75
GR830	5.25	8.12	8.88	3.25	3.00	4.00	N/A	N/A	2.00	7/16-14	0.88	4.84	7.00	3.50	6.75	3.60	1.250	1/4 X 2.25
GR832	5.75	8.50	9.38	3.50	3.25	4.00	N/A	N/A	2.00	7/16-14	0.88	5.02	7.50	3.75	7.06	3.66	1.375	5/16 X 2.50
GR842	6.13	10.25	11.38	4.44	4.25	5.00	N/A	N/A	2.50	5/8-11	1.00	6.10	8.50	4.25	8.12	4.50	1.875	1/2 X 3.06
GR852	7.19	13.00	14.00	5.12	5.25	5.81	N/A	N/A	2.91	5/8-11	1.25	7.50	11.00	5.50	9.06	4.78	2.000	1/2 X 3.50
GR860	8.13	14.25	16.50	6.50	6.00	6.38	11.13	0.33	3.19	5/8-11	1.00	N/A	12.75	6.38	10.00	4.65	2.500	5/8 X 4.00

* Capacitor housing, single phase only, 2-1/4" high

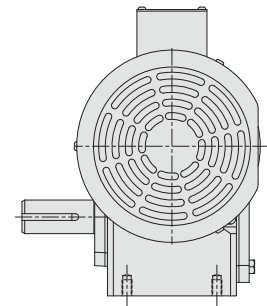
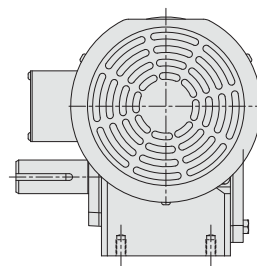
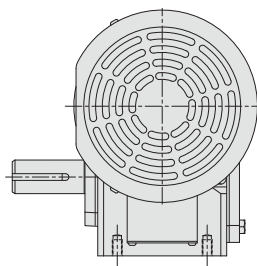
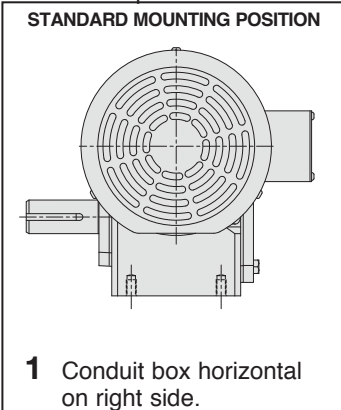
MOTOR LENGTH – See page 649 for motor length dimensions of individual ratings.

MOTOR MOUNTING DIMENSIONS

Series	BMQ				LQ				P				AB			
	48CZ	56C/140TC	180TC	210TC	48CZ	56C/140TC	180TC	210TC	48CZ	56C/140TC	180TC	210TC	48CZ	56C/140TC	180TC	210TC
GR813	3.46	3.46	N/A	N/A	5.63	6.07	N/A	N/A	5.88	7.16	N/A	N/A	4.88	5.31	N/A	N/A
GR815	3.99	3.99	N/A	N/A	6.16	6.60	N/A	N/A	5.88	7.16	N/A	N/A	4.88	5.31	N/A	N/A
GR818	4.09	4.09	N/A	N/A	6.26	6.70	N/A	N/A	5.88	7.16	N/A	N/A	4.88	5.31	N/A	N/A
GR821	4.46	4.46	N/A	N/A	6.63	7.07	N/A	N/A	5.88	7.16	N/A	N/A	4.88	5.31	N/A	N/A
GR824	N/A	4.63	5.06	N/A	N/A	7.76	8.76	8.76	N/A	7.16	9.22	10.81	N/A	5.31	6.44	7.59
GR826	N/A	5.19	5.62	N/A	N/A	8.32	9.32	9.32	N/A	7.16	9.22	10.81	N/A	5.31	6.44	7.59
GR830	N/A	5.69	6.12	6.56	N/A	8.82	9.82	9.82	N/A	7.16	9.22	10.81	N/A	5.31	6.44	7.59
GR832	N/A	5.88	6.31	6.75	N/A	9.01	10.01	10.01	N/A	7.16	9.22	10.81	N/A	5.31	6.44	7.59
GR842	N/A	6.45	7.21	7.21	N/A	11.81	12.90	12.90	N/A	7.16	9.22	10.81	N/A	5.31	6.44	7.59
GR852	N/A	7.85	8.61	8.61	N/A	13.21	14.30	14.30	N/A	7.16	9.22	10.81	N/A	5.31	6.44	7.59
GR860	N/A	10.45	9.33	9.33	N/A	N/A	15.88	15.88	N/A	7.16	9.22	10.81	N/A	5.31	6.44	7.59

Motor Mounting Postions - All Products

Conduit box position viewed from input side of reducer.



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High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

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SPEED REDUCER NOMENCLATURE & DEFINITIONS

BACKLASH – Rotational movement of the output shaft when holding the input shaft stationary and rotating the output alternately clockwise and counter clockwise. Backlash is defined as the clearance between adjacent tooth flanks in a pair of mounted gears. In any gearset, some amount of backlash (clearance) is necessary to prevent damage brought about by gear tooth interference. Lack of backlash may cause noise, overloading, overheating of gears and bearings and even seizing and failure.

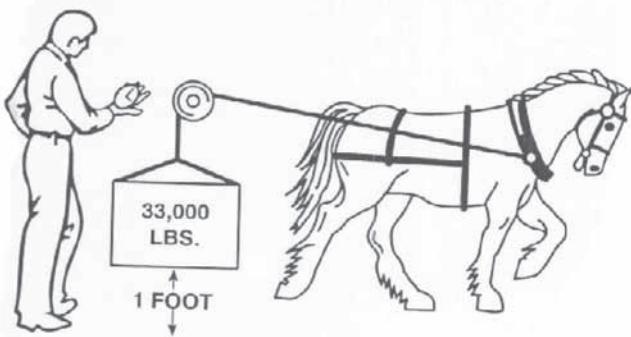
CENTER DISTANCE – On a single reduction reducer, this is the distance between the center lines of the input and output shafts. Shaft center lines may be parallel or at right angles to one another. The center distance of multiple stage reducers usually refers to the lowest speed stage (last reduction).

THRUST LOAD – Forces imposed on a shaft parallel to the shaft axis. It is often encountered on shafts driving mixers, fans, blowers and similar machines. When thrust load acts on a speed reducer, you must be sure that the thrust load rating of the reducer is high enough that it's shafts and bearings can absorb the load.

MECHANICAL RATING – The maximum power or torque that a speed reducer can transmit, based on the strength and durability of its components, is its mechanical rating. Obviously, the reducer may be rated no higher than the strength or durability of its weakest component. Reducers typically have a safety margin of two to three on their mechanical ratings. Thus, a reducer can withstand momentary overloads of 200-300% of its mechanical rating during a start up or other brief overload situations.

MOUNTING POSITION – The relationship of the input and output shafts relative to the floor line.

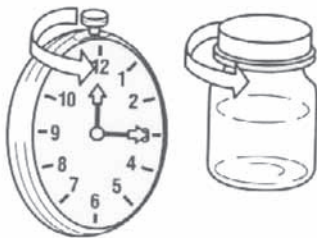
HORSEPOWER – A measure of the rate of doing work and equals the power required to lift 33,000 pounds one foot in one minute.



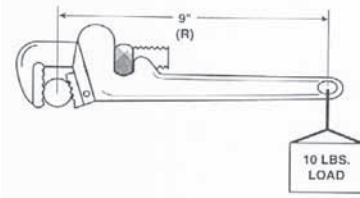
INPUT HORSEPOWER – The amount of power applied to the input shaft of a reducer by the prime mover is its input horsepower. It is often used as a selection basis for power transmission components, and it appears in the rating table of drive manufacturer's published data. Remember that input horsepower ratings represent the maximum amount of power that the reducer can safely handle.

OUTPUT HORSEPOWER – The amount of power available at the output shaft of a reducer is its output horsepower. Due to losses caused by inefficiency, output horsepower is always less than input horsepower.

TORQUE – A twisting effort tending to cause rotation. Because most power transmission is associated with rotating elements, torque becomes important as a measurement of the effort required to produce work in the rotational mode. Torque is expressed as a force multiplied by a lever arm. It is stated in several units – pound feet, pound inches, ounce inches, ounce feet, etc. However, the most commonly used is pound inches.

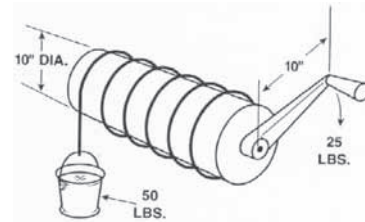


In the case of speed reducers and gears, force or load is usually expressed in pounds and distance in inches. For example, if a load of 10 pounds is applied to a shaft by means of a wrench 9 inches long, we then have a torque of 10 pounds x 9 inches or 90 lb. in.



It is important to note that torque measurement is not dependent on time. The same amount of torque may be required to run a shaft slowly or rapidly, but the introduction of a time element causes work to be performed, and work is measured in terms of horsepower. Consider the application of drawing water from a well via winch and bucket.

In raising a 50-pound pail of water with a 10-inch diameter (5-inch radius) drum and a 10-inch crank arm, 25 pounds (neglecting friction) must be applied to the 10-inch crank



arm to overcome the torque created by the weight of the pail of water acting on the 5-inch drum radius. If no motion is involved, the system is in balance, and although torque is being exerted, no work is being done. If the crank is turned at the rate of 10 RPM, the resulting work done is:

$$HP = \frac{T \times RPM}{63,000} = \frac{250 \times 10}{63,000} = \text{approx .04 HP}$$

If the crank is turned twice as fast, the horsepower expended becomes:

$$\frac{250 \times 20}{63,000} = \text{approx .08 HP}$$

Therefore, exerting the same torque at twice the speed requires twice the horsepower.

RATIO – is defined as the driving speed divided by the driven speed. If a 1750 RPM electric motor is used to drive a 350 RPM conveyor, the ratio would be a 5:1. Ratio is useful for calculating speed reduction and torque multiplication from driver to driven member. For example, a 5:1 ratio Uniline speed reducer directly connected to an electric motor would reduce the motor speed to 1/5 of its original value while multiplying the motor torque to 5 times the original value (neglecting friction losses).

SPEED REDUCER SELECTION – Before a reducer can be selected for any given application, the equivalent horsepower is computed by multiplying the specified or actual horsepower by the service factor for the particular load classification for which the unit is to be used. It is necessary that the unit selected have a capacity equal to or in excess of this equivalent horsepower. The recommended service factors for various load classifications and duration of service are shown for several types of prime movers on page 644.

Load classifications for various applications are given on page 644. They are classified into three commonly recognized load classifications: Uniform, Moderate Shock, and Heavy Shock.

Service factors represent the normal relationship between gear design power rating and the continuous power requirements. Applications involving unusual or severe loading or requiring a high degree of dependability should be carefully reviewed with the manufacturer before a service factor is applied.

Applications with high-torque motors and motors for intermittent operations, applications where extreme repetitive shock occurs, or where high-energy loads must be absorbed, as when stalling, require special consideration and are not covered by the service factors given on page 644.

When drives are equipped with brakes on the input, and the torque rating of the brake exceeds the rating of the motor, the rating of the brake dictates the selection of the gear unit.

The maximum momentary or starting load must not exceed 300 percent of rated load (200 percent overload). Rated load is defined as the unit rating with a service factor of 1.0.



It is the responsibility of the original equipment manufacturer or user to install and/or operate Ohio Gear Products in conformance with applicable local and national safety codes, suitable guards for rotating shafts and couplings should be used at all times. Good safety procedures should always be observed whenever working with or around any transmission equipment. Fitness for use is the customer's decision and responsibility.

SERVICE FACTORS – Numbers which modify the loads which must be considered in selecting a speed reducer are called service factors. They vary with the type of service in which the reducer is to be used, the kind of prime mover involved and the duty cycle.

WORM GEAR REDUCER SERVICE FACTORS

Proper determination of an application's service factor characteristics is critical for maximum reducer life and trouble free service. See the definition of service factor in the glossary.

All Grove Gear reducers and Gear-Motors™ are sized for applications having an AGMA defined service of 1.0, unless otherwise stated. (Alternately, 1.0 service factor is sometimes expressed as "Class I Service".) Reducers in such applications operate on a continuous duty basis, for 10 hours per day or less, and are free of recurrent shock loads. When operating characteristics are different than noted, the input horsepower and torque ratings listed must be divided by the service factor selected from the table below. This table applies to reducers with an electric or hydraulic motor input.

SPECIAL APPLICATION CONSIDERATIONS

CAUTION : Please contact Grove Gear for assistance in applications not listed or for applications with unusual characteristics. Including the following:

- Input speeds not listed in catalog
- Frequent starting or repetitive shock applications
- Selection of reducers for man lifts or people moving equipment
- High energy loads, including stalling

WORM REDUCERS:

- Starting or momentary overloads exceeding 200% of gear reducer mechanical capacity (100% overload)

SERVICE FACTOR TABLE

Duration of Service (Hours per day)	Uniform Load	Moderate Shock	Heavy Shock	Extreme Shock
Occasional 1/2 Hour	—*	—*	1.00	1.25
Less than 3 Hours	1.00	1.00	1.25	1.50
3 - 10 Hours	1.00	1.25	1.50	1.75
Over 10 Hours	1.25	1.50	1.75	2.00

* Unspecified service factors should be 1.00 or as agreed upon by the user and manufacturer.

When a single or multi-cylinder engine is the input power, the service factor selected from the table above should be increased by multiplying the value by the factor selected from the table below.

Service Factor Conversion Table for Engine Driven Applications.

Hydraulic or Electric Motor	Single Cylinder Engines	Multi-Cylinder Engines
1.00	1.50	1.25
1.25	1.75	1.50
1.50	2.00	1.75
1.75	2.25	2.00
2.00	2.50	2.25

On page 644, AGMA standardized service factor data is listed for a wide variety of applications operating 3 to 10 hours per day and for 10 hours or more per day. **BACK-DRIVING** – This is the converse of self-locking. Depending upon ratio and many variables, it is difficult to predict the back-driving capability of a reducer. Worm gear reducers are not intended to be used as speed increasers. Consult factory for back-driving applications.

PEOPLE CONVEYING EQUIPMENT – Selection of gear drives for applications whose primary purpose is the transportation of people is not approved. This includes such applications as freight or passenger elevators, escalators, man lift platforms, and ski tows and ski lifts.

If the primary purpose of the application is material conveyance and occasionally people are transported, the warranty may remain in effect provided the design and load conditions are not exceeded and certification to the appropriate safety codes and load conditions has been obtained by the system designer or end user from the appropriate enforcement authorities.

STORED & INACTIVE GEAR DRIVE – Each drive is protected with rust preventive that will protect parts against rust for a period of 6 months in an indoor dry shelter.

If a drive is to be stored, or is inactive after installation beyond the above periods, drain oil from housing and spray all internal parts with a rust preventive oil that is soluble in lubricating oil and rotate the shafts several times by hand. Before operating, drives which have been stored or inactive must be filled to the proper level.

Periodically inspect stored or inactive gear drives and spray or add rust inhibitor every six months, or more often if necessary. Indoor dry storage is recommended.

EXCESSIVE OVERLOADS – The maximum momentary or starting load must not exceed 300% of rated load (200% overload). Rated load is defined as gear drive rating with a service factor of 1.0. If the maximum starting or momentary load exceeds the above conditions, compute a second equivalent power rating by dividing the peak load by two. The gear drive selected must have capacity equal to, or in excess of, the larger equivalent power rating.

REVERSING SERVICE – Applications involving either more than 20 reversals per ten hour period, or less than 20 reversals per ten hour period with peak torques greater than 200% of normal load must be referred to Factory.

BRAKE EQUIPPED APPLICATIONS – When a gear drive is equipped with a "working" brake that is used to decelerate the motion of the system and the brake is located between the prime mover and the gear drive, select the drive based on the brake rating or highest equivalent power rating, whichever is greater. If the brake is used for holding only and is applied after the motion of the system has come to rest, the brake rating must be less than 200% of the catalog rating, refer the application to Factory. Also refer to Factory all applications in which the brake is located on the output shaft of the gear drive.

OVERSIZED PRIME MOVER – Published service factors do not cover applications that require oversize prime movers for high energy or peak loads. Refer such applications to Factory for selection of suitable drives.

MAXIMUM INPUT SPEEDS FOR WORM GEAR REDUCERS (GR, NH, EL SERIES)

Size 813 through 852 2500 RPM
Size 860 through 8100 1750 RPM

NOTE: Horsepower ratings for 1750 RPM should not be exceeded when operating at higher input speeds. For higher input speeds, contact Factory.

APPLICATION CONSIDERATIONS:

Belt Conveyors – To determine the torque, establish the belt pull. In calculating this, the effects of sliding friction and angle or inclination must be considered. The table below shows application factors which may be used in determining belt pull based upon common combinations of materials and various angles.

Material Combinations	Angle from the Horizontal									
	0°	10°	20°	30°	40°	50°	60°	70°	80°	90°
Pivoting Bucket Conveyor	0.025	0.19	0.36	0.52	0.66	0.78	0.88	0.95	0.99	1.00
Belt on Rollers	0.025	0.19	0.36	0.52	0.66	0.78	0.88	0.95	0.99	1.00
Metal on Metal (Finished)	0.20	0.37	0.53	0.67	0.80	0.89	0.97	1.01	1.02	1.00
Fabric on Steel	0.27	0.44	0.60	0.74	0.85	0.94	1.00	1.03	1.03	1.00
Fabric on Wood	0.32	0.49	0.63	0.77	0.88	0.97	1.02	1.04	1.04	1.00
Leather on Wood	0.35	0.52	0.67	0.80	0.91	0.99	1.04	1.06	1.05	1.00
Wood on Wood	0.35	0.52	0.67	0.80	0.91	0.99	1.04	1.06	1.05	1.00
Plastic on Steel	0.35	0.52	0.67	0.80	0.91	0.99	1.04	1.06	1.05	1.00
Metal on Wood	0.40	0.57	0.72	0.85	0.95	1.02	1.07	1.08	1.05	1.00
Rubber on Wood	0.45	0.62	0.76	0.89	0.99	1.05	1.09	1.09	1.06	1.00
Rubber on Steel	0.50	0.67	0.81	0.93	1.03	1.09	1.12	1.11	1.07	1.00
Leather on Metal	0.56	0.72	0.87	0.98	1.06	1.12	1.14	1.13	1.08	1.00

The procedure involves selection of the proper application factor for the calculations:
Belt Pull = (Total Weight on Conveyor) x (Application Factor)
Torque = (Belt Pull) x (Radius of Head Pulley)

Example: An inclined belt conveyor is to move boxes of steel parts. The belt is fabric on rollers. Five boxes will be on the conveyor at a time, and each weighs 50 pounds. The conveyor is inclined at 10° to the horizontal, and the head pulley diameter is 7". How much torque is required at the head pulley?

Select .44 as the application factor.
Determine weight: 5 x 50 = 250 Lbs.
Determine belt pull: 250 x .44 = 110 Lbs.
Determine torque: 110 x 3.5 = 385 Lb. Ins.

HOISTS – A worm gear is generally said to be self-locking or irreversible when the gear cannot drive the worm. This static condition can be upset by vibrations from nearby machinery or other sources. Many worm gear reducers are not self-locking, and even a particular size and ratio, which may appear to be, cannot be depended upon for this purpose. Also, a reducer which holds the load when upward movement is stopped may not when the load inertia is moving downward and the motor is stopped. For complete locking assurance, it is recommended that a fail-safe brake be used for such an application.

Technical Information

A.G.M.A. SERVICE FACTORS

Application	Service Factor	
	3-10 Hours	Over 10 Hours
AGITATORS		
Pure Liquids	1.00	1.25
Liquids & Solids	1.25	1.50
Liquids-Variabale Density	1.25	1.50
APRON CONVEYORS		
Uniformly Loaded or Fed	1.00	1.25
Heavy Duty	1.25	1.50
APRON FEEDERS		
	1.25	1.50
ASSEMBLY CONVEYORS		
Uniformly Loaded or Fed	1.00	1.25
Heavy Duty	1.25	1.50
BARGE HAUL PULLERS		
	1.50	1.75
BARKING		
Drums (Coupling Connected)		1.75
Mechanical		1.75
BAR SCREENS (Sewage)		
	1.00	1.25
BELT CONVEYORS		
Uniformly Loaded or Fed	1.00	1.25
Heavy Duty	1.25	1.50
BELT FEEDERS		
	1.25	1.50
BLOWERS		
Centrifugal	1.00	1.25
Lobe	1.25	1.50
Vane	1.00	1.25
BOLTING MACHINERY		
	1.00	1.25
BREWING & DISTILLING		
Bottling Machinery	1.00	1.25
Brew Kettles, Cont. Duty	1.00	1.25
Can Filling Machines	1.00	1.25
Cookers-Cont. Duty	1.00	1.25
Mash Tubs-Cont. Duty	1.00	1.25
Scale Hoppers-Frequent Starts	1.25	1.50
BUCKET		
Conveyors Uniform	1.00	1.25
Conveyors Heavy Duty	1.25	1.50
Elevators Cont.	1.00	1.25
Elevators Uniform	1.00	1.25
Elevators Heavy Duty	1.25	1.50
CALENDARS		
Rubber		1.50
Textile	1.25	1.50
CANE KNIVES		
	1.00	1.25
CAN FILLING MACHINES		
	1.50	1.75
CAR DUMPERS		
	1.25	1.50
CENTRIFUGAL		
Blowers, Compressors, Discharge Elevator, Fans or Pumps	1.00	1.25
CHAIN CONVEYORS		
Uniformly Loaded or Fed	1.00	1.25
Heavy Duty	1.25	1.50
CLARIFIERS		
	1.00	1.25
CLASSIFIERS		
	1.25	1.50
CLAY WORKING INDUSTRY		
Brick Press	1.75	2.00
Briquettte Machines	1.75	2.00
Clay Working Machinery	1.25	1.50
Plug Mills	1.25	1.50
COMPRESSORS		
Centrifugal	1.00	1.25
Lobe	1.25	1.50
Reciprocating:		
Multi-Cylinder	1.25	1.50
Single Cylinder	1.50	1.75
CONCRETE MIXERS		
Continuous	1.25	1.50
Intermittent	1.25	1.50
CONVEYORS-Uniformly Loaded or Fed		
Apron, Assembly, Belt, Bucket, Chain, Flight, Oven, Screw	1.00	1.25
CONVEYORS-Severe Duty		
Live Roll		Contact Factory
Reciprocating, Shaker	1.50	1.75
COOLING TOWER FANS		
		Contact Factory
CRANES		
Dry Dock Cranes		Contact Factory
Main Hoist	1.00	1.25
Bridge and Trolley Travel		Contact Factory
CRUSHERS		
Ore or Stone	1.50	1.75
Sugar		1.50
DISC FEEDERS		
	1.00	1.25

DOUBLE ACTING PUMPS		
2 or more Cylinders	1.25	1.50
Single Cylinder		Contact Factory
DRAW BENCH (Metal Mills)		
Carriage & Main Drive	1.25	1.50
DREDGES		
Cable Reels, Conveyors	1.25	1.50
Cutter Head & Jig Drives	1.75	2.00
Maneuvering Winches, Pumps	1.25	1.50
Screen Drives	1.50	1.75
Stackers, Utility Winches	1.25	1.50
ELEVATORS		
Bucket-Uniform Load	1.00	1.25
Bucket-Heavy Duty	1.25	1.50
Bucket-Continuous	1.00	1.25
Centrifugal Discharge	1.00	1.25
Escalators		Not Approved
Freight		Not Approved
Gravity Discharge	1.00	1.25
Man Lifts, Passenger		Not Approved
EXTRUDERS (Plastic)		
Film Sheet, Coating, Rods, Pipe Tubing	1.25	1.25
Blow Molders, Pre-plasticizers		1.50
FANS		
Centrifugal	1.00	1.25
COOLING TOWERS		
Forced Draft		Contact Factory
Induced Draft	1.25	1.25
Large (Mine, etc.)	1.25	1.50
Large Industrial	1.25	1.50
Light (Small Diameter)	1.00	1.25
FEEDERS		
Apron, Belt	1.25	1.50
Disc	1.00	1.25
Reciprocating	1.75	2.00
Screw	1.25	1.50
FLIGHT		
Conveyors, Uniform	1.00	1.25
Conveyors, Heavy	1.25	1.50
FOOD INDUSTRY		
Beet Slicers	1.25	1.50
Bottling, Can Filling Mach.	1.00	1.25
Cereal Cookers	1.00	1.25
Dough Mixers, Meat Grinders	1.25	1.50
HAMMER MILLS		
	1.50	1.75
HOISTS		
Heavy Duty	1.75	2.00
Medium Duty	1.25	1.50
Skip Hoist	1.25	1.50
INDUCED DRAFT FANS		
	1.25	1.50
LAUNDRY WASHERS AND TUMBLERS		
	1.25	1.50
LINE SHAFTS		
Driving Processing Equipment	1.25	1.50
Other Line Shafts, Light	1.00	1.25
LUMBER INDUSTRY		
Barkers-Spindle Feed	1.25	1.50
Barkers-Main Drive	1.75	1.75
Carriage Drive		Contact Factory
CONVEYORS		
Burner	1.25	1.50
Main or Heavy Duty	1.50	1.50
Main Log	1.75	2.00
Re-saw Merry-Go-Round	1.25	1.50
Slab	1.75	2.00
Transfer	1.25	1.50
Chains-Floor	1.50	1.50
Chains-Green	1.50	1.75
Cut-Off Saws-Chain & Drag	1.50	1.75
Debarking Drums	1.75	2.00
Feeds-Edger	1.25	1.50
Feeds-Gang	1.50	1.50
Feeds-Trimmer	1.25	1.50
Log Deck	1.50	1.50
Log Hauls-Incline Well Type	1.50	1.50
Log Turning Devices	1.50	1.50
Planer Feed	1.25	1.50
Planer Tilting Hoist	1.50	1.50
Rolls-Live-Off Bearing-Roll Cases	1.50	1.50
Sorting Table, Tipple Hoist	1.25	1.50
Transfers-Chain & Craneway	1.50	1.75
Tray Drives	1.25	1.50
Veneer Lathe Drives		Contact Factory
MACHINE TOOLS		
Auxiliary Drives	1.00	1.25
Bending Rolls	1.25	1.50
Main Drives	1.25	1.50
Notching Press (Belted)		Contact Factory
Plate Planers	1.50	1.75
Punch Press (Geared)	1.50	1.75
Tapping Machines	1.50	1.75

METAL MILLS		
Draw Bench Carriages & Main Drives	1.25	1.50
Pinch, Dryer and Scrubber		
Rolls Reversing		Contact Factory
Slitters	1.25	1.50
Table Conveyors Non-Reversing		
Group Drives	1.25	1.50
Individual Drives	1.50	1.75
Reversing Wire Drawing & Flattening Machines	1.25	1.50
Wire Winding Machines	1.25	1.50
MILLS, ROTARY		
Ball and Rod Mills with Spur Ring Gear		1.75
with Helical Ring Gear		1.50
Direct Connect		1.50
Cement Kilns, Dryers, Coolers, Pebble, Plain & Wedge Bar Mills		1.50
Tumbling Barrels	1.50	1.75
MIXERS (Also see Agitators)		
Concrete, Cont. & Int.	1.25	1.50
Constant Density	1.00	1.25
Variable Density	1.25	1.50
OIL INDUSTRY		
Chillers	1.25	1.50
Oil Well Pumping		Contact Factory
Paraffin Filter Press	1.25	1.50
Rotary Kilns	1.25	1.50
PAPER MILLS		
		Contact Factory
PASSENGER ELEVATORS		
		Contact Factory
PLATE PLANERS		
	1.50	1.75
PRINTING PRESSES		
		Contact Factory
PUMPS		
Centrifugal	1.00	1.25
Proportioning	1.25	1.50
Reciprocating		
Single Act, 3 or more Cyl.	1.25	1.50
Double Act, 2 or more Cyl.	1.25	1.50
Single Act, 1 or 2 Cyl.		Contact Factory
Double Act, 1 Cyl.		Contact Factory
Rotary: Gear, Lobe, Vane	1.00	1.25
PUNCH PRESSES (Gear Driven)		
	1.50	1.75
RUBBER & PLASTIC INDUSTRIES		
Calendars		1.50
Crackers		1.75
Laboratory Equipment	1.25	1.50
Mills (2 on line)	1.50	1.50
Mills (3 on line)	1.25	1.50
Mixing Mills	1.50	1.50
Refiners		1.50
Sheeters		1.50
Tire Building & Machines		Contact Factory
Tire & Tube Press Openers		Contact Factory
Tubers & Strainers		1.50
Warming Mills		1.50
SCREENS		
Air Washing	1.00	1.25
Rotary-Sand or Gravel	1.25	1.50
Traveling Water Intake	1.00	1.25
SEWAGE DISPOSAL		
Bar Screens	1.00	1.25
Chemical Feeders	1.00	1.25
Collectors	1.00	1.25
Dewatering Screens	1.25	1.50
Scum Breakers	1.25	1.50
Slow or Rapid Mixers	1.25	1.50
Thickeners	1.25	1.50
Vacuum Filters	1.25	1.50
SKI TOWS & LIFTS		
		Not Approved
STOKERS		
	1.00	1.25
STONE CRUSHERS		
	1.50	1.75
SUGAR INDUSTRY		
Cane Knives, Crushers, Mills		1.50
TABLE CONVEYORS (Non-Reversing)		
Group Drives	1.25	1.50
Individual Drives	1.50	1.75
Reversing		Contact Factory
TEXTILE INDUSTRY		
Batchers, Calendars	1.25	1.50
Card Machines	1.25	1.50
Dry Cans, Dryers	1.25	1.50
Dyeing Machinery	1.25	1.50
Knitting Machinery		Contact Factory
Looms, Mangles, Nappers, Pads	1.25	1.50
Range Drives		Contact Factory
Slashers, Soapers, Spinners	1.25	1.50
Tenter Frames, Washers, Winders	1.25	1.50
TUMBLING BARRELS		
	1.50	1.75
VANE BLOWERS		
	1.00	1.25
WINDLASS		
		Contact Factory
WIRE		
Drawing Machines	1.25	1.50
Winding Machines	1.25	1.50

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

Technical Information

Warnings and Cautions

Terms and Conditions

$$\frac{TQ(\text{In-lb}) = (\text{HP} \times 63025)}{\text{RPM}}$$

$$\frac{HP(\text{Rotational}) = TQ(\text{In-Lb}) \times \text{RPM}}{63025}$$

$$\frac{TQ(\text{ft-lb}) = (\text{HP} \times 5252)}{\text{RPM}}$$

$$\frac{HP(\text{Rotational}) = TQ(\text{ft-lb}) \times \text{RPM}}{5252}$$

$$TQ(\text{In-lb}) = W \times R$$

$$\frac{HP(\text{Linear}) = W \times V}{33000}$$

Torque and Horsepower

Torque as it is related to gear reducers is defined as a twisting motion resulting in rotational movement. Horsepower is a measure of the rate of doing work, and depends on speed of rotation and the radius of rotation.

$$HP = \frac{TQ \times \text{Speed (RPM)}}{63025}$$

$$TQ = \frac{HP \times 63025}{\text{RPM}}$$

Efficiency

The efficiency of a Worm Gear Speed Reducer is dependent on input speed, lead angle of the worm, type of lubricant, ambient temperature and many other variables. The efficiency for speed reducer can be easily calculated as follows.

$$\text{Efficiency} = \frac{\text{Output HP}}{\text{Input HP}}$$

$$\text{Efficiency}_{(\text{Total})} = \text{Eff}_1 + \text{Eff}_2 + \text{Eff}_3$$

Overhung Load & Thrust Loads

An overhung load exists when a force is applied at right angles to a shaft beyond the shaft's outermost bearing. Pulleys, sheaves and sprockets will cause an overhung load when used as a power take-off. The amount of overhung load will vary, depending on the type of power take-off used and its mounting location on the shaft. The catalog Overhung Load ratings listed below are calculated at the centerline of the shaft.

Overhung load ratings are listed for each reducer size and should not be exceeded. If the basic reducer is selected using a service factor, that factor must also be used in the equations below.

Output Shaft OHL =

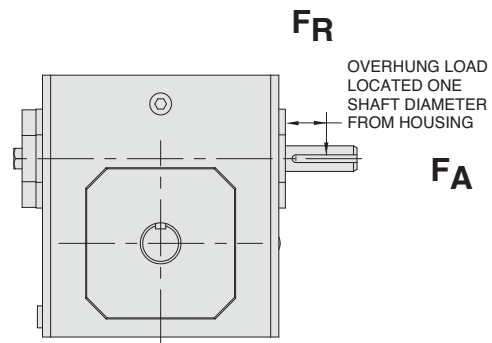
$$\frac{126000 \times \text{Motor HP} \times \text{Output HP Rating} \times O_L \times L_F}{\text{Pitch Diameter (of sprocket, pulley or sheave)} \times \text{Input HP Rating} \times \text{Output RPM}}$$

Input Shaft OHL =

$$\frac{126000 \times \text{Motor HP} \times O_L \times L_F}{\text{Pitch Diameter (of sprocket, pulley or sheave)} \times \text{Input RPM}}$$

Overhung Load Factors (O_L)

Sprocket	1.00
Gear Pinion	1.25
V-Belt Sheave or Pulley	1.50
Flat Belt	2.50



LOAD LOCATION FACTORS - L_F:

Distance	813	815	818	820	824	826	830	832	842	852	860-8100
1 x T	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	Contact Factory
2 x T	0.46	0.61	0.49	0.58	0.58	0.57	0.48	0.57	0.56	0.56	
3 x T	0.30	0.44	0.32	0.41	0.41	0.40	0.32	0.40	0.39	0.39	
4 x T	0.22	0.34	0.24	0.31	0.31	0.31	0.24	0.31	0.30	0.30	
5 x T	0.18	0.28	0.19	0.26	0.26	0.25	0.19	0.25	0.24	0.24	

Distance = distance of load from side of housing in terms of shaft diameter 'T'
T = Shaft diameter

Overhung Load – Overhung load is imposed upon a shaft when a pinion or sprocket is used as a power take-off. The magnitude of the load varies with the type of PTO and its location to the shaft bearing. Calculate the load (including minimum required service factor) and check the result against the tabulated overhung load rating. The overhung load formula below considers the transmitted horsepower with service factor. This is appropriate for applications where starting loads, momentary overloads and brake capacities do not exceed 200% of gear reducer rating (100% overload). For other conditions, calculate the actual application load by multiplying the transmitted power by the appropriate service factor.

L_f = load location factor (the input shaft OHL is assumed to be applied at one shaft diameter from the seal cage, (L_f = 1.0) if the load is applied at a distance greater than one shaft diameter from the seal cage, refer the application to the Factory). The calculated overhung load must be less than or equal to the capacity shown on pages 645-648.

Load Location Factor (L_f) – the output shaft load location factors are shown below.

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

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MAXIMUM OVERHUNG LOAD AND THRUST LOAD RATINGS (LBS.)

GR SERIES • SINGLE REDUCTION • OUTPUT SHAFT OVERHUNG LOAD F_R

Ratio	Gear Reducer Size													
	GR813	GR815	GR818	GR821	GR824	GR826	GR830	GR832	GR842	GR852	GR860	GR870	GR880	GR8100
5	700	860	1200	1000	1770	1625	2170	2275	2800	3100	3538	6209	7761	11028
7.5	700	860	1200	1035	1770	1625	2170	2275	2930	3245	3723			
10	700	860	1200	1065	1770	1625	2170	2275	3010	3370	3723			
15	700	860	1200	1125	1770	1625	2170	2275	3190	3560	3723			
20	700	860	1200	1175	1770	1625	2170	2275	3320	3560	3723			
25	700	860	1200	1210	1770	1625	2170	2275	3445	3560	3723			
30	700	860	1200	1255	1770	1625	2170	2275	3550	3560	3723			
40	700	860	1200	1315	1770	1625	2170	2275	3715	3560	3723			
50	700	860	1200	1385	1770	1625	2170	2275	3730	3560	3723			
60	700	860	1200	1415	1770	1625	2170	2275	3730	3570	3723			
70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
80	700	860	1200	1495	1770	1625	2170	2275	3740	3590	3723	N/A	N/A	N/A
100	700	860	1200	1580	1770	1625	2170	2275	3750	3600	3723	N/A	N/A	N/A

Ratio	Gear Reducer Size													
	GR813	GR815	GR818	GR821	GR824	GR826	GR830	GR832	GR842	GR852	GR860	GR870	GR880	GR8100
5	827	794	793	735	1451	1420	1729	1605	1445	1675	3633	4009	4777	6808
7.5	948	946	868	811	1659	1609	1944	1869	1640	2021	3990			
10	1070	1056	976	898	1820	1762	2147	2026	1788	2449	3990			
15	1144	1144	1144	1099	2091	2069	2549	2490	2319	3033	3990			
All other single reduction ratios	1144	1144	1144	1144	2091	2091	2574	2574	2533	3412	3990			

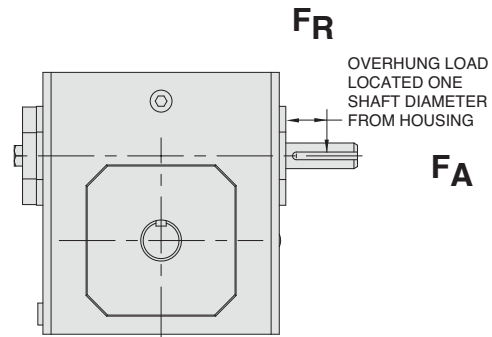
GR SERIES • SINGLE REDUCTION EXTENDED BEARING DESIGN • OUTPUT SHAFT OVERHUNG LOAD F_R

Ratio	Gear Reducer Size							
	GR830	GR832	GR842	GR852	GR860	GR870	GR880	GR8100
All Ratios	605	959	1200	2524	2245	3791	4850	8500

GR SERIES • SINGLE REDUCTION • INPUT SHAFT OVERHUNG LOAD F_R

Ratio	Gear Reducer Size													
	GR813	GR815	GR818	GR821	GR824	GR826	GR830	GR832	GR842	GR852	GR860	GR870	GR880	GR8100
All Ratios	75	75	75	75	125	125	150	150	175	300	450	450	450	500

◇ Output shaft overhung load rating (lbs) is based on load applied one shaft diameter from face of reducer housing.
 F_R = Radial load rating = overhung load (lbs)
 F_A = Axial load rating = thrust rating (lbs)



MAXIMUM OVERHUNG LOAD AND THRUST LOAD RATINGS (LBS.)

NH SERIES • SINGLE REDUCTION • OUTPUT SHAFT OVERHUNG LOAD F_R

Ratio	Gear Reducer Size									
	NH813	NH815	NH818	NH821	NH824	NH826	NH830	NH832	NH842	NH852
5	860	860	1250	775	1300	1750	1950	2250	2800	3100
7.5	860	860	1250	775	1300	1750	1950	2250	2930	3245
10	860	860	1250	775	1300	1750	1950	2250	3010	3370
15	860	860	1250	775	1300	1750	1950	2250	3190	3560
20	860	860	1250	775	1300	1750	1950	2250	3320	3560
25	860	860	1250	775	1300	1750	1950	2250	3445	3560
30	860	860	1250	775	1300	1750	1950	2250	3550	3560
40	860	860	1250	775	1300	1750	1950	2250	3715	3560
50	860	860	1250	775	1300	1750	1950	2250	3730	3560
60	860	860	1250	775	1300	1750	1950	2250	3730	3570
80	860	860	1250	775	1300	1750	1950	2250	3740	3590
100	860	860	1250	775	1300	1750	1950	2250	3750	3600

NH SERIES • SINGLE REDUCTION • OUTPUT SHAFT THRUST LOAD F_A

Ratio	Gear Reducer Size									
	NH813	NH815	NH818	NH821	NH824	NH826	NH830	NH832	NH842	NH852
5	827	794	793	735	1451	1420	1729	1605	1445	1675
7.5	948	946	868	811	1659	1609	1944	1869	1640	2021
10	1070	1056	976	898	1820	1762	2147	2026	1788	2449
15	1144	1144	1144	1099	2091	2069	2549	2490	2319	3033
All other single reduction ratios	1144	1144	1144	1144	2091	2091	2574	2574	2533	3412

NH SERIES • SINGLE REDUCTION EXTENDED BEARING DESIGN • OUTPUT SHAFT OVERHUNG LOAD F_R

Ratio	Gear Reducer Size			
	NH830	NH832	NH842	NH852
All Ratios	605	959	1200	2524

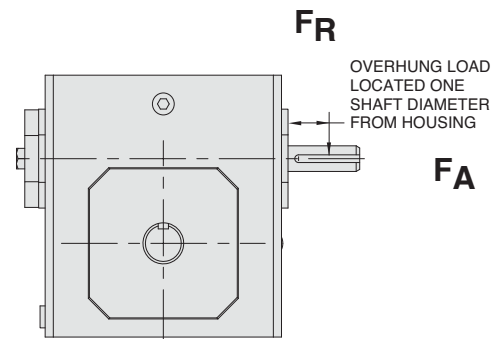
NH SERIES • SINGLE REDUCTION • INPUT SHAFT OVERHUNG LOAD F_R

Ratio	Gear Reducer Size									
	NH813	NH815	NH818	NH821	NH824	NH826	NH830	NH832	NH842	NH852
All Ratios	75	75	75	75	125	125	150	150	175	300

◇ Output shaft overhung load rating (lbs) is based on load applied one shaft diameter from face of reducer housing.

F_R = Radial load rating = overhung load (lbs)

F_A = Axial load rating = thrust rating (lbs)



MAXIMUM OVERHUNG LOAD AND THRUST LOAD RATINGS (LBS.)

EL SERIES • SINGLE REDUCTION • OUTPUT SHAFT OVERHUNG LOAD F_R

Ratio	Gear Reducer Size									
	EL813	EL818	EL821	EL824	EL826	EL830	EL832	EL842	EL852	EL860
5	700	920	1000	1770	1625	2170	2170	2800	3100	3538
7.5	700	920	1035	1770	1625	2170	2170	2930	3245	3723
10	700	920	1065	1770	1625	2170	2170	3010	3370	3723
15	700	920	1125	1770	1625	2170	2170	3190	3560	3723
20	700	920	1175	1770	1625	2170	2170	3320	3560	3723
25	700	920	1210	1770	1625	2170	2170	3445	3560	3723
30	700	920	1255	1770	1625	2170	2170	3550	3560	3723
40	700	920	1315	1770	1625	2170	2170	3715	3560	3723
50	700	920	1385	1770	1625	2170	2170	3730	3560	3723
60	700	920	1415	1770	1625	2170	2170	3730	3570	3723
80	700	920	1495	1770	1625	2170	2170	3740	3590	3723
100	700	920	1580	1770	1625	2170	2170	3750	3600	3723

EL SERIES • SINGLE REDUCTION • OUTPUT SHAFT THRUST LOAD F_A

Ratio	Gear Reducer Size									
	EL813	EL818	EL821	EL824	EL826	EL830	EL832	EL842	EL852	EL860
5	827	793	735	1451	1420	1729	1605	1445	1675	3633
7.5	948	868	811	1659	1609	1944	1869	1640	2021	3990
10	1070	976	898	1820	1762	2147	2026	1788	2449	3990
15	1144	1144	1099	2091	2069	2549	2490	2319	3033	3990
All other single reduction ratios	1144	1144	1144	2091	2091	2574	2574	2533	3412	3990

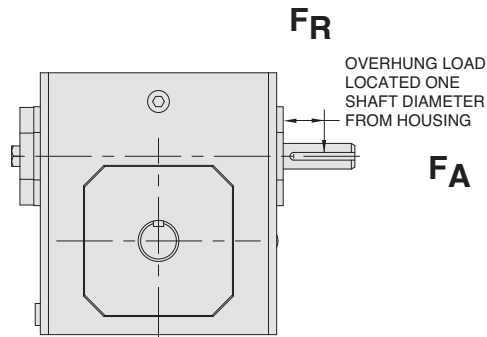
EL SERIES • SINGLE REDUCTION • INPUT SHAFT OVERHUNG LOAD F_R

Ratio	Gear Reducer Size									
	EL813	EL818	EL821	EL824	EL826	EL830	EL832	EL842	EL852	EL860
All Ratios	75	75	75	125	125	150	150	175	300	450

◇ Output shaft overhung load rating (lbs) is based on load applied one shaft diameter from face of reducer housing.

F_R = Radial load rating = overhung load (lbs)

F_A = Axial load rating = thrust rating (lbs)



Additional Engineering Equations and Conversion Factors

Velocity(FPM) = $V = .2618 \times D \times \text{RPM}$

Rotational Speed = $\text{RPM} = \frac{V}{(.2618 \times D)}$

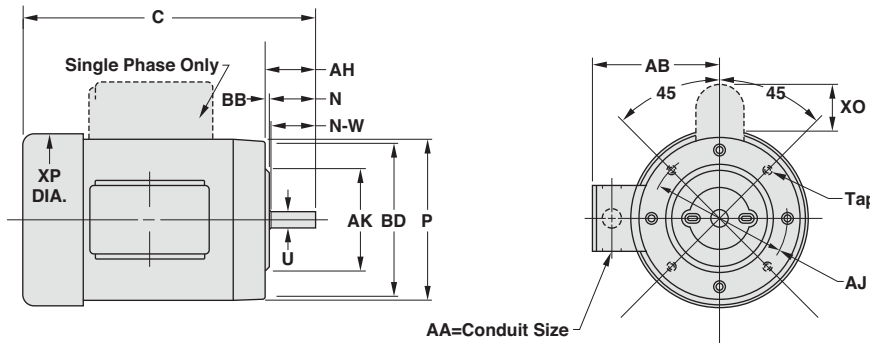
Ratio = $\frac{\text{Input RPM}}{\text{Output RPM}} = \frac{\text{No. Teeth in Driver}}{\text{No. Teeth in Driven}} = \frac{\text{Diameter of Driver}}{\text{Diameter of Driven}}$

Ratio(Total) = $\text{Ratio}_1 + \text{Ratio}_2 + \text{Ratio}_3$

- 1 inch = 25.4 MM
- 1 lb = 4.448 N
- 1 in-lb = .11298 Nm
- 1HP = 746 Watts = .746 kW
- 1kW = 1.34 HP
- °F = $9/5 \times \text{°C} + 32$
- °C = $5/9 \times (\text{°F} - 32)$

- Where:
- D = Diameter (inches)
 - HP = Horsepower
 - R= Radius (inches)
 - RPM - Rotational Speed
 - TQ = Torque
 - V = linear velocity (FPM)
 - W = force or tension (lbs)

MOTOR DIMENSIONS AC & DC MOTORS • NEMA C FACE CRITICAL MOUNTING DIMENSIONS



The condensed dimensions shown on these pages are for general reference only and are not for construction. The “C” and “AG” dimensions for each catalog item are included in this catalog. Certified drawings of all ratings are available for construction purposes.

NEMA SHAFT AND KEYWAY DIMENSIONS ■ (Inches)

NEMA SHAFT (U)	KEYWAY DIMENSIONS (R) (S)		NEMA SHAFT (U)	KEYWAY DIMENSIONS (R) (S)	
	(R)	(S)		(R)	(S)
5/8	33/64	3/16	2-3/8	2-1/64	5/8
7/8	49/64	3/16	2-1/2	2-3/16	5/8
1-1/8	63/64	1/4	2-7/8	2-29/64	3/4
1-3/8	1-13/64	5/16	3-3/8	2-7/8	7/8
1-5/8	1-13/32	3/8	3-7/8	3-5/16	1

■ S is keyway width.
U minus R is keyway depth.

NEMA DIMENSIONS (Inches)

Frame Size ▲	N	P	U	N-W	AA	AB	AH	AJ	AK	BB	BD	XO	XP	TAP	KEY
S56	1 ¹⁵ / ₁₆	5 ¹⁹ / ₃₂	5/8	1 ¹ / ₈	1/2	4 ⁷ / ₈	2 ¹ / ₁₆	5 ⁷ / ₈	4 ¹ / ₂	1/8	6 ¹ / ₂	2 ¹ / ₄	5 ⁷ / ₈	3/8-16	3/16
56		6 ¹⁹ / ₃₂				7 ⁵ / ₁₆									
143T	2 ³ / ₈	6 ¹⁹ / ₃₂	7/8	2 ¹ / ₄	3/4	5 ⁵ / ₁₆	2 ¹ / ₈	5 ⁷ / ₈	4 ¹ / ₂	1/8	6 ¹ / ₂	2 ¹ / ₄	7 ⁵ / ₃₂	3/8-16	3/16
145T															
182T	2 ⁷ / ₈	8 ¹⁵ / ₃₂	1 ¹ / ₈	2 ³ / ₄	3/4	6 ³ / ₈	2 ⁵ / ₈	7 ¹ / ₄	8 ¹ / ₂	1/4	8 ⁷ / ₈	2 ¹ / ₄	9 ³ / ₃₂	1/2-13	1/4
184T															
S213T	3 ¹ / ₂	8 ¹⁵ / ₃₂	1 ³ / ₈	3 ³ / ₈	3/4	6 ³ / ₈	3 ¹ / ₈	7 ¹ / ₄	8 ¹ / ₂	1/4	8 ⁷ / ₈	2 ¹ / ₄	9 ³ / ₃₂	1/2-13	5/16
213T															
215T	—	10 ¹³ / ₁₆	—	—	1	8 ⁵ / ₁₆	—	—	—	—	9	—	11 ³ / ₃₂	—	—
254TC	—	13 ¹ / ₄	1 ⁵ / ₈	4	1 ¹ / ₄	11 ⁵ / ₈	3 ³ / ₄	7 ¹ / ₄	8 ¹ / ₂	1 ¹ / ₄	9 ⁵ / ₈	—	12 ⁷ / ₈	1/2-13	3/8
256TC															

▲ Blue shading denotes dimensions established by NEMA standard MG1, others are unique to LEESON, and will vary with each manufacturer.

High Efficiency Helical - Bevel Gear Reducers

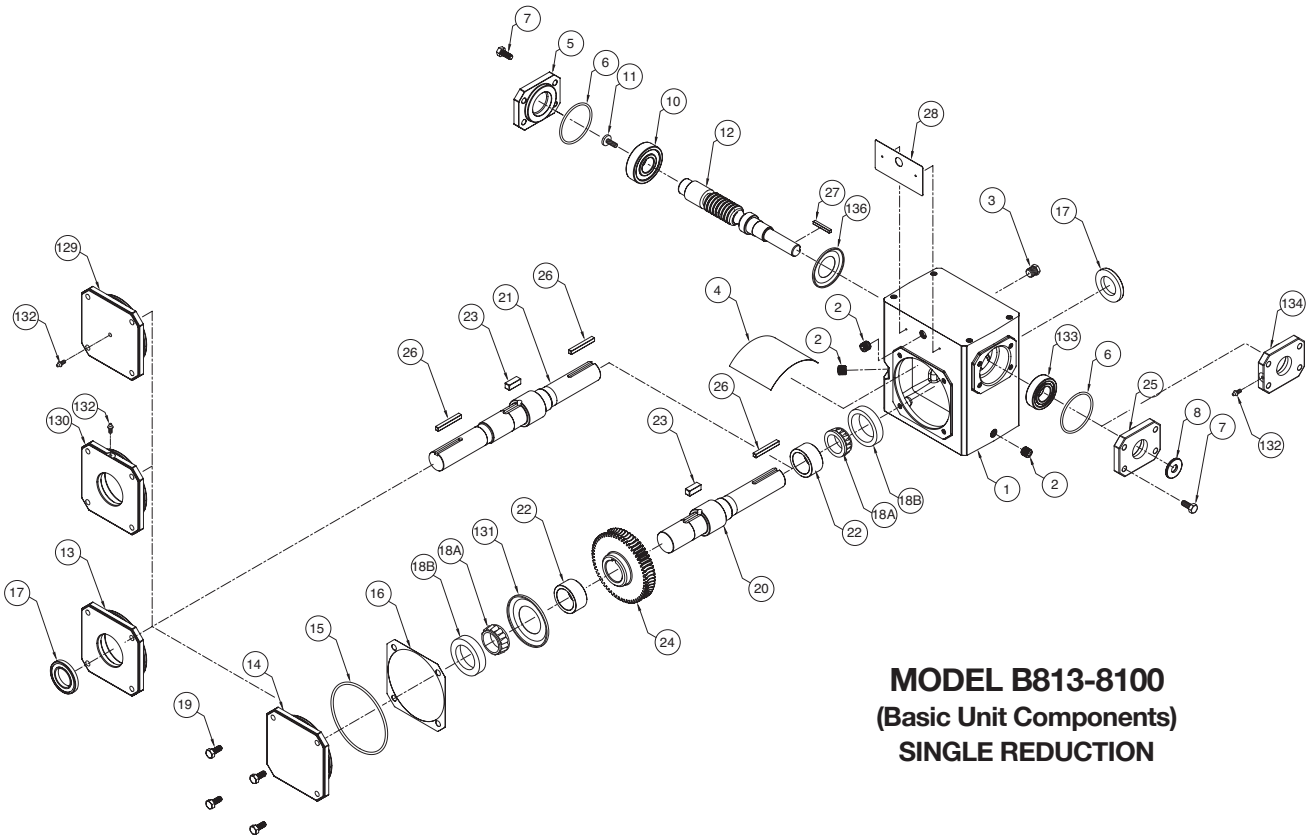
High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

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MODEL B813-8100
(Basic Unit Components)
SINGLE REDUCTION

BASIC SINGLE REDUCTION UNIT (B-STYLE)

ITEM # DESCRIPTION

- 1 HOUSING
- 2 PIPE PLUG
- 3 VENT PLUG
- 4 SPLASH GUARD
- 5 INPUT CAP
- 6 O-RING
- 7 HEX HEAD CAP SCREW
- 8 INPUT OIL SEAL
- 9 INPUT BEARING (cup and cone for 842 and larger units)
- 10 INPUT BEARING (cup and cone for 842 and larger units)
- *11 RETAINING SCREW
- 12 INPUT WORM SHAFT
- 13 OUTPUT COVER - OPEN
- 14 OUTPUT COVER - CLOSED
- 15 O-RING
- 16 OUTPUT COVER SHIM (as required)
- 17 OUTPUT OIL SEAL
- 18 OUTPUT BEARING (18A. CONE, 18B. CUP)
- 19 HEX HEAD CAP SCREW

- ♣ 20 OUTPUT SHAFT - SINGLE
- ♣ 21 OUTPUT SHAFT - DOUBLE
- 22 GEAR SPACER
- 23 GEAR KEY (only used on size 826 and larger units)
- ♣ 24 OUTPUT GEAR
- *25 INPUT COVER
- 26 KEY - OUTPUT EXTENSION
- 27 KEY - INPUT EXTENSION
- 28 NAMEPLATE

QUILL MOTOR FLANGE UNIT (BMQ-STYLE)

- 40 QUILL MOTOR FLANGE
- 41 INPUT OIL SEAL
- 42 HEX HEAD CAP SCREW (flange to housing)
- 43 RETAINING RING - SHAFT
- *44 RETAINING RING - HOUSING
- 45 QUILL INPUT SHAFT
- 46 KEY - INPUT
- 47 HEX HEAD CAP SCREW (motor to flange)

HOLLOW OUTPUT SHAFT UNIT (H-STYLE)

- 51 OUTPUT COVER
- 52 OUTPUT OIL SEAL

- 53 OUTPUT BEARING (53A. CONE, 53B. CUP)
- 54 GEAR SPACER
- ♣ 55 OUTPUT SHAFT
- 56 SETSCREW
- 57 GEAR KEY (only used on size 826 and larger units)
- ♣ 58 OUTPUT GEAR
- 59 OUTPUT KEY

LONG MOTOR FLANGE AND COUPLING KIT (BM-STYLE)

- 110 "C" FACE MOTOR FLANGE
- 111 HEX HEAD CAP SCREW (flange to housing)
- 112 COUPLING KEY - REDUCER SHAFT
- 113 SETSCREW - REDUCER SHAFT
- 114 COUPLING GEAR - REDUCER SHAFT
- 115 COUPLING SLEEVE
- 116 SETSCREW - MOTOR SHAFT
- 117 COUPLING GEAR - MOTOR SHAFT
- 118 COUPLING KEY - MOTOR SHAFT
- 119 HEX HEAD CAP SCREW

- 120 PLASTIC PLUG

VERTICAL SHAFT REQUIRED PARTS

(supplied only when mounting position involves a vertical shaft)

- *129 OUTPUT COVER - CLOSED
- *130 OUTPUT COVER - OPEN
- *131 OUTPUT BEARING GREASE RETAINER
- 132 GREASE FITTING
- 133 SEALED BALL BEARING (only used on size 818 thru 826 units)
- ♣ 134 INPUT COVER
- ♣ 136 INPUT BEARING GREASE RETAINER

* ONLY USED ON SIZE 842 AND LARGER UNITS

♣ ONLY USED ON SIZE 830 AND LARGER UNITS

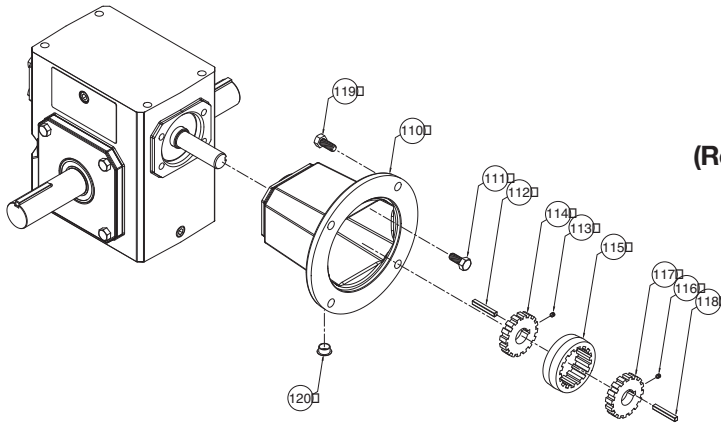
♣ SUPPLIED ONLY AS OUTPUT ASSEMBLY ON 813 THROUGH 824 UNITS

CAST IRON
GR SERIES

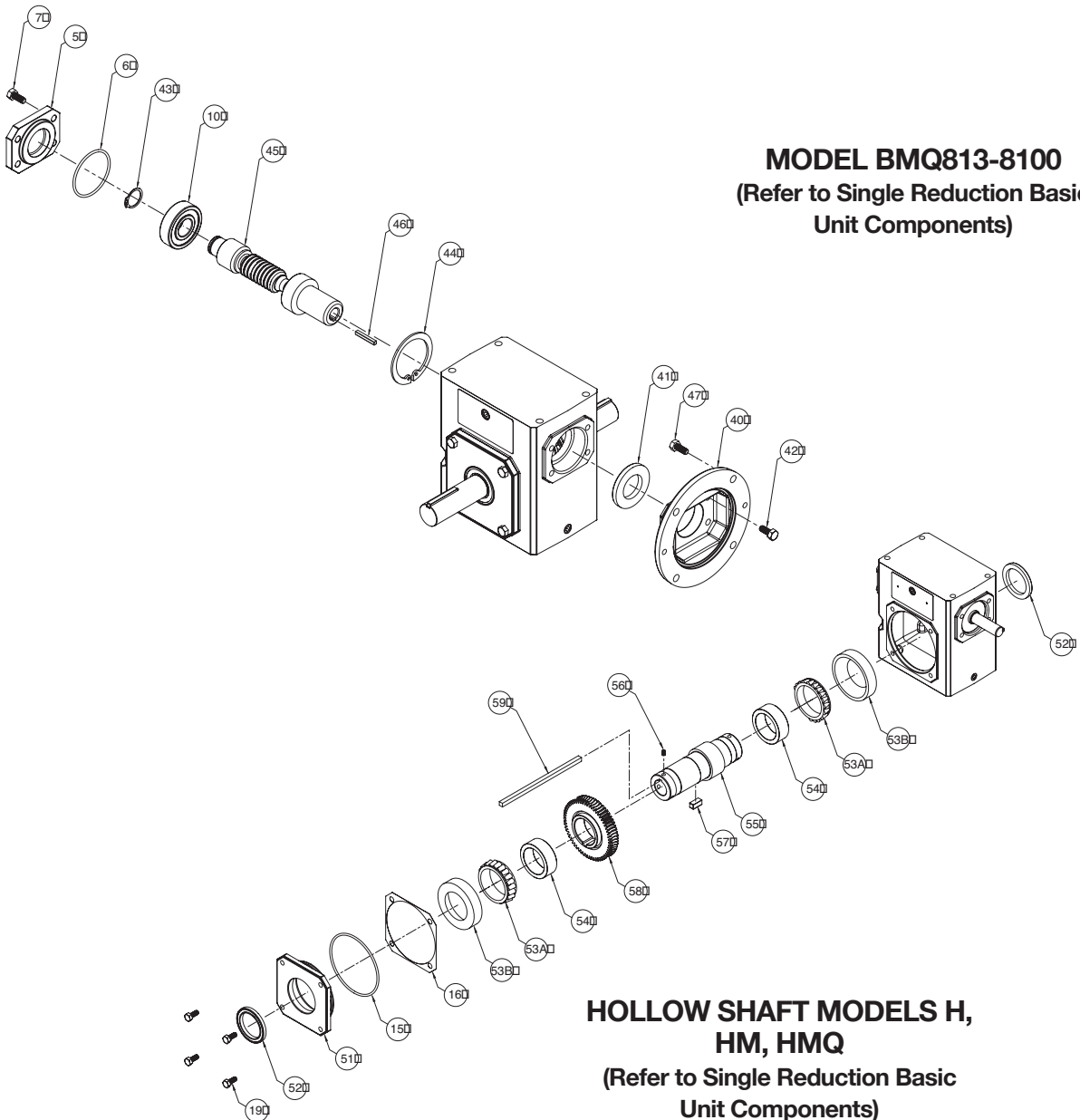
CAST IRON
NH SERIES

ALUMINUM
EL SERIES

Technical Information



MODEL BM813-8100
(Refer to Single Reduction Basic Unit Components)



MODEL BMQ813-8100
(Refer to Single Reduction Basic Unit Components)

HOLLOW SHAFT MODELS H, HM, HMQ
(Refer to Single Reduction Basic Unit Components)

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

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High Efficiency Helical - Bevel Gear Reducers

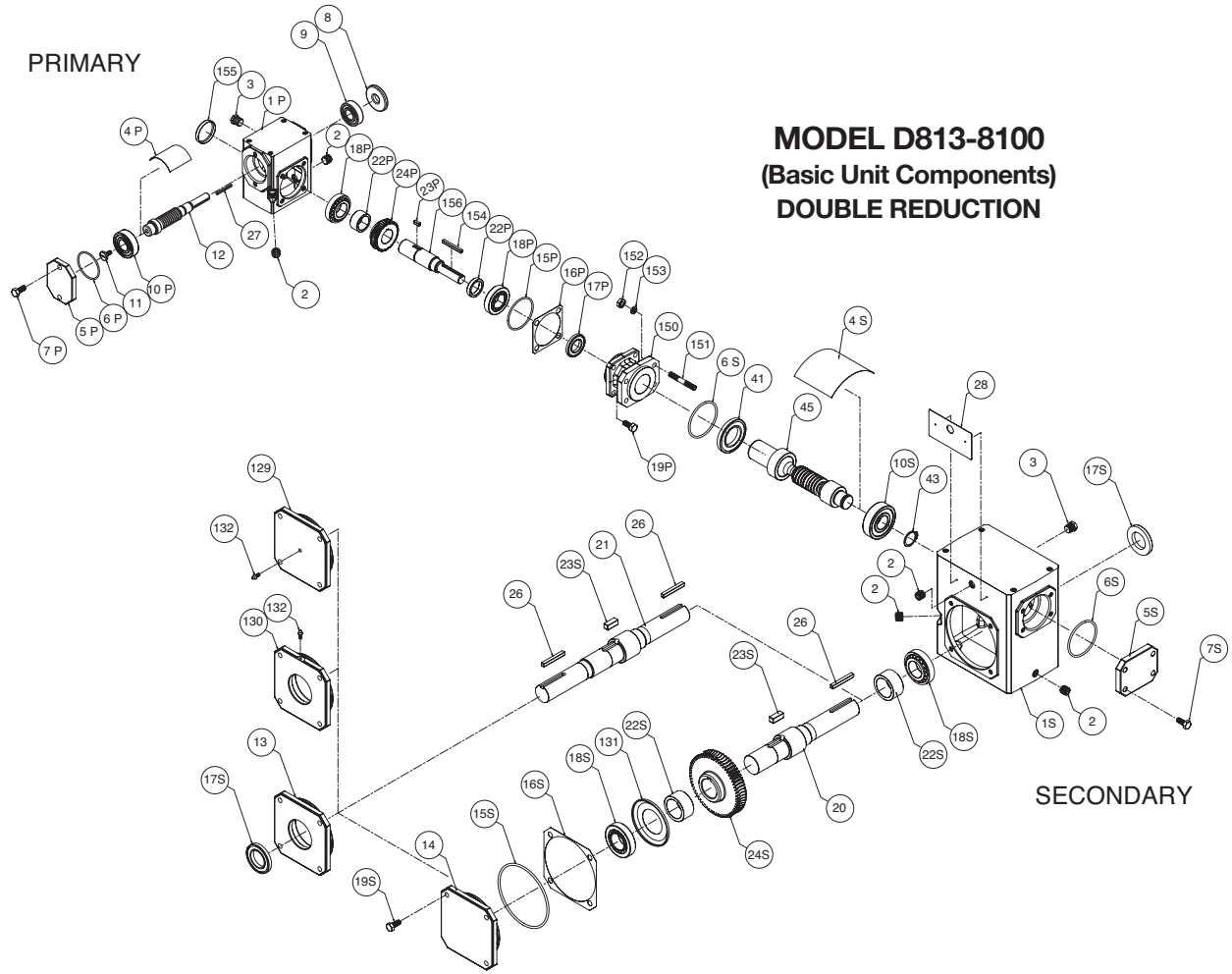
High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

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MODEL D813-8100
(Basic Unit Components)
DOUBLE REDUCTION

DOUBLE REDUCTION UNIT (D-STYLE)

ITEM # DESCRIPTION

- 1 HOUSING
- 2 PIPE PLUG
- 3 VENT PLUG
- 4 SPLASH GUARD
- 5 INPUT CAP
- 6 O-RING
- 7 HEX HEAD CAP SCREW
- 8 INPUT OIL SEAL
- 9 INPUT BEARING (cup and cone for 842 and larger units)
- 10 INPUT BEARING (cup and cone for 842 and larger units)
- 11 RETAINING SCREW
- 12 INPUT WORM SHAFT
- 13 OUTPUT COVER - OPEN
- 14 OUTPUT COVER - CLOSED
- 15 O-RING
- 16 OUTPUT COVER SHIM (as required)
- 17 OUTPUT OIL SEAL
- 18 OUTPUT BEARING (18A. CONE, 18B. CUP)
- 19 HEX HEAD CAP SCREW
- *20 OUTPUT SHAFT - SINGLE
- *21 OUTPUT SHAFT - DOUBLE

- 22 GEAR SPACER
- 23 GEAR KEY (only used on size 826 and larger units)
- *24 OUTPUT GEAR
- 26 KEY - OUTPUT EXTENSION
- 27 KEY - INPUT EXTENSION
- 28 NAMEPLATE
- 41 INPUT OIL SEAL
- 43 RETAINING RING - SHAFT
- 45 QUILL INPUT SHAFT
- 150 DOUBLE REDUCTION ADAPTER
- 151 STUD
- 152 HEX NUT
- 153 LOCK WASHER
- 154 PRIMARY SOLID OUTPUT KEY
- 155 EXPANSION PLUG
- 156 PRIMARY SOLID OUTPUT SHAFT

QUILL MOTOR FLANGE UNIT (DMQ-STYLE)

- 40 QUILL MOTOR FLANGE
- 41 INPUT OIL SEAL
- 42 HEX HEAD CAP SCREW (flange to housing)
- 43 RETAINING RING - SHAFT
- *44 RETAINING RING - HOUSING
- 45 QUILL INPUT SHAFT

- 46 KEY - INPUT
- 47 HEX HEAD CAP SCREW (motor to flange)

HOLLOW OUTPUT SHAFT UNIT (DH-STYLE)

- 51 OUTPUT COVER
- 52 OUTPUT OIL SEAL
- 53 OUTPUT BEARING (53A. CONE, 53B. CUP)
- 54 GEAR SPACER
- *55 OUTPUT SHAFT
- 56 SETSCREW
- 57 GEAR KEY (only used on size 826 and larger units)
- *58 OUTPUT GEAR
- 59 OUTPUT KEY

LONG MOTOR FLANGE AND COUPLING KIT (DM-STYLE)

- 110 "C" FACE MOTOR FLANGE
- 42 HEX HEAD CAP SCREW (flange to housing)
- 112 COUPLING KEY - REDUCER SHAFT
- 113 SETSCREW - REDUCER SHAFT
- 114 COUPLING GEAR - REDUCER SHAFT
- 115 COUPLING SLEEVE
- 116 SETSCREW - MOTOR SHAFT

- 117 COUPLING GEAR - MOTOR SHAFT
- 118 COUPLING KEY - MOTOR SHAFT
- 47 HEX HEAD CAP SCREW (motor to flange)
- 120 PLASTIC PLUG

VERTICAL SHAFT REQUIRED PARTS

(supplied only when mounting position involves a vertical shaft)

- *129 OUTPUT COVER - CLOSED
- *130 OUTPUT COVER - OPEN
- *131 OUTPUT BEARING GREASE RETAINER
- 132 GREASE FITTING
- 133 SEALED BALL BEARING (only used on size 818 thru 826 units)
- ◆134 INPUT COVER
- ◆136 INPUT BEARING GREASE RETAINER

* ONLY USED ON SIZE 842 AND LARGER UNITS
◆ ONLY USED ON SIZE 830 AND LARGER UNITS
* SUPPLIED ONLY AS OUTPUT ASSEMBLY ON 813 THROUGH 824 UNITS

P - PRIMARY
S - SECONDARY

CAST IRON
GR SERIES

CAST IRON
NH SERIES

ALUMINUM
EL SERIES

Technical Information

High Efficiency Helical - Bevel
Gear Reducers

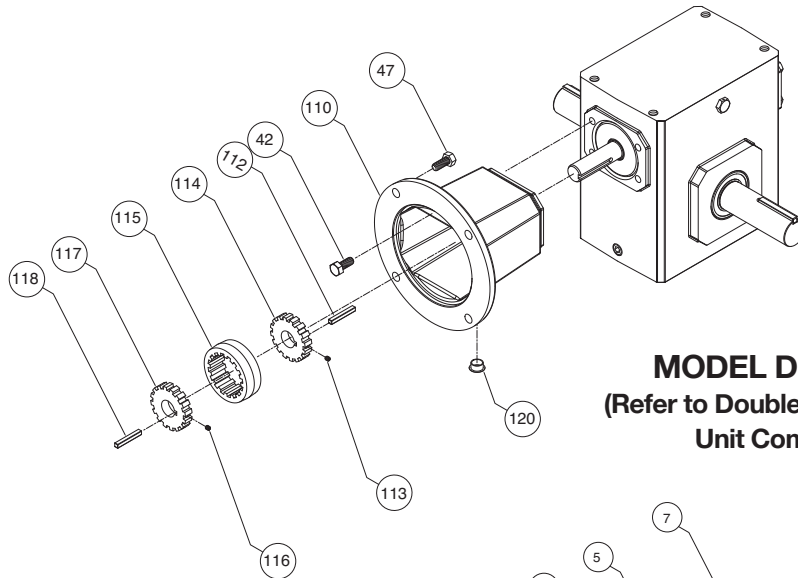
High Efficiency Parallel Shaft
Gear Reducers

Stainless Steel & WASHGUARD®
High Efficiency Gear Reducers

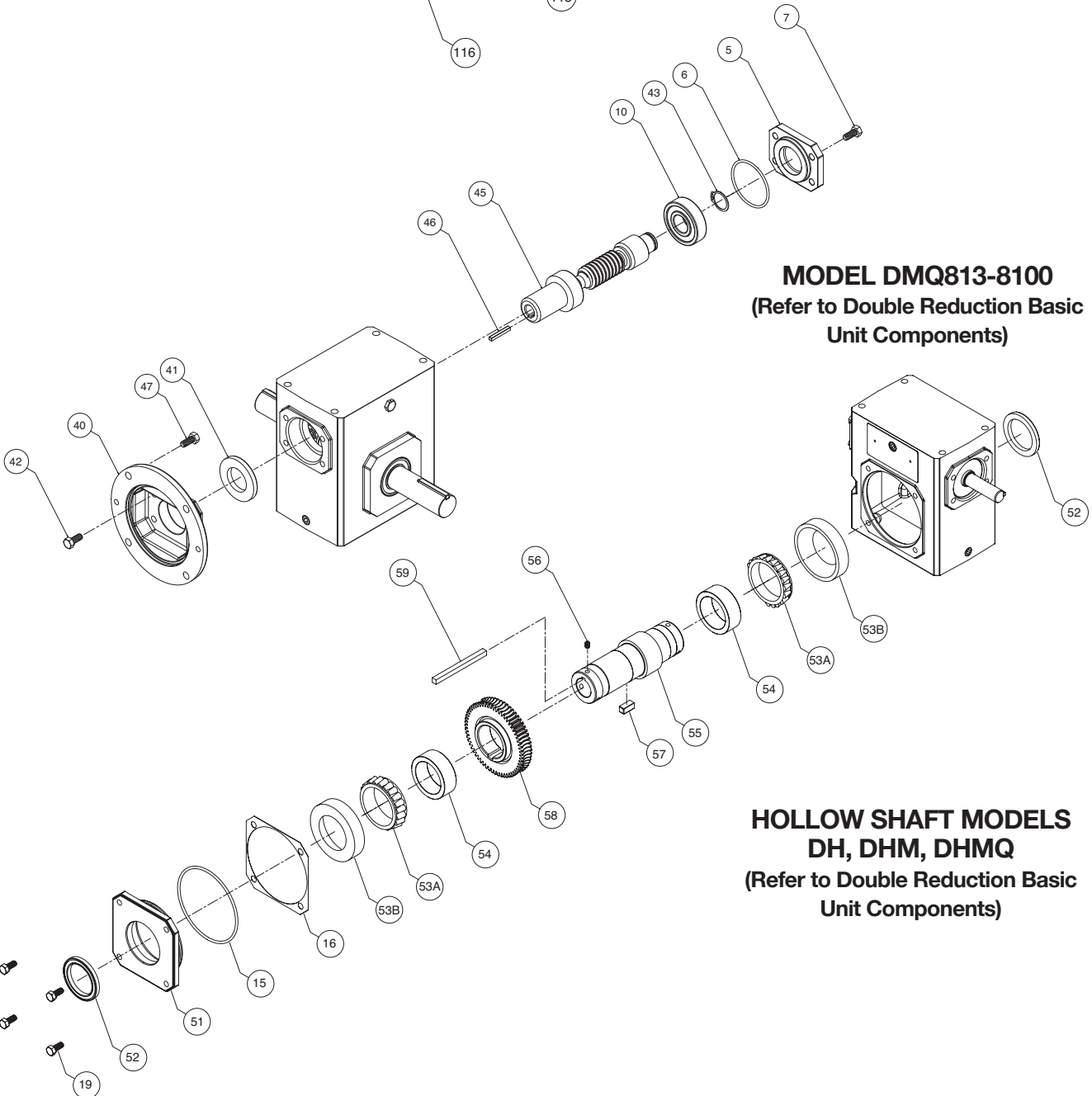
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MODEL DM813-8100
(Refer to Double Reduction Basic
Unit Components)

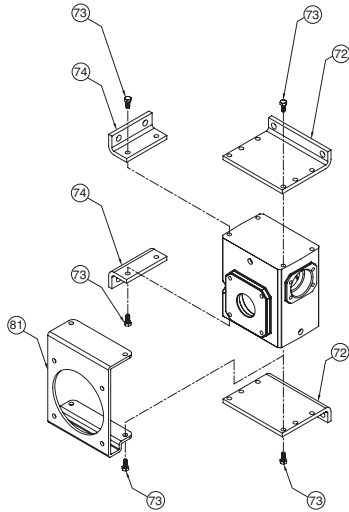


MODEL DMQ813-8100
(Refer to Double Reduction Basic
Unit Components)

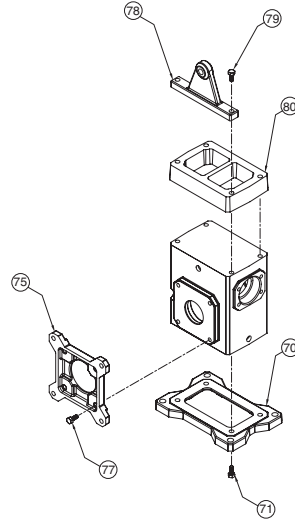
**HOLLOW SHAFT MODELS
DH, DHM, DHMQ**
(Refer to Double Reduction Basic
Unit Components)



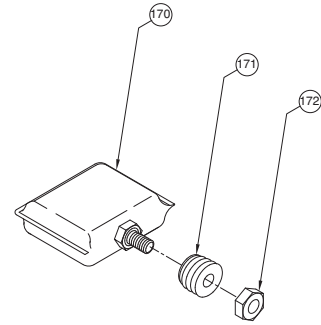
STEEL MOUNTING ACCESSORIES



CAST MOUNTING ACCESSORIES



ENVIROSEAL



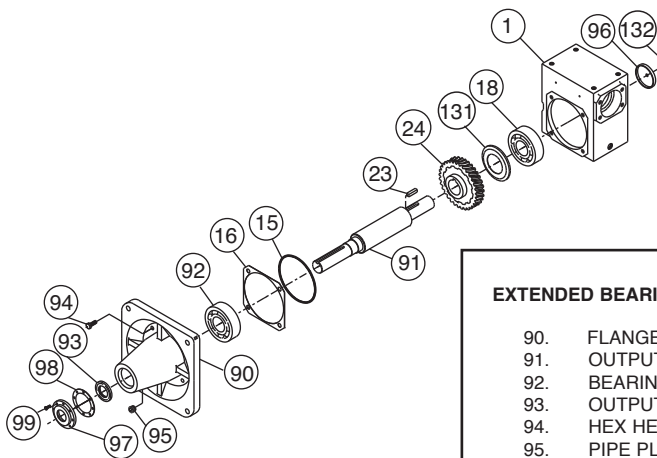
INTERNAL PRESSURE COMPENSATION CHAMBER ASSEMBLY

- 170 INTERNAL PRESSURE COMPENSATION CHAMBER
- 171 INTERNAL PRESSURE COMPENSATION CHAMBER STEM PLUG
- 172 INTERNAL PRESSURE COMPENSATION CHAMBER STEM NUT

MOUNTING BRACKET OPTIONS

- | | |
|-----------------------------|--|
| 70 HORIZONTAL MOUNTING BASE | 77 HEX HEAD CAP SCREW |
| 71 CAP SCREW | 78 TORQUE BRACKET |
| 72 HIGH AND LOW V-BRACKETS | 79 HEX HEAD CAP SCREW |
| 73 HEX HEAD CAP SCREW | 80 RISER BLOCK |
| 74 "J" MOUNT BRACKET | 81 "FB" OUTPUT FLANGE (bent steel - only available thru size 826, excluding 815 units) |
| 75 "F" OUTPUT FLANGE (CAST) | |

EXTENDED BEARING UNIT



EXTENDED BEARING UNIT

- 90. FLANGE
- 91. OUTPUT SHAFT
- 92. BEARING
- 93. OUTPUT OIL SEAL
- 94. HEX HEAD CAP SCREW
- 95. PIPE PLUG
- 96. EXPANSION PLUG
- *97. FLANGE COVER
- *98. GASKET
- *99. HEX HEAD CAP SCREW

*ONLY USED ON SIZE 5-1/4" CENTER DISTANCE AND LARGER UNITS

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

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High Efficiency Parallel Shaft Gear Reducers

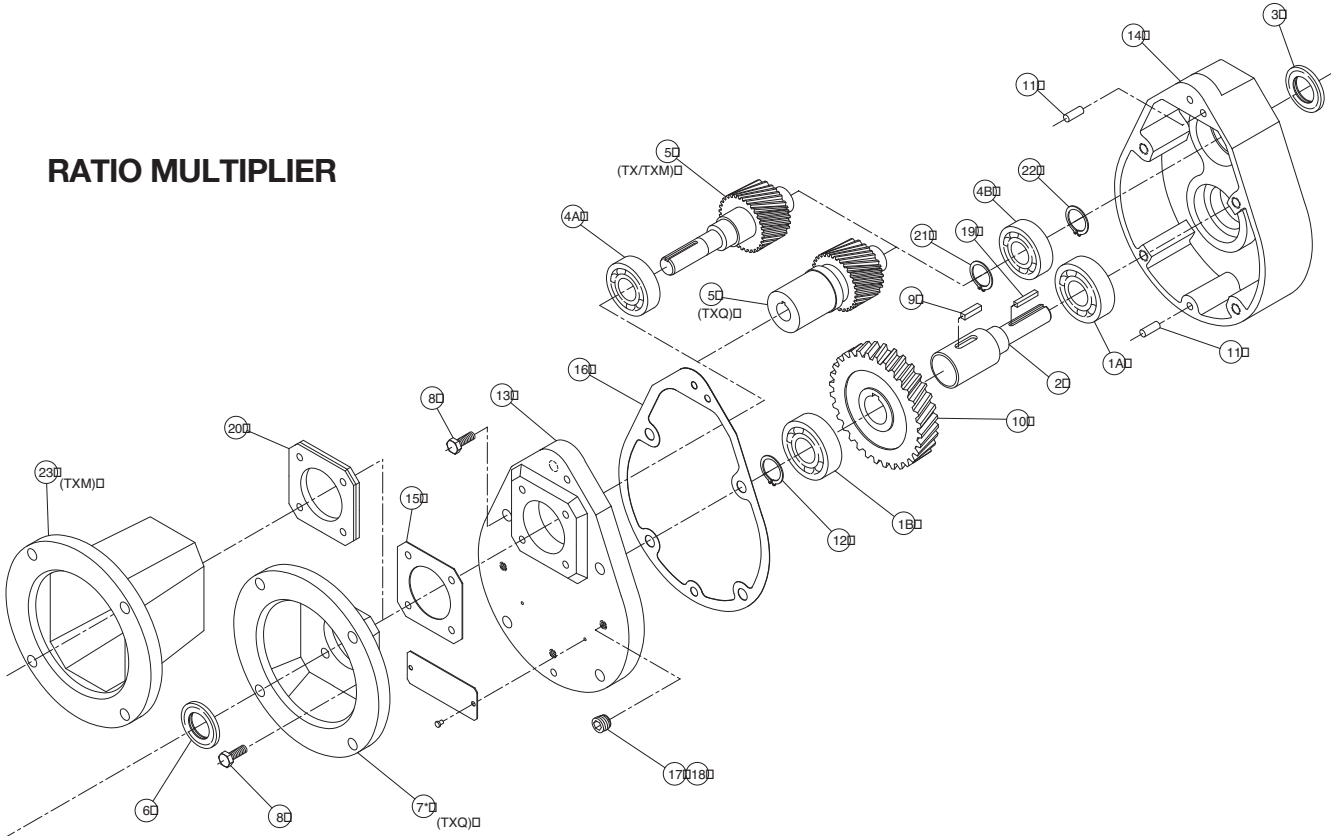
Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

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RATIO MULTIPLIER



DOUBLE REDUCTION UNIT (DMQ-STYLE)			
ITEM #	DESCRIPTION		
1A	BEARING, OUTPUT - EXTENSION END	4A	BEARING, INPUT - EXTENSION END (n/a for TXQ)
1B	BEARING, OUTPUT - INBOARD END	4B	BEARING, INPUT - INBOARD END
2	SHAFT, OUTPUT (state output frame size)	5	SHAFT, INPUT
3	OIL SEAL, OUTPUT	6	OIL SEAL, INPUT
		*7	FLANGE, MOTOR (TXQ only)
		8	HEX HEAD CAP SCREW
		9	KEY, GEAR
		10	GEAR, OUTPUT
		11	PIN, DOWEL
		12	SPACER, LOW SPEED
		13	COVER, HOUSING
		14	HOUSING
		15	GASKET, INPUT COVER
		16	GASKET, HOUSING
		17	PLUG, PIPE
		18	PLUG, VENT
		19	KEY, OUTPUT SHAFT
		20	COVER, INPUT, SEAL RETAINER
		21	RING, RETAINING, INTERNAL, INPUT SHAFT
		22	RING, RETAINING, EXTERNAL, INPUT SHAFT
		23	FLANGE, MOTOR (TXM only)
			*MOTOR FLANGE REPLACES INPUT COVER ON 'TXQ' MODEL

Technical Information

U.L., CSA, ISO AND OTHER STANDARDS & APPROVALS – MOTORS

UNDERWRITERS LABORATORIES INC.

1. All motor models listed with prefix “C” have U.L. component recognition (without thermal overload). File Number E57948, Guide Number PRGY2.
2. All units have U.L. recognized Class B, F or H insulation systems unless otherwise noted. File Number E55555, Guide Number OBJY2.
3. Single phase motors with a model number prefix of “A” or “M” (automatic or manual protectors) have U.L. recognized protector winding combinations and component recognition. File Number E57955, Guide Number XEWR2.
4. Three phase motors with a model number prefix of “A” or “M” (automatic or manual protectors) have U.L. recognized protector winding combinations plus have capability of providing U.L. recognized primary single phasing which is included in our U.L. file E57955, Guide Number XEWR2.
5. Explosion-Proof, single and three phase for 56, 143T and 145T frames: File Number E75276, Guide Number PTDR.
Explosion-Proof motors 182T and larger: File Number E12044, Guide Number PTDR.
Explosion-Proof motors DC motors 48 frame: File Number E75276, Guide Number PTDR..
6. Permanent Magnet DC motors except PZ and P300 gearmotors are recognized components under File Number E57948, Guide Number PRGY2.
7. PZ and P300 Permanent Magnet DC gearmotors: File number E49849 or E49747, Guide Number PRGY2.
8. Speedmaster SCR Drives, Component Recognition, File E132235, Guide Number NMMS2, except catalog numbers 174902 and 174903.
9. Speedmaster SCR Drives, catalog numbers 174902 and 174903. File Number E154901, Guide Number NMFT2.
10. Speedmaster AC Adjustable Speed Drives, File Number E161242. Canadian UL covered by File Number E161242 also, Guide Number NMMS.

CANADIAN STANDARDS ASSOCIATION

1. Motor construction for all single and three phase NEMA 42 through S254T frame, IEC/metric 63 through 90L frame, and all sub-fractional horsepower motors: Report Number L33543, Guide Number 260-0-0..
2. Motor construction for all steel or cast iron three phase NEMA 182T through 447T frame and IEC/metric 100L through 250M frame motors: Report Number LR62104.
3. Thermally protected single phase motors through 7½ HP, Report Number LR33543.
4. All Farm Duty motors 1/3 HP through 7½ HP, Report Number LR33543
5. Explosion proof single and three phase for 56, 143T and 145T frames: File Number LR47667.
Explosion-Proof motors 182T and larger: File Number LR21839 and LR47504.
Explosion-Proof DC motors 48 frame: File Number LR701080.
6. Permanent Magnet DC motors are listed under File Number LR33543.
7. Multi-Speed Motors, steel or cast iron, 182T through 447T frames are listed under file number LR33543.
8. Speedmaster SCR Drives, catalog numbers 174902 and 174903. File Number LR75790.

MOTOR EFFICIENCY VERIFICATION

Energy Efficiency Verification - Full load efficiency ratings of three phase, single speed, NEMA/EEMAC Design A or B squirrel cage induction motors, 1 through 200 HP, 230, 460 or 575 volts, 60 Hz, in totally enclosed and open, drip-proof enclosures for non-hazardous applications, CSA Report Number EEV 78720-1. Tested to CSA 390 (IEEE 112B) Standards. The Grafton testing facility is qualified for CSA energy efficiency performance testing of polyphase induction motors. The Grafton Testing Facility is NVLAB recognized for energy efficiency testing of electric motors to EPACT requirements of the Department of Energy.

ISO QUALITY CERTIFICATION

Grafton and Saukville, Wisconsin administrative, design and manufacturing facility, ISO 9001, Certificate Number RvC #93-102. EN29001, BS5750: Part 1 and ANSI/ASQC Q91-19.

Black River Falls, Wisconsin manufacturing facility, ISO 9002, Certificate Number RvC #93-090.

Mississauga (Toronto), Ontario, administrative, distribution facility, ISO 9002, Certificate Number QMI #003027.

Hanover, Ontario, manufacturing facility, ISO 9002, Certificate Number QMI #003028.

BAKING INDUSTRY SANITATION STANDARDS COMMITTEE

WASHGUARD® II, stainless steel washdown duty motors, NEMA frames 56, 143T, 145T, 182T and 184T are certified to Standard No. 29 for Electric Motors and Accessory Equipment, authorization number 769. The WBMQ Series of gear reducers are BISSC certified to Standard No. 29 for Electric Motors and Accessory Equipment, authorization number 941.

SAUDI ARABIAN STANDARDS ORGANIZATION

SCCP Ref. No.: R-100157

The CE Mark

CE is an acronym for the French phrase “*Conformite Europeene*” and is similar to the UL or CSA marks of North America. However, unlike UL or CSA which require independent laboratory testing, the CE mark can be applied by the motor manufacturer through “self certifying” that its products are designed to the appropriate standards. The European Union has issued 24 directives related to the **CE** mark. Three Directives apply to electric motors.



Low Voltage Directive (73/23/EEC) This directive applies to electrical equipment operating in the voltage range of 50-1000 volts AC or 75-1500 volts DC. Virtually all LEESON motors (except low voltage DC) are included in this directive.

Based on our testing to the applicable electrical and mechanical standards EN60034 and IEC 34, LEESON certifies conformity to this directive. All three phase 50 Hz stock motors comply with the nameplate designations, lead markings and connection diagrams required. A “Declaration of Conformity” accompanies these motors and a CE label is applied.

Machinery Directive (89/3392/EEC) This directive applies to machinery that may contain certain motors. This is an issue with equipment manufacturers and requires the use of a motor meeting the Low Voltage Directive and requires a “Declaration of Incorporation” document which means that only the motor complies with the requirements of the Low Voltage Directive. A CE label is applied to the motor but it remains the responsibility of the equipment manufacturer to obtain certification for the finished product.

Electromagnetic Compatibility (EMC) Directive (89/336/EEC) This directive addresses the final product and is again a concern for the equipment manufacturer. Since this Directive addresses electromagnetic interference (EMI) concerns, it does not affect three phase AC motors because they do not produce EMI. DC motors, however, do produce EMI. How much of the “noise” is emitted outside the machine depends on a host of factors. LEESON’s Engineering Department can assist OEM’s in applying DC motors in machinery destined for Europe and requiring certification to the EMC Directive.



The following  **WARNING** and  **CAUTION** information is supplied to you for your protection and to provide you with many years of trouble free and safe operation of your GROVE GEAR product:

Read **ALL** instructions prior to operating reducer. Injury to personnel or reducer failure may be caused by improper installation, maintenance or operation.

 **WARNING**

- Written authorization from GROVE GEAR is required to operate or use reducers in man lift or people moving devices.
- Check to make certain application does not exceed the allowable load capacities published in the current catalog.
- Buyer shall be solely responsible for determining the adequacy of the product for any and all uses to which Buyer shall apply the product. The application by Buyer shall not be subject to any implied warranty of fitness for a particular purpose.
- For safety, Buyer or User should provide protective guards over all shaft extensions and any moving apparatus mounted thereon. The User is responsible for checking all applicable safety codes in his area and providing suitable guards. Failure to do so may result in bodily injury and/or damage to equipment.
- Hot oil and reducers can cause severe burns. Use extreme care when removing lubrication plugs and vents.
- Make certain that the power supply is disconnected before attempting to service or remove any components. Lock out the power supply and tag it to prevent unexpected application of power.
- Reducers are not to be considered fail safe or self-locking devices. If these features are required, a properly sized, independent holding device should be utilized. Reducers should not be used as a brake.
- Any brakes that are used in conjunction with a reducer must be sized or positioned in such a way so as to not subject the reducer to loads beyond the catalog rating.
- Lifting supports including eyebolts are to be used for vertically lifting the gearbox only and no other associated attachments or motors.
- Use of an oil with an EP additive on units with backstops may prevent proper operation of the backstop. Injury to personnel, damage to the reducer or other equipment may result.
- Overhung loads subject shaft bearings and shafts to stress which may cause premature bearing failure and/or shaft breakage from bending fatigue, if not sized properly.

 **CAUTION**

- Test run unit to verify operation. If the unit tested is a prototype, that unit must be of current production.
- If the speed reducer cannot be located in a clear and dry area with access to adequate cooling air supply, then precautions must be taken to avoid the ingestion of contaminants such as water and the reduction in cooling ability due to exterior contaminants.
- Mounting bolts should be routinely checked to ensure that the unit is firmly anchored for proper operation.

In the event of the resale of any of the goods, in whatever form, Resellers/Buyers will include the following language in a conspicuous place and in a conspicuous manner in a written agreement covering such sale:

The manufacturer makes no warranties or representations, express or implied, by operation of law or otherwise, as to the merchantability or fitness for a particular purpose of the goods sold hereunder. Buyer acknowledges that it alone has determined that the goods purchased hereunder will suitably meet the requirements of their intended use. In no event will the manufacturer be liable for consequential, incidental or other damages. Even if the repair or replacement remedy shall be deemed to have failed of its essential purpose under Section 2-719 of the Uniform Commercial Code, the manufacturer shall have no liability to Buyer for consequential damages.

Resellers/Buyers agree to also include this entire document including the warnings and cautions above in a conspicuous place and in a conspicuous manner in writing to instruct users on the safe usage of the product.

This information should be read together with all other printed information supplied by GROVE GEAR.

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Gear Reducers

High Efficiency Parallel Shaft
Gear Reducers

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High Efficiency Gear Reducers

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TERMS AND CONDITIONS OF SALES QUOTATIONS ARE MADE AND ORDERS ARE ACCEPTED BY SELLER ONLY TO THESE TERMS AND CONDITIONS:

1. AGREEMENT AND MODIFICATION OF SALES TERMS.

The agreement between Seller and Buyer ("Sales Contract") is with respect to the sale of goods described on the other side hereof (the "goods"). Any Terms and Conditions contained in any purchase order or other form of communication from Seller's customers which are additional to or different from these Terms and Conditions shall be deemed rejected by Seller unless expressly accepted in writing by Seller.

2. ACCEPTANCE OF ORDERS.

Acceptance by Seller of Buyer's purchase order(s) is expressly conditioned upon Buyer's assent to these Terms and Conditions. Buyer will be deemed to have assented to such Terms and Conditions unless Seller receives written notice of any objections within 10 days after Buyer's receipt of this form or in all events prior to any delivery or other performance by Seller of Buyer's order if less than 10 days.

3. QUOTATIONS.

Quotations by Seller shall be deemed to be offers by Seller to sell the goods described therein subject to these Terms and Conditions, and acceptance of such offers is expressly limited to acceptance by Buyer of all of these Terms and Conditions within 30 days from the date of the quotation or as specified. Purchase orders submitted by Buyer for the goods quoted by Seller shall be subject to and will be deemed to constitute acceptance of these Terms and Conditions. All purchase orders will be subject to approval by Seller.

4. TERMINATION OR MODIFICATION.

The Sales Contract may be modified or terminated only upon Seller's express written consent, which consent will at all times be conditioned on Buyer's agreement to pay Seller's modification or termination charge including, but not limited to expenses and costs plus a reasonable profit, except that any goods completed on or before Seller's acceptance of termination shall be accepted and paid in full by Buyer.

5. PRICES AND TERMS.

Fulfillment of Buyer's order is contingent upon the availability of materials. The price of the goods sold pursuant to the Sales Contract shall be based upon Seller's prices in effect at the time of shipment and any acceptance of the order will be on the basis of the freight rates now in effect. In the event of an increase or decrease in the applicable freight charges before the material is shipped, such changes in freight charges will be for the account of Buyer. Price advances, discounts, extras and terms and conditions are subject to changes without notice. Unless otherwise provided on the front side hereof, price is F.O.B. Seller's point of shipment, and terms of payment shall be net 30 days from date of invoice. Seller may assess a delinquency charge of 1-1/2 percent per month on invoices not paid within stated payment terms. Seller may require full or partial payment or payment guarantees in advance of shipment whenever, in its opinion, the financial condition of Buyer so warrants. In addition, Seller may, at any time, suspend performance of any order or require payment in cash, security or other adequate assurance satisfactory to Seller when, in Seller's opinion, the financial condition of Buyer warrants such action.

6. TAXES.

Prices do not include sales, use or other similar federal, state or local taxes. Buyer shall pay to Seller, in addition to the price of the goods, all applicable taxes which may be invoiced separately at a later date.

7. DESIGN; EXTRA WORK; BUYER'S MATERIAL. (a) If any order accepted by Seller contemplates the preparation of special designs by Seller, Buyer issuing such order will have a responsible representative specifically approve all designs prepared by Seller.

(b) If Buyer requests extra work not included in the quotation or original order, Buyer will pay for the extra work at reasonable rates as determined by Seller.

(c) In the event spoilage/damage occurs on orders where Buyer furnishes the material, Seller shall not be liable for replacement of or damage to such material.

8. RISK OF LOSS, TITLE, SECURITY INTEREST.

Delivery shall occur, and risk of loss shall pass to Buyer, upon delivery of the material to a carrier at the F.O.B. point of shipment. Transportation shall be at Buyer's sole risk and expense, and any claims for losses or damage in transit shall be against the carrier only. However, Seller retains title to all products until paid for in full in cash and Buyer agrees to perform all acts necessary to provide a fully perfected security interest in the goods in favor of Seller. Seller may, at Seller's option, repossess the same, upon Buyer's default in payment hereunder, and charge Buyer with any deficiency.

9. DELIVERIES AND QUANTITIES.

(a) Delivery dates are not guaranteed but are estimated on the basis of immediate receipt by Seller of all information to be furnished by Buyer and the absence of delay, direct or indirect, resulting from or contributed to by circumstances beyond Seller's reasonable control. If the goods are non-catalog goods, Seller may ship overages or underages to the extent of 10 percent of quantity ordered, and Buyer shall pay for such quantity based upon the unit price of the goods. Seller shall not be required to maintain closer control of quantity, unless specifically agreed to by Seller in writing. Quantities of all items may be determined by weight. Any claims for shortage must be within 10 days from the date of receipt of the goods by Buyer, and in every case the weights found in any particular shipment, including tare, must be given and Seller advised as to the method used by Buyer in computing the count of parts.

(b) In the event that Buyer is unable to accept delivery of the goods at time of shipment, Seller shall invoice Buyer for the full purchase price as if shipment had been made and: (i) if Seller is able to store such goods in its own facilities, Buyer will pay Seller the reasonable handling and storage charges for the period of such storage, and (ii) if Seller is unable to store such goods at its own facility, Seller reserves the right to arrange handling and storage in a suitable bonded warehouse for the Buyer at Buyer's expense. In cases where handling and storage become necessary, it shall be Buyer's responsibility to notify Seller when shipment is to be made. Seller will make necessary arrangements for shipment at Buyer's expense.

10. RETURNED GOODS.

Goods may not be returned. However, if Seller consents in writing or upon verbal authorization to the return of goods for any reason, transportation charges must be prepaid by Buyer, who also shall assume all risk of loss of such returned goods until actual receipt by Seller.

11. INSPECTION, ACCEPTANCE.

Buyer shall inspect the goods immediately upon the receipt thereof. All claims by Buyer (including claims for shortages), except only those provided for under the WARRANTY AND LIMITATIONS OF LIABILITY and PATENTS clauses below, must be asserted in writing by Buyer

within a 10 day period or they are waived. If this contract involves partial performances, all such claims must be asserted within a 10 day period for each partial performance. Rejection may be only for defects substantially impairing the value of products or work. Buyer's remedy for lesser defects shall be those provided for under the Warranty and Liability clauses. THERE SHALL BE NO REVOCATION OF ACCEPTANCE. If Buyer wrongfully rejects, revokes or delays acceptance of items or work tendered under this contract, or fails to make a payment due on or before delivery, or repudiates this contract, Seller shall, at its option, have a right to recover as damages, either the price as stated herein (upon recovery of the price, the items involved shall become the property of the Buyer) or the profit (including reasonable overhead) which the Seller would make from performance together with incidental damages and reasonable cost.

12. WARRANTIES AND LIMITATIONS OF LIABILITY. (a) Seller warrants to Buyer that the goods will conform to the following warranty: The goods will be commercially free from defects in material and workmanship under normal use for a period of 1 year from the date of shipment of the goods by Seller and will conform to the date of shipment to applicable specifications, drawings and blueprints, except for departures therefrom with written approval of Buyer; provided that work performed by Seller upon blanks and other materials furnished by Buyer is excluded from this warranty. Seller shall have no liability to Buyer for cost of blanks furnished by Buyer which are damaged or spoiled during heat treat or machining operations;

(b) In the case of drives, gears and reducers manufactured by Seller, Seller warrants only that such products, when shipped, shall be capable of delivering the service rating as indicated in Seller's written documents, including quotations and catalogs or as noted on such products, providing such equipment is properly installed and maintained, correctly lubricated, operating under normal conditions with competent supervision, and within the load limits for which it was sold, and provided further that the equipment is free from critical speed, torsional or other type vibration, no matter how induced;

(c) If any model or sample was provided to the Buyer, it was used merely to illustrate the general type and quality of goods and not to warrant that goods shipped would be of that type or quality;

(d) UNLESS AUTHORIZED IN WRITING BY A CORPORATE OFFICER OR VICE PRESIDENT, NO AGENT, EMPLOYEE OR REPRESENTATIVE OF SELLER HAS ANY AUTHORITY TO BIND SELLER TO ANY AFFIRMATION, REPRESENTATION OR WARRANTY CONCERNING THE GOODS SOLD UNDER THE SALES CONTRACT AND ANY SUCH AFFIRMATION, REPRESENTATION OR WARRANTY HAS NOT FORMED A PART OF THE BASIS OF THE BARGAIN AND SHALL BE UNENFORCEABLE;

(e) Seller's sole obligation under the foregoing warranties is limited to either, at Seller's option, replacing or repairing defective goods (or defective parts thereof) This warranty does not cover the cost of installation of the new or repaired goods or parts. Replacement goods or parts are warranted for the remainder of the warranty period applicable to the goods originally supplied by Seller. All claims for allegedly defective goods must be made within 10 days after Buyer learns of such alleged defects. All claims not made in writing and received by Seller within such 10 day period shall be deemed waived. Buyer shall return a sample of the alleged defective part for Seller's inspection, and no other goods shall be returned to Seller without Seller's written consent. This warranty shall not extend to goods subjected to

misuse, abuse, neglect, accident or improper installation or maintenance, incorrect lubrication, or goods which have been altered or repaired by anyone other than Seller or its authorized representative;

(f) THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND/OR ANY OTHER TYPE, WHETHER EXPRESS OR IMPLIED;

(g) Products not manufactured and work not performed by Seller are warranted only to the extent and in the manner that the same are warranted to Seller by Seller's vendors, and then only to the extent that Seller is reasonably able to enforce such warranty. In enforcing such warranty, it is understood Seller shall have no obligation to initiate litigation unless Buyer undertakes to pay all costs and expenses therefor, including but not limited to Attorney's fees, and indemnifies Seller against any liability to Seller's vendors arising out of such litigation;

(h) THE FOREGOING IS SELLER'S ONLY OBLIGATION AND BUYER'S EXCLUSIVE REMEDY FOR BREACH OF WARRANTY. BUYER'S FAILURE TO SUBMIT A CLAIM AS PROVIDED ABOVE SHALL SPECIFICALLY WAIVE ALL CLAIMS FOR DAMAGES OR OTHER RELIEF INCLUDING BUT NOT LIMITED TO CLAIMS BASED ON LATENT DEFECTS. IN NO EVENT SHALL BUYER BE ENTITLED TO INCIDENTAL, CONSEQUENTIAL, CONTINGENT, OR SPECIAL DAMAGES, NOR SHALL SELLER'S LIABILITY EXCEED THE PURCHASE PRICE OF THE GOODS. EVEN IF THE REPAIR OR REPLACEMENT REMEDY SHALL BE DEEMED TO HAVE FAILED OF ITS ESSENTIAL PURPOSE UNDER SECTION 2-719 OF THE UNIFORM COMMERCIAL CODE, SELLER SHALL HAVE NO LIABILITY TO BUYER FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, SUCH AS LOST PROFITS, LOST REVENUE, DAMAGE TO OTHER EQUIPMENT OR LIABILITY OR INJURY TO A THIRD PARTY. ANY ACTION ARISING HEREUNDER OR RELATED HERETO MUST BE COMMENCED WITHIN ONE (1) YEAR AFTER THE CAUSE OF ACTION OCCURS OR IT SHALL BE BARRED, NOTWITHSTANDING ANY STATUTORY PERIOD OF LIMITATIONS TO THE CONTRARY; and

(i) In the event of the resale of any of the goods, in whatever form, Buyer will include the following language in a conspicuous place and in a conspicuous manner in a written agreement covering such resale: "THE MANUFACTURER MAKES NO WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED, BY OPERATION OF LAW OR OTHERWISE, AS TO THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE GOODS SOLD HEREUNDER. BUYER ACKNOWLEDGES THAT IT ALONE HAS DETERMINED THAT THE GOODS PURCHASED HEREUNDER WILL SUITABLY MEET THE REQUIREMENTS OF THEIR INTENDED USE. IN NO EVENT WILL MANUFACTURER BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL OR OTHER DAMAGES."

(j) Nuclear Use Disclaimer - Equipment sold by Seller is not intended for use in connection with any nuclear facility or activity. If so used, Seller disclaims all liability for any nuclear damage, injury or contamination, and Buyer shall indemnify and hold Seller, its officers, agents, employees, successors, assigns and customers harmless from and against any and all losses, damages or expenses of whatever form or nature (including attorneys' fees and other costs of defending any action) which they or any of them may sustain or incur, whether as a result of breach of contract, warranty, tort (including negligence) or otherwise, by reason of such use.

13. REMEDIES AND LIMITATIONS OF LIABILITY. In the event Buyer claims Seller has breached any of its obligations under

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High Efficiency Parallel Shaft Gear Reducers

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

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High Efficiency Helical - Bevel Gear Reducers

the Sales Contract, whether of warranty or otherwise, Seller may request the return of goods and tender to Buyer, at Seller's option, a replacement shipment of goods. If Seller so requests the return of the goods, the goods will be redelivered to Seller in accordance with Seller's instructions and at Buyer's expense. Except as herein provided, Seller shall have no further obligation under the Sales Contract. The remedies contained in this paragraph and paragraph 12 hereof shall constitute the sole recourse of Buyer against Seller for breach of any of Seller's obligations under the Sales Contract, whether warranty or otherwise.

High Efficiency Parallel Shaft Gear Reducers

14. TECHNICAL ADVICE. Any technical advice furnished or recommendation made by Seller or any representative of Seller concerning any use or application of any of the goods is believed to be reliable, but SELLER MAKES NO WARRANTY, EXPRESSED OR IMPLIED, ON RESULTS TO BE OBTAINED. BUYER ASSUMES ALL RESPONSIBILITY FOR LOSS OR DAMAGE RESULTING FROM THE HANDLING OR USE OF ANY OF THE GOODS.

Stainless Steel & WASHGUARD® High Efficiency Gear Reducers

15. FORCE MAJEURE. Seller shall not be liable for failure to perform its obligations under the Sales Contract in whole or in part caused by the occurrence of any contingencies beyond the reasonable control either of Seller or of suppliers of Seller. If any such contingency occurs, Seller may allocate goods and deliveries among Seller's customers.

16. ASSIGNMENT AND DELEGATION. No right or interest in the Sales Contract shall be assigned by Buyer without Seller's prior written consent, and no delegation of any obligation owed, or to the performance of any obligation by Buyer shall be made without Seller's prior written consent. Any attempt at assignment or delegation shall be wholly void and totally ineffective for all purposes unless made in conformity with this paragraph.

Technical Information

17. PATTERNS AND TOOLING. Unless otherwise agreed to in writing with Buyer, Seller shall retain title to and possession of all special tooling, patterns and dies whether paid for by Buyer or not, but such special tooling, patterns and dies that are specifically paid for by Buyer will be held by Seller exclusively for the manufacture of Buyer's goods for not more than 2 years after the date of Buyer's last order requiring their use. Seller will exercise reasonable care in handling and storing any tooling, patterns or dies specifically paid for by Buyer, but Seller shall not be liable for damage or loss thereof.

Warnings and Cautions

18. PATENTS. SELLER MAKES NO REPRESENTATION OR WARRANTY WITH RESPECT TO THE PATENTABILITY OF THE GOODS OR THAT ANY OF THE GOODS WILL BE FREE FROM CLAIMS OF INFRINGEMENT. Buyer agrees to indemnify and defend Seller in any such suit, action or proceeding for any claim resulting from actual or alleged infringement of any domestic or foreign letters patent for (i) any feature, construction or design incorporated at Buyer's request in any goods or to adapt such goods to the particular use of Buyer or Buyer's customers or (ii) any additions, changes or adaptations made by Buyer or Buyer's customers after delivery of the goods.

Terms and Conditions

19. CONFIDENTIAL INFORMATION. All drawings, diagrams, specifications, technical data and other materials furnished

by Seller and identified by Seller as confidential are and shall remain the exclusive property of Seller and shall be returned to Seller upon request. Buyer agrees to treat such information and material as confidential and not to reproduce or disclose such information or materials without Seller's prior written consent. This paragraph does not apply to any information already known to and readily accessible in the trade or which may become so through no fault of Buyer.

20. CHANGES. Seller may, at any time, without notice, make changes (whether in design, material, improvements or otherwise) in any catalog goods, and may discontinue the manufacture of any catalog goods, all in its sole discretion, without incurring any obligations of any kind as a result thereof, whether for failure to fill an order of Buyer or otherwise.

21. INSTALLATION. Installation of the goods shall be by Buyer unless otherwise specifically stated in the Sales Contract.

22. SEVERABILITY. If any term or provision contained in the Sales Contract is declared or held invalid by a court of competent jurisdiction, such declaration or holding shall not affect the validity of any other term, clause or provision contained herein.

23. GOVERNING LAW AND LIMITATION. (a) The formation and performance of the Sales Contract shall be deemed to have been made and governed by the Uniform Commercial Code as adopted in the state of Seller's principal place of business;

(b) Buyer hereby agrees to the jurisdiction of any state or federal court located in the county of Seller's principal place of business. Buyer waives any objection based on forum non conveniens and any objection to venue of any action instituted hereunder, and consents to the granting of such legal or equitable relief as is deemed appropriate by a court of competent jurisdiction. The rights and obligations of Seller and Buyer shall not be governed by the provisions of the United Nations Convention on Contracts for the International Sale of Goods; and

(c) Seller represents that the goods will be produced in compliance with the Fair Labor Standards Act of 1938, as amended.

(d) BUYER AGREES TO PAY ALL OF SELLER'S COSTS AND EXPENSES OF COLLECTION AND LITIGATION, INCLUDING BUT NOT LIMITED TO ATTORNEYS' FEES AND COSTS.

Revised May 2007

Notes

High Efficiency Helical - Bevel Gear Reducers

High Efficiency Parallel Shaft Gear Reducers

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Lined area for notes, consisting of 20 horizontal lines.

Notes

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Gear Reducers

High Efficiency Parallel Shaft
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GROVE GEAR

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