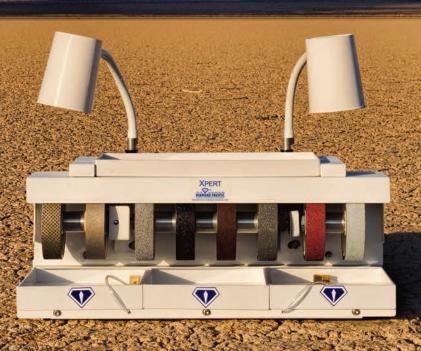
DIAMOND PACIFIC CATALOG 2014



THERE'S A GEM-MAKER TO FIT YOUR NEEDS



The Genie Gem-Maker

Known around the world for top performance with it's 6" diamond grinding and polishing wheels.



The Pixie Gem-Maker It's set of 4" diamond wheels makes it the favorite of opal cutters.



BigFoot

Compact, portable, lots of storage with a full set of 2" diamond wheels. Big performance in a little package.



The Titan Gem-Maker

Big, fast, efficient, the workhorse of grinders with a full set of 8" diamond wheels.

Cover photo by Lara Hartley

Put fun and pride into your lapidary hobby or profession get the right tools for the job

YOU CAN CUT, shape and polish gemstones with speed and ease if you have the right tool for the job. Just as a hammer and saw are the basic tools of a carpenter, a grinding and polishing machine and rock saw are the basic tools of the lapidary.

OUR GEM-MAKERS GIVE YOU VALUE FOR YOUR MONEY. We have designed them to give you lasting service, convenience and best of all top performance to put real pleasure into your lapidary hobby or profession.

We start with a top quality motor big enough for the job. We don't skimp on any of the parts, to give you the best quality for your money. Even our smallest machine, the BigFoot has a lot packed into a small package. This machine is compact, but includes extra storage for parts and accessories.

OUR GEM-MAKERS ARE TOP PERFORMERS due to our special design, top quality wheels and our unique Spra-Mist pump system. On the Pixie, Genie, Xpert and Titan machines, all of our basic recommended wheels are mounted at once, so you can easily proceed from one step to the next through the entire grinding and polishing process. This is an important time saver. Even the BigFoot has easy to change wheels making this process simple and quick.

GALAXY METAL BOND DIA-MOND WHEELS start with a steel rim mounted to a hard plastic center. The diamond is nickel plated to the ring creating a smooth, true-running surface. You will appreciate the fact that they never need dressing, are fast and run cool.

OUR NOVA RESIN-BOND diamond sanding and polishing wheels out-perform any other method available.

Novas are permanently charged with diamond embedded in a tough, flexible plastic resin backed by a thick sponge rubber backing. This soft, flexible construction enables the surface of the Nova to conform to your stone, eliminating flat spots and scratches so difficult to remove with other methods of polishing. Nova wheels are durable and do the job fast and efficiently.

PROCEDURE IS SIMPLE. Grind your cabochon to shape on an 80 grit Galaxy metal-bond diamond grinding wheel. Proceed to a 220 grit Galaxy wheel to remove all deep scratches. Coarse sanding is done on the 280 grit Nova resin-bond diamond wheel. Spend enough time on this wheel to completely remove all scratches left by the grinding wheels and then proceed to the next three Nova wheels. Our standard machines come with two Galaxy wheels, 80 and 220 grits and four Nova wheels, 280, 600, 1200 and 3000 grits. We also include a 14,000 grit Diamond Nova Disc for polishing.

EQUALLY IMPORTANT to the performance of our Gem-Maker's is the Spra-Mist Coolant System. Our system uses an air pump that operates a geyser (sprayer) to supply a fine water spray to the underside of the wheels. Because the unit is pumping air, not water, it cannot become clogged. There is no plumbing required. Just pour a little water in the pan and you can go to work. Our grinding and polishing machines run clean, you use them in your kitchen or den without making a lot of mess



OUR GEM-MAKERS are all versatile and easy to use. These machines all come complete and ready to use, just add water to the tray and plug them in to a power outlet. You can grind and polish small flats on the Pixie, Genie, Xpert and Titan machines, eliminating the need for a special flat lap machine.

All four of these machines will accept a steel back-up plate attached to the right hand wheel adaptor. This allows Magnetic Novas to be quickly applied, used and removed as you proceed through the sanding and polishing sequence.

These machines all accept a $\frac{1}{4}$ "-20 thread bolt on the right side which, in addition to the Magnetic Nova back-up plate, allows you to use the "No-Hole" diamond laps.

All of our Gem-Makers will accept our Nova polishing discs, as well as our canvas, leather and felt discs.

The BigFoot, Pixie, Genie and Xpert have Trim-Saw attachments available. Buff kits for metal finishing are available for the Pixie, Genie and Titan machines.

All of our Gem-Makers come with a lamp. Additional lamps and magnifiers may be added to all but the BigFoot.

NEED HELP MAKING A CHOICE

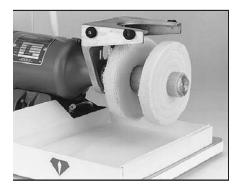
between machines, just give our knowledgeable Customer Service department a call at 1-800-253-2954 or email customerservice@diamondpacifictool.com.

GENIE—THE "MAGICAL" GEM-MAKER



GENIE COMES COMPLETE: It's powered by a ¹/₄ HP heavy duty, industrially rated custom Baldor motor. Standard motor is 115 volt/60 HZ. Overseas model uses similar motor in 230 volt/50 HZ. Comes mounted on a 13-¹/₂" x 27" laminated base board. Genie includes two 6" x 1¹/₂" Galaxy diamond grinding wheels (80 and 220 grit), four 6" x 1¹/₂" Nova sanding and polishing wheels (280, 600, 1200 and 3,000 grits), one 18" lamp, with two mounting buttons (to allow you to move it from left to right or add a second lamp or magnifier—see page 10), Spra-Mist coolant system, cab rest, one 5 ¹/₂" 14,000 grit Diamond Nova Disc, sample bottle Water Aid, four splash guards, and a manual. We also include Safety Goggles WHICH MUST BE WORN WHEN OPERATING THIS MACHINE.

100-GD-100 Genie.....115 volts, 60Hz motor ...Shp. Wt. 56 lbs.. 2225.00 100-GD-100X Export Model ...230 volts, 50Hz motor ...Shp. Wt. 56 lbs.. 2325.00



Jeweler's Buff Kit attaches to the right hand side of the Genie. Comes with buffs and rouge for polishing jewelry and other metal parts. See page 9.



Our "Boxer" attachment lets you make perfectly fitted mitered corners for gemstone boxes, or other projects requiring a mitered joint. See page 8.

The Genie is truly a "magic machine."

NOT ONLY DOES IT MAKE SHORT WORK of grinding and polishing gemstones, but with a few accessories added, it becomes a trim saw, jewelers buffer, flat lap machine, and a way to easily miter perfect corners for gemstone boxes. Put a Genie in your workshop and you'll work wonders!

THE GENIE GIVES TOP PERFOR-MANCE. First and foremost, the Genie will do your grinding and polishing jobs in the fastest and most efficient manner available. And do it in style. Its unique combination of special diamond wheels all mounted together lets you proceed directly from one step to the next without any delay or a lot of bother. Turn out a 30 x 40 agate cab from preform to finished gem in a matter of minutes.

See page 1 for more information about this Gem-Maker's performance.

GENIE IS VERSATILE. You get more than just a grinding machine. The attachments and accessories described below let you perform a variety of functions. For more information, see the pages listed.

• Trim saw attachment with 8" blade lets you convert your Genie to a trim saw in a matter of minutes. Now you can even take a trim saw along when you travel. Page 3.

- Regular flat laps and discs attach to the left end of the motor shaft, letting you grind and polish flats. See pages 16 &17.
- Now you can polish flats on the Lapcraft "No Hole" discs. They screw into the right hand wheel adaptor of the Genie, giving you a 6" diameter lap with no bothersome center hole. Listed on page 16.

• Our magnetic Nova Discs make quick work of polishing flats. See page 15 to find out more on the Magnetic Novas. Standard Nova Discs, leather and canvas pads and other accessories with a ¹/₄"-20 thread bolt fit the Genie. See page 18.

TRIM SAW ATTACHMENT FOR THE GENIE

Turn your Genie into a handy 8" trim saw in a matter of minutes. Easy installation—uses no oil.

EASY TO INSTALL AND USE: The Genie trim saw attachment is easy to install; requires no tools. Simply spin off the adaptor with the three Nova wheels on the right hand side of the machine. Place the saw pan under the shaft. Mount the saw blade on the adapter and spin it onto the right hand shaft. Slip the saw table and hood into place, fill the pan with five pints of water, and you are ready to go.

CLEAN TO USE: Since the saw uses water as a coolant, there is no oily mess or dangerous fumes. You can use the trim saw wherever you use your Genie.

SPECIAL FEATURE GIVES A HEAD START ON GRINDING: The unique angle block included with the trim saw allows you to finish-trim the edges of your cabs at a ten degree angle, giving you a head start towards grinding the bezel of your cab. Saves you time, effort and your grinding wheels as well.



COMES COMPLETE WITH BLADE: Your trim saw comes complete with a sintered continuous thin rim blade, size 8" x .032 x 1" bore. This is a good, all-purpose cutting blade. It is not recommended that blades that are much thicker or thinner than the .032 (rim thickness) blade supplied be used with this attachment. Thicker blades do not cut well with water as a coolant. Thinner blades need a higher RPM to "stiffen" them, and are more hazardous to use.

GENIE VIDEO GUIDE

For new owners of a Genie and old pros as well. This DVD contains a wealth of information about the use and care of the Genie Gem-Maker. Covers such subjects as machine setup, break-in and wheel replacement, pump trouble-shooting, maintenance, and the use of the Genie in the lapidary process. Professionally produced, informative and easy to follow. Contains over 80 minutes of useful technical information.

TRIM SAW ATTACHMENT: Comes with molded, durable plastic hood and pan, sintered continuous thin rim blade, size 8" x .032 x 1" bore, shaft adapter, angle block, sample bottle of Water Aid, splash guard, and SAFETY GOGGLES THAT MUST BE WORN WHEN OPERATING THIS TRIM SAW.

100-TSG-105 Trim Saw		
100-TSB-106 Blade Only		
410-WA-108 Water Aid	8 oz	
410-WA-116 Water Aid	16 oz	

JEWELRY FINDINGS KIT



Here's an assortment of jewelry findings to have handy when you make your first stones. You'll be able to have a finished piece of jewelry to show off your cabochons. Kit contains one belt buckle, two pendants, one bolo set: string, pair of tips, and bolo mounting. *Designs, colors, and sizes vary*, but bolo mounting and tips will be the same color—gold or silver. Mountings are gold or silver colored metal. *No choice in selections,* but kit is priced below standard retail prices.

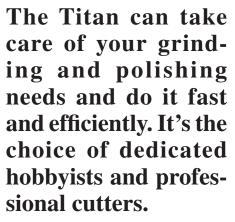
TITAN – THE RUGGED, HEAVY DUTY GEM-MAKER



THE TITAN COMES COMPLETE. Includes $\frac{3}{4}$ HP, 115/230V industrially rated motor on 16" x 42" laminated baseboard, double pump Spra-Mist coolant system, cast aluminum quick-change hoods and pans, one 80 grit and one 220 grit $7\frac{5}{8}$ " x $1\frac{1}{2}$ " Galaxy metal-bond diamond grinding wheel, four $7\frac{5}{8}$ " x 2" Nova resin-bond diamond sanding and polishing wheels (one each 280, 600, 1200 and 3,000 grit); one 24" flex stem lamp, one $5\frac{1}{2}$ " 14,000 grit Diamond Nova Disc, special disc geyser for laps, cab rest, set of two splash guards, sample bottle Water Aid, and a manual. We also include SAFETY GOGGLES WHICH MUST BE WORN WHEN OPERATING THIS MACHINE. Note: Titan comes with two mounting buttons to allow you to move lamp from right to left or add a second lamp or magnifier—see page 10 to order.

100-T-100 Titan 115/230V, 60Hz Shp.Wt. 151 lbs. 3740.00 100-T-100X Export Model230V, 50Hz Shp.Wt. 151 lbs. 4040.00

Shipped via UPS in 2 cartons. One weighs 94 lbs. and one weighs 57 lbs.



START WITH IT'S ALL-DIAMOND GRINDING AND POLISHING WHEELS. They are mounted together on the machine, allowing you to proceed from start to finish without wasting time changing wheels. The grit sequence is the best all-around choice for shaping and polishing most stones, and they'll make short work of the task. If you need special grits for your particular job, the wheels are easy to change.

If you need to polish flats, you can attach regular flat laps up to 6" in diameter to the left end using the special lap connector (shown in photo below). On the right hand side use Lapcraft "No Hole" diamond discs, Nova discs, our Magnetic Novas, or similar accessories having a 1/4"-20 thread bolt for attachment. A special geyser for use with the flat laps is included with the Titan.

If you need to polish metal, we've made up a Jeweler's Buff Kit for the Titan. See page 9 for more information on the kit.

See page 1 for more information about this Gem-Maker.



TITAN IS RUGGED. It features a big ³/₄ HP, 1800 RPM, 115/230V industrially rated motor that is sealed against grit contamination and never needs oiling. (Export motor is 1500 RPM, 230V/50Hz) It has a 1" diameter shaft that is even heavier through the bearings which have a 30 mm bore.

Shown at left is Titan's double pump Spra-Mist system that provides plenty of water to the wheels while you work, keeping your stones cool and the rock dust down. The hoods and pans are rugged, solid cast aluminum, yet are easily removed.



PIXIE – THE COMPLETE, PORTABLE GEM-MAKER Just because the Pixie is compact and lightweight doesn't mean it can't do a great job. It's fast and efficient at polishing stones, and is the Gem-Maker preferred by those working opal.



THE PIXIE COMES COMPLETE: Includes one piece housing on a $14^{1}/_{2}$ " x 18" laminated baseboard, motor, Spra-Mist coolant system, one 80 grit and one 220 grit 4" x $1^{1}/_{4}$ " Galaxy metal-bond diamond grinding wheel, four 4" x $1^{1}/_{4}$ " Nova resin-bond diamond sanding and polishing wheels (one each 280, 600, 1200, and 3,000 grit), one 15" flex stem lamp, one 4" 14,000 grit Diamond Nova Disc, handy cab rest, base for geyser, sample bottle of Water Aid, set of two splash guards, and a manual. We also include Safety Goggles WHICH MUST BE WORN WHEN OPERATING THIS MACHINE.

PIXIE TRIM SAW ATTACHMENT

Now you can trim small slabs on your Pixie Gem-Maker. You can cut up to a 5" square slab right in half. Easy to attach the trim saw parts by removing the right hand wheel adaptor, and then attaching the saw blade adaptor with blade. The saw table and blade guard are made of stainless steel for long life. Comes with a 6" x .020 sintered continuous rim blade with 5" arbor hole. You can use either a 1/2" or 5%" arbor hole blade by turning over the blade flange. Comes with saw table, blade guard, 6" blade, adaptor, flanges, and instructions. We also include Safety Goggles WHICH MUST BE WORN WHEN OPERATING THIS MACHINE

THE PIXIE has the same six-wheel sequence of diamond grinding and polishing wheels as the larger Gem-Makers, and provides you with a fast, efficient way to shape and polish stones. The Pixie is a great favorite of those who specialize in cutting opal.

FOR DOING SMALL FLATS, you can use Lapcraft's 4" "No Hole" diamond discs which fit the right hand side. You can also use 4" Nova discs, 4" canvas or leather pads, or any other attachment with a ¹/₄"-20 bolt and a diameter of 4" or less. You can turn your Pixie into a buffer for polishing metal with our jeweler's kit. See page 9.

THE PIXIE IS COMPACT, LIGHTWEIGHT. The Pixie features a durable, molded housing of G.E. Noryl[®] that makes the machine the most lightweight, compact and efficient 4" wheel, grinding and polishing machine available. It weighs less than 30 lbs. including the lamp, and fits on a Formica baseboard that measures only $14\frac{1}{2}$ " x 18". It requires no special hook-ups or plumbing, so it can easily be used in your RV or wherever space is limited and a standard 115V outlet is available.

TRIM SAW ATTACHMENT



Big Foot



Only 12" wide by 11" deep by $6\frac{1}{4}$ " high! Stores even smaller at 12"x $6\frac{1}{4}$ " x $6\frac{1}{4}$ ".



It wasn't easy to squeeze most of the capabilities of a Genie into a machine the size of a shoebox, but that's BigFoot!

BigFoot is designed to be more convenient in size and weight with only minor compromises in it's capacity to cut stones, and NO COMPROMISE at all in quality.

You can grind and polish calibrated cabochons up to 52×38 with ease, as well as larger stones of baroque shapes. You have plenty of room between the wheels for making crosses and hearts.

With the trim saw attachment, BigFoot can trim out your smaller slabs with ease. Takes only a minute to remove the right hand wheel adaptor and spin on the adaptor with the saw blade. And blade, adaptor, and saw table all fit into compartments of BigFoot for convenient storage and transport.

Check out these BigFoot features:

✓ Uses six 2 ³⁄₈" Galaxy and Nova Wheels in our standard sequence. You can grind and polish with ease using these diamond wheels

✓ Four wheels are mounted at once for wide (1 ⅓'') wheel spacing, with the rapid (no tools required) wheel change feature found on the Genie.

✓ Uses our standard Spra-Mist coolant system providing plenty of water to the wheels.

✓ Special pans for using Nova Discs on right side. 14,000 grit Nova disc now included. Additional grits of Nova discs on page 18.

✓ Has a variable speed control on a quiet, premium quality motor. You get plenty of power for the job.

✓ A halogen lamp is standard equipment, giving you plenty of light right on your work area.

Shown at left is the trim saw attachment in place. The saw blade is bolted to the wheel adaptor that is then screwed onto the wheel shaft. The saw table fits neatly in the water pan.

THE 2014 XPERT

Having eight wide spaced wheels all in a row and ready to go! That is the immediate appeal of the Xpert machine. But you'll also like such features as: The light weight welded aluminum construction, powder coating for lasting good looks, full length 1" stainless steel shaft in 1" bearings, Spra-mist coolant system (The same as used on the Genie), a hood that hinges upward for easy cleaning and change of wheels, and a handy tray on top for placing stones, also two lamps now come with the machine! And last but definitely not least—when your 6" wheels are worn out, and you think you might like an 8"machine, you've already got the machine! All you need is a set of 8" wheels! And that brings us to...



THE NEW X-88

Which is basically the same machine supplied with 8" wheels right from the start! Both the 2014 version of the Xpert and the X-88 come complete with eight wheels!

This makes possible the following very fast grit sequence which is now supplied as standard on the Xpert and X-88.

- ✔ 60 grit (Regular not Hex) Galaxy diamond wheel for fast shaping
- ✓ 120 grit Galaxy wheel Removes scratches or start here on soft stones
- ✓ 100 grit Nova diamond wheel Fast scratch removal & prep for 280
- ✓ 280 to 3,000 Nova four step well proven sequence
- ✓ Super Cerium Nova Brilliant polish without residue or mess

(Other grit sequences available as custom order)

THE XPERT COMES COMPLETE. Includes $\frac{1}{3}$ HP motor with built in overload protection. Standard motor is 115 volt/60 HZ. For use overseas order Export version with 230 volt/50 HZ motor. One inch diameter stainless steel arbor shaft. Two 6" x 1- $\frac{1}{2}$ " Galaxy diamond grinding wheels (60 and 120 grit), six 6" x 1- $\frac{1}{2}$ " Nova wheels (100, 280, 600, 1200 and 3000 grits), and a cerium wheel, two flex stem lamps, Spra-Mist coolant system, cab rest, 3 water trays, safety goggles.

THE X-88 ALSO COMES COMPLETE. Same criteria as the Xpert but instead of 6" wheels, **comes** with 8" wheels! Two 8" x $1-\frac{1}{2}$ " Galaxy diamond grinding wheels (60 and 120 grit), six 8" x 2" Nova wheels (100, 280, 600, 1200 and 3000 grits) & Cerium Wheel (A total of 8 wheels).

*Machines available Spring 2014 call 1-800-253-2954 for updated information.

THE BOXER

With the Boxer you can easily make gemstone boxes with perfect mitered joints

The mitered joints created by using the Boxer eliminate unsightly seams where sides are glued together. With mitered joints the seams become inconspicuous. Using the Boxer to hold a slab at an angle, ends can be quickly ground to an accurate 45° bevel using a diamond lap. Four such slabs will fit together to make the sides of a box up to 3" deep with no limit on length.

The Boxer can be used with a 6" "No-Hole" lap on the right side of a Genie or a standard 6" lap on the left side. The Pixie will require a 4" "No-Hole" lap, and a smaller plastic pan, which you may purchase from the supermarket. For use on the Titan you will need to purchase the "Boxer to Titan Adaptor" listed separately below, this will allow mounting on either the right or left side of the Titan with a maximum 6" lap size.

We recommend a 100 grit lap. Sanding and polishing may be done with Nova Discs or Magnetic laps. The Boxer is made of a combination of stainless steel and aluminum parts.

The Boxer mitered joint attachment 100-BOXER Shp wt. 5 lbs	159.00
The Boxer to Titan Adaptor 100-BOXER-TAShp wt. 2 ½ lbs	75.65

Slab Clamp **Base Clamp** Swing Arm Length Adjustment Base Screw

Figure 1

** IMPORTANT ** WEAR SAFETY GOGGLES WHEN USING THE BOXER

SHAFT ADAPTORS FOR GEM-MAKERS

These adaptors fit over the shafts of the Genie, Pixie, Big-Foot and Xpert. The adaptors all have a 1" OD to fit our Galaxy and Nova wheels. Order extra right hand adaptors for specialty wheels for easy change out of wheels while working. Both R/H adaptors have hole for accepting a $\frac{1}{4}$ "x 20 bolt in pads. The L/H Genie adaptor comes with lap connector nut.

101-ADP-GR	R/H Genie	8 oz	71.50
101-ADP-GL	L/H Genie	8 oz	82.50
101-ADP-PR	R/H Pixie	6 oz	
501-ADP-BFR	R/H BigFoot	6 oz	49.50
501-ADP-XR	R/H Xpert	8 oz	40.50

SPACERS FOR GEM MAKERS

101-PSP-1	. Pixie Spacer	1 oz	5.00
101-GSP- ³ / ₄	. Genie Spacer	1 oz	5.50
101-GSP-1- ³ /8	. Genie Spacer	1 oz	6.50
101-TSP-1- ³ / ₄	. Titan Spacer	5 oz	12.00

CUSTOM SPACERS (Fit Genie, Titan, Xpert)

101-GSP-1	1" wide spacer	1 oz	6.50
	⁵ / ₈ " wide spacer		
101-GSP- ¹ /2	¹ / ₂ " wide spacer	1 oz	6.50
101-GSP- ¹ /4	¹ /4" wide spacer	1 oz	6.50

GENIE WHEEL ADAPTOR KIT



Now you can enjoy the convenience of an extra adaptor for adding wheels to your Genie without having to figure out in advance which spacers you might need. This kit contains the extra Genie right hand adaptor and nut, plus seven extra spacers to accommodate any wheel combination. Contains the following spacers: two 1 3/8" wide, three 3/4" wide, one ⁵/s'', wide, and one ¹/4'' wide.

JEWELER'S BUFF KITS FOR GEM-MAKERS You can buff and polish jewelry on your Titan Each kit contains 1 muslin buff, 1 flannel buff, 1 bar of

You can buff and polish jewelry on your Titan and Pixie as well as on the Genie.

We've put together all the necessary adaptors, spacers, buffs and rouge you need to convert your Gem-Maker to a buffing machine without a lot of expense.



PIXIE BUFF KIT

Contains: 1- 4" muslin buff, 1- 4" flannel buff, 1 bar of Tripoli, 1 bar red jeweler's rouge, 1 R/H adaptor w/nut, one spacer.



GENIE BUFF KIT

Contains: 1- 6" muslin buff, 1- 6" flannel buff, 1 bar of Tripoli, 1 bar red jeweler's rouge, 1 R/H adaptor w/nut, 6 spacers.



Tripoli, one bar of Red Jeweler's Rouge, and the spacers

needed for mounting. The Genie and Pixie kits also contain

a right hand adaptor for mounting on a shaft. Wheels are

mounted directly onto the Titan shaft. The Genie Kit has 6"

buffs, Titan 8" buffs, and the Pixie Kit has 4" buffs.

TITAN BUFF KIT

Contains: 1- 8" muslin buff, 1- 8" flannel buff, 1 bar of Tripoli, 1bar red jeweler's rouge, 4 spacers. Buffs and spacers fit directly on Titan shaft.

100-JBK-T 4 lbs. 46.00

TAPERED SPINDLE

100-JBK-P......3 lbs.53.00

100-JBK-G......6 lbs. 109.00

*** For replacement buffs and rouge see page 82-83 ***

ADAPTOR

ADAPTOR FOR USING TAPERED SPINDLE ON GEM-MAKERS

This adaptor allows you to use a 3/8" R/H tapered spindle for attaching buffs to the right hand of the Genie, Pixie, BigFoot and Titan. You can then use buffs with standard pin hole centers on your Gem-Maker. (See page 83 for buffs.) The adaptor spins into the 1/4-20 adaptor hole on the right hand side of the machine to allow you to attach the spindle. Fits tapered spindle shown below.

TAPERED SPINDLE FOR GEM-MAKERS

Use with adaptor above to attach buffs with standard pin hole centers to your Gem-Maker.



This versatile guide has variable rock placement and adjustable rollers which allows small slabs to be cut with a small trim saw. Marked in $\frac{1}{4}$ " increments.

This guide works on our Genie Trim Saw Attachment, Wizard Trim Saw, and the New Xpert Trim Saw Attachment .

We recommend Super T brand cyanoacrylate adhesive and Super Solvent for use with this product. (Adhesive and solvent not included - See catalog page 93 to purchase)

605-2013 Dop Style Slabbing Guide.. Shp.Wt. 2 lbs. 125.00

Shown on Genie: adaptor, tapered spindle and buff.



FLEX-STEM LAMPS FOR MACHINES, WORKSHOP, HOME, DISPLAYS

Moffatt Flex-Stem lamps adjust to any position. A quickcoupling base allows the lamp to be removed for storage or attachment to another area. Lamps come in several stem lengths, making them adaptable for use in many places about the shop and home. Flex-stem magnifiers below are interchangeable with lamps on our machines. Mounting base not included. See below to order. All take 100 watt bulb, maximum. Bulb not included. White shades only.

117-0624-T	24", fits Titan	3 lbs	62.76
117-0618-G	18", fits Genie	3 lbs	57.96
117-0615-P	15", fits Pixie	3 lbs	55.02
117-0636 .	36", lamp	4 lbs	75.26

MAGNIFIER-SHADE MOUNTED

Fits lamps above, giving you a handy way to get an illuminated look at what you're doing. (Only fits current toggle switch lamps.) Measures 4" x 2" and attaches to lamp shade. Swivels out of the way. Dust cover included. Black only.

FLEX STEM MAGNIFIER

This handy, single lens, two power magnifier can be bent to any position, leaving hands free to examine work piece. Attach to any flat surface such as workbench, table, or separate base-board. Quickcoupling attachment enables magnifier to be detached from base. See below to order base.

117-MV15 Magnifier, 15" stem	2 lbs	
117-MV24 Magnifier, 24" stem		
117-RIM Magnifier Rim		8.86
117-RCS Connector latch		3.95

MOUNTING BASES

Fits flex-stem lamps & magnifiers listed above. Standard base attaches to almost any flat surface that will take screws. Order extra bases for mounting in different locations so lamp can be moved from one area to another.

Standard coupler base - fits all lamps and magnifiers.

117-MS2		5.25
Threaded Stem Coupler Base, ³ / ₈ -	16 (fits Pixie or 2	Xpert machines)
117-MS1		5.25
Magnetic base - use on metal s	urface has 100 I	Lb. pull on solid
steel surfaces.		
117-MB		16.90
C-Clamp base - has 21/2" deep thr	oat.	
117-MLCC	1 lb	

LAMP SWITCHES

Lamp Switch, Toggle (fits current Mo	offatt lamps)	
117-SKT	2 oz	8.14
Lamp Switch, Rotary (fits older Mof	fatt lamps)	
117-SKR	2 oz	15.75



SPARE PARTS FOR GEM-MAKERS

When ordering any of the items below, please state catalog number and year and model of your machine, or give a brief description of your machine so that we can send the proper part.

ITEM	PIXIE		GENIE			TITAN			
	Order #	Price	Wt	Order #	Price	Wt	Order #	Price	Wt
Baseboard, Standard	101-PBB-126	37.50	6 lbs.	101-GBB-126	47.20	9 lbs.			
Baseboard Plywood	101-PBB-130	58.50	5lbs.	101-GBB-130	89.50	7 lbs.	101-TBB-126	170.00	17 lbs
Bearings	101-GBE-148	12.75	4 ozs.	101-GBE-148	12.75	4 ozs.	101-TBE-148	27.50	4 ozs.
Belt, plastic pumps	101-PPB-150	17.50	2 ozs.	101-GPB-150	17.50	2 ozs.	101-TPB-193	17.50	2 ozs.
Belt, motor	101-PPB-150	17.50	2 ozs.			0			
Cab Rest, Gem Makers	101-CRP	23.90	6 oz	101-CRG	23.90	6 oz	101-CRT	30.00	2 lbs
Capacitor, 115V	101-PCA-65 Before 4/2003	14.20	5 ozs.	101-GCA-65	35.00	5 ozs.	101-TCA-65	35.00	5 ozs.
Capacitor 230V				101-GCA-75	35.00	5 ozs.	101-TCA-75	35.00	5 ozs.
Geysers for Gem-Makers	101-GSG-25	39.75	4 ozs.	101-GSG-25	39.75	4 ozs.	101-TSG-25	48.75	8 ozs.
Geyser Base/Disc Geyser	101-BASE	3.75	2 ozs.	101-BASE	3.75	2 ozs.	101-TDG-25	42.95	12 ozs.
Hood, RH or LH, state which	101-PHO	240.00	6 lbs.	101-GHO-128	80.00	2 lbs.	101-THO-128	290.00	13 lbs.
Hood Bracket, RH or LH, state which				101-GHO-129	67.00	2 lbs			
Lap Connector w/screw				101-G-LAP	25.00	5 ozs.	101-T-LAP	39.50	4 ozs.
Leathers, pump set	101-GPL-145	5.00	1 oz.	101-GPL-145	5.00	1 oz.	101-TPL-245	10.00	1 oz.
Motor, 115V	101-PMO-125	307.00	6 lbs.	101-GMO-125	450.00	26 lbs	101-TMO-125	925.00	59 lbs.
Motor, 230V	101-PMO-125X	317.00	6 lbs.	101-GMO-125X	550.00	26 lbs	101-TMO-125X	1,025.00	59 lbs.
Pan	101-PPA-130	40.00	2 lbs.	101-GPA-130	35.00	1 lb.	101-TPA-130	280.00	10 lb.
Pump replacement	101-P-PUMP	145.00	1 lb.	101-G-PUMP	145.00	1 lb.	101-T-PUMP-B	345.00	1 lb.
Splash Guards, Set	101-PUO-105	12.00	5 ozs	101-GUO-105	25.00	8 oz	101-TUO-105	15.00	5 oz
Tubing, geyser, ft.	101-AHS-138	2.75	1 oz.	101-AHS-138	2.75	1 oz.	101-AHT-141	3 .75	1 oz.

	PUMP MAINTENANCE KITS								
*Pump Maintenance Kits	101-PMK	01-PMK 43.00 6 ozs 101-GMK 36.75 6 ozs 101-TTK 58.25 6 ozs				6 ozs			
* Kits include pump leathers, gasket, tubing for geysers and pump belts - all that is needed for each particular pump. Pixie kit and Titan Twin Pump kits have two belts. Genie kit one.									
BigFoot Pump Maint Kit	501-BMK	42.50	6 ozs Includes two belts						
Belt, Titan Metal Pump	For Titan Single	For Titan Single Metal Pump 1978-1992 101-PPB-150 17.50 2 of				2 ozs			
Leathers, Titan Metal Pump	For Titan Single	For Titan Single Metal Pump 1978-1992101-TPL-1457.50			1 oz				
For parts to our Gem-Ma For International assistar									stance.

GALAXY DIAMOND GRINDING WHEELS Take the "grind" out of grinding stones.

OUR GALAXY DIAMOND GRINDING WHEELS give you the fast, cool cutting efficiency of diamonds, plus a smooth, true-running surface that never needs dressing.

Galaxy Wheels give you lasting service because of their quality construction. The diamonds are held on a heavy steel ring by an extremely hard, nickel alloy plating for durability. The ring is mounted on a tough glass-filled polyester core, making Galaxies a smooth, quiet running wheel.

GALAXY DIAMOND WHEELS are clean to use. Because the wheels themselves don't wear away as silicon carbide wheels do, you don't get all the mess. Galaxy Wheels must be used with water, but you only need a small amount to keep the wheels and stone wet and cool, and to keep down the rock dust.

Galaxy Wheels have 1" arbor holes. To use on other size arbors order bushings listed at right.

Both our standard and carving wheels give you a wide choice of grit and wheel sizes to fit your needs. The diamond shaped, interrupted pattern of the Hex Wheels (one shown above on the left) in 80, 60, and 30 grit sizes makes them the coarsest, fastest grinding wheels available.





BUSHINGS FOR WHEELS

These bushings fit arbor sizes 1'', 3/4'', 5/8'', and 1/2''. Come in two widths to fit the various Nova and Galaxy Wheels.

TO ORDER FOR GALAXY WHEELS: The two, four, and six inch Galaxy Wheels take one 1" bushing. The $7\frac{5}{8}$ " Galaxy Wheels take two $\frac{3}{4}$ " bushings.

TO ORDER FOR NOVA WHEELS: The two and four inch diameter Nova Wheels take one 1" bushing. The six inch diameter Nova Wheels take two $\frac{3}{4}$ " bushings, and the $7\frac{5}{8}$ " Nova Wheels take two 1" bushings.

	PRICE LIST FOR STANDARD GALAXY WHEELS							
Grit Size	23/8"	x 11/8"	4" x 1¼"		6" x 1½"		7 ⁵ /8" x 1 ¹ /2"	
	Order#	Price	Order#	Price	Order#	Price	Order#	Price
Fine 600	100-M2-06F	85.00	100-M4-06F	110.00	100-M6-06F	140.00	100-M8-06F	180.00
Fine 360	100-M2-36	85.00	100-M4-36	110.00	100-M6-36	140.00	100-M8-36	180.00
Fine 220	100-M2-22	85.00	100-M4-22	110.00	100-M6-22	140.00	100-M8-22	180.00
Med Fine 180	100-M2-18	90.00	100-M4-18	120.00	100-M6-18	155.00	100-M8-18	200.00
Med Fine 120	100-M2-12	95.00	100-M4-12	130.00	100-M6-12	170.00	100-M8-12	220.00
Coarse 100	100-M2-10	100.00	100-M4-10	140.00	100-M6-10	185.00	100-M8-10	240.00
Coarse 80	100-M2-80	105.00	100-M4-80	150.00	100-M6-80	200.00	100-M8-80	260.00
Coarse 60	100-M2-60	110.00	100-M4-60	160.00	100-M6-60	215.00	100-M8-60	280.00
Rough 80 Hex	100-M2-80H	150.00	100-M4-80H	220.00	100-M6-80H	280.00	100-M8-80H	360.00
Rough 60 Hex	100-M2-60H	180.00	100-M4-60H	270.00	100-M6-60H	340.00	100-M8-60H	440.00
Rough 30 Hex	100-M2-30H	240.00	100-M4-30H	350.00	100-M6-30H	450.00	100-M8-30H	580.00
	SHIPPING WEIGHTS FOR ALL GALAXY WHEELS							
1 Wheel	1	lb	2	lbs	3	lbs	5	lbs

GALAXY WHEELS FOR CARVING Our Galaxy carving wheels have special shapes and sizes for helping the sculptor grind those difficult grooves and curves in stone.



USE THESE ROUNDED-FACED CARVING WHEELS when doing carving, intarsia, channel work, stained glass and other applications that require curved edges. Use the ¹/₄" and ¹/₂" widths for narrow grooves and the 1" wide for larger ones. Four wheel diameters increase your choices.

All Galaxy carving wheels can be used on the Titan. All but the 8" wheels can be used on the Genie. Only the two and four inch wheels can be used on the Pixie. These wheels can also be used on most other grinding machines that have standard arbors.

Galaxy Wheels have 1" arbor holes. To order bushings, see page 12. The four and six inch diameter wheels take one 1" bushing. The two inch wheel takes one $\frac{3}{4}$ " bushing and the $7\frac{5}{8}$ " inch wheel takes two $\frac{3}{4}$ " bushings.

8

ORDERING EXTRA SPACERS FOR MOUNTING CARVERS. You may need to know hub widths to order extra spacers to mount your carvers. Hub width for all 2" dia. carvers is ³/₄"; for 4" dia. is 1¹/₄"; for 6" dia. is 1"; and for 8" dia. is 1¹/₂". To order extra spacers, see page 8

	CONVEX CARVER WHEELS						
Grit	Wheel	¹ ⁄4'' Wide	Wheel	¹ /2" Wide	Wheel	1" Wide Wheel	
Size	Dia.	Order#	Price	Order#	Price	Order#	Price
600	2"	100-MC2-46	80.00	100-MC2-26	85.00	N/A	-
360	2"	100-MC2-43	80.00	100-MC2-23	85.00	N/A	-
220	2"	100-MC2-42	80.00	100-MC2-22	85.00	N/A	-
100	2"	100-MC2-41	95.00	100-MC2-21	100.00	N/A	-
600	4"	100-MC4-46	105.00	100-MC4-26	110.00	100-MC4-16	120.00
360	4"	100-MC4-43	105.00	100-MC4-23	110.00	100-MC4-13	120.00
220	4"	100-MC4-42	105.00	100-MC4-22	110.00	100-MC4-12	120.00
100	4"	100-MC4-41	135.00	100-MC4-21	140.00	100-MC4-11	150.00
600	6"	100-MC6-46	135.00	100-MC6-26	140.00	100-MC6-16	150.00
360	6"	100-MC6-43	135.00	100-MC6-23	140.00	100-MC6-13	150.00
220	6"	100-MC6-42	135.00	100-MC6-22	140.00	100-MC6-12	150.00
100	6"	100-MC6-41	180.00	100-MC6-21	185.00	100-MC6-11	195.00
600	8"	100-MC8-46	175.00	100-MC8-26	180.00	100-MC8-16	190.00
360	8"	100-MC8-43	175.00	100-MC8-23	180.00	100-MC8-13	190.00
220	8"	100-MC8-42	175.00	100-MC8-22	180.00	100-MC8-12	190.00
100	8"	100-MC8-41	235.00	100-MC8-21	240.00	100-MC8-11	250.00



Caution: Wear Safety Goggles

when using any Galaxy Wheel.

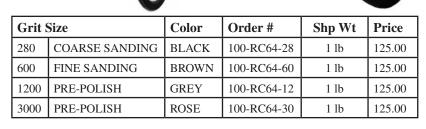
USE EXTRA ADAPTORS FOR MOUNTING CARVING WHEELS

Genie owners can obtain maximum convenience by mounting the special carving wheels on a separate right hand adaptor. This eliminates the need of taking the Nova Wheels off their right hand adaptor and putting on the carving wheels each time. Pixie owners can use an extra right hand adaptor (which holds the far right hand Nova Wheel) for the same purpose. Wheels on the Titan fit directly on the shaft. Call us to determine your particular need.

INTRODUCING OUR NEW NOVA CARVERS

These wheels are 6" x $\frac{1}{4}$ " wide and come in our four most popular grit sizes. Excellent for finishing work after using the Galaxy carving wheels. Nova Carvers can be used on the Genie or Titan and most other grinding machines that have standard arbors. Nova Carvers have a 1" arbor hole. Hub width is $\frac{1}{4}$ ". Extra spacers may be needed when mounting these wheels, see page 8 to order. Genie owners can obtain maximum convenience by mounting the Nova Carvers on a separate right hand adaptor. This eliminates the need to take the regular Nova Wheels off the adaptor each time you wish to use the Nova Carvers. (See page 8) Nova Carvers will fit directly onto the Titan shaft.





6" x ¹/4" wide

NOVA CARVERS

NOVA RESIN-BOND DIAMOND SANDING AND POLISHING WHEELS

Nova Wheels get results fast. The diamonds are embedded within a tough, flexible plastic resin and backed by soft, thick rubber. This soft, flexible construction enables the surface of the Nova Wheel to conform to your stones, eliminating flat spots and scratches.

We recommend that Novas be used in sets rather than in combination with other types of sanding and polishing wheels. Our all-purpose sequence is the 280, 600, 1200, and 3,000 grit wheels, followed by the use of a 14,000 Nova disc. This combination will put an excellent polish on most stones. Some hard-to-polish material may require more steps, such as additional grit Nova Wheels or discs.

Nova Wheels have a 1" arbor hole. To use on other size arbors order bushings shown on page 12.



NOVA WHEELS MUST BE USED WITH WATER AS A COOLANT.

	STANDARD NOVA WHEELS									
	Grit Size	Wheel	2 ³ /8" x 1 ¹ /8"	Wheel	4'' x 1 ¹ ⁄4'' W	Vheel	6'' x 1 ¹ ⁄2'' Wheel		7 ⁵ /8'' x 2'' Wheel	
	GIII Size	Color	Order #	Price	Order #	Price	Order #	Price	Order #	Price
60	COARSE SANDING	GREEN	100-RW2-70	60.00	100-RW4-70	87.00	100-RW6-70	130.00	100-RW8-70	215.00
100	MEDIUM SANDING	LT GREEN	110-RW2-11	60.00	100-RW4-11	87.00	100-RW6-11	130.00	100-RW8-11	215.00
140	MEDIUM SANDING	RUST	100-RW2-15	60.00	100-RW4-15	87.00	100-RW6-15	130.00	100-RW8-15	215.00
280	FINE SANDING	BLACK	100-RW2-28	60.00	100-RW4-28	87.00	100-RW6-28	130.00	100-RW8-28	215.00
600	FINE SANDING	BROWN	100-RW2-60	60.00	100-RW4-60	87.00	100-RW6-60	130.00	100-RW8-60	215.00
1200	PRE-POLISH	GREY	100-RW2-12	60.00	100-RW4-12	87.00	100-RW6-12	130.00	100-RW8-12	215.00
3000	PRE-POLISH	ROSE	100-RW2-30	60.00	100-RW4-30	87.00	100-RW6-30	130.00	100-RW8-30	215.00
8000	PRE-POLISH	TAN	100-RW2-80	60.00	100-RW4-80	87.00	100-RW6-80	130.00	100-RW8-80	215.00
14,000	POLISH	CREAM	100-RW2-14	60.00	100-RW4-14	87.00	100-RW6-14	130.00	100-RW8-14	215.00
50,000	POLISH	LT BLUE	100-RW2-50	60.00	100-RW4-50	87.00	100-RW6-50	130.00	100-RW8-50	215.00
Shp. wt.	- 1 item		1 lb		1 lb		2 lbs.		2 lbs.	



NEW POLISHING WHEELS

Now you can use your favorite polishing compound in a much cleaner and neater way! These wheels eliminate the mess of loose powder and will not leave polishing residue in the pits or crystal pockets of your stones! Use these new polishing wheels to give your stones a super fine polish!

NEW POLISHING WHEELS									
Туре	2 ³ /8'' x 1	2 ³ / ₈ " x 1 ¹ / ₈ "Wheel		4'' x 1 ¹ /4'' Wheel		6" x 1 ¹ /2" Wheel		7 ⁵ /8'' x 2'' Wheel	
Турс	Order #	Price	Order #	Price	Order #	Price	Order #	Price	
Cerium	100-RW2-C	42.00	100-RW4-C	60.90	100-RW6-C	91.00	100-RW8-C	150.50	
Aluminum	100-RW2-A	42.00	100-RW4-A	60.90	100-RW6-A	91.00	100-RW8-A	150.50	
Tin	100-RW2-T	42.00	100-RW4-T	60.90	100-RW6-T	91.00	100-RW8-T	150.50	
Shp Wt -1 item	11	lb.	11	b.	2 11	os.	2 lt	9 8.	

MAGNETIC NOVA LAPS FOR LAPPING

Our Magnetic Nova Laps give you the fast polishing performance of Novas combined with the convenience of an easy on-off magnetic lap. They attach right onto most flat laps and are easily removed.

Magnetic Nova Laps have a ¹/₁₆" thick backing of solid rubber containing magnetized iron particles so the laps will adhere to a cast iron, steel or nickel plated lap. The rubber is coated with a thick layer of our special Nova resin-bond diamond formula for fast action and lasting service. The surface of the Magnetic Nova is made with a grid pattern for better performance.

You can use the Magnetic Novas on your present flat lap setup in most cases, but they will not work on aluminum or diamond coated discs. If your lap set-up will accommodate an attachment using a $\frac{1}{4}$ "-20 bolt (such as on the Genie, Titan and Pixie), then you can use one of the special back plates listed below on the right. These steel faced back plates along with the Magnetic Novas will give you a non-interrupted polishing surface for maximum efficiency.

Our recommended general purpose grit sequence for sanding and polishing most flats is to use Magnetic Nova Laps in 30, 60, 280, 600 and 1200 grits, followed by our Super Premium Cerium Oxide Polish on a felt pad. For deep saw marks you may add a coarse Diamond Plated Disc. Other sequences may be used with excellent results depending on the material to be polished.

Shown at right is a Genie with a 6" steel faced back plate attached to the right hand wheel adaptor of the machine. Magnetic Novas (6" size shown lying on machine pan) can be used on the steel-faced back plate, and are easily attached and removed from the plate.

	MAGNETIC NOVA LAPS					
Grit	4" Laps: 26.00 ea.	6''Laps: 52.00 ea.	8'' Laps: 84.00 ea			
Size	Order #	Order #	Order #			
30	100-RM04-35	100-RM06-35	100-RM08-35			
60	100-RM04-70	100-RM06-70	100-RM08-70			
140	100-RM04-15	100-RM06-15	100-RM08-15			
280	100-RM04-28	100-RM06-28	100-RM08-28			
600	100-RM04-60	100-RM06-60	100-RM08-60			
1200	100-RM04-12	100-RM06-12	100-RM08-12			
3000	100-RM04-30	100-RM06-30	100-RM08-30			
8000	100-RM04-80	100-RM06-80	100-RM08-80			
14,000	100-RM04-14	100-RM06-14	100-RM08-14			
50,000	100-RM04-50	100-RM06-50	100-RM08-50			
Shp. wt.	1 lb.	1 lb.	1 lb.			

(For larger size Nova laps see page 78).





BACK PLATES FOR MAGNETIC LAPS

These back plates offer a full surface area without the usual center hole. They are similar to the "No-Hole" diamond laps with a ¼"-20 thread bolt for attaching to the Pixie, Genie, Xpert and Titan or other machines accepting that size bolt accessory.

Face or entire plate made of steel for use with 4", 6" and 8" Magnetic Novas (at left), 8" Magnetic Plated Discs (see page 79). Shown above is the back side of a back plate demonstrating the $\frac{1}{4}$ "-20 bolt attachment.

Order #	Item	Shp. wt.	Price
106-14434	4" Back Plate	1 lb.	50.00
106-14432	6" Back Plate	2 lbs.	60.00
106-14433	8" Back Plate	2 lbs.	70.00

PRE-CHARGED DIAMOND LAPPING DISCS STANDARD DIAMOND DISCS "NO HOLE" DIAMOND DISCS

Lapcraft's STANDARD DIAMOND DISCS are designed expressly for the lapidary field and are available in a variety of diameters and mesh sizes. They are made with high quality man-made diamond using single, whole crystals. The diamond is bonded to a solid base that is ground flat and parallel to exacting specifications. Made in USA.

Lapcraft Standard Diamond Discs come with standard ¹/₂"arbor hole. Special arbor sizes available on request.

Lapcraft's NO HOLE DIAMOND DISCS offer a full face, flat grinding surface without the usual center hole obstruction. Diamond covers the entire work surface. On the back of the disc is a ¹/₄"-20 machine screw for screwing into the end of any arbor with the same internal thread. Made in USA.

CAUTION: wear Safety Goggles when using these discs.



FOR STANDARD AND "NO HOLE" DISCS

80, 100 EXTRA COARSE: For fast grinding and shaping.
180 COARSE: Fast performing and light cab roughing.
260 MEDIUM: General preforming and opal cab roughing.
360, 600 FINE: Light preforming and cab finish grinding.
1200 EXTRA FINE: General prepolishing finish.
1500, 1800 SUPER FINE: Dead-smooth prepolish.
3000 SUPER FINE: Super smooth prepolish.
8000 ULTRA FINE: For special finishes.

	STAN	DARD DIA	AMOND DIS	CS	"NO HO	OLE" DIA	MOND DI	SCS
Grit	6''		8''		4	**	6''	
Size	Order #	Price	Order #	Price	Order #	Price	Order #	Price
80	106-6102	155.00	106-6104	225.00	106-4100	95.00	106-4225	155.00
100	106-4019	137.00	106-4028	200.00	106-4101	80.00	106-4226	135.00
180	106-4020	106.00	106-4029	133.00	106-4102	73.00	106-4227	110.00
260	106-4021	97.00	106-4030	115.00	106-4103	62.00	106-4228	100.00
360	106-4022	91.00	106-4031	110.00	106-4104	60.00	106-4229	95.00
600	106-4023	80.00	106-4032	100.00	106-4105	58.00	106-4230	85.00
1200	106-4024	91.00	106-4033	110.00	106-4106	58.00	106-4231	90.00
1500	106-4025	91.00	106-4034	110.00	106-4107	58.00	106-4232	90.00
1800	106-4026	91.00	106-4035	110.00	106-4108	58.00	106-4233	90.00
3000	106-4027	105.00	106-4036	140.00	106-4109	65.00	106-4234	95.00
8000	106-4037	105.00	106-4038	140.00	106-4110	65.00	106-4235	95.00
Ship.Wt. Ea.	1 LB		2 LBS.		1 LB		1 LB	

DIAMOND DURA-DISCS UNCHARGED LAPS

Dura-Discs give you the efficiency of a diamond lap for finishing flat surfaces at an economical price.

Dura-Discs come in a variety of grit sizes, allowing you to process most stones through the coarse and fine sanding processes.

Dura-Discs are precision ground,1mm thick steel discs heavily plated with diamond for fast cutting and long life. Use them with worn out standard laps as backplates, or with the Master Lap sold below. Dura-Discs have a $\frac{1}{2}$ " center hole that allows them to be securely fastened to the back-plate.

	DIAMOND DURA-DISCS						
Grit	6''		8''				
Size	Order #	Price	Order #	Price			
60	700-72-06-0060	120.00	700-72-08-0060	168.00			
100	700-72-06-0100	88.00	700-72-08-0100	120.00			
180	700-72-06-0180	65.00	700-72-08-0180	85.00			
260	700-72-06-0260	57.00	700-72-08-0260	80.00			
320	700-72-06-0320	49.00	700-72-08-0320	70.00			
600	700-72-06-0600	45.00	700-72-08-0600	64.00			
1200	700-72-06-1200	42.00	700-72-08-1200	60.00			
1500	700-72-06-1500	42.00	700-72-08-1500	60.00			
Shp. Wt.	1 lb.		2 lbs.				

MASTER LAP

SAFETY FIRST—WEAR YOUR GOGGLES

Wear Safety Goggles when using any of the discs & laps on this and the opposite page.

We offer a variety of laps designed to be charged by the craftsman with his or her personal preference of diamond abrasive or other conventional abrasives. See pages 19-20 for abrasives.



FINALAP

A unique polishing lap that gives a brilliant polish on a variety of stones such as quartz, corundum, beryl, peridot, etc. The FINALAP is designed to be charged with diamond slurry. Has a dense metallized resin surface which resists grooving and gouging. It readily accepts a diamond charge and requires no break-in time.

105-4523	6" lap	1 lb	105.00
105-4524	8" lap	2 lbs	125.00

DIAMOND SLURRY

TIN LAP

Excellent lap for use with cerium oxide or tin oxide as a final polish. Precision surfaced. Comes with $\frac{1}{2}$ " arbor hole.

105-4505	6" lap	1 lb	135.00
105-4506	8" lap	2 lbs	205.00

COPPER LAP

Can be charged with a variet	ty of abrasives	sincluding
diamond. Precision surfaced	. Standard 1/2"	arbor hole.
105-4509 6" lap	1 lb	86.00
105-4510 8" lap	2 lbs	115.00

18 PADS, POLISHING

STANDARD NOVA RESIN-BOND DISCS



Nova Discs are ideal for polishing backs of cabs, nodules, geode faces, and similar flats as well as for sanding and polishing cabs. They have a soft, rubber backing and are slightly convex (domed) so that under pressure of your stone, they provide an even polishing surface in the middle area often missed with other methods. A standard ¹/₄"-20 thread bolt is molded into their plastic back-up plate to fit our Gem-Makers and most other machines accepting that size bolt. See below right to order an adaptor to fit your machine if it is not one of our Gem-Makers.

The 4" Nova Disc is recommended for the BigFoot and Pixie, and the $5\frac{1}{2}$ " is used on the Genie, Xpert and Titan.

Nova Discs must be used with water.

STANDARD NOVA DISCS				
Grit	4''	Disc	5 ¹ /2" Disc	
Size	Order#	Price	Order#	Price
280	100-RD4-28	45.00	100-RD5-28	77.50
600	100-RD4-60	45.00	100-RD5-60	77.50
1200	100-RD4-12	45.00	100-RD5-12	77.50
3000	100-RD4-30	45.00	100-RD5-30	77.50
8000	100-RD4-80	45.00	100-RD5-80	77.50
14000	100-RD4-14	45.00	100-RD5-14	77.50
50,000	100-RD4-50	45.00	100-RD5-50	77.50
Shp. wt 1 item 1 lb. 1 lb.				



Pads below have a rigid plastic back plate with $\frac{1}{4}$ "-20 thread bolt that will fit the BigFoot and Pixie (4 inch), Genie, Xpert and Titan (5 $\frac{1}{2}$ inch), and other machines designed for such attachments. All pads have a $\frac{1}{4}$ " thick foam rubber backing so they will conform to the shape of your stone.

Canvas, leather and felt pads may be used with diamond compound, or other polishes (see pages 19-20). Leather pads come either smooth or rough side up. When using diamond compound, use a silicone lubricant, such as our Gem-Lube (see page 20). Shipping Weight: 5 ozs.

Tuno	4 Inch	ch 5½ Inch		h
Туре	Order #	Price	Order #	Price
Canvas	100-PAD-4CU	8.50	100-PAD-5CU	11.50
Leather, rough	100-PAD-4LR	9.75	100-PAD-5LR	15.95
Leather, smooth	100-PAD-4LS	9.75	100-PAD-5LS	15.95
Felt	100-PAD-4F	9.75	100-PAD-5F	15.95

SHAFT ADAPTORS FOR ARBORS

These adaptors fit shafts of other machines for using laps, pads with $\frac{1}{4}$ "x 20 thread bolts. Have plain bore with set screws. The $\frac{3}{4}$ " size also accepts laps with $\frac{1}{2}$ " center hole. Arbor sizes listed below.

106-AD-1411 ¹ /2"	arbor	. 6 oz	9.00
106-AD-1412 ³ /8"	arbor	. 6 oz	9.00
106-AD-1413 ⁵ /16	" arbor	. 6 oz	9.00
106-AD-1414 ¹ /4"	arbor	. 6 oz	9.00
106-AD-1415 ⁵ /8"	arbor	. 6 oz	9.00
106-AD-1416 ³ /4"	arbor	. 6 oz	9.00

FELT DISCS Diam These unbacked discs are ¼" durable wool felt. Felt discs may be glued to back plates or used in other applications. Polishing compounds will adhere well to the surface of this product. 0 6" 0

	Unbacked		
Diameter	Order #	Price	Shp Wt
4"	100-PAD-U-04F	2.50	1 oz.
6"	100-PAD-U-06F	6.30	2 oz.
8"	100-PAD-U-08F	8.85	4 oz.

DIAMOND COMPOUND

Our diamond compound is composed of top quality, closely graded diamond particles suspended in a water-based carrier.

Use on pads, discs, or buffs. Color coded for easy identification when using. Packaged in convenient, disposable, plastic syringes. Use with Gem Lube or Microsol lubricant. (see page 20) Weight:2 oz per syringe



DIAMOND SPRAY

Lapcraft diamond spray comes in a convenient non-aerosol pump spray bottle. The diamond is suspended in a hightech vehicle packed with 1 full carat of precisely graded diamond powder. This packaging produces the uniformity of particle dispersion needed to make diamond abrasives most effective without a limited shelf life. Shipping weight: 3 oz.

Size		2 Gram Syringe		5 Gram Syringe	
Mesh	Micron	Order #	Price	Order #	Price
100,000	0-1/2	340-C100-2	5.00	340-C100-5	10.00
50,000	0-1	340-C500-2	5.00	340-C500-5	10.00
14,000	0-2	340-C140-2	5.00	340-C140-5	10.00
8,000	2-4	340-C800-2	5.00	340-C800-5	10.00
3,000	4-8	340-C300-2	5.00	340-C300-5	10.00
1,200	10-20	340-C120-2	5.00	340-C120-5	10.00
600	20-40	340-C600-2	5.00	340-C600-5	10.00
325	54-80	340-C325-2	5.00	340-C325-5	10.00
260	80-100	340-C260-2	5.00	340-C260-5	10.00

DIAMOND POLISHING COMPOUND



DIAMOND SPRAY				
Mesh	Micron	Order #	Price	
100,000	0-1/2	106-6050	15.00	
50,000	0-1	106-6051	15.00	
14,000	0-2	106-6052	15.00	
8,000	2-4	106-6053	15.00	
3,000	4-8	106-6054	15.00	
1,200	10-20	106-6056	15.00	
600	20-40	106-6057	15.00	
325	54-80	106-6049	15.00	

DIAMOND POWDER Size **5** Carat Vials **25** Carat vials Mesh Micron Order # Order # Price Price 100,000 340-P10-05 7.50 340-P10-25 $0 - \frac{1}{2}$ 25.00 50.000 0-1 340-P50-05 7.50 340-P50-25 25.00 14.000 0-2 340-P14-05 7.50 340-P14-25 25.00 8.000 2-4 7.50 340-P80-05 340-P80-25 25.00 3.000 4-8 340-P30-05 7.50 340-P30-25 25.00 1.200 10-20 340-P12-05 7.50 340-P12-25 25.00 20-40 600 340-P60-05 7.50 340-P60-25 25.00 325 54-80 340-P32-05 7.50 340-P32-25 25.00 80-100 260 340-P26-05 7.50 340-P26-25 25.00 180 340-P18-05 7.50 NA 340-P18-25 25.00 100 340-P00-05 7.50 340-P00-25 25.00 NA 80 340-P08-05 7.50 340-P08-25 25.00 NA 60 340-P06-05 7.50 340-P06-25 NA 25.00

DIAMOND POWDER

This fine quality micron diamond powder has been carefully graded to give you blocky crystals. Use for charging laps, polishing pads—wherever you need a high quality diamond abrasive for polishing stones. Weight: vial: 2 oz

DIAMOND "SUPER POLISH"

Super Polish is an extremely concentrated diamond compound, a little bit goes a long way. You can use it on all stones and most metals, especially high karat gold alloys. Very good on Jade or Opal. Can be applied directly to work piece or to felt, leather, wood, cork, canvas pads, or a brush. No coolant required. Clean up with soap and water. Comes in 3 gram vial or 3 gram stick form. Shp. Wt. each 8 oz.

	DIAMOND SUPER POLISH					
Grit	Color	Vial	Stick	Price		
1200	Blue	400-SP-012	400-SPS-012	25.00		
2000	Green	400-SP-020	400-SPS-020	25.00		
14,000	Yellow	400-SP-140	400-SPS-140	25.00		

GEM-LUBE

Use this silicone extender fluid with diamond compound on canvas and leather polishing pads, phenolic laps, etc. Provides a lubricant to the polishing surface to keep your gemstone cool and the rock dust in a fluid form that is easily wiped away. Gem Lube cannot be shipped via air. Order Microsol (below) if air shipment is required.

410-LUBE......2¹/₂ oz can 6 ozs. Shp.Wt.......9.45



GEM-LUBE



MICROSOL

Silicone based extender fluid. Use about one drop per six drops diamond compound to help spread compound over pad or lap. Makes compound a little more fluid and easy to spread.

106-11121 oz vial 2 ozs. Shp.Wt.6.00

WATER AID WETTING AGENT

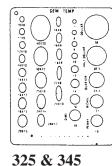
Water Aid is a concentrated wetting agent. It increases cutting action of sawing, grinding, and sanding/polishing operations using water by eliminating surface tension and preventing hydroplaning. It's biodegradable and normally harmless to skin. Approx. 6 drops per pint is all that's needed.

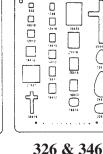
410-WA-1088 oz. bottle	11 oz	3.25
410-WA-11616 oz. bottle.	$1\frac{1}{2}$ lbs	5.25
410-WA-1101 gal	9 lbs	

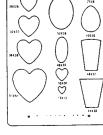


GEM

TEMPLATES AND SCRIBES







327 & 347

GEM-TEMP TEMPLATES are anodized aluminum, color coded for quick identification. Precision stamped markings are permanent. Precision cut designs stay accurate and resist wear, last for years. Double GEM-TEMP templates enable you to see and scribe both sides of slab while it is held firmly in place.

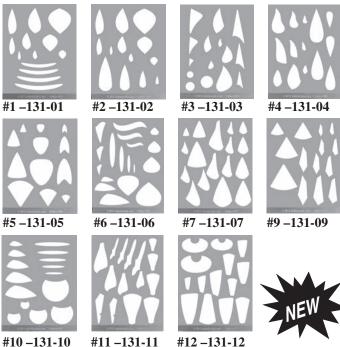
SINGLE OVALS AND CIRCLES (blue)
130-325 1 oz
DOUBLE OVALS AND CIRCLES (blue)
130-325D
SINGLE SQUARES AND RECTANGLES (gold)
130-326
DOUBLE SQUARES AND RECTANGLES (gold)
130-326D
SINGLE MISC. SHAPES (red)
130-327
DOUBLE MISC. SHAPES (red)
130-327D
SET OF THREE, one each color, with scribe.
130-GT3

GEM-TEMP PLA	ASTIC TEMPLATES	are made of
heavy duty plastic.	Won't corrode or bend	d out of shape.
Precision cut. Set in	cludes 1 of each style,	plus scribe.
130-345	1 oz	4.90
130-346	1 oz	4.90
130-347	1 oz	4.90
130-349set of 3		

SCRIBING PENCILS. The basic tool for making the outline of cabochon shapes on slabs. The pencils, one aluminum and the other brass, come as a set. The scribes are easy to see and will not wash off during sawing or grinding. Sharpen pencils on any grinding wheel.

DIAMOND TIPPED SCRIBE Light weight and slips in your pocket. Scribe plastic, glass, stone and metals.

CARBIDE SCRIBE. Our carbide pocket scribe with clip is always where you want it - in your pocket. Hardened carbide tip ensures extended life.



#10-131-10 #11 -131-11

Let the cabs begin!

Be as creative as you want to be with these eye pleasing templates introduced at recent shows and now available in our catalog for the first time. Protective "peel off" paper exposes a transparent $8\frac{1}{2} \times 11$ plastic template.

131-01	
131-02	
131-03	
131-04	
131-05	
131-06	
131-07	
131-09	
131-10	
131-11	
131-12	

Background: John F. Heusler G. G. designed these templates based on his artistic taste. He is an award winning jewelry designer and has been cutting gems for over 43 years. His articles in Lapidary Journal/Jewelry Artist Magazine the past few years showcase many of these cuts.



SCRIBING PENCILS

DIAMOND TIPPED SCRIBE



CARBIDE SCRIBE



ALCOHOL LAMP

DOPSTATIONTM Features a thermostatically controlled pot for melting waxes used for dopping stones. Features a custom-calibrated ceramic element designed to heat green and black wax fast and then hold it at the proper working temperature. Made of durable plastic, the DopStationTM has a lighted on/off switch, convenient tool storage area, and a flat rim for warming stones prior to dopping.

142-450110 115V U	S plug	1.2 lbs	. 34.95
142-450112 230V E	uro plug	1.2 lbs	36.95

ALCOHOL LAMP For heating wax carvers and spatulas and melting various waxes. Has 3/16" wick and burns denatured alcohol. Faceted body sets at convenient angles for dopping. Wick adjusts with thumb wheel.

150-LMP-422.00	Lamp	9 oz	6.95
150-LMP-422.10	Wick	1 oz	. 1.00



DOP WAX

BLACK DOP WAX. Use with hot dops above. Softens at 170° . Gives excellent adhesion for facetor. Stick $\frac{5}{8}$ x 10" $\frac{1}{4}$ lb. Four sticks per 1 lb pkg.

GREEN DOP WAX. The standard utility wax for general lapidary work. Provides good adhesion. Use with hot dops above. Softens at 150°. Stick 3/8" x 10" 1/4 lb. Four sticks per 1 lb pkg.

FACET WAX. Leeco Brown Dop Wax. This is the old time favorite brown wax. When applied correctly, this product provides a tight, firm, heat resistant bond which will hold up throughout the cutting and polishing process. Preferred by many faceters. Comes in 4 ounce packages



DOP MASTER

DOP MASTER Our new dopping system features a comfortable, 1/2" diameter x 4-1/2" long aluminum handle. It comes with 16 dopping sticks (screws). Use either standard dop wax or cyanoacrylate glue (see page 93) to attach stone to dopping stick. Includes handy plastic stone holder with 16 holes for storing mounted stones so you can dop multiple stones at one time. This system makes it easy to change from one stone to the next when grinding or polishing, simply use the enclosed hex key to loosen the set screw, drop in a new dop stick (screw), tighten the set screw in the handle and you are ready to work. (Tip: To remove dop wax reheat the stone. When using cyanoacrylate you may need to use accelerator. To remove cyanoacrylate use Super Solvent.)

"HOT STUFF" (Red Label) Instant Cyanoacrylate Glue. Normally sets in 3-10 seconds. Thin like water for exact fit or deep penetration.

129-HS1	¹ / ₂ oz	.3.95
129-HS4	2 oz	10.50

NCF AEROSOL ACCELERATOR Use with cyanoacrylate glues to speed curing time. CONTAINS NO CHLO-**ROFLUOROCARBONS**

SUPER SOLVENT For cyanoacrylate glues. Use to break an existing bond. Can normally be used on hands and most surfaces, but solvents should be tested on a small area first. Should not be used on lacquer, butyrate or nitrate based finishes.

WOODEN **DOP STICKS**

WOODEN DOP STICKS. Easy

to use, inexpensive. You can dop many stones at one time. Assorted diameters from 1/4" to 5/8". About 4" long. Pkg. of ten. 721-70-1001......6 oz.5.00



SILICON CARBIDE DISCS AND BELTS

High quality silicon carbide discs and belts for sanding and polishing stone or glass. May be used either wet or dry and in both directions. Discs

available for 6" or 8" diameter plates. To attach discs use Feathering Disc Adhesive listed on page 93. The 6" and 8" Belts fit the expanding drums below, match diameter and width. Wet Belt sander belts fit any $3" \ge 41\frac{1}{2}"$ machine.

Fits	Order number	Description	Mesh	Shp. Wt. Each	Price
	702-85-5006-100	DISC, 6"	100 GRIT	6 oz.	1.45
6"	702-85-5006-220	DISC, 6"	220 GRIT	6 oz.	1.45
Discs	702-85-5006-320	DISC, 6"	320 GRIT	6 oz.	I.45
Discs	702-85-5006-400	DISC, 6"	400 GRIT	6 oz.	1.45
	702-85-5006-600	DISC, 6"	600 GRIT	6 oz.	1.45
	702-85-5008-080	DISC, 8"	80 GRIT	6 oz.	2.45
	702-85-5008-100	DISC, 8"	100 GRIT	6 oz.	2.45
8"	702-85-5008-220	DISC, 8"	220 GRIT	6 oz.	2.45
Discs	702-85-5008-320	DISC, 8"	320 GRIT	6 oz.	2.45
	702-85-5008-400	DISC, 8"	400 GRIT	6 oz.	2.45
	702-85-5008-600	DISC, 8"	600 GRIT	6 oz.	2.45
	702-85-6625-080	BELT 2 ¹ /2"x18 ¹⁵ /16"	80 GRIT	6 oz.	2.60
	702-85-6625-100	BELT 2 ¹ /2"x18 ¹⁵ /16"	100 GR1T	6 oz.	2.55
6" x 2½"	702-85-6625-220	BELT 2 ¹ /2"x18 ¹⁵ /16"	220 GRIT	6 oz.	2.55
Drum	702-85-6625-320	BELT 2 ¹ /2"x18 ¹⁵ /16"	320 GRIT	6 oz.	2.55
	702-85-6625-400	BELT 2 ¹ /2"x18 ¹⁵ /16"	400 GRIT	6 oz.	2.55
	702-85-6625-600	BELT 2 ¹ /2"x18 ¹⁵ /16"	600 GRIT	6 oz.	2.55
	702-85-6830-080	BELT 3"x 25 ⁷ / ₃₂ "	80 GRIT	6 oz.	3.45
	702-85-6830-100	BELT 3"x 25 ⁷ / ₃₂ "	100 GRIT	6 oz.	3.40
8" x 3"	702-85-6830-220	BELT 3"x 25 ⁷ / ₃₂ "	220 GRIT	6 oz.	3.40
Drum	702-85-6830-320	BELT 3"x 25 ⁷ / ₃₂ "	320 GRIT	6 oz.	3.40
	702-85-6830-400	BELT 3"x 25 ⁷ / ₃₂ "	400 GRIT	6 oz.	3.40
	702-85-6830-600	BELT 3"x 25 ⁷ / ₃₂ "	600 GRIT	6 oz.	3.40
	702-85-6341-080	BELT 3"x 41 ¹ /2"	80 GRIT	6 oz.	5.90
	702-85-6341-100	BELT 3"x 41 ¹ /2"	100 GRIT	6 oz.	5.50
Wet Belt	702-85-6341-120	BELT 3"x 41 ¹ /2"	120 GRIT	6 oz.	5.50
Sanders	702-85-6341-220	BELT 3"x 41 ¹ /2"	220 GRIT	6 oz.	5.50
Sanuers	702-85-6341-320	BELT 3"x 41 ¹ / ₂ "	320 GRIT	6 oz.	5.50
	702-85-6341-400	BELT 3"x 41 ¹ / ₂ "	400 GRIT	6 oz.	5.50
	702-85-6341-600	BELT 3"x 41 ¹ /2"	600 GRIT	6 oz.	5.50

EXPANDING DRUMS

Use these expanding drums with silicon carbide belts for sanding and polishing gemstones. The expansion slots in the rubber rim allow the drum to expand when rotated, thereby locking the belt in place. The rubber drum is soft, resilient and durable. The drum surface flexes to the gemstone's contour to allow for quickly removing scratches even from flat surfaces. Belts may be easily changed by sliding on and off drums when machine is stopped. Come with bushings to fit 1", $\frac{3}{4}$ ", $\frac{5}{8}$ " and $\frac{1}{2}$ " arbors. For use with arbors with threaded shafts and retaining nuts.



Order number	Size	Shp. Wt.	Price
710-71-5061 710-71-5062	6" DIAMETER X 1 ¹ / ₂ " WIDTH 6" DIAMETER X 2 ¹ / ₂ " WIDTH	3 lbs. 3 lbs.	68.00 89.00
710-71-5083	8" DIAMETER X 3" WIDTH	5 lbs.	117.00

DISCS

BELTS

AD-A-UNIT ARBOR SYSTEM

For the shop that needs an extra arbor for those many special jobs, this versatile series can fill the bill

- You can buy the heavy duty 8" Husky Arbor alone as a replacement or addition to your shop, or—
- You can buy the arbor with a heavy duty, heavy molded plastic – one piece hood and pan for use with your own motor for power or—
- You can buy the unit complete with arbor, hood and pan, and ¹/₃ HP 115V 60 Hz motor with a baseboard.
- Also available is the complete AD-A-UNIT-MB model with a 220V 50 Hz motor for export.
- A ¹/₂ HP variable speed model is available. Call us with your needs.

The complete units are ideal for use in industrial shop set ups and for community center and club workshops. Excellent for multiple stations.

You can mount a wheel or expanding drum on each end of the shaft. Both ends have a ¹/₂" step for mounting laps. The right hand will also accept ¹/₄" - 20 screw back discs. You can set up the unit as either a stone or metal finishing unit. Attach our special Galaxy Carving Wheels and you have a machine for carving stone.

You can use expanding drums with belts, a variety of grinding and polishing wheels such as our diamond Galaxy and Nova Wheels, and various buffing wheels.

The 8" arbor is heavy duty, cast aluminum with a split housing so just the removal of four screws allows you to change the belt or remove the shaft for bearing replacement. Arbor shaft is $\frac{3}{4}$ " stainless steel with overall length of 18". Cushion mounted bearings and 3-step pulley.

The hood and pan are now a single unit molded from heavy duty plastic with a drain hose connector molded in place. An overhead water manifold with two valves for providing coolant (water) to wheels mounted on arbor shaft.



SHOWN ABOVE: Ad-A-Unit with 8" Husky arbor & one piece molded plastic hood & pan.

CAUTION: Use Safety Goggles to protect your eyes when using this machine.

AD-A-UNIT ARBOR SYSTEM



BASIC AD-A-UNIT



BUFFS

AD-A-UNIT: Basic Ad-A-Unit comes with the 8" Husky arbor, belt and three-step pulley. Also includes heavy duty, powder coated steel hood and pan with coolant system consisting of overhead water manifold with two valves for providing the coolant. Fan has two pipe threaded drain holes. Can be used with your own motor and baseboard.

630-28-2000......Shp. Wt. 28 lbs......610.00

HUSKY 8" ARBOR: with belt and 3-step pulley. Use with your own motor and coolant system. You can mount a wheel, buff or expanding drum on each end of the shaft. Both ends have a ¹/₂" step for mounting laps. The right hand shaft will also accept ¹/₄-20 screw back discs. See below for various attachments that can be used with any of the models of Ad-A-Units.

HOOD with water manifold and two valves 690-28-2002
PAN with two pipe threaded drain holes. 690-28-2001
AD-A-UNIT SHAFT 690-28-2103 Shp Wt. 3 lbs 145.00
BEARINGS. Need two per arbor. 690-90-16204 Each
RUBBER BEARING MOUNT 690-90-0002 Shp Wt. 6 ozs
BELT FOR MB MODEL 690-91-4310 Each 10 oz 10.96

These Ad-A-Unit machines are quite versatile. For the wheels, drums, buffs and belts shown, use listings below.

Expanding drums	
Silicon Carbide Belts	
Galaxy Grinding Wheels	12 - 13
Nova Sanding and Polishing Wheels	14
Polishing Buffs	

WHEELS

FOREDOM® HAND POWER TOOLS RELIABLE – ECONOMICAL – VERSATILE – REVERSIBLE

FOREDOM K2230 JEWELERS KIT

- Features 1/6 HP hang up style motor
- Ball bearing, fan cooled, variable speed
- 66% more power than older CC machine
- 33% more power than old S machines
- Speed up to 18,000 RPM, 39" flex shaft
- Fits most quick disconnect handpieces
- Good for right or left hand users
- Reversible feature helps keep dust away for right hand users
- Alternating motor direction helps extend life of certain abrasives
- Available in 115 volt and 230 volt models. 230 volt is CE approved

Kit comes with: motor; #30 geared chuck handpiece, 0-5/32 capacity; FCT-1 solid state speed control with wide footprint, plastic housing; chuck key with easy grip handle; flex shaft grease; 60 piece jewelers accessory kit; handy rotating tool holder. FULL 2 YEAR WARRANTY FROM FOREDOM ELECTRIC

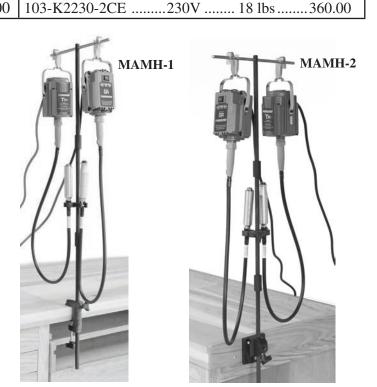
FOR USE INSIDE THE USA

Kit 2230 - 1/6 HP motor, UL and CSA listed

FOREDOM MOTOR HANGERS

Motor Hangers conveniently and securely suspend hang-up style motors and other power tools above the work bench for ready access to your work. Foredom Motor Hangers feature a 3-piece hexagonal support rod and top safety hook rod for holding one or two motors. The MAMH-1 comes with a clamp mount for attaching to the top of your bench. May be easily removed or relocated. The MAMH-2 comes with a base mount, which allows you to screw it to the top or side of your bench. Both models include a Handpiece Rest and two Spring Safety Clips. Assembly of the hanger is simple with the supplied couplings and set screws.

DOUBLE MOTOR HANGER WITH BENCH CLAMP103-MAMH-13 ½ lbsDOUBLE MOTOR HANGER WITH BASE MOUNT103-MAMH-23 ½ lbs\$69.00





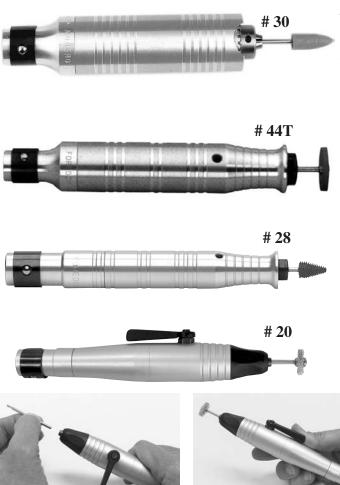
FOR USE OUTSIDE THE USA Kit 2230-2CE - 1/6 HP motor, CE approved with Con-

tinental European required plug end.

FOREDOM ACCESSORIES

FOREDOM® INTERCHANGEABLE HANDPIECES

General purpose handpieces # 30, 44T, 28 and 20 have Foredom's Quick Disconnect feature that makes it fast and easy to interchange handpieces or to attach and remove them. Handpieces # 20 features Foredom's Quick Change Bur Release that allows you to insert and remove burs without the use of a chuck key or pin and wrench. All handpieces have pre-lubricated ball bearings that require no additional lubrication and are suitable for continuous use. NOTE: Burs shown are not included.



#30 Foredom's most popular handpiece features a geared 3-jaw #0 chuck that takes any size shank accessory shank or drill bit up to ⁵/₃₂" (4mm). Comes with 103-CKH-1 chuck key with molded plastic handle. Various bench top tools are available to work with the versatile # 30, including Foredom's drill press and handpiece holder (page 30). 5³/₁₆" long, 1" dia, weight, 5.85 oz.

44T Collet-type chuck handpiece accommodates accessories with shank sizes up to 1/4" in diameter. Comes with three collets $\frac{3}{32}$ " (2.35mm), $\frac{1}{8}$ "(3.18mm) and $\frac{1}{4}$ " (6.4mm), and pin and chuck wrench. Other fractional and metric collets are available in Collet Set 440 (page 30). Can also be used in Foredom's handpiece holder and drill presses. (page 30). 5 ⁵/₈" long, 1" dia. (center) ³/₄" dia, (taper), weight 5.85 oz.

103-HP44 60.00

28 Collet-type chuck handpiece with a slender, comfortable design and tapered grip. Comes with ³/₃₂" (2.35mm) and ¹/₈"(3.18mm) collets, and pin and chuck wrench. Other fractional and metric collets are available in collet set 600 (page 30). 5 ¹/₄" long, ³/₄" dia. (center) $\frac{1}{2}$ "dia. (taper), weight 3 oz.

20 Has molded plastic front grip with tapered sides for easy and close handling. Comes with Lever Action for quick and easy insertion and change of accessories. Accommodates ³/₃₂" Shank only. To insert an accessory, rotate lever 90° away from handpiece body, insert accessory, and move lever forward or back 90° into locked position. 5 ⁵/₈" long, 1¹/₈" dia. (center) ³/₈" dia. (front taper), weight 4 oz.

SPEED CONTROLS FOR ¹/₆HP SERIES SR MOTORS



FCT-1

The reliable FCT is Foredom's most popular foot operated speed control. It features solid state circuitry in a heavy duty plastic housing with an extra wide footprint, low profile, and non-skid pads on the bottom for ease of use. It provides smooth control throughout the entire speed range. CSA listed. 7" long, $4\frac{1}{2}$ " wide, $2\frac{5}{8}$ " high.





The SCT offers the same electronics and smooth control as the FCT but in a much heavier, cast iron housing. The bottom surface of the SCT is covered with non-skid material. The added weight of the metal housing eliminates any unexpected movement of the control along the floor. CSA listed. 6³/₄" long, 4["] wide, 2⁵/₈" high. Not available for use with SR CE 103-UA10451......7 lbs. 49.00 machines.

tor into a bench top model with the cast iron base and yoke assembly. It includes all mounting screws. Fits series R, S, and SR motors.

BASE AND

ASSEMBLY

YOKE

FOREDOM 2" ANGLE GRINDER ATTACHMENT FOR USE WITH #30 HANDPIECE

This Angle Grinder attachment comes in a kit designed especially for the Jeweler or Lapidary. Attaches easily over the top of Foredom's #30 Handpiece (not included - see page 27 to order Handpiece). Has .75 to 1 gear reduction NEVER use in REVERSE rotation.

Best to secure work piece in a vise or clamp to allow for two handed operation of the grinder. Optimum operating speed 10,000 - 15,000.

One year warranty.

Includes: Angle Grinder Attachment for #30 Handpiece; 120 grit flap wheel, installed; 1 Flexible Diamond PSA sanding disc and 7 Diamond Micro finishing PSA sanding discs; Cerium Oxide disc, Screw-lok felt disc; Velcro PSA disc (8 pieces, to use with Diamond PSA discs); Velcro type disc mandrel; screw-lok disc mandrel.





103-AK69109145.00

20-PC STONE CARVING KIT

Flexible Diamond Disc A-5752, plus 1 each of Diamond Microfinishing Discs, listed below, 2 Cerium Oxide Discs A-4408, 10 PSA Velcro Discs A-10041. 10,000 Max RPM.



A-5752 Flexible Diamond Disc



A-4408 Cerium Oxide



A-10041 PSA Velcro Disc

2" DIAMOND MICROFINISHING FILM PSA SANDING DISCS

These 3M Diamond Discs have a flexible backing suitable for metal and lapidary applications. (1 each included with Angle Grinder Kit sold above). Work great on all materials including stone, glass, and even hard to work stainless steel and titanium. Use wet when working gemstone, rock and glass. Use with Velcro PSA disc and mandrel. Shipping weight 1 oz each.



Diamond Micro finishing Film PSA				
Sanding Discs				
Part No.	Grit	Micron	Price	
103-A-4452	120	125	4.50	
103-A-4453	220	74	4.40	
103-A-4454	320	45	4.40	
103-A-4455	400	30	4.40	
103-A-4456	600	20	4.40	
103-A-4457	1,200	9	4.40	
103-A-4583	4,000	3	7.80	
Cerium Oxide	Polishin	g Disc		
103-A-4408	50,000	0.5	9.20	

ACCESSORIES FOR ANGLE GRINDER ATTACHMENT

Accessories listed on this page and the bottom of page 28, fit the Foredom Angle Grinder Attachment listed on the facing page. These accessories have special mounting hubs and mandrels (included with Angle Grinder Kit) and should NOT be mounted directly in a flexible shaft or micro motor handpiece.

FLEXIBLE DIAMOND PSA SANDING DISCS

3M's Flexible Diamond PSA discs are made from a 2-ply polyester backing film coated with diamond filled nickel plated dots and come in 5 grits. Use these to grind, sand and smooth. Use wet on gemstones, rock and glass. Use dry on plastic, enamel, steel, ceramic, wood, painted and plated surfaces.



Flexible Diamo	nd PSA	Sanding 1	Discs
Order No.	Grit	Micron	Price each
103-A-5752	60	250	16.50
103-A-5753	120	125	13.20
103-A-5754	220	74	11.20
103-A-5756	400	40	9.25
103-A-5758	800	20	9.25

Requires A-10041 PSA Velcro Loop Disc and A-69222 Velcro Hook Disc Mandrel (both included with Angle Grinder, replacements sold below). Shipping weight 1 oz ea.

Mounting Pressure Sensitive Adhesive (PSA) Sanding Discs on Angle Grinder PSA

Disc A-10041 has a Velcro Loop fabric surface that is REQUIRED to adhere all PSA 2" sanding discs to the Velcro Hook surface of Disc Mandrel A-69222 or the Velcro Hook Sanding Heads listed below.

103-A-10041-5...PSA Velcro Loop Disc (5 pk). shp wt 1 oz ...4.20

103-A-69222..... Velcro Hook Disc Mandrel shp wt 2 oz ...6.00

VELCRO HOOK SANDING HEADS with 3/8" arbor holes. When used as a backing, these heads vary the firmness of the pressure from the PSA sanding discs.

REQUIRES hub to mount to Angle Grinder. (Hub included with Angle Grinder Kit - for replacement or additional hubs order 103-69212-L)



,	Order No.	Туре	Thickness	Price each		
t	103-AR10043	Extra Firm	3/16"	10.50		
	103-AR10044	Firm	11.00			
	103-AR10045	Medium	5/8""	11.50		
	103-AR10046	Soft	12.50			
	103-A69212-L	Long Mount	4.00			



SCREW-LOK DISC MANDREL For use with felt Pad (right). Both pieces included with Angle Grinder.



A-10041

FELT PAD

5/16" thick by 2" diameter, screw-lok mount.

103-A-69225......5.00

A-69222

DRILL PRESS STAND

Use your Handpiece in this drill press and convert your flexible shaft machine into a drill press for drilling straight, accurate holes in gemstones, metal, wood, plastic and glass. It's a rugged, precision tool made with machined cast iron base, table and housing for stability and accuracy. Sturdy locking nut presets stroke depth from 0 to 1 ¼". Use with #30, 30H, 44, 44T and 44HT Handpiece. Handpiece in photo not included.



ROTATING UNIVERSAL BUR HOLDER

This handy, rotating bur holder accommodates all size accessory shanks. Store and organize up to 126 burs and have them all easily accessible. Takes $\frac{1}{16}, \frac{3}{32}, \frac{1}{8}$ " and $\frac{1}{4}$ " shanks. It measures 7" wide by 4" high, and holds $69-\frac{3}{32}$ " or $\frac{1}{8}$ " burs, $12-\frac{1}{4}$ " burs, and $45-\frac{1}{16}$ " burs.

103-10080 1 lb. 16.50

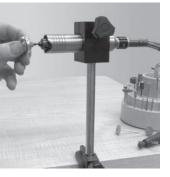
BUR HOLDER

Small square bur holder will hold a total of 52 burs (34 $3/_{32}$ " and 18 $1/_8$ "). Measures 2- $1/_2$ " square x 2- $1/_4$ " high. Holds burs up to 2" long. Includes clear plastic cover.



HANDPIECE HOLDER

Holds handpiece in position for use as a high speed lathe for grinding, carving, etc. while controlling work piece with both hands. Adjustable height up to 10" above work surface. Rotates 360°. Comes with BC-1 bench clamp. For #30, 30H, 30SJ, 44, 44T & 44HT Handpieces. 103-HH-302 lbs......41.00



Motor Brushes

Priced per pair. Suitable for 115 & 230V units except where noted.

Replacement Shafts and Sheaths

- 103-77N Neoprene material outer sheath that comes equipped on series L motors and is optional for all other motors except series EE and F.... 19.00

Lubrication supplies

MAINTENANCE SUPPLIES Maintenance kits



Maintenance Kits for flex shaft motors contain a shaft, a pair of motor brushes, grease and operating manual. Kits are suitable for 115 and 230 volt motors, except where noted.

- 103-MK-9A Maintenance kit for 230 volt CC motors ... 18.00



COLLET SETS FOR HANDPIECES

No. 440 set for handpieces 44	and 44T Seven c	ollets: ¹ /16", ³ /32,
3mm, ¹ / ₈ ", ⁵ / ₃₂ ", 6mm, ¹ / ₄ ".		
103-440	4 oz	
No. 600 set for handpiece 28,	8, 8D, Set of four	collets ¹ / ₃₂ ", ¹ / ₁₆ ",
³ / ₃₂ " and ¹ / ₈ "		
103-600	4 oz	30.00

CHUCK KEY

Fits Handpiece 30, 30H, 30SJ and 25C. Has comfortable plastic handle making accessory change easier, and key more difficult to misplace.

SELECTING SMALL TOOLS FOR CARVING

You will find almost as many methods for carving as you will choice in tools to do the job, from hammer and chisel to create life size statues, to a variety of motorized tools and diamond points for intricate carving of agate and similar hard stones. The wide choice in small burrs, buffs and wheels can be particularly confusing to the beginner.

The information below is intended as a beginner's basic guide to the selection and use of small tools for the shaping through polishing process using The Carver's Choice fixed point unit. The tools work as well with our Multiflex Unit, or with any flexible-shaft set-up. Our selection is based on suggestions by a master carver, but is meant to be a beginner's start-up kit. The tools are by no means the only ones you will need or want.

Page numbers listed with the tool descriptions and order numbers below refer to pages in this catalog.

STEP 1. SHAPING YOUR Work piece. The process for carving stone follows the basic steps in finishing gemstones of any kind: the work piece must be cut or ground to shape, then finished through steps of sanding and polishing. To start, the more matrix you can remove from your stone by trim sawing or rough grinding, the easier time you will have actually carving. Saves your small tools as well.

Diamond burrs are used for shaping your work piece. These come in a variety of shapes and sizes. They are designed to be used wet. V-shaped or knife edged burrs are used to outline and form deep valleys. Straight wheels are used to shape convex areas and pointed burrs are used to form concave areas. You will find a large selection of types and shapes on pages 32 through 35.

The inexpensive plated burrs or points on page 33 and the bottom of page 35 are good for beginners. Once you have determined the best shapes for your use you can upgrade to the sintereted points on page 32.

STEP 2. THE SANDING PROCESS. In sanding, you are trying to remove all scratches left by the shaping process, and to prepare the surface of the stone for polishing. You will generally spend time going through several sanding steps.

Our Nova Miniature sanding points are used for the sanding process. These points must be used wet. Nova points come in 9 grits and are color coded for easy identification. Use the Nova points at approximately 2000 to 4000 RPM. The coarser points 60, 140 or 280 grits, are used following the metal bonded diamond burrs. The medium grits, 600, 1200 and 3000 are for finer sanding. See page 35 to order. You may also want to try out the Mini-Nova wheels, also listed on page 35. These come in single or multiple layers for different needs. Great for getting into hard to reach areas. STEP 3. FINE SANDING AND POLISHING. Depending on how well the surface of your stone is prepared to this point, you need to proceed with more steps in the polishing process. For this you may use Nova points in 8000, 14000 or 50000 grits. You may also use Phenol points (see page 34) with diamond compound (page 19) or felt wheels with diamond compound. Remember Nova products must be used with water. Points charged with diamond compound must be used with a lubricant like our Gem-Lube (see page 20). To use felt wheels spread a small amount of diamond compound on the felt then add a spray of Gem-Lube. The carving arbor should be run at about 1500 RPM (approximately the 10 o'clock position on the bench lathe dial. If you are throwing compound the speed is too high.

When using diamond compound, your work piece and your hands should be cleaned with soap and water between each step to prevent contamination by the coarser compound grits.

CARVER'S WORK STATION

Stop the splash and mess when you carve with this handy shield developed by master carver, Dick Friesen. The unique arrangement of double, adjustable shields prevents water splashing towards you as you carve, either with a Foredom Flex-shaft unit, or the fixed-shaft Multi-Flex. The Work Station also incor-



porates a water tank with adjustable valve to control amount of water to your work piece. A flex-stem lamp easily puts light right to where you work. Made of powder coated metal with clear shields that protect you from splash without obstructing your view as you work.

Work Station

SINTERED DIAMOND CARVING BURS

Sintered carving burs from Inland are professional grade tools. The diamond is all the way through the head, so it will last five to ten times longer than plated diamond tools. All point shapes come in grit sizes: 100, 220, 325 and 600. Shanks are ³/₃₂'' diameter. Shown approximate shape and size. Suitable for shaping and carving all kinds of minerals. Must be used with water. Shp. Wt. 1 oz. Please specify catalog number.

100 & 220 grit \$16.95 325 & 600 grit \$17.95								
Order # 100 grit	174-470152	174-470172	174-470232	174-470252	174-470272	174-470332	174-470352	174-470372
Order # 220 grit	174-470154	174-470174	174-470234	174-470254	174-470274	174-470334	174-470354	174-470374
Order # 325 grit	174-470156	174-470176	174-470236	174-470256	174-470276	174-470336	174-470356	174-470376
Order # 600 grit	174-470158	174-470178	174-470238	174-470258	174-470278	174-470338	174-470358	174-470378
Head Size	6mm x 13mm	8mm x 13mm	4mm x 10mm	6mm x 13mm	8mm x 13mm	4mm x 12mm	6mm x 13mm	8mm x 13mm

100 & 220 grit \$16.95 325 & 600 grit \$17.95	•	•						
Order # 100 grit	174-470442	174-470452	174-470632	174-470652	174-470672	174-470732	174-470752	174-470762
Order # 220 grit	174-470444	174-470454	174-470634	174-470654	174-470674	174-470734	174-470754	174-470764
Order # 325 grit	174-470446	174-470456	174-470636	174-470656	174-470676	174-470736	174-470756	174-470766
Order # 600 grit	174-470448	174-470458	174-470638	174-470658	174-470678	174-470738	174-470758	174-470768
Head Size	5mm x 5mm	6mm x 6mm	4mm x 12mm	6mm x 13mm	8mm x 13mm	4mm x 12mm	6mm x 13mm	7mm x 13mm

100 & 220 grit \$16.95 325 & 600 grit \$17.95	T	-		Т	Т	T		
Order # 100 grit	174-471052	174-471072	174-471092	174-471152	174-471172	174-471192	174-471232	174-471252
Order # 220 grit	174-471054	174-471074	174-471094	174-471154	174-471174	174-471194	174-471234	174-471254
Order # 325 grit	174-471056	174-471076	174-471096	174-471156	174-471176	174-471196	174-471236	174-471256
Order # 600 grit	174-471058	174-471078	174-471098	174-471158	174-471178	174-471198	174-471238	174-471258
Head Size	6mm x 2mm	8mm x 3mm	10mm x 3mm	6mm x 2mm	8mm x 3mm	10mm x 3.5mm	4mm x 11mm	6mm x 13mm

100 & 220 grit \$16.95 325 & 600 grit \$17.95				=				
Order # 100 grit	174-471272	174-471342	174-471352	174-471432	174-471452	174-471472	174-471652	174-471662
Order # 220 grit	174-471274	174-471344	174-471354	174-471434	174-471454	174-471474	174-471654	174-471664
Order # 325 grit	174-471276	174-471346	174-471356	174-471436	174-471456	174-471476	174-471656	174-471666
Order # 600 grit	174-471278	174-471348	174-471358	174-471438	174-471458	174-471478	174-471658	174-471668
Head Size	8mm x 13mm	5mm x 13mm	6mm x 13mm	4mm x 12mm	6mm x 13mm	8mm x 13mm	5mm x 12mm	7mm x 13mm

LASCO DIAMOND CARVING BURS

Lasco's diamond tools give you a choice in grit sizes, from 40 grit for roughing out to 600 grit for pre-polish finish. The Lasco-bond process assures a uniform diamond surface that won't peel or pull out. The Lasco tools hold a cutting area without skipping, binding or jumping. You'll enjoy fast, vibration free, self cleaning reduction. Made in USA. Shown approx. size. Ship wt. 2 oz. Order from charts below.



Price	\$10.00 ea.	\$10.00 ea.	\$9.00 ea.	\$11.00 ea.
40 Grit	173-CL95-040	173-CLR95-040	173-B60-040	173-B100-040
80 Grit	173-CL95-080	173-CLR95-080	173-B60-080	173-B100-080
150 Grit	173-CL95-150	173-CLR95-150	173-B60-150	173-B100-150
200 Grit	173-CL95-200	173-CLR95-200	173-B60-200	173-B100-200
400 Grit	173-CL95-400	173-CLR95-400	173-B60-400	173-B100-400
600 Grit	173-CL95-600	173-CLR95-600	173-B60-600	173-B100-600

All 3⁄32'' Shanks		W22	BW4	BW1
Price	\$6.95 ea.	\$6.95 ea.	\$7.75 ea.	\$6.95 ea.
80 Grit	173-K2-080	173-W22-080	173-BW4-080	173-BW1-080
200 Grit	173-K2-200	173-W22-200	173-BW4-200	173-BW1-200
600 Grit	173-K2-600	173-W22-600	173-BW4-600	173-BW1-600

Price

80 Grit

600 Grit

\$6.95 ea.

173-EL44-080

200 Grit 173-EL44-200 173-CC22-200

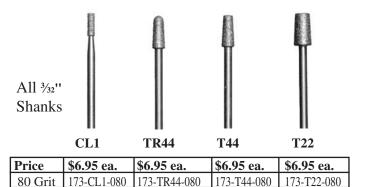
173-EL44-600 173-CC22-600

\$6.95 ea.

173-CC22-080

All ³ ⁄32'' Shanks	BW6	BW7	CLR85	F100
-	\$10 = 0		*0 00	\$10 F0

Price	\$10.50 ea.	\$9.50 ea.	\$9.00 ea.	\$10.50 ea.
40 Grit	173-BW6-040	173-BW7-040	173-CLR85-040	173-F100-040
80 Grit	173-BW6-080	173-BW7-080	173-CLR85-080	173-F100-080
200 Grit	173-BW6-200	173-BW7-200	173-CLR85-200	173-F100-200
600 Grit	173-BW6-600	173-BW7-600	173-CLR85-600	173-F100-600



173-TR44-200

173-TR44-600

173-T44-200

173-T44-600

173-T22-200

173-T22-600

200 Grit 173-CL1-200

600 Grit 173-CL1-600

All ³ / ₃₂ " Shanks					All ³ ⁄2'' Shanks	
	EL44	CC22	P22	CLR1		S

\$6.95 ea.

173-P22-080

<u>173-P22-20</u>0

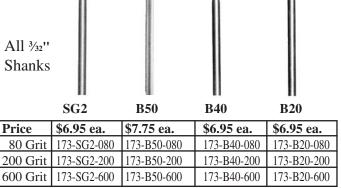
173-P22-600

\$6.95 ea.

173-CLR1-080

173-CLR1-200

173-CLR1-600



DIAMOND SPECIALTY TOOLS

These diamond tools from Lasco give carvers large heads for faster reduction. The Lasco-bond process assures a uniform diamond surface that won't peel or pull out. You'll enjoy fast,

vibration free, self cleaning reduction. Made in USA. Shank size is ¹/₈". Shown approximate size. Ship wt. 2 ozs.



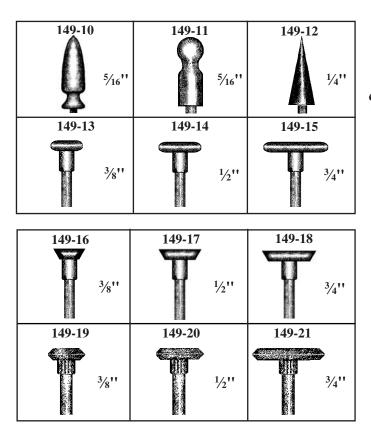
DME WHEEL



	DOME	WHEEL
Price	\$29.00 each	\$29.00 each
40 Grit	173-DOM-040	173-WHL-040
80 Grit	173-DOM-080	173-WHL-080
150 Grit	173-DOM-150	173-WHL-150
200 Grit	173-DOM-200	173-WHL-200
400 Grit	173-DOM-400	173-WHL-400
600 Grit	173-DOM-600	173-WHL-600

PHENOL POINTS & WHEELS

You can finish extremely hard stone with Phenol Points, especially fire agate free-forms and jade carvings. Tools must be charged with diamond compound. The more the tool is used, the more the diamond becomes embedded in the point. Use any grit combination, but 325, 1200 and 50,000 will do a good job in most cases. Use a separate tool for each grit. Avoid contamination. Use Gem Lube or Microsol (page 20) as lubricant, not water. Tools are most effective using a flex-shaft machine at 500 RPM. Illustrations are approx. size. Shank ¹/₈'' dia, Approx 1³/₈'' long. Ship wt. 2 oz. ORDER TOOLS BY NUMBERS SHOWN. Price ea. \$6.50



DIAMOND CARVING WHEELS

These economical mini grinding wheels and discs have diamond nickel plated to the working surface. Both are 80 grit and come either $\frac{1}{3}$ "" or $\frac{1}{4}$ " thick. Mandrel included. Use with water. Imported.

GRINDING WHEEL

V-SHAPE DISC



MINI GRINDING WHEELS							
Order #	Diameter	Thickness	Arbor	Price			
170-24-93701	³ /4"	¹ /8"	1⁄8"	12.00			
170-24-93702	3⁄4"	¹ /4"	1⁄8"	12.75			

MINI V-SHAPE GRINDING DISC						
Order #	Diameter	Thickness	Arbor	Price		
170-24-95710	3⁄4"	1⁄8"	1⁄8"	12.50		
170-24-95720	3⁄4"	¹ /4''	1⁄8"	12.95		



THIN diamond slicing discs that can be mandrel mounted for use with flexible shaft tools. Comes in four different diameters. Use with water. The 1", $\frac{3}{4}$ " and $\frac{5}{8}$ " slitters have $\frac{1}{16}$ " arbor holes. The 2" has $\frac{1}{8}$ " arbor hole. Made in USA. Wt. 2 ozs. See page 37 for mandrels.

106-12150 ⁵ /8" R	Requires M01	or M06 mandr	el 14.00
106-12155 ³ /4" R	Requires M01	or M06 mandr	el 14.25
106-12160 1" R	Requires M01	or M06 mandr	el 15.00
106-12165 2" R	Requires M02	or M14 mandr	el 25.00

NOVA MINIATURE SANDING AND POLISHING POINTS

Carvers find these miniature Nova sanding and polishing points answer many of their carving problems. You get the speed and high performance of our Nova resin-bond diamond formulas in shapes and sizes for use on your carvings in the sanding and polishing processes. Mandrel size is $\frac{3}{32}$ " which fits most Foredom and Dremel power tools. Illustrations show approximate shape and size. Weight each or set: 2 oz. Nova points must be used with water.

WEA	FETY irst R YOUR GGLES		N1M	NIL			N2M	N2L	
Grit Size	Color	Order #	Price						
60	GREEN	100-N1M-70	7.50	100-N1L-70	8.00	100-N2M-70	7.50	100-N2L-70	8.00
140	RUST	100-N1M-15	7.50	100-NIL-15	8.00	100-N2M-15	7.50	100-N2L-15	8.00
280	BLACK	100-N1M-28	7.50	100-N1L-28	8.00	100-N2M-28	7.50	100-N2L-28	8.00
600	BROWN	100-N1M-60	7.50	100-N1L-60	8.00	100-N2M-60	7.50	100-N2L-60	8.00
1200	GREY	100-N1M-12	7.50	100-N1L-12	8.00	100-N2M-12	7.50	100-N2L-12	8.00
3000	ROSE	100-N1M-30	7.50	100-N1L-30	8.00	100-N2M-30	7.50	100-N2L-30	8.00
8000	TAN	100-N1M-80	7.50	100-N1L-80	8.00	100-N2M-80	7.50	100-N2L-80	8.00
14000	CREAM	100-N1M-14	7.50	100-N1L-14	8.00	100-N2M-14	7.50	100-N2L-14	8.00
50,000	LT BLUE	100-N1M-50	7.50	100-N1L-50	8.00	100-N2M-50	7.50	100-N2L-50	8.00
Set of four 2	80, 600,1200,3000	100-NIM-S	27.00	100-N1L-S	28.80	100-N2M-S	27.00	100-N2L-S	28.80

MINI-NOVAS FOR SANDING AND POLISHING

MINI-NOVAS FOR SANDING AND POLISHING THOSE "HARD-TO-GET-AT" PLACES.

Use with power hand tools. Flexible, resin-bond diamond sanding and polishing wheels that come in three thicknesses, three diameters, and four grit sizes. The most flexible wheels have diamond on one side of a single layer of canvas. The thickest wheels (about ¹/₈") are made of two layers of canvas with diamond between them



and on each side. All wheels have a ¹/₁₆" arbor hole. Use with mandrels M1 or M6 (see page 37), to mount in your Dremel or Foredom type tool. Mini-Novas should be used with water.

Sets contain one 280, 600, 1200 and 3,000 grit wheels. Wt. 2 oz set.

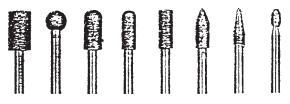
5 27	.00 10	JOINZE D	20.00
Whe	el Size	Set of fou 600,1200	
Diamete	r No. of Layers	Order #	Price
¹ /2"	1	100-2Q1-S	4.95
1/2"	2	100-2Q2-S	7.95
¹ /2"	3	100-2Q3-S	11.90
3⁄4"	1	100-3Q1-S	9.90
3⁄4"	2	100-3Q2-S	15.85
3⁄4"	3	100-3Q3-S	23.75
1"	1	100-4Q1-S	14.85
1"	2	100-4Q2-S	23.75
1"	3	100-4Q3-S	35.65

DIAMOND CARVING POINTS

Now you can have a wide variety of diamond points at a reasonable price. With proper care they will give lasting service. Twenty piece set contains one each of point types shown. Shank size $\frac{3}{2}$ ". Show approx. size. Use with water. Imported.



JUMBO HEAD DIAMOND POINT SET



Use these jumbo sized diamond points on stone, ceramics, carbides & wood. Points shown approximate shape and size. Shank size is $\frac{3}{32}$ ". Set contains one each of the above eight shapes. Use with water. Imported. Standard 150 grit.

170-24-08094...... 8 piece set 6 oz 12.00

DIAMOND CORE DRILLS





LAPCRAFT CORE DRILLS are metal-bonded, high strength diamond drills designed for fast cutting and long life. The rigid steel shanks are plated and rust free. Use with water. Made in USA. Ship. Wt. 2 oz. each.

Order #	Outside Drill Dia.	Shank	Price
106-2200	1/8"	3/32"	20.00
106-2201	$3^{1/2}$ mm	1/8"	20.00
106-2202	1/4"	⁵ / ₃₂ "	30.00
106-2203	5/16"	⁵ / ₃₂ "	31.00
106-2204	3/8"	1/4"	33.00
106-2205A	10 mm	1/4"	35.00
106-2205	7⁄16"	¹ ⁄4''	35.00
106-2206	1/2"	¹ ⁄4''	38.00
106-2207	9⁄16"	1/4"	40.00
106-2208	5/8"	3/8"	42.00
106-2210	3/4"	3/8"	48.00
106-2212	7⁄8"	3/8"	55.00
106-2213	1"	3/8"	60.00
106-2214	1 ¹ /16"	3/8"	65.00
106-2220	1¼"	3/8"	80.00
106-2240	1 ¹ /2"	3/8"	82.00

CLOCK FACE CORE DRILL packs come three drills per pack in either $\frac{3}{8}$ " OD, $\frac{7}{16}$ " or 10mm. Ship. Wt. 3 oz. Use with water.

Order #	Description	Price
106-2205A-3	10 mm 3-pack for Clocks	87.25
106-2204-3	³ / ₈ " 3-pack for Clocks	87.25
106-2205-3	⁷ /16" 3-pack for Clocks	87.25



STANDARD DIAMOND DRILLS MICROMITE DIAMOND DRILLS from Lapcraft are outstanding performers and the choice of professionals. The mandrels are made of durable steel and are plated with rapid cutting man-made diamond. As a result, you get a drill that gives you low cost per hole drilled. Use with water. Speed 5000-20,000 R.P.M. Made in USA. Ship. Wt. 2 oz.

Size	Size	Each		Package	of 6	
MM	Inches	Order #	Price	Order #	Price	
3/4	.030	106-2001	4.00	106-2001-6	22.00	
1	.040	106-2002	4.00	106-2002-6	22.00	
11/4	.050	106-2003	4.00	106-2003-6	22.00	
11/2	.060	106-2004	4.00	106-2004-6	22.00	
13/4	.070	106-2005	4.00	106-2005-6	22.00	
2	.080	106-2006	4.50	106-2006-6	23.00	
21/4	.090	106-2007	4.50	106-2007-6	23.00	
21/2	.100	106-2008	5.00	106-2008-6	24.00	
3	.120	106-2009	5.50	106-2009-6	28.00	
31/2	.140	106-2010	6.00	106-2010-6	30.00	
4	.160	106-2011	6.50	106-2011-6	35.00	

LAPCRAFT DRILL SETS MICROMITE ASSORTED DRILL SETS save you money and give you variety as well. Ship. Wt. 3 oz. per set.

Order #	Description	Price
106-2000-3	Three-pak contains one ea: $1 \text{ mm}, 1\frac{1}{4} \text{ mm}, 1\frac{1}{2} \text{ mm}.$	12.00
106-2000-6	Six pak contains one ea: ³ / ₄ mm, 1mm, 1 ¹ / ₄ mm, 1 ¹ / ₂ mm, 2mm, 2 ¹ / ₂ mm.	25.00
106-2000-11	Eleven pak contains one ea. of all standard sizes from ³ / ₄ mm to 4mm	50.00

DIAMOND TWIST DRILLS

Use these electroplated, diamond twist drills on stone, ceramics, glass, carbide and other hard non-metallic materials. All drills have ³/₃₂" shanks and are plated with medium-fine diamond grit. Use with all standard handpieces. Use water as a lubricant. Imported. Shp.Wt. 2 oz. each. Set 1 lb.

Order #	Size	Price
150-DIB-210.70	1.00 mm	4.95
150-DIB-210.90	1.30 mm	4.95
150-DIB-211.00	1.40 mm	4.95
150-DIB-211.20	1.60 mm	4.95
150-DIB-211.40	1.80 mm	4.95
150-DIB-211.60	2.10 mm	4.95
150-DIB-210.00	SET OF SIX	28.79

METAL AND BRISTLE BRUSHES

Steel, brass and bristle brushes come in three popular shapes. Use metal bristles for a brushed finish on metal. Use steel on white metals and brass on yellow metals. Bristle brushes are used for finishing metal in delicate or pattern areas. Also good for cleaning. Mounted on ³/₃₂" shanks. Come three brushes of one kind per package. Ship Wt. 6 oz. pkg. Maximum Speed Rating: 25,000 RPM.

Material	Whee	l	Cup		End	
	Order #	Pkg	Order #	Pkg	Order #	Pkg
Brass	200-BR-102	5.36			200-BR-112	3.75
Steel	200-BR-104	5.36			200-BR-114	4.20
Soft Bristle	200-BR-106	1.60	200-BR-107	3.06	200-BR-116	2.60
Hard Bristle	200-BR-110	1.60	200-BR-111	2.90	200-BR-120	2.44



3M SCOTCH-BRITE RADIAL BRISTLE DISCS

Embedded with abrasives for exceptional clean up of metal, stone, ceramic and hard woods. 36x to 80x for heavy cleanup. 120x to Pumice for light cleaning and semi-finish. Use finer grits for texturing, pre-polish and polishing.

Color coded for easy identification. Generate little or no dust. Recommended speed 3,000 to 18,000 (30,000 Maximum RPM).

Stack multiple discs onto a mandrel for making a sturdy brush. (Discs not used individually). The $\frac{3}{4}$ " or $\frac{9}{16}$ " discs use 103-M01 or 103-M06 Mandrels. 1" discs use 103-M02 or 103-M35 Mandrels (Order Mandrels separately -see below.)

Order #	Price Pk of 6#		Grade/ Grit	Color	Order #	Price Pk of 6#		Grade/ Grit	Color
141-25755	9.90	3⁄4"	80x	Yellow	141-27614	9.90	9/16"	120x	White
141-25757	9.90	3⁄4"	220x	Red	141-27615	9.90	9⁄16"	220x	Red
141-25758	9.90	3⁄4"	400x	Blue	141-27616	9.90	9/16"	400x	Blue
141-25759	9.90	3⁄4"	Pumice	Pink	141-27617	9.90	9/16"	Pumice	Pink
141-27610	12.50	1"	36x	Brown	141-27618	9.90	9⁄16"	1 Micron	Lt. Green
141-27611	12.50	1"	50x	Green	141-27619	9.90	9⁄16"	6 Micron	Peach
141-27612	12.50	1"	80x	Yellow	Ordenman	duala aa			
141-27613	12.50	1"	120x	White	Order man	ureis sej	parate	iy - see	below.



Made in USA by 3M.

MINIATURE MANDRELS

Come in packages of 6. Shipping weight 2 oz per package.

Use these miniature mandrels with wheels, points and cones. Made of high quality steel for precision work.

SMALL WHEEL MANDRELS

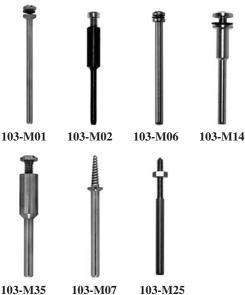
Mandrels M01 and M06 are for standard wheels. M02 and M35 have reinforced shoulders. M35 comes with extra long screw for mounting thicker wheels or ganging bristle discs or sanding discs.

M14 has enlarged head for support of disc or blade type tools.

POINT AND CONE MANDRELS

Mandrels M07 and M25 are standard mandrels.

Maximum safe speed is 25,000 RPM.



MANDRELS Wt. 1 oz. ea.					
Order #	Price	Shank Size	Arbor Hole		
103-M01	1.25	³ / ₃₂ "	1/16"		
103-M02	2.95	³ / ₃₂ "	1⁄8"		
103-M06	1.80	1/8"	1/16"		
103-M07	1.80	1/8"	1⁄8"		
103-M14	2.10	1/8"	1⁄8"		
103-M25	1.60	1/8"	¹ /16"		
103-M35	2.10	1⁄8"	1⁄8"		

CAUTION: Wear Safety Goggles when using these tools. See page 103.

38 BUFFS, MINIATURE

SOLID FELT WHEELS



SOLID FELT WHEELS Good for polishing or lapping metal and stones. Made of highest grade wool felt compressed for uniform texture, hardness and shape. Comes in package of 10. Use M01 or M06 mandrel.

MUSLIN BUFFS

ness Hardness	Price/pkg
Hard	2.80
Hard	2.25
Hard	2.15
	Hard Hard

KNIFE EDGE WHEELS



For use in crevices and other hard-to-reach places. Unmounted. 3 per package.

ino unice al el per puenage.							
Order #	Dia.	Hardness	Use Mandrel	Price/pkg			
160-BF-1001	¹ /2"	Н	M01	2.75			
160-BF-815	1"	Η	M06	4.75			

16 PIECE ASSORTED

FELT BOBS Molded felt bobs in shapes similar to those shown. Shapes come in different sizes, and in medium and hard. For use on hard and soft metals and stone. Use with

0	
Ŷ	4



MINIATURE BUFF WHEELS

MUSLIN BUFFS These miniature buffs are used for final buffing and polishing on soft and precious metals. 160-BF-1030 buffs are chemically treated to hold polishing compound better. Use 103-M01 or 103-M06 mandrel. Package of 3.

Order #	Dia.	Stitching	Ply	Treated	Price/pkg			
200-MGTI-OW	1"	2 Rows	16	No	4.50			
160-BF-1030	1"	2 Rows	10	Yes	4.25			



BUD ROUND POINTED CYLINDER

FORMED FELT BOBS Made of high quality felt. These formed bobs come in a variety of shapes for difficult polishing jobs. Mounted. Mandrel shank is $\frac{3}{32}$ ". 12 per package.

Order #	Shape	Hardness	Mounted	Price/pkg
160-BF-1070	Bud	Н	Yes	20.00
160-BF-1075	Round	Н	Yes	18.40
160-BF-1080	Pointed	Н	Yes	18.20
160-BF-1090	Cylinder	Н	Yes	20.30
	-			

CHAMOIS WHEEL BUFF (Not shown) These fine, soft buffs have a shellac hardened pin hole center. For use with rouge for final coloring of gold. Use 1" with 103-M01 or 103-M06 mandrel. Use 2" buff on tapered spindle.

Order#	Dia.	Stitching	Ply	ShipWt.	Price/Ea
200-CHM-1	1"	1	5	3 oz	4.75
200-CHM-2	2"	3	10	2 oz.	9.25

E-Z COOL WATER COOLANT SYSTEM This independent water pump system operates in any tray with a minimum 1" of water. The built in flow control of the pump provides just the right amount of water, and the flex line adjusts to put it exactly where you want it! (line may also be shortened by removing segments).

660-70-8000.....115 volt....Shp. Wt 2 lbs....35.00 660-70-8000X...230 volt....Shp. Wt 2 lbs....40.00

THE MULTI-FLEX CARVING SYSTEM

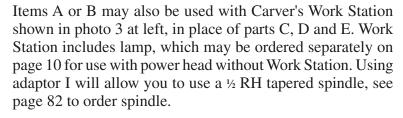
The Multi-Flex system was first designed for carvers, giving them both a fixed point carver that's still preferred by the master carvers in Europe, or a flex-shaft/handpiece system more commonly used in the United States.

The heart of the system is the Powerhead. The high torque motor and 3-step pulley system provide a variable speed range of 100 to 9000 RPM. You get plenty of power at the turn of a control knob. The Multi-Flex Powerhead comes mounted on a 16" x 24" laminated baseboard. Powerhead is available in 115V and 230V versions.

Fixed Point Carving System (Photo 1) Requires: Items A or B, C, D, E, F & G.

Flexible Shaft Carving System (Photo 2) Requires: Items A or B, C, D, E & H plus a FlexAid from page 40 and a handpiece from page 27.

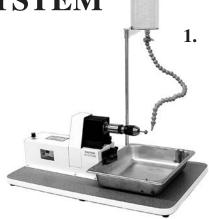
3.

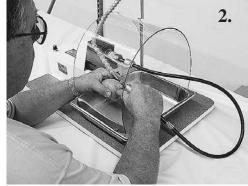


SELECTING YOUR MULTI-FLEX SYSTEM COMPONENTS

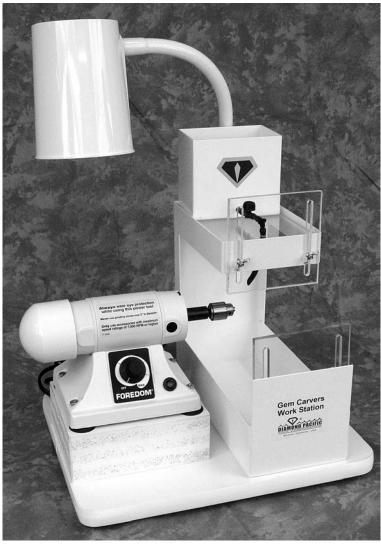
Using the letters in the chart below, choose the components you need to build the Carving System of your choice.

	Item	Order #	Price	Wt
A	Powerhead with 115V motor, speed control, 16" x 24" baseboard, one spanner wrench, Safety Goggles.	660-29-0000	550.00	251bs.
B	Powerhead with 230V motor, speed control, 16" x 24" baseboard, one spanner wrench, Safety Goggles.	660-29-0000X	650.00	251bs.
C	Drip tank with valve, Loc line tubing. Mounts on powerhead baseboard.	660-70-19002	75.00	1 lb.
D	Pan, stainless steel. Measures 10 $\frac{1}{2}$ " x 12 $\frac{1}{2}$ ".	660-29-5021	45.00	2 lbs.
E	Shield, Polycarbonate. Approx. 8"x 29" long. Slotted to fit in Pan (D). Or use Workstation shown on page 31.	660-29-5070	25.00	1 lb.
F	Chuck, keyless drill chuck 0-1/4 JT1 for fixed point carving. Use with adaptor (G).	661-29-5065	95.00	1 lb
G	Adaptor, JT1 for use with taper keyless drill chuck (F) for fixed point carving	660-29-5060	40.00	2 lbs
Н	Adaptor, $\frac{1}{4}$ " plain, for use with Flex-Aid (see page 40) for handpieces (see page 25).	660-29-5080	35.00	1 lb
Ι	Adaptor $\frac{1}{2}$ " plain, for attaching RH $\frac{1}{2}$ " tapered spindle. (See page 82).	660-29-3000	35.00	1 lb.





THE CARVER'S CHOICE



THE CARVER'S CHOICE includes motor, Foredom bench lathe mounted on $11\frac{1}{2}$ " x 14" baseboard, $\frac{5}{16}$ " shaft chuck arbor for fixed point carving, complete Carver's Work Station (including lamp). NOTE: Flex shaft is NOT included.

660-CC 115 VoltShp wt 27 lbs 444.0	0
660-CC-X 230 VoltShp wt 27 lbs 467.0	0

FLEXADE® FLEX-SHAFT

Convert your lathe, drill press or electric drill into a flex-shaft machine. For best performance, motor speed should operate at 3500 RPM or higher, and ONLY in a forward direction. Any Foredom Quick Change Handpiece can be attached. The 30" Flexade[®] comes with motor coupling. For current models of Foredom's M.BL Lathe and other motors with $\frac{5}{16}$ " diameter shafts.

For Multi-Flex Flex Shaft Carver, older Foredom lathes and other motors with $\,^{1}\!\!/ 4^{\prime\prime}$ motor shafts.

Now you can carve the fixed-point method, or with a flexible-shaft either way with the same unit. Plus, you have a unique coolant/shield setup that protects you from any coolant splash, but with no shields to interfere with a clear line of sight to the work piece as you carve.

The design of our unique shield and coolant system makes this possible. Your line of sight passes over one adjustable clear plastic shield and under the other, leaving you with an unobstructed view as you work, yet protected from any splash and splatter. You control the coolant flow as well, allowing you to adjust the drip to an efficient minimum.

Not only that, you have plenty of room to maneuver your work piece around the fixed-point arbor. The chuck accommodates accessory shanks from $0-\frac{5}{32}$ ". The motor is $\frac{1}{6}$ HP with adjustable speeds form 500-7000 RPM and comes in either 115 Volt or in 230 Volt for use outside the USA.

The Carver's Choice easily converts to allow flexible-shaft carving. Just remove the arbor chuck (included with the unit) and attach a flexible-shaftwhich must have a $\frac{5}{16}$ " coupling. The Flexade[®] sold below allows you to use almost any of Foredoms's handpieces (sold on page 27). We do not include a flexible-shaft with the unit.

When you convert to the flexible-shaft method, you can move the Work Station unit out away from the motor, giving you plenty of room for movement of the flexible-shaft. The Work Station is completely self-contained, and can be used elsewhere in your shop.

Work Station comes with handy flex-lamp, and coolant tank with adjustable valve.

The Carver's Choice unit is the suggestion of master carver Dick Friesen, so it works.



HANDPIECE AND LATHE SHOWN NOT INCLUDED.

GRYPHETTE

Use this handy glass grinder for all your stained glass needs, and apply the same techniques to using stone slabs for creating lampshades, boxes, windows, etc.



This handy glass grinder offers remarkable performance and efficiency at an affordable price that makes it attractive for all your stained glass needs. The Gryphette is handy for wire wrapping too. Use the Grove Grinder Head for a fast easy way to groove around the edges of stone or glass pieces for wrapping your wire.

The Gryphette Grinder features a powerful motor that lets you grind shapes in your material at medium pressure without worry that you will overload the motor, even when using 1" heads.

Working table measures 6-3/4" x 6-3/4"". Overall size of grinder is 7-3/4" x 7-3/4" x 6-1/4" high from base to table top. Unit comes with a flexible spray guard that allows large or specially shaped pieces of glass or stone to be ground without removing the guard, it simply bends out of the way.

The Gryphette is made of high impact plastic, and is so simple and well built that Gryphon offers a 5 year limited warranty.

GRYPHETTE GLASS GRINDER comes with 120 grit, ³/₄" cylindrical diamond head 115 volt.

725-50 6 lbs Shp Wt \$81.25

DIAMOND GRINDING HEADS



Gryphon Diamond Products are unsurpassed for grinding and drilling glass, ceramic, marble and granite. These bits are made to be self sharpening to extend wear and improve performance. Heads are guaranteed not to peel. All heads come with hex wrench.

USING GRINDERS

CYLINDRICAL HEADS: The ³/₄" and 1" diameters heads come in 4 grits. The Coarse head (C) 60 grit, is used for quick material removal. The Standard or Medium head (M) 120 grit, is best for all around grinding. The Fine (F), 220 grit will smooth the marks left by the coarser grits. Extra Fine (X), 600 grit leaves a smooth final finish.

The smaller ¹/₈" and ¹/₄" cylindrical heads or pins, come in Coarse (C) 60 grit, Standard (M) 120 grit and Fine (F) 220 grit. These may be used to drill holes in glass or stone slabs, then used to grind elaborate shapes within the inner surface. Head sits above table

GROOVE GRINDER is great for grooving stone and glass edges to hold wire when doing wire wrapping projects. Comes in Fine (F) 220 grit only.

DIAMOND HEADS							
Dia	Grit	Order #	Dia	Grit	Order #		
1/8''	60	726-0125C	1/4"	60	726-0250C		
1/8''	120	726-0125M	1⁄4''	120	726-0250M		
1/8''	220	726-0125F	1/4"	220	726-0250F		
3/4"	60	726-0750C	1"	60	726-1000C		
3/4"	120	726-0750M	1"	120	726-1000M		
3/4"	220	726-0750F	1"	220	726-1000F		
3/4"	600	726-0750X	1"	600	726-1000X		
Groove	Groove Grinder 220 726-2000M						
	Order Tools by Order Number Shown						
Price ea	\$14.75	5		S	hip Wt 8 oz		

GRYPHON DIAMOND BAND SAW



The simple, rugged construction of the Gryphon Band Saw assures years of service, without expensive and frustrating maintenance. You have a 12" square platform area. The coolant system requires only tap water—add a few drops of our Water Aid (see page 20) to extend blade life. The reservoir measures 10" x 9". Motor is $\frac{1}{3}$ HP direct drive at 2850 RPM.

You can make those "impossible" cuts in rock slabs and even fusion glass with this Gryphon C-40 Band Saw. It works like a wood band saw to cut curves and other intricate shapes in stone and glass. Simply guide the work piece and the saw does the rest. The diamond blade cuts fast and the improved tension adjustment gives you increased control over the cutting process.

- The Gryphon Band Saw uses thin diamond blades which remove less material than wire or ring saw blades, and eliminates "double cutting" on projects such as foiled lampshades. The band saw is also the quietest saw available, and easily cuts the most intricate patterns in glass and stone.
- Our Lapidary version of the Gryphon C-40 comes with one special Heavy Duty Fuser's Blade. This special heavy duty blade is made with coarse diamonds for cutting dense stone, fused glass and other tough materials.
- Both the Heavy Duty Fuser's blade and the Standard Black Diamond blade are 37" in circumference and will fit other band saws using this size blade.

You can cut material up to 3" thick, but you must cut SLOWLY and CAREFULLY. One inch thick material is the maximum practical thickness.

FOR EXPORT USE, a transformer is required. Use the one listed in chart below.

Order #	Description	Shp.Wt	Price
725-70-9800	GRYPHON MODEL C-40 DIAMOND BAND SAW comes with ¹ / ₃ HP 115V motor, coolant system, one Heavy Duty Fuser's Blade Made in U.S.A. Limited one year warranty by manufacturer.	17 lbs.	424.00
726-70-9801	BLACK DIAMOND BLADE – Twin pack. Two high quality diamond blades. Stan- dard replacement blades. 37" x 020" wide x .020" x.140" deep, Standard diamonds	1 lb.	146.25
726-70-9807	HEAVY DUTY FUSER BLADE. Coarse grit diamonds make this blade suitable for cutting rock slabs, fused glass, and similiar tough materials. 37" x 020" wide x .020" x.280" deep, Super Power diamonds.	1 lb.	83.50
726-70-9802	BLADE GUIDES. Pack of 4 replacement guides.	8 ozs.	7.00
726-70-9805	MAINTENANCE KIT. Contains upper and lower bands, and replaceable bushing for lower wheel.	8 ozs.	20.50
104-WIZ-8634	TRANSFORMER, For overseas use, converts 230 volt power to 115 volt power.	8 lbs.	80.00

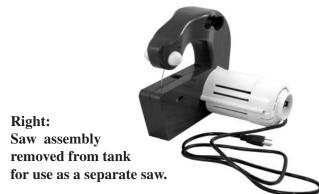
The Gryphon Zephyr+ Diamond Ring Saw lets you cut in any direction, and operation is very smooth and quiet. It's large work surface is free of obstructions, and the overhead blade support is slender, allowing you to have a very clear view of the material as it is cut. In addition, the Zephyr+ has a deeper throat and more clearance than other consumer glass saws.

- The saw is designed for quiet operation and for low maintenance. The critical moving parts are shielded to minimize breathing the glass or rock dust that is generated when cutting. The highest quality bearings and wheels are used to extend the life of these critical parts.
- The motor/blade assembly is a separate unit that can be removed from the base and used as a handheld saw for cutting items that cannot easily be brought to the table. A small water reservoir is built into the blade assembly housing and will hold enough water for a few minutes of hand-held cutting. When the saw is used in the normal configuration (installed in the base), the base will hold enough water for several hours of cutting.
- The Gryphon Zephyr+ will cut glass, tile, rock and all other similar hard materials. A choice of blades lets you select the one that is best suited to your application. We even offer a Separating Blade that will allow you to make inside cuts without requiring a lead-in slot.

GRYPHON DIAMOND ZEPHYR+ RING SAW



Above: Motor/blade assembly combined with tank and large 17.5'' X 17.5'' table.



Order #	Description	Shp.Wt	Price
725-60-4000	ZEPHYR+ DIAMOND RING SAW. comes with ¹ / ₃ HP direct drive 115 V motor, 2 Standard 7" diameter diamond blades, face shield, and Maintenance Kit. Limited 3 year warranty by manufacturer.	19 lbs.	405.00
726-60-4001	Standard 7" Diamond Blade	2 ozs.	68.25
726-60-4002	Separating 7" Diamond Blade	2 ozs.	68.25
726-60-4003	Dichoric Glass Ring Blade, 7", fine grit	2 ozs.	68.25
726-60-4010	Drive Belt, 48" circumference	6 ozs.	29.95
726-60-4011	Purple Idler Wheel, complete	2 ozs.	22.95
726-60-4012	Gold Guide Wheel, complete with bearing and rubber	2 ozs.	30.00
726-60-4013	Rubber Inserts for Gold Drive Wheel, set of 3	2 ozs.	14.95
726-60-4015	Plastic Face Shield, replacement	2 ozs.	10.00
726-60-4016	Work Surface, replacement	1.5 lbs.	40.00

THE WIZARD-4G 6" TRIM SAW



NOTE: The blade is not included with the saw so that you can choose your own blade. Uses $\frac{5}{8}$ " or $\frac{1}{2}$ " arbor hole. To order a blade, see page 56-57 and choose from a number of blade types and thicknesses.

The Wizard-4G measures approximately 12" from front to rear, and 13" from left to right.

WIZARD-4G TRIM SAW

THE WIZARD-4G comes with a sample bottle of Water Aid, angle block and safety goggles.

Shipping Weight 22 lbs.

IMPORTANT SAFETY NOTE

The Wizard-4G is a trim saw and not designed for slabbing rock. Wear Safety Goggles when using saw.

Our Wizard-4G Trim Saw has a new look, improved features and a lower price. Hard to beat that combination. You can't buy a better trim saw anywhere.

- The Wizard-4G makes a full 6" cut—more than some larger saws. Fairly large slabs can be trimmed simply by turning them to cut from opposite directions.
- The Wizard-4G uses water as a coolant and this benefit alone makes the Wizard-4G a pleasure to use. Water is cheap, non-toxic and easy to clean up, unlike every other coolant you can use, especially oils.
- When it comes to cleanup, you can detach the pans from the rest of the saw with the turn of a single thumb screw. Take the pan and the saw table to the sink for cleaning and leave the saw on the work bench. No other saw of any size or description is this easy to clean.
- The Wizard-4G saw housing is stainless steel powder coated for good looks and long life. The saw pan and table are molded from sturdy ABS plastic that's easy to clean and gives years of service.
- The high torque motor has plenty of power for trimming any hardness of rock. Motor has Ground Fault Circuit Interrupter to protect against electrical shock.
- The unique angle block included with the trim saw allows you to finish-trim the edges of your cabs at a ten degree angle, giving you a head start towards grinding the bezel of your cab.

Shown at right is the Wizard-4G with the rip fence attachment and blade, both sold separately. Choose your blade from those on pages 56-57.

RIP FENCE ATTACHMENT: Lets you cut uniform strips. Comes with bracket for attaching to front of saw pan, and adjustable guide bar. Can be used on either side of blade.. Stainless steel, approximately 11" long.

NOTE: The Rip Fence only fits Wizards manufactured after April 2007. Not for older model saws.



TRIM SAWS 45

MODEL TC-6 6" TRIM SAWS

The MODEL TC-6 trim saw actually accommodates fairly large slabs for trimming on it's $8^{1/2}$ " x $9^{3/4}$ "flat table. Add the adjustable vise (sold separately), and you have a slab saw for cutting small rocks.

The table swings up for easy cleaning and filling of the lubricant tank. The table and tank are cast aluminum with a powder coated finish for easy cleaning and long wear. The stainless steel $\frac{5}{8}$ " arbor has two sealed bearings and extra neoprene seal on tank side. Laminated baseboard measures $14\frac{1}{2}$ " x 18".

This saw must be used with oil as a coolant. It's capacity is approximately two pints. We recommend Roc-Oil, for fast cutting without the usual disadvantages of other cutting oils. See page 58 for lubricants.

Blade shown not included. Order 6" blades with 5/8" arbor from pages 55-57.

MODEL TC-6-1000 BASIC SAW

MODEL TC-6-3000 TRIM SAW







SPARE PARTS FOR SAWS ON PAGES 45-48								
ItemOrder #PriceShp. Wt.ItemOrder #Price							Shp. Wt.	
TC-6 Arbor Assy	690-06-2000	140.00	3 lbs.	10TS-B Arbor Assy	690-10-118001	300.00	3 lbs.	
TC-6 Arbor Bearing	690-90-1081	12.00	6 oz.	10TS-B Arbor Bearing	690-90-16202	23.25	8 oz.	
TC-6 Arbor Seal	690-90-5062	6.00	2 oz.	10TS-B Arbor Seal	690-10-102574	11.50	2 oz.	
TC-10 Arbor Assy	690-10-2100	270.00	3 lbs.	10TS-B Arbor Gasket	690-10-100547	3.65	2 oz.	
TC-10 Arbor Bearing	690-90-16202	23.25	8 oz.	10TS-B Sump Gasket	690-10-100545	4.95	2 oz.	
TC-10 Plastic Hood	690-10-2006	123.00	3 lbs.	TC-14 Arbor Assy	690-14-4100	340.00	6 lbs.	
				TC-14 Arbor Bearing	690-90-16204	20.00	4 oz.	



MODEL 10TS-B TRIM/SLAB SAW comes with vise, splashguard and ¹/₃ HP 115V/60Hz motor. 600-10-1219......Shp Wt. 68 lbs......1320.00

NOTE: This saw does not come with a blade. To order a 10" blade, see pages 55-57.

See page 41 for spare parts.

MODEL 10TS-B You'll get years of service from this 10" trim/slab saw.

First, it has all the features needed to make it a versatile trim and slab saw. Easy to use as a trim saw because the vise rotates off to one side to free the table for trimming. With the vise in place, you can slab rocks up to 3¹/₂" in diameter. Table measures 12" W x 17" L. Overall size approx. 29¹/₂" L x 18" W.

Second, it's built solid and rugged with cast aluminum construction with a durable, impact-resistant finish. Arbor shaft is ⁵/₈" stainless steel with lubricated, factory sealed ball bearings, and an extra neoprene oil seal on the tank side.

This saw must be used with oil as a coolant. We recommend Roc-Oil, for fast cutting without the usual disadvantages of oil. (See page 58.) Takes approx. $\frac{1}{2}$ gal. coolant

Vise jaws are steel plate with hardwood facings. Designed for a time-tested, economical gravity feed system, the vise has $1\frac{1}{2}$ " lateral movement for cross-feeding and adjustable stop guide for constant thickness cuts.

Tips for slabbing with gravity feed trim/slab saws



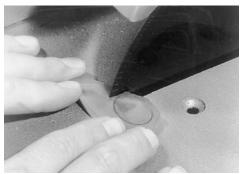
1. Object to be slabbed is clamped in vise. The cut is started by hand pressure.



3. Gravity feed and vise are removed. Once this is done, slabs can be held by hand to be trimmed to desired shape.



2. A bucket of sand is attached to the gravity feed cable to maintain an even pressure throughout.



4. All cuts must be made in a straight line. Be careful not to put side pressure on the blade. Successive straight cuts approximate curved lines that will be finished on a grinding wheel. Make all trim saw cuts outside the template mark.

MODEL TC-10 10" SLAB/TRIM SAW

This 10" saw makes it easy to trim and slab small rocks. A power feed mechanism makes slabbing especially easy.

For slabbing, secure your rock in the vise, push the button, and the power feed goes from there. You can slab rocks up to approximately $3\frac{5}{8}$ " x 6" wide by 6" long. The vise glides smoothly and accurately on two stainless steel rails. Vice cross feed is 2". The power feed has an automatic shut-off switch for safety.

Trimming slabs is also easy. The arbor is centered on the table so that you can get a 90° perpendicular cut every time. The stainless steel $\frac{5}{8}$ " arbor shaft has two sealed ball bearings and extra neoprene seal at the tank for extra long life. The saw table is 13" x 17" with a rim around the edge to contain water and sludge while sawing.

The TC-10 comes with a clear, plastic hood that is easily installed and removed. Splash from the cutting blade is contained within, but you can easily check your progress through the clear hood.

Clean up is easy, too. The table with vise and switches is hinged at one end, and flips up for access to the coolant tank and sludge removal. There is also a drain at one end of the tank. Tank and table is durable aluminum construction with impact resistant finish for long life. Mounted on a 16" x 24" laminated baseboard.

This saw requires oil as a coolant. Tank capacity is approximately one gallon. We recommend Roc-oil. See page 58.

NOTE: This saw takes a 10" blade with ⁵/₈" arbor hole. To order a blade, see pages 55 to 57.

See page 45 for spare parts or call our Customer Service for more information.

MODEL TC-10 SLAB/TRIM SAW Comes with ¹/₃ Hp 115V/60Hz motor, power feed, vise, and see-through hood. (Blade not included.)

600-10-2500...... Shp Wt. 66 lbs1615.00

EXPORT MODEL TC-10X Same as above but with 220V 50 Hz motor.



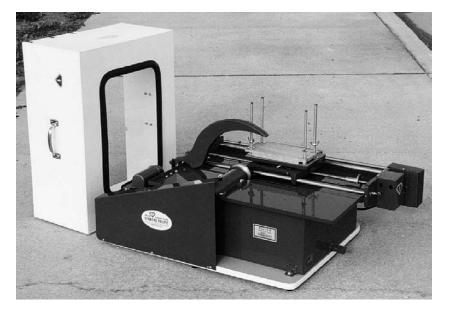
The Model TC-10 10" saw is attached to a 16" x 24" laminated baseboard. Overall length of the saw is approximately 30" to include motor and power feed controls.





See page 103 for goggles. (Included with all Diamond Pacific trim saws)

MODEL TC-14 SLAB/TRIM SAW



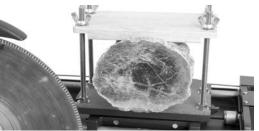
The TC-14 is a convenient size slab/trim saw that will serve the needs of most rockhounds.

The Model TC-14 comes set up to use as a slab saw. The removable table vise easily holds a 5" by 7" rock for slabbing. Larger rocks can be cut depending on their configuration and how they fit into the vise, blade and saw box space.

The vise has over 3" cross feed adjustment, and moves on strong, stainless steel glides. The power feed motor is geared for continuous operation with a slip clutch and safety shut off switch. Once the cut is made, it is easy to pull the vise back to the starting position for the next cut.

The TC-14 is also designed to be used as a trim saw. Large slabs can be held in the vise for trimming off edges or a series of slices. This saw can be converted to a full trim saw by removing the vise system, disconnecting the power feed and leveling the top of the table on one side of the blade (use a piece of board to level) The arbor is mounted on top of the deck so the center of the blade is even with the deck top. This makes 90 degree corner trim cuts easy.

Hood is powder coated steel. Includes acrylic window for viewing



Above: Rock ready for slabbing Below: Large slice ready to trim



Check these features

- Power feed motor is geared for continuous operation.
- Removable table vise holds a 5" x 7" rock. Will cut a 5 ¹/₄" depth over the vise.
- Saw arbor housing is cast aluminum with ³/₄" stainless steel arbor shaft and two sealed ball bearings. Saw table and tank are heavy gauge steel plate. Measures 24"W x 39" L x 21" High.
- Industrial powder coat finish on all appropriate parts.
- Motor available in ½ HP 115V/60Hz or 220V/50Hz.

This saw must be used with oil as a coolant. We recommend Roc-Oil, for fast cutting without the usual disadvantages of oil. (See page 58.) Requires approx. $2\frac{1}{2}$ gals. coolant.

NOTE: Blade not included in saw price. Choice of blade depends on your application. See pages 55-57 or call us for more information.

MODEL TC-14 SAW comes complete with base, tank, vise, power feed assembly, ½ HP 115V/60Hz motor, guards and hood. (Blade not included.) 600-14-1000......Shp Wt. 246 lbs......2750.00 EXPORT MODEL same as above but with 220V 50Hz motor. 600-14-1000X......Shp. Wt. 246 lbs......2880.00 Saw must be crated for shipment. CRATING FEE for either saw.

600-14C.....175.00





Photo shows *blade, vise and table.

* Blade Not Included in Saw Price. Choice of blade depends on your application. Please call for more information.

MODEL SA-18 SWING ARM SLAB SAW

- Overall Size: 38"L x 29" W x 59" H.
- Table is 12" x 13¹/₂" with a cross feed of approximately 9".
- Motor: ³/₄ HP 115V 60 Hz or 220V 50 Hz.
- Shipping Weight: 670 lbs. Must be crated for shipment.
- SPECIAL ORDER: Allow 6-8 weeks for shipment.
- 599-18
 115V 60 Hz
 8449.00

 599-18X
 220V 50 Hz
 8795.00

 500
 75.00
 75.00

SWING ARM SLAB SAWS

In a swing arm type of saw, the blade is mounted on a heavy swinging arm and moves vertically under gravity down through the rock. The rock remains stationary while a cut is being made.

You easily adjust the cutting speed by setting a needle valve that controls the flow of fluid from a hydraulic cylinder that supports the arm.

The arm is raised for the next cut by an electric pump that forces the hydraulic fluid back into the cylinder.

Apart from this smooth, simple feed system that doesn't need the usual sliding (or rolling) carriage, this type of saw has the advantage of using only one-half to two-thirds as much floor space, as they are shorter in the front to rear dimension.

Here are some advantages that you get only in Diamond Pacific's swing arm saws:

- Electric pump to raise the arm rather than a hand pump.
- Single belt drive sealed inside the swing arm,
- Table cross feed uses miter gears so handle can be mounted in front to save your knuckles.
- Table lifts out of saw tank leaving nothing in your way when cleaning the tank.
- Your rock is clamped to a table having a generous amount of travel in both front to rear and left to right directions.
- Adjustable lamp puts light where you need it.
 - Saw tank sits on a cabinet type stand that houses the 15 gal. coolant recirculating system. Tank and cabinet are heavy gauge steel plate with a durable powder coat finish. Oil must be used as the coolant. We recommend Roc-Oil—see page 58.

 MODEL SA-24 SWING ARM SLAB SAW Overall Size: 48"L x 38" W x 71" H. Table is 18" x 20" with a cross feed of approximately 13". Motors 1 UP 115V 60 Up or 220V 50 Up
• Motor: 1 HP 115V 60 Hz or 220V 50 Hz.
115V requires 20 Amp Circuit.
• Shipping Weight: 1360 lbs. Must be crated for shipment.
• SPECIAL ORDER: Allow 6-8 weeks for shipment.
599-24 115V 60 Hz 10,250.00
599-24X
599-24CCrating Fee



The TR Series rock saws (shown above is the TR-24 model) are re-designed and improved saws that we developed from the models we purchased from Contempo Lapidary in 1997. In turn, Contempo had developed their large saws from principles and features used by long time manufacturers such as Highland Park, Beacon Star, Frantom and others. Some of these older saws are still in operation after 50–60 years. We build our modernized saws to the same high standards of long life and performance.

MAXIMUM Work piece SIZES							
Model Blade Size Height Length							
TR-18	18"	6 ¼''	16"				
TR- 24	24"	8 ³ ⁄4"	20"				
TR- 36	36"	14"	25"				

THE MODEL TR SERIES LAPIDARY SLAB SAWS

Built to handle large and heavy pieces of rock, these saws are also widely used in industry for other applications cutting concrete and asphalt specimens for testing in construction projects, slicing core samples in the oil industry, geological specimens, etc.*

Whatever the job, these rugged slab saws are designed for years of dependable service. Our Powerglide Feed System, coolant recirculating system, hood safety switch, superior materials, etc., give you a large slab saw that is easy to use and built to last.

While the diameter of the saw blades makes a difference in the size of the saw and its components, the features and construction of the TR-18, TR- 24 and TR-36 Slab Saws are much the same.

***NOTE:** The standard TR Series slab saws are designed for lapidary use. For other industrial or commercial uses, modifications must be made to the saws. Please call us with your specifications to receive a quote.

SAW BOX AND HOOD

The tank not only serves to contain the coolant lubricant essential to the cutting process, it also forms the foundation or chassis for the saw mechanisms. In the TR Series, the tank is made of welded steel plate rather than sheet metal. Legs are heavy duty angle iron welded to the tank and braced to support the saw and heavy loads. The saw is solid with almost no vibration. The hood is lighter weight steel for easier lifting, with a clear, plexiglass window for viewing the saw blade in operation. The hood confines the saw while in operation for safety's sake, and also confines the coolant which is thrown in a heavy spray from the rotating blade. The TR-36 has gas springs to help raise and lower the hood. The two smaller saws have locking elbow braces with safety locking pin. Two safety switches on all three saws prevent the motor from running when the hood is up.

"V" GUIDE RAIL SYSTEM AND VISE

Since the saws are designed for heavy duty slabbing and quartering of large specimens, the vise and rail system are made to handle the job. V-grooved ball bearing guide rollers glide the vise carriage smoothly on precision ground, steel V-rails attached to heavy steel channels. Exacting tolerances insure matching of hardened bearings, rollers and rails. Alignment of the rails to the blade is within approximately .005 maximum across the full blade diameter.

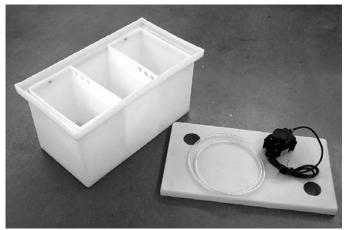
The vise is readily accessible for loading with wood faced jaws that open extra wide. It's made of cast aluminum for the 18" and 24" saws, and welded steel for the 36" saw. The vise is easily adjustable and will hold the material securely as it passes through the cutting blade.

POWERGLIDE HYDRAULIC FEED SYSTEM

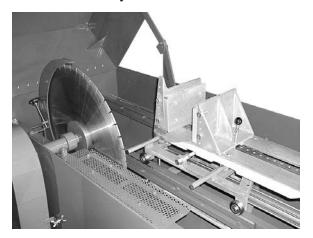
The Powerglide hydraulic feed system is standard on all three saws and is superior to screw feed systems by providing control of cutting speed and length of cut. Your saw blades will cut better and last longer because the hydraulic system feeds the material without slowing down the blade RPM. Another plus is the ability to stop and start the movement of the vise, allowing you to cut a "starting nitch" in any surface. This kind of control helps prevent blade damage and "tweaking" of the rock from the vise.

The system consists of a hydraulic pump supplying fluid to a special hydraulic cylinder that in operation, moves the vise carriage with rock through the blade. Speed and pressures are determined by the type of material being cut, and are set by adjusting the easyto-use regulator, gauge and feed valve.

A safety cut-off device prevents the vise carriage from moving beyond desired length of blade cut.



"V" guide rail system is standard on all 18" to 36" saws. Shown is system for TR-24 saw.



MULTI-STAGE FILTER AND RECIRCU-LATION SYSTEM FOR SLAB SAWS

We've improved and enlarged the coolant recirculating systems for our saws, and have made them available in kits for use on most other large slab saws as well. The system can move large volumes of clean oil over the cutting surface of the saw blade to keep it cool and lubricated. The holding tanks are heavy duty plastic with multiple settling chambers to filter out particles from the coolant. The tank and submersible pump are easily cleaned. See photo below.

Specifications for systems for TR Series saws approximate those given below for separate kits available for other large slab saws.

RECIRCULATING SYSTEMS FOR SLAB SAWS

The kits contain submersible pump, coolant tank, hose and fittings. Systems will fit most saws and are easily installed using common hand tools.

Tanks for 14" - 24" saws hold approx. 15 gal. and measure 17"W x 22"L x 12"H. Comes with lid. Tanks for 30" - 36" saws hold approx. 30 gal. and measure 18"W x 24"L x 18"H. Comes with lid.

Kit Size	Order #	Shp. Wt.	Price
For saws 14"-24"			
pump ¹ /10 HP 115V 60Hz	600-24-8000	14 lbs.	520.00
For saws 14"-24"			
pump ¹ /10 HP 220V 50/60Hz	600-24-8000X	14 lbs.	540.00
For saws 30"-36"			
pump ¹ /10 HP 115V 60Hz	600-36-8100	28 lbs.	639.00
For saws 30"-36" pump ¹ /10 HP 220V 50/60Hz	600-36-8100X	28 lbs.	655.00

MODELS TR-18 AND TR-24 SLAB SAWS

These 18" and 24" saws are the best commercial and industrial models on the market.

The standard TR-18 and TR-24 series slab saws are designed for lapidary use, providing anyone wanting to cut large pieces of rock with a heavy duty, reliable rock saw.

These saws are also ideal for many industrial and commercial needs, such as cutting concrete and asphalt specimens for testing in highway and other construction projects. For those applications, modifications to the saw generally must be made. For anyone with such special requirements, just provide us with your specifications and we will give you a quote on building a saw to fit your particular need.

STANDARD FEATURES FOR BOTH MODELS:

- **Powerglide Hydraulic Feed System** pushes rock to blade for steady cutting. See page 51. Both saws must be used with oil—we recommend Roc-Oil described on page 58.
- V-Guide Rail System with heavy cast-aluminum vise features quick release pin and positive screw tightening. (See page 51.)
- **Multi-Stage Filter and Recirculation System**. See page 47 for complete description of this 15 gallon capacity tank system that makes easy work of the process.



- Arbor Shaft is 1" Diameter in a one piece, cast aluminum arbor housing with sealed ball bearings.
- Heavy Duty Tank of ³/₁₆'' Steel Plate. Tank has sloped bottom for proper drainage of coolant. Heavy steel legs on casters allow moving of saw. Leveling screws on each leg. Steel hood has large plexiglass top window for visibility of saw in operation.
- **Safety Features** include full steel belt guard and hood activated cut-off switch.
- Blade Not Included in Saw Price. Choice of blade depends on your application. See pages 55-57 or call us for more information.

NOTE: 1 HP saws wired for 115V require a 20 Amp circuit and a NEMA 5-20R receptacle. NOTE: 1¹/₂ HP saws wired for 115V require a 30 Amp circuit and receptacle, and are special order.

MODEL TR-18 SAW	MODEL TR-24 SAW
 MODEL TR-18 SAW Tank Size: 45" L. x 27" W. x 14.75" Deep. Overall size: 50" L x 34" W x 47" Tall. Cross Feed: 6" Vise Opening: 7" Depth of Cut: 6¼" with 5" flange Motor: 1 HP Motor: 115V 60 Hz or 220V 50 Hz. Shipping Weight: 670 lbs. Must be crated for shipment. SPECIAL ORDER: Allow 4-6 weeks for shipment. 	 MODEL TR-24 SAW Tank size 61" L x 32" W x 18" Deep. Overall size: 69" L x 37" W x 47" Tall. Cross feed: 8" Vise Opening: 17" Depth of cut: 8³/₄" with 6" flange. Motor: 1¹/₂ HP 230V 60Hz or 220V 50 Hz. Shipping Weight: 890 lbs. Must be crated for shipment. SPECIAL ORDER: Allow 4-6 weeks for shipment.
600-18-8000115V 60 Hz7325.00 600-18-8000X7650.00 600-18C	600-24-9000

MODEL TR-36 SLAB SAW

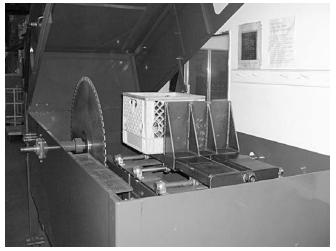




Control panel for Power Glide System is easily accessible.

This 36" professional slab saw is a giant in size and performance

- For all it's size, the Model TR-36 saw is easy to operate and provides professional cutters of gem material, glass and core samples with reliable performance cut after cut.
- The true workhorse and "secret" of many successful cuts is the Power Glide Hydraulic feed system. (See page 51.) The basic design and simplicity of function insures fast, clean cutting of materials. You are able to set pressure and feed at a constant positive pressure. The Power Glide system for the TR-36 even has a "power return" feature which returns the carriage after a slice has been cut.
- Blade is constantly cooled and cleaned by the recirculating system. (See page 51.) Coolant is directed to both sides of the blade throughout the cutting operation. Recirculation tank holds 30 gallons Oil must be used as a coolant. We recommend Roc-Oil for best performance. See page 58.
- Vise is operated by a 1" Acme thread screw. It has a 23¹/₂" opening with 14" depth of cut, 11¹/₂" cross feed for a maximum of 14"H x 23¹/₂"D x approx. 30"W rock size. Jaw face is 15" wide. V-Guide rails have 4" U Channel supports. Arbor shaft is 1".
- The tank is made of ³/₁₆" steel plate and measures 96" long x 40" wide by 27" deep. The hood has four heavy duty, gas assist springs for lifting. Safety shut off switch stops saw when the hood is raised.
- Comes with 3 HP continuous duty motor. Specify 220V 60 Hz. or 240V 50 Hz. (5 HP and 3-phase motors also available in either frequency. Call for quotation.
- Blade not included in saw price. Choice of blade depends on your application. See pages 55-57 or call us for more information.



Cuts rocks up to 14" H x 25" D x Approx 35" W.

MODEL TR-36 SAW

The Model TR-36 Saw is SPECIAL ORDER. Allow 6-8 weeks plus delivery time. Saw must be crated. Shipping weight is 2000 pounds. (Crate size: Approx. 6'H x 5'W x 10'L.)

605-36-1000	230V 60 Hz	17,000.00
605-36-1000X	220V 50 Hz	17,500.00
605-36C	Crating fee	676.00

SPARE PARTS FOR SAWS

When ordering any of the items below, please state catalog number and year and model of your machine, or give a brief description of your machine so that we can send the proper part.

SPARE PARTS FOR TR-18, TR-24 and TR-36 SAWS							
ITEM	FITS MACHINE	ORDER #	PRICE	WEIGHTS			
Arbor Bearing Insert (inner)	TR-18, TR-24	690-90-1160	67.00	8 oz.			
Arbor Bearing Flange (outer)	TR-18, TR-24	690-90-4104	70.00	8 oz.			
Arbor Bearing Insert (inner)	TR-36	690-90-2220	71.00	8 oz.			
Arbor Bearing Flange (outer)	TR-36	690-90-4200	75.00	8 oz.			
Coolant Pump, 110 Volt	TR-18, TR-24, TR-36	690-70-7430	150.00	1 lb.			
Coolant Pump, 220 Volt	TR-18, TR-24, TR-36	690-70-7430X	157.50	1 lb.			
Flange, 5" x 1" (sold individually)	For 18" Saws	690-66-2504	78.00	2 lbs.			
Flange, 6" x 1" (sold individually)	For 24" Saws	690-66-2604	94.50	4 lbs.			
Flange, 8" x 1" (sold individually)	For 36" Saws	690-36-4006	131.00	6 lbs.			
Hydraulic Cylinder	TR-18	690-18-7001	399.00	4 lbs.			
Hydraulic Cylinder	TR-24	690-24-7001	468.00	5 lbs.			
Hydraulic Cylinder	TR-36	690-36-7001	540.00	7 lbs.			
Hydraulic Pressure Regulator	TR-18, TR-24, TR-36	690-24-7102	151.00	1 lb.			
Hydraulic Pump	TR-18, TR-24, TR-36	690-24-7201	354.50	1 lb.			

SPARE PARTS FOR OLDER HIGHLAND PARK SAWS

We have worm gears and worms for some older Highland Park saws. Most older gears have a part number on them, such as G-1039. Use that number to locate and order a new gear from the chart below. Otherwise, send in the old part so that we can match it with a new gear. If you need both a gear and a worm, make

certain to order the proper corresponding worm for the gear. Since there are many older model saws with different gears and worms, we cannot guarantee a fit in every case, but a new part may be returned if unused and undamaged.

V	VORM GEAF	RS		MATCHING WORMS			
Order #	Old Part #	Shp. Wt.	Price	Order #	Old Part #	Shp. Wt.	Price
690-49-103010	G-1031	7 oz.	95.00	690-49-102988	HLTH	2 oz.	46.00
690-49-103028	G-1038	7 oz.	110.00	690-49-102996	HLUH	2 oz.	55.00
690-49-103036	G-1039	1 lb.	126.00	690-49-102996	HLUH	2 oz.	55.00
690-49-103051	G-1047	2 lbs.	303.75	690-49-103002	HLVH	4 oz.	61.00
690-49-103052	G-1046	1 lb.	168.00	690-49-103002	HLVH	4 oz.	61.00

SPLIT NUTS (CLUTCH) FOR HIGHLAND PARK SAWS

These split nuts are for older saws manufactured by Highland Park Co. If you are uncertain as to the size you need, give us a call. We cannot guarantee a fit in every case, but a new part may be returned if unused and undamaged.

00-	······································	F		
Highland Park	Split Nut, ³ ⁄8 - 16	690-49-110630	83.00	2 lbs.
Highland Park	Split Nut, ³ ⁄4 - 16	690-49-116533	83.00	2 lbs.
Highland Park	Split Nut, 1/2 - 20	690-49-110640	83.00	2 lbs.
Highland Park	Split Nut, 5⁄8 - 18	690-49-116640	83.00	2 lbs.
Highland Park	Split Nut, Double 1- 14	690-49-116525	166.00	4 lbs.
Highland Park	Split Nut Spring	690-49-102954	14.25	2 ozs.
				I
Frantom 18"-24" Saws	Split Nut (clutch) 5/8 - 18	690-92-1700	246.00	3 lbs.

SELECTING AND MAINTAINING A DIAMOND SAW BLADE

1. Identify type and hardness of material to be cut.

2. Determine correct blade speed. Blade speed must be matched to the blade used and material to be cut. Hard materials and thick blades require slower speeds. Soft material and thin blades require faster speeds. Refer to Guide to Operating Speeds for Blades below. Thicker blades are generally more durable and last longer, but thinner blades reduce material loss.

3. Evaluate capacity of your saw, and motor RPM. Make sure that your saw runs at the correct RPM's for the diameter of the blade. The chart at the bottom of this page shows speeds for motors running at 1750 RPM. Speed is determined by multiplying the motor RPM by the motor pulley diameter and then divided by the equipment pulley diameter. For example a saw with a 1750 RPM motor, a 3.0" motor pulley, 2.5" arbor pulley will operate at a blade speed of 2100 RPM's. (1750 x $3.0 \div 2.5 = 2100$) Referring to the "Guide to Operating Speeds for Blades" you will see that this is a correct speed for blades from 5" to 10" in diameter. If your saw is not operating at the desired speed, you will need to change the pulley sizes.

4. Consider coolant requirements. Saws with steel parts should be used with an oil type coolant, like our Roc-Oil. Steel core blades work best with oil. If water is used as a coolant, blade must not be left immersed in water.

5. Select rim style. Sintered continuous blades are a good all around lapidary blade. Segmented or notch rim blades have an interrupted surface which increases waste removal and coolant flow.

6. When installing a new blade check your arbor shaft for radial and axial play. Try moving the shaft back and forth and in and out. Any movement indicates that the shaft needs adjustment, new bearings, or replacement. Lapidary blades are manufactured to fit snug on the shaft. If the shaft is worn the blade will not spin concentrically and may bind or wear prematurely. Make certain that all belts on your saw are in good condition and properly tensioned.

7. Flanges are required to support the blade during operation. Flanges must measure at least one quarter of the blade diameter, so a 6" diameter blade would require flanges at least 1.5" in diameter. Make certain that flanges are smooth, flat and parallel. Flanges should be recessed about three quarters of their diameter from their center. This supports the blade while avoiding distortion of its center core.

8. Start cuts by feeding in the work piece when the blade is running at operating speed. If the blade starts cutting to either side of its plane of rotation, you will get a nonparallel cut and may damage the blade. When cut is almost complete, a break may occur, leaving a jagged spur. This spur can damage the blade. To prevent this, infeed pressure should be reduced near the end of the cut.

9. A diamond blade will be come dull or glazed along the cutting edge during use. To sharpen the blade, make a few cuts into a dressing stick, such as those on page 58. CAUTION: DO NOT sharpen plated blades.

10. Diamond on Continuous Rim, Notch Rim and Segmented diamond blades cannot be replaced. Saw Blade manufacturers do not offer repair services of any kind. Be sure you read all recommendations prior to using your diamond saw blade.

GUIDE TO OPERATING SPEEDS FOR BLADES

The chart below shows the recommended operating range for 4" to 36" saw blades. To select the best speed see instructions 2 and 3 of Selecting and Maintaining a Diamond Saw Blade.

Blade Diameter (inches)	Revolutions Per Minute	Blade Diameter (inches)	Revolutions Per Minute
4	2400-5700	14	750-1600
5	1900-4500	16	700-1400
6	1600-3800	18	600-1200
7	1400-3200	20	550-1100
8	1200-2800	24	450-950
9	1100-2500	30	350-750
10	950-2200	36	300-700
12	800-1900		

Motor		Table yields arbor shaft rpm (revolutions per minute) for a 1750 rpm motor										
Pulley					Equipm	ent Arboi	[·] Pulley D	iameter				
Diameter	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0	7.0	8.0	10.0
1.5	1750	1313	1050	875	750	656	583	525	438	375	328	263
2.0	2333	1750	1400	1167	1000	875	778	700	583	500	438	350
2.5	2917	2188	1750	1458	1250	1094	972	875	729	625	547	438
3.0	3500	2625	2100	1750	1500	1313	1167	1050	875	750	656	525
3.5	4083	3063	2450	2042	1750	1531	1361	1225	1021	875	766	613
4.0	4667	3500	2800	2333	2000	1750	1556	1400	1167	1000	875	700
4.5	5250	3938	3150	2625	2250	1969	1750	1575	1313	1125	984	788
5.0	5833	4375	3500	2917	2500	2188	1944	1750	1458	1250	1094	875
6.0	7000	5250	4200	3500	3000	2625	2333	2100	1750	1500	1313	1050

You can calculate the equipment shaft speed for other motor speeds by multiplying the motor rpm by the motor pulley diameter and then dividing by the equipment pulley diameter.

PROFESSIONAL BLADES FOR CUTTING GLASS

These supreme wet cutting blades are custom formulated for chip free, production cutting of glass.

Dia.	Rim Thickness	Arbor Size	Order #	Price
8"	.060	5/8"	300-0806050-85	106.00
10"	.060	⁵ /8"	300-1006050-85	125.00
12"	.080	1"	300-1208080-85	223.00

DIA-LASER STAINLESS STEEL BLADES

- Rust proof stainless steel bodies.
- Excellent performance in water only coolant.
- Cuts fast and free at standard speeds.

DO NOT DRESS DIA-LASER BLADES.

PROFESSIONAL BLADES FOR TILE AND COUNTER TOPS

These blades are specially formulated for use cutting porcelain tile, granite and hard marble. A high-grade diamond crystal matrix is sintered onto a high-carbon steel core. The custom core helps to ensure straight cuts. These blades must be used wet. Rim height 7.5mm.

Dia.	Rim Thickness	Arbor Size	Order #	Price
7"	.067	5/8"	300-0706750-84	91.00
8"	.067	5/8"	300-0806750-84	102.00
9"	.067	5/8"	300-0906750-84	115.00
10"	.067	5/8"	300-1006750-84	115.00
10"	.067	1"	300-1006780-84	115.00
12"	.095	1"	300-1209580-84	141.00
14"	.095	1"	300-1409580-84	178.00

Order your DIA-LASER stainless steel blade from chart below. Choose correct catalog number for your arbor hole size. For shipping weights, see chart on page 57.

DIA-LASER STAINLESS STEEL BLADES

The DIA-LASER Blades from Lapcraft are ultra-thin, stainless steel blades made to conserve gem materials when cutting precious stones. The cutting teeth are premium multi-pointed diamond crystals chosen for their strength and sharpness. These cutting points are securely metal bonded onto the outer edge of hardened, rust proof, circular stainless steel bodies. The end result—super abrasive circular saw blades that cut with speed and ease through the hardest and toughest materials with minimum effort.

Diameter	Rim Thickness	Core Thickness	Arbor	Order #	Price
4"	.024	.012	¹ /2''	109-9020	25.00
4"	.024	.012	⁵ / ₈ "	109-9021	25.00
5"	.024	.012	¹ / ₂ "	109-9040	27.00
5"	.024	.012	⁵ / ₈ ''	109-9041	27.00
6"	.014	.006	1/2"	109-9050	29.00
6"	.014	.006	⁵ / ₈ "	109-9051	29.00
6"	.024	.012	¹ /2''	109-9060	29.00
6"	.024	.012	⁵ / ₈ ''	109-9061	29.00
6"	.045	.025	¹ /2"	109-9070	32.00
6"	.045	.025	⁵ / ₈ ''	109-9071	32.00
8"	.024	.012	¹ /2''	109-9080	44.00
8"	.024	.012	⁵ / ₈ ''	109-9081	44.00
8"	.045	.025	1/2"	109-9090	44.00
8"	.045	.025	⁵ /8"	109-9091	44.00

BD-301 SUPREME NOTCH RIM BLADES

The 301 series of blades are manufactured using a high concentration of industrial diamonds on a notch rim (see figure 1). Specially designed to provide superior cutting of hard materials.

Dia.	Rim Thickness	Arbor Size	Order #	Price
6"	.025	⁵ /8"x ¹ /2"	300-0602554-81	81.00
8"	.040	⁵ /8"x ¹ /2"	300-0804054-81	111.00
10"	.040	⁵ / ₈ "x ¹ / ₂ "	300-1004054-81	134.00
12"	.065	1" x ¾"	300-1206586-81	210.00
14"	.065	1" x ¾"	300-1406586-81	312.00
16"	.085	1" x ¾"	300-1608586-81	402.00
18"	.085	1" x ¾"	300-1808586-81	478.00
20"	.085	1" x ¾"	300-2008586-81	525.00



NOTCH RIM BLADES have a solid diamond sintered kerf for superior cutting of hard materials. Use Roc-Oil as a coolant. (See page 58).



SINTERED CONTINUOUS Rim Diamond Blades, great choice for cutting gemstones and lapidary materials. For best life and performance. Use Roc-Oil as a coolant (See page 58).



SEGMENTED RIM

Diamond Blades. The segmented rim provides for better waste removal and cooler cutting in large diameter blades. Use with Roc-oil (see page 58).

WEIGHT CHART FOR SAW BLADES										
Blade Size	Shipping Weight	Blade Size	Shipping Weight							
4-6"	1 pound	18"	8 pounds							
8-10"	2 pounds	20"	10 pounds							
12"	3 pounds	24"	15 pounds							
14"	4 pounds	*30"	40 pounds							
16"	6 pounds	*36"	70 pounds							

DIAMOND SAW BLADES

For assistance in choosing a blade see page 55.

BD-303 PROFESSIONALTM

The 303 Professional series blades are premium quality with a high diamond concentration. The 4" through 14" blades have a sintered continuous rim for providing smooth cuts (see figure 2)

Dia	Rim Thickness	Arbor Size	Order #	Price	
4"	.014	¹ / ₂ "	300-0401440-83	46.00	
4"	.014	5/8"	300-0401450-83	46.00	
4"	.020	.020 1/2" 300-0402040-83		48.00	
4"	.020	⁵ /8"	300-0402050-83	48.00	
5"	.020	1/2"	300-0502040-83	50.00	
5"	.020	5/8"	300-0502050-83	50.00	
6"	.014	¹ /2"	300-0601440-83	53.00	
6"	.014	5/8"	300-0601450-83	53.00	
6"	.020	¹ /2"	300-0602040-83	55.00	
6"	.020	5⁄8"	300-0602050-83	55.00	
6"	.032	⁵ /8"x ¹ /2"	300-0603254-83	58.00	
6"	.040	⁵ /8"x ¹ /2"	300-0604054-83	62.00	
7"	.050	⁵ /8"x ¹ /2"	300-0705054-83	67.00	
8"	.025	⁵ /8"x ¹ /2"	300-0802554-83	69.00	
8"	.032	.032 ⁵ / ₈ "x ¹ / ₂ " 300-0803254-83		72.00	
8"	.060	⁵ /8"x ¹ /2"	300-0806054-83	74.00	
9"	.060	⁵ /8"x ¹ /2"	300-0906054-83	75.00	
10"	.032	⁵ / ₈ "x ¹ / ₂ "	300-1003254-83	78.00	
10"	.040	⁵ / ₈ "x ¹ / ₂ "	300-1004054-83	81.00	
10"	.050	⁵ / ₈ "x ¹ / ₂ "	300-1005054-83	106.00	
12"	.065	1" x ¾"	300-1206586-83	224.00	
14"	.070	1" x ¾"	300-1407086-83	248.00	
	03 Professio gmented (se		blades in 16" to 36	" diameters	
16"	.085	1" x ¾"	300-1608586-83	294.00	
18"	.085	1" x ¾"	300-1808586-83	356.00	
20"	.100	1" x ¾"	300-2010086-83	459.00	
24"	.100	1" x ¾"	300-2410086-83	777.00	
30"*	.125	1"	300-3012580-83	1119.00	
36"*	.200	1"	300-3612580-83	1741.00	

*** SHIPPING NOTE:**

All 30" and 36" blades are special order and will require longer lead times. 30" and 36" blades must be crated for shipment. Add \$40.00 crating fee to shipping cost. (Crate order number 300-36C)

BLADE COOLANTS

Before buying any saw blade, make certain you know which type of coolant your rock saw requires. All diamond saw blades cut faster in an oil lubricant, but the old standard cutting oils have many undesirable features. Some saw blades and rock saws still must be used with oil, especially the larger blades and saws. Water is now often used as a coolant, but it can rust some blades and rock saws. Using the correct coolant will directly affect blade performance. The following is a general guideline:

SOFT ROCK: Use water, water soluble oil, or oil.

MEDIUM HARD ROCK: Use a water soluble oil or oil.

HARD, DENSE ROCK SUCH AS AGATE: Use an oil coolant only.





These dressing sticks make it easy to sharpen saw blades to keep them cutting properly. Made of special aluminum oxide and designed for dressing diamond blades. Shp. Wt. : 8 oz.

For Blades:	Stick Size	Order #	Price		
4" - 8"	¹ /2" x ¹ /2" x 6"	109-SS-05	4.60		
10" - 14"	1" x 1" x 6"	109-SS-10	10.50		
16" +	2" x 2" x 6"	109-SS-20	23.90		



ROC-OIL—THE ORIGINAL USER-FRIENDLY, HIGH PERFORMANCE MINERAL OIL SAW COOLANT

Our Roc-Oil is a high quality, food grade mineral oil that out performs other cutting oils and without any of their usual disadvantages. Use it to cut any rock, from soft to hard, and in any saw, large or small. You get top quality performance along with user friendly advantages.

****** IT'S NON TOXIC: Roc-Oil is rated as a food grade mineral oil so you know it's safe to handle. It doesn't burn your skin, unless you are very sensitive, and has no disagreeable odor.

****** IT' HAS A HIGH FLASH POINT: Roc-Oil is nonflammable under normal conditions. Its flash point is 309° which is above normal temperatures. It's also above the flash point of similar, lower grade mineral coolants.

Dispose of Roc-Oil following your local requirements for mineral oils.

"ROC-CUT" WATER SOLUBLE LUBRICANT

Use "Roc-Cut" in your trim saws, cabbers, faceting units, and sanders—whatever uses a splash or recirculating system. It's inexpensive (mix 1 part with 20 parts water for sawing and 1 part with 30 parts water for grinding) and it will prevent rusting as well as give you a great cutting lubricant. Nontoxic, non-allergenic, has no vapors, odor or greasy film. Can be filtered and re-used indefinitely. NOT for slab saws when cutting quartz materials, nor for leaving in tank.

711-70-1116.	16 oz	.Shp wt 2 lbs	
711-70-1117.	1 gal	.Shp wt 10 lbs	

WATER AID



Water Aid is a concentrated wetting agent. It increases cutting action of sawing, grinding, and sanding/ polishing operations using water by eliminating surface tension and preventing hydroplaning. It's biodegradeable and normally harmless to skin. Approx. 6 drops per pint is all that's needed.

410-WA-108 8 oz. bottle	11 oz	
410-WA-116 16 oz. bottle		5.25
410-WA-1101 gal	9 lbs	

TYPES OF TUMBLERS

TUMBLE POLISHING STONES

The tumbling of stones has been going on in Nature for eons of time, as anyone who has picked up a smooth and rounded stone from a beach can testify. This process in Nature is the same that man uses today to tumble polish gemstones: rubbing one stone against another in an abrasive substance, and generally in water. Man carries the process a step further—uses machines (tumblers) to achieve a high polish on his gemstones.

Tumblers can come in several kinds and dozens of shapes and sizes, as described on the following pages. All use the basic process of grinding, sanding, and polishing stones through movement in a series of abrasives from coarse to fine.

The steps in tumbling vary from the use of an extremely fine polishing material for only a few hours to put a final polish on a valuable gemstone, to the general sequence of coarse grit (60/90) silicon carbide through three, four or more polishing abrasives in subsequently finer grit, to the final polishing step. This can take from a few days to four to six weeks.

Most stones with a hardness of 5 to 7 $^{1}/_{2}$ on the Moh scale (see page 71) will tumble polish well. Softer and harder stones may still polish, but may require more or special steps and abrasives to achieve a satisfactory polish. Some stones will never polish no matter what you do to them.

Tumble polishing stones is an easy and great way to start kids (and adults) on a lifelong interest in the natural world around them. Finding your own rocks, and turning them into shining marvels of Nature is a rewarding experience.



ROTARY TUMBLERS

Shown is the 25RT twenty five pound Rotary Tumbler. (See page 60.)

Shown is the Mini-Sonic MT-10 Vibratory Tumbler (See page 62.)

VIBRATORY TUMBLERS



There are two main types of tumblers—the rotary and the vibratory. The first tumblers were of the rotary type, where a barrel revolves as it rides on two parallel revolving shafts. The vibratory type sits and shakes, causing the load to move within the barrel but without the harsher action of the rotary. Both types require a series of abrasives starting with coarse and working up to a fine polish.

Rotary tumblers are the most familiar type, and range in barrel capacities from around 4 lbs. to commercial sizes that will process hundreds of pounds of material. The smaller units (2–4 lbs. capacity) are popular for youngsters and beginners, but the less expensive kinds have more maintenance problems. A well built rotary tumbler can last for years, however, even decades, if given care.

Rotary (barrel) tumblers are generally easy to load, require a minimum of attention, and produce satisfactory results on most stones and metals. Their main tumbling action abrades away any sharp edges and points, leaving finished stones with rounded surfaces and contours. Rotary tumblers are not suitable for material that is pre-formed and desired to retain it's shape.

Rotary tumblers generally take more time to finish a load of stones, from four to six weeks or more, depending on material and abrasives used. They also use more grit per load, but generally need fewer steps in the tumbling process, and less attention the rest of the time.

Vibratory tumblers have either mechanical or electronic drives. Mechanical units use motors for power, while the Mini Sonic tumblers use magnetic energy. They have no moving parts such as shafts, belts or pulleys, and are exceptionally long lived.

The action in vibratory tumblers is more gentle than that found in rotary tumblers. The barrel in a vibratory tumbler remains stationary even as it vibrates, producing a continuous movement of material and grit within the barrel.

Because of their unique, gentle polishing action. vibratory tumblers do not wear away the shapes of stones, so that they retain their original form. Hearts and squares will come out as hearts and squares. This makes vibratory tumblers ideal for polishing preforms, carvings, metal jewelry, castings, etc.

Vibratory tumblers are generally faster in polishing a given load of material than a rotary tumbler, but actual time can vary from one day for a final polish on a preform to several weeks on hard-to-polish stones when starting from scratch.

SEE PAGE 109 FOR BOOKS ON TUMBLING.

HEAVY DUTY COMMERCIAL TUMBLERS



Diamond Pacific rotary tumblers are designed for hard use, efficiency and long life. These machines are based on the original Highland Park design. Rotary tumblers are ideal for tumble polishing large loads of stone, light deburring, burnishing, peening, cleaning and finishing metal parts.

Our new 25 pound and 40 pound barrels are made of industrial grade polyethylene like our original 65T barrel. This barrel design does not require any liners. Lids are made water tight by inserting a neoprene rubber gasket between the barrel and the lid.

The double pulley drive on the barrel rollers combined with the polyurethane covers on the shafts eliminates barrel slippage. Rollers are mounted on heavy duty bronze

25RT

50RT

75RT



bearings. Ball bearing guides keep barrels aligned.

Units for use in the USA come with an industrial rated ¹/₃ HP 115V/60HZ motor, heavy duty cord, in-line switch and Appliance Leakage Circuit Interrupter (ALCI) to protect against electrical shock. Units are also available with ¹/₃ HP 220 volt/50HZ motor for use outside the USA. Motor is mounted inside the base.

IMPORTANT NOTE: The weight of the rocks and materials varies, so load capacities listed by weight are approximate and for comparison only. A more

> accurate capacity of the barrel is given by volume. It is important to load your barrel to approximately ³/₄ full, regardless of material and including fillers, abrasives and water. A load that is more or less than ³/₄ full WILL NOT produce proper tumbling action.

Overall Tumbler Dimensions

16" wide x 13" deep x 22" high 25RT: 28" wide x 13" deep x 22" high 50RT: 32" wide x 13" deep x 22" high 75RT: 40T: 28" wide x 13" deep x 22" high 28" wide x 13" deep x 24" high 65T:

Model	Barrels	Load Capacity		Barrel	115V 60Hz	z Models	220V 50Hz	Shp.	
Number	Included	Weight	Volume	Diameter	Order #	Price	Order #	Price	Wt.
25RT	1	25 lbs	2.5 Gal	12"	610-125	612.95	610-125X	687.95	45 lbs
50RT	2	50 lbs	5 Gal	12"	610-150	799.95	610-150X	874.95	63 lbs
75RT	3	75 lbs	7.5 Gal	12"	610-175	954.95	610-175X	1029.95	70 lbs
40T	1	40 lbs	4 Gal	12"	610-140	699.95	610-140X	774.95	65 lbs
65T	1	90 lbs	8.5 Gal	15"	610-165	824.95	610-165X	899.95	74 lbs
		F	or Replacen	nent Barrels a	and Gaskets see j	page 68		-	





HOW THE MT-4 WORKS

The MT-4 Mini-Sonic Tumbler operates without shafts, belts, pulleys, eccentric weight or even a motor—no moving parts, so the MT-4 will far outlast other types of tumblers. It operates on a unique principle employing interrupted electrical current that provides vibration as the driving force powering the rotation of the load. Operating frequency is 3600 vibrations per minute on 60Hz models and 3000 vibrations per minute in 50Hz Export models.

Rotation and intensity is adjustable with solid state electronic controls. During rotation, the tumbling load is alternately separated and compacted during each vibratory cycle. This improves the tumbling process and allows fresh abrasive to be drawn in between materials in the tumbler hopper. Only the contents inside the hopper actually rotate while the hopper itself remains practically motionless except for the driving arc of motion.

Only a small amount of abrasives are required in the Mini-Sonic tumbling process compared to ordinary rotary tumblers. As the abrasive begins to pulverize or break down and

combines with rock dust and water, a slurry or coating mixture is formed, and it is this coating which should be maintained throughout all the tumbling processes. Too much water or too much abrasives will cause materials to collect in the bottom of the hopper and not rotate properly. It is only necessary to maintain a thin coating of abrasive slurry between the materials in the load to keep the polishing process working properly.

NOTE: when polishing with Vibra-Dry compounds, no water is required, and you will not have the slurry described above.

THE MT-4 MINI-SONIC VIBRATORY TUMBLER

The MT-4 Mini-Sonic Tumbler is the best all-around tumbler on the market when it comes to performance, easy operation, and long-lasting service. You can tumble polish almost any kind of stone, from opal to topaz, delicate carvings and preforms, as well as metal items such as coins, jewelry findings, shell casings, etc.

It's unique tumbling operation is the key to the high performance of the MT-4. The vibratory motion is achieved without any moving parts. It improves the polishing process and uses only a small amount of abrasives compared to ordinary tumblers.

Load capacity is approximately four pounds including stone, fillers and abrasives. You control the rotation and intensity of the tumbler operation with solid state electronic controls.

Hoppers give exceptionally long wear. They are made of cast plastisol. With no motor, belts or pulleys to worry about, you have a tumbler built for years of worry free service.

Model	Voltage	Order #	Price	Shp. Wt.
MT-4	115V	432-004	283 .00	11 lbs.
MT-4 *Export	220V	432-004-X	304.00	11 lbs.
MT-4 *Export	240V	432-004-XA	312.00	11 lbs.
Hopper -4 w/ lid	Fits All Models	433-04H	59.00	2 lbs.
Hopper lid	Fits All Hoppers	433-04L	18.50	8 ozs.
Tune up Kit	MT-4	490-402097	49.25	7 ozs.
* Export mode country of		0 or 240 Volt. destination wh	1 .	0

Choose the tumbler that suits your needs: Five MINI-SONIC options to choose from

You control the tumbling action with a Mini-Sonic Tumbler, from the gentle processing of opal to the full power processing of agates, jaspers, topaz, etc. Tumble polish baroques, preforms, beads, sea shells, metals, etc., fast and efficiently and without changing the shapes to any measurable degree. You can even tumble polish carvings without wearing away delicate features.

Both the MT-10 and MT-14 feature dial speed controls for selecting the power required to control tumbling action and speed of rotation.

The Mini-Sonic tumblers are not your ordinary vibratory tumblers—the unique action of the Mini-Sonic tumblers is achieved without shafts, belts, pulleys, eccentric weights or even a motor. Without any moving parts to wear out or a motor to burn up, these tumblers will last longer than other small vibratory type tumblers.

Hoppers are of cast plastisol and the tumbler housing is made of durable ABS plastic. You get quality materials and workmanship in the Mini-Sonic tumbler.

HOW TO ORDER

We offer two tumbler base sizes with a variety of hoppers, as per the options illustrated. First select the base, either the MT-10 or MT-14, that will best suit your needs. Then select the hopper option you prefer, and use the appropriate chart for that option to order from.

You do not necessarily have to limit the number of hoppers you select to the options shown. Having extra hoppers, especially for the polishing stage, is recommended to prevent contamination.

NOTE: Export models come in both 220V and 240V. Please make certain you order the right model for your voltage requirements. Specify voltage or country of ultimate destination.

Choose from two MT-10 options



Option 1 Base with one MT-10 Hopper MIT-1093

Option 2 Base with two MT-4 Hoppers

Option 1 Qty to		115V Model		220V Model		240V Model		Shp.Wt	
	Qty to Order	Order #	Price	Order #	Price	Order #	Price	Ea.	Total
MT-10 Base	1	432-010	380.00	432-010-X	416.00	432-010-XA	424.00	20 lbs.	20 lbs.
Hopper-10	1	433-10H	118.00	433-10H	118.00	433-10H	118.00	5 lbs.	5 lbs.
MT-10 Option 1 Totals		498.00	-	534.00	-	542.00	-	25 lbs.	

Option 2	Qty to Order	115V Models		220V Model		240V Model		Shp.Wt	
		Order #	Price	Order #	Price	Order #	Price	Ea.	Total
MT-10 Base	1	432-010	380.00	432-010-X	416.00	432-101-XA	424.00	20 lbs.	20 lbs.
Hopper-4	2	433-04H	118.00*	433-04H	118.00*	433-04H	118.00	2 lbs.	4 lbs.
MT-10 Optio	on 2 Tota	ls	498.00	-	534.00	-	542.00	-	24 lbs.
* Total for tv	vo Hopp								

Choose from three MT-14 options



MT-14 Shown with One Hopper -14



MT-14 Shown with One Hopper -4, One Hopper -10



Option 1 Qty to		115V Model		220V Model		240V Model		Shp.Wt	
	Order	Order #	Price	Order #	Price	Order #	Price	Ea.	Total
MT-14 Base	1	432-014	422.00	432-014-X	459.00	432-014-XA	467.00	26 lbs.	26 lbs.
Hopper-14	1	433-14H	177.00	433-14H	177.00	433-14H	177.00	6.5 lbs.	6.5 lbs.
MT-14 Optio	n 1 Tota	ls	599.00	-	636.00	-	644.00	-	32.5 lbs.

Option 2	2 Qty to Order	115V Model		220V Model		240V Model		Shp.Wt	
Option 2		Order #	Price	Order #	Price	Order #	Price	Ea.	Total
MT-14 Base	1	432-014	422.00	432-014-X	459.00	432-014-XA	467.00	26 lbs.	26 lbs.
Hopper-4	1	433-04H	59.00	433-04H	59.00	433-04H	59.00	2 lbs.	2 lbs.
Hopper-10	1	433-10H	118.00	433-10H	118.00	433-10H	118.00	5 lbs.	5 lbs.
MT-14 Option 2 Totals		599.00	-	636.00	-	644.00	-	33 lbs.	

Option 3 Qty to		115V Model		220V Model		240V Model		Shp.Wt	
Option 5	Order	Order #	Price	Order #	Price	Order #	Price	Ea.	Total
MT-14 Base	1	432-014	422.00	432-014-X	459.00	432-014-XA	467.00	26 lbs.	26 lbs.
Hopper-4	3	433-04H	177.00*	433-04H	177.00*	433-04H	177.00*	2 lbs.	6 lbs.
MT-14 Option 3 Totals		599.00	-	636.00	-	644.00	-	32 lbs.	

* Total for three Hopper-4's. Price each 59.00.

EXTRA HOPPERS WITH LIDS FOR MINI-SONIC TUMBLERS								
Hopper TypeFits Models:**Load CapacityShp.Wt.Order #Price								
Hopper - 4	All Models	4 lbs. approx.	2 lbs.	433-04H	59.00			
Hopper -10	All except MT-4	8 lbs. approx.	5 lbs.	433-10H	118.00			
Hopper -14	Fits MT-14 only	12 lbs. approx.	$6^{1/2}$ lbs.	433-14H	177.00			
** Load capacity for materials and grit is approximate since materials vary.								

EXTRA LIDS FOR MINI-SONIC TUMBLERS								
Lid Fits	Order #	Price	Shp.Wt.	Lid Fits	Order #	Price	Shp.Wt.	
Hopper - 4	433-04L	18.50	8 oz.	Hopper - 14	433-14L	29.00	1 lb.	
Hopper -10	433-10L	21.00	1 lb.			-		

Build your own VIBRA-SONIC tumbler Select hopper options to suit your own needs

You get to choose the size and number of hoppers for your particular operation with the VSV model series of the Vibra-Sonic tumblers. You can have up to six different loads in various stages of finish going at the same time.

You also get the unique process of the Vibra-Sonic tumblers that produces both a rotary and vibratory tumbling action reducing processing time up to one-tenth that of ordinary tumblers. Only the load rotates at over 2500 vibrations per minute.

Open type hoppers are easy to load and unload, and permit access for inspection during operation. Your materials tumble quietly, quickly and without splash or gas buildup. Even the most delicate of materials can be processed without breakage or loss of detail.

Shown on opposite page are the various combinations for hoppers available for the VSV-12 and VSV-24 machines. The VSV-50 only comes with Hopper-50 which has a 50 lb. load capacity. The capacity of the other combinations varies from 4 lbs. to 28 lbs. Hoppers are individually cast from plastisol for a quiet, long life. Each hopper (except the Hopper-50) is interchangeable with most Mini-Sonic tumblers as well as the VSV models.

HOW TO ORDER

You will first need to choose the VSV model you prefer: VSV-12, VSV-24 or VSV-50. Then you need to choose the proper adaptor for that model, and finally, the quantity and size of the hoppers that will fit the adaptor. The Hopper 50 will only fit on the VSV-50 adaptor. The adaptor for the VSV-12 will hold only a single row of hoppers. In ordering, specify base order number, adaptor order number, and quantity and order number for hoppers you will need to make your machine complete. There are three adaptors, one for each of the three VSV models. When ordering, make certain the adaptor you select is suitable for the hopper you desire.

Base fits all three VSV models. It is made from solid, cast aluminum with a durable powder coat finish. Motor is $\frac{1}{3}$ HP 115V 60 Hz. Export model available in 230V 50 Hz.

UNIVERSAL BASE FOR VIBRA-SONIC VT AND VSV MODELS



Base fits both the Vibra-Sonic VT machines shown on page 66, and the VSV models shown here with their various hopper configurations. VT hoppers are interchangeable without modification; the VSV models do require different adaptors for the different hopper options. Bases are solid cast aluminum with a durable powder coat finish. They have adjustable actions and quiet, sealed bearings. Motor is ¹/₃HP 115V, 60Hz. Also available in 230V 50Hz.

PARTS FOR VIBRA-SONIC VSV MODELS							
Item	Fits Model:	Order #	Shp. Wt.	Price			
Base 115V/60H	All Models	438-BASE	35 lbs.	970.00			
Base 230V/50H	All Models	438-BASE-X	35 lbs.	1072.00			
Adaptor 12	VSV-12	437-A12	5 lbs.	183.00			
Adaptor 24	VSV-24	437-A24	10 lbs.	325.00			
Adaptor 50	VSV-50	437-A50	11 lbs.	238.00			
Hoppers	See below to order.						

HOPPERS WITH LIDS FOR VSV VIBRA-SONIC TUMBLERS								
Hopper Type	Fits Models:	**Load Capacity	Shp.Wt.	Order #	Price			
Hopper - 4	All except VSV-50	2 lbs.	433-04H	59.00				
Hopper -10	All except MT-4, VSV-50	8 lbs. approx.	5 lbs.	433-10H	118.00			
Hopper -14	All except MT-4, MT-10, VSV-50	12 lbs. approx.	$6^{1/2}$ lbs.	433-14H	177.00			
Hopper -50	Only fits VSV-50	50 lbs. approx.	12 lbs.	439-50H	238.00			
Lid, 50H Only fits 50H Hopper***		-	2 lbs.	433-50L	48.00			
** Load capacity	for materials and grit is approximate	e since materials vary.	*** See page 63 f	or other hopper lids.				

Select hopper options to suit your own needs



Base





Honner ontions for VSV-24



Tumbler

VSV-24

+

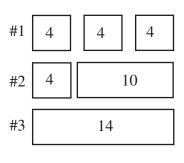


The VSV-24 Model takes the Adaptor-24 on a base.

			PP		Pulo				
	4	4	4		4	10]		14
#1	4	4	4	#2	4	10	#3	4	4 4
	4	10				14]		14
#4	4	4	4	#5		14	#6	4	10

VSV-12





Hopper options for VSV-12

The VSV-12 Model takes the Adaptor-12 on a base.

VSV-50

VSV-50 Model

The VSV-50 Model only takes Hopper-50 and Adapter-50 on a base.



See page 64 to order

COMMERCIAL VIBRA-SONIC TUMBLERS HEAVY-DUTY, LARGE CAPACITY VT MODELS











Universal Base for Vibra-Sonic VT and VSV Models

The VT models of the Vibra-Sonic tumblers have been the industry standard for over 50 years and still out-perform and outlast any other type of vibratory tumbler available.

The unique action produces both vibratory and rotary tumbling action reducing processing time for loads of stone or metal. Material may be processed without breakage or loss of detail.

VT hoppers open for easy access for inspection and loading and are quickly removable for unloading. Tumbles quietly, quickly, without splash or gas buildup.

Universal base fits VT models and VSV models on page 65. VT hoppers interchange without modification. VSV models require different adaptors. Base is powder coated solid cast aluminum. All VT hoppers are cast aluminum, with a soft plastisol liner. Hoppers may be re-lined to extend life, see below.

Base comes with ¹/₃HP 115V, 60 HZ industrial motor. Also available in 230V, 50 HZ model for use outside the USA. Base has adjustable action and quiet sealed bearings. 115 volt model has Appliance Leakage Circuit Interrupter (ALCI) to protect against electrical shock. All three hoppers listed fit the VT base. Select the size that best suits your needs.

VT-12 model features two 6 lb hoppers, allowing you to perform grinding and polishing operations simultaneously. Soft plastisol lids. Base requires two of these hoppers for balance, but you may run only one at a time if desired.

VT-14 single hopper model is ideal for smaller stones or long pieces. Soft plastisol lined cast aluminum lid with wing-nut lock for liquid tight seal. Load Capacity 14 lbs.

VT-35 hopper for large loads or larger pieces. Has cast aluminum lid with wing-nut lock for liquid tight seal. Load Capacity 35 lbs (3.0 gal).

VT MODEL VIBRA-SONIC TUMBLERS							
Item	Fits Model:	Order #	Shp. Wt.	Price			
Base 115V/60Hz	All Models	438-BASE	35 lbs.	970.00			
Base 230V/50Hz	All Models	438-BASE-X	35 lbs.	1072.00			
Hopper VT-12	VT-12	439-06HC	7 lbs.	238.00			
Hopper VT-14	VT-14	439-14HC	16 lbs.	465.00			
Hopper VT-35	VT-35	439-35HC	27 lbs.	553.00			
Hopper Lid	VT-12	439-06HCL	8 oz.	25.00			
Bearing, VT	VT Motor	490-865696	10 oz.	74.50			

VIKING HOPPER RELINES

Viking VT hoppers are solid cast aluminum lined with plastisol. Hoppers are re-lineable for extended usage. To have a hopper relined, send it to us freight pre-paid and allow 45 days for processing your order.

Hopper Model:	Order #	Shp. Wt.	Price
VT-12 Reline	440-021496	7 lbs.	120.00
VT-14 Reline	440-021596	16 lbs.	233.00
VT-35 Reline	440-021696	27 lbs.	297.00
Lid, VT-14 Reline	440-021796	3 lbs.	34.65
Lid, VT-35 Reline	440-021896	4 lbs.	34.65



Using a vibratory tumbler can save you time and money. Unlike rotary tumbling where just the top, sliding layer of the load is being worked, the entire load in a vibratory tumbler is ground or polished continuously. This makes the finishing time shorter. Vibratory tumbling also has the advantage of retaining the overall shape of pieces better while still removing imperfections such as burs. In gem production, vibratory tumbling is preferred for preforms where shape must be retained.

The TV-5 unit is a favorite of hobbyists. It will process about four pounds of rock. Bowl diameter is 8" with convenient solid lid system. (The TV-5 should not be used for continuous commercial use.) The TV-10 has a heavy duty drive and suspension combined with a tough, cross linked polyethylene bowl. Bowl has noise dampening cover and drains for liquid. (Cannot be used with steel shot.)

The AV-18 and AV-40 models are built rugged for industrial use. All are designed with heavy duty drive and suspension systems, and equipped with adjustable amplitude. Machine bowls are made of tough polyethylene with a sound dampening lid to reduce noise while in operation. All bowls have a drain for liquids.

All AV style models are SPECIAL ORDER machines. Please allow 2-3 weeks for delivery.

	Bowl	**Load capacity	Motor	Shp.	110V 60Hz	110V 60Hz Models		Models
Model	Dia.	Material & Grit	Size	Wt.	Order #	Price	Order #	Price
TV-5	8"	5 lbs.	¹ ⁄57 HP	7 lbs.	113-23-001	108.95	113-24-106	119.95
Bowl TV-5	8"	5 lbs.	-	3 lbs.	113-23-005	24.95	113-23-005	24.95
TV-5 Bowl lid nut/grommet -		-	2 oz.	113-23-004	1.90	113-23-004	1.90	
TV-10	10"	10 lbs.	¹ /25 HP	16 lbs.	113-23-009	279.00	113-24-108	285.00
Bowl TV-10	10"	10 lbs.	-	5 lbs.	113-23-010	99.00	113-23-010	99.00
AV-18	12"	18 lbs.	¹ /15 HP	21 lbs.	115-23-024*	495.00	115-24-113*	495.00
Bowl AV-18	12"	18 lbs.	-	5 lbs.	115-23-036*	212.00	115-23-036*	212.00
AV-40	17"	35 lbs.	¹ / ₃ HP	51 lbs.	115-23-026*	1170.00	115-24-114*	1,225.00
Bowl AV-40	17"	35 lbs.	-	16 lbs.	115-23-032*	322.00	115-23-032*	322.00
* Special order, allow 2-3 weeks delivery. ** Approximate-materials vary.								

THE MODELS LISTED ON THIS PAGE ARE FOR STONE FINISHING ONLY, MAY NOT BE USED FOR BURNISHING.

SPARE PARTS FOR TUMBLERS

When ordering any of the items below, please state catalog number and year and model of your machine, or give a brief description of your machine so that we can send the proper part.

Machine	Part Description	Order #	Price	Wt.
Mini-Sonic	Speed control w/knob 115V	490-401996	31.95	2 oz
Mini-Sonic	Speed control w/knob 220V or 240V	490-401997	32.80	2 oz
Mini-Sonic	Compression Spring	490-400196	11.50	1 oz
Mini-Sonic	Foot Spring	490-401196	8.92	1 oz
Mini-Sonic	MT Hopper Latch & Keeper Set	490-405196	13.05	6 oz
Mini-Sonic	Tune Up Kit (Requires 1/MT-4- 2/MT-10 - 3/MT-14)	490-402097	49.25	7 oz
Vibra-Sonic	Motor ¹ / ₃ HP 50/60HZ for VT or VSV Base	490-860996	301.40	18 lbs
Vibra-Sonic	Spring, vinyl coated with cup	490-861696	30.40	5 oz
Vibra-Sonic	Bearing - Rubber Mounted	490-865696	74.50	11 oz
Vibra-Sonic	Bearing - Old style pillow block	490-865996	70.35	10 oz
Vibra-Sonic	Drive Belts, Set of 2	490-861796-2	19.50	5 oz
Rotary	Motor 1/3HP 115V 60HZ with cord/switch/ALCI	690-94-5052	225.00	15 lbs
Rotary, Export	Motor ¹ / ₃ HP 220V 50HZ w/cord & Switch	690-94-5041	300.00	15 lbs
Rotary	Belt, Motor - for all Rotary Tumbler Models	690-91-4340	11.36	8 oz
Rotary	Belt, Shaft - for all Rotary Tumbler Models	690-91-4190	10.00	4 oz
Rotary	Shaft Assy, Long 25RT,12T (w/tubing)	690-30-104463	14.48	1.5 lbs
Rotary	Shaft Assy, Short 25RT,12T (w/tubing)	690-30-104471	14.08	1.5 lbs
Rotary	Shaft Tubing Kit 25RT,12T (2 pieces)	611-93-001	14.76	5 oz
Rotary	Shaft Assy, Long 50RT,40T,65T,24T (w/tubing)	690-30-104430	27.40	2.5 lbs
Rotary	Shaft Assy, Short 50RT,40T,65T,24T (w/tubing)	690-30-104420	27.05	2.5 lbs
Rotary	Shaft Tubing Kit 50RT,40T,65T,24T (2 pieces)	611-93-002	28.80	10 oz
Rotary	Shaft Assy, Long 75RT,36T (w/tubing)	690-30-104406	38.02	3.5 lbs
Rotary	Shaft Assy, Short 75RT,36T (w/tubing)	690-30-104414	37.67	3.5 lbs
Rotary	Shaft Tubing Kit 75RT,36T (2 pieces)	611-93-003	42.48	1 lb
Rotary	Tumbler Guide, long w/bearing	690-30-102618	20.85	6 oz
Rotary	Tumbler Shaft Bearing	690-90-2529-1	8.29	8 oz
25RT	Barrel Assembly, 25 lb polyethylene barrel	611-12502	125.00	4.5 lbs.
40T	Barrel Assembly, 40 lb polyethylene barrel	611-14002	150.00	5.5 lbs.
25RT - 40T	Lid Gasket for new 25 and 40 lb polyethylene barrels	611-12519	20.75	1 lb
65T	Barrel Assembly, 65 lb polyethylene barrel	611-16502	275.00	15 lbs
65T	Lid Gasket for 65 lb polyethylene barrel	611-16519	38.95	1lb
12T Rotary	12 lb Barrel Assembly, Metal Barrel - RED only	611-30-1210	150.00	10 lbs
12T Rotary	12 lb Barrel Liner	611-30-1212	55.00	4 lbs
12T Rotary	12 lb Lid Gasket	611-30-1219	11.95	1 lb
40T Metal Barrel	Metal Barrel & Liner -No Longer Available 11/20/11	Not Available	NA	
40T Metal Barrel	Lid Gasket, for discontinued 40 lb metal barrel w/liner	611-30-4019	25.00	1 lb
For	any tumbler parts not listed please call Customer Service	at the number listed	above.	

NOTE: There is a \$2.00 service fee for orders under \$20.00

USING TUMBLING ABRASIVES

The main principle in polishing stone is to start with a coarse abrasive for grinding, and work through a series of increasingly finer abrasives to the final polish. The process is basically simple, but there are variations in gemstone properties, types of abrasives, many recommended grit (abrasive) sequences, and results produced by the different types of tumblers. All these variations and choices can be confusing, especially to a beginner, so it should be remembered that tumbling is basically simple, not an "exact science", and can be great fun once the basics are mastered.

The first choice to be made is the type of tumbler to be used, Rotary or Vibratory. A brief description of the two types is given on page 59. Further descriptions can be found on the pages in this catalog listing the tumblers themselves.

Both rotary and vibratory tumblers use the standard silicon carbide grits with water in the mix as well as a filler of some type. However, Vibra-Dry mixes can be used in vibratory tumblers for the polishing steps, and produce higher polishes on almost all stones and metals. (See page 71.) Vibra-Dry mixes do not use water, and can be re-used multiple times.

The beginner should be aware that some stones will not polish in either type of tumbler nor with any grit sequence. In order not to waste your time and money, be selective. See section on "Selecting Stones".

Over the years, individuals have developed procedures and grit sequences that give them good results. As a result, you will find that advice, books and manufacturer's instructions vary in their recommendations. All follow the basic principle of tumbling, but reading "Use 80 grit to start" in one source and "Use 60/90 to start" in another is confusing. Both work, and there is actually little difference between those grit sizes. In fact, most grit sizes that are used actually cover a range in particle size. Finer grits and polishes are more closely graded so that particle size is more uniform and so are the results. Finer grits and polishes are more expensive.

Fillers are recommended for use in both types of tumblers and in each step in almost all grit sequences. Fillers soften the action, fill space between stones, and carry the grit to the stone's surface more efficiently. Fillers generally can be reused if thoroughly cleaned between grit sequences. We recommend the ceramic bits for both stones and metals as they seem to do the best job and will last longer.

ROCK FOR TUMBLING



Package contains assorted gemstone materials of suitable size and hardness for tumbling. Mixed varieties, sorry no choice. Stone size varies, but averages 1" in diameter. Can be broken into smaller pieces if desired. Approximately 2 lbs. per package.

403-TR-10......Shp. Wt. 2¹/₂ lbs......12.75

SELECTING STONES

It is important that you select stones that will polish in order to be successful at tumble polishing. The looks of rocks can be deceiving, but in general, those with a hard surface and sometimes shiny look to them, are likely to polish.

Stones with hardness of around 5 to $7\frac{1}{2}$ on the Moh Scale of Hardness are best. This includes the agates and jaspers which are the easiest to polish. Softer and harder stones, and certain stones such as Apache Tears and jade are special challenges, and require special procedures.

MOH SCALE OF HARDNESS

- 1. Talc
- 6. Orthoclase
- 2. Gypsum
- Quartz
 Topaz
- Calcite
 Fluorite
- 9. Corundum
- 5. Apatite 10. Diamond

SCRATCH TEST FOR HARDNESS

Use the simple field test below to identify the relative hardness of a stone. Stones in the range of 6.5 to 7.5 will usually polish well.

Fingernails scratch	2 to 2.5
Pennies scratch	3
Knife blades scratch	5.5
Window glass scratches	5.5
Steel files scratch	6.5
Garnet scratches	7 to 7.5
Carborundum scratches	9.5

SILICON CARBIDE ABRASIVES							
GRIT SIZE	ORDER #	NET WT.	SHIP WT.	PRICE			
UNGRADED	400-0090-01	1 lb.	$1\frac{1}{4}$ lbs.	5.55			
60/90 COARSE	400-0090-02	$2^{1/2}$ lbs.	3 lbs.	11.15			
GRIND	400-0090-05	5 lbs.	$5^{1/2}$ lbs.	18.90			
	400-0090-10	10 lbs.	$11\frac{1}{2}$ lbs.	35.05			
	400-0090-50	50 lbs.	53 lbs.	134.75			
GRADED	400-0220-01	1 lb.	$1^{1}/_{4}$ lb.	6.35			
220	400-0220-02	$2^{1/2}$ lbs.	3 lbs.	13.10			
COARSE GRIND	400-0220-05	5 lbs.	$5\frac{1}{2}$ lbs.	21.30			
	400-0220-10	10 lbs.	$11\frac{1}{2}$ lbs.	37.40			
	400-0220-50	50 lbs.	53 lbs.	143.75			
GRADED	400-0400-01	1 lb.	$1\frac{1}{4}$ lb.	7.20			
400 FINE	400-0400-02	2 lbs.	3 lbs.	12.70			
GRIND	400-0400-05	5 lbs.	$5^{1/2}$ lbs.	25.15			
	400-0400-10	10 lbs.	$11\frac{1}{2}$ lbs.	45.85			
	400-0400-50	50 lbs.	53 lbs.	176.25			
GRADED	400-0600-01	1 lb.	$1\frac{1}{4}$ lb.	7.60			
600	400-0600-02	2 lbs	3 lbs.	13.50			
PRE-POLISH	400-0600-04	4 lbs.	5 lbs.	22.10			
	400-0600-08	8 lbs.	9 lbs.	38.95			
	400-0600-40	40 lbs.	43 lbs.	149.80			
GRADED	400-1000-01	1 lb.	1¼ lb.	10.05			
1000 PRE-POLISH	400-1000-02	2 lbs.	3 lbs.	15.05			
I KL-I ULISII	400-1000-04	4 lbs.	5 lbs.	28.05			
	400-1000-08	8 lbs.	9 lbs.	52.10			
	400-1000-40	40 lbs.	43 lbs.	200.00			

DE ABRASIVES SILICON CARBIDE ABRASIVES



These abrasives have sharp, hard grains for fast cutting. Use in tumblers, flat laps, sphere machines or wherever coarse and fine grinding grits are needed. The grit sequences below are standard, but can be varied depending on material and need. Standard sequence for rotary tumblers is 60/90, 220 and 600 silicon carbide, followed by a polish. For best results, use an aluminum oxide pre-polish 800 grit before the final polish. Use this same silicon carbide sequence including the aluminum oxide pre-polish, in vibratory tumblers. When lapping, add the 400 and 1000 grits to the standard sequence.

NOTE: Silicon carbide abrasives are packaged in sturdy containers for convenient storage and use. Prevents leakage and contamination.

GRIT KITS FOR STONES

Kits are designed primarily for those just learning the fun of tumbling stones. The abrasives included will polish a variety of stones from soft to hard.

The KW-10 kit contains enough abrasives for approximately 8–10 loads for the MT-4 tumbler. You will have less for the Raytech TV-5 and similar

WET KITS FOR ROTARY OR VIBRATORY TUMBLERS

The KW-10 and KW-20 wet kits can be used in rotary and vibratory tumblers, and use water in each step. Kits contain the following: 60/90, 220 and 600 silicon carbide grits, aluminum-oxide prepolish, polish, ceramic media for filler, measuring cups, instructions.

403-KW-10 Shp.wt. 7 lbs 37.80 403-KW-20 Shp.wt. 13 lbs 65.00 tumblers. The KW-20 kit contains enough abrasives to do about 3–4 loads in tumblers with 8 to 10 pound barrels.

When using larger tumblers, it is more economical to purchase grits in larger quantities, and in the grit sizes to fit your needs.

BEGINNING WET KIT FOR MT-4 MINI-SONIC TUMBLERS

The MT-1 kit is designed for vibratory tumblers such as the MT-4 Mini-Sonic tumbler. The kit contains the following: 60/90, 220 and 600 silicon carbide grits, aluminum-oxide prepolish, polish, and ceramic media for filler. You will have enough grit for several loads.

403-MT-1 Shp.wt. 3 lbs 17.00

VIBRA-DRY+ MIXES

We've added two super-fine mixes of 75,000 and 100,000 grits to our improved line of Vibra-Dry polishes. These two super-fine mixes will give the professional a polish on precious stones and fine jewelry pieces that's been only dreamed of until now. You will enhance both the looks and value of your stones and jewelry. Even our standard Vibra-Dry mixes will produce a brilliant finish seldom achieved by any other method.

Vibra-Dry+ mixes allow you to polish stones and metal pieces without the addition of water, additives, thickeners, or fillers of any kind. Everything you need is in the mix. No more worry about keeping the right amount of liquid or slurry levels, and no mess at the end of each polishing step. Vibra-Dry+ is a dry process, so that your stones, coins or jewelry pieces can be easily removed from the mix, cleaned with only a polishing cloth or rinsed in water. The mix is then ready to process another batch of material. You save time, labor and compound, and achieve a superb polish as well.

There are three main ways to use Vibra-Dry+ to polish stones and metals. For someone, especially a professional jeweler, who wants to put a final, outstanding shine to finished pieces of jewelry, loose faceted stones, pre-formed or poorly finished cabochons, then using the 25,000 and 50,000 Vibra-Dry+ mixes fills the need. This applies to most metal pieces as well, such as finished jewelry, castings, coins, etc. In cases of severe tarnish or fire scale, metal pieces may need to be run through one or more coarser grits of Vibra-Dry+ first.

For those wanting to process valuable or delicate materials such as amber, pearls, opals, etc., most of the finishing process may be done just using a series of Vibra-Dry+ mixes, avoiding the use of most or all silicon carbide steps. It just depends on your material.

Then for those just wanting to tumble polish rough stones such as agate and similar gemstone materials, prepare your stones by processing them through the standard silicon carbide grits: 60/90, 220, and 600 grits, followed by 800 grit aluminum oxide pre-polish. This sequence prepares most stones even for standard final polishes, but a far better shine is achieved by then using the 25,000 or 50,000 Vibra-Dry+ mixes.

NOTE: Vibra-Dry+ mixes are formulated for the prepolish and final polishing steps in processing stones and metals in vibratory tumblers. They are not recommended for use in rotary or barrel type tumblers.

The Guidelines given here are just that. For most stones from 6 to 8 in hardness, going through the silicon carbide grits will prepare your stones properly. Softer stones are harder to polish, and you might find that using some of the coarser Vibra-Dry+ mixes will help.

GUIDELINE FOR SELECTING GRIT SEQUENCE						
MATERIAL HARDNESS	USE VIBRA-DRY					
Soft: 2-4 MOH scale (Amber, coral, pearl, etc.)	600-3000-25,000-50,000					
Soft-Medium: 4-5 MOH scale (Apache tears, glass, shell, etc.)	3000-25,000, 50,000					
Medium: 5-6 MOH scale (Jade, opal, turquoise, etc.)	3000-14,000-25,000, 50,000					
Hard:7-8 MOH scale) (Agates, jasper, topaz, etc.)	14,000, 25,000, 50,000					
All stones & metals for super polish	75,000 and 100,000					

VIBRA-DRY EXTENDER

This specially formulated extender compound relubricates standard Vibra-Dry abrasives and extends their life so that they can be re-used longer. NOTE: Cannot be shipped by air or overseas.

420-100299	4 oz	8.75
420-100499	16 oz	

VIBRA-DRY PLUS POLISHING COMPOUNDS									
AMOUNT	1 LB	•	2 LBS.	2 LBS.		5 LBS.		•	
GRIT	ORDER #	PRICE	ORDER #	PRICE	ORDER #	PRICE	ORDER #	PRICE	
600	421-00600-01	26.00	421-00600-02	46.80	421-00600-05	104.00	421-00600-25	455.00	
1700	421-01700-01	26.00	421-01700-02	46.80	421-01700-05	104.00	421-01700-25	455.00	
3000	421-03000-01	26.00	421-03000-02	46.80	421-03000-05	104.00	421-03000-25	455.00	
8000	421-08000-01	26.00	421-08000-02	46.80	421-08000-05	104.00	421-08000-25	455.00	
14,000	421-14000-01	32.00	421-14000-02	57.60	421-14000-05	128.00	421-14000-25	560.00	
25,000	421-25000-01	32.00	421-25000-02	57.60	421-25000-05	128.00	421-25000-25	560.00	
50,000	421-50000-01	34.00	421-50000-02	61.20	421-50000-05	136.00	421-50000-25	595.00	
75,000	421-75000-01	40.00	421-75000-02	72.00	421-75000-05	160.00	421-75000-25	700.00	
100,000	421-90000-01	46.00	421-90000-02	82.80	421-90000-05	184.00	421-90000-25	805.00	

TUMBLING ABRASIVES 71

POLISHES FOR STONE

The polishing compounds on this page are used on pads (see page 18), flat laps (see Tin Lap page 17), or buffs (see pages 9, 38, 83). To use these polishes, make a slurry by mixing polish with either water, mineral oil (like our Roc-Oil on page 58) or a 50-50 oil and dishwashing detergent mixture.

Cerium Oxide, Aluminum Oxide and Tin Oxide are packaged in durable, reusable plastic containers to prevent damage in transit and provide for easy storage.

ALUMINUM OXIDE PRE-POLISH

For use as a pre-polish on soft and difficult to polish stones such as Apache tears and tigereye. Can also be used as a final polish on extremely hard materials (+8 on MOH scale.) Great for slabs. 800 grit. Packaged in plastic containers.

GRIT SIZE	ORDER	NET WT.	SHIP WT.	PRICE
	400-86-01	1 lb.	$1\frac{1}{4}$ lbs.	9.55
800	400-86-02	2 lbs.	3 lbs.	17.15
	400-86-05	5 lbs.	$5\frac{1}{2}$ lbs.	34.70
	400-86-10	10 lbs.	$11\frac{1}{2}$ lbs.	61.95
	400-86-25	25 lbs.	26 lbs.	120.80

ALUMINUM OXIDE POLY PRODUCTS

These high grade polishing aluminas have been custom developed for the Lapidary Industry, use as you would cerium or tin oxides.

POLY-AL LS is an AGRESSIVE powder. At 1.4-1.6 microns, it is an ideal pre-polish.

401-AL-LS-4 4 oz. SizeShip Wt. 8 oz.4.80 401-AL-LS-1..... 1 lb. SizeShip Wt. 1 ¼ lb.14.65 401-AL-LS-5..... 5 lb. SizeShip Wt. 5 ¼ lb.65.11

POLY-AL T is a medium fine powder, 0.8 micron particles. Polishes better than Tin Oxide. Particularly good on hard stones. Ideal pre-polish on softer stones, does not undercut.

401-ALT-4	4 oz. Size	Ship Wt. 8 oz	12.57
401-ALT-1	1 lb. Size	Ship Wt. 1 ¼ lb.	44.00
401-ALT-5	5 lb. Size	Ship Wt. 5 ¼ lb.	195.56

POLY-AL Z most economical of the Poly Products Particles 0.35 microns. Produces an excellent polish. 401-ALZ-4......4 oz. SizeShip Wt. 8 oz.6.90 401-ALZ-1......1 lb. SizeShip Wt. 1 ¹/₄ lb.21.18 401-ALZ-5.......5 lb. SizeShip Wt. 5 ¹/₄ lb.94.11

POLY-AL F the finest of the Poly Products, with particles of only 0.2 microns. This polish will put a superior polish on most any stone that has been properly prepared for polish. Does not break down much during use, so you use less product

401-ALF-4 4 oz. SizeShip Wt. 8 oz.12.31 401-ALF-11 lb. SizeShip Wt. 1¹/₄ lb.43.10 401-ALF-55 lb. SizeShip Wt. 5¹/₄ lb.191.55



CERIUM OXIDE

Cerium Oxide is one of the best all-purpose polishes available. We carry this product in two grades, Standard and Super. Both polishes are considered optical grade Cerium Oxide. Our Standard grade Cerium Oxide will give you an excellent polish when used on pads or buffs. Standard Cerium is generally tan in color. Our Super Cerium Oxide is one of the best polishes we've tested. It gives an excellent polish to almost any stone and works especially well when used on a felt pad. Super Cerium Oxide is generally white in color. Color of both products may vary. (Cerium Oxide is a mined product and may be white, tan, yellow, pink or brown.)

400-80-04 Standard 4 ozShp wt.	8 oz 10.60
400-80-01 Standard 1 lbShp wt.	1 ¹ / ₄ lbs 36.50
400-80-05 Standard 5 lbShp wt.	6 lbs 171.35
402-83-04 Super 4 ozShp wt.	8 oz 20.96
402-83-01 Super 1 lbShp wt.	1¼ lbs75.00
402-83-05 Super 5 lbShp wt.	6 lbs 338.00

LUSTERITE POLISHING COMPOUND

A hard, finely pulverized pyrochemically produced compound suitable for polishing gems of various hardness. Use Lusterite I as you would cerium or tin oxide. Use Lusterite II for tumbling. Mixes with water. Zip lock container. Net weight 1 lb. each.

400-65-01 Lusterite I Shp wt. $1\frac{1}{2}$ lbs.10.00 400-75-01 Lusterite II Shp wt. $1\frac{1}{2}$ lbs.10.00

TIN OXIDE POLISHING COMPOUND

Puts an excellent polish on almost all gemstones, including the hard-to-polish ones. Packaged in plastic containers.

402-90-04 ¹ / ₄ lb	Shp wt.	6 oz 16.55
402-90-011 lb	Shp wt.	1 ¹ / ₄ lbs57.00

FILLERS FOR TUMBLING STONE AND METALS

Fillers are an important addition to the stone/grit mix in almost any tumbling sequence or tumbler. Fillers help distribute the grit to the stone or metal part, and act as a cushion between the parts.

CERAMIC MEDIA

Non-abrasive, angle cut cylinders. Works well as a filler and carrier in tumbler loads of stone. Also used as a burnishing media on jewelry metals. Really speeds the job and helps leave a super finish. Cylinder size approx. $\frac{5}{32}$ " x $\frac{5}{16}$ ". The one pound size comes in a zip lock bag. The 5, 10, and 50 lb. sizes are packed in reusable plastic containers.

CORN COB FILLER

Ground corn cobs. Makes an excellent filler for polishing stones. Softer than walnut shells. Comes in 1 lb. and 5 lb. bags.

400-CC-1... 1 lb...... Shp. Wt. 1 lb. 4 oz. 4.00 400-CC-5... 5 lbs. Shp. Wt. 5 lb. 4 oz. 15.00

WALNUT SHELL FILLER - PLAIN

Makes a good filler for tumbling gemstones. Keeps stones from hitting each other during the tumbling process.

400-WS-1......1 lb Plain Shp. Wt. 1 lb. 4 oz. 3.00 400-WS-5......5 lb Plain Shp. Wt. 5 lb. 4 oz. .. 10.00

WALNUT SHELL FILLER WITH POLISH

Ground walnut shells treated with red rouge make an excellent final polish for metals including silver, gold, brass, etc. Keeps items separated and aids in the tumbling process. Packaged in 1 lb. and 5 lb. bags.

400-WSR-1 1 lb with Rouge Shp. Wt. 1 lb. 4 oz.....4.75 400-WSR-5 5 lb with Rouge Shp. Wt. 5 lb. 4 oz....19.00

STAINLESS STEEL SHOT

BURNISHING COMPOUND

Use with steel shot to achieve a bright finish on jewelry metals. Great on both silver and gold. Starting ratio is a heaping tablespoon to a gallon of water. Adjust as necessary. Net Wt. 1 lb.

400-BC-20......Shp. Wt. 1 lb. 4 oz....... 4.95

POLISHING CLOTHS



DELUXE ROUGE CLOTH

Individually packaged, these cloths are actually a double cloth, one impregnated with rouge, the other without rouge to keep hands clean. Use for final polishing. Size $10" \times 10^{1/2}"$.

BRILLIANT POLISHING CLOTH

DOUBLE BRILLIANT POLISHING CLOTH

POLISHING WHEELS

See page 83 for buffing wheels.



Genuine leather and quality foam rubber discs. Make your own polishing pads or use on regular polishing heads. Rubber is $\frac{1}{4}$ " thick. Shp. Wt. each, 5 ozs.

Dia.	Leather		Leather Foam Rubb	
	Order #	Price	Order #	Price
6"	101-82-110026	5.50	101-82-106526	3.75
8"	101-82-110028	10.75	101-82-106534	5.25
10"	101-82-110020	16.50	101-82-106542	7.75

LEATHER SQUARE KIT

Use these squares of leather to cover your polishing discs. Leather can be cut to fit. Use piece of strong wire contained in kit to fasten leather to your disc. Charge with any polishing compound. Leather can be used rough or smooth side. Shp. Wt. 12 ozs. each.

703-82-122283		16.25
703-82-122291	10" sq. fits 8" disc	19.95
703-82-122309	12" sq. fits 10" disc	23.95

DOUBLE DECK VIBRATORY LAP

You can be rough grinding and finish polishing at the same time with this 18" double pan set-up. Use the top pan with its special premium grade felt pad for all polishing, and the lower pan for the other stages of grind and pre-polish.

Slabs rotate in a circular orbit so there is little damage to any stone edge. Each pan comes with a heavy duty vinyl tubing around the outer edge to act as a buffer between moving slabs and sides of pan.

The upper pan comes with a premium grade wool felt polishing pad that can be charged with a variety of polishes for the final process on your slabs. Each pad should only be used with one type of polish. If you need to use different polishes, each should have its own polish pad to prevent contamination. The polishing pad is used over a smoothsurfaced aluminium plate.

The lower plate is aluminum finished with special indentations for use with silicon carbide grits for grinding and sanding flat stones. It comes with a heavy duty vinyl bumper ring to serve as a buffer between moving slabs and edge of pan.

Brackets hold the two pans in place, one above the other, and are designed for easy removal of the pans.

Machine is made of non-rusting aluminum castings. Only weighs 50 pounds so it can be moved from place to place but is still heavy enough for stability while in operation.

For use overseas, order the transformer listed below.

Item	Order #	Shp Wt.	Price
Double Deck Lap	620-42-2000	53 lbs.	1290.00
Smooth Pan	621-42-2003	12 lbs.	260.00
Rough Pan	621-42-2004	12 lbs.	260.00
Polish Pad	621-93-0060	1 lb.	25.95
Bracket (Set of 4)	621-42-2115	2 lbs.	90.10
Rubber Ball	690-42-2005	6 oz.	5.25
Spring	690-42-2007	6 oz.	10.25
Spider	690-42-2002	7 lbs.	131.25
Counterweight	690-42-2009	8 oz.	26.25
115V Motor, Cord, Switch	690-42-5000	8 lbs.	262.50
Transformer	104-WIZ-8634	1 lb.	80.00



DOUBLE DECK LAP MODEL DL-18 The machine comes with frame, motor, two pans, felt polishing pad, set of brackets.



Double Lap shown with top pan removed.

GRIT SEQUENCE FOR LAPPING

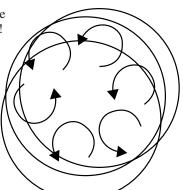
The choice of abrasive grit sizes for the lapping process follows somewhat that in tumbling or stone polishing procedures. The choice also depends upon the material, and preference of the person doing the work. The following sequence of silicon carbide grits is commonly used, and will generally produce a satisfactory polish on most materials: 60/90, 220, 400, 600, 1000, and then a polish. Generally, the more steps the better the polish. Abrasives sold on pages 70, 72.



A UNIQUE DOUBLE ACTION WORKS FOR YOU

While the Vi-Bro-Lap plate oscillates, work-piece rotates! This gives faster grinding surface speed; distributes abrasives, assures a flat polished surface, and equalizes wear on lap plate. Allow 3-4 weeks for delivery.

We have most parts for older Vi-Bro-Laps. Call us for information.



"VI-BRO-LAPS" IN TWO SIZES

Both the 20" and 27" Vi-Bro-Lap models give you the satisfaction of achieving flat surfaces on geode halves, agate, petrified wood and other material, yet relieves you of the necessity for constant attention to the lapping process.

The Vi-Bro-Lap can accommodate a number of specimens at the same time. The tempered aluminum lap plate is grooved in a criss-cross pattern. This permits abrasive particles to circulate between the lap plate and the work piece so that the abrasive itself is continuously being crushed to a smaller size.

When the work piece surface is ground flat and satin smooth use the felt polishing pad with a fine polishing compound to obtain a fine mirror like finish on your work piece.

SPECIFICATIONS

- Lap plates are manufactured from heat treated aluminum alloy to produce a tough, wear-resistant surface. Each surface has milled V-grooves in a square grid pattern.
- Suspension is controlled by aircraft strength cable, adjustable for fine leveling to keep work pieces evenly distributed over the lap plate surface.
- 20VL measures 21" W x 21" D x 21" H. 27VL measures 28" W x 28" D x 30" H.
- Frame is welded, fabricated steel for stability.
- Comes with ¹/₃ HP motor. Felt polishing pad included. Export model, 220 volt/50 HZ available for use outside the USA

Item	20" Model 20VL			27'' Model 27VL			
Item	Order # Shp Wt.		Price	Order #	Shp Wt.	Price	
Model with ¹ / ₃ HP 115V 60 Hz motor	620-41-108415	176 lbs.	2010.00	620-41-108423	270 lbs.	2330.00	
Export model with ¹ / ₃ HP 220V 50 Hz motor	620-41-108415X	176 lbs.	2215.00	620-41-108423X	270 lbs.	2535.00	
Crating fee- machine	620-41-C20	-	195.00	620-41-C27	-	225.00	
Replacement plate	621-41-118208	28 lbs.	670.00	621-41-118190	84 lbs.	870.00	
Crating fee 27VL plate				621-41-118190C	-	65.00	
Polish pad, wool felt	621-41-117101	1 lb.	32.00	621-41-117119	2 lbs.	59.00	
Cable & eye bolt kit	690-41-100438	8 oz.	20.00	690-41-100420	8 oz.	20.00	
Rubber foot	690-41-104120	6 oz.	11.50	690-41-104120	6 oz.	11.50	
Flange bearing	690-90-4120	2 lbs.	67.00	690-90-4120	2 lbs.	67.00	
Pillow block bearing	690-90-5684	2 lbs.	47.00	690-90-5684	2 lbs.	47.00	
Rubber Bumper Ring	690-41-118211	l lb	14.25	690-41-118210	1 lb	14.91	

ROTATING DISC FLAT LAPS

Now you can polish your bookends and large flats on the same machine, using either our Magnetic Novas or the standard process using abrasives on the rotating disc itself.

We've modified our RL Model Rotating Flat Laps to accommodate the speeds and set up necessary for both processes.

For the fastest and most efficient way to polish large flats, we recommend using our Magnetic Nova Laps.

You save time in two ways. First, the actual polishing process for each step is reduced by the speed and efficiency of our resin-bond diamond Magnetic Nova Laps. Under normal circumstances, it only takes 15 to

USING DIAMOND MAGNETIC NOVAS

Our diamond Magnetic Novas are the fastest and most efficient way to polish large slabs on the RL Lap machines.

Our recommended general-purpose grit sequence of Magnetic Novas for RL machines is 30, 60, 280, 600 and 1200 grits, followed by Super Premium Cerium Oxide Polish on a felt pad. We also recommend the use of a 60 grit Plated Diamond Disc to precede the 60 grit Magnetic Nova for those slab surfaces with deep saw marks or other features requiring grinding preparation. Other grit sequences can be used to fit your need

We recommend that Magnetic Novas in diameters 12" and larger be used with 1" arbor holes. The hole prevents the "dead" center of the revolving lap from "grabbing" your work piece, yet does not prevent you from using the entire surface of the lap.

USING THE STANDARD LAPPING PROCESS

If you need to precision grind and polish a flat surface on stone, glass or optics, use the cast iron lap plate of the RL lap, and a series of silicon carbide or other abrasives. The rotating cast iron plate is built to fulfill the fundamental requirements of precision lapping with maximum stability and wheel balance. Lap plates are machined to exacting tolerances and grooved with concentric V-groove circles for retention of the abrasive. Your surface will be FLAT.

Standard grit sequence for most purposes is 60/90, 220,400, 600, 1000, followed by a polish. We recommend our Super Premium Cerium Oxide sold on page 72.

25 minutes for each grit step to polish your large flat. Second, you save a lot of time by not having the usual clean-up job between grit changes. Changing grits with Magnetic Novas simply means removing one flexible lap from the plate and installing the next—taking only a few moments at most. (See photo below.) Since the diamonds in Magnetic Novas are permanently bonded to their working surfaces, there's little chance of contamination.



Magnetic Novas are easy to exchange. To order Magnetic Novas see page 78.



ROTATING DISC FLAT LAPS



Magnetic Plated Diamond Discs and Magnetic Felt Discs listed on page 79 both the use of abrasive grits on the rotating plates, and for use of Magnetic Novas. Machines with variable speed motors are generally not needed, but are available as a SPECIAL ORDER. Call for technical assistance for your application, and for prices.

Item 12" Model		Iodels		Item	18" Models		
Item	Order #	Shp Wt.	Price	Item	Order #	Shp Wt.	Price
12 RL Lap Machine ¹ / ₃ HP 115V-60Hz	620-40-121897	144 lbs.	1725.00	18 RL Lap Machine * ¹ ⁄2 HP 115V-60Hz	620-40-121889	326 lbs.	2625.00
12 RL Lap Machine ¹ / ₃ HP 220V-50Hz For use outside the USA	620-40-121897X	135 lbs.	1825.00	18 RL Lap Machine * ¹ ⁄ ₂ HP 220V-50Hz For use outside the USA	620-40-121889X	326 lbs.	2870.00
12RL Cast Iron Replacement Plate	621-40-117085	25 lbs.	510.00	18 RL Cast Iron Replacement Plate	621-40-117077	76 lbs.	810.00
12 RL Splash Guards (2)	621-40-118457	2 lbs	57.00	18RL Splash Guards (3)	621-40-118458	3lbs.	99.00
Crating fee RL machine	620-40-C12		109.00	Crating fee 18 RL machine	620-40-C18		213.00
* 18" Laps shipped via tru	ıck			Crating fee 18 RLPlate	621-40-117077C		43.00

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MAGNETIC NOVA LAPS FOR LAPPING

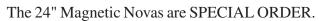
Our Magnetic Nova Laps give you the fast polishing performance of Novas combined with the convenience of an easy on-off magnetic lap. They attach right onto most flat laps and are easily removed.

Magnetic Nova Laps have a 1/16" thick backing of solid rubber containing magnetized iron particles so the laps will adhere to a cast iron, steel or nickel plated lap. The rubber is coated with a thick layer of our special Nova resin-bond diamond formula for fast action and lasting service. The surface of the Magnetic Nova is made with a grid pattern for better performance.

You can use the Magnetic Novas on your present flat lap set-up in most cases, but they will not work on aluminum or diamond coated discs.

This year we have added a new 30 grit to our Magnetic Nova Lap sequence. Our new recommended general purpose grit sequence for sanding and polishing most flats, is to use Magnetic Nova Laps in 30, 60, 280, 600 and 1200 grits, followed by our Super Premium Cerium Oxide Polish on a felt pad. This sequence works especially well when used with our RL laps shown on pages 76-77. For deep saw marks you may add a coarse Diamond Plated Disc. Other sequences may be used with excellent results depending on the material to be polished.

We recommend that Magnetic Novas in diameters 12" and larger be used with 1" arbor holes. The hole prevents the "dead" center of the revolving lap from "grabbing" your work piece, yet does not prevent you from using the entire surface of the lap.





Shown above is Magnetic Nova being removed from an 18RL lap machine.

HOW TO ORDER ARBOR HOLES

Standard Magnetic Novas do not come with arbor holes unless requested. ALL ARBOR HOLES ARE SPECIAL ORDER, BUT THERE IS NO ADDITIONAL CHARGE FOR THIS SERVICE. Allow 2-3 days extra.

To order an arbor hole in any Magnetic Nova, please specify arbor hole size you require by adding the following Special Order numbers to the standard order number of the Magnetic Nova.

For $\frac{1}{2}$ " arbor hole, add -4 to the order number. For ⁵/₈" arbor hole, add -5 to the order number. For $\frac{3}{4}$ "" arbor hole, For 1" arbor hole.

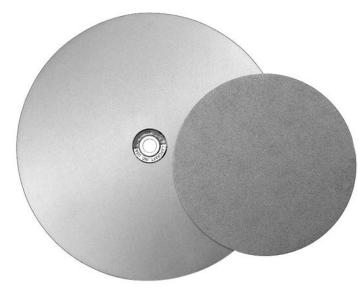
add -6 to the order number. add -8 to the order number.

Example: 100-RM08-60-5 This signifies an 8" diameter, 60 grit Magnetic Nova with a $\frac{5}{8}$ " arbor hole.

If you have any questions, please call our Customer Service Representatives.

	MAGNETIC NOVA LAPS									
Grit Size	8'' Laps: 84.00 ea	12'' Laps: 165.00 ea	16'' Laps: 285.00 ea.	18'' Laps: 335.00 ea.	24'' Laps: 790.00 ea.					
	Order #	Order #	Order #	Order #	Order #					
30	100-RM08-35	100-RM12-35	100-RM16-35	100-RM18-35	100-RM24-35					
60	100-RM08-70	100-RM12-70	100-RM16-70	100-RM18-70	100-RM24-70					
140	100-RM08-15	100-RM12-15	100-RM16-15	100-RM18-15	100-RM24-15					
280	100-RM08-28	100-RM12-28	100-RM16-28	100-RM18-28	100-RM24-28					
600	100-RM08-60	100-RM12-60	100-RM16-60	100-RM18-60	100-RM24-60					
1200	100-RM08-12	100-RM12-12	100-RM16-12	100-RM18-12	100-RM24-12					
3000	100-RM08-30	100-RM12-30	100-RM16-30	100-RM18-30	100-RM24-30					
8000	100-RM08-80	100-RM12-80	100-RM16-80	100-RM18-80	100-RM24-80					
14,000	100-RM08-14	100-RM12-14	100-RM16-14	100-RM18-14	100-RM24-14					
50,000	100-RM08-50	100-RM12-50	100-RM16-50	100-RM18-50	100-RM24-50					
Shp. wt.	1 lb.	1.5 lb.	2 lbs.	3 lbs.	4 lbs.					

MAGNETIC PLATED DIAMOND DISCS

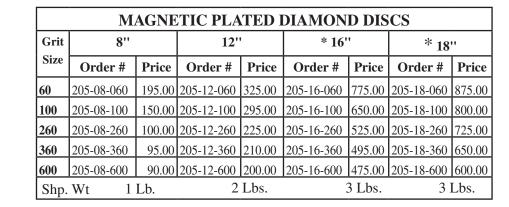


Shown above are the 8" and 12" Magnetic Plated Diamond Discs Magnetic Plated Diamond Discs have diamond metal-bonded to a magnetic backing which will adhere to a steel back-up plate. Grit sizes range from 60 to 600 for grinding and sanding flats. They are especially efficent at removing saw marks from slabs

The 12" and 18" Plated Discs fit our model 12RL and 18RL rotating lap machines (see page 76-77). The 12" Plated Discs have a 5%" center hole, and the 16" and 18" Plated Discs have a 1" center hole.

The 8" Plated Disc has no center hole for an uninterrupted working surface. It can be used with the 8" steel-faced back plate (see page 15) that fits the right hand side of the Titan.

*THE 16" AND 18" MAGNETIC PLATED DIAMOND DISCS ARE SPECIAL ORDER.



SAFETY	WEAR YOUR
FIRST	GOGGLES

FELT DISCS

These discs are ¹/₈" thick wool felt with high tensile strength and excellent resistance to wear. Discs with magnetic rubber backing can be used on metal back plates and laps. Plain discs can be glued to back plates or used in other applications. Polishing compounds will adhere well to the surface.

	Unbacked			Magnetic			
Diameter	Order #	Price	Shp Wt	Order #	Price	Shp Wt	
8"	100-PAD-U-08F	8.85	4 oz.	100-PAD-M-08F	13.35	8 oz.	
12"	100-PAD-U-12F	23.70	6 oz.	100-PAD-M-12F	34.95	1 lb	
18"	100-PAD-U-18F	30.20	1 lb.	100-PAD-M-18F	64.70	2 lbs	



See page 103 for goggles

THE "SCULPTURE" ROCK LATHE

This rock lathe machine lets you preform rounded shapes in stone. You can preform eggs, candlesticks, vases, display bases, handles and spheres up to 8" long and 8" in diameter.

Blade and motor carriage is on a roller cross feed powered by an independent gear motor and lead screw with a clutch. This complete assembly floats freely up and down on roller bearings as it follows the template of your design. The stone is held in place by the heavy duty tightening rod and is rotated into the blade by another independent gear motor. The complete machine is made from powder coated steel plate and has stainless steel rails and coolant pan.

The blade is cooled by a recirculating pump feeding coolant from the pan through two "Lockline" coolant hoses. These adjustable lines allow you to position the coolant flow where you need it. Flow is controlled by valves.

Our Galaxy Carving Wheels can also be used on the Sculpture so that you can finish grind and sand your work piece.

Overall size is $33\frac{1}{2}$ " x 21". Weight is approx. 75 lbs. Must be crated for shipping. Will ship via UPS/FEDEX. ALLOW 4-6 WEEKS FOR SHIPMENT.

THE SCULPTURE ROCK LATHE INCLUDES:

Frame and carriage assemblies made from steel plate that is powder coated for long life. Has stainless steel carriage rails.

Saw blade is powered by high torque motor. Includes two gearhead motors for driving the Y carriage and turning the rod holding the work piece.

Coolant system consisting of recirculating pump, stainless steel coolant pan, two adjustable Lockline coolant hoses and two control valves.

Heavy duty 8" x .090 x ⁵/₈" diamond saw blade.

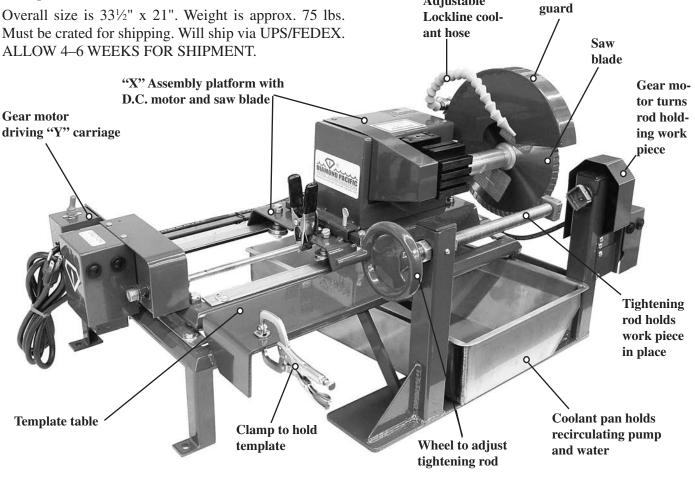
SAFETY GOGGLES SHOULD BE WORN WHEN USING THIS MACHINE.

Shipping Weight 140 pounds. Must be crated.

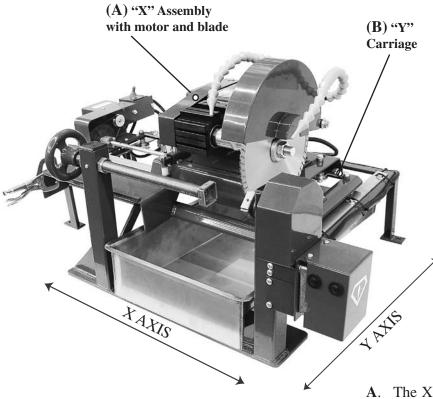
Adjustable

640-34-1000	.115V Model	
640-34-1000X	.230V Model	
640-34C	.Crating Fee	
640-925D	.Replacement Blade	2 lbs157.00

Blade



THE "SCULPTURE" ROCK LATHE



The "Sculpture" is based on the simple XY linear movement principle. The X axis moves across the face of the work piece (from left to right) and is driven by a power feed screw. The Y axis is then left free to move up and down, guided by the template tracer arm following the shape of the template.



A. The X assembly platform is powered by a gear motor driving a screw feed that moves the platform from left to right, keeping the cutting edge of the blade moving across the length of the work piece.

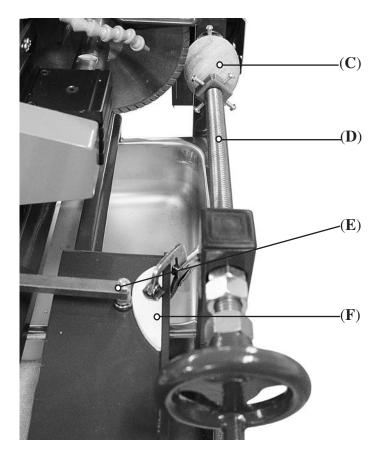
B. The Y carriage assembly carries the X platform and moves it up and down, and is guided in its movement by the template tracer arm following the shape of the template.

C. Work piece is held in place by the tightening rod. The work piece is rotated in place by a gearhead motor as the blade moves across the work piece, following the template.

D. Tightening the rod adjusts to fit work piece between the clamps holding it.

E. Template tracer arm has a special roller bearing that fits the edge of the template which must be at least $\frac{1}{4}$ " thick. As X platform moves to right, template tracer bearing follows edge of template, guiding Y carriage in moving saw blade to cut desired shape.

F. Template for egg shaped work piece shown clamped in place on template table. Template represents one-half of desired shape of finished piece.

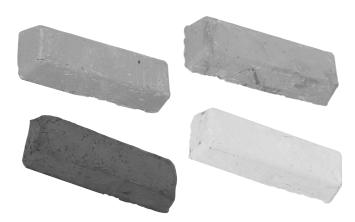


METAL POLISHES



EURO GOLD AND SILVER POLISH This is the ideal product for gently polishing that will leave a brilliant luster to gold, silver and other metals. Restores, polishes, cleans and protects in one easy step. Made in Germany. Replaces EuroShine sold previously. Comes in 3.33 oz tube.

150-POL-68515.95



RED ROUGE – The standard compound for a final coloring and a high polish on precious metals such as gold and silver. Not for burnished surfaces. Bar weight 16 ozs.

TRIPOLI (Brown) – The most popular general compound for cutting down and buffing base metals. Gives a smooth, satin finish to copper, aluminum, pewter, gold and even hard plastic surfaces. Also ideal for preliminary coloring operations. Bar weight 9 ozs.

GREEN ROUGE – Produces a super bright finish on most white metals. This rouge has some cutting action and should not be used on plated articles. Works like ZAM on stones. Bar weight 12 ozs.

400-304.85

WHITE ROUGE – Fast cutting, produces high gloss finish on white metal such as stainless and chrome. Bar weight 12 ozs.

YELLOW ROUGE – Good all-around, low residue compound for use on gold, chrome, platinum, stainless steel and other hard metals. Bar weight 1 lb.



WORKING HANDS AND WORKING FEET

These hand and foot creams really work, just like you. O'Keeffe's products are Odorless, Hypoallergenic, and Non-greasy. These non-oil based formulas pull water in rather than repel it like other products on the market. Helps chapped hands and cracked feet get the moisture and hydration they need to heal. Guaranteed Relief in Days. Made in USA.

165-WH34 Hands..... 3.4 oz jar ... Shp wt. 4 oz. ...7.30 165-WH32 Feet 3.2 oz jar ... Shp wt. 4 oz. ...7.30

ARBOR ADAPTOR FOR BUFF WHEELS

Adaptor has $\frac{1}{4}$ " shank to fit most electric hand drills. Fits wheels with $\frac{1}{2}$ " arbor hole. Flanges hold wheels securely. For wheels 4" or more in dia. 200-AA-505 6 oz.5.25

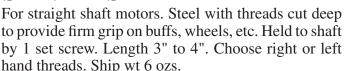


FLANGES FOR WHEEL BUFFS

Use on buffing wheels with 1" bore centers for increased efficiency and safety. Aluminum, sold in pairs. Ship. wt. 3 oz. pr.

Order #	Arbor Size	Price
200-AF-535- ¹ / ₂	1/2''	1.10
200-AF-535-5/8	5/8"	1.10
200-AF-535-¾	3/4"	1.10

TAPERED SPINDLES



For Shaft	L/H	R/H	
Diameter	Thread	Thread	Price
1/4"	154-TSL1	154-TSR2	15.00
5/16"	154-TSL7	154-TSR8	15.00
3/8"	154-TSL3	154-TSR4	15.00
1/2"	154-TSL5	154-TSR6	15.00
5/8"	154-TSL9	154-TSR10	15.00



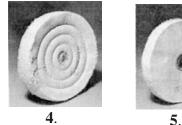


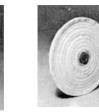
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1.

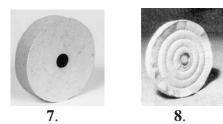


3.





6.



7. SOLID FELT WHEELS

Now in those hard-to-find larger sizes and all three hardnesses. Buffs are made of high grade wool felt compressed for uniform texture and hardness. For polishing and lapping metal and stones. Can be charged with polishing compounds. Wheels are bored to 1", and may be bushed to fit $\frac{3}{4}$ ", $\frac{5}{8}$ ", and $\frac{1}{2}$ " arbors. Order # Size Hardness Shp Wt Price

Order #	Size	Hardness	Shp Wt	Price
148-615-	$H = 6 \times 1 \frac{1}{2}$	Hard	1 lb.	71.90
148-615-	$M = 6 \times 1 \frac{1}{2}$	Medium	1 lb.	61.94
148-615-	$6 \times 1 \frac{1}{2}$	Soft	1 lb.	55.30
148-815-	$H = 8 \times 1 \frac{1}{2}$	Hard	2 lbs.	127.82
148-815-	$M = 8 \times 1 \frac{1}{2}$	Medium	2 lbs.	110.12
148-815-	S 8 x 1 $\frac{1}{2}$ "	Soft	2 lbs.	98.24

8. MUSLIN AND FLANNEL BUFFS for Gem Makers. All six have 1" arbor holes. To use on other size shafts use Flanges for wheel buffs listed on page 82.

Order #Fits Machine TypeDia.StitchingPlyShp.Wt.Price100-JPK3PixieMuslin4"2 Rows402 oz.4.75100-JPK4PixieFlannel4"2 Rows302 oz.6.75100-JPK1GenieMuslin6"3 Rows605 oz.10.75100-JPK2GenieFlannel6"3 Rows305 oz.9.45100-JPK5TitanMuslin8"4 Rows5510 oz.16.95100-JPK6TitanFlannel8"3 Rows3010 oz.12.80

WHEEL BUFFS

These buffing wheels come in a variety of materials for different applications.

Buffs come with standard pin hole type center to fit tapered spindles. For buffs with 1" arbor hole to fit Gem-Makers, see #8 below left..

1. COARSE MUSLIN - Shellac centers, use with adhesive compounds such as Tripoli for removing scratches.

Order #	Dia.	Stitching	Ply	Shp. Wt.	Price
200-CM4X42	4"	3 Rows	40	2 oz.	3.75
200-CM6X50	6"	4 Rows	50	5 oz.	8.15

2. FINE MUSLIN - Premium White. 80/80. Leather centers, use with any rouge compound for a bright finish.

Order #	Dia.	Stitching	Ply	Shp. V	Wt.Price
200-FM4X50	4"	3 Rows	50	2 oz.	4.80
200-FM6X60	6"	4 Rows	60	6 oz.	10.25
200-FM8X50	8"	4 Rows	55	10 oz.	15.95

3. MUSLIN, YELLOW TREATED - Premium 86/80. Chemically treated for use with abrasive compounds for cut down. 4" shellac center. Buff 200-YL6X20 has leather center. Buff 200-YL6X50 has shellac center.

Order #	Dia.	Stitching	Ply	Shp. V	Vt.Price
200-YL4X40	4"	3 Rows	40	2 oz.	5.60
200-YL6X20	6"	4 Rows	20	4 oz.	6.00
200-YL6X50	6"	4 Rows	50	6 oz.	14.65

4. CANTON COTTON FLANNEL - Soft 8 oz. flannel with shellac centers, use with rouge for final polish.

Order #	Dia.	Stitching	Ply	Shp. V	Wt.Price
200-FL4X30	4"	3 Rows	30	2 oz.	5.75
200-FL6X30	6"	4 Rows	30	5 oz.	8.45
200-FL8X30	8"	4 Rows	30	10 oz.	11.80

5. LOOSE PLY MUSLIN - Premium 80/80. Has no stitching, lead center. Use for final polish with rouge. The 4" buff is made of COARSE muslin, and the 6" buff is FINE muslin.

Order #	Dia.	S	titching	Ply	Shp.Wt.	Price
200-LC4X36	COARSE	4"	None	36	4 oz.	5.60
200-LC6X54	FINE	6"	None	54	8 oz.	10.85

6. RAZOR EDGE - Muslin 86/80, yellow treated, leather center. For use with abrasive or rouge in hard-to reach areas.

Order #	Dia.	Stitching	Ply	Shp. Wt.	Price
200-RE4X12	4"	4 Rows	12	2 oz.	5.00
200-RE6X12	6"	8 Rows	12	3 oz.	7.10



optivisor[®] The original Binocular Magnifier with optical lenses

Don't settle for plastic lenses when it comes to saving your eyesight and improving your vision for close-up work. OptiVisor's lenses are prismatic, optical glass ground and polished to precise, optical standards. They are bevel edged and mounted in an interchangeable plastic frame, allowing you to have different lens powers for different needs. OptiVisor is still your best buy in a headband magnifier.

OptiLOUPE

Order #	Magnification	Shp. Wt.	Price
116-DA-02	Magnifies 1 ¹ / ₂ X at 20" focal length	12 oz.	57.65
116-DA-03	Magnifies 1 ³ / ₄ X at 14" focal length	12 oz.	57.65
116-DA-04	Magnifies 2 X at 10" focal length	12 oz.	57.65
116-DA-05	Magnifies 2 ¹ / ₂ X at 8" focal length	12 oz.	57.65
116-DA-07	Magnifies 2 ³ / ₄ X at 6" focal length	12 oz.	59.62
116-DA-10	Magnifies 3 ¹ / ₂ X at 4" focal length	13 oz.	59.62
116-DA-LP1	OPTILOUPE Monocular attachable lens. Adds 2 ¹ / ₂ extra power to your OptiVisor. Attaches to either eyepiece.	2 oz.	13.13
116-DL	Lens Plate Nos. 2, 3, 4 & 5 State number when ordering.	2 oz.	35.85
116-DL-07	Lens Plate No. 7	2 oz.	37.68
116-DL-10	Lens Plate No. 10	2 oz.	37.68
116-DA-00	Headpiece assembly, No lens*	10 oz.	28.69
116-PT3	Leather comfort band	1 oz.	6.27

Opitivisor is equipped with these unique features

- Adjustable Headband Conforms to fit all head sizes - fabricated from a special blend of lightweight ABS material - comfortable when worn for long periods of time.
- It Tilts Adjustable pivots allow the visor to be tilted out of the way when not needed and at your fingertips when you need magnification.
- Genuine Leather Comfort Band - Padded with orthopedic felt - adds to comfort.
- Made completely in the U.S.A by skilled craftsmen.

OptiVISOR

as seen by normal vision **OptiV** 1¹/₂ X at 20" **Op**1³/₄ X at





 1½ X at 20"
 1¾ X at 14"
 2 X at 10"
 2½ X at 8"
 2¾ X at 6"
 3½ X at 4"
 OptiLOUPE Option

 ORDER OPTIVISOR IN ANY OF THESE SIX LENS POWERS
 Adds 2½ X
 to all models

116-DA-LPI

The VisorLIGHT[™] Puts light on your viewing area when using your optivisor[®]

New Visorlight[™] attaches to your Optivisor, illuminating the magnified viewing area as you work. Gives you a hand-free light with 6000 candle power Xeonon Laserbeam. Takes two AA batteries for 4 to 5 hours use. Made in U.S.A.

MODEL LT-06 Has 10" cord for mounting on back side of visor (as shown below.)

MODEL LT-42 Has 42" cord and clips to allow battery pack mounting on belt or in pocket.

REPLACEMENT BULBS for LT-06 and LT-42

116-LT-2204.......Shp. wt. 8 oz......7.98



HAND LENS

DIAMOND CUT 10X LENS

Diamond Cut is attractive and provides better grip. Triplet. 10X has good depth of field. Comes in either 18mm or the 21.5mm with larger field of view. Black finish. Leather case. (The 747 has larger lens than the 745 shown in photo.)

150-ELP-745	 2 oz	
150-ELP-747.	 2 oz	

TRIPLET 10X LENS

Economical yet offers 10X, 18mm triplet lens. Black finish. Comes with leather case.

150-ELP-744	 .1	1.	5

LARGE 21.5mm 10X TRIPLET LENS

Case is hexagonal, but head is actually an elegant twelve faceted design. Silver finish. Leather case.

DIAMOND TRIPLET 10X 20.5mm LENS

Quality three-piece bonded lens is ground for distortion free viewing and extra sharpness. Rubber grip added for comfort and better control. Chrome/ Black. Leather case.

HEXAGONAL 15X TRIPLET LENS

A more powerful 15X lens with three-piece, color corrected lens. Has 20.5mm field of view. Chrome/Black. Leather case.



TWIN GRIP with 2X power magnifier. Ball joints permit positioning of clamps and magnifier at any angle. Center bar can be removed and replaced with crosslock tweezers.

745

EXTRA HAND has many uses in jewelry making and other crafts. It keeps your hands free for soldering, gluing, and positioning, while work is held firmly at any angle required. Has a 6 1/2" long, self-locking tweezer mounted in double ball joints connected to a heavy iron base. Base may vary from that shown. Replacement tweezer is nickel plated. 160-HO-475......1 lb. 4 oz. 10.95

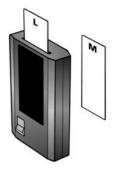
160-TW-385 Replacement tweezer 8 oz. 3.95



TWIN GRIP

"THE TRIPLE" MULTI-WAVE FLUORESCENT LIGHT

This compact, portable ultraviolet lamp emits UV A or UV B or UV C wavelengths. Just change out special insert sheets stored in lamp. Has 4 watt UV C ultraviolet lamp/tube that operates on two AA batteries.











SOLID STEEL MANDREL

ALUMINUM MANDRELS



JEWELER'S SHEARS

SUPER SHEARS

152-51IK-50+	1/2	······	10.55
152-SHR-305	5½'	6 oz	14.45

SHEARS

Cut up to 20 gauge sheet stock with these high quality shears. Made	
of steel with tempered blades. Overall length is seven inches with	
$1\frac{1}{2}$ " blades. Come with straight or curved blades. Made in France.	
152-SHR-530	
152-SHR-531	

KNOT CUTTER

ALL PURPOSE SCISSOR

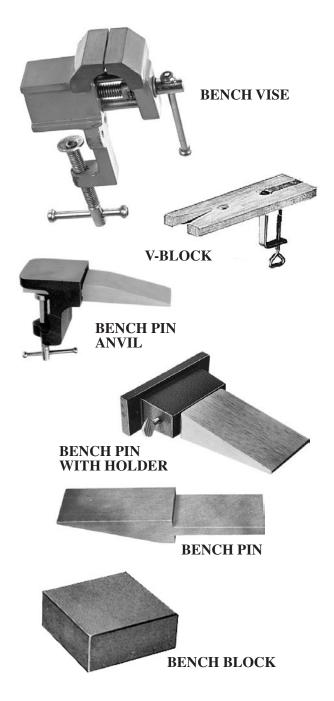
THREAD CLIPPER

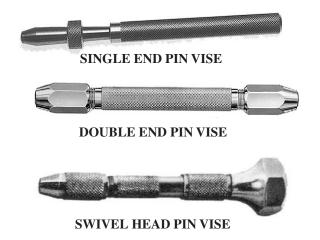
RING MANDRELS

PIN VISES

SINGLE-END SLIDE PIN VISE Pin vise has knurled slide for easy one-hand operation. Capacity of 0 to 0.8mm. Length is $4 \frac{1}{2}$ ".

SWIVEL HEAD PIN VISE All metal, hexagonal swivel head pin vise comes with two double end collets for 0 to 3.3mm" capacity. Overall length of pin vise is $3^{1}/_{2}$ ".





BENCH VISE

V-BLOCK AND CLAMP

This handy bench extension gives the extra support and space needed for filing, sawing, and drilling. Especially useful when using jeweler's saw. Block size: $2^{1}/4$ " x $7^{1}/2$ ". Clamp fits table up to $1^{3}/4$ " thick.

BENCH PIN-ANVIL COMBINATION

For supporting pieces being flattened, filing and laying out work. Anvil top is smoothly finished. Wood pin measures 4" long by $1\frac{3}{4}$ " wide and is replaceable.

160-AN-118	
160-BP-170 Pin only7"L x 13/4"	W5 oz3.95

BENCH PIN IN METAL HOLDER

Holder screws onto edge of work bench, extending working space. Thumb screw holds wood bench pin which is included. Pin is $5\frac{1}{2}$ "L x $2\frac{1}{4}$ " W.

BENCH PIN

BENCH BLOCK

Used to support work while flattening or when laying out designs	
Case hardened steel milled smooth. Measures $2\frac{1}{2}$ " x $2\frac{1}{2}$ " x 1".	
160-AN-125 1 lb	









HAMMERS

BRASS MALLET

Nicely balanced, solid brass head will not mar soft or delicate metals. Head 2" long on metal handle.

150-HAM-215	5
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CHASING HAMMER

BALL PEEN HAMMER

Hardened steel head with hardwood handle. Made especially for the jeweler.

102-HA-3302 0Zsnp.	0. WL 0 02	4.70
162-HA-351 4 ozshp.	. wt. 8 oz	5.90

RAWHIDE MALLETS

JEWELER'S SAWS

DEEP THROAT SAW FRAME High-quality, well-balanced frame is strongly constructed with hardwood handle. Adjusts to accommodate broken blades. 5" deep throat.

150 5110 050......

JEWELER'S SAW BLADES

These saw blades are premium quality at a reasonable price. Come 12 per package. Blades increase in size from 4/0 to 0 and from 1 to 4. Size #4/0 is smallest blade and #4 is largest. Price is \$2.50 per pack of 12. Shp. wt. 1 oz per pck.

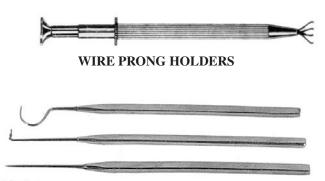
Order No.	Size	Order No.	Size
150-SAW-400.03	4/0	150-SAW-400.07	1
150-SAW-400.04	3/0	150-SAW-400.08	2
150-SAW-400.05	2/0	150-SAW-400.09	3
150-SAW-400.06	0	150-SAW-400.10	4

DIAMOND WIRE SAW BLADES

These diamond wire saw blades cut forms and shapes in any slabbed stone-jade, quartz, agate, glass, etc. Also cut silver and copper. Cut in any direction.

-	

106-3106	³ /4 mm	180 grit	. 2 oz 18.00
106-3105		-	
150-SAW-270.6		-	
150-SAW-271.0		U	
150-SAW-271.2		-	
150-SAW-271.4		0	

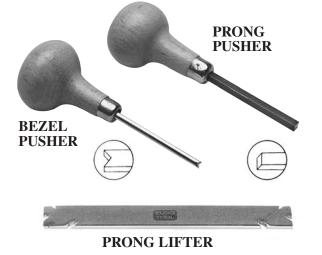


SET OF 3 PROBES

BEZEL ROLLER Polished steel rocker in wooden handle. Rolls and pushes bezel against stone in rings, broaches, pendants, etc. Recommended for larger settings.

BURNISHER When smoothing and finishing soft metals or setting edges on knives and scrapers, jewelry hobbyists, model makers, and metal workers reach for these burnishers. Oval-shaped, tool steel, $1\frac{1}{2}$ " long blade is set in wood handle.

160-BS-121	. Curved	2 oz	2.95
160-BS-111	. Straight	2 oz	2.95



WIRE PRONG HOLDERS Press top of this unique tool and slim,
stainless steel prongs emerge from tip. Release pressure and prongs
close around your gemstone, gripping it tightly for inspection or
display. Length: 5".
150-HOL-653
150-HOL-654

SET OF 3 PROBES These stainless steel tools have strong yet flexible tips that are very useful for positioning, adjusting and gluing stones or small parts. Overall lengths approximately $5^{1}/_{2}$ " - 6".

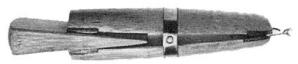


BEZEL ROLLER









WEDGE CLAMP

PRONG PUSHER

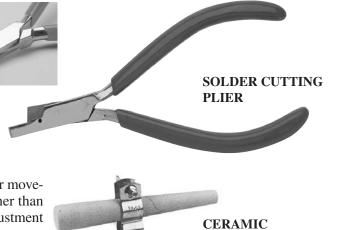
Polished steel tip set in a	comfortable wood handle.	Use for pushing
prongs or crown points	around stones.	
150-PSH-770	6 oz	2.60

BEZEL PUSHER

Has polished groove in tips	that wipes and set	s bezel against stone.
Mounted in wooden handle		
152-DI-535	6 oz	

PRONG LIFTER

SOLDER CUTTING PLIER



CERAMIC SOLDERING ROD

Keeps rings in position while soldering and prevents collapse or movement. Holds heat longer and more efficiently, and works cleaner than standard carbon rods. Mounted on a pivoting base for easy adjustment and positioning. For rings size 4 and up.

162-HO-625	 Base w/rod		2 lbs	
162-HO-626	 Ceramic rod	only	1 lb	

TRIPOD WITH MESH SCREEN

Set tripod with screen over an alcohol lamp or Bunsen burner to heat wax pot or keep it warm. Can also be used so that work can be heated from below while soldering or enameling. Comes with 6" square mesh screen.

162-BT-268	5
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HEATING SCREEN

CERAMIC HONEYCOMB SOLDERING BOARD

Popular honeycomb design holds pins to keep work in place while soldering. Made of a non-asbestos ceramic. Board is lightweight and reflects heat. Size is 3.7%" x 5.5/16"



SOLDERING TWEEZERS







COPPER TONGS

SOLDERING TWEEZERS

The polished steel jaws are available either straight or curved. These strong cross-locking tweezers have heat resistant fiber grips and will hold your work securely. Length 6".

150-TWZ-740	. Straight	3 oz	4.45
150-TWZ-741	. Bent	3 oz	4.45

SOLDERING PICK

This deluxe titanium soldering pick is specifically made to lift minute drops of molten solder. Features a number 35 high-tech titanium rod to which solder cannot stick, unlike most soldering picks with steel wire picks. Has a non-conductive, non-roll handle.

GAUGES

STONE GAUGE Stone diameters are measured with the calibrated gauge holes provided in ½mm steps from 2mm to 11mm. Corresponding gauges for mountings are provided on the center wheel. Useful in choosing the right setting bur.

STONE AND MOUNTING GAUGE Aluminum gauge

with holes for measuring stones, while the round extensions are used to measure mountings. One side shows mm's and the other the corresponding carat weight for diamond.

METAL RING SIZE GAUGE

Professional finger ring sizer. Nickel plated, ½ round. Easy to read colored numerals. Sizes 1-13 with half sizes according to U.S. standard.

PLASTIC RING GAUGE Graduated in half sizes from 1 to 13. Accurate, durable and inexpensive. On a chain.

PRECISION BRASS GAUGE 80mm sliding gauge includes inch scale in ¹/₁₆ ths as well. 3" long.

PRECISION PLASTIC GAUGE (Similar to brass gauge shown) 75mm sliding gauge includes inch scale in ¹/₃₂ nds as well. 4 ¹/₂ " long. Made in Switzerland.

DIAL CALIPER Easy to read. Quickly and accurately measures inside and outside dimensions of mountings. Measures in millimeters. Maximum is 150 mm with accuracy to 0.1 mm. Has zero adjust dial. Made of high impact, glass-filled nylon. Only 9" long.

HANDY FOUR PIECE BEAD REAMING SET

This diamond bead reamer set is handy enough to carry in your pocket. Three different diamond plated tools fit into the $4\frac{1}{2}$ " long aluminum case/handle. Unscrew cap and select tool type you need and fit into chuck on end of case/handle. Case has clip for attaching to your pocket. Use for reaming out all size beads from seed size to large.

150-DIB-275.00 Four Piece Set	4 oz	15.95
150-DIB-275.5045° Edging Point	1 oz	1.75
150-DIB-275.55 Large Reamer	1 oz	2.45
150-DIB-275.05 Small Reamer	1 oz	1.95

DIAMOND BEAD REAMER SET OF TWO

REAMERS/BROACHES SET OF SIX

STO



91

GAUGES, MANDRELS







METAL RING SIZE GAUGE

PLASTIC RING SIZE GAUGE





ALLE FORMEREE MAN TOGAL

JEWELRY SHIELDTM

This well-known product shields sensitive skin from jewelry irritation. One in four people have an allergy to alloys present in costume and fine jewelry, glasses, watches, even clasps and snaps found on clothing. They suffer itching and skin irritation. Even more people react adversely to metals: their skin turns black, green or suffers from an itchy rash. How does Jewelry Shield work? Brushing transparent Jewelry Shield onto jewelry and metal accessories creates an invisible shield protecting sensitive and allergy-prone skin. Jewelry Shield's specially patented formula lasts much longer than any other product or remedy available. One application lasts three months. Bottle $\frac{1}{2}$ oz.

150-JWL-180	. Shp. wt. 1 oz	5.99
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BEAD TIP CEMENT

G-S Hypo Cement is excellent for jewelry making. Comes with precision applicator to allow application of intricate parts. Dries water clear. Ideal for plastics, beads, ceramics, glass and more. Especially great for sealing knots between beads. Will not bond fingers. Sets in 10 minutes. Tube $\frac{1}{3}$ oz.

E6000 HEAVY DUTY ADHESIVE

BEADSMITH'S BEAD BUDDY

SET OF THREE LARGE BEAD MATS

These bead mats are the solution to having a work surface that keeps your beads from rolling away. The mat's super soft, foamlike material is ideal for working with small beads. Use one on any table or with the bead tray described below. Set of three mats 11" x 14" in assorted colors to contrast with the beads you are using. Perfect for seed beads and delicas.

BEAD MAT TRAY









WARNING: GLUES CONTAIN TOXIC MATERIALS. READ DIREC-TIONS ON LABELS BEFORE USING AND FOLLOW ALL INSTRUCTIONS.



SUPER SOLVENT For cyanoacrylate glues. Use to clean up excess glue or break an existing bond. Can normally be used on hands, most fabrics and surfaces, but solvent should be tested on a small area first. Should not be used on lacquer, butyrate or nitrate based finishes.

NEW NCF AEROSOL ACCELERATOR Use with cyanoacrylate glues to speed curing time on difficult-to-bond materials or under adverse conditions. Contains special ingredients which clean bonding surfaces and start curing at even lower temperatures. CONTAINS NO CHLORO-FLUOROCARBONS.

129-NCF-A 6 oz. 12.95



BOND 527

INSTANT CYANOACRYLATE GLUES Select the cyanoacrylate glue that fits your needs. All are "instant" bonding, dry clear and can be buffed to a high polish, have incredible bonding strength and can be used on almost any type of material. Keep unopened bottles in freezer at 32° or below for extended life. Store used bottles at room temperature.

"SUPER T" (Yellow Label) Sets in 10-25 seconds. Thick like syrup to fill small gaps between parts that don't fit perfectly. 129-ST1.....¹/₂ oz.3.95 129-ST1-C... Case of 12....1 lb. ...45.00 129-ST4......2 oz. ...10.50

"HOT STUFF" (Red Label). Normally sets in 3-10 seconds. Thin like water for exact fit or deep penetration.

129-HS1.....¹/₂ oz.3.95 129-HS1-C.. Case of 12....1 lb. ...45.00 129-HS4......2 oz. ...10.50

3M FEATHERING DISC ADHESIVES Use to bond sanding and buffing discs to back plates. Bonds instantly but allows discs to be peeled off backing after use. Works on rubber, plastic, metal backup pads. Comes in 5 oz. tube.

140-08051 Tube 8 oz. 22.05



GLUES, FILLERS 93

SHIPPING NOTICE

All items on this page can only be shipped via UPS Ground Service within the Continental States. No air or overseas shipments due to Federal regulations. Sorry.





OPTICON Seals and cements fractures in flat or curved, polished or unpolished stone. Eliminates fracture reflection and structural weakness and in addition accomplishes the filling of pits. Opticon 224 resin is amber clear and when heated to a low viscosity has the property of high penetration of fractures, much like glycerin or oil. 9 oz. Shipped via UPS ground only in USA.

DIAMOND NEEDLE FILE SET

This TEN piece diamond file set contains just about every shape you need for those small, difficult carving jobs. Shapes shown approximate. Two layers of diamond plated to steel give long life. Grit size is 220 mesh. Approx. 5" long.

170-24-00010..... Set of 10 4 oz. 15.00

ECONOMY NEEDLE FILE SETS

NEEDLE FILE HANDLE

PRECISION SWISS HAND FILES

Made from fine cutting steel, milled to exact shape and size. Files have durability and hardness combined with the right feel. Cut measures 6". Weight 4 ozs.

Order #	Style	Cut	Price
152-FIL-100.2	Barrette	2	24.95
152-FIL-110.2	Hand Flat	2	16.50
152-FIL-120.2	Half Round	2	29.95

HAND FILE HANDLE

Hardwood handle, strong metal collar. Use with 6" hand files above. Twist on.

FILE CLEANER

Remove all small particles that clog the teeth of your files with this handy file cleaner. Steel wire bristles are set in hardwood handle. Made in USA.

152-FCL-7518 oz	8.95
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FILE CLEANER



TWEEZER SET

BEADING TWEEZERS



BEAD ORGANIZER AND CARRYING CASE

Made of durable translucent plastic, this storage case features 52 removable compartments. Perfect for storing beads & findings. Organizer includes: 1 carrying case $(10" \times 8" \times 1-\%")$ 2 Medium boxes $(4-1/4" \times 2-3/8" \times 3/4")$ 34 Small boxes $(1-1/2" \times 1-1/2" \times 5/8")$ 16 Mini boxes $(1-1/4" \times 1-1/4" \times 1/2")$ Plus a bead scoop & tweezer. (Beads not included).

153-BC499......9.95

TRIANGULAR TRAY

Useful 3.75" triangular tray for scooping, counting and putting beads and other small objects into containers. Made of durable white plastic. Sides are slanted for ease of use, nest for storage. Sold in packs of 6.

DIAMOND TWEEZER WITH SHOVEL

FLEXIBLE POLYSTYRENE DISH

These flexible dishes feature a round footprint for stability. Sides are contoured for easy handling. Flexible for pouring small parts or beads into a container. Smooth surface and rounded corners provide easy removal of powdered products. Also good as mixing trays for epoxy or other small batches. Use as quick freeze trays or heat up to 200° F. Stack for easy storage.1- $\frac{5}{4}$ " x $\frac{5}{16}$ " deep. Sold in packs of 10

TWEEZERS

ALL PURPOSE TWEEZER SET

Four popular styles cover your basic needs and give years of service. General purpose, medium point is suitable for beading. Curved-point with pin interlock keeps jaws from twisting when doing heavy work. Negative-lock has fine point for delicate jobs. Use the cross-lock with fiber-grip handles for soldering. Lengths vary from $4^{1}/2^{"}$ to $6^{1}/2^{"}$.

BEADING TWEEZERS

Designed with needle like points for knotting thread between beads.

Stainless steel, needle like poin	ts, Length 5".	
150-TWZ-735.1	2 oz	2.25
Stainless steel, length $4^{3}/4^{"}$.		
150-TWZ-735.5	2 oz	3.00
Bent tip knotting tweezers. Ben	t tips make it easier to see	knot-
ting process. Design may vary f	from illustration.	
153-TW10	2 oz	3.95





CRIMPERS

A. DUAL CRIMPER

The Dual Crimper incorporates two medium crimping cavities to fit crimp tubes and beads of medium size. Each cavity of the Dual Crimper is slightly larger (or smaller) than the other, to give the user the ability to tighten the crimp properly. Works with #1 and #2 Round Crimp Beads or #2 Crimp Tubes, as well as other non-standard crimp bead and tube sizes. The Dual Crimper has soft ergonomic handles that give you a great grip and are more comfortable to use. Approximately 5 inches long.

B. THE MICRO CRIMPER

The Micro Crimper is specially designed for use with smaller size crimp beads and tubes. This crimping tool works well for securing #1 Crimp Tubes and #0 Round Crimp Beads. Use one firm squeeze to crimp with the inner-position grooves, then use the outer position grooves to round off the crimp. The jaw grooves are comparably smaller than other crimpers to make a dependable closure on smaller crimp findings. Approximately 5 inches long.

HOW TO FORM THE PERFECT CRIMP

At the last bead (A), pass the jewelry wire (B) through the crimp bead or tube (C), then through the clasp or jump ring (D), back through the crimp (C), and optionally back through the end bead (A).

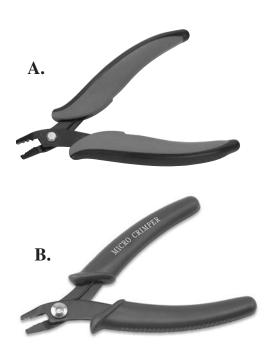
Step 1- Secure the crimp in the crimping station (E). Best results are obtained when the two wires are positioned on either side of the center dimple.

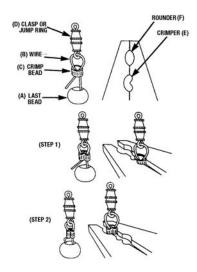
Step 2- Final shaping in the rounding station (F) – forming a smooth, rounded crimp.

NOTE: When bead stringing, it is important for the bead crimp to match whatever wire that one is using. The worst case is using too large of crimp with finer wire; then the crimp may not close enough to hold properly. Always test that the crimp is secure on the wire.

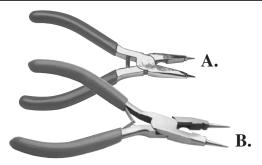
CRIMP BEADS finish off wire connections when beading. Use crimpers shown above. Bead is placed in lower groove of the tool with wires side by side. Make one firm compression. Then put crimp bead into upper position, turn 90° and make another firm compression. This rounds the crimp and creates the perfect crimp connection. Packages contain approx. 1.5 grams of beads. Wt. 1 oz. each pkg.

0	CI	C 1		Duico		Recommended	
Order #	Shape	Color	Crimp Size	inches	mm	Price	Crimping Tool
210-JBS-01	Tube	Silver	#1	.010013	.2533	3.00	Micro Crimper
210-JBS-02	Tube	Gold	#1	.010013	.2533	3.00	Micro Crimper
210-JBS-03	Tube	Silver	#2	.013024	.3361	2.50	Dual Crimper
210-JBS-04	Tube	Gold	#2	.013024	.3361	2.50	Dual Crimper
210-JBS-05	Round	Silver	#2	.024026	.6066	2.50	Dual Crimper
210-JBS-06	Round	Gold	#2	.024026	.6066	2.50	Dual Crimper
210-JBS-07	Round	Silver	#1	.010021	.2553	2.50	Dual Crimper
210-JBS-08	Round	Gold	#1	.010021	.2553	2.50	Dual Crimper
210-JBS-20	Round	Silver	#0	.010013	.2533	3.00	Micro Crimper
210-JBS-21	Round	Gold	#0	.010013	.2533	3.00	Micro Crimper









A. BEADER'S DELIGHT PLIERS

This unique plier, developed by EURO TOOL is an essential for bead stringers and wire wrappers because it is a multi-task tool. It offers a round nose for coiling wire, a flat jaw for flattening, straightening or bending at right angles, a groove for closing coils or jump rings and a side cutter. Made of stainless steel with gentle coil return spring and cushion grip handles for comfort .

B. FOUR-IN-ONE BEADER'S DELIGHT

Developed by EUROTOOL, this plier is our Four-in-One "Beader's Delight." A must for wire wrappers too because it offers a finely tapered long nose for coiling, a flat jaw for flattening, straightening or bending, a groove for closing coils and jump rings, plus side cutter. Great for travel with PVC grips, double-leaf springs.

BEADER'S 8 PIECE MINI-TOOL KIT

This economical set features 3" color-coded mini-pliers plus other handy tools essential to the beader. Compact and portable, your tool set only measures 2.25" x 7" in it's black canvas case, so you can take it with you anywhere. Mini-pliers have polished steel heads, cushion grips handles, spring action, and lapjoint construction. Included in set are:

- * Chain nose plier
- * Nylon jaw plier
- * Round nose plier
- * Knotting tweezer
- * Flat nose plier
- * Semi-flush side cutter

- * Thread cutter
- * Scoop EEZTM Bead Scoop

BLACK LEATHERETTE TOOL CASE

Make your own beader's kit or store your pliers and other tools in this handy case. Made of black leatherette, it measures 9" x 6.5" x 1.25". Has zipper and 9 expandable bands to hold your tools secure. You will find this case convenient for storing a variety of tools and supplies.

BEADING AWL

Has a comfortable PVC handle. Use it for knotting bead cord, picking and probing knots.

BEADING AWL

Has sharp, tapered point used to encourage knots into place and for removing misplaced knots. Also use to clean out bead holes. 5" long.

WIREWRAPPING **CUTTERS**



SEMI-FLUSH SIDE CUTTERS. Necessary for

cutting all types jewelry wire. Features double leaf springs, box joint construction with PVC grips and brush finish. A real value for the money. Approx.4¹/₂" long.



ROSARY PLIERS

Combination round nose/side cutter is especially designed for work on rosaries. Has box joint and is suitable for all assembly operations. Approx. 5" long.





FACTS YOU SHOULD KNOW WHEN CHOOSING PLIERS

CHAIN NOSE PLIERS

Traditional and the most popular pliers. Use to make bends, loops and similar forming operations on wire or sheet metal. In bead stringing, use to lock crimp beads, attach needles to bead cord, etc. Handy for most gripping, pulling, manipulating actions.

FLAT NOSE PLIERS

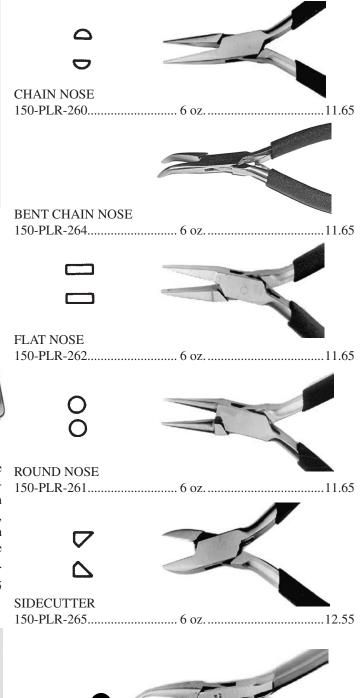
For gripping and holding flat or square objects securely, and for making angular bends and similar forming operations.

ROUND NOSE PLIERS

For making bends, loops, circles, coils in wire or sheet metal. The tapered, round jaws are smooth and will not scratch or nick soft metals. In bead stringing, use for closing bead tips, curving wire such as jump rings, looping eye pins, etc.

SONORA PLIERS

The Sonora line offers a new feel in pliers, with a textured, non-slip grip that will make your work a lot easier. Sonora pliers have box joints and are made of highly polished, stainless steel that will remain rust free. A real value for the money.



SONORA PLIER SET



Save on this set of the four most basic types of pliers from the Sonora line. These pliers are user friendly, with an exclusive textured grip. Grab a Sonora plier and you will experience a touch that makes work easier. These box-jointed, highly polished pliers, are a slender 4¹/₂" in length, and made of stainless steel to remain rust-free. Included in the set is a chain nose, flat nose, round nose plier, and a sidecutter, plus a handy pouch to keep the set together.



LOOP-CLOSING PLIERS

Small hollow jaws for holding and closing jump rings, small loops, etc. Made of stainless steel.

BENT CHAIN NOSE

Box-joint bent chain nose has a multitude of uses in every shop. Great quality at an extremely competitive price. $4 \frac{1}{2}$ " long.

VALUE LINE PLIERS FROM **EURO-TOOL®**

You get real value for your money with these pliers. They have quality features at a reasonable price. Offer comfort and durability with double-leaf springs, box joint construction, PVC grips and brushed finish.



FLAT NOSE

For gripping and holding flat or square objects securely, and for making angular bends and similar forming operations. Can also be used for some manipulating and pulling. Insides of jaws are smooth.



CHAIN NOSE

Use to make bends, loops and similar forming operations with wire or sheet metal, and for gripping, manipulating and pulling. Smooth jaws have slightly beveled edges to avoid marring. Nose tapers to fine point.



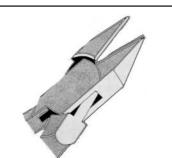
BENT CHAIN NOSE

Handy for hard to reach places. Has multiple uses for jewelers, crafters, or anyone wanting a handy tool at a handy price.



ROUND NOSE

For making bends, loops, circles, coils on wire or sheet metal. Can also be used for some manipulating functions. The tapered circular jaws are smooth so that they will not scratch or nick soft metals.



BOX JOINT

CONSTRUCTION Outlasts and outperforms all other types.

- Retains precise alignment, even under strain and after considerable use.
- Jaws never develop looseness or wobble, yet open and close smoothly.

EURO-TOOL® PREMIUM QUALITY PLIERS

These are premium quality German box joint pliers. They are lightweight, suitable for professionals for fine work. Heads are superbly polished highest grade steel. Vinyl coated handles have double leaf springs. Lengths vary.



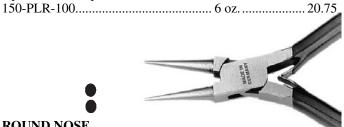
FLAT NOSE

For gripping flat objects and making right angle bends. Smooth jaws come to fine even taper.



CHAIN NOSE

The most popular style for all purpose bending and holding. Smooth jaws with slightly beveled edges to avoid marking. Nose tapered to a fine point.



ROUND NOSE

Perfectly round and finely tapered to the tips. Used for making loops and round bends. Smooth for delicate wire.



FLAT NOSE

This extra narrow flat nose plier has jaws only 2.2 mm wide, making it ideal for smaller jobs, especially making 90° angles with wire. Has PVC grips, dual-leaf springs, box joint jaws.

MASTER COILER PLIER



The Master Coiler makes loops and coils consistently without

nicking wire. These pliers allow you to hold

the wire with the flat jaw while rotating the round jaw to form the perfect loop. Made of polished stainless steel jaws with a standard step-jaw.

NYLON JAW PLIERS FOR WIRE WORKING

The wire workers delight! With these nylon jawed pliers you'll have no more nicks and scratches on your wire to rebuff and refinish. Just place the wire inside the jaws and draw the pliers along the wire several times to straighten. These pliers also harden wire components when squeezed gently between the jaws. Because the jaws are made of nylon, the wire is protected from the damage that can be caused by metal jaws. Pliers are made of polished stainless steel with PVC grips and box-joint construction. Jaws are replaceable. Pliers are approx. 5 $^{3}/_{4}$ " long.

WIRE WORKING NYLON JAW PLIER



STRAIGHT NOSE PLIERS

THIN STRAIGHT NOSE PLIERS

150-PLR-829.00	Pliers	6 oz	19.95
152-PLR-829.05	Replacement jaw	s3 oz	4.15

FLUSH AND SEMI-FLUSH SIDECUTTERS

SPECIALTY PLIERS



New, slim line jaws have a 2.0mm punch with precise clearance for a clean cut. Use to size leather, plastic bands, etc. Length is $5\frac{3}{4}$ ".

150-PLR-138.05...... 10.95



SPLIT RING PLIERS

Just put the tooth jaw between the overlapping split ring and squeeze. The split ring pops open, ready for the user to put on chains, etc. Great tool.



PRONG-OPENING PLIERS

A revolutionary new idea! A plier for opening prongs which will not fracture stone. You have total control no matter what size prong. Plier puts no pressure on the top of the stone. Top jaw is a claw which grips the prong cleanly and the lower jaw is grooved to hold the prong.



PRONG-CLOSING PLIERS

New bent nose pliers with grooves so that the tip doesn't slip off when closing prongs. Recommended for stonesetters doing small prongs. 4 $\frac{1}{2}$ " long.



RING-HOLDING PLIERS

Hollow jaws hold rings while work is being done, particularly polishing the inside. The pliers are made of stainless steel with box joints and cushioned grips.

HIGH QUALITY SPECIALTY PLIERS FOR JEWELERS

Pliers on this page, are high quality and are suitable for professionals doing fine work. Lightweight, vinyl coated handles. Polished working surfaces and box joint construction. (except for 152-PLR-469.11).



NEEDLE NOSE





END CUTTER

This semi-flush end-cutter is perfect for cutting close to objects. The jaws are at right angles to the handles. Double leaf springs, German made

150-PLR-120	6 oz	





SIDE CUTTER



FLUSH CUT WIRE CUTTERS



STONE SETTING PLIER

Highly polished stone setting pliers have one smooth jaw, the other notched for bending and tightening prongs. Fine head allows access to tight spots.





LOOPING PLIERS

One jaw is round, the other flat. For looping wire or flat strips of metal. Stainless steel.



BENDING PLIERS





BENDING PLIERS

For making sharp loops and bends in wire or metal. One jaw is round, the other concave. Designed for jump rings and similar rings. Stainless steel.







Estwing GEOLOGICAL TOOLS PROUDLY MADE IN THE USA

Estwing has been making high quality tools since 1923. These picks and hammers combine steel construction with top quality engineering. The E3-14P and E3-12BL picks are light enough for kids. The E6-24PC has a 50% larger face. Cushioned grips provide comfortable use in extreme heat or cold weather conditions. E-30 comes with leather grip. All other tools have nylon-vinyl grips.

NOTE: ESTWING TOOLS NOT AVAILABLE FOR SHIPMENT OUTSIDE THE USA AND CANADA.



-		ICKO
1	10-E3-13P	Shp wt. 2 lbs 34.48
1	10-E3-14P	. Shp wt. 2 lbs
1	10-E3-22P	. Shp wt. 3 lbs 42.88
1	10-Е-30	. Shp wt. 3 lbs 48.00
1	10-E3-23LP	Shp wt. 3 lbs 47.58



BELT SHEATH FOR POINTED TIP PICKS

110-3......Shp wt. 8 ozs..... 10.50

CHISEL EDGE PICKS

110-E3-12BL	.Shp wt. 2 lbs	41.04
110-E3-20BLC	Shp wt. 2 lbs	42.54
110-E3-24BLC	Shp wt. 3 lbs	44.96
110-E6-24PC	Shp wt. 3 lbs	52.50





BELT SHEATH FOR CHISEL EDGE PICKS 110-4.....Shp wt. 8 ozs 11.10



GEO-PALEO PICK

THE GEO/PALEO PICK - is an improved version of the former HOE-PICK. The Geo-Paleo Pick has all steel construction. Handle is 25" overall with textured vinyl grip for comfort. Head is 14" from pointed edge to chisel edge. Durable powder coated finish.

ESTWING CRACK HAMMERS



110-B3-2LB	. Shp wt. 3 lbs	38.08
110-B3-3LB	. Shp wt. 4 lbs	38.08
110-B3-4LB	. Shp wt. 5 lbs	42.92
110-B3-4LBL	. Shp wt. 5 lbs	44.88

ESTWING CHISELS

These geological chisels are forged in one piece with a new unbreakable polymer cap and an oil resistant cushion grip. It provides 2 ½ times the striking surface of a standard chisel and reduces shock and sound over 80%. Grip allows comfortable use in both extreme heat and cold weather conditions. Made in USA.







For splitting, vinyl cushion grip, 1¹/₄"x 8. 110-ERC-8.....Shp wt. 2 lbs.....22.74 Bestving Paris

For splitting, vinyl cushion grip, 2½"x 7". 110-ERC-7.....Shp wt. 2 lbs.....22.44

Riffles on one-third of inside of pan.

Lightweight yet strong for prying. Forged I beam

ESTWING GAD PRY BAR

construction. Length 18".

Comments har

ESTWING BLACK PLACTIC

GOLD PAN

110-BP-101	0" diameter	Shp wt.	8 ozs ²	4.88
110-BP-121	2" diameter	Shp wt.	8 ozs	5.98
110-BP-141	4" diameter	Shp wt.	12 ozs8	3.50
110-BP-161	6" diameter	Shp wt. 2	2 lbs 10).28





TREASURE SCOOP

The Treasure Scoop is a great tool for rockhounding and beachcombing. Use to scoop up rocks and other treasures without bending over. Lightweight, sturdy, cast aluminum. Comes in two lengths. Makes great walking or balancing stick. Imported.

111-TS-36 36" handle......shp. wt. 2 lbs. 43.10 111-TS-42 42" handle.....shp. wt. 2 lbs. 46.95



104 BOOKS-GEM TRAIL GUIDES

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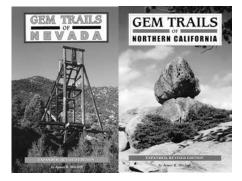
The GPS Guide to Western Gem Trails

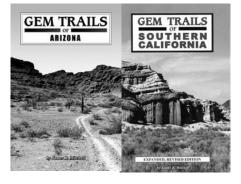
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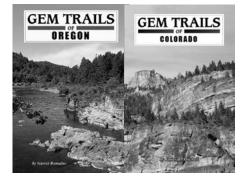
Gem Trails Of Washington

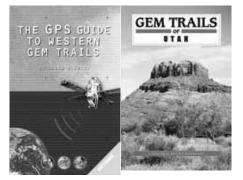
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Mitchell. Features over 90 collecting locations. Detailed directions and a map for each collecting site lead you to over 80 different minerals plus fossils in the Centennial state. Color photographs aid in specimen identification. Includes information about local museums, and tours make this an ideal travel and collecting guide for rockhounds. 224 pages.

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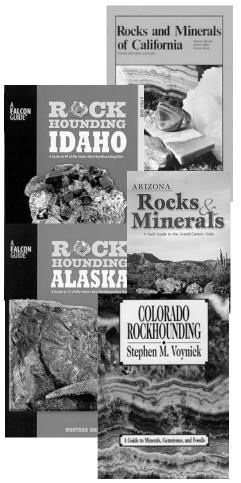
Chesterman. 750 color plates are cross referenced to detailed descriptions of field patterns and rock locations. Excellent and comprehensive. 850 pages.

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DK Smithsonian Books

Designed for beginners and experienced collectors alike, these field guides make identification of individual specimens sure, simple and straightforward. Each entry has a full color illustration as well as color-coded bands that provide at-a-glance facts for quick reference. Easy to use and beautiful to look at, this series is an invaluable resource for every collector. Soft Cover, $5\frac{3}{4}$ " x $8\frac{1}{2}$ ".

Handbook of Gemstones

Hall. 180 pages.

Handbook of Fossils

Handbook of Rocks and Minerals

Pellant 256 pages

240-438	1	lb 8	oz	20.00

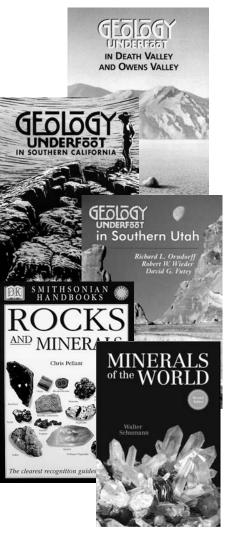
Geodes: Nature's Treasures

Golden Guides

Handy reference guides to add pleasure and knowledge to your hobby. 4" x 6" size makes them easy to take along on field trips. All have color illustrations. Clear, concise descriptions written by experts. Average 160 pages.

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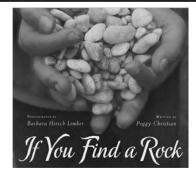
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Rocks From Space

Norton. This non-technical introduction to the fascinating meteorites, asteroids, comets, and impact craters is lavishly illustrated and tells the story of cosmic debris – the science, superstition and folklore, and the tales of people who collect them. 467 pages. Second edition.

Night Sky: A Field Guide to the Constellations

Poppele. Make stargazing more fun. A simple approach to easily find 62 constellations. Softcover 256 pages.



If You Find a Rock

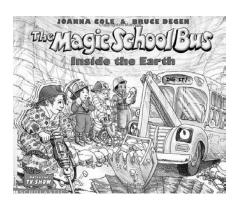
Christian. Children can discover the joy of rock hunting. This beautifully photographed and hand-tinted book celebrates the variety of rocks that can be found, including skipping rocks, chalk rocks and splashing rocks. Ages 6-9 160 pgs.

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Let's Go Rock Collecting

Gans. Easy-to-understands text introduces
children ages 5 to 9 to rocks, how they are
formed, what they are made of, and how
they are used. Original color artwork and
color photos. 32 pages.
240-854

The Magic School Bus: Inside the Earth



Julie The Rock Hound

Everybody Needs a Rock

Baylor & Parnall. When children follow this author's highly individualistic rules for finding just the right rock for themselves, they may discover an understanding and interest for rocks as well. Ages 3–7.31 pgs.



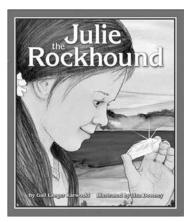
by BYRD BAYLOR with pictures by PETER PARNALL

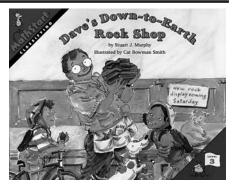
Let's Rock!

Discover basic earth science in this rocksolid series that looks at the Characteristics of different types of rocks. Describes everything from minerals components to color and whether or not they contain fossils. Ages 9-12, 32 pgs

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Rocks & Minerals: A Gem of a Book





Dave's Down-To-Earth Rock Shop

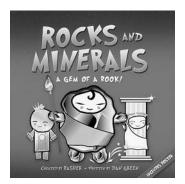
Murphy. After visiting Dave's Rock Shop, Josh and Amy start collecting rocks, discovering different ways to organize their collections. Children learn to classify rocks by different attributes like color, shape or size. Ages 7 and up. 34 pgs.

DK Eyewitness Books

For beginning naturalists ages 10 and up. Hundreds of color photos and illustrations plus CD with clipart and full color wall chart. Hardcover 72 pages..

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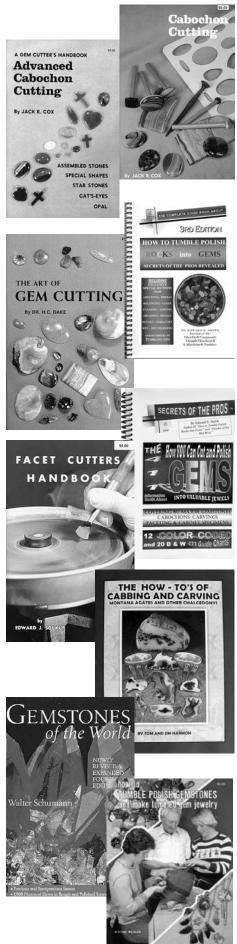
Dake. Teaches how to buy rough stones, cut the gems, choose the right equipment, and how to properly use the equipment. Gets you started on the right path into the hobby of gem cutting. 96 pages.

Facet Cutters Handbook

DVD - Opal Cutting Made Easy Downing. Covers step-by-step instructions for selecting, cutting and polishing opals. About 30 minutes.

Rock Sculpture - The Joy of Stone Carving

Gemstones of the World



BOOKS - LAPIDARY 109

Genie Video Guide For new owners of a Genie and old pros as well. This new DVD contains a wealth of information about the use and care of The Genie Gem-Maker. Covers such subjects as machine setup, break-in and wheel replacement, pump trouble-shooting, maintenance, and use of the Genie in the lapidary process. Professionally produced, informative and easy to follow. Contains over 80 minutes of useful technical information.

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How You Can Cut and Polish Gems Into Valuable Jewels

The How-To's of Cabbing and Carving Montana Agates and Other Chalcedonys Harmon. Learn how to turn raw agates into beautiful cabochons and carvings. Step by step in full color. Shows tools used for each step of the process. 46 pages

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Wexler. Step-by-step instructions for turning pebbles and rough stones into sparkling jewels. A guide to the type of tumbling equipment available and how to use it. 32 pages.

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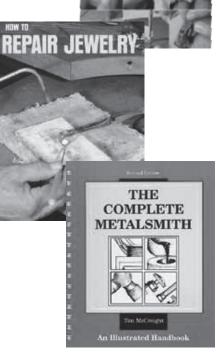
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Basic Jewelry Making

"All the skills and tools you need to get started."Allison. Learn the basic techniques for making beaded jewelry like you see in shops and galleries. This manual is clearly illustrated. Manual has lay-flat binding, making it a perfect companion as you learn how to work with beads, secure clasps and fittings, and design and plan your pieces. 110 pages.

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Wood. Readers will discover the glorious color and vibrancy of glass beads that can be sued to create eighteen beautiful projects including purses, boxes, picture frames, cushions and scarves. A wide range of beading techniques is shown and explained to create your project. Hard cover. 112 pages 200 color photos.

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Soukup. This book contains easy-to-learn methods for fabricating soldered jewelry pieces, using the scroll wire method. All steps are clearly shown with photos and detailed text. 48 pages..

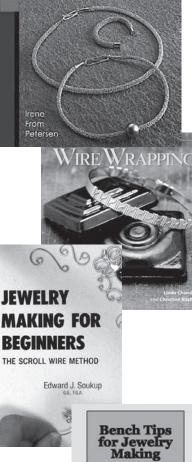
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Bench Tips for Jewelry Making

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101 Useful Tips

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BOOKS - JEWELRY MAKING 111

Getting Started With Seed Beads.

Wedekind. First time beaders will learn shopping to storing, and from stringing to sewing a successful beginning project. A good resource of all the basics you will want to know. 128 pages.

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All Wired Up: Wire Techniques for the **Beadworker and Jewelry Maker**

Lareau. This book will have you creating unique wirework jewelry in no time. Includes incredibly detailed step-by-step instructions with more than 260 exquisite line drawings. Make wire-wrapped cabochons, necklaces, wire hood and eye clasps. Color gallery of wirework by twelve contemporary artists, including the author.

112 **BOOKS - BEADING**

The Beader's Bible

Crouchley. One of the largest collections of patterns ever supplied in one book. Contains more than 300 fabulous bead designs with dozens of applications for purses, pendants, chokers, necklaces, bracelets, napkin rings, picture frames and more. Every design is charted in full color using realistic bead graphics plus a photograph to show the finished piece. All essential information provided. Hardbound, spiral. 63/4 x 8". 128 pages, all in color.

240-118 2 lbs. 29.99

Easy Beaded Jewelry

Ray & Wilke. Everyone from the novice beader to the experienced jewelry maker will find plenty to love and learn in this book. Written by experienced jewelry designers who walk you through the basics, then launch into a plethora of designs for you to replicate. Featured are 75 projects along with 250 full color photos and illustrations to provide easy-to-follow instructions. Covers basics, tools, tips, style, color and design options. Softbound, 8¹/₂ x 11, 144 pages.

A String & A Prayer: How to Make & **Use Prayer Beads**

Wiley & Shannon. Learn the use and symbolism of prayer beads for various cultures and religions throughout history, as well as rituals and prayers for their use today. 133 pages. 240-150 1 lb. 14.95

Basics of Bead Stringing

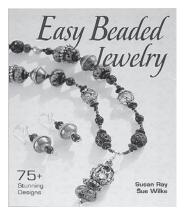
Kanan. Gives instructions for the basic steps and techniques for stringing beads. Shows how to repair and restring your old jewelry, and design and string new ones. Illustrations & color photos. 82 pages.

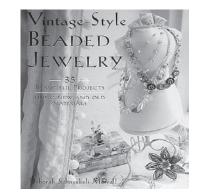
Getting Started Stringing Beads

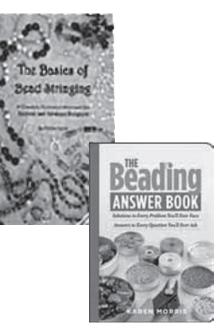
Campbell. A must-have primer for the beginning beader. Learn how to shop for beads and to design your own pieces. Contains over 100 photos and illustrations, plus easy step-by-step instructions. 88 pgs.

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The Beaders Companion

Durant. This compact, handy, spiral-bound manual will be the most valuable tool in every bead box. Easy-to-read and filled with definitions and illustrations of techniques, beads and tools. step-by-step instructions on many beading projects. 104 pgs.

Beautiful Beaded Jewelry: Over 20 Practical and Inspirational Projects

Bourgeois & Garsmeur. Become your own jewelry designer and make gorgeous beaded necklaces, bracelets, and earrings using a range of materials including glass beads, bugle beads sequins, wire, buttons and other readily available items. 64 pages. 240-103 8 oz. 12.99

Beads: The Art of Stringing

Ragan. Simplified, step-by-step guide with many different knotted designs. 58 pages.

Vintage-Style Beaded Jewelry

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Making Beaded Jewelry

Case. Illustrates the vast choice of beads available, and blends over 80 projects with easy-to-follow instructional techniques and color photos. Whether restringing an old necklace or making something special and new, the information is here, including a glossary of beading terms . 128 pages.

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*We close on holidays, and the Saturday preceding Monday holidays, and sometimes early other days. If you are coming from out of town, please call to make certain we will be open, or to make an appointment.

HOW TO ORDER

State catalog number, item description and size when applicable. Also state year (or year purchased) and model type of machine when ordering replacement parts as some parts vary slightly from model to model.

DEALERS

Please write or call for dealer information.

PRICES

All prices subject to change without notice. **Items will be invoiced at current prices.** We reserve the right to correct any errors in this catalog.

MINIMUM ORDER FEE

Orders under \$20.00, including orders for spare parts, will be charged a \$2.00 service fee in addition to shipping and processing fees.

SPECIAL ORDER FEE

For special order items not manufactured by Diamond Pacific there will be a \$10.00 Special Order fee in addition to shipping and processing charges.

PAYMENT

Payment must accompany order. When sending payment with your order please allow enough to cover shipping and processing charges. We do honor Visa, Master Card, Discover Card, and American Express. Send your card number, expiration date, and your signature when ordering by mail if you wish to use a credit card. California residents must add sales tax.

OUR ADDRESSES

MAILING ADDRESS: For all correspondence, remittances and orders.

2620 W. Main St. Barstow, CA 92311

SHIPPING AND PLANT LOCATION: Please send all returns, etc. by UPS to our plant location:

2620 W. Main St. Barstow, CA 92311 EMAIL: diamondpacific@aol.com

SHIPPING CHARGES

To determine your shipping and processing charges, you will need to find your Zone by consulting the Official Zone Chart on page V. Then use the chart on page VI to find the shipping charge in your zone column for the weight of your order. Use the next full pound for fractions of a pound. Rates on this chart do include insurance coverage up to \$25,000. Shipping charges listed on page VI are subject to change without notice. Large equipment will be shipped via truck freight prepaid and billed to your invoice. For assistance with freight charges on large equipment please call our toll free customer service number, 1-800-253-2954.

USA ORDERS

We generally ship United Parcel Service or Fed Ex Ground Services whenever possible. Include your complete shipping address along with your mailing address and phone number. UPS/FEDEX will not deliver to a post office box.

If you require parcel post, please advise us. Parcel Post or other special services may incur additional charges.

SPECIAL AIR SERVICE*

Please call for quotes if you wish air service. We ship UPS Next Day, 2nd Day or 3 Day within the USA.

NOTE: We cannot ship adhesives via Air Freight.

ORDER & SHIPPING INFORMATION

CANADIAN ORDERS*

We ship UPS to those Canadian areas having that service, otherwise, orders weighing less than 66 lbs. will be shipped parcel post. Heavier orders will be shipped truck freight. **ORDERS CANNOT BE SHIPPED COD INTO CANADA.**

FOREIGN ORDERS*

We ship parcel post on orders below the weight limits for your country, and air or ocean freight collect on heavier orders. Generally, air freight is the best way. Please include complete shipping instructions. Fed Ex, UPS, or other air services are available to most countries. Brokerage and Customs fees are the responsibility of the Customer. We do not have any information on these charges; they are incurred at your country's Port of Entry.

* Foreign orders must have phone number for freight companies to contact. No orders accepted without phone number.

* NOTE: We cannot ship adhesive products to Canada or elsewhere outside the USA. Also, we cannot ship these products within the USA via air freight.

Please, DAMAGE IN SHIPMENT

Open your packages upon receipt. SAVE ALL PACK-ING AND CARTONS UNTIL YOU ARE CERTAIN MERCHANDISE IS NOT DAMAGED. Any adjustment for damage to merchandise in shipment must be made to the carrier.

If there is any visible damage at time of delivery, the carrier must make note of this on receipt. In case of concealed damage discovered after unpacking, contact the delivery carrier immediately and request an inspection. SAVE ALL PACKING AND CARTONS.

This chart shows the zone from Barstow, California, for your ZIP Code. To use the chart find your ZIP Code Prefix (the first three numbers of your ZIP Code). Your delivery

DELIVERY, BACK ORDERS, AND SHORTAGES

Orders for standard catalog items are generally packed within 3-5 business days and shipped by ground carrier. Allow sufficient transit time from our factory to your destination when estimating delivery time.

For large quantities, special order or modified items, please call for prices and delivery time. Orders may be shipped in two or more cartons, and will be marked that way on the carton. If all cartons are not received within 3-4 working days please call customer service. For shortages in complete shipments, contact Customer Service immediately and provide the invoice number as shown on the packing slip.

Be sure to examine the contents and packing material carefully for small items that may have been missed during the unpacking of the parcel.

If an item is not available for shipment within the delivery time, it will be back ordered and shipped as soon as possible by ground carrier. Back ordered items will be indicated on the shipment's packing list.

Our back order policy does not apply to International shipments because of shipping restrictions. These items should be added to your next order.

RETURN OF MERCHANDISE

Any merchandise received that is not satisfactory may be returned to us within ten days of receipt for full refund of **purchase price of item only**, provided merchandise is returned in its ORIGINAL CONDITION and shipping is prepaid. Insure the items for full value as we cannot be responsible for loss or damage in return transit. Any item returned after the 10 days may not be accepted for refund and will be subject to a 20% re-stocking fee.

OFFICIAL ZONE CHART

ZONE from Barstow is shown to the right of the prefix. To determine the estimated shipping costs use the standard shipping/processing chart on the next page.

SHIPPING AND PROCESSING CHARGES*

To determine your shipping and processing charges, you will first need to find your Zone by consulting the Official Zone Chart on page V. Then find the shipping charge in your Zone column

for the weight of your order. Use the next full pound rate for fractions of a pound.

* See page V for complete information

We will bill at current shipping charges.

									mpp.	U	/IIul z				
Lbs	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8	Lbs	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8
1	\$9.62	\$9.87	\$10.03	\$10.35	\$10.77	\$10.87	\$10.99	76	\$44.88	\$50.59	\$53.16	\$60.80	\$69.90	\$79.13	\$85.61
2	\$10.08	\$10.54	\$11.20	\$11.39	\$11.98	\$12.17	\$12.53	77	\$46.31	\$51.88	\$54.47	\$62.00	\$71.15	\$80.60	\$86.15
3	\$10.32	\$11.07	\$11.81	\$12.11	\$12.74	\$13.03	\$13.75	78	\$47.67	\$53.12	\$55.64	\$63.13	\$72.40	\$81.99	\$86.70
4	\$10.69	\$11.50	\$12.42	\$12.88	\$13.45	\$13.79	\$14.64	79	\$49.05	\$54.39	\$56.95	\$64.47	\$73.07	\$82.82	\$87.55
5	\$11.13	\$11.75	\$12.96	\$13.40	\$14.02	\$14.45	\$15.42	80	\$50.53	\$55.77	\$58.27	\$65.77	\$74.30	\$83.38	\$88.43
6	\$11.45	\$12.11	\$13.21	\$13.75	\$14.31	\$14.89	\$15.89	81	\$51.55	\$56.73	\$59.53	\$66.73	\$75.33	\$84.54	\$89.11
7	\$11.97	\$12.46	\$13.50	\$14.13	\$14.73	\$15.30	\$16.40	82	\$53.02	\$58.01	\$60.86	\$68.01	\$76.38	\$85.78	\$90.24
8	\$12.43	\$12.87	\$13.90	\$14.45	\$15.22	\$15.94	\$17.31	83	\$54.55	\$59.16	\$62.21	\$69.33	\$77.61	\$87.02	\$91.39
9	\$12.79	\$13.26	\$14.20	\$14.84	\$15.61	\$16.71	\$18.30	84	\$56.08	\$60.48	\$63.49	\$70.64	\$78.84	\$88.20	\$92.55
10	\$13.23	\$13.47	\$14.54	\$15.30	\$16.27	\$17.79	\$19.43	85	\$57.48	\$61.82	\$64.75	\$71.93	\$80.06	\$89.27	\$93.69
11	\$13.72	\$14.06	\$14.89	\$15.69	\$16.88	\$18.88	\$20.63	86	\$58.99	\$63.09	\$66.06	\$73.24	\$81.25	\$90.34	\$94.84
12	\$14.16	\$14.54	\$15.28	\$16.09	\$17.62	\$19.97	\$21.94	87	\$60.47	\$64.45	\$67.50	\$74.52	\$82.36	\$91.40	\$95.96
13	\$14.65	\$15.02	\$15.62	\$16.55	\$18.40	\$21.11	\$23.26	88	\$62.08	\$65.77	\$68.80	\$75.85	\$83.51	\$92.47	\$97.15
14	\$15.03	\$15.52	\$16.02	\$17.00	\$19.37	\$22.19	\$24.58	89	\$63.68	\$67.06	\$70.11	\$77.13	\$84.63	\$93.55	\$98.31
15	\$15.42	\$16.04	\$16.39	\$17.48	\$20.33	\$23.33	\$25.91	90	\$65.24	\$68.21	\$71.20	\$77.95	\$85.45	\$94.22	\$99.39
16	\$15.72	\$16.36	\$16.72	\$17.87	\$21.07	\$24.27	\$27.05	91	\$66.59	\$69.48	\$72.56	\$79.25	\$86.57	\$95.27	\$100.54
17	\$16.05	\$16.94	\$17.30	\$18.62	\$22.18	\$25.53	\$28.48	92	\$68.02	\$70.70	\$73.72	\$80.35	\$87.68	\$96.39	\$101.72
18	\$16.41	\$17.49	\$17.91	\$19.53	\$23.23	\$26.67	\$29.88	92	\$69.43	\$71.96	\$75.09	\$81.48	\$88.64	\$97.33	\$102.83
19	\$16.82	\$17.43	\$17.51	\$20.39	\$24.22	\$27.81	\$31.27	93	\$70.87	\$73.17	\$76.22	\$82.56	\$89.75	\$98.44	\$103.98
								94							
20 21	\$17.27 \$17.73	\$18.75 \$19.38	\$19.28 \$19.93	\$21.30 \$22.17	\$25.27 \$26.29	\$28.98 \$30.11	\$32.69 \$34.04	95	\$72.31 \$73.74	\$74.33 \$75.51	\$77.46 \$78.76	\$83.66 \$84.76	\$90.64 \$91.62	\$99.33 \$100.24	\$105.11 \$106.22
21	\$17.73	\$19.38	\$19.93	\$23.00	\$20.29	\$30.11	\$35.48	96	\$75.25	\$75.51	\$78.76	\$86.06	\$91.62	\$100.24	\$106.22
22	\$18.73	\$20.00	\$20.65	\$23.00	\$28.36	\$32.44	\$35.48	97	\$76.74	\$78.04	\$81.45	\$87.14	\$93.86	\$101.38	\$107.42
23	\$18.73	\$20.64	\$21.34	\$23.84 \$24.63	\$28.36	\$32.44	\$36.89	98	\$76.74	\$78.04	\$81.45	\$87.14	\$93.86	\$102.49	\$108.54
24	\$19.21	\$21.22	\$22.04	\$25.37	\$29.41	\$33.57	\$39.68	100	\$78.20	\$79.24	\$84.30	\$89.54	\$96.08	\$103.60	\$110.88
		\$21.83						100	00.61¢		\$84.30			\$104.72	\$110.88
26 27	\$20.31		\$23.39	\$26.22 \$27.01	\$31.53 \$32.55	\$35.84	\$41.09	101	\$80.88 \$81.72	\$81.67		\$90.78	\$97.19	\$105.82	\$112.00
27	\$20.82 \$21.30	\$22.97 \$23.57	\$23.98 \$24.72	\$27.01 \$27.83	\$32.55	\$36.98 \$38.12	\$42.49 \$43.93	102	\$81.72	\$82.82 \$84.00	\$86.71 \$87.75	\$91.91 \$92.89	\$98.21 \$99.23	\$106.85	\$113.11
20	\$21.30	\$23.57	\$25.44	\$28.57	\$33.59	\$39.12	\$45.26	103	\$84.21	\$85.15	\$88.78	\$92.89	\$100.25	\$107.90	\$115.30
30	\$22.39	\$24.03	\$26.21	\$29.41	\$35.66	\$40.30	\$46.70	104	\$85.48	\$86.35	\$89.79	\$94.87	\$100.25	\$109.98	\$116.36
31	\$22.39	\$25.27	\$26.88	\$30.21	\$36.67	\$41.42	\$48.07	105	\$86.76	\$87.53	\$90.83	\$95.85	\$102.27	\$111.00	\$117.48
32	\$23.23	\$25.86	\$20.00	\$31.06	\$37.70	\$42.57	\$49.49	100	\$87.93	\$88.74	\$91.86	\$96.85	\$102.27	\$112.04	\$118.59
33	\$23.73	\$26.48	\$28.30	\$31.89	\$38.69	\$43.70	\$50.88	107	\$89.09	\$89.91	\$92.87	\$97.83	\$103.29	\$113.06	\$119.67
34	\$23.73	\$27.08	\$28.97	\$32.70	\$39.71	\$44.83	\$52.26	100	\$90.28	\$91.10	\$93.89	\$98.81	\$105.30	\$114.09	\$120.77
35	\$24.13	\$27.00	\$29.67	\$33.52	\$40.73	\$45.96	\$53.62	110	\$91.36	\$92.31	\$94.94	\$99.79	\$106.33	\$115.12	\$121.88
36	\$25.09	\$28.19	\$30.32	\$34.33	\$40.73	\$45.90	\$53.02	111	\$92.32	\$93.29	\$95.96	\$100.75	\$100.33	\$116.12	\$121.00
37	\$25.59	\$28.83	\$30.97	\$35.14	\$42.66	\$48.20	\$55.96	112	\$93.28	\$94.27	\$96.97	\$101.73	\$108.31	\$117.15	\$123.99
38	\$26.02	\$29.32	\$31.64	\$35.94	\$43.59	\$49.31	\$57.02	113	\$94.25	\$95.28	\$98.00	\$102.70	\$109.30	\$118.15	\$125.04
39	\$26.45	\$29.91	\$32.33	\$36.73	\$44.54	\$50.43	\$58.10	114	\$95.20	\$96.27	\$99.00	\$103.67	\$110.30	\$119.14	\$126.10
40	\$26.81	\$30.54	\$33.01	\$37.50	\$45.43	\$51.49	\$59.11	115	\$96.21	\$97.31	\$100.06	\$104.66	\$111.30	\$120.17	\$127.18
41	\$27.26	\$31.06	\$33.65	\$38.28	\$46.32	\$52.55	\$60.13	116	\$97.18	\$98.30	\$101.09	\$105.66	\$112.31	\$121.17	\$128.24
42	\$27.72	\$31.52	\$34.30	\$39.04	\$47.17	\$53.61	\$61.15	117	\$98.12	\$99.29	\$102.09	\$106.60	\$113.27	\$122.17	\$129.31
43	\$28.15	\$32.10	\$34.99	\$39.85	\$48.07	\$54.74	\$62.22	118	\$99.13	\$100.32	\$103.14	\$107.58	\$114.27	\$123.19	\$130.36
44	\$28.54	\$32.63	\$35.56	\$40.63	\$48.91	\$55.83	\$63.26	119	\$100.11	\$101.34	\$104.17	\$108.55	\$115.28	\$124.20	\$131.43
45	\$28.94	\$33.21	\$36.22	\$41.43	\$49.78	\$56.94	\$64.33	120	\$101.64	\$102.36	\$105.24	\$109.56	\$116.29	\$125.21	\$132.54
46	\$29.31	\$33.74	\$36.77	\$42.16	\$50.56	\$58.03	\$65.38	121	\$102.69	\$103.40	\$106.28	\$110.55	\$117.32	\$126.23	\$132.54 \$133.60
47	\$29.69	\$34.16	\$37.36	\$42.92	\$51.29	\$59.12	\$66.43	122	\$103.46	\$104.39	\$107.32	\$111.51	\$118.28	\$127.21	\$134.69
48	\$30.07	\$34.65	\$37.94	\$43.62	\$52.05	\$60.21	\$67.49	123	\$104.48	\$105.42	\$108.39	\$112.50	\$119.31	\$128.23	\$135.77
49	\$30.43	\$35.11	\$38.49	\$44.36	\$52.76	\$61.30	\$68.53	124	\$105.47	\$106.47	\$109.44	\$113.50	\$120.31	\$129.23	\$136.84
50	\$30.79	\$35.55	\$39.03	\$45.00	\$53.45	\$62.39	\$69.57	125	\$106.47	\$107.48	\$110.49	\$114.46	\$121.30	\$130.22	\$137.91
51	\$31.12	\$35.93	\$39.51	\$45.66	\$54.11	\$63.41	\$70.60	126	\$107.49	\$108.52	\$111.55	\$115.47	\$122.32	\$131.24	\$139.03
52	\$31.48	\$36.28	\$39.95	\$46.28	\$54.79	\$64.37	\$71.64	127	\$108.48	\$109.55	\$112.61	\$116.45	\$123.32	\$132.23	\$140.09
53	\$31.81	\$36.69	\$40.35	\$46.88	\$55.43	\$65.16	\$72.66	128	\$109.51	\$110.61	\$113.68	\$117.44	\$124.33	\$133.23	
54	\$32.16	\$37.05	\$40.87	\$47.49	\$56.10	\$65.80	\$73.68	129	\$110.51	\$111.64	\$114.74	\$118.44	\$125.33	\$134.23	\$142.27
55	\$32.49	\$37.41	\$41.28	\$48.13	\$56.75	\$66.33	\$74.68	130	\$111.54	\$112.68	\$115.78	\$119.41	\$126.32	\$135.24	\$143.36
56	\$32.81	\$37.77	\$41.74	\$48.78	\$57.39	\$66.87	\$75.69	131	\$112.58	\$113.74	\$116.89	\$120.43	\$127.34	\$136.25	\$144.44
57	\$33.15	\$38.17	\$42.19	\$49.44	\$58.02	\$67.42	\$76.63	132	\$113.58	\$114.78	\$117.95	\$121.40	\$128.35	\$137.24	\$145.51
58	\$33.47	\$38.57	\$42.64	\$49.94	\$58.65	\$67.85	\$77.38	133	\$114.62	\$115.84	\$119.03	\$122.40	\$129.35	\$138.25	\$146.60
59	\$33.77	\$38.95	\$43.10	\$50.40	\$59.17	\$68.28	\$77.97	134	\$115.64	\$116.89	\$120.12	\$123.42	\$130.37	\$139.24	\$147.70
60	\$34.07	\$39.32	\$43.53	\$50.78	\$59.65	\$68.66	\$78.46	135	\$116.67	\$117.97	\$121.20	\$124.44	\$131.42	\$140.29	\$148.78
61	\$34.40	\$39.69	\$43.97	\$51.33	\$60.20	\$69.10	\$78.98	136	\$117.70	\$119.00	\$122.30	\$125.47	\$132.46	\$141.34	\$149.90
62	\$34.64	\$39.99	\$44.34	\$51.74	\$60.63	\$69.52	\$79.47	137	\$118.73	\$120.10	\$123.40	\$126.41	\$133.42	\$142.25	\$150.99
63	\$34.93	\$40.35	\$44.73	\$52.16	\$61.02	\$69.98	\$79.96	138	\$119.79	\$121.23	\$124.56	\$127.58	\$134.60	\$143.43	\$152.10
64	\$35.21	\$40.72	\$45.15	\$52.55	\$61.46	\$70.46	\$80.45	139	\$120.83	\$122.35	\$125.68	\$128.63	\$135.65	\$144.47	\$153.17
65	\$35.50	\$41.14	\$45.64	\$52.92	\$61.99	\$70.88	\$80.97	140	\$121.90	\$123.49	\$126.82	\$129.68	\$136.72	\$145.54	\$154.29
66	\$35.77	\$41.58	\$46.10	\$53.29	\$62.59	\$71.26	\$81.56	141	\$122.94	\$124.58	\$127.98	\$130.72	\$137.78	\$146.58	\$155.40
67	\$36.05	\$41.96	\$46.50	\$53.61	\$63.07	\$71.62	\$81.83	142	\$123.54	\$125.69	\$129.10	\$131.76	\$138.82	\$147.61	\$156.47
68	\$36.31	\$42.33	\$46.89	\$53.92	\$63.41	\$72.02	\$82.06	143	\$124.61	\$126.82	\$130.26	\$132.83	\$139.89	\$148.67	\$157.57
69	\$36.57	\$42.68	\$47.27	\$54.23	\$63.75	\$72.42	\$82.32	144	\$125.66	\$127.94	\$131.41	\$133.87	\$140.96	\$149.72	\$158.66
70	\$36.81	\$43.03	\$47.68	\$54.49	\$63.98	\$72.75	\$82.49	145	\$126.24	\$129.07	\$132.56	\$134.93	\$142.01	\$150.75	\$159.75
71	\$37.71	\$43.87	\$48.09	\$55.10	\$64.56	\$73.09	\$82.89	146	\$127.31	\$130.19	\$133.71	\$135.97	\$143.06	\$151.80	\$160.82
72	\$39.17	\$45.24	\$48.83	\$56.16	\$65.60	\$74.08	\$83.39	147	\$128.36	\$131.34	\$134.89	\$137.04	\$144.15	\$152.85	\$161.96
73	\$40.61	\$46.56	\$49.60	\$57.15	\$66.77	\$75.31	\$83.90	148	\$129.23	\$132.46	\$136.05	\$138.11	\$145.22	\$153.91	\$163.06
74	\$42.12	\$47.93	\$50.80	\$58.49	\$67.95	\$76.62	\$84.53	149	\$129.99	\$133.59	\$137.20	\$139.14	\$146.25	\$154.92	\$164.13
75	\$43.55	\$49.32	\$52.04	\$59.71	\$68.89	\$77.76	\$85.09	150	\$131.07	\$134.76	\$138.39	\$140.22	\$147.36	\$155.99	\$165.24



CUSTOMER ORDER BLANK

DATE ____

PHONE: (800) 253-2954 USA (760) 255-1030 International FAX 255-1077

-AX:	(/t	5U)	2

2620 W Main St, Barstow, CA 92311

TELEPHONE NUMBER _

NAME ____

MAILING ADDRESS

SHIPPING ADDRESS

STATE_ _ ZIP_ CITY_ QUANTITY ORDER # UNIT PRICE SHIPPING DESCRIPTION OF ITEM TOTAL lbs. oz. TOTAL PLEASE INDICATE MANNER OF PAYMENT BELOW TOTAL FOR GOODS lbs. oz. CHECK UNISA MASTER CARD DISCOVER AMEX UNISA ADD \$2.00 FEE ON **ORDERS UNDER \$20.00** TOTAL WT. CARD#__ CA RESIDENTS ADD IN POUNDS 7.5% SALES TAX AMOUNT FOR EXPIRATION DATE __ SHIPPING/HANDLING CARD HOLDER'S TOTAL AMOUNT SIGNATURE

7/13

Dear Friends,

Last year this page featured a photo of a prototype 10" trim saw that was under construction and we expressed the hope that this new saw would appear in the 2014 catalog.

The bad news is that this project has been delayed. The good news is that new design ideas will be incorporated and that should make it even better than originally predicted. The delay has been due to prototype work on one improved version after another of our Xpert machine.

The Xpert started as a 6" version of our 4" Pixie machine with one nice upgrade—provision for mounting a seventh wheel. This feature along with the wide wheel spacing made the Xpert a widely admired machine.

This Xpert was originally sold with two pans that didn't fully cover the base of the machine but were easily moved along under the wheels. This arrangement was changed to three pans that didn't need to be moved. Now, however, the base of the unit was upped from 24" to nearly 29" in width.

That meant there was room for an eighth wheel! With the seven wheel Xpert one had to choose between adding an extra coarse wheel to speed up grinding or an extra fine wheel to help with polishing. Now you can have both at once!

Our catalog cover photo is of the first eight wheel prototype Xpert. It starts with a 60 grit (regular not Hex), includes a 100 grit Nova, which is a very fast scratch remover, and ends with a Nova Cerium polish wheel—See the new Xpert on page 7.

Following this first eight wheel version we built a new machine with a nice added feature...The hood hinges upwards for ease of cleaning the machine and replacing wheels.

At this point we relaxed a bit knowing we had built a real "Dream Machine". However—you know what they say in the TV commercials..."But wait! There's more!"

As I write this we are busily welding up a machine that is just 1" taller and 1" deeper although of the same length. It's of all aluminum construction so it's lighter.

Why the change? This latest and hopefully last version of the Xpert will readily accept either 6" or 8" wheels!

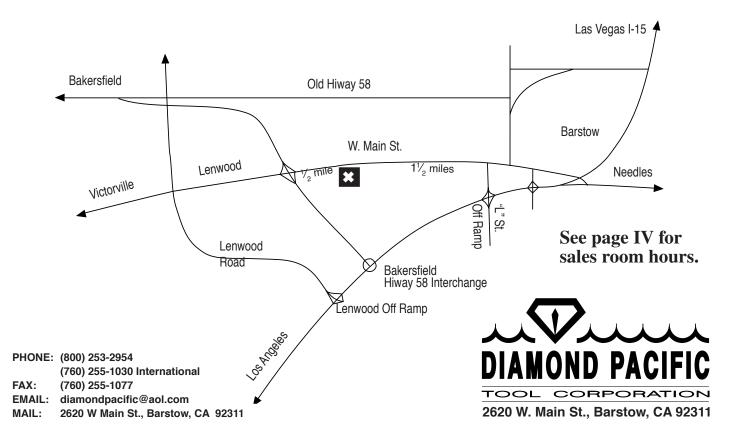
Thanks again for your business. We look forward to meeting you at the shows or at our shop in Barstow!

Sincerely, Biel C. Depue Bill E. Depue

Bill E. Depu President



We invite you to stop by our plant whenever you are in our area.





1-800-253-2954

