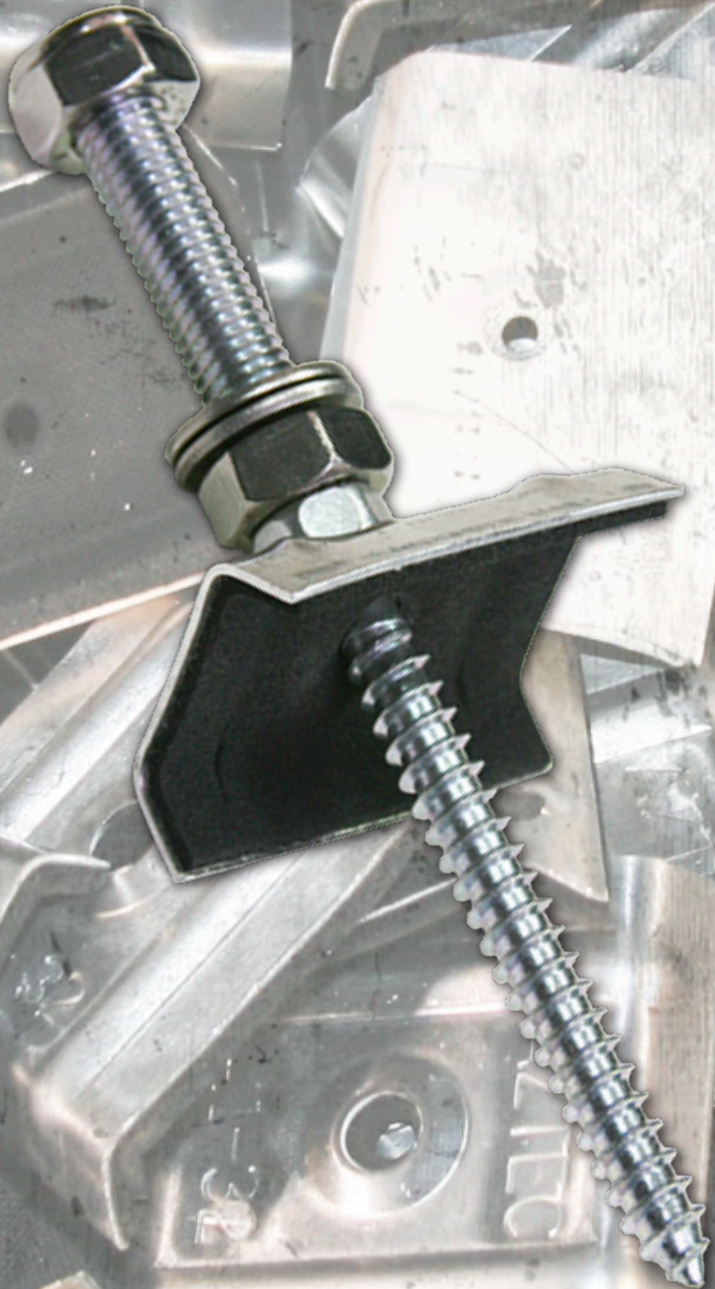
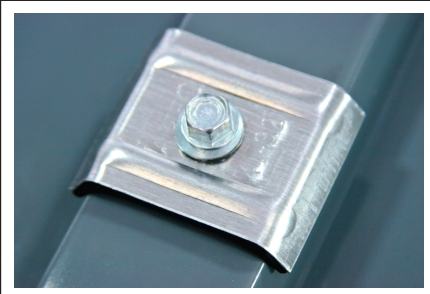
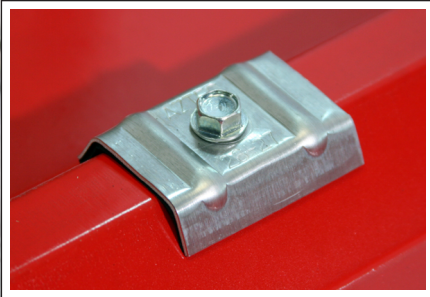


Aztec Washer Company P36

Saddle Washers

2/2016



when reliability counts
Aztec Washer Company 13821 Danielson Street, Poway, CA 92064 1(800) WASHER 5 (927-4375)
Ph: (858) 513-4350 • Fax: (858) 513-4305 • sales@aztecwasher.com • www.aztecwasher.com

Quality and Service Worldwide



**Hank De Graan,
President and CEO
of Aztec Washer Company**

Aztec Washer Company is a family owned and operated corporation located in Poway, California that started in 1968 When its founder and current C.E.O., Henry DeGraan, became one of the first bonded washer manufacturers in the world. With his knowledge in the fastener industry, a few local distributors and several orders to fill, **Aztec** quickly grew to a prominent position in the market place.

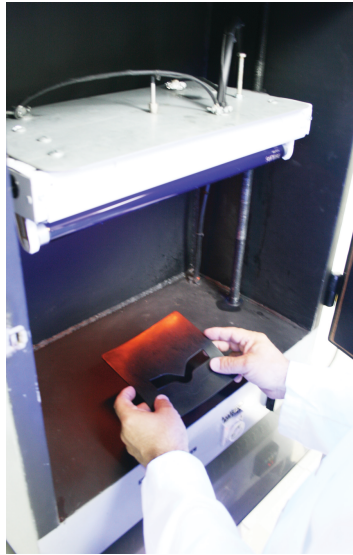
With 40 years of experience, knowledge, service and loyalty to our customers, **Aztec** remains a leader in the industry around the globe with additional operations in the United Kingdom, Germany, Poland, Australia, and Mexico. The close working relationship established with our distributor networking ensures that the right parts, in the right quantities are available to meet customer needs and satisfaction.

Our extensive tooling and production capabilities provide us with advantage to meet standard, large volume demands as well as custom specialties in the widest range of metals, polymers, and thicknesses allowing endless possibilities.

Quality that Meets the Challenge

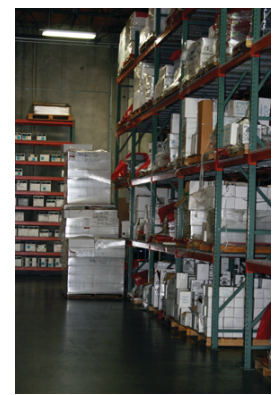
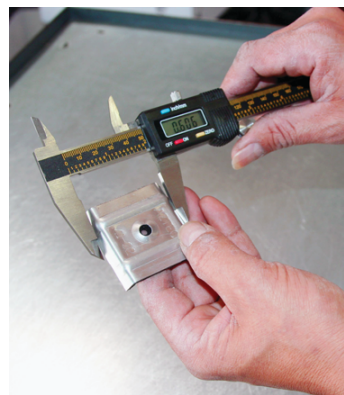


At **Aztec** we control all phases of the manufacturing process. From purchasing raw materials, our unique bonding process, to production of the finished product. **Aztec** professionals work hands on to oversee the entire operation.



Aztec is a Certified ISO 9001 company who prides itself on product quality and customer satisfaction. With an on-site rubber chemist and state of the art inspection equipment, we perform constant monitoring to ensure both the customer's and **Aztec's** standards are met.

Meeting the Need... Volume with Quality



A major factor in **Aztec's** rise to a leadership position in this industry lies in our tooling resources and 40 years of experience. Our capabilities enable us to produce both "standards" and "specials" in a range of sizes to accommodate saddle washers.

Aztec's vast tooling capabilities coupled with numerous elastomers, metal and alloy options enable us to offer our customers a variety of choices to fill virtually every need. This exceptional tooling capability permits us to begin with almost any application concept and develop a viable product within time constraints.

Our production department, equipped with state-of-the-art high-speed and variable-speed presses, surface finishing machines and inspection equipment, manufactures your exact part.

Aztec meets the needs of customers with daily requirements in the hundreds to millions - we can meet your volume and quality needs too!

The hole diameter in the rubber is smaller than the hole diameter in the metal

.040" (1mm) thick Aluminum alloy sheet

Powder painting is possible in various colors

Reinforcing ribs

EPDM elastomer "Polymer 36" vulcanized to aluminum

Improved

Shape memory - same sealing properties even after repeated installation, high expansion or contraction factor - permanent seal, improved resistance to weather degradation - prolonged life span, excellent heat resistance - allows powder painting in standard or special colors.

Facing Materials

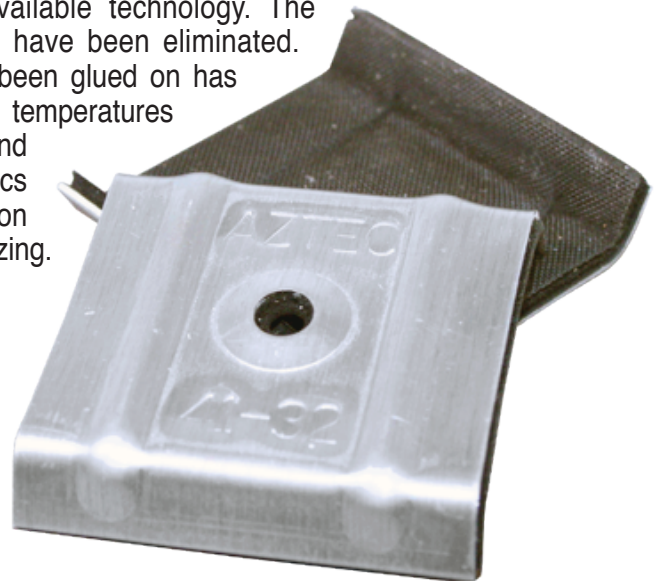
Our new "Polymer 36" is a result of industry demand and available technology. The unsuitable memory and wear characteristics of sponge and foam have been eliminated. The unsuitability of powder painting the part after the sponge has been glued on has been eliminated. **Polymer 36** has been developed to withstand the temperatures required to fully cure powder paint and still retain a full and complete bond between the polymer and its aluminum substrate. Memory characteristics very similar to solid polymers have been achieved thru experimentation in chemical technologies and our own expertise in vulcanizing.

Backing Materials

Our selection of backing material involves three primary considerations: strength, corrosion resistance and cost.

Aluminum

Aztec's special alloys provide good performance when moderate strength and deflection requirements exist. For higher stress applications, improved strength and corrosion resistance may be attained by a selection of specialty alloys and tempers such as 5052-H38. Use of an aluminum **P36** saddle washer also minimizes concerns of galvanic corrosion in certain installations.



Saddle Washers are More than just a washer

Because of a unique bonding process, which bonds a strong backing material to a resilient facing material, **Aztec's P36** saddle washers will perform a function that neither material could perform alone. Where sealing challenges are presented, the conical design directs the flow of the elastomeric portion toward problem areas. When problems call for cushioning or vibration control, the facing material will also provide the solution.

Features Include:

- Quality elastomerics, meeting the need for elasticity, memory, temperature extremes, chemical, ozone and sunlight-resistance.
- Conical design directs flow of facing materials to form a seal conforming to both fastener and sealing surface.
- Full-face design cushions fragile surfaces and minimizes vibration.
- Choice of various colors and finishes

Cushioning and Vibration Control

40 Years of proven experience in testing and retesting compounded formulas have led to the perfection of **Aztec's P36** saddle washers. Our washers possess extraordinary elasticity and memory when cushioning and vibration control are needed. As the saddle washer is compressed and fastened against a substrate, the facing material serves as a permanent

P36 saddle washers solve a variety of problems in numerous applications including:

- Noise Control
- High Winds

Aztec's unique **P36** saddle washer products are designed to provide a permanent seal in a wide variety of applications, including:

- Metal roofs and siding where the expansion and contraction of metal require a permanent resilient seal

A **P36** saddle washer is used for fastening of roof coverings in conjunction with either screws or bolts. It is used as a crown fixing and is therefore placed on top of the corrugations or ribs. The **P36** saddle washer has the shape that fits the profile of the roof covering. The **P36** saddle washers consist of backing material which usually is steel or aluminum, and facing material which has to be very elastic and has good sealing capabilities.

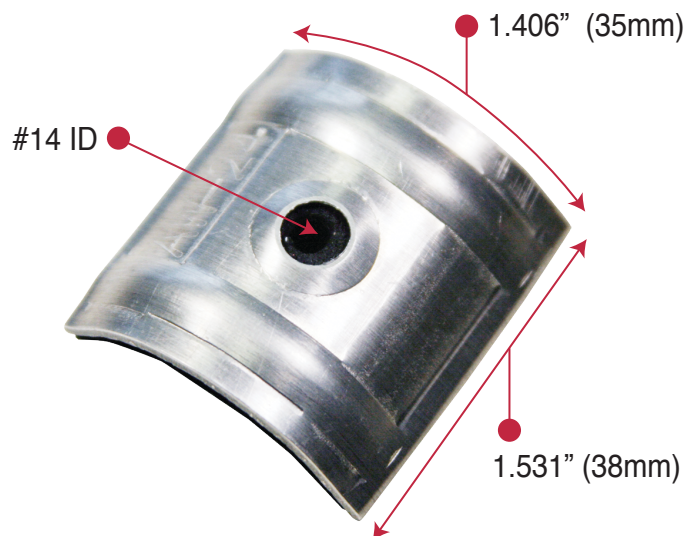
Standard saddle washer: The saddle washers on the market today are mostly made from the pre-painted steel or aluminium. The facing material is made of a low tensile strength polymer sponge. The current sponge material has poor memory characteristics which does not allow for the expansion and contraction of the panels used in metal building constructions.

P36 saddle washers produced by **Aztec** are made of an aluminum sheet with a thickness of 1.0 mm or more. Facing material is a nitrogen expanded low durometer EPDM elastomer called "Polymer 36".

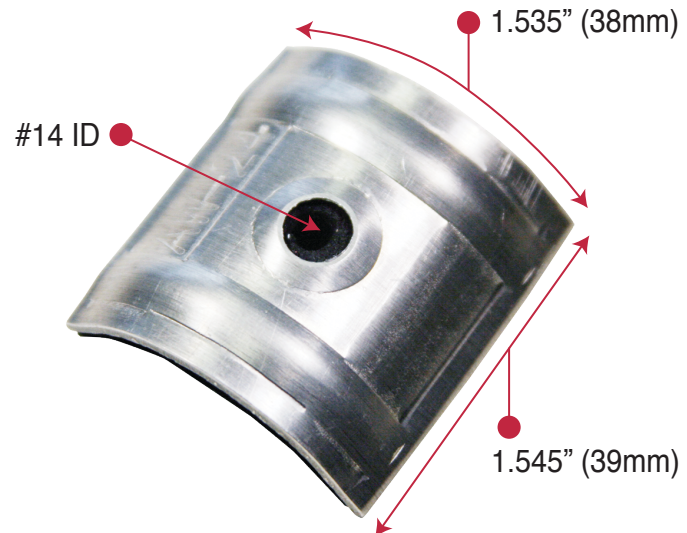
Backing material – Aluminium and facing material – "**Polymer 36**" are bonded together prior to forming of saddle washer. "**Polymer 36**", in addition to its other excellent properties, it has a good temperature resistance. This allows the powder coating of saddle washer in any RAL, NCS or other special colors. Technology of **P36** saddle washers powder coating as well as the machines used are specially developed by **Aztec**.



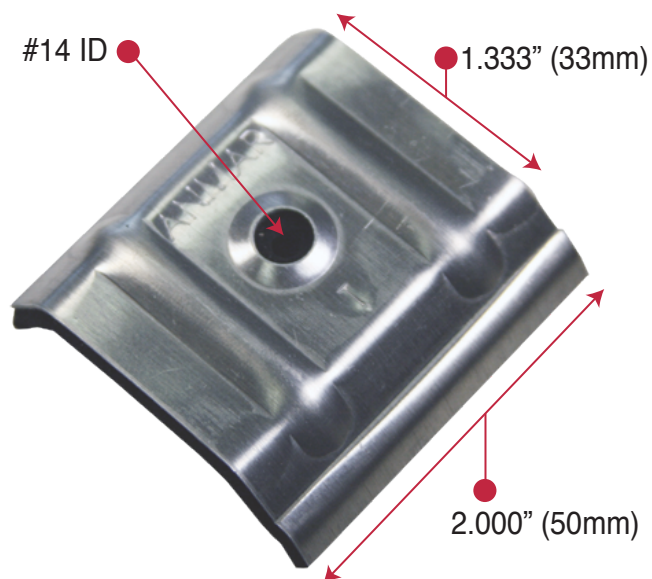
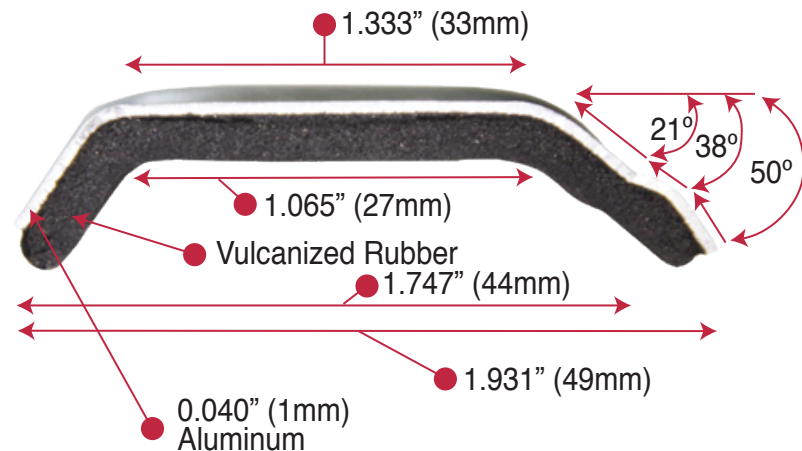
P36 Saddle Washer: AW-24



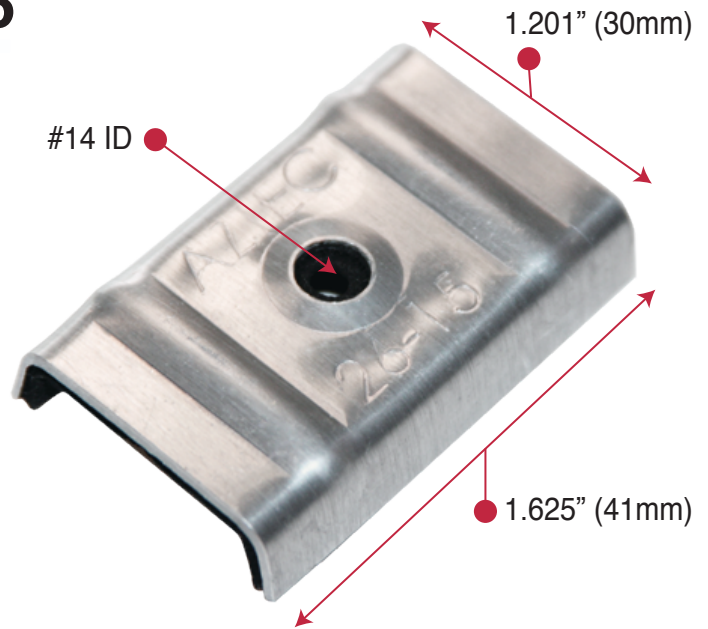
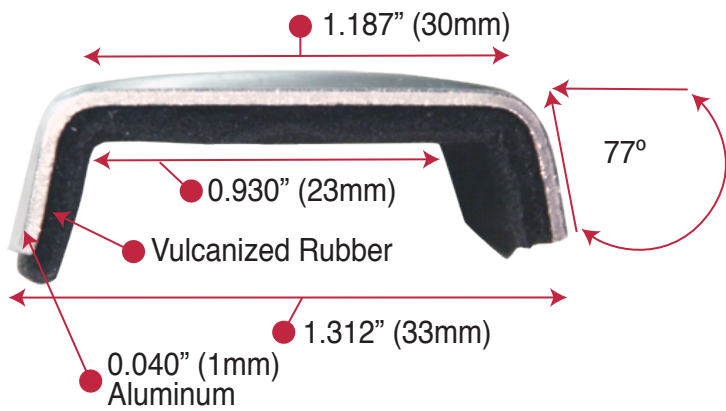
P36 Saddle Washer: AW-25



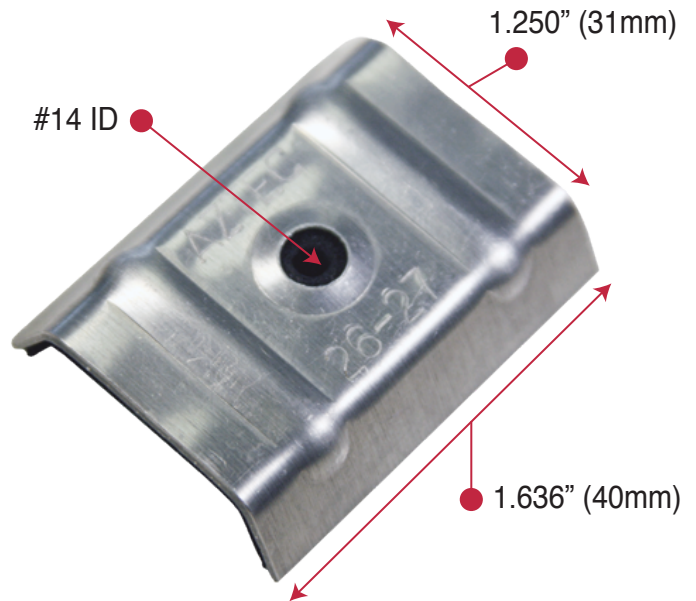
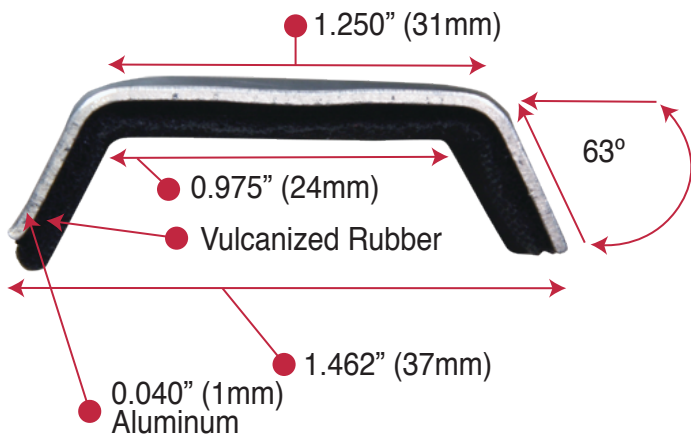
P36 Saddle Washer: ANT



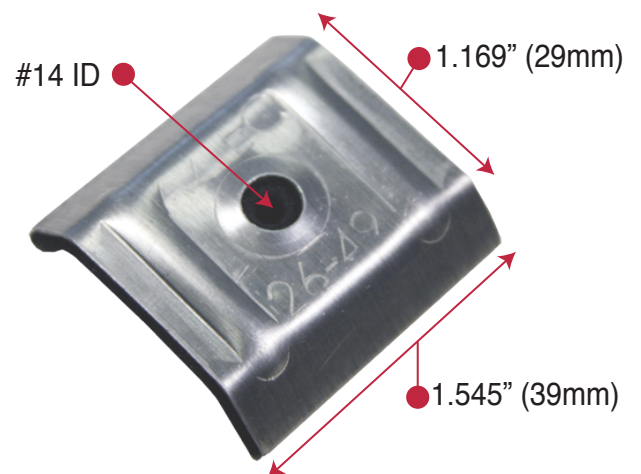
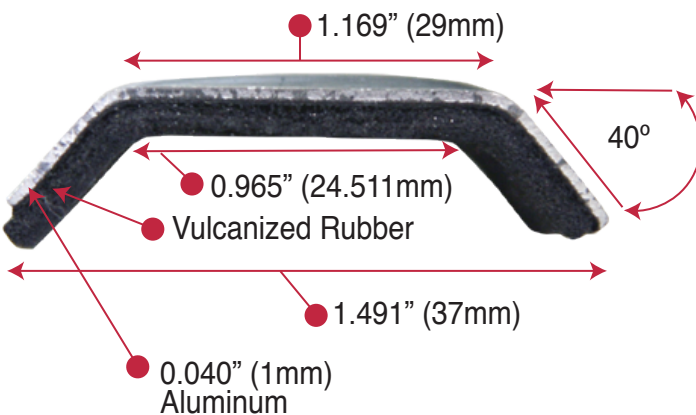
P36 Saddle Washer: 26-15



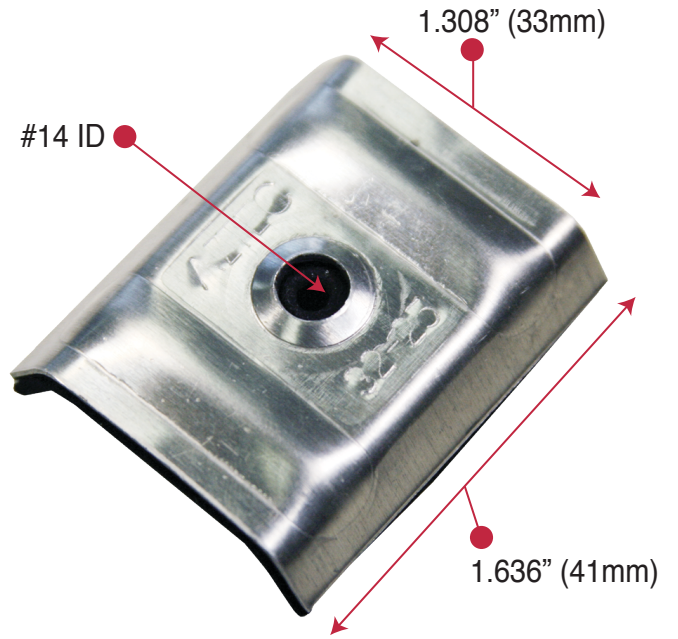
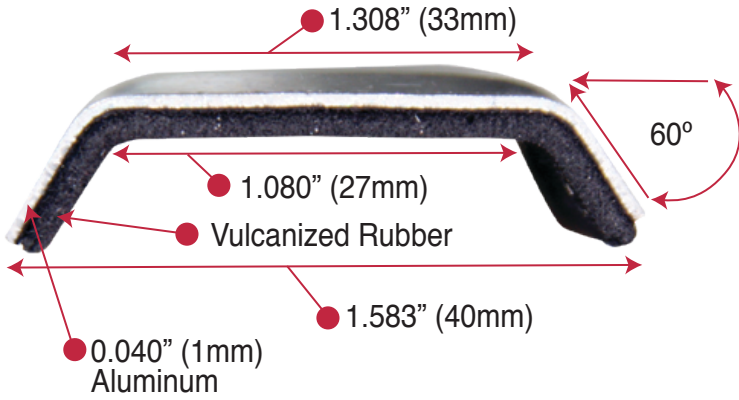
P36 Saddle Washer: 26-27



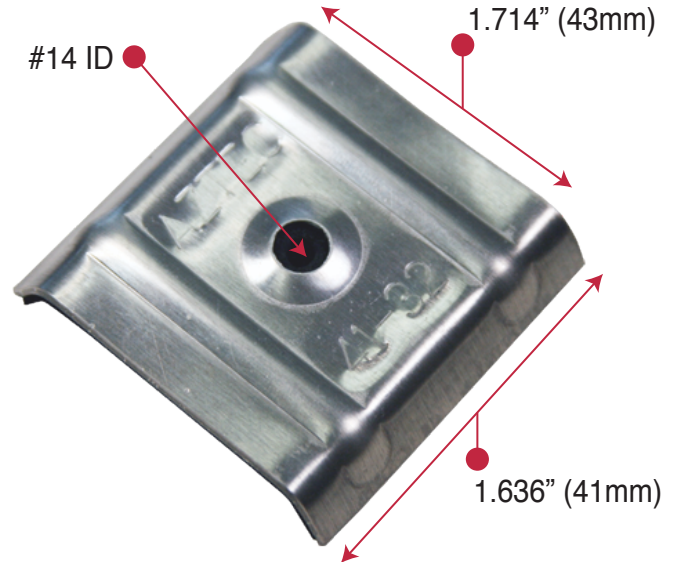
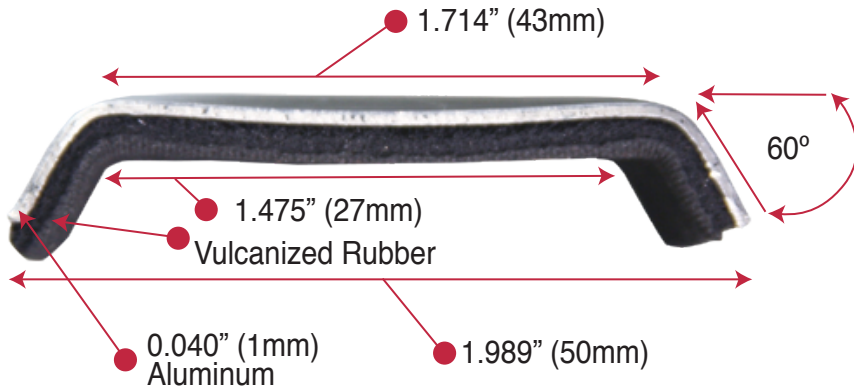
P36 Saddle Washer: 26-49



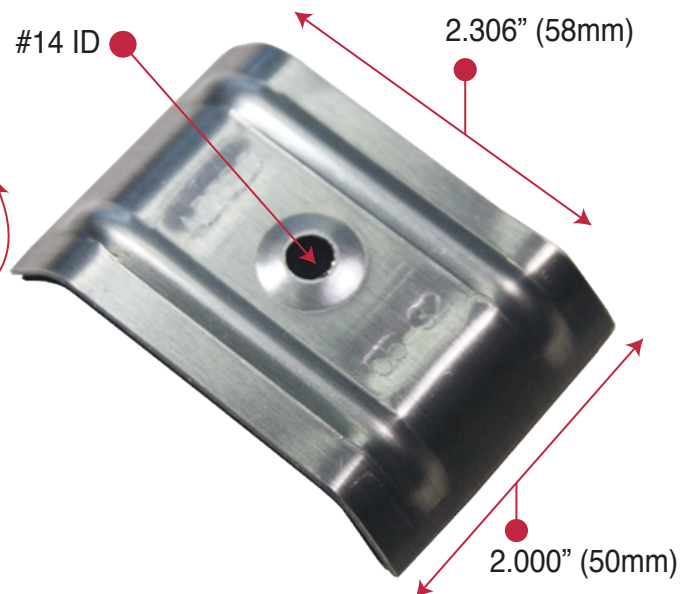
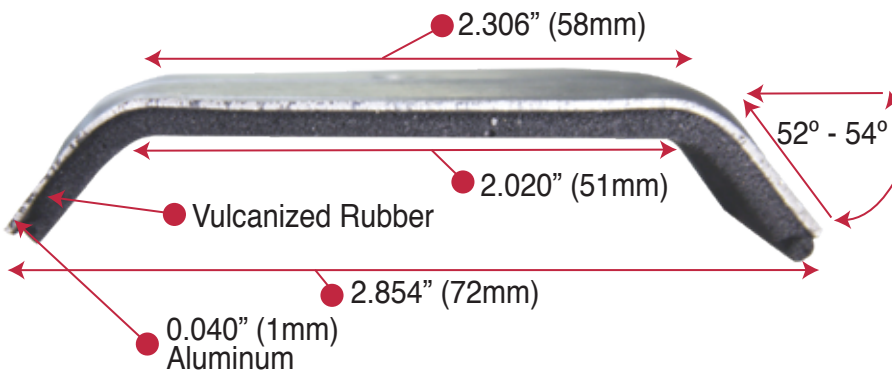
P36 Saddle Washer: 32-25

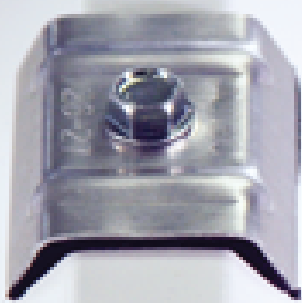


P36 Saddle Washer: 41-32



P36 Saddle Washer: 55-32





Specifications For P36 Saddle Washers Elastomer

Polymer	Neoprene / EPDM / SBR
Specifications	
ASTM D 1056-67.....	SCE41
ASTM D 1056-78.....	RE41
ASTM D 1056-85, 91, 98.....	2A1
MIL-R-6130C TY/GR/CONDITION.....	II-A-SOFT
MIL-C-3133C MIL STD 670 B.....	SCE3
UL 157/UL 50/ UL 508.....	LISTED
Flammability Specifications	
UL-94-HF-1.....	LISTED
UL-94-HBF.....	PASS
MIL-R-6130C.....	PASS
FMVSS-302.....	PASS

Physical Property	Test Method	Unit Of Measurement	Result
Compression Deflection @25%	ASTM D 1056	psi kPa	2-5 14-35
Density	ASTM D 3575	pcf g/cm ³	4-8 .064-.128
Water Absorption Max. Weight Change	ASTM D 1056	%	5
Temperature Range	N/A	°F	-40 to +200
High Intermittent	N/A	°F	+200
Tensile Strength	ASTM D 1056 (DIE A)	psi kPa	75 517
ACCEL. Aging (7 Days @158°F) Flexibility (No Cracking) Appearance Change Change in Compression Deflection	ASTM D 1056	N/A 180° Bend N/A %	Pass None +30
Thermal Conductivity	ASTM C 177-85	K Factor	.30
Color	N/A	N/A	Black

Resistance To:			
Acid	Excellent	Ozone	Excellent
Alkali	Excellent	Ketones	Fair
Gasoline and Oil	Fair	Chlorinated Solvents	Poor
Aromatic Hydrocarbons	Fair	Oxidation	Excellent

P-36 Saddle Washers

Black EPDM Sponge Rubber specification

TYPE 1: Typical Physical Properties of P-36 Saddle Washer

Mechanical Property	Test Method	Unit of Measure	Result
Compression Deflection @25%	ASTM D 1056	PSI	2-5
Density	ASTM D 3575	PCF	9-14
Water Absorption Max weight change	ASTM D 1056	%	5
Temperature range	N/A	°F	-40 to +275
Tensile Strength	ASTM D 412 (Die A)	PSI	50
Elongation Minimum	ASTM D 412 (Die A)	%	150
Accelerated aging (7 days@158 °F) Change in compression deflection	ASTM D 1056	%	± 30
Color			Black

Aluminum, Commercial Alloy 5052 (Typical Properties)

Chemical Composition	% Present
Silicon (Si)	0.0 - 0.25
Copper (Cu)	0.0 - 0.10
Iron (Fe)	0.0 - 0.40
Manganese (Mn)	0.0 - 0.10
Molybdenum (Mo)	2.20 - 2.80
Zinc (Zn)	0.0 - 0.10
Chromium (Cr)	0.15 - 0.35
Others (Total)	0.0 - 0.15
Aluminum (Al)	Balance

Mechanical Properties	Value
Tensile Strength	33,000 psi
Yield Strength	28,000 psi
Elongation	12%
Shear Strength	20,000 psi

Conserving is good for Business and the Environment



Aztec Washer Company *Our Green Statement / Policy*

On a sales trip in early 2007, a very sharp man asked how the "Green Movement" had influenced our company. Although we are a family oriented company that has always been socially and environmentally conscious, I have never been asked that question before and it prompted the following statement.

Throughout the years, **Aztec Washer Company** has continued to research and implement new policies to conserve and protect our natural resources and reduce energy consumption wherever possible. This policy is applied to our manufacturing process as well as our general use. We are proud to say that we recycle all of our scrap materials from the production process throughout packaging and shipping.

Aztec also designed and produced the very first and only bonded washer/screw head powder paint and assembly machine in use today. With the removal of harmful VOC's no longer a concern for **Aztec**, we chose to make this revolutionary paint line available to the rest of the world.

Aztec will continue to pursue new avenues for protecting the world's resources. In pursuit of those efforts, we have employed the services of an Energy Curtailment Specialist to advise new and innovative ways we can reduce energy and preserve our environment.

Respectfully Yours,

Matthew De Graan

COO



Other Quality Aztec products



INTERNATIONAL HEADQUARTERS

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To see our complete product line go to www.aztecwasher.com



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