

One Location, Multiple Services...

Our manufacturing process involves casting and compression molding of K•Prene® urethane. This means Acrotech Inc. can produce parts cost-effectively, compared to machining or injection molding. Acrotech Inc.'s stocked products include several industry-specific parts in addition to sheets, round rods, bars, Versa Rolls™ and several styles of bumpers. These items are stocked in 6 different durometers/hardnesses in a variety of sizes. We also offer custom molding of K•Prene® urethane; including mold construction, production of metal inserts and secondary machining.



The casting process of polyurethane allows Acrotech to cost-effectively produce part volumes ranging from one to one hundred thousand, and can range in size from less than a cubic inch to over 400 pounds!

Andy Oliver –
President Acrotech, Inc



Molds are designed and produced in-house allowing us to control every detail.

Shafts and hubs up to 8 feet long can be recycled by removing worn-out material and **recovering** with quality K•Prene® urethane.

Any size or shape insert can be produced by our state-of-the-art **machine shop**.

Specialty Processing— Different durometers can be bonded together.



Our machine shop offers the capabilities for **secondary machining** to tight tolerances and profiling.

Several K•Prene® formulations are **FDA Approved** for use in food processing and medical industry applications.

K•Prene® polyurethane can be cast onto the metal inserts and achieve excellent adhesion.

For **less demanding needs** - AcroKast® offers the rigidity of a structural plastic and the cost-effectiveness of liquid casting.

Stocked Inventory Dimension Tolerances

These tolerances cover all stocked products, except where noted. Please advise factory if closer tolerance is required.

Sheets

Length: +1/4 - 0
 Width: +1/4 - 0
 Thickness: +/-2% or +/- .010
 whichever is greater

Round, Square & Rectangular Bars

Length: +1/4 - 0
 O.D. +/-2% or +/- .010
 whichever is greater

For ordering information, visit:
www.acrotechinc.com

Prices subject to change without notice.

Roll Bending Machines

Acrotech also manufactures a line of One Pass Roll Bending Machines. If you have large-volume needs for complete or partial cylinders with little or no flats on the ends, our machines will produce your parts quickly and cleanly. This includes polished materials containing large cutouts or perforations!

If you roll parts sporadically or in small quantities, Acrotech will custom roll them for you!

For a quote, contact one of our machine engineers or inquire at:

www.acrotechinc.com



*If you would like to see our machines in action, call us for a DVD or check out the video on our web site!
www.acrotechinc.com*

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characteristics

K•Prene®, the Unequaled Urethane!

We provide standard polyurethane materials from 10 Shore A to 85 Shore D Durometer. Our standard grades are polyether thermosets. We also produce polyesters and FDA materials.

*Custom formulations are available.
Call for more information:*

800-333-9645

Our K•Prene® sample chains can be very helpful. Be sure to request one!



Selecting K•Prene® for Metal Forming

The K•Prene® grades listed below are the materials most often used for metal forming. The type of application, available press tonnage, and characteristics of the metal to be formed will assist in selecting the best grade and size. In addition, the urethane provides a unique combination of properties.

These include: high load-bearing capacity; toughness; hardness; abrasion resistance; and oil and ozone resistance.

K-800A	K-900A	K-950A	K-750D
<p>Requires lower tonnage. Withstands greater deflection. Should not be used for material heavier than 20 gauge mild steel, except in special applications. Maximum recommended deflection 35%.</p> 	<p>Withstands consistent flexing. Good cut resistance. Good load-bearing capacity. Recommended for most applications where large radius bends or difficult bends require large deflection or flow of K•Prene®. Maximum recommended deflection 25%.</p> 	<p>High tensile strength for higher blank-holding pressure. High load-bearing capacity. Best tear strength. Best cut resistance. Best abrasion/wear resistance. Recommended for most applications. Maximum recommended deflection 15%.</p> 	<p>Greatest load-bearing capacity. Excellent machinability. Good abrasion/wear resistance. Offers greatest rigidity, yet will deflect. Maximum recommended deflection 5%.</p> 

Stocked Durometers/Hardnesses

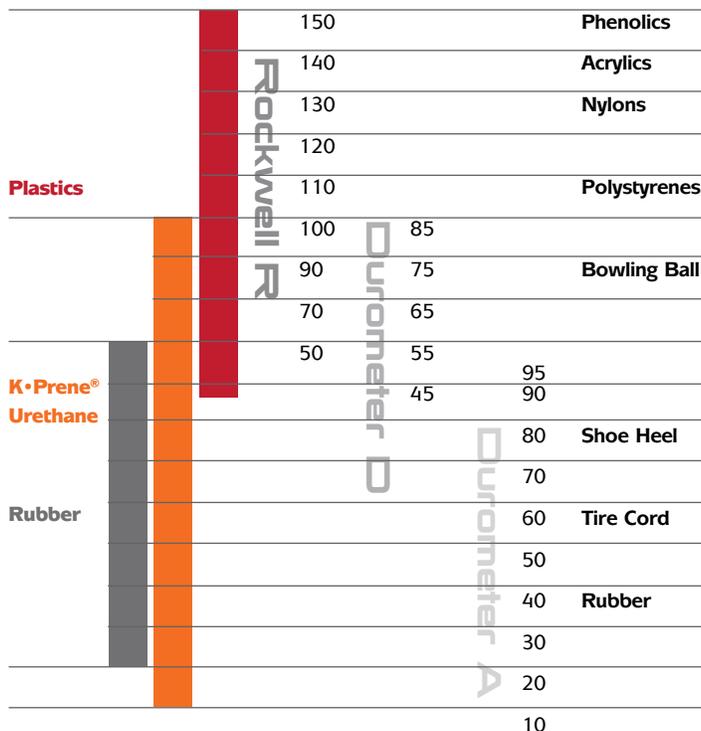
- K-400A Yellow 40A Durometer:** A low durometer material with a high coefficient of friction that will satisfy countless industrial needs such as rollers, bumpers, etc.
- K-600A Black 60A Durometer:** High coefficient of friction and excellent tensile strength makes this material a good choice for feed rolls and many other industrial applications.
- K-800A Orange 80A Durometer:** Good tear strength, abrasion resistance and excellent flex life. Good low temperature properties.
- K-900A Blue 90A Durometer:** Withstands constant flexing. Good cut resistance and load-bearing capacity.
- K-950A Red 95A Durometer:** High tensile strength and load-bearing capacity. Good tear strength, cut resistance, and abrasion resistance.
- K-750D Brown 75D Durometer:** Great load-bearing capacity. Excellent machinability and abrasion resistance. Offers great rigidity, yet will deflect.

See stocked inventory dimension tolerances on page 3.

Physical Properties of K•Prene® Urethane

	ASTM STD.	K-400A	K-600A	K-800A	K-900A	K-950A	K-750D
Hardness, Shore A	D-2240	40	60	80	90	95	—
	D-2240	—	—	—	43	50	75
Tensile Strength, (PSI)	D-412	500	3500	3000	5500	6500	9700
Elongation, %	D-412	510	530	800	430	380	250
100% Modulus, (PSI)	D-412	90	280	400	1100	1800	4900
300% Modulus, (PSI)	D-412	200	390	625	2200	4300	—
Tear Strength, Split, lb./in.	D-470	20	25	70	90	130	115
Tear Strength, Die C, lb./in.	D-624	80	180	400	600	700	770
Abrasion Resistance, NBS Index	D-1630		45	110	175	300	475
Impact Resistance (Izod) ft. lb./in.	D-256	—	—	—	—	—	5
Compression Set, Method B, %	D-395	38	6	45	30	36	—
Compression Set, Method A, %	D-395	—	—	—	—	—	15
Bashore Resilience, %	D-2632	8	32	60	42	40	44
Bell Brittle Point, F.	D-2137	—	-70	<-130	<-80	<-80	<-83
Coefficient of Friction	D-1894			0.55	0.45	0.30	0.11
Compression Modulus, 5%, (PSI)	D-575	13.3	40	150	272	515	1796
Compression Modulus, 10%, (PSI)	D-575	28.2	80	274	530	982	4509
Compression Modulus, 15%, (PSI)	D-575	43.8	130	378	735	1372	5996
Compression Modulus, 20%, (PSI)	D-575	—	180	492	940	1811	7266
Compression Modulus, 25%, (PSI)	D-575	82.7	240	641	1240	2358	8433
Specific Gravity	D-792	—	1.16	1.08	1.11	1.13	1.21

Hardness Scale



K•PRENE® URETHANE CHARACTERISTICS

- > TDI and MDI chemical structures, both are available in polyether and polyester formulas.
- > We manufacture over 25 formulations on a daily basis.
- > Hundreds of other formulations are available to meet your most demanding application.
- > Broad hardnesses ranging from 10 Shore A to 85 Shore D Durometer.
- > 6 standard colors, custom colors are available.
- > K•Prene® is abrasion and cut resistant.
- > K•Prene® is chemical and oil resistant.
- > K•Prene® is radiation, ozone, weather and age resistant.
- > K•Prene® is liquid castable and easily moldable.
- > K•Prene® is machinable and resilient.
- > K•Prene® has lower cost tooling.
- > K•Prene® has high load bearing capacity.
- > K•Prene® has elastic memory.

Machining of K•Prene®

Machining of K•Prene® urethane proves useful when the required tolerances cannot be obtained by conventional molding methods, or when low production runs do not justify the cost of molds. We maintain a complete inventory of sheets, round rods, and bars in six different hardnesses which can often be used to make prototypes or limited production quantities.

The table below details the general machining characteristics of K•Prene® urethane K-900A durometer and harder. For K•Prene® urethane below K-800A durometer, cutting tools are often not satisfactory and grinding may be required. In some cases, machinability can be improved by freezing K•Prene® urethane below K-800A durometer with dry ice or liquid nitrogen.

Machining of K•Prene® urethane is similar to that of metals, and in most cases the same tools can be used. **The principle differences between metal and urethane machining are:**

Modulus of Elasticity

Urethanes are resilient and can be easily distorted, so care must be taken to avoid distortion due to holding or cutting forces.

Softening Point

Gumming, poor finishes and poor dimensional control will readily occur if excess heat is generated and allowed to accumulate. Proper tool geometry, feed rates and cutting speed in conjunction with coolants can usually overcome these problems. Water-soluble cutting oils and/or light machine oils are good coolants for urethanes.

Lower Thermal Conductivity

Heat generated by the cutting tools stays close to the tool and raises the urethane temperature rapidly. This heat must be controlled. Melting can occur above 350° F.

Elastic Memory

Elastic recovery occurs in urethanes both during and after machining, so the cutting tool must provide clearance to compensate accordingly. Without compensation, expansion of the urethane after cutting will result in increased friction between the cut surface and the cutting tool. Excess heat build-up will result. Elastic recovery after machining can result in smaller internal diameters or larger external diameters than were measured during cutting.

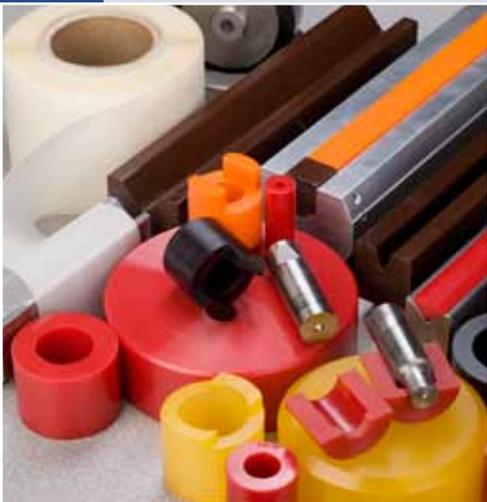


Machining Applications	Recommended Tools	Size Limitations	Maximum Speeds	Workholding Recommendations	Suggestions
Bandsawing	Sharp 2-4 hook carbide blade with raker set.	Max. 8" thick Min. 1/8" thick sheets.	1800 ft./min. (reduce to 1200 ft./min below K-900A).	Vises or clamps (Not required with flats or sheets).	<ul style="list-style-type: none"> • Rotate rounds when sawing. • Maintain high blade tension.
Cutting Shearing Slitting	Shears or belt-cutting machines with up to 1/8" knife blade.	Thin sheets (up to 1/2").		Friction clamps.	<ul style="list-style-type: none"> • Use bevel edge blades (square degree, compress urethane, resulting in uneven cuts).
Drilling	High speed 90° + twist drills with blunt point.	Min. of 3/8" (no minimum if clamped between steel).	600-800 RPM	Vises or clamps.	<ul style="list-style-type: none"> • Good tolerances possible with K-750D, for other grades use over-size drills.
Tapping	Regular high speed taps.	None		Vises or clamps.	<ul style="list-style-type: none"> • Except for K-750D, use over-size tap to allow for shrinkage or urethane.
Turning Boring	H.S.S. tool bits with positive rake of 5°-10°.	No limits on dia. length restricted (long soft bars may flex).	800 surface ft./min.	Angle of cut to work: 90° - 120°.	<ul style="list-style-type: none"> • Form tools may be used (especially when machining K-750D).
Grinding	Tool post grinder 20-80 grit wheel.		Lathe -150 RPM or lower. Grinder -2000-3500 RPM.	Fixtures or friction mandrels.	<ul style="list-style-type: none"> • Air blast to eliminate build up.
Knifing	Carbide or H.H.S. razor sharp and as thin as possible.		600-1000 RPM	Fixtures or friction mandrels.	<ul style="list-style-type: none"> • Use lubricant to help prevent dishing.
Milling	Sharp single-blade flycutters with 10° back rake and good clearance.	Min. 3/8" thick	Approx. 2000 surface ft./min.	Vise or double-face clamping tape.	<ul style="list-style-type: none"> • Flycutting at approx. 3" dia. give best results.

applications

K•Prene®... Unequaled Results in Many Applications

APPLICATIONS	Abrasion resistance	Tensile strength	Tear resistance	High load bearing	Vibration damping	Electrical properties	Low coefficient of friction	Loose tolerances and rough machining on metal parts	Bonding to metal	Hardness plus high flex and elongation	Increased flex life	Ozone resistance	Excellent oil resistance
Strippers, Springs			•	•	•						•		
Encapsulating & Potting						•						•	•
Molds							•		•				•
Tooling and Holding Fixtures				•					•	•			•
Plungers	•						•						•
Pedals	•								•				
Hangers		•	•		•								
Casters	•			•	•								
Pulleys	•								•				
Oil Field Equipment	•		•	•			•		•	•	•	•	•
Pallet Wheels	•		•	•					•	•	•	•	•
Seals, Oil	•		•				•		•	•	•	•	•
Metalfoming Pads & Dies		•	•	•					•	•			•
Valve Seats				•	•		•		•	•			•
Heels	•		•	•					•	•			
Hammers & Mallets		•	•	•	•				•	•		•	•
Drive or Friction Rolls	•			•	•				•	•		•	•
Mounts, Shock Absorbing				•	•	•			•	•		•	
Belts (Light Drive) & Conveyor Belts	•	•	•								•	•	•
Timing Belts		•	•								•	•	•
Couplings			•	•	•		•		•	•		•	
Wheels & Industrial Tires	•		•	•	•				•	•		•	
Drives, Gear	•		•	•			•		•				
Diaphragms	•	•	•								•		•
Bushings	•			•			•	•		•			•
Packings	•				•		•		•	•			•
Bearings	•			•			•		•	•		•	•
Gaskets									•	•			•
Liners for Sheaves, Chutes & Hoppers	•		•		•				•	•		•	
Rotors (Pump) and Impellers	•		•						•	•			•
Bumpers	•		•	•	•				•	•			



Custom Molding

Need a new part?

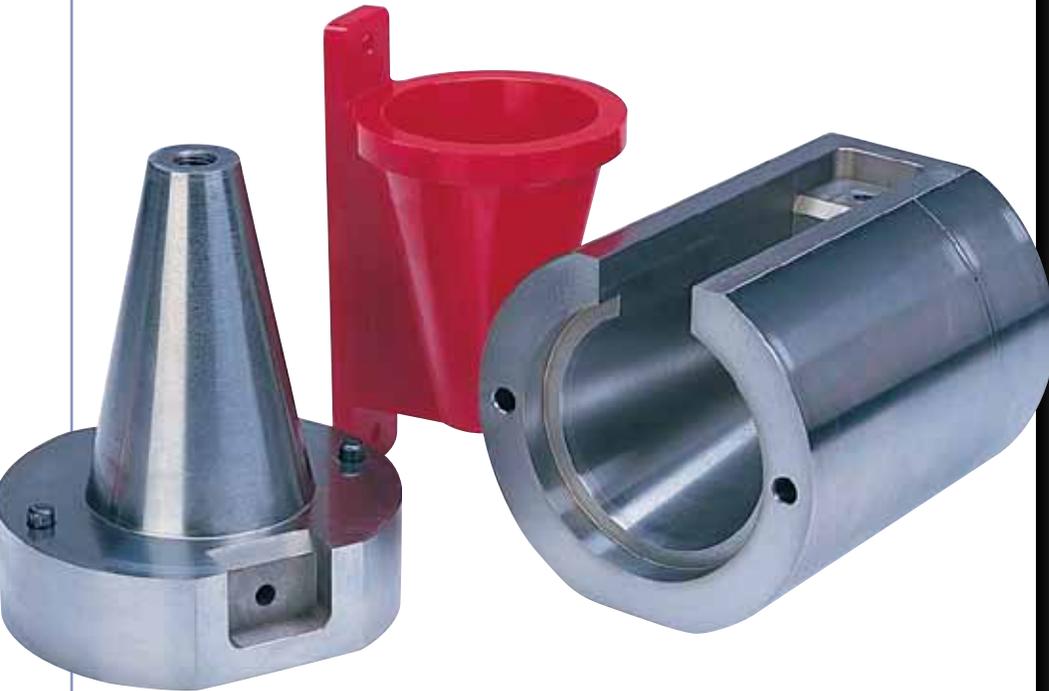
Want to improve an existing part?

Need one part for maintenance?

Need one thousand parts for production?

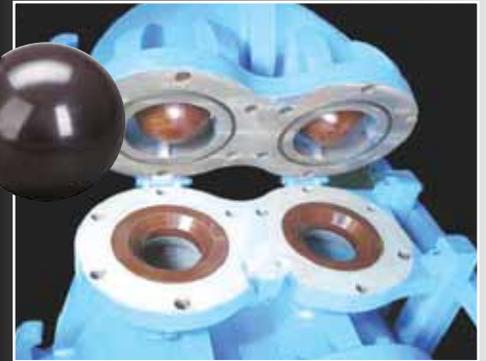
From conception to completion, Acrotech Inc. can help with design considerations, material formulation, secondary operations and mold design and manufacture!

Because of low mold costs compared to other molding procedures, custom molding with K•Prene® can be very cost effective for prototype through production. The molds are generally machined from steel or aluminum, depending on the application, or can even be cast from a flexible mold material using an existing part as a master.



A long-time customer's experience with Acrotech Inc.

This check valve ball and valve seat are made in several sizes to control flow in pump applications. Tremendous resistance to abrasion is required, along with the ability to withstand significant pressure. K•Prene® has surpassed the stainless steel components previously used!



"As a world leader in the manufacturing of solid pumping systems, it is critical for V-Ram to have the best materials in our systems. We have found that K•Prene® urethane balls and valve seats will easily handle the most severe abrasion requirements we encounter! Thanks for your part in helping V-Ram establish and maintain the industry standards."

Sincerely,

David Olson, President

V-Ram Solids

These pumping applications require up to 1200 PSI and involve municipal waste water, oil refinery sludge and animal renderings.



Custom applications

Custom Machining Capabilities To Your Specs!

Acrotech's modern equipment capabilities offer custom machining from start to finish of many materials such as:

Cold Finish and Hot Rolled Steel : Stainless Steel : Aluminum Brass : Bronze : Tool Steel : Alloy Steel, and Composites such as Delrin, UHMW, Acetal etc.



special applications



Washers, Seals & Gaskets

Almost any O.D./I.D. combination can be supplied. We have provided parts from 1/4" dia. to 6" dia. in quantities of thousands to just a few pieces. Material, size, color, etc., all supplied to your specifications.

Bulk or specific quantity packaging is available. Contact Acrotech for details.



Custom Bumpers

Acrotech has made bumpers in countless shapes and sizes. Contact our applications department with any possible applications you would like to discuss. In addition to a general description, a print or a sketch, sample parts would be helpful if available.



Metal Backed Sheets

Cut, drill, and saw these sheets to suit your needs. Make your own bumpers, wear pads, machinery mounts, etc., in any standard durometer.

Many backings or urethane thicknesses are available.

ROLL BENDING MACHINES

The Benefits of “One Pass” Two Roll Bending Machines

- > Roll parts with a minimum of flat on the leading and trailing ends for easier welding and better looking parts.
- > Increase production and lower costs because there is no preforming required.
- > Roll perforated and other difficult materials without fluting or kinking. Roll prefinished materials (stainless, aluminum, prepaint, etc.) without damaging parts.
- > Easy set up and operations with excellent repeatability and quick tooling changes.
- > Auto loading.
- > Additional operator protection (light curtains).
- > Special high alloy snaps for larger diameter to length ratios.



Custom Rolling

In addition to providing rolled samples, Acrotech offers custom rolling services. We have several machines and a full selection of tooling readily available to provide quality rolled parts in a timely manner. You'll be surprised at how economical custom rolling can be with your One Pass Rolling Machine. Forget the scheduling headaches and pursue outsourcing your rolled product.

Contact Acrotech for a quotation today.

800-333-9645



Models 1212, 1618 and 1824

Built to meet the demands of production involving small, light gauge parts. Pneumatic lock-up is standard on all models for increased productivity.

120V 1PH standard wiring simplifies installation.

220 or 440V 3PH wiring is also available.

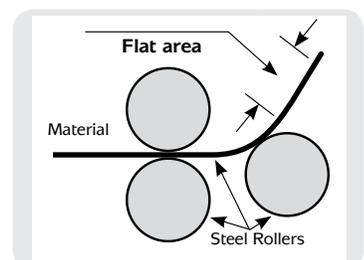
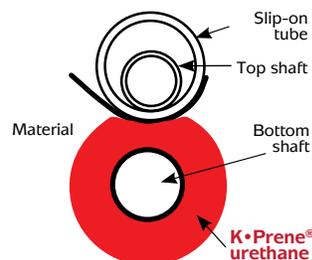
The Two Roll Principle

Urethane Roll:

Rotation of both rolls produces accurate curving and rolling of complete or partial cylinders in one pass!

Steel Rolls:

Conventional 3-roll steel rolling machines will produce a “flat area” on the leading edge as well as the trailing edge of the sheet metal.



The **Two Roll Principle** method is comprised of a steel top roll and a **urethane** bottom roll. A segment of this top roll is pushed into the urethane bottom roll, and this deflecting volume of urethane functions the same as hydraulic fluid in a hydroforming process, exerting very high pressures against the steel roll. When sheet metal is inserted between two such rolls, the urethane wraps the sheet metal tightly against the steel roll (similar to a radius forming urethane press brake die), and since the urethane roller is driven, the sheet metal is roll formed into a precise radius. Allowing for natural spring back of the material, this radius remains uniform irrespective of whether the shape of the part being formed is a complete circle, or is only a segment of a circle. The flat spots on the leading and trailing edges are very minimal (approx. one to four material thicknesses, depending on the type of material). Otherwise difficult-to-roll sheet metal parts, such as those with perforations, cut-outs, uneven feeding or trailing edges, embossed parts, ect. can be formed without kinking or fluting.

Every model in Acrotech's unique line of Two Roll Bending Machines is designed and built for production and precision. These machines will roll a variety of materials and configurations into cylinders with virtually no flats on the ends!



LD and HD Models

Designed for the production of larger, heavier gauge parts. The drop arm and the lower roll are positioned pneumatically on all LD machines and hydraulically on the HD models. Standard features adding to the productivity and safety of these machines include:

- 1) A counter indicates roll position and allows for quick repeat set up.
- 2) A safety kneebar which can be easily activated to quickly shut down all mechanical operations.



Model V-1006

The model V-1006 has cantilevered rolls mounted in a vertical position. This unique design allows the parts to simply drop from the machine at the end of the rolling cycle, greatly increasing productivity. Its short, sturdy rolls are ideally suited for narrow parts such as clamps, brake bands, hole saws, light fixtures, etc.

SPECIFICATIONS

Model	Capacity mild steel		Working length of rolls		Diameter of top roll		Diameter of bottom roll		Rolling speed f.p.m.		Motor hp.
	Std.	Metric	Std.	Metric	Std.	Metric	Std.	Metric	Std.	Metric	
1212	12 ga.	2.7mm	12"	305mm	3-1/2"	88.9mm	9"	229mm	22	670.6CMPM	1.0
1618	16 ga.	1.5mm	18"	457mm	3-1/2"	88.9mm	6"	152mm	15	457.2CMPM	1.0
1824	18 ga.	1.2mm	24"	610mm	3-1/2"	88.9mm	6"	152mm	15	457.2CMPM	1.0
LD-1418	14 ga.	1.9mm	18"	457mm	3-1/2"	88.9mm	9"	229mm	23.2	707.1CMPM	1.5
LD-1118	11 ga.	3.1mm	18"	457mm	4"	102mm	9"	229mm	23.2	707.1CMPM	1.5
LD-1224	12 ga.	2.7mm	24"	610mm	4"	102mm	9"	229mm	23.2	707.1CMPM	1.5
LD-31618	3/16"	4.8mm	18"	457mm	5"	127mm	9"	229mm	19.8	603.5CMPM	3.0
LD-1024	10 ga.	3.4mm	24"	610mm	5"	127mm	9"	229mm	19.8	603.5CMPM	3.0
LD-1230	12 ga.	2.7mm	30"	762mm	5"	127mm	9"	229mm	23.2	707.1CMPM	1.5
HD-31624	3/16"	4.8mm	24"	610mm	6"	152mm	12"	305mm	16.0	487.7CMPM	5.0
HD-1030	10 ga.	3.4mm	30"	762mm	6"	152mm	12"	305mm	19.5	594.4CMPM	3.0
HD-1236	12 ga.	2.7mm	36"	914mm	6"	152mm	12"	305mm	19.5	594.4CMPM	3.0
HD-31630	3/16"	4.8mm	30"	762mm	7"	178mm	12"	305mm	16.0	487.7CMPM	5.0
HD-1036	10 ga.	3.4mm	36"	914mm	7"	178mm	12"	305mm	16.0	487.7CMPM	5.0
HD-1248	12 ga.	2.7mm	48"	1220mm	7"	178mm	12"	305mm	19.5	594.4CMPM	3.0
HD-31636	3/16"	4.8mm	36"	914mm	8"	203mm	12"	305mm	16.0	487.7CMPM	5.0
HD-1048	10 ga.	3.4mm	48"	1220mm	8"	203mm	12"	305mm	16.0	487.7CMPM	5.0
HD-1160	11 ga.	3.1mm	60"	1520mm	8"	203mm	12"	305mm	16.0	487.7CMPM	5.0
HD-1672	16 ga.	1.5mm	72"	1830mm	8"	203mm	12"	305mm	22.9	698.0CMPM	1.5
V-1006	10 ga.	3.4mm	6"	152mm	4"	102mm	8"	203mm	22.0	6.68CMPM	0.75

ROLL BENDING ACCESSORIES



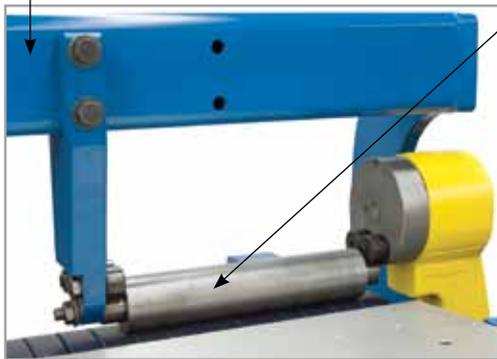
Slip-on Tubes:

When the diameter required is larger than what the top shaft will produce, a slip-on-tube is used. The tubes are developed per part size and increase the forming diameter capability of the top shaft. Quickly change the tube by simply slipping them on and off the top shaft as needed.

Slip-on Tube Support:

This support mechanism prevents slip-on-tubes from pinching your rolled parts against the lower roll at the end of the cycle. It is adjustable to accommodate different tube sizes.

Note: These shafts require the small OD mounting fixture.



Small Shaft Assemblies:

These are for the production of small diameter parts. There are several standard sizes and custom sizes are possible, depending on requirements.

Part Ejectors:

For increased production, part ejectors and part feeders can be developed for most models.



OPTIONAL ACCESSORIES

- > **Pneumatic Lock-Up System** - allows any number of parts to be identically duplicated.
- > **Small-OD Mounting Fixture** - precisely determines degree to bend.
- > **Slip-On Tubes** - securely clamps material to ensure safety and accuracy.
- > **Small-OD Shaft Assembly** - provides one radius setup plus mount for additional tooling.
- > **Slip-On Tube Support** - holds material in place to provide accurate bends.

ROLL BENDING APPLICATIONS

Acrotech machines best fit into an OEM type fabrication / manufacturing facility where high volume, consistent parts are required at low cycle times. Some applications include:

- AIR TANKS
- ARCHITECTURAL DESIGNS
- CATALYTIC CONVERTERS
- CHEMICAL or NUCLEAR INDUSTRIAL CONTAINERS
- CHIMNEY FLUES
- COMMERCIAL VEHICLE PANELS
- COMPRESSOR CASING for AIR CONDITIONING
- ELECTRIC MOTOR CASINGS
- EXHAUST SYSTEMS
- FAN BLADES
- FIRE EXTINGUISHERS
- GAS or FLUID TANKS
- HOLE SAW BLADES
- LIGHTING FIXTURES
- MISC. DUCTING COMPONENTS
- MISC. RINGS & BANDS
- MOTOR & BLOWER HOUSINGS
- NAME PLATES
- PIPE CLAMPS
- PRESSURE VESSELS & TANKS
- SLEEVE BEARINGS
- TANK HEATER ELEMENTS
- WASHING MACHINE TUBS
- WATER HEATERS

Metal Forming Applications Using Urethane

WHY USE K•PRENE® URETHANE IN FORMING APPLICATIONS?

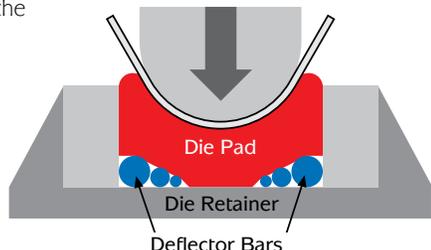
There are several families of urethane elastomers, but not all of them will perform equally well. Even within one grade of a given urethane formulation, cured properties can vary widely. K•Prene® urethane is specifically compounded and processed by Acrotech Inc. to maximize the characteristics desired for optimum tool and die operation. Some of the major advantages of urethane are non-compressibility, resiliency, and the ability to form and hold metal without marring its surface finish. It behaves similar to a solid fluid with a memory; under force it will change its shape, but its volume will remain constant. Urethane will produce high, uniform and continuous counter pressure under load. And, when the load is removed, it quickly returns to its original shape.

For more information on basic principles of metal forming with K•Prene®, contact us for our PTB-90 catalog.

Application Examples where K-Prene® Urethane Can Be Used

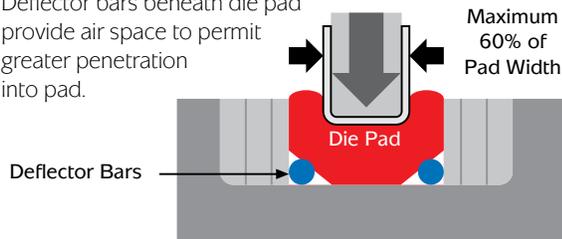
Radius Forming with Deflector Bars

Urethane die with deflector bars positioned under pad. Bars are graduated in size to control deflection of urethane. This helps form the difficult bends.



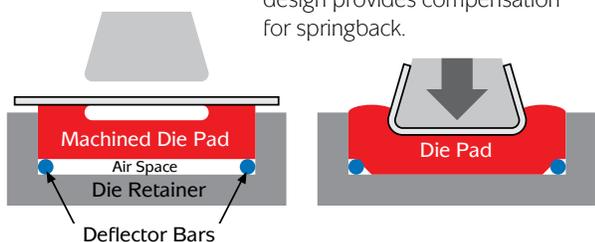
Compound Bends

Difficult forms like these can be made with a standard urethane die pad (definition is best with lighter gauges). Deflector bars beneath die pad provide air space to permit greater penetration into pad.



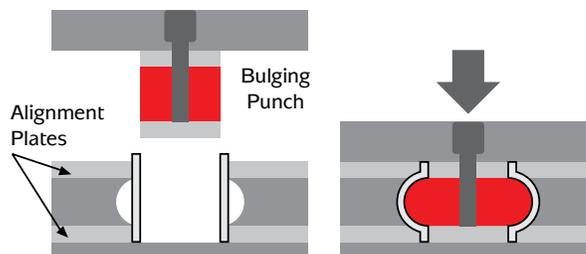
Over-forming

Unique adaptation of urethane pad to over-form flanges. Here, the pad is cast or machined-to-shape because greater pressures are required. This design provides compensation for springback.



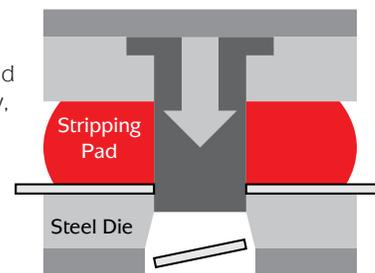
Bulging Punch

In bulging applications, urethane offers much longer service life than rubber, and is very cost effective compared to expanding/shrinking steel punches. Displacement of urethane punch under compression forces metal outward into desired shape. Amount of bulge is determined by depth of stroke. When ram is raised (after stroke), urethane resumes its normal shape and bulged part can be easily removed.



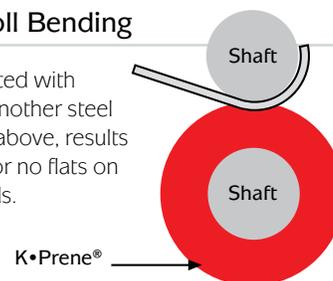
Stripping Pad for Punching

A standard urethane pressure pad machined to fit around punch. This is an easy, economical method of constructing a durable, oil resistant, high pressure stripping pad.



Roll Bending

A rotating steel shaft coated with K•Prene® working with another steel shaft positioned directly above, results in round parts with little or no flats on the leading or trailing ends.



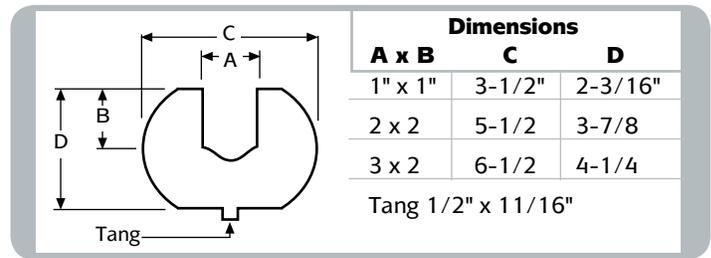
The information and suggestions in this brochure are based upon the best laboratory and technical information available to us. Any recommendations or suggestions are made without warranty or guarantee, since the conditions of use are beyond our control. Nothing contained herein shall be construed to imply the nonexistence of any relevant patents nor to constitute a permission, inducement or recommendation to practice any invention covered by any patent owned by Acrotech Inc. or by others, without authority from the owner of the patent.

Tru-Form[®] Press Brake Die

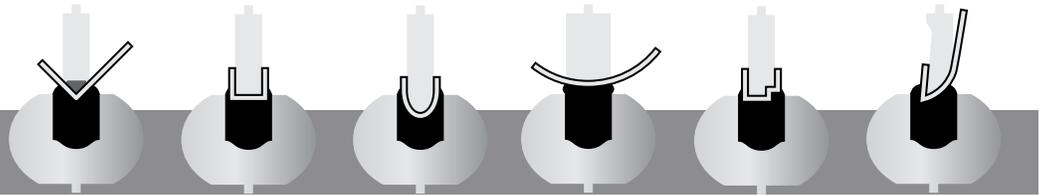
DIE RETAINERS

Our retainers are made from a high tensile aluminum alloy. They enclose our various die pad systems which, under pressure from a punch, produce significant forming pressure. The retainers will withstand 50 tons/ft. and are available in 3 sizes (See A x B dimensions.) in lengths up to 16'.

Note: Part width should not exceed 60% of die pad width.



Selection of Basic Die Components



Basic Die Pad System



SOLID K•PRENE[®] DIE PAD
Deflects to form metal under continuous high blank-holding pressure before forming action literally wraps blank around punch. The three standard widths (A x B), are available in 4 ft. lengths. They can be butted together as needed. Pads can be saw-cut to fit any punch or retainer length.



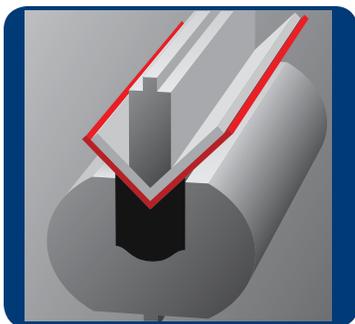
K•PRENE[®] DIE BLOCK PAD
This system functions like a solid pad but uses 2" long blocks. The blocks allow more economical replacements if a short section is damaged. Furnished in 1 ft. long increments only (six 2" blocks per ft).



CORED K•PRENE[®] DIE PADS
This system offers a 1" cored hole in our standard 2" and 3" wide pad. The relieved pad concentrates forming pressure on the outside edges allowing deeper penetration in the center. This is another option for U-forming when press tonnage may be limited.



K•PRENE[®] PRESSURE RODS
When forming heavier metals or difficult shapes (like flat bottom U-forming), higher blank-holding pressure can be easily generated by inserting a K•Prene[®] rod in the air channel under die pad. The rod acts like a "spring" to concentrate additional pressures upward. Rods are furnished in 1/4", 1/2", and 5/8" diameters, in lengths up to 4 ft.



K•PRENE[®] WEAR PADS
These 1/8" thick strips protect the forming pad from punch cuts. Available in lengths up to 4 ft. and in widths equal to our standard die pad systems. Wear pads should be as wide as die pad, or 1" wider when forming heavy metals, to protect both the parts and the retainer walls.

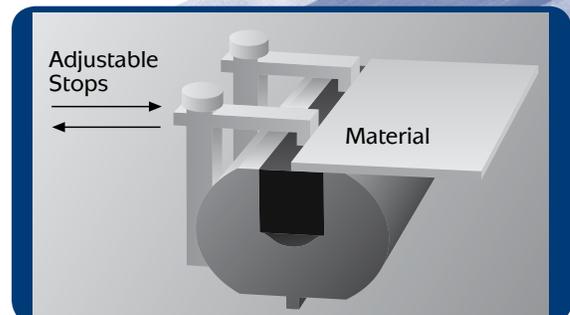


K•PRENE[®] WAFER PAD
This system involves the use of four thin (1/4" or 1/2") K•Prene[®] strips, or wafers, which are stacked in the retainer. It allows the increased punch penetration needed for severe bends, like U-forming. It is most efficient when forming blanks lighter than 16 ga. M.S.

Die Component Accessories

FLEXIBLE STOCK BACKGAGES

Spring steel deflects up when urethane bulges.



Tru-Form® Uses and Recommendations

K•Prene® Grade	Die Pad Sizes			K•Prene® Wear Pads	K•Prene® Pressure Rods
	1" x 1"	2" x 2"	3" x 2"		
K-900A Medium Pressure	For most V-forming jobs up to & including 11 ga. steel (even exotics). NOT recommended for U-forming.	Can V-form mild steel up to 1/4" thick, radius U-form up to 11 ga., or flat bottom U-form up to 16 ga.	Same as 1" and 2" wide pads, but also allows deeper punch penetration to form both wider channels and larger radius bends.	For use when deep penetration is required; withstands constant flexing action.	For use when very high blank-holding pressure is required for heavy metals
K-950A High Pressure	Recommended when higher blank-holding and forming pressure is required-for example, forming harder metals or sharper inside radii. Punch penetration and shorter pad life may result. Generally used for uncomplicated bends in difficult metals.			Most recommended. Harder surface can withstand more abuse. Generally not used for deep penetration.	Not recommended.
K-800A Low Pressure	Recommended for lighter metals (less than 20 ga. mild steel) when long pad life is desired. Best grade when limited press tonnage is available or if deeper punch penetration is required for complicated bends in light gages.			Not recommended.	Most recommended grade for generating additional blank-holding pressure.

Tonnage Requirements

Tonnage ratings are for forming a 90° bend in mild steel, using a sharp V-punch and are for guidance only. Lubrication will reduce tonnage requirement.

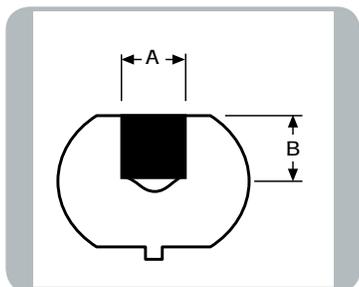
K•Prene® Grade	Die Pad Sizes											
	1" x 1"				2" x 2"				3" x 2"			
	Metal Gage				Metal Gage				Metal Gage			
	20	16	14	11	20	16	14	11	20	16	14	11
K-800A	2.8	4.5	7	15.7	3	4.5	6.8	13	2.8	4	6	10
K-900A	4.2	6.5	9.5	21.5	3.5	5	7.5	14.2	3.3	4.5	6.5	11.5
K-950A	6.2	8.5	12.5	25.7	5.5	7.5	10.8	21.5	5	7	9.2	15.5

Die Component Prices

Component	1" x 1"	2" x 2"	3" x 2"
Die Retainer (16 ft. max. length)	\$133.35 Base + \$72.50/ft.	\$259.35 Base + \$147.35/ft.	\$312.90 Base + \$194.85/ft.
K•Prene® Solid	see bar prices (pg 22)	see bar prices (pg 22)	see bar prices (pg 22)
Die Pad 2" long blocks (6/ft.)	\$27.00/ft.	\$52.75/ft.	\$75.10/ft.
System Wafers (set of 4)	\$31.50/ft. (1/4" thick each)	\$63.00/ft. (1/2" thick each)	\$84.00/ft. (1/2" thick each)
Wear Pad (1/8" thick)	\$5.60/ft. (1" wide)	\$7.20/ft. (2" wide)	\$8.85/ft. (3" wide)
Wear Pad (1/8" thick)	\$7.20/ft. (2" wide)	\$8.85/ft. (3" wide)	\$10.45/ft. (4" wide)
Pressure Rod	\$16.20/ft. (1/4" diameter)	\$12.20/ft. (1/2" diameter)	\$13.15/ft. (5/8" diameter)

Double-faced Clamping Tape (1" x 36 yds.) \$14.05 per roll
Flexible Backgages \$105.85 per set \$169.80 per set installed

NOTE: The above K•Prene® materials (except Block System) are furnished in 4 foot or shorter lengths. When used in longer retainers the materials are butted together end-to-end. For additional information, please request catalog PTB90.



Ordering Information

(Please order in 1ft. increments, UP TO 16 ft.)

Basic Die:

- 1) Die Retainer, A x B x length
- 2) Die Pad System, Solid, Block, or Wafer, durometer, A x B x length.

Specify Auxiliary Components:

- 1) Wear Pad - durometer, width x length.
- 2) Pressure Rod - durometer, diameter x length.
- 3) Double-faced Clamping Tape.
- 4) Flexible Backgages.

Press Brake Dies

K•Prene® urethane female dies are designed for production and will not leave die marks! They feature tremendous load-bearing capacity and excellent resistance to abrasion. These are manufactured in 48" lengths and can be butted together as needed. They are lightweight, easy to handle, stocked for immediate delivery and may be shipped via UPS.

Desired opening equals 8X the material thickness.
Recommended for air bending, NOT coining.



90 Degree Dies

Dimensions	Lgth.	Part No.	Price
<p>Up to 22ga. M.S.</p>	12"	KBDV-0104-12	\$34.20
	24"	KBDV-0104-24	58.95
	36"	KBDV-0104-36	85.45
	48"	KBDV-0104-48	110.30
<p>Up to 18ga. M.S.</p>	12"	KBDV-0308-12	34.20
	24"	KBDV-0308-24	58.95
	36"	KBDV-0308-36	85.45
	48"	KBDV-0308-48	110.30
<p>Up to 16ga. M.S.</p>	12"	KBDV-0102-12	34.20
	24"	KBDV-0102-24	58.95
	36"	KBDV-0102-36	85.45
	48"	KBDV-0102-48	110.30
<p>Up to 14ga. M.S.</p>	12"	KBDV-0508-12	45.20
	24"	KBDV-0508-24	83.00
	36"	KBDV-0508-36	119.00
	48"	KBDV-0508-48	155.30
<p>Up to 13ga. M.S.</p>	12"	KBDV-0304-12	45.20
	24"	KBDV-0304-24	83.00
	36"	KBDV-0304-36	119.00
	48"	KBDV-0304-48	155.30
<p>Up to 12ga. M.S.</p>	12"	KBDV-0708-12	50.75
	24"	KBDV-0708-24	91.75
	36"	KBDV-0708-36	136.30
	48"	KBDV-0708-48	173.55
<p>Up to 11ga. M.S.</p>	12"	KBDV-1000-12	50.75
	24"	KBDV-1000-24	91.75
	36"	KBDV-1000-36	136.30
	48"	KBDV-1000-48	173.55

Note: All dies have standard 1/2" x 5/8" tang.

85 Degree Dies

Dimensions	Lgth.	Part No.	Price
<p>Up to 12ga. S.S.</p>	12"	KBDV-1104-12	\$79.40
	24"	KBDV-1104-24	143.10
	36"	KBDV-1104-36	205.50
	48"	KBDV-1104-48	265.60
	12"	KBDV-1102-12	79.40
	24"	KBDV-1102-24	143.10
	36"	KBDV-1102-36	205.50
	48"	KBDV-1102-48	265.60
<p>Can be machined for custom applications. Ask for a quote.</p>	12"	KBDB-0000-12	79.40
	24"	KBDB-0000-24	143.10
	36"	KBDB-0000-36	205.50
	48"	KBDB-0000-48	265.60

30 Degree Dies

Dimensions	Lgth.	Part No.	Price
<p>Up to 22ga. M.S.</p>	12"	KBDA-0104-12	\$34.20
	24"	KBDA-0104-24	58.95
	36"	KBDA-0104-36	88.45
	48"	KBDA-0104-48	110.30
<p>Up to 18ga. M.S.</p>	12"	KBDA-0308-12	34.20
	24"	KBDA-0308-24	58.95
	36"	KBDA-0308-36	85.45
	48"	KBDA-0308-48	110.30
<p>Up to 16ga. M.S.</p>	12"	KBDA-0102-12	45.20
	24"	KBDA-0102-24	83.00
	36"	KBDA-0102-36	119.00
	48"	KBDA-0102-48	155.30
<p>Up to 14ga. M.S.</p>	12"	KBDA-0508-12	45.20
	24"	KBDA-0508-24	83.00
	36"	KBDA-0508-36	119.00
	48"	KBDA-0508-48	155.30

Acro-Hyde™ for Press Brake Forming

Acro-Hyde™, a urethane film, prevents die marks on a wide range of materials including stainless, aluminum and other polished stocks. Manufacturing costs will be reduced significantly because the film eliminates secondary polishing or having to scrap expensive blanks. Simply cut Acro-Hyde™ to length, lay it on top of the bottom die and secure one side with *Double-faced Clamping Tape.



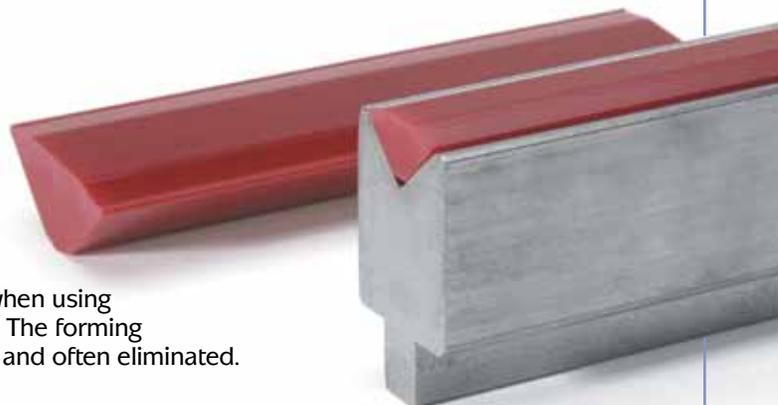
Description	Part No.	Price
.015 x 2" wide x 100 ft.	ACH-02015	\$45.00
.015 x 4" wide x 100 ft.	ACH-04015	86.62
.015 x 6" wide x 100 ft.	ACH-06015	129.69
.030 x 6" wide x 100 ft.	ACH-06030	209.00
.015 x 12" wide x 100 ft.	ACH-12015	265.00
.030 x 12" wide x 100 ft.	ACH-12030	418.00
.015 x 18" wide x 100 ft.	ACH-18015	285.00
.030 x 18" wide x 100 ft.	ACH-18030	438.00
.015 x 36" wide x 20 ft. (min.)	ACH-36015	7.81/ft.
.030 x 36" wide x 20 ft. (min.)	ACH-36030	14.50/ft.

Call for volume discounts

General Properties:	Specifications	Values
Durometer:	D2240	85A
Specific Gravity:	D792	1.20
Tensile Properties:	D638	
Modulus at 100% strain		800 psi
Modulus at 300% strain		1800 psi
Modulus at break		7000 psi
Modulus of elasticity up to 10% strain		30 psi
Elongation at break		400
Set at break		30
Tear Properties:		
Die C	D624	425

Acroform™ Inserts

For a quick and effective way to avoid die marks on stainless steel, pre-painted material, etc. simply position these 1" or 2" inserts in corresponding 90° bottom dies! The K•Prene® insert will conform to a variety of punch tips. In addition to eliminating the secondary procedure expense of removing die marks, your die will now act like a universal bottom die.



The maximum thickness capacity of the die remains the same when using Acroform™, but now you can also form lighter gauge materials. The forming of expanded metal or mesh is simplified, as cracking is reduced and often eliminated.

It is recommended to use insert lengths that are slightly longer than the actual bend length. Acroform™ inserts are manufactured in multiple lengths, or sections can be butted together for longer bends. To avoid insert separation, use a double-faced tape in the bottom die.

This product is stocked in K•950A. It is available in softer grades.

*DOUBLE-FACED CLAMPING TAPE

This double-faced tape securely holds Acroform™ and Acro-Hyde™ in place. It eliminates the need for fixtures, clamping devices, bolts, etc.



Dimension	Length	Part No.	Price
<p>1" Insert 1/2" H</p>	12"	KAF-161000-12	\$13.00
	24	KAF-161000-24	25.95
	36	KAF-161000-36	38.85
	48	KAF-161000-48	51.85
<p>2" Insert 1" H</p>	12	KAF-162000-12	29.00
	24	KAF-162000-24	58.00
	36	KAF-162000-36	87.00
	48	KAF-162000-48	115.80
*Double-faced Clamping Tape 1" x 36 yards		KPT-136	14.00/roll

Strippers

Strippers - Wiedeman and Piranha

Stocked in K-900A. Other Durometers are available.

For Wiedeman W-20, W-30, W45, & Centrum Models

112 Style Tooling

Station	Shape	Face Dia.	I.D.	O.D.	Lgth.	Part No.	Price
B	Std.	1-5/32"	31/32"	2"	1-27/32"	500-1453	\$8.30
C	Std.	1-23/32	1-15/32	2-1/2	2-1/16	500-1455	9.35
D	Std.	2-7/32	1-31/32	3	1-1/2	500-1456	9.35
D	1" sq.*	2-7/32	1-31/32	3	1-1/2	500-1520	11.05
D	Rect.**	2-7/32	1-31/32	3	1-1/2	500-1511	10.50
E	Std.	2-29/32	3-3/32	4-9/32	1-1/2	500-1457	11.55
E	Rect.**	2-29/32	3-3/32	4-9/32	1-1/2	500-1459	13.25
F	Std.	3-11/16	3-3/32	4-9/32	1-1/2	500-1462	11.55
F	2" sq.*	3-11/16	3-3/32	4-9/32	1-1/2	500-1467	13.25
F	Rect.**	3-11/16	3-3/32	4-9/32	1-1/2	500-1526	13.25
G	Std.	4-3/16	3-15/32	4-25/32	1-1/2	500-1463	12.90
G	Rect.**	4-3/16	3-15/32	4-25/32	1-1/2	500-1527	14.10
K	Std.	* 1" & 2" Squares Only.					
K	Rect.**	** 1/2" & Narrower Rectangles Only.					

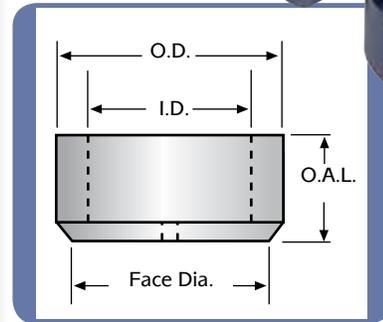
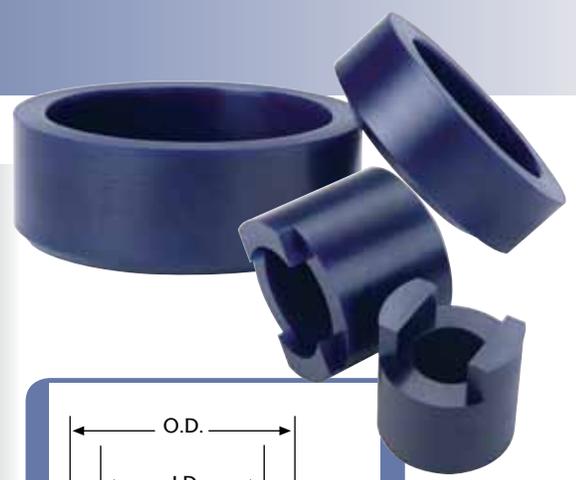
114 Style Tooling

Station	Shape	Face Dia.	I.D.	O.D.	Lgth.	Part No.	Price
B	Std.	1-1/8"	1-1/16"	1-31/32"	2.362"	500-1342	\$9.40
C	Std.	1-23/32	1-3/4	2-1/2	2-5/16	500-1344	11.55
D	Std.	2-7/32	1-31/32	3	2-3/32	500-1351	11.55
D	1" sq.*	2-7/32	1-31/32	3	2-3/32	500-1379	13.25
D	Rect.**	2-7/32	1-31/32	3	2-3/32	500-1421	13.25
E	Std.	2-29/32	2-31/32	4	2-3/32	500-1354	12.90
E	Rect.**	2-29/32	2-31/32	4	2-3/32	500-1448	14.10
F	Std.	3-9/32	2-31/32	4	2-3/32	500-1355	12.90
F	2" sq.*	3-9/32	2-31/32	4	2-3/32	500-1531	14.35
F	Rect.**	3-9/32	2-31/32	4	2-3/32	500-1530	14.35
G	Std.	3-25/32	4-11/32	5-5/32	2-3/32	500-1359	17.40
G	2" sq.*	3-25/32	4-11/32	5-5/32	2-3/32	500-1426	18.50
G	Rect.**	3-25/32	4-11/32	5-5/32	2-3/32	500-1528	18.50
H	Std.	4-17/16	4-11/32	5-5/32	2-3/32	500-1360	17.40
H	Rect.**	4-17/16	4-11/32	5-5/32	2-3/32	500-1452	18.50
J	Std.	5-11/32	4-23/32	5-13/16	2-3/32	500-1375	22.35
J	Rect.**	5-11/32	4-23/32	5-13/16	2-3/32	500-1431	24.25
K	Std.	6-5/8	5-23/32	6-5/8	2-3/32	500-1534	26.50
K	Rect.**	6-5/8	5-23/32	6-5/8	2-3/32	500-1535	29.25

SPRINGS/STRIPPERS FOR PIRANHA IRONWORKERS

For use on punch gauge table. Stocked in K-900A.
Other durometers available.

Model	I.D.	O.D.	Lgth.	Part No.	Price
P-35	1-1/16"	2-1/4"	3"	PIR-P35/P50	\$17.85
P-50	1-1/16"	2-1/4"	3"	PIR-P35/P50	17.85
P-70	1-3/8"	3-1/2"	5"	PIR-P70/P90	36.75
P-90	1-3/8"	3-1/2"	5"	PIR-P70/P90	36.75



Stocked in 90A Durometer

Strippers

Di-Acro 902 Series Strippers are designed for direct use in Di-Acro Hand Turret Punches, as well as the VT-19P, VT-19S, and VT-19 NC equipped with 903 style Turrets.

Station	I.D.	Part No.	Price
A	3/8"	902-1508001	\$11.30
A	3/4"	902-1508002	11.80
B	1"	902-1508003	16.20
B	1-1/2"	902-1508004	16.20
A	5/8"	902-1508005	13.20
A	3/4"	902-1508006	13.20
B	1"	902-1508007	18.70
B	1-1/2"	902-1508008	18.70

Di-Acro 906 Series Strippers are manufactured specifically for the VT-19P, VT-19S, and VT-19 NC and the VT-36 NC equipped with the 906 style Turrets.

Station	I.D.	Part No.	Price
B	3/8"	906-1508001	\$11.30
B	3/4"	906-1508002	11.80
C	3/8"	906-1508003	16.20
C	3/4"	906-1508004	16.20
C	1"	906-1508005	13.20
D	1-3/8"	906-1508006	13.20
E-F	2-1/4"	906-1508007	23.65

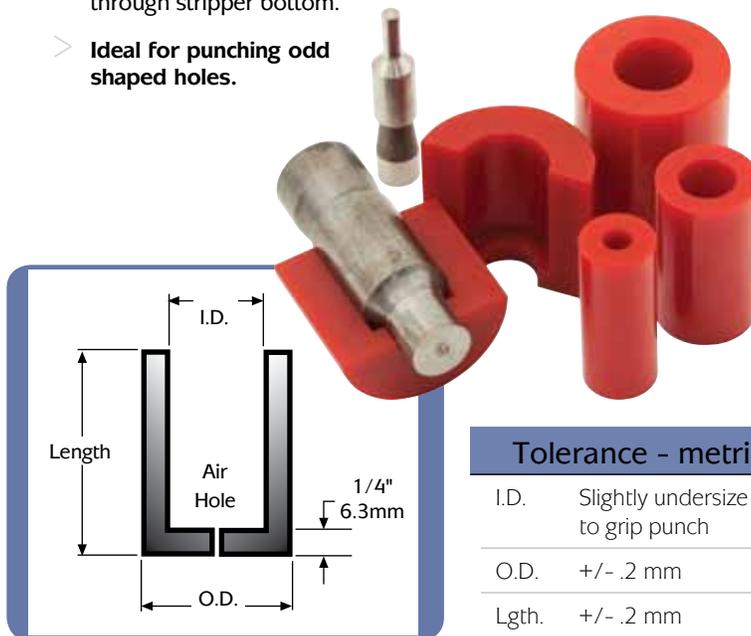
SurStrip™ Punch Strippers

Stocked in K-950A. Other durometers are available. To order, indicate the part number, durometer, and quantity desired.

Standard Sizes – Strippers with I.D. of 3/16", 1/4" and 5/16" have 1/16" dia. air holes. All others have 1/8" air holes.

I.D.	O.D.	Lgth.	Part No.	Price
3/16"	11/16"	1-1/4"	KSS-316114	\$3.40
		1-1/2"	KSS-316112	3.65
1/4"	3/4"	1-1/4"	KSS-014114	3.40
		1-1/2"	KSS-014112	3.65
		1-3/4"	KSS-014134	4.00
5/16"	13/16"	1-1/4"	KSS-516114	3.65
		1-1/2"	KSS-516112	4.00
		1-3/4"	KSS-516134	4.25
		2"	KSS-516200	4.60
3/8"	7/8"	1-1/4"	KSS-038114	4.00
		1-1/2"	KSS-038112	4.25
		1-3/4"	KSS-038134	4.60
		2"	KSS-038200	4.90
1/2"	1"	1-1/4"	KSS-012114	4.25
		1-1/2"	KSS-012112	4.60
		1-3/4"	KSS-012134	4.90
		2"	KSS-012200	5.20
		2-1/4"	KSS-012214	5.50
		1-1/4"	1-3/4"	KSS-012134A
5/8"	1-1/8"	2"	KSS-012200A	5.95
		1-1/4"	KSS-058114	4.25
		1-1/2"	KSS-058112	4.60
		1-3/4"	KSS-058134	4.90
3/4"	1-1/2"	2"	KSS-058200	5.20
		1-3/4"	KSS-034134	5.80
		2"	KSS-034200	6.45
		2-1/4"	KSS-034214	7.00
		2-1/2"	KSS-034212	7.65
7/8"	1-3/4"	2-3/4"	KSS-034234	8.20
		1-3/4"	KSS-078134	6.75
		2"	KSS-078200	7.35
		2-1/4"	KSS-078214	7.90
		2-1/2"	KSS-078212	8.55
1"	2"	2-3/4"	KSS-078234	9.15
		1-3/4"	KSS-100134	7.35
		2"	KSS-100200	7.90
		2-1/4"	KSS-100214	8.55
1-1/4"	2-1/2"	2-1/2"	KSS-100212	9.15
		2-3/4"	KSS-100234	9.80
		2"	KSS-114200	12.20
		2-1/4"	KSS-114214	13.40
		2-1/2"	KSS-114212	14.60
1-1/2"	2-3/4"	2-3/4"	KSS-114234	15.80
		3"	KSS-114300	17.00
		2"	KSS-112200	14.60
		2-1/4"	KSS-112214	15.80
		2-1/2"	KSS-112212	17.00
2"	3"	2-3/4"	KSS-112234	18.30
		3"	KSS-112300	19.50
		2-1/4"	KSS-200214A	21.00
3"	4"	2-1/4"	KSS-200214	21.60
		2-1/4"	KSS-300214A	22.05
	4-1/2"	2-1/4"	KSS-300214	27.50

- > **Longer Tool Life** – These strippers generate high holding pressure and strip the blank cleanly from the punch, resulting in an optimum working condition for the punch and longer effective work life.
- > **Very high load-bearing capacities.**
- > **Safer than steel springs, since they do not fragmentize.**
- > **Easy To Use** – Simply push stripper onto punch shank (I.D. is slightly undersized to grip punch). First stroke of press forces punch tip through stripper bottom.
- > **Ideal for punching odd shaped holes.**



Tolerance - metric

I.D.	Slightly undersize to grip punch
O.D.	+/- .2 mm
Lgth.	+/- .2 mm

Metric Sizes – Stocked with 1/8" dia. air holes

I.D. mm	O.D. mm	Lgth. mm	Part No.	Price
6	19mm	45mm	MSS-006045	\$4.00
6	19	53	MSS-006053	4.15
6	19	71	MSS-006071	4.55
8	21	45	MSS-008045	4.25
8	21	53	MSS-008053	4.45
8	21	71	MSS-008071	4.70
10	23	45	MSS-010045	4.70
10	23	53	MSS-010053	4.85
10	23	56	MSS-010056	5.00
10	23	71	MSS-010071	5.15
13	26	45	MSS-013045	4.85
13	26	53	MSS-013053	5.15
13	26	56	MSS-013056	5.25
13	26	71	MSS-013071	5.75
16	30	45	MSS-016045	5.00
16	30	53	MSS-016053	5.25
16	30	56	MSS-016056	5.35
16	30	71	MSS-016071	5.75
20	38	45	MSS-020045	5.85
20	38	53	MSS-020053	6.40
20	38	71	MSS-020071	8.20
25	50	45	MSS-025045	7.35
25	50	53	MSS-025053	7.90
25	50	71	MSS-025071	9.80
32	60	45	MSS-032045	12.20

Square and Rectangular Bars, Inches

Width	Height	Length				2" Blocks
		12"	24"	36"	48"	
3/8"	3/8"	\$11.75	\$18.20	\$24.70	\$25.85	
1/2	1/2	12.70	20.05	27.50	29.60	
3/4	3/4	15.35	25.40	35.50	40.30	
1	1	21.75	38.10	54.60	65.75	\$27.00 per ft.
1-1/4	1-1/4	26.60	47.80	69.10	85.05	
1-1/2	1-1/2	32.45	59.55	86.75	108.60	
* 2	2	47.25	89.60	131.80	168.65	\$52.70 per ft.
2-1/2	2-1/2	66.70	128.10	189.55	245.70	
* 3	2	69.85	134.30	198.87	258.10	\$75.10 per ft.
3	3	98.20	191.00	283.95	371.50	
4	4	165.90	285.80	415.00	535.00	
5	5	233.45	420.85	617.40	804.85	
6	6	315.85	585.70	864.80	1,134.75	

* Available with 1" diameter center hole at the same price.
To order, specify "with center hole."

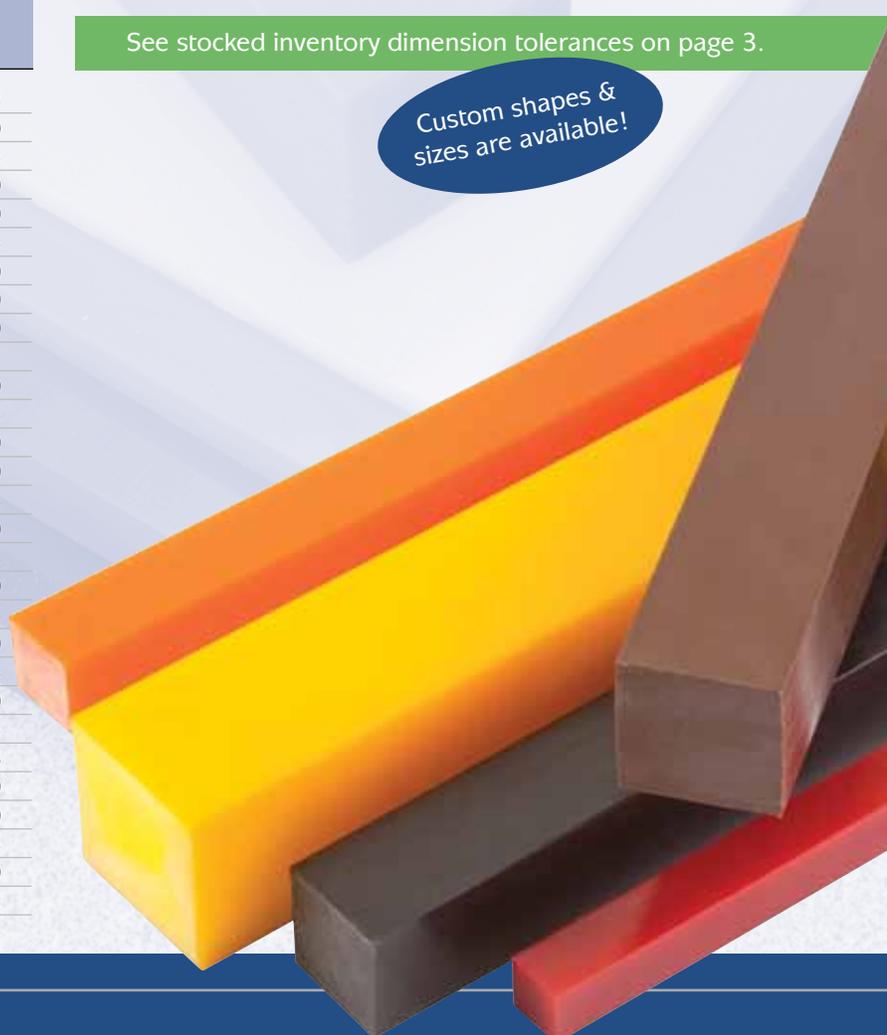
Square and Rectangular Bars, Metric (made to order)

* These sizes fit European style bottom dies.

Width mm +0 - 0.3	Height mm +0 - 0.3	Length mm +5 - 0	Price
25	25	100	\$11.15
		415	29.60
		500	34.65
		835	52.20
		1000	58.70
*30	25	100	11.65
		415	31.80
		500	37.30
		835	56.50
		1000	64.05
*50	50	100	19.30
		415	63.65
		500	75.60
		835	117.70
		1000	140.65
*80	30	100	18.90
		415	61.65
		500	73.30
		835	114.05
		1000	136.00
75	50	100	25.85
		415	90.50
		500	107.95
		835	169.58
		1000	205.40
*110	45	100	31.00
		415	112.15
		500	134.00
		835	211.25
		1000	257.45

See stocked inventory dimension tolerances on page 3.

Custom shapes & sizes are available!



Precision Cast Sheets

Custom shapes & sizes are available!

These have more tightly controlled thickness dimensions than open cast sheets.

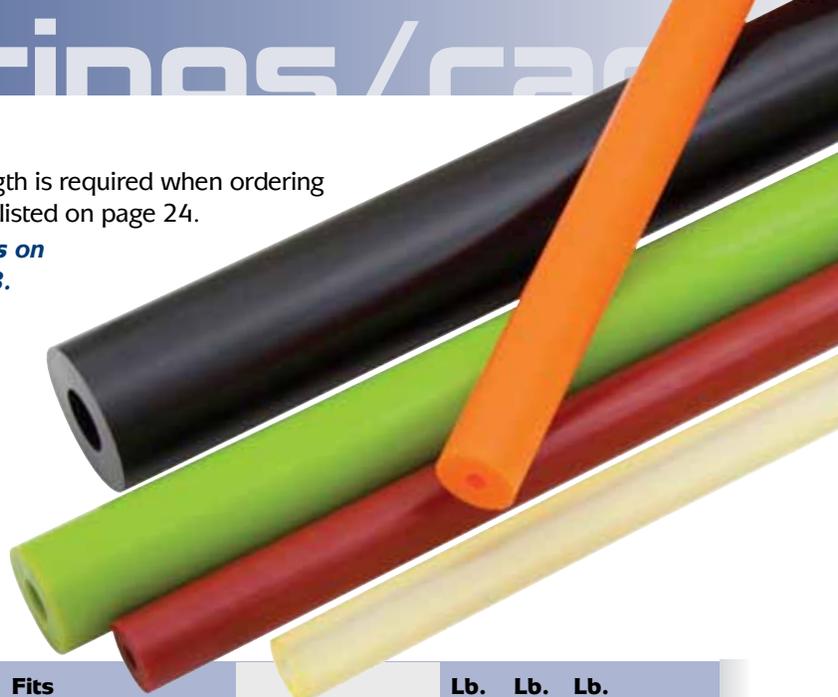
See stocked inventory dimension tolerances on page 3.

Width	Length	Thickness						
		1/16"	1/8"	3/16"	1/4"	3/8"	1/2"	5/8"
1"	48"	\$20.25	\$22.25	\$24.25	\$26.25	\$30.25	\$34.25	\$39.50
2	48	24.70	28.80	32.75	36.75	44.75	52.80	63.30
3	48	29.20	35.30	41.30	47.25	59.35	71.30	87.05
4	48	33.60	41.70	49.70	57.75	73.80	89.90	110.90
6	6	19.10	20.60	22.15	23.65	26.70	29.60	33.60
	12	22.50	25.50	28.45	31.50	37.50	43.60	51.45
	18	25.85	30.35	34.85	39.40	48.40	57.45	69.20
	24	29.20	35.20	41.30	47.25	59.35	71.30	87.05
	36	35.90	44.95	54.00	63.00	81.05	99.10	122.75
	48	42.65	54.60	66.70	78.75	102.80	126.95	158.50
12	12	29.20	35.20	41.30	47.25	59.35	71.30	87.05
	18	35.90	44.95	54.00	63.00	81.05	99.10	122.75
	24	42.65	54.60	66.70	78.75	102.80	126.95	158.45
	36	56.00	74.05	92.20	110.25	146.40	182.50	229.75
	48	69.40	93.55	117.60	141.75	189.95	238.15	301.05
18	18	45.90	59.55	73.10	86.65	113.70	140.80	176.20
	24	55.95	74.05	92.20	110.25	146.40	182.50	229.75
	36	76.15	103.25	130.30	157.40	211.70	265.90	336.75
	48	96.30	132.40	168.55	204.65	277.00	349.25	443.75
24	24	69.40	93.55	117.60	141.75	189.95	238.15	301.05
	36	96.30	132.40	168.55	204.65	277.00	349.25	443.75
	48	107.30	155.50	203.70	251.90	348.30	444.70	570.60
	60	138.90	195.20	251.40	307.65	420.10	532.60	645.00
	72	150.15	217.70	285.10	352.60	487.50	622.45	757.50
48	48				442.60	622.45	802.45	982.40
	96				802.40	1,162.25	1,522.10	1,882.05
		3/4"	1"	1-1/2"	2"	2-1/2"	3"	4"
1"	48"	\$43.60	\$65.75	\$73.65	\$87.40	\$102.70	\$123.30	\$159.10
2	48	71.30	87.40	151.75	168.65	238.10	258.10	295.05
3	48	99.15	123.30	217.70	258.10	280.05	371.50	442.60
4	48	126.95	159.10	235.10	295.05	382.65	442.60	535.00
6	6	36.65	42.65	70.45	81.70	93.05	104.30	126.75
	12	57.45	69.50	113.40	135.90	158.45	180.95	225.85
	18	78.35	96.40	156.35	190.05	223.86	257.60	325.00
	24	99.15	123.30	190.05	235.10	280.05	325.00	415.00
	36	140.80	176.95	257.60	325.00	420.10	487.55	622.45
	48	182.50	230.70	325.00	415.00	532.60	622.45	802.40
12	12	99.15	123.30	180.95	225.85	280.05	325.00	415.00
	18	140.80	176.95	257.60	325.00	392.50	460.00	594.95
	24	182.50	230.70	325.00	415.00	532.60	622.45	802.40
	36	265.85	338.20	487.55	622.45	757.50	892.40	1,162.25
	48	349.25	445.65	622.45	802.40	982.40	1,162.25	1,522.10
18	18	203.40	257.60	386.30	487.55	588.75	689.95	997.40
	24	265.85	338.20	487.55	622.45	757.50	892.40	1,162.25
	36	390.95	499.40	690.00	892.40	1,094.85	1,297.20	1,702.05
	48	516.00	660.55	892.40	1,162.25	1,432.20	1,702.05	2,241.85
24	24	349.25	445.65	622.45	802.40	982.40	1,162.25	1,522.10
	36	516.00	660.55	892.40	1,162.25	1,432.20	1,702.05	2,241.85
	48	667.00	859.75	1,162.25	1,522.10	1,882.05	2,241.85	2,961.55
	60	757.50	982.40	1,432.20	1,882.05	2,331.85	2,781.70	3,681.30
	72	892.40	1,162.25	1,702.05	2,241.85	2,781.70	3,321.40	4,401.00
48	48	1,162.25	1,522.10	2,241.85	2,961.55	3,681.30	4,401.00	5,840.45
	96	2,241.85	2,961.55	4,401.00	5,840.45	7,279.90	8,719.20	11,598.10

Tubes / Springs and Caps

Stocked in K-950A. A minimum order of the 12" or 24" length is required when ordering any other durometer. Additional sizes including metrics are listed on page 24.

Note: See the Caps on bottom of page 23.



Fits Punch Body				Lb. Per 1/8" Def.	Lb. Per 3/8" Def.	Lb. Per 1/2" Def.	Price	Fits Punch Body				Lb. Per 1/8" Def.	Lb. Per 3/8" Def.	Lb. Per 1/2" Def.	Price	
Diam.	O.D.	Lgth.	Order No.					Diam.	O.D.	Lgth.	Order No.					
3/16"	11/16"	1-1/4"	KPS-0316H01104	220	-	1036	\$2.55	1/2"	1"	1"	KPS-0102H01000	512	-	1143	\$2.65	
		High Press.	1-1/2"	KPS-0316H01102	200	-	904			2.75	1-1/4"	KPS-0102H01104	340	-	1025	3.05
		12	KPS-0316H12000	*	-	-	15.55			1-1/2"	KPS-0102H01102	325	-	946	3.50	
1/4"	3/4"	1"	KPS-0104H01000	325	-	1101	2.35			1-3/4"	KPS-0102H01304	275	-	878	4.00	
		High Press.	1-1/4"	KPS-0104H01104	250	-	975			2.85	2	KPS-0102H02000	250	-	834	4.35
		1-1/2"	KPS-0104H01102	215	-	790	3.05			24	KPS-0102H24000	*	-	-	38.85	
		1-3/4"	KPS-0104H01304	183	-	703	3.80			1-1/8"	1"	KPS-0102V01000	681	1709	-	2.85
		12	KPS-0104H12000	*	-	-	18.10			Very High Press.	1-1/4"	KPS-0102V01104	525	1475	-	3.40
		1"	KPS-0104V01000	475	1294	-	2.45			1-1/2"	KPS-0102V01102	424	1318	-	3.80	
5/16"	13/16"	1-1/4"	KPS-0516H01104	280	-	1037	3.05			1-3/4"	KPS-0102V01304	350	1207	-	4.45	
		High Press.	1-1/2"	KPS-0516H01102	255	-	936			3.40	2	KPS-0102V02000	320	1123	-	4.65
		1-3/4"	KPS-0516H01304	235	-	863	3.80			24	KPS-0102V24000	*	-	-	43.40	
		2	KPS-0516H02000	225	-	809	4.20			1-1/4"	1"	KPS-0102U01000	863	2188	-	3.05
		12	KPS-0516H12000	*	-	-	20.60			Ultra High Press.	1-1/4"	KPS-0102U01104	675	1793	-	3.60
		1"	KPS-0104U01000	712	1543	-	2.55			1-1/2"	KPS-0102U01102	550	1529	-	4.10	
3/8"	7/8"	1"	KPS-0308H01000	444	-	1027	2.75			1-3/4"	KPS-0102U01304	492	1341	-	4.75	
		High Press.	1-1/4"	KPS-0308H01104	347	-	957			3.40	2	KPS-0102U02000	450	1200	-	5.05
		1-1/2"	KPS-0308H01102	275	-	910	3.70			24	KPS-0102U24000	*	-	-	48.30	
		1-3/4"	KPS-0308H01304	224	-	876	4.20	5/8"	1-1/8"	1"	KPS-0508H01000	562	-	1224	2.85	
		2	KPS-0308H02000	199	-	851	4.65	High Press.	1-1/4"	KPS-0508H01104	446	-	1169	3.40		
		12	KPS-0308H12000	*	-	-	23.10	1-1/2"	KPS-0508H01102	375	-	1133	3.80			
	1"	Very High Press.	1"	KPS-0308V01000	575	1501	-	2.85	1-3/4"	KPS-0508H01304	323	-	1107	4.45		
			1-1/4"	KPS-0308V01104	475	1265	-	3.60	2	KPS-0508H02000	295	-	1087	4.75		
			1-1/2"	KPS-0308V01102	389	1108	-	3.90	24	KPS-0508H24000	*	-	-	43.60		
			1-3/4"	KPS-0308V01304	325	998	-	4.45	1-1/4"	1"	KPS-0508V01000	794	1855	-	3.05	
			2	KPS-0308V02000	286	912	-	4.95	Very High Press.	1-1/4"	KPS-0508V01104	600	1624	-	3.60	
			12	KPS-0308V12000	*	-	-	24.70	1-1/2"	KPS-0508V01102	510	1310	-	4.10		
1-1/8"	Ultra High Press.	1"	KPS-0308U01000	800	2071	-	3.05	1-3/4"	KPS-0508V01304	424	1232	-	4.85			
		1-1/4"	KPS-0308U01104	593	1729	-	3.80	2	KPS-0508V02000	384	1185	-	5.15			
		1-1/2"	KPS-0308U01102	522	1501	-	4.10	24	KPS-0508V24000	*	-	-	48.65			
		1-3/4"	KPS-0308U01304	450	1338	-	4.75	1-3/8"	1"	KPS-0508U01000	975	2462	-	3.30		
		2	KPS-0308U02000	387	1215	-	5.25	Ultra High Press.	1-1/4"	KPS-0508U01104	775	2129	-	3.90		
		12	KPS-0308U12000	*	-	-	26.50	1-1/2"	KPS-0508U01102	640	1907	-	4.45			

Custom shapes & sizes are available!

See stocked inventory dimension tolerances on page 3.

tubes / springs

Tubes and Springs – Inches

Tubes and springs are made to order. Common sizes are listed below; if you don't see the size you are looking for, contact us and we will make it for you.

Custom shapes & sizes are available!



See stocked inventory dimension tolerances on page 3.

I.D.	O.D.	Lgth.	Price
3/16"	3/4"	12"	\$15.45
1/4	5/8	12	15.45
1/4	1-1/8	12	27.00
1/4	1-1/4	12	29.75
1/4	1-1/2	12	32.80
9/32	1	12	25.45
5/16	3/4	12	18.80
5/16	7/8	12	20.45
5/16	1	12	24.30
3/8	3/4	12	17.65
3/8	15/16	12	23.10
3/8	1-1/4	12	29.75
3/8	1-1/2	12	31.50
3/8	2	12	37.50
3/8	2-1/2	12	49.65
7/16	3/4	12	24.30
7/16	7/8	24	33.10
7/16	1-1/4	24	54.00
1/2	1-1/2	24	60.60
1/2	1-3/4	24	62.80
1/2	2	24	70.90

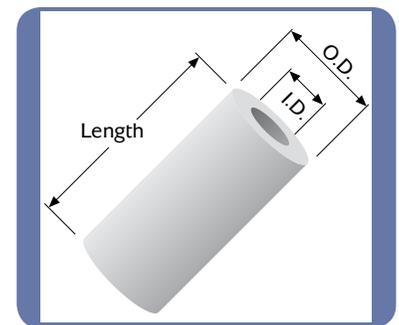
I.D.	O.D.	Lgth.	Price
1/2"	2-1/2"	24"	\$93.80
1/2	3	24	165.40
9/16	1	24	48.20
9/16	1-1/4	24	49.70
9/16	2	24	68.90
9/16	2-1/2	24	86.55
9/16	3	24	96.50
5/8	1	24	47.50
5/8	1-1/2	24	61.95
5/8	1-3/4	24	68.40
5/8	2	24	76.15
5/8	2-1/2	24	103.15
3/4	1-1/8	24	46.35
3/4	1-1/4	24	56.30
3/4	2	24	79.40
3/4	2-1/2	24	87.05
7/8	1-1/4	24	49.70
7/8	2-1/2	24	104.70
7/8	3	24	143.35
1	1-3/8	24	18.20
1	1-1/2	24	58.40

I.D.	O.D.	Lgth.	Price
1"	2-1/4"	24"	\$93.80
1	3	24	132.30
1	3-1/4	24	146.60
1	4	24	209.50
1-1/4	2	24	78.25
1-1/4	3	24	134.50
1-1/2	2	24	86.00
1-1/2	2-1/4	24	69.55
1-1/2	2-1/2	24	81.60
1-1/2	3	24	123.50
1-1/2	4	24	196.35
2	2-1/2	24	60.80
2	3	24	105.85
2	3-1/4	24	115.85
2	3-1/2	24	134.50
2	4	24	174.20
2-1/2	4	24	148.90
3	4	24	121.30
3	5	24	219.15
4	5	12	90.85

Tubes and Springs – Metric, made to order.

I.D. mm	O.D. mm	Lgth. mm	Price
7	15	25	\$1.90
7	15	30	2.20
7	15	35	2.45
7	15	40	2.65
7	15	500	22.20
8.5	20	25	2.20
8.5	20	30	2.55
8.5	20	35	2.85
8.5	20	40	3.15
8.5	20	500	28.15
11	25	25	2.55
11	25	30	2.95
11	25	35	3.25
11	25	40	3.70
11	25	45	3.90
11	25	500	34.35
14	30	25	2.85
14	30	30	3.40
14	30	35	3.80
14	30	40	4.20
14	30	45	4.55
14	30	50	4.95
14	30	55	5.40

I.D. mm	O.D. mm	Lgth. mm	Price
14	30	60	\$6.00
14	30	500	41.30
14	40	40	5.70
14	40	50	6.65
14	40	60	8.10
14	40	500	58.70
14	50	50	7.25
14	50	60	8.95
14	50	80	11.55
14	50	500	64.70
14	60	50	9.35
14	60	60	11.45
14	60	80	15.05
14	60	500	85.50
22	80	60	17.15
22	80	80	22.60
22	80	100	26.90
22	80	500	130.65
22	100	80	33.20
22	100	100	39.70
22	100	120	49.50
22	100	500	194.60



Tolerance		
I.D.	7mm	
	8.5	
	11	+/- 0.2
	14	
	22	
O.D.	15	
	20	
	25	+/- 0.2
	30	
	40	+/- 0.3
	50	
	60	
80	+/- 0.4	
100		

Diameter	Length				
	6"	12"	24"	36"	48"
1/4"	(NOT AVAILABLE)	\$16.20	\$21.85		
3/8		16.70	22.90		
1/2		12.20	19.15	\$26.05	\$27.75
5/8		13.15	21.00	28.90	31.50
3/4		14.30	23.35	32.35	36.15
7/8		15.65	26.05	36.45	41.60
1		17.25	29.20	41.20	47.90
1-1/4		21.55	37.95	54.20	65.20
1-1/2		26.70	48.20	69.65	85.80
1-3/4		33.70	62.30	90.75	113.95
2		40.00	74.90	109.65	139.15
2-1/4		47.25	89.15	131.15	167.80
2-1/2		55.25	105.15	155.10	199.75
2-3/4		64.05	122.85	181.55	235.10
3		76.35	147.45	218.40	284.25
3-1/4		81.80	158.25	234.80	306.00
3-1/2		92.40	179.55	266.60	348.50
3-3/4		103.85	202.45	300.95	394.30
4		116.05	226.80	337.60	443.10
4-1/2		\$106.60	145.35	285.40	425.35
5	118.25	207.00	374.55		
6	152.90	276.40	513.25		
7	193.95	358.40	677.40		
8	241.30	453.00	866.60		

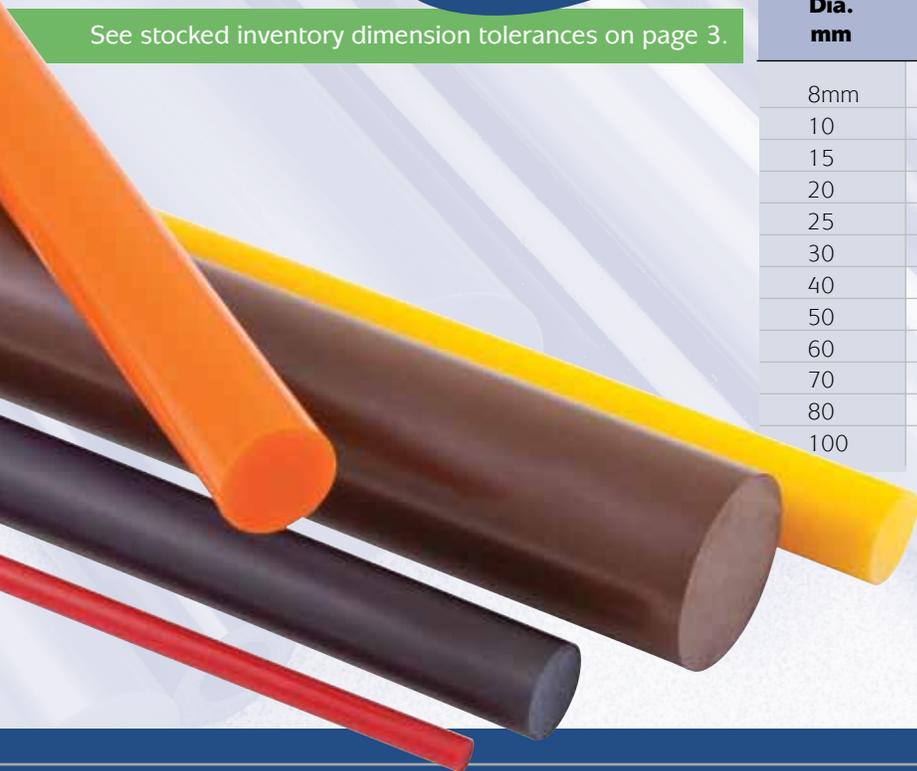
Custom shapes & sizes are available!

See stocked inventory dimension tolerances on page 3.

Round Rods – Metric, made to order.

Dia. mm	Length +5/-0mm	Price	Length +5/-0mm	Price
8mm	500mm	\$16.90	-	-
10	500	17.55	-	-
15	500	19.65	1000mm	\$28.70
20	500	22.60	1000	34.65
25	500	26.50	1000	42.45
30	500	31.20	1000	51.80
40	500	43.20	1000	75.70
50	500	58.60	1000	106.60
60	500	77.40	1000	144.20
70	500	99.65	1000	188.70
80	500	125.30	1000	240.05
100	500	186.90	1000	363.20

Note: Metric sizes conform to J.I.S. specifications.



Custom shapes & sizes are available!

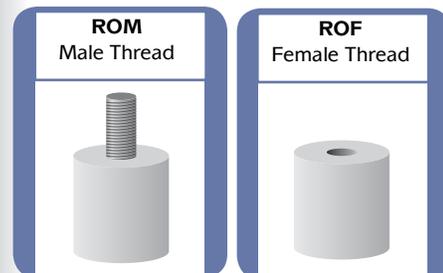
Round, Rectangular, and Square Bumpers

ROUND BUMPERS

These bumpers have steel cores with male or female threads. Bumpers are stocked in K-400A, K-600A, K-800A, K-900A, and K-950A.



Specifications				Prices		
Dia.	Hth.	Thread	Part No.	1-24	25-49	50+
1"	1"	1/4-20	ROM-001	\$3.95	\$3.75	\$3.60
1-1/4	1	1/4-20	ROM-002	4.50	4.25	4.05
1-1/2	1-1/4	3/8-16	ROM-003	5.40	5.20	5.00
2	1-1/4	3/8-16	ROM-004	7.20	6.95	6.50
2-1/2	2	1/2-13	ROM-005	13.10	12.50	11.90
3	2-1/2	1/2-13	ROM-006	21.95	20.90	19.90
1"	1"	1/4-20	ROF-001	\$3.60	\$3.35	\$3.20
1-1/4	1	1/4-20	ROF-002	4.10	3.95	3.75
1-1/2	1-1/4	3/8-16	ROF-003	4.90	4.60	4.35
2	1-1/4	3/8-16	ROF-004	6.60	6.25	6.00
2-1/2	2	1/2-13	ROF-005	12.15	11.60	11.05
3	2-1/2	1/2-13	ROF-006	21.00	20.00	19.05

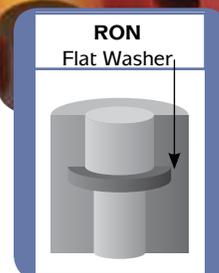


WASHERS

These round bumpers have a flat washer molded into the bumper and will accept a socket head cap screw of the size indicated. Stocked in K-400A, K-600A, K-800A, K-900A, and K-950A.



Specifications				Prices		
Dia.	Hth.	Thread	Part No.	1-24	25-49	50+
3/4"	3/4"	1/4"	RON-001	\$2.70	\$2.60	\$2.45
1	1	1/4	RON-002	3.40	3.25	3.10
1-1/4	1	3/8	RON-003	3.90	3.70	3.50
1-1/2	1-1/4	3/8	RON-004	4.80	4.50	4.30
2	1-1/4	1/2	RON-005	6.40	6.15	5.90
2-1/2	2	1/2	RON-006	12.00	11.40	10.90
3	2-1/2	1/2	RON-007	18.80	18.00	17.10

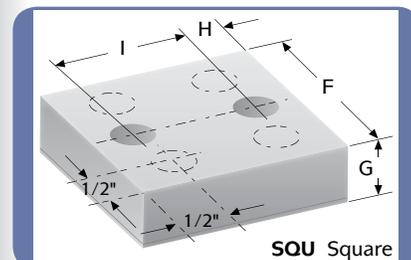
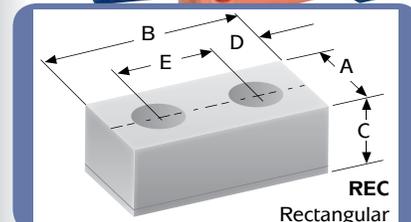


RECTANGULAR AND SQUARE BUMPERS

Base is 1/8" aluminum plate. Mounting holes are drilled and counterbored for 1/4" socket head cap screws. Stocked in K-400A, K-600A, K-800A, K-900A and K-950A.



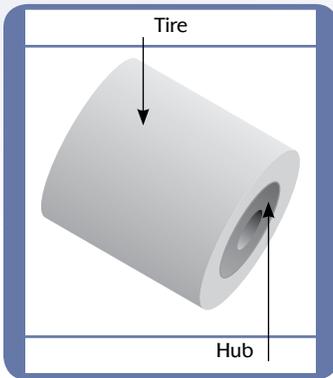
Specifications					Prices			
A	B	C	D	E	Part No.	1-24	25-49	50+
1"	2"	1/2"	3/8"	1-1/4"	REC-001	\$4.40	\$4.20	\$4.00
1	2	3/4	3/8	1-1/4	REC-002	4.95	4.75	4.50
1	2	1	3/8	1-1/4	REC-003	5.40	5.20	5.00
1	2	1-1/2	3/8	1-1/4	REC-004	6.45	6.15	5.90
1-1/4	2-1/2	3/4	3/8	1-3/4	REC-005	5.95	5.60	5.35
1-1/4	2-1/2	1	3/8	1-3/4	REC-006	6.70	6.35	6.10
1-1/4	2-1/2	1-1/2	3/8	1-3/4	REC-007	8.30	7.90	7.50
1-1/2	3	3/4	1/2	2	REC-008	6.95	6.60	6.25
1-1/2	3	1	1/2	2	REC-009	8.04	7.60	7.30
1-1/2	3	1-1/2	1/2	2	REC-010	10.35	9.80	9.40
F	G	H	I	Part No.	1-24	25-49	50+	
1"	3/4"	1 Hole-Centered		SQU-001	\$3.85	\$3.70	\$3.50	
1-1/2	1	3/8"	3/4"	SQU-002	5.15	4.90	4.70	
2	1	3/8	1-1/4	SQU-003	7.45	7.10	6.70	
2-1/2	1	Hole Centers are 1/2" from each edge.		SQU-004	10.25	9.70	9.30	
3	1-1/2			SQU-005	17.45	16.60	15.85	
4	1-1/2			SQU-006	27.45	26.20	24.95	



Versa Roll™

A LOW-COST ALTERNATIVE FOR WHEELS, CASTERS, ROLLERS, SHEAVES, ETC.

- > Two grades of tough K•Prene® urethane permanently bonded together, resulting in a hard anti-friction hub with softer outer tire.
- > Stocked with a K-900A outer tire and an anti-friction K-750D hub.
- > K-750D hub can serve as a bearing in some applications.
- > ID's, OD's, lengths and profiles can be machined to fit your application.
- > Use to make low cost OEM components for your manufactured products.
- > For special applications, other durometers are available.



> Nominal OD's 1-1/2" - 6" ± 2%

> I.D.'s are slightly oversized to provide running clearance for 3/8" to 1" shafts.

Custom shapes & sizes are available!

Nominal O.D.	Bearing O.D.	I.D.	Part No.	Prices	
				12" length	24" length
1-1/2"	1"	No Bore	KVR-1510000	\$41.65	—
	1	3/8"	KVR-1510375	41.65	—
	1	1/2	KVR-1510500	41.65	—
	1	3/4	KVR-1510750	—	\$79.30
1-3/4	1	3/8	KVR-17510375	45.70	—
2	1	1/4	KVR-2010250	50.40	—
	1	3/8	KVR-2010375	50.40	—
	1-1/2	3/8	KVR-2015375	50.40	—
	1-1/2	1/2	KVR-2015500	50.40	—
	1-1/2	5/8	KVR-2015625	50.40	90.85
	1-1/2	3/4	KVR-2015750	50.40	90.85
	1-1/2	7/8	KVR-2015875	—	90.85
	1-1/2	1	KVR-2015100	—	104.90
2-1/2	1-1/2	3/8	KVR-2515375	65.00	—
	1-1/2	1/2	KVR-2515500	65.00	—
	1-1/2	5/8	KVR-2515625	65.00	117.50
	1-1/2	3/4	KVR-2515750	65.00	117.50
	1-1/2	1	KVR-2515100	—	150.95
3	1-1/2	3/8	KVR-3015375	80.25	—
	1-1/2	1/2	KVR-3015500	80.25	—
	1-1/2	5/8	KVR-3015625	80.25	146.45
	1-1/2	3/4	KVR-3015750	80.25	146.45
	2	1	KVR-3020100	—	169.10
3-1/2	1-1/2	3/8	KVR-3515375	102.10	—
	1-1/2	1/2	KVR-3515500	102.10	—
	1-1/2	5/8	KVR-3515625	102.10	188.10
	1-1/2	3/4	KVR-3515750	102.10	188.10
3-3/4	2	1	KVR-37520100	112.35	207.90
4	1-1/2	3/8	KVR-4015375	122.75	—
	1-1/2	1/2	KVR-4015500	122.75	—
	1-1/2	5/8	KVR-4015625	122.75	227.45
	1-1/2	3/4	KVR-4015750	122.75	227.45
	2	1	KVR-4020100	122.75	227.45
4-1/2	2	1	KVR-4520100	—	297.70
5	1-1/2	3/8	KVR-5015375	177.40	—
	1-1/2	1/2	KVR-5015500	177.40	—
	1-1/2	5/8	KVR-5015625	177.40	332.00
	1-1/2	3/4	KVR-5015750	177.40	332.00
	2	1	KVR-5020100	177.40	332.00
6	1-1/2	3/8	KVR-6015375	255.30	—
	1-1/2	1/2	KVR-6015500	255.30	—
	1-1/2	5/8	KVR-6015625	255.30	479.00
	1-1/2	3/4	KVR-6015750	255.30	479.00
	2	1	KVR-6020100	255.30	479.00

Tool Holster

Designed to reduce costly repairs and down time of expensive pneumatic tools used in fast paced assembly lines. Stocked in K•Prene® K-900A which is hard and slick, insuring easy-in and easy-out, yet will flex upon contact. Mounting holes at top and bottom mean secure and easy installation. Contact our factory for additional sizes or styles.



Part No.	Taper ID	Cup Length	Overall Length	Price
500-0221	4" to 1-1/2"	7"	8-1/2"	\$37.80

Slick Strip™ Tape (10Mil.)

When applied to metal surfaces, this pressure sensitive tape will reduce friction and protect finished stock (wood, metal, etc.) from scratches and dents. To apply, cut to length with scissors, remove adhesive protector and apply to clean, dry surface. Work hardens.

Part No.	Width	Length	Price
SST-1001	1"	36 yards	\$46.20
SST-1015	1-1/2"	36 yards	60.90
SST-1002	2"	36 yards	74.55
SST-1003	3"	36 yards	106.05
SST-1004	4"	36 yards	138.60
SST-1006	6"	36 yards	208.95
SST-1022	22"	10' min.	9.45/ft



K-20 Adhesive

Especially formulated to withstand continuous flexing. Exhibits great strength when used to bond K•Prene® to K•Prene®, metal, or plastic. Two-part kit composed of equal containers of resin and hardener.

• 45 minute pot life • 12 hour cure time • 2-3 day full cure

Description	Part No.	Price
1/2 Pint Kit (2 - 1/4 Pint Cans)	KPA-202	\$22.00
1 Pint Kit (2 - 1/2 Pint Cans)	KPA-203	40.90
2 Pint Kit (2 - 1 Pint Cans)	KPA-204	78.45



FDA Approved Polyurethane

Acceptable for repeated contact with food under section #177.2600, subpart F, and can be used in continuous and repetitive contact with dry, aqueous and fatty foods. Typical features of these urethanes include outstanding abrasion resistance, high tensile and tear strength, and excellent load bearing capabilities. **Applications include:**

- > Conveyor Systems
- > Chutes and Chute Liners
- > Inspection Tables
- > Custom Molded Parts
- > Rollers and Wheels
- > Bumpers and Feet
- > Hoppers and Transfer Systems
- > Gaskets and Seals

Physical Properties	K-551A	K-651A	K-751A	K-853A	K-954A
Hardness, Shore A	55	65	75	85	94
100% Modulus, PSI	210	320	450	750	1500
300% Modulus, PSI	320	580	950	1800	NA
Tensile, PSI	3000	430	5600	6200	7800
Elongation, %	560	500	460	430	430
Split Tear, D-470, PLI	50	65	75	100	140
Tear, Die C, PLI	180	240	330	500	760
Bashore Resilience, %	53	44	38	34	24
Color	White	White	White	White	White



K•Prene® and High Performance Applications

K•Prene® has become a great option for numerous applications due to ongoing efforts to reduce weight and increase speed and handling without sacrificing anything in the process. Its growing use makes perfect sense once you consider its characteristics, including the ability to absorb shock, strong, lightweight, fluid and abrasion resistance.

The processing of all the different K•Prene® formulas involves pouring K•Prene® in its hot and thick liquid form into molds, then allowing it to cure in an oven. This process is ideally suited for producing smaller part quantities (from single digits to several thousands) and is often more cost-effective than machining parts to size.

Duro (hardness) and color table.

K-400A = Soft/Yellow
 K-500A = Med/Natural
 K-600A = Med/Black
 K-700A = Hard/Green

(Additional Duro's and colors are available).

Spring Rubbers for 5"-5-1/2" Springs

Size	Duro	Part No.	Price
3/4"	K-400A	500-2448	\$30.45
3/4"	K-500A	500-2449	30.45
3/4"	K-600A	500-0121	30.45
3/4"	K-700A	500-2850	30.45
7/8"	K-400A	500-2450	33.60
7/8"	K-500A	500-2451	33.60
7/8"	K-600A	500-0124	33.60
7/8"	K-700A	500-2452	33.60
1"	K-400A	500-2453	38.85
1"	K-500A	500-2454	38.85
1"	K-600A	500-0126	38.85
1"	K-700A	500-2851	38.85
1-1/4"	K-400A	500-2455	42.55
1-1/4"	K-500A	500-2456	42.55
1-1/4"	K-600A	500-0129	42.55
1-1/4"	K-700A	500-2457	42.55
1-1/2"	K-400A	500-2458	47.25
1-1/2"	K-500A	500-2459	47.25
1-1/2"	K-600A	500-2460	47.25
1-1/2"	K-700A	500-2461	47.25

Coil Over Spring Rubbers for 3"-3-1/2" Springs

Size	Duro	Part No.	Price
.600	K-400A	500-2462	\$19.95
.600	K-500A	500-2463	19.95
.600	K-600A	500-2464	19.95
.600	K-700A	500-2465	19.95
.700	K-400A	500-2466	21.00
.700	K-500A	500-2467	21.00
.700	K-600A	500-2468	21.00
.700	K-700A	500-2469	21.00
.850	K-400A	500-2524	22.05
.850	K-500A	500-2525	22.05
.850	K-600A	500-2526	22.05
.850	K-700A	500-2527	22.05
1"	K-400A	500-2470	22.85
1"	K-500A	500-2471	22.85
1"	K-600A	500-2472	22.85
1"	K-700A	500-2473	22.85

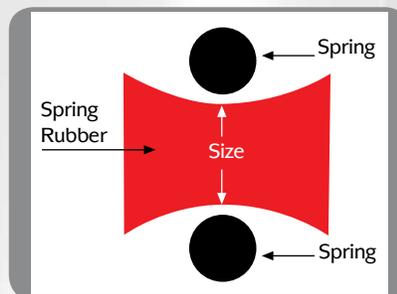


3"-3-1/2" Springs

5"-5-1/2" Springs

Pullouts are optional\$1.05 each.

- > Use dims, between coil springs to determine part size.
- > Cut part and feed in between coil springs.
- > Approximate clearance between bottom of coil spring and top of rubber radius is 1/4".



Automotive and Other High Performance Applications

There are many K•Prene® applications for the automotive industry. They weigh less than existing metal parts and have significant tensile strength.

- Sway bar (Stabilizer Bar) Bushings
- Control Arm Bushings
- Leaf Spring Bushings
- Strut Rod Bushings
- Shock Bushings

- Bump Stops & Street Stops
- Shock Reservoir Isolators

Or many other custom applications that your automobile, motorcycle or snowmobile needs may require.



Wood Industry / Drive Wheels

Designed with 3 or 6 bolt mounting holes to fit various hubs on molders, etc. The sizes listed are stocked in 80A durometer (others are available). If the size you need is not listed, please call us with your dimensions. *When ordering, be sure to specify the durometer desired.*



3 Hole Bolt Pattern

Part No.	OD	ID	Width	Price
DW3-0009	4-3/4"	2"	2"	\$23.10
DW3-0010	5-1/2	2-3/16	2	24.15
DW3-0011	5-1/8	2-3/16	2	24.15
DW3-0012	6	2-1/4	2	34.65
DW3-0013	6-5/16	2-3/4	2	30.45
DW3-0014	6-5/8	2-3/4	1	21.55
DW3-0015	6-5/8	2-3/4	2	34.65
DW3-0016	7	2-1/4	2	45.05
DW3-0017	8-9/16	4	2	56.35
DW3-0018	6	2-3/4	2	29.75
DW3-0019	5-1/2	3	2	23.65
DW3-0020	7-5/16	2-3/4	2	51.45
DW3-0021	5-1/2	3	1	15.75
DW3-0022	5-1/2	2-1/4	3/4	13.15
DW3-0023	5-1/2	2-1/4	2	23.10
DW3-0024	5-1/2	1-1/4	3/4	15.75

6 Hole Bolt Pattern

Part No.	OD	ID	Width	Price
DW6-0040	4-3/4"	3"	3/4"	\$12.30
DW6-0041	5-1/2	3	3/4	14.20
DW6-0042	6-5/8	3-3/8	3/4	16.70
DW6-0043	4-3/4	3	2	21.15
DW6-0044	6-1/4	3-3/8	3/4	17.95
DW6-0045	7-1/4	3-3/8	3/4	20.90
DW6-0047	6	3	3/4	15.30

Press Fit Power Feed Tires and Reusable Hubs

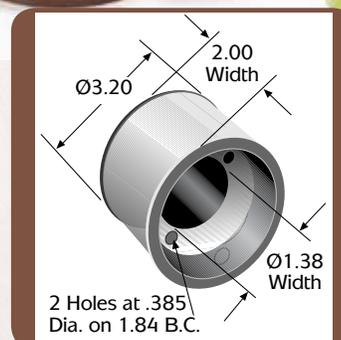
Our hubs and tires feed better and cost less than the rubber-coated hubs which are standard on many feeders. They fit most models and are designed to feed narrow stock. Tires are stocked in K-600A and K-700A. *When ordering, be sure to specify the durometer desired.*



Part No.	Description	OD	Width	Price
PFT-0060	Tire	3"	1"	\$8.35
PFT-0061	Tire	4-3/8	1-3/4	15.75
PFT-0062	Tire	4-7/8	1-3/4	23.10
PFT-0063	Tire	4-3/8	2	18.90
PFT-0064	Tire	4-3/8	2-1/4	22.05
*PFT-0065	Tire	4-3/8	2	24.70

* This ribbed design works best for slick surfaces. Tire OD's increase when installed.

PFH-0070	Hub-fits all tires except PFT-0060			\$8.95
PFT-TOOL	Tire mounting tools			18.90



OEM Replacement Parts

Acrotech has redesigned several parts in response to requests for parts that "work better, cost less, and are more readily available!" Let us know if you have suggestions.

SOME OF THE BRANDS AND MODELS ARE LISTED BELOW:

Barr Mullin Wonder Saw Rollers
 Brute - Press Fit
 Brandt Edge Bander/Arminus Profile
 Sander - Holddown Rollers
 Challoner Tenoner Holddown Pad

Gre Con Optimizer Holddown Rollers
 Jenkins Tenoner Hold Down Pad
 Progress Tennon Machine Pads
 Shaper Feed Tires - Press Fit

Recovery of OEM Hubs and Shafts

With so much machinery imported, this service results in better performance, quicker delivery and reduced expenses! Here are several examples. *To order, send part/parts with information re: the part number, durometer, and quantity desired.*

SOME OF THE BRANDS AND MODELS ARE LISTED BELOW:

Hubs

Barr Mullin Wunder Saw - Turbo
 Gre Con Optimizer In-Feed Wheel
 Hessman Sander
 Mattison Molder
 Multiscore
 Power Feeder - Sm.
 Commatic, Delta, Grizzley, etc.
 Power Feeder - Lg.
 Delta, Jet, Nandini, Steff, Maggi, etc.
 Ultimizer
 Weinig Molders

Shafts

AEM Planer Sander
 Barr Mullin - Brute Pressure Roller
 Bridgewood Stile/Rail Trimmer
 Delta Planer
 Makita Wood Planer-2030
 Mereen-Johnson Gang Rip Saw
 Mid Oregon Gang Rip Saw
 Progressive Gang Rip-pressure roller
 SAC - Planer Roller
 Sears Planer
 Williams & Hussey Molder

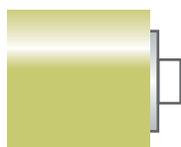


Roller Manufacturing and Recovering

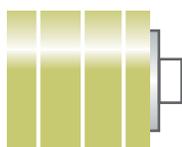
Manufacturing of steel shafts coated with K•Prene®, complete with various groove types is available to satisfy many applications. Removal of worn out or damaged coatings and recovering with K•Prene® is also available.

Contact factory to receive a quote or download PDF quote form or Re-covering form from our website.

Several groove types, angles, widths and depths are available.



Smooth



Vertical



Horizontal



Herring Bone



Serrate



Diamond

