PNEU-DRAULICS

quality-service asap

We are strategically focused on providing engineered solutions to the following key markets:

Aerospace
Vehicles moving through air and space.

Automotive
Vehicles and components associated with propelling and stopping vehicles.

Chemical Industry
Chemical processing producing a wide variety of solid, liquid and gaseous materials.

Consumer
Appliances, consumer electronics, water systems and food & beverage equipment.

Fluid Power
Hydraulic and pneumatic systems or components.

General Industrial
Manufacturing or processing of products or components.

Heavy Duty Mobile
Construction, agriculture and heavy trucks.

Information Technology
Computer systems, peripherals and components.

Life Sciences
Medical devices, diagnostic & lab equipment and pharmaceutical manufacturing.

Military
Government weapons, vehicles, surveillance and security.

Oil & Gas
Oil and natural gas exploration, drilling, extraction and conveyance.

Other Transportation
Railways, subways and marine.

Power Generation
Electrical power generation facilities.

Renewable Energy
Naturally replenished energy from sunlight wind, rain, tides and geothermal services.

Semiconductor
Design and fabrication of semiconductor devices.

Telecommunications
Transmission of signals over a distance for the purpose of communications.

Parker DISTRIBUTOR

PNEU-DRAULICS ISO 9001 Certificate No. 99-1564f

The Sealing Specialists

111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

PNEU-DRAULICS

SALES INFORMATION

PNEU-DRAULICS WARRANTY

Our products are guaranteed to be free of defects in workmanship. Any product found to be defective may be returned to Pneu-Draulics for replacement per our "Returned Goods" policy. All technical advise is based on technical data thought to be reliable, and it is intended for use by people having skill and know-how, at their own discretion and risk. Any sale of our products under any other guarantee or warranty is not authorized.

Your account number is _____

Your discount on individual parts is 60%

If you don't see the size and material you need listed, call for price & availability

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CALL 1-800-333-SEAL
FAX (859) 887-4165
www.pneu-draulics.com

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SALES INFORMATION

TERMS OF SALE

Credit Cards: MasterCard, Visa, American Express

Minimum Invoice $15.00
Minimum Line Item.....$2.50
Cash Counter Sales $5.00
F.O.B. .....Pneu-Draulics
Terms.....Net 30 days

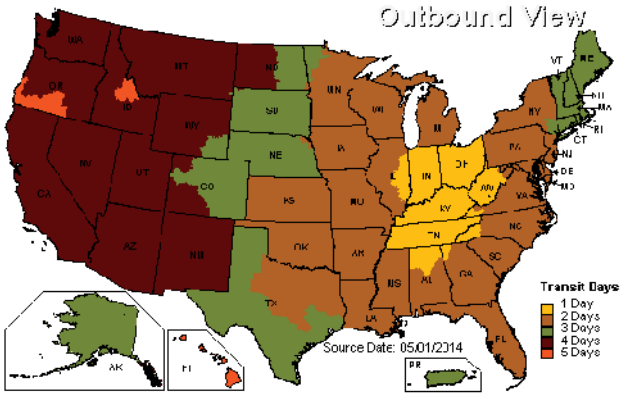
Prices subject to change without notice. All terms and conditions subject to Pneu-Draulics Standard Terms of Sale.

SHIPMENTS

0 - 149 lbs. .....UPS
150 - Over .....Truck

RETURN GOODS

Authorization must be obtained from Pneu-Draulics before any merchandise may be returned. A 20% handling charge may be charged unless the material is found to be defective or shipped by Pneu-Draulics error. All claims must be made **within 30** days after receipt of items. Returned goods shipments should be sent prepaid. Special order items are non-refundable.



UPS delivery from Pneu-Draulics

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CREDIT APPLICATION

APPLICANT

COMPANY NAME: _____

SHIPPING ADDRESS: _____

BILLING ADDRESS: _____

PHONE NUMBER: _____ CONTACT: _____ FAX NUMBER: _____

BANK REFERENCE

NAME OF BANK: _____

ADDRESS: _____

PHONE NUMBER: _____ ACCOUNT NUMBER(S): _____

TRADE REFERENCES

COMPANY: _____
ADDRESS: _____
_____
PHONE NUMBER: _____

COMPANY: _____
ADDRESS: _____
_____
PHONE NUMBER: _____

COMPANY: _____
ADDRESS: _____
_____
PHONE NUMBER: _____

COMPANY: _____
ADDRESS: _____
_____
PHONE NUMBER: _____

OTHER

TYPE OF BUSINESS: ☐ MANUFACTURER ☐ RE-BUILDER ☐ OTHER: _____ GENERAL MANAGER: _____

☐ CORPORATION ☐ PARTNERSHIP ☐ OTHER: _____ YEARS IN BUSINESS: _____ DUNN & BRADSTREET LISTING: _____

IF CORPORATION:

PRESIDENT'S NAME: _____

RESIDENCE ADDRESS: _____ RESIDENCE PHONE NUMBER: _____

OTHER OFFICERS:

NAME: _____ TITLE: _____

RESIDENCE ADDRESS: _____ RESIDENCE PHONE NUMBER: _____

NAME: _____ TITLE: _____

RESIDENCE ADDRESS: _____ RESIDENCE PHONE NUMBER: _____

PRINCIPAL SHAREHOLDERS:

NAME: _____ TITLE: _____

RESIDENCE ADDRESS: _____ RESIDENCE PHONE NUMBER: _____

NAME: _____ TITLE: _____

RESIDENCE ADDRESS: _____ RESIDENCE PHONE NUMBER: _____

IF PARTNERSHIP:

PARTNER'S NAME: _____

RESIDENCE ADDRESS: _____ RESIDENCE PHONE NUMBER: _____

PARTNER'S NAME: _____

RESIDENCE ADDRESS: _____ RESIDENCE PHONE NUMBER: _____

I/We expressly understand that the information given here in above is being relied upon by Pneu-Draulics, Inc., as an inducement to extend credit to _____ (*company name*) I/We acknowledge that said information is true and correct. Should Pneu-Draulics, Inc., extend credit based upon said information, I/we, as the duly authorized representative(s) of _____ (*company name*) do hereby agree, for and on behalf of _____ (*company name*) that said entity shall be bound by Pneu-Draulics' credit terms as same shall be established from time to time by Pneu-Draulics. I/We understand that currently Pneu-Draulics, Inc.'s terms are full payment due net 30 days with all accounts past due 60 days incurring finance charges of one and one-half percent (1 1/2%) per month. Additionally, all costs of collecting delinquent accounts, including but not limited to collection agency fees, attorneys' fees, and court costs, shall be the responsibility of _____ (*company name*). This agreement is governed by the laws of the Commonwealth of Kentucky, and all disputes relative to this agreement shall be referred to the appropriate forum-court of jurisdiction for disputes arising in Jessamine County, Kentucky.

This the _____ day of _____, 20_____.

Company: _____

By: _____, Position: _____ and _____, Position: _____

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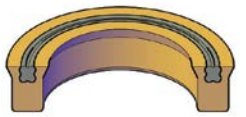

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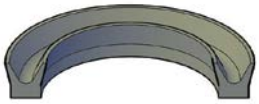

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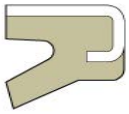
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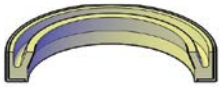
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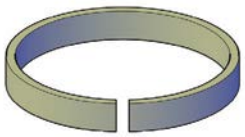

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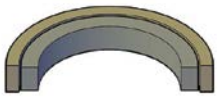
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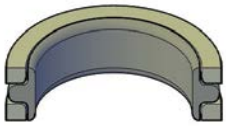
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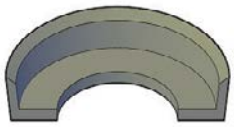

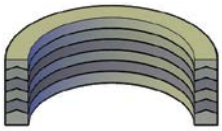

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Caterpillar, Hyco, J. I. Case, John Deer, Komatsu, Atlas, Allis Chamlers, Bakerlift track, Barko, Bell Tree Harvester, Bobcat, Bulldog Kits Champion, Clark, Ditch Witch, Dresser, Euclid, Fossi Crane, Fontaine, Ford, Galion, Gresen, Grove Crane, Hanna, Heil, Hiab, Hitatchi, International Harvester, JCB, Jiffy Lift, Kawasaki, Leach, Lin Act, Linkbelt, Michigan, Milwaukee, Myers, Perfection, Prince, Sheffer, Tomkins-Johnson, Texas Hyd, Volvo, Wabco and Ward.

The OEM Pneu-Draulics seal kits are assembled for the repairman. You can install our kit and expect performance equal to or greater than supplied by the OEM. Our kits are not manufactured by the OEM, but are direct replacements requiring no modifications.

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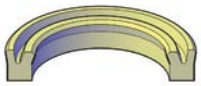
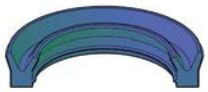
	Metric Rod U Cups	Urethane	-65 +230F	0-5000 PSI	203-204
	Metric Twin Lip Rod Seals	Urethane	-40 to +22F	0-6000 PSI	205-206
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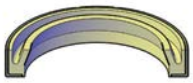	Metric MCW Wiper	Urethane or Nitrile Lip Steel Case	-30 +200F		216-217
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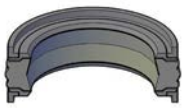
	Metric Capped Piston Seal	PTFE Cap Nylon Back Up Nitrile Expander	-40 to +230F	0-6000 PSI	231
	Metric 5 Piece Piston Seals	Nitrile Piston Seal Polyacetal Anti Extrusion Ring	-22 to +212F	0-6000 PSI	232

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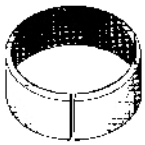	Nylon, Phenolic, Metric Wear Rings	or Filled PTFE			235-242
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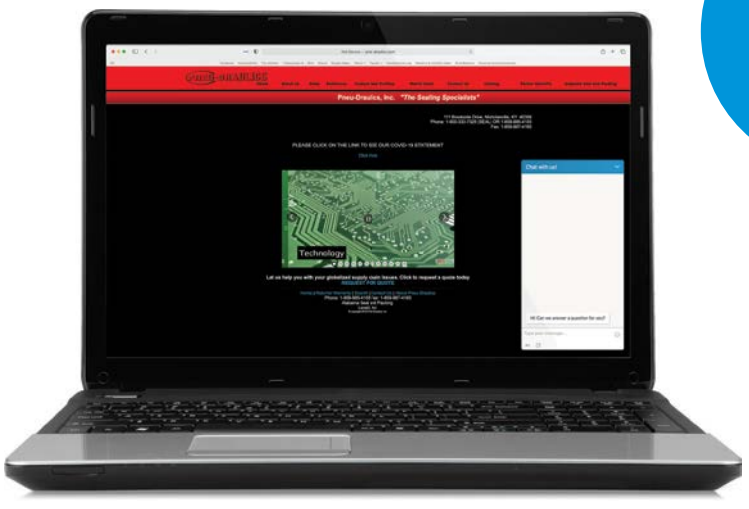

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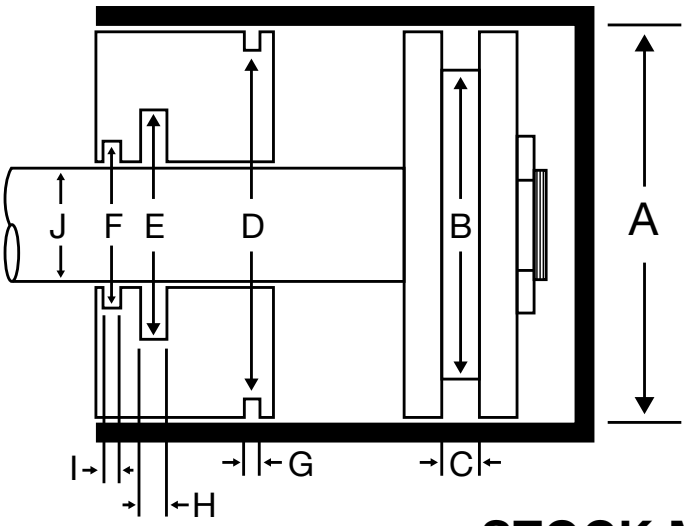
CUSTOM MACHINED SEALS

INCH & METRIC PROFILES

CUSTOM SEAL QUOTE

Below are the metal dimensions required to quote a custom seal. All seals require at least three dimensions: ID (inside diameter), OD (outside diameter), and height. Some seals may have multiple diameter and groove heights.



Piston seals: Bore (**A**), Piston groove (**B**), and Groove height (**C**). Remember that the bore and the piston OD are not the same.

Rod Seals: Rod (**J**), Groove OD (**E**), Groove height (H).

Wipers: Rod (**J**), Groove OD (**F**), Groove height (**I**). The groove height for a wiper is the base height.

STOCK MATERIALS

URETHANE

Green — Standard 95 durometer urethane for most hydraulic seals. High resistance to abrasion, low compression set, high rigidity and tear resistance. Temp (-22^{O}F to +230^{O}F)

Red — Optional 95 durometer urethane for use in hot water (up to 200^{O}F). Ideally suited for mining applications or wherever high water based fluids may be found.

POLYESTER

Hytrel® — Standard 85 durometer orange polyester can be used in many applications replacing urethanes and rubber materials. Stronger than rubber, more flexible than engineered plastics. Good extrusion resistance. Temp (-58^{O}F to +230^{O}F).

ELASTOMER

NBR — Nitrile 85 durometer elastomer is a general purpose elastomer used as seal energizer or for low pressure applications. Temp (-40^{O}f to +212^{O}F).

HNBR — Highly saturated Nitrile 85 durometer elastomer has greatly improved wear and extrusion resistance over standard BR. Temp (-13^{O}F to +302^{O}F).

Fluorocarbon — Excellent 85 durometer elastomer for use in higher temperature applications. Excellent chemical resistance. Brown material. Temp (-4^{O}to +392^{O}F).

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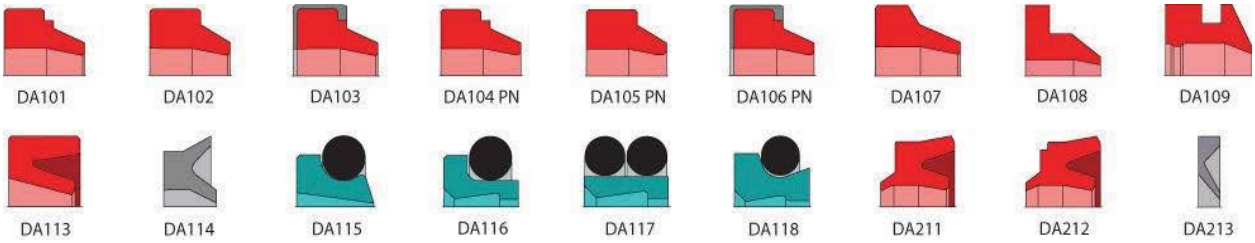
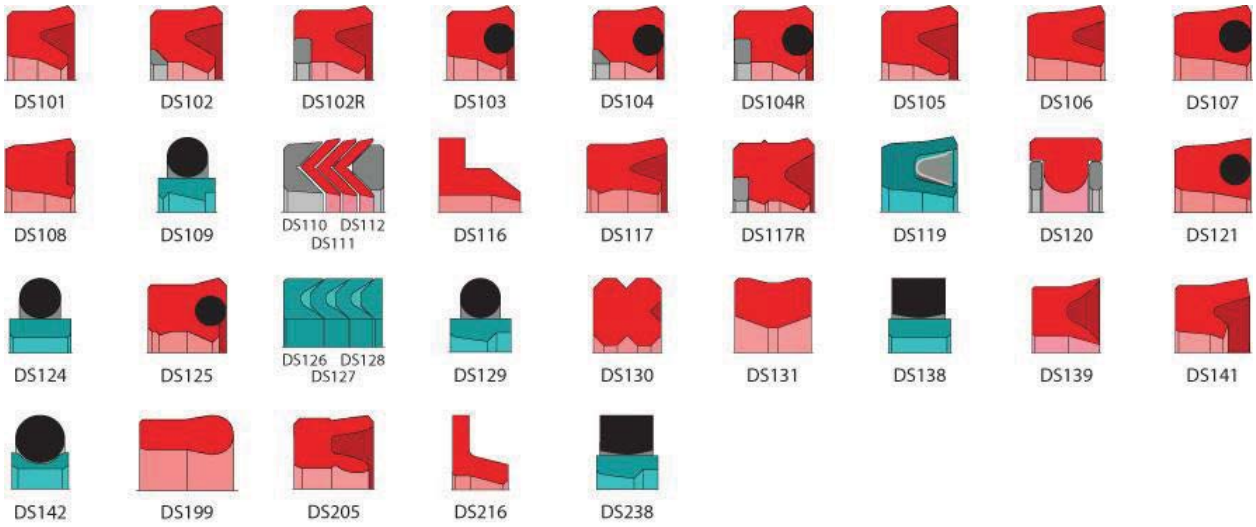
PNEU-DRAULICS

CUSTOM MACHINED SEALS

Rod Wipers



Rod Seals



Piston Seals

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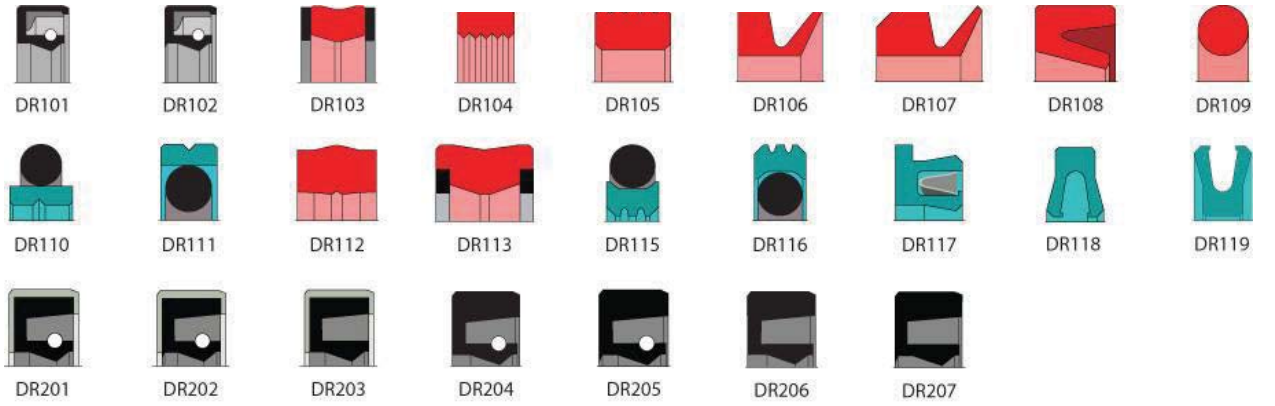
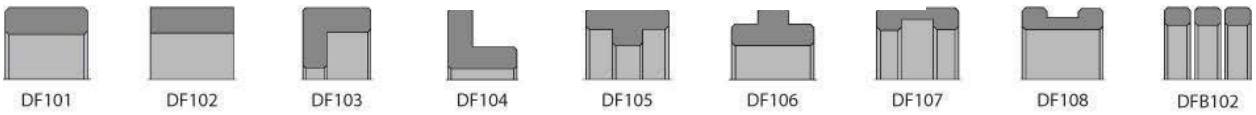
CUSTOM MACHINED SEALS

Rotary Seals



Wear Rings



Face Seals

Back-Up Rings

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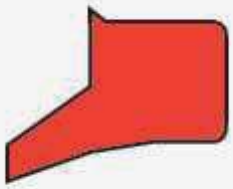
PNEU-DRAULICS

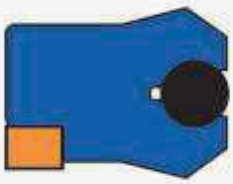
MINING SEALS

Call for availability in both standard and metric sizes for seals commonly used in mining industry



TYPE 38

The Hallite 38 wiper has been designed so that the proportions of the wiping lip ensure it maintains contact with the rod surface to remove heavily deposited mud, ice etc. The outside diameter contacts the housing and has a sealing lip to prevent moisture entering the groove.
A polyester based material is used to provide a tough abrasion resistant wiper for the difficult conditions usually found in mining or earth moving applications. All the range can be used with a split housing, however, the majority can be installed in a blind housing with care.



TYPE 652

The Hallite 652 is a high pressure rod seal designed specifically for longwall mining applications. The seal design comprises three elements; an O ring energizer*, a polyurethane shell and a polyacetal anti-extrusion ring.

The shell is manufactured in Hythane® 181 to provide flexibility for installation and responsiveness to the sealing lip. The rubber energizer ensures complete lip actuation under all pressure conditions and cushions the seal against shock loadings. The anti-extrusion ring enables the seal to withstand side loads and extreme pressure peaks during operation, even with the extrusion gaps which are the result of using remote plastic bearing strips such as Hallite 506.

*In some cases a profiled energizer (as T621) is used

TYPE 605

The Hallite 605 is an asymmetric seal offering superlative dry rod sealing for light to medium duty applications.

The 605 has become an industry standard seal worldwide owing to its twin lip profile and consistent performance.

Manufactured in Hythane® - 181, the Hallite 605 is an extremely flexible seal making installation very easy.

The ranges cover most standard housings used in Europe, North America and Asia.

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MINING SEALS

Type 83

The Hallite 83 Tri-Seal assembly offers the engineer many advantages when considering the design of cast iron, bronze, alloy ect. one-piece pistons in double-acting hydraulic cylinders, not the least being cost effectiveness with long efficient seal life.

The Tri-Seal consists of two split plastic anti-extrusion rings and a nitrile synthetic rubber sealing member. Under pressure, the seal exerts a wedging action on the anti-extrusion ring, reducing the clearance between the cylinder bore and the piston, thus minimizing the possibility of extrusion of the seal.

Wear rings are also available for this assembly, allowing the designer to benefit from the following advantages:

Eliminate metal to metal contact in the bore
One piece steel piston
Improved alignment for optimum seal life
Smoother operation

Type 155

The Hallite 155 U ring is designed as static seal for cylinders. It is used instead a conventional Oring/back-up ring combination. Through its special design and compound, extrusion gaps of up to F=0.4mm at 500 bar pressure are allowed.

This seal was developed for HFA applications, but can also be used with standard mineral oil fluids.

TYPE 730

The Hallite 730 is a top of the range double acting piston seal. It is constructed with a tough wear resistant thermoplastic polyester elastomer (TPE) face, which is loaded by a profiled nitrile energizer.

Material options can be provided for the sealing face, including lubricated polyester and PTFE. All designs have rectangular polyacetal anti-extrusion rings. The TPE face material is suitable for both roller-burnished and honed tubing.

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MINING SEALS

TYPE 53

A robust assembly designed specifically for one piece pistons, the Hallite 53 double acting seal uses a rubber sealing element which has proved itself in service to be extremely wear resistant and capable of working most effectively in a wide variety of medium duty applications. The seal is also suitable for two piece pistons.

The assembly comprises a rubber seal, two split support rings and two split bearings, one of each located either side of the seal.

The nitrile rubber seal is designed to have its section compressed by the housing, to ensure a low pressure seal and, when pressurized, be protected from extrusion damage by the extending lips of the support ring. The support ring is manufactured from a tough flexible polymer and scarf cut for assembly.

The proportions of the range have been determined to give a satisfactory performance when used with the recommended operating conditions.

TYPE 842

The Hallite 842 rod wiper is designed to prevent the ingress of foreign particles and moisture into the cylinder. The profile has been specially developed for harsh environments, in particular the longwall mining industry.

The special feature is the flap on the wiping lip which covers the gland housing, preventing the water/slurry trap so common with conventional wipers and thus ingress of contamination around the outside of the wiper. The internal ribs on the inside diameter prevent the possibility of pressure trapping between the gland seal and the wiper and ensure correct support and guidance of the wiping lip, even in cases of high eccentricity as can occur between the outer stage gland and the inner cylinder of a roof support leg.

The Hallite 842 is manufactured in Hallite's high performance polyurethane Hythane® 181. The material has excellent compression set characteristics, excellent wear and abrasive resistance, proven compatibility with HFA (95/5) fluids, as used in longwall mining equipment, and with mineral oil.

A number of sizes, do not have an interference fit between the outside diameter of the wiper and the wiper housing bore. They float on the retaining lip.

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Rod Sealing with PolyPak® Seals

As a general rule, rod seals are more critical in nature than their companion piston seals. With increasing OEM requirements for “dry rod” capability, both to conserve system fluid and avoid leakage, the design and selection of the rod seal can be more challenging than its piston counterpart.

Parker recommends the use of the Type B PolyPak (BPP Profile) for rod seal applications due to its design features, including:

- Excellent film-breaking capability of the beveled lip design.
- The higher level of lip loading provided by the Type B offers maximum sealability.
- The long body of the design provides maximum stability.

Piston Sealing with PolyPak Seals

Piston seals can be classified in two categories: single-acting and double-acting. The single acting seal is only required to seal in a single direction as system pressure is seen on only one end of the piston (return of the piston in a single-acting system is accomplished either by gravity or spring loading). The double-acting cylinder requires that the piston be sealed in both directions of stroke as system fluid is applied to one side or the other to achieve movement.

PolyPak Material Combinations

PolyPak seals can be configured in numerous o-spring energizer and shell combinations. Table represents “standard” combinations. Care should be taken to insure that both the PolyPak shell and its companion o-spring energizer are compatible with the system temperature, pressure, and fluid requirements.

Table Standard Shell and O-spring Energizer Combinations for PolyPak Seals

PolyPak Shell	Energizer
Molythane®	70A Nitrile
Polymyte®	70A Nitrile, 75A FKM
Nitroxile®	70A Nitrile
Ethylene Propylene	80A EPR
Fluorocarbon	75A FKM
All Plastic and Rubber	Metal O-spring

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PNEU-DRAULICS

Gland Dimensions — Standard, Deep and Type B Profiles

Standard PolyPak

Deep PolyPak

Type B PolyPak

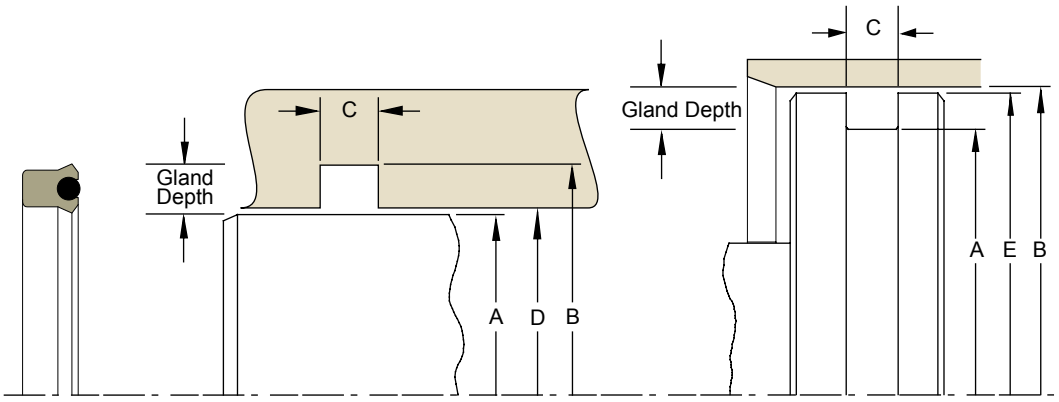

Table A Rod Gland Dimension Tolerances

Nominal Gland Depth	A Rod Diameter	B Groove Diameter	C Groove Width	D Throat Diameter
1/8	+.000/-.001	+.002/-.000	+.015/-.000	+.002/-.000
3/16	+.000/-.002	+.002/-.000		+.002/-.000
1/4	+.000/-.002	+.003/-.000		+.003/-.000
5/16	+.000/-.002	+.004/-.000		+.003/-.000
3/8	+.000/-.002	+.005/-.000		+.004/-.000
7/16	+.000/-.003	+.006/-.000		+.004/-.000
1/2	+.000/-.003	+.007/-.000		+.005/-.000
5/8	+.000/-.003	+.009/-.000		+.006/-.000
3/4	+.000/-.004	+.011/-.000		+.007/-.000
1	+.000/-.005	+.015/-.000		+.009/-.000

Table B Piston Gland Dimension Tolerances

Nominal Gland Depth	B Bore Diameter	A Groove Diameter	C Groove Width	E Piston Diameter
1/8	+.002/-.000	+.000/-.002	+.015/-.000	+.000/-.001
3/16	+.002/-.000	+.000/-.002		+.000/-.002
1/4	+.003/-.000	+.000/-.003		+.000/-.002
5/16	+.003/-.000	+.000/-.004		+.000/-.002
3/8	+.004/-.000	+.000/-.005		+.000/-.002
7/16	+.005/-.000	+.000/-.006		+.000/-.002
1/2	+.005/-.000	+.000/-.007		+.000/-.003
9/16	+.006/-.000	+.000/-.008		+.000/-.003
5/8	+.006/-.000	+.000/-.009		+.000/-.003
3/4	+.007/-.000	+.000/-.010		+.000/-.004
7/8	+.008/-.000	+.000/-.011	1/8	+.000/-.005
1	+.009/-.000	+.000/-.012	1/8	+.000/-.005

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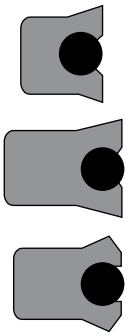
LOADED U-CUPS

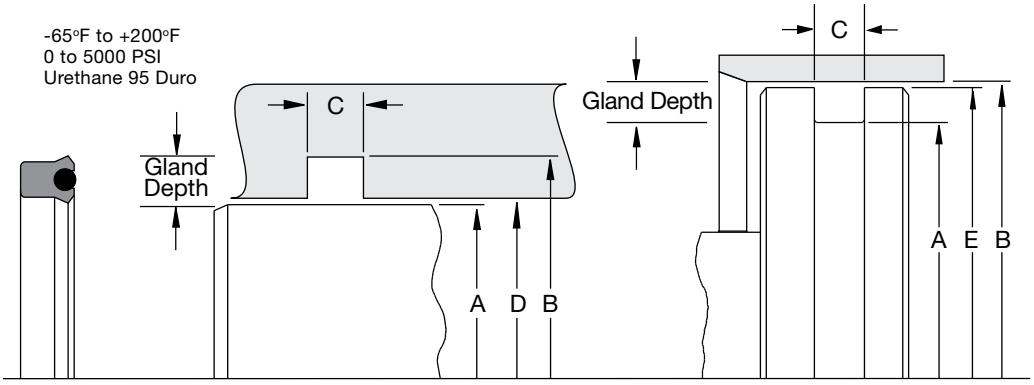
STANDARD
Standard U-Cup seals are square in cross-section and are suitable for a wide variety of rod and piston applications. Available in cross-sections from 1/8" to 1" and diameters to 90°, the Standard U-Cup is ideal for retrofit of existing seal grooves.

DEEP
Deep U-Cup seals are rectangular versions of the Standard U-Cup. The added length improves stability in high-shock, heavy duty applications. Available in cross-sections from 1/8" to 1" and diameters to 90°.

TYPE "B"
Type "B" U-Cup seals add a back-bevel lip to the Deep U-Cup shape and thus align the seal interface near the centerline of the Q-spring to provide increased squeeze (and sealability.) This highly stable configuration provides excellent low pressure sealing as well as "super-pressure" capability. Available in all sizes from 1/8"to 1 to over 90° diameter.



-65°F to +200°F
0 to 5000 PSI
Urethane 95 Duro



(Other sizes available call for price and delivery.) (Viton Polypaks are available call for price and delivery.)

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
		1/8" CROSS SECTION		
12500625	1/16	5/16	1/8	$ 7.77
12500125	1/8	3/8	1/8	$ 6.98
12500125250B	1/8	3/8	1/4	$ 7.96
12500187	3/16	7/16	1/8	$ 6.92
12500187250B	3/16	7/16	1/4	$ 7.79
12500250	1/4	1/2	1/8	$ 7.04
12500250250B	1/4	1/2	1/4	$ 7.16
12500312	5/16	9/16	1/8	$ 7.04
12500312250B	5/16	9/16	1/4	$ 8.31
12500375	3/8	5/8	1/8	$ 7.66
12500375187B	3/8	5/8	3/16	$ 7.79
12500375250B	3/8	5/8	1/4	$ 7.21
12500437	7/16	11/16	1/8	$ 7.05
12500437250	7/16	11/16	1/4	$ 7.56
12500437250B	7/16	11/16	1/4	$ 6.70
12500500	1/2	3/4	1/8	$ 6.84
12500500250	1/2	3/4	1/4	$ 7.84
12500500250B	1/2	3/4	1/4	$ 6.57
12500562	9/16	13/16	1/8	$ 7.03
12500562250B	9/16	13/16	1/4	$ 6.93
12500625	5/8	7/8	1/8	$ 6.84
12500625187	5/8	7/8	3/16	$ 8.05
12500625187B	5/8	7/8	3/16	$ 7.04
12500625SQB	5/8	7/8	1/8	$ 7.04
12500625250B	5/8	7/8	1/4	$ 10.07
12500687	11/16	15/16	1/8	$ 7.20
12500687250B	11/16	15/16	1/4	$ 8.25
12500750	3/4	1	1/8	$ 7.33
12500750187B	3/4	1	3/16	$ 7.67
12500750250	3/4	1	1/4	$ 7.53
12500750250B	3/4	1	1/4	$ 7.66
12500750SQB	3/4	1	1/8	$ 8.77
12500812	13/16	1 1/16	1/8	$ 7.70
12500812250B	13/16	1 1/16	1/4	$ 10.32
12500875	7/8	1 1/8	1/8	$ 7.73
12500875187B	7/8	1 1/8	3/16	$ 8.65

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PNEU-DRAULICS

LOADED U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
		1/8" CROSS SECTION		
12500875250	7/8	1 1/8	1/4	$ 8.51
12500875250B	7/8	1 1/8	1/4	$ 7.40
12500906	39/32	1 5/32	1/8	$ 9.00
12500937	15/16	1 3/16	1/8	$ 7.85
12500937250B	15/16	1 3/16	1/4	$ 8.85
12501000	1	1 1/4	1/8	$ 7.96
12501000187B	1	1 1/4	3/16	$ 7.69
12501000250	1	1 1/4	1/4	$ 8.36
12501000250B	1	1 1/4	1/4	$ 8.36
12501062	1 1/16	1 5/16	1/8	$ 8.31
12501062250B	1 1/16	1 5/16	1/4	$ 9.29
12501125	1 1/8	1 3/8	1/8	$ 8.20
12501125250	1 1/8	1 3/8	1/4	$ 8.59
12501125250B	1 1/8	1 3/8	1/4	$ 7.98
12501187	1 3/16	1 7/16	1/8	$ 8.20
12501187187B	1 3/16	1 7/16	3/16	$13.50
12501187250B	1 3/16	1 7/16	1/4	$ 8.36
12501250	1 1/4	1 1/2	1/8	$ 8.59
12501250187B	1 1/4	1 1/2	3/16	$ 8.36
12501250250	1 1/4	1 1/2	1/4	$ 9.58
12501250250B	1 1/4	1 1/2	1/4	$ 9.03
12501312	1 5/16	1 9/16	1/8	$ 8.47
12501312187B	1 5/16	1 9/16	3/16	$ 9.78
12501375	1 3/8	1 5/8	1/8	$ 8.16
12501375187B	1 3/8	1 5/8	3/16	$ 8.97
12501375250	1 3/8	1 5/8	1/4	$ 9.94
12501375250B	1 3/8	1 5/8	1/4	$ 8.67
12501437	1 7/16	1 11/16	1/8	$ 8.48
12501500	1 1/2	1 3/4	1/8	$ 8.59
12501500187B	1 1/2	1 3/4	3/16	$ 8.97
12501500250	1 1/2	1 3/4	1/4	$ 10.34
12501500250B	1 1/2	1 3/4	1/4	$ 9.09
12501500312	1 1/2	1 3/4	5/16	$ 8.55
12501562	1 9/16	1 13/16	1/8	$10.99
12501625	1 5/8	1 7/8	1/8	$ 7.98
12501625250B	1 5/8	1 7/8	1/4	$13.15
12501687	1 11/16	1 15/16	1/8	$ 8.75
12501750	1 3/4	2	1/8	$ 8.70
12501750250	1 3/4	2	1/4	$ 9.78
12501875	1 7/8	2 1/8	1/8	$ 8.83
12502000	2	2 1/4	1/8	$ 10.54
12502000250	2	2 1/4	1/4	$ 10.62
12502125	2 1/8	2 3/8	1/8	$12.23
12502125250	2 1/8	2 3/8	1/4	$ 22.03
12502125375	2 1/8	2 3/8	3/8	$ 17.46
12502250	2 1/4	2 1/2	1/8	$ 10.99
12502375	2 3/8	2 5/8	1/8	$ 11.23

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LOADED U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
1/8" CROSS SECTION				
12502375187B	2 3/8	2 5/8	3/16	$ 18.27
12502500	2 1/2	2 3/4	1/8	$ 11.52
12502500250	2 1/2	2 3/4	1/4	$ 16.31
12502500250B	2 1/2	2 3/4	1/4	$ 16.31
12502625	2 5/8	2 7/8	1/8	$ 13.63
12502750	2 3/4	3	1/8	$ 10.09
12502750375B	2 3/4	3	3/8	$ 17.12
12502875	2 7/8	3 1/8	1/8	$ 12.66
12503000	3	3 1/4	1/8	$ 13.11
12503000375B	3	3 1/4	3/8	$ 26.72
12503250	3 1/4	3 1/2	1/8	$ 13.67
12503500	3 1/2	3 3/4	1/8	$ 14.12
12503500375	3 1/2	3 3/4	3/8	$ 29.57
12503625187B	3 5/8	3 7/8	3/16	$ 20.48
12503750	3 3/4	4	1/8	$ 20.01
12503750250B	3 3/4	4	1/4	$ 26.20
12504000	4	4 1/4	1/8	$ 19.03
12504250	4 1/4	4 1/2	1/8	$ 21.01
12504375	4 3/8	4 5/8	1/8	$ 27.18
12504500	4 1/2	4 3/4	1/8	$ 28.34
12504500187B	4 1/2	4 3/4	3/16	$ 33.21
12504750	4 3/4	5	1/8	$ 24.30
12505000	5	5 1/4	1/8	$ 28.76
12505750	5 3/4	6	1/8	$ 34.60
5/32" CROSS SECTION				
15600437	7/16	3/4	5/32	$ 7.04
15600625	5/8	15/16	5/32	$ 11.60
15600750	3/4	1 1/16	5/32	$ 9.30
15600937	15/16	1 1/4	5/32	$ 10.13
15601000	1	1 5/16	5/32	$ 8.04
15601125	1 1/8	1 7/16	5/32	$ 12.85
15601187	1 3/16	1 1/2	5/32	$ 8.01
15601250	1 1/4	1 9/16	5/32	$ 8.54
15601375	1 3/8	1 11/16	5/32	$ 8.54
15601437	1 7/16	1 3/4	5/32	$ 15.42
15601500	1 1/2	1 13/16	5/32	$ 10.67
15601500312B	1 1/2	1 13/16	5/16	$ 12.07

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PNEU-DRAULICS

LOADED U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
		3/16" CROSS SECTION		
18700187	3/16	9/16	3/16	$ 6.83
18700250	1/4	5/8	3/16	$ 7.51
18700312	5/16	11/16	3/16	$ 5.93
18700312312B	5/16	11/16	5/16	$ 7.74
18700375	3/8	3/4	3/16	$ 6.18
18700375250	3/8	3/4	1/4	$ 9.50
18700375312	3/8	3/4	5/16	$ 7.61
18700375312B	3/8	3/4	5/16	$ 7.79
18700437	7/16	13/16	3/16	$ 6.23
18700437312B	7/16	13/16	5/16	$ 7.83
18700500	1/2	7/8	3/16	$ 6.25
18700500312B	1/2	7/8	5/16	$ 6.75
18700562	9/16	15/16	3/16	$ 6.29
18700562312B	9/16	15/16	5/16	$ 8.16
18700625	5/8	1	3/16	$ 6.65
18700625312	5/8	1	5/16	$ 8.26
18700625312B	5/8	1	5/16	$ 7.58
18700656	21/32	1 1/32	3/16	$ 7.58
18700687	11/16	1 1/16	3/16	$ 7.17
18700687312B	11/16	1 1/16	5/16	$ 8.68
18700750	3/4	1 1/8	3/16	$ 7.20
18700750250	3/4	1 1/8	1/4	$ 8.67
18700750312	3/4	1 1/8	5/16	$ 8.69
18700750312B	3/4	1 1/8	5/16	$ 8.28
18700812	13/16	1 3/16	3/16	$ 7.25
18700812312B	13/16	1 3/16	5/16	$ 9.03
18700875	7/8	1 1/4	3/16	$ 7.32
18700875312	7/8	1 1/4	5/16	$ 9.13
18700875312B	7/8	1 1/4	5/16	$ 8.58
18700875375	7/8	1 1/4	3/8	$ 9.14
18700937	15/16	1 5/16	3/16	$ 7.53
18701000	1	1 3/8	3/16	$ 8.62
18701000250	1	1 3/8	1/4	$ 9.56
18701000250B	1	1 3/8	1/4	$ 9.86
18701000312	1	1 3/8	5/16	$ 9.51
18701000312B	1	1 3/8	5/16	$ 9.61
18701000375B	1	1 3/8	3/8	$ 13.71
18701062	1 1/16	1 7/16	3/16	$ 8.73
18701062312B	1 1/16	1 7/16	5/16	$ 9.87
18701125	1 1/8	1 1/2	3/16	$ 8.89
18701125250B	1 1/8	1 1/2	1/4	$ 9.64
18701125312	1 1/8	1 1/2	5/16	$ 8.51
18701125312B	1 1/8	1 1/2	5/16	$ 9.78
18701125375B	1 1/8	1 1/2	3/8	$ 9.06
18701187	1 3/16	1 9/16	3/16	$ 8.51
18701187250B	1 3/16	1 9/16	1/4	$ 13.99
18701187312B	1 3/16	1 9/16	5/16	$ 10.30
18701250	1 1/4	1 5/8	3/16	$ 9.14
18701250250B	1 1/4	1 5/8	1/4	$ 9.28

PNEU-DRAULICS
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LOADED U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
		3/16" CROSS SECTION		
18701250312	1 1/4	1 5/8	5/16	$ 9.83
18701250312B	1 1/4	1 5/8	5/16	$ 9.07
18701250375B	1 1/4	1 5/8	3/8	$ 10.43
18701312	1 5/16	1 11/16	3/16	$ 9.41
18701312312	1 5/16	1 11/16	5/16	$15.97
18701312312B	1 5/16	1 11/16	5/16	$ 9.82
18701375	1 3/8	1 3/4	3/16	$ 8.88
18701375250B	1 3/8	1 3/4	1/4	$10.31
18701375312	1 3/8	1 3/4	5/16	$ 9.39
18701375312B	1 3/8	1 3/4	5/16	$ 8.82
18701375375B	1 3/8	1 3/4	3/8	$10.31
18701437	1 7/16	1 13/16	3/16	$ 9.73
18701437312	1 7/16	1 13/16	5/16	$10.18
18701500	1 1/2	1 7/8	3/16	$ 8.95
18701500250B	1 1/2	1 7/8	1/4	$10.42
18701500266B	1 1/2	1 7/8	17/64	$14.62
18701500290B	1 1/2	1 7/8	.290	$17.24
18701500312B	1 1/2	1 7/8	5/16	$ 9.01
18701500375	1 1/2	1 7/8	3/8	$10.41
18701500375B	1 1/2	1 7/8	3/8	$ 9.20
18701562	1 9/16	1 15/16	3/16	$ 9.31
18701562375B	1 9/16	1 15/16	3/8	$11.32
18701625	1 5/8	2	3/16	$ 9.49
18701625250	1 5/8	2	1/4	$10.95
18701625250B	1 5/8	2	1/4	$11.23
18701625312	1 5/8	2	5/16	$10.77
18701625312B	1 5/8	2	5/16	$ 9.36
18701625375	1 5/8	2	3/8	$10.77
18701625375B	1 5/8	2	3/8	$ 9.28
18701687	1 11/16	2 1/16	3/16	$ 9.66
18701750	1 3/4	2 1/8	3/16	$ 9.75
18701750230B	1 3/4	2 1/8	.230	$11.53
18701750250B	1 3/4	2 1/8	1/4	$14.99
18701750275	1 3/4	2 1/8	.275	$16.49
18701750312	1 3/4	2 1/8	5/16	$13.10
18701750312B	1 3/4	2 1/8	5/16	$10.57
18701750375	1 3/4	2 1/8	3/8	$31.68
18701750375B	1 3/4	2 1/8	3/8	$10.07
18701812	1 13/16	2 3/16	3/16	$ 9.93
18701875	1 7/8	2 1/4	3/16	$ 10.07
18701875250	1 7/8	2 1/4	1/4	$ 17.50
18701875375	1 7/8	2 1/4	3/8	$ 11.37
18701875375B	1 7/8	2 1/4	3/8	$ 10.89
18701937	1 15/16	2 5/16	3/16	$ 10.01
18701937375	1 15/16	2 5/16	3/8	$ 11.50
18702000	2	2 3/8	3/16	$ 10.24
18702000250B	2	2 3/8	1/4	$ 15.46
18702000312B	2	2 3/8	5/16	$ 12.33
18702000375	2	2 3/8	3/8	$ 11.64

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PNEU-DRAULICS

LOADED U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
		3/16" CROSS SECTION		
18702000375B	2	2 3/8	3/8	$ 38.19
18702062	2 1/16	2 7/16	3/16	$ 10.81
18702125	2 1/8	2 1/2	3/16	$ 10.80
18702125250	2 1/8	2 1/2	1/4	$ 14.39
18702125250B	2 1/8	2 1/2	1/4	$ 14.88
18702125312B	2 1/8	2 1/2	5/16	$ 19.67
18702125375	2 1/8	2 1/2	3/8	$ 14.71
18702125375B	2 1/8	2 1/2	3/8	$ 14.88
18702250	2 1/4	2 5/8	3/16	$ 11.45
18702250312B	2 1/4	2 5/8	5/16	$ 19.22
18702250375	2 1/4	2 5/8	3/8	$ 15.42
18702250375B	2 1/4	2 5/8	3/8	$ 15.67
18702375	2 3/8	2 3/4	3/16	$ 11.59
18702375250B	2 3/8	2 3/4	1/4	$ 22.03
18702375375	2 3/8	2 3/4	3/8	$ 15.89
18702375375B	2 3/8	2 3/4	3/8	$ 13.85
18702375500B	2 3/8	2 3/4	1/2	$ 25.70
18702500	2 1/2	2 7/8	3/16	$ 12.03
18702500250B	2 1/2	2 7/8	1/4	$ 16.75
18702500312B	2 1/2	2 7/8	5/16	$ 19.22
18702500375	2 1/2	2 7/8	3/8	$ 15.89
18702500375B	2 1/2	2 7/8	3/8	$ 16.75
18702625	2 5/8	3	3/16	$ 12.10
18702625250B	2 5/8	3	1/4	$ 20.60
18702625375	2 5/8	3	3/8	$ 16.11
18702625375B	2 5/8	3	3/8	$ 16.11
18702750	2 3/4	3 1/8	3/16	$ 12.51
18702750281B	2 3/4	3 1/8	9/32	$ 18.99
18702750375	2 3/4	3 1/8	3/8	$ 16.26
18702750375B	2 3/4	3 1/8	3/8	$ 15.90
18702875	2 7/8	3 1/4	3/16	$ 12.56
18702875250B	2 7/8	3 1/4	1/4	$ 25.65
18702875375B	2 7/8	3 1/4	3/8	$ 17.36
18703000	3	3 3/8	3/16	$ 12.84
18703000250B	3	3 3/8	1/4	$ 19.28
18703000312B	3	3 3/8	5/16	$ 19.28
18703000375	3	3 3/8	3/8	$ 18.09
18703000375B	3	3 3/8	3/8	$ 19.28
18703125	3 1/8	3 1/2	3/16	$ 19.04
18703125250B	3 1/8	3 1/2	1/4	$ 17.25
18703125312B	3 1/8	3 1/2	5/16	$ 32.08
18703125375	3 1/8	3 1/2	3/8	$ 19.04
18703125375B	3 1/8	3 1/2	3/8	$ 19.05
18703250	3 1/4	3 5/8	3/16	$ 13.62
18703250375	3 1/4	3 5/8	3/8	$ 21.02
18703250375B	3 1/4	3 5/8	3/8	$ 20.04
18703375	3 3/8	3 3/4	3/16	$ 18.84
18703375250B	3 3/8	3 3/4	1/4	$ 25.44
18703375375B	3 3/8	3 3/4	3/8	$ 22.00

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LOADED U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
		3/16" CROSS SECTION		
18703500	3 1/2	3 7/8	3/16	$ 14.89
18703500266B	3 1/2	3 7/8	.266	$ 24.61
18703500312B	3 1/2	3 7/8	5/16	$ 37.64
18703500375B	3 1/2	3 7/8	3/8	$ 22.24
18703625	3 5/8	4	3/16	$ 15.58
18703625250B	3 5/8	4	1/4	$ 30.56
18703625375	3 5/8	4	3/8	$ 23.44
18703625375B	3 5/8	4	3/8	$ 25.84
18703750	3 3/4	4 1/8	3/16	$ 16.52
18703750375B	3 3/4	4 1/8	3/8	$ 25.43
18703875	3 7/8	4 1/4	3/16	$ 17.49
18703875375B	3 4/8	4 1/4	3/8	$ 26.60
18704000	4	4 3/8	3/16	$ 19.40
18704000375	4	4 3/8	3/8	$ 27.32
18704000375B	4	4 3/8	3/8	$ 25.36
18704125	4 1/8	4 1/2	3/16	$ 20.14
18704125SQB	4 1/8	4 1/2	3/16	$ 34.30
18704125250	4 1/8	4 1/2	1/4	$ 26.36
18704125375	4 1/8	4 1/2	3/8	$ 28.22
18704125375B	4 1/8	4 1/2	3/8	$ 26.49
18704250	4 1/4	4 5/8	3/16	$ 21.17
18704250281B	4 1/4	4 5/8	.281	$ 34.23
18704250375B	4 1/4	4 5/8	3/8	$ 30.09
18704375	4 3/8	4 3/4	3/16	$ 21.72
18704375375	4 3/8	4 3/4	3/8	$ 30.74
18704375375B	4 3/8	4 3/4	3/8	$ 31.05
18704500	4 1/2	4 7/8	3/16	$ 22.55
18704500312B	4 1/2	4 7/8	5/16	$ 49.10
18704500375	4 1/2	4 7/8	3/8	$ 22.55
18704500375B	4 1/2	4 7/8	3/8	$ 30.86
18704625	4 5/8	5	3/16	$ 23.78
18704625375	4 5/8	5	3/8	$ 35.91
18704750	4 3/4	5 1/8	3/16	$ 27.53
18704750375B	4 3/4	5 1/8	3/8	$ 32.61
18704875	4 7/8	5 1/4	3/16	$ 26.41
18705000	5	5 3/8	3/16	$ 39.92
18705000312	5	5 3/8	3/16	$ 53.48
18705000375	5	5 3/8	3/8	$ 38.71
18705500375B	5 1/2	5 7/8	3/8	$ 40.51
18705750375B	5 3/4	6 1/8	3/8	$ 67.63
18705875	5 7/8	6 1/4	3/16	$ 35.74
18706000	6	6 3/8	3/16	$ 40.28
18707500250	7 1/2	7 7/8	1/4	$ 69.64

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PNEU-DRAULICS

LOADED U-CUPS

7/32" CROSS SECTION

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
21800312	5/16	3/4	7/32	$ 9.23
21802062	2 1/16	2 1/2	7/32	$17.58
21802500	2 1/2	2 15/16	7/32	$19.87
21802562	2 9/16	3	7/32	$18.24
21802812	2 13/16	3 1/4	7/32	$19.02
21803000	3	3 7/16	7/32	$20.19

3/16" CROSS SECTION

25000250	1/4	3/4	1/4	$ 9.62
25000250375B	1/4	3/4	3/8	$ 9.64
25000312	5/16	13/16	1/4	$ 8.91
25000375	3/8	7/8	1/4	$ 7.98
25000437	7/16	15/16	1/4	$ 8.19
25000437375	7/16	15/16	3/8	$ 8.85
25000500	1/2	1	1/4	$ 9.66
25000500375	1/2	1	3/8	$11.02
25000500375B	1/2	1	3/8	$ 9.82
25000562	9/16	1 1/16	1/4	$ 9.12
25000562375B	9/16	1 1/16	3/8	$ 9.87
25000625	5/8	1 1/8	1/4	$ 8.20
25000625375B	5/8	1 1/8	3/8	$ 9.93
25000687	11/16	1 3/16	1/4	$ 8.24
25000687375B	11/16	1 3/16	3/8	$ 9.93
25000750	3/4	1 1/4	1/4	$ 8.33
25000750SQB	3/4	1 1/4	3/8	$11.76
25000750375	3/4	1 1/4	3/8	$ 9.78
25000750375B	3/4	1 1/4	3/8	$ 10.36
25000812	13/16	1 5/16	1/4	$ 8.28
25000812375B	13/16	1 5/16	3/8	$13.71
25000875	7/8	1 3/8	1/4	$ 8.28
25000875375B	7/8	1 3/8	3/8	$ 9.20
25000937	15/16	1 7/16	1/4	$ 8.37
25001000	1	1 1/2	1/4	$ 9.69
25001000375	1	1 1/2	3/8	$ 10.02
25001000375B	1	1 1/2	3/8	$12.53
25001062	1 1/16	1 9/16	1/4	$11.11
25001093	1 3/32	1 19/32	1/4	$11.22
25001125	1 1/8	1 5/8	1/4	$ 9.86
25001125375B	1 1/8	1 5/8	3/8	$ 9.42
25001187	1 3/16	1 11/16	1/4	$10.86
25001250	1 1/4	1 3/4	1/4	$ 10.19
25001250375	1 1/4	1 3/4	3/8	$ 10.35
25001250375B	1 1/4	1 3/4	3/8	$ 8.97
25001312	1 5/16	1 13/16	1/4	$ 10.30
25001312375B	1 5/16	1 13/16	3/8	$ 11.11
25001375	1 3/8	1 7/8	1/4	$ 10.40
25001375SQB	1 3/8	1 7/8	1/4	$ 13.43
25001375375	1 3/8	1 7/8	3/8	$ 10.48

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LOADED U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
		1/4" CROSS SECTION		
25001375375B	1 3/8	1 7/8	3/8	$ 10.48
25001437	1 7/16	1 15/16	1/4	$ 10.55
25001500	1 1/2	2	1/4	$ 10.87
25001500SQB	1 1/2	2	1/4	$ 11.76
25001500312B	1 1/2	2	5/16	$ 14.60
25001500375	1 1/2	2	3/8	$ 11.55
25001500375B	1 1/2	2	3/8	$ 10.50
25001500500B	1 1/2	2	1/2	$ 18.07
25001562312B	1 9/16	2 1/16	5/16	$ 23.44
25001625	1 5/8	2 1/8	1/4	$ 11.33
25001625375	1 5/8	2 1/8	3/8	$ 15.14
25001625375B	1 5/8	2 1/8	3/8	$ 11.86
25001750	1 3/4	2 1/4	1/4	$ 11.58
25001750375B	1 3/4	2 1/4	3/8	$ 12.29
25001875	1 7/8	2 3/8	1/4	$ 12.39
25001875375B	1 7/8	2 3/8	3/8	$ 14.07
25002000	2	2 1/2	1/4	$ 12.88
25002000312B	2	2 1/2	5/16	$ 19.18
25002000375	2	2 1/2	3/8	$ 13.83
25002000375B	2	2 1/2	3/8	$ 12.45
25002125	2 1/8	2 5/8	1/4	$ 13.57
25002125375B	2 1/8	2 5/8	3/8	$ 16.23
25002187375B	2 3/16	2 11/16	3/8	$ 20.08
25002250	2 1/4	2 3/4	1/4	$ 14.22
25002250375	2 1/4	2 3/4	3/8	$ 14.26
25002250375B	2 1/4	2 3/4	3/8	$ 14.26
25002375	2 3/8	2 7/8	1/4	$ 14.81
25002375375	2 3/8	2 7/8	3/8	$ 17.35
25002375375B	2 3/8	2 7/8	3/8	$ 15.01
25002437	2 7/16	2 15/16	1/4	$ 26.07
25002500	2 1/2	3	1/4	$ 15.22
25002500312B	2 1/2	3	5/16	$ 19.79
25002500375	2 1/2	3	3/8	$ 15.66
25002500375B	2 1/2	3	3/8	$ 13.86
25002500500B	2 1/2	3	1/2	$ 27.11
25002625	2 5/8	3 1/8	1/4	$ 16.57
25002625375B	2 5/8	3 1/8	3/8	$ 19.04
25002750	2 3/4	3 1/4	1/4	$ 16.86
25002750375	2 3/4	3 1/4	3/8	$ 17.75
25002750375B	2 3/4	3 1/4	3/8	$ 17.58
25002750500B	2 3/4	3 1/4	1/2	$ 28.60
25002875	2 7/8	3 3/8	1/4	$ 17.46
25002875375B	2 7/8	3 3/8	3/8	$ 20.50
25003000	3	3 1/2	1/4	$ 22.74
25003000375	3	3 1/2	3/8	$ 18.57
25003000375B	3	3 1/2	3/8	$ 18.57
25003000500B	3	3 1/2	1/2	$ 26.03
25003125	3 1/8	3 5/8	1/4	$ 22.94
25003125375B	3 1/8	3 5/8	3/8	$ 22.34
25003250	3 1/4	3 3/4	1/4	$ 23.13

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PNEU-DRAULICS

LOADED U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
		1/4" CROSS SECTION		
25003250375	3 1/4	3 3/4	3/8	$ 27.06
25003250375B	3 1/4	3 3/4	3/8	$ 33.07
25003250500B	3 1/4	3 3/4	1/2	$ 23.39
25003375	3 3/8	3 7/8	1/4	$ 23.39
25003375375B	3 3/8	3 7/8	3/8	$ 21.06
25003500	3 1/2	4	1/4	$ 23.94
25003500375	3 1/2	4	3/8	$ 22.08
25003500375B	3 1/2	4	3/8	$ 24.51
25003500500	3 1/2	4	1/2	$ 32.36
25003625	3 5/8	4 1/8	1/4	$ 19.38
25003625375	3 5/8	4 1/8	3/8	$ 23.00
25003625375B	3 5/8	4 1/8	3/8	$ 24.88
25003750	3 3/4	4 1/4	1/4	$ 24.93
25003750375	3 3/4	4 1/4	3/8	$ 23.02
25003750375B	3 3/4	4 1/4	3/8	$ 22.65
25003750562B	3 3/4	4 1/4	9/16	$ 25.97
25003875	3 7/8	4 3/8	1/4	$ 25.11
25003875375	3 7/8	4 3/8	3/8	$ 23.87
25003875562	3 7/8	4 3/8	9/16	$ 46.44
25004000	4	4 1/2	1/4	$ 28.39
25004000312B	4	4 1/2	5/16	$ 41.10
25004000375B	4	4 1/2	3/8	$ 23.89
25004000375	4	4 1/2	3/8	$ 24.02
25004000500	4	4 1/2	1/2	$ 23.89
25004000500B	4	4 1/2	1/2	$ 33.62
25004000562	4	4 1/2	9/16	$ 23.89
25004000562B	4	4 1/2	9/16	$ 24.62
25004125	4 1/8	4 5/8	1/4	$ 26.55
25004250	4 1/4	4 3/4	1/4	$ 26.60
25004250375B	4 1/4	4 3/4	3/8	$ 27.06
25004250562B	4 1/4	4 3/4	9/16	$ 31.20
25004375	4 3/8	4 7/8	1/4	$ 27.31
25004375562	4 3/8	4 7/8	9/16	$ 28.19
25004500	4 1/2	5	1/4	$ 28.44
25004500312	4 1/2	5	5/16	$ 44.24
25004500312B	4 1/2	5	5/16	$ 44.24
25004500375	4 1/2	5	3/8	$ 29.46
25004500375B	4 1/2	5	3/8	$ 28.36
25004500500B	4 1/2	5	1/2	$ 31.60
25004500562	4 1/2	5	9/16	$ 29.39
25004500562B	4 1/2	5	9/16	$ 30.74
25004500625B	4 1/2	5	5/8	$ 28.66
25004500SQB	4 1/2	5	1/4	$ 26.93
25004625	4 5/8	5 1/8	1/4	$ 24.09
25004625562B	4 5/8	5 1/8	9/16	$ 32.92
25004750	4 3/4	5 1/4	1/4	$ 29.43
25004750375B	4 3/4	5 1/4	3/8	$ 35.44
25004750562	4 3/4	5 1/4	9/16	$ 31.09

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LOADED U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
		1/4" CROSS SECTION		
25004750562B	4 3/4	5 1/4	9/16	$ 35.44
25004875	4 7/8	5 3/8	1/4	$ 30.07
25004875562	4 7/8	5 3/8	9/16	$ 32.26
25005000	5	5 1/2	1/4	$ 30.98
25005000375	5	5 1/2	3/8	$ 34.24
25005000375B	5	5 1/2	3/8	$ 33.63
25005000500B	5	5 1/2	1/2	$ 40.52
25005000562	5	5 1/2	9/16	$ 34.40
25005000562B	5	5 1/2	9/16	$ 35.17
25005000625	5	5 1/2	5/8	$ 63.19
25005125	5 1/8	5 5/8	1/4	$ 31.66
25005250	5 1/4	5 3/4	1/4	$ 32.35
25005250375B	5 1/4	5 3/4	3/8	$ 38.62
25005250562B	5 1/4	5 3/4	9/16	$ 39.10
25005375	5 3/8	5 7/8	1/4	$ 33.06
25005375375	5 3/8	5 7/8	3/8	$ 52.24
25005375562B	5 3/8	5 7/8	9/16	$ 40.66
25005500	5 1/2	6	1/4	$ 33.52
25005500375	5 1/2	6	3/8	$ 40.30
25005500375B	5 1/2	6	3/8	$ 39.68
25005500562	5 1/2	6	9/16	$ 40.58
25005500562B	5 1/2	6	9/16	$ 40.39
25005500625	5 1/2	6	5/8	$ 34.25
25005625	5 5/8	6 1/8	1/4	$ 34.25
25005625562B	5 5/8	6 1/8	9/16	$ 41.24
25005750	5 3/4	6 1/4	1/4	$ 34.29
25005750375B	5 3/4	6 1/4	3/8	$ 51.49
25005750562	5 3/4	6 1/4	9/16	$ 41.29
25005750562B	5 3/4	6 1/4	9/16	$ 42.37
25005875	5 7/8	6 3/8	1/4	$ 35.00
25006000	6	6 1/2	1/4	$ 35.43
25006000375B	6	6 1/2	3/8	$ 43.37
25006000437B	6	6 1/2	7/16	$ 47.71
25006000500	6	6 1/2	1/2	$ 80.56
25006000500B	6	6 1/2	1/2	$ 63.84
25006000562	6	6 1/2	9/16	$ 48.98
25006000562B	6	6 1/2	9/16	$ 43.93
25006250	6 1/4	6 3/4	1/4	$ 36.25
25006250375B	6 1/4	6 3/4	3/8	$ 52.19
25006250562	6 1/4	6 3/4	9/16	$ 47.59
25006250562B	6 1/4	6 3/4	9/16	$ 63.01
25006500	6 1/2	7	1/4	$ 36.59
25006500375B	6 1/2	7	3/8	$ 48.07
25006500562B	6 1/2	7	9/16	$ 50.89
25006750	6 3/4	7 1/4	1/4	$ 37.44
25006750375B	6 3/4	7 1/4	3/8	$ 54.49
25006750562	6 3/4	7 1/4	9/16	$ 49.62
25006750562B	6 3/4	7 1/4	9/16	$ 52.79
25007000	7	7 1/2	1/4	$ 56.90

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PNEU-DRAULICS

LOADED U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
		1/4" CROSS SECTION		
25007000375B	7	7 1/2	3/8	$ 56.90
25007000500B	7	7 1/2	1/2	$ 53.99
25007000562B	7	7 1/2	9/16	$ 54.73
25007250	7 1/4	7 3/4	1/4	$ 65.88
25007250562B	7 1/4	7 3/4	9/16	$ 54.11
25007500	7 1/2	8	1/4	$ 40.21
25007500375B	7 1/2	8	3/8	$ 70.74
25007500562	7 1/2	8	9/16	$ 59.81
25007500562B	7 1/2	8	9/16	$ 62.14
25007750	7 3/4	8 1/4	1/4	$ 41.06
25007750562B	7 3/4	8 1/4	9/16	$ 70.06
25008000	8	8 1/2	1/4	$ 48.12
25008000562B	8	8 1/2	9/16	$ 63.30
25008125562B	8 1/8	8 5/8	9/16	$ 66.99
25008250	8 1/4	8 3/4	1/4	$ 49.22
25008250375B	8 1/4	8 3/4	3/8	$ 67.24
25008250562B	8 1/4	8 3/4	9/16	$ 68.02
25008500	8 1/2	9	1/4	$ 50.31
25008500562B	8 1/2	9	9/16	$ 67.08
25008750	9 1/4	8 3/4	1/4	$ 56.47
25009000	9	9 1/2	1/4	$ 63.55
25009000562	9	9 1/2	9/16	$ 99.11
25009250	9 1/4	9 3/4	1/4	$ 59.90
25009250562	9 1/4	9 3/4	9/16	$ 82.39
25009500	9 1/2	10	1/4	$ 61.65
25009500562	9 1/2	10	9/16	$ 87.88
25009500562B	9 1/2	10	9/16	$ 93.72
25009750	9 3/4	10 1/4	1/4	$ 68.84
25010000	10	10 1/2	1/4	$ 73.33
25010250	10 1/4	10 3/4	1/4	$ 80.29
25010500	10 1/2	11	1/4	$ 77.16
25011000	11	11 1/2	1/4	$ 81.17
25011250	11 1/4	11 3/4	1/4	$ 87.93
25011500	11 1/2	12	1/4	$ 86.58
25011750	11 3/4	12 1/4	1/4	$ 89.10
25012000	12	12 1/2	1/4	$ 91.49
25012500	12 1/2	13	1/4	$ 99.67
25012750562B	12 3/4	13 1/4	9/16	$ 121.55
25013500	13 1/2	14	1/4	$ 104.38
25024500	24 1/2	25	1/4	$ 361.82

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
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LOADED U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
		9/32" CROSS SECTION		
28101000	1	1 9/16	9/32	$ 16.00
28102312	2 5/16	2 7/8	9/32	$ 16.38
28102562	2 9/16	3 1/8	9/32	$ 18.70
28104437	4 7/16	5	9/32	$ 37.32
28105000	5	5 9/16	9/32	$ 35.93
28105437	5 7/16	6	9/32	$ 44.28
		5/16" CROSS SECTION		
31200250	1/4	7/8	5/16	$ 11.22
31200375	3/8	1	5/16	$ 11.22
31200437	7/16	1 1/16	5/16	$ 11.88
31200500	1/2	1 1/8	5/16	$ 11.90
31200625	5/8	1 1/4	5/16	$ 16.22
31200687	11/16	1 5/16	5/16	$ 12.46
31200750	3/4	1 3/8	5/16	$ 12.53
31200750500	3/4	1 3/8	1/2	$ 12.78
31200750500B	3/4	1 3/8	1/2	$ 13.34
31200875	7/8	1 1/2	5/16	$ 10.39
31201000	1	1 5/8	5/16	$ 9.73
31201000375B	1	1 5/8	3/8	$ 14.13
31201000500	1	1 5/8	1/2	$ 13.14
31201000500B	1	1 5/8	1/2	$ 12.21
31201062	1 1/16	1 11/16	5/16	$ 13.07
31201125	1 1/8	1 3/4	5/16	$ 9.42
31201125375B	1 1/8	1 3/4	3/8	$ 14.06
31201187	1 3/16	1 13/16	5/16	$ 13.14
31201250	1 1/4	1 7/8	5/16	$ 10.21
31201250375B	1 1/4	1 7/8	3/8	$ 15.73
31201250500	1 1/4	1 7/8	1/2	$ 13.66
31201250500B	1 1/4	1 7/8	1/2	$ 13.06
31201312	1 5/16	1 15/16	5/16	$ 15.32
31201375	1 3/8	2	5/16	$ 10.90
31201375375B	1 3/8	2	3/8	$ 16.88
31201375500B	1 3/8	2	1/2	$ 13.54
31201500	1 1/2	2 1/8	5/16	$ 11.70
31201500375B	1 1/2	2 1/8	3/8	$ 14.96
31201500437B	1 1/2	2 1/8	7/16	$ 20.73
31201500500	1 1/2	2 1/8	1/2	$ 14.26
31201500500B	1 1/2	2 1/8	1/2	$ 14.83
31201625	1 5/8	2 1/4	5/16	$ 12.46
31201625375B	1 5/8	2 1/4	3/8	$ 19.81
31201625500B	1 5/8	2 1/4	1/2	$ 15.93
31201687	1 11/16	2 15/16	5/16	$ 12.80
31201750	1 3/4	2 3/8	5/16	$ 13.15
31201750375B	1 3/4	2 3/8	3/8	$ 16.59
31201750437	1 3/4	2 3/8	7/16	$ 29.88
31201750500	1 3/4	2 3/8	1/2	$ 15.80

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PNEU-DRAULICS

LOADED U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
		5/16" CROSS SECTION		
31201750500B	1 3/4	2 3/8	1/2	$ 16.39
31201875	1 7/8	2 1/2	5/16	$ 14.12
31201875375B	1 7/8	2 1/2	3/8	$ 16.97
31201875500	1 7/8	2 1/2	1/2	$ 16.53
31201875500B	1 7/8	2 1/2	1/2	$ 28.71
31201937	1 15/16	2 9/16	5/16	$ 14.43
31202000	2	2 5/8	5/16	$ 14.82
31202000375B	2	2 5/8	3/8	$ 18.14
31202000437B	2	2 5/8	7/16	$ 27.86
31202000500	2	2 5/8	1/2	$ 17.41
31202000500B	2	2 5/8	1/2	$ 18.98
31202125	2 1/8	2 3/4	5/16	$ 15.55
31202125500B	2 1/8	2 3/4	1/2	$ 19.59
31202250	2 1/4	2 7/8	5/16	$ 16.16
31202250500B	2 1/4	2 7/8	1/2	$ 18.21
31202375	2 3/8	3	5/16	$ 16.96
31202375500B	2 3/8	3	1/2	$ 20.78
31202500	2 1/2	3 1/8	5/16	$ 17.62
31202500375B	2 1/2	3 1/8	3/8	$ 18.12
31202500500	2 1/2	3 1/8	1/2	$ 20.65
31202500500B	2 1/2	3 1/8	1/2	$ 19.63
31202562	2 9/16	3 3/16	5/16	$ 23.62
31202625	2 5/8	3 1/4	5/16	$ 18.48
31202625500B	2 5/8	3 1/4	1/2	$ 23.17
31202750	2 3/4	3 3/8	5/16	$ 19.35
31202750375B	2 3/4	3 3/8	3/8	$ 23.00
31202750500B	2 3/4	3 3/8	1/2	$ 19.74
31202750625B	2 3/4	3 3/8	5/8	$ 21.84
31202875	2 7/8	3 1/2	5/16	$ 19.97
31202875500B	2 7/8	3 1/2	1/2	$ 24.08
31203000	3	3 5/8	5/16	$ 23.33
31203000375B	3	3 5/8	3/8	$ 21.27
31203000500	3	3 5/8	1/2	$ 24.59
31203000500B	3	3 5/8	1/2	$ 22.05
31203000562	3	3 5/8	9/16	$ 17.05
31203125	3 1/8	3 3/4	5/16	$ 24.02
31203125375	3 1/8	3 3/4	3/8	$ 32.11
31203125500B	3 1/8	3 3/4	1/2	$ 30.08
31203250	3 1/4	3 7/8	5/16	$ 25.30
31203250500B	3 1/4	3 7/8	1/2	$ 27.15
31203375	3 3/8	4	5/16	$ 25.87
31203375500	3 3/8	4	1/2	$ 23.86
31203375500B	3 3/8	4	1/2	$ 28.01
31203375625B	3 3/8	4	5/8	$ 26.63
31203500	3 1/2	4 1/8	5/16	$ 22.51
31203500375B	3 1/2	4 1/8	3/8	$ 42.97
31203500500	3 1/2	4 1/8	1/2	$ 26.63
31203500500B	3 1/2	4 1/8	1/2	$ 30.86
31203625	3 5/8	4 1/4	5/16	$ 27.33
31203625375B	3 5/8	4 1/4	3/8	$ 40.90

PNEU-DRAULICS
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LOADED U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
		5/16" CROSS SECTION		
31203625500B	3 5/8	4 1/4	1/2	$ 27.55
31203750	3 3/4	4 3/8	5/16	$ 28.22
31203750375B	3 3/4	4 3/8	3/8	$ 30.29
31203750500B	3 3/4	4 3/8	1/2	$ 29.76
31203750625B	3 3/4	4 3/8	5/8	$ 30.04
31203875	3 7/8	4 1/2	5/16	$ 29.09
31203875500	3 7/8	4 1/2	1/2	$ 30.22
31203875500B	3 7/8	4 1/2	1/2	$ 30.13
31204000	4	4 5/8	5/16	$ 29.61
31204000500B	4	4 5/8	1/2	$ 39.59
31204000562	4	4 5/8	9/16	$ 31.13
31204000562B	4	4 5/8	9/16	$ 30.34
31204125	4 1/8	4 3/4	5/16	$ 30.34
31204125500B	4 1/8	4 3/4	1/2	$ 31.88
31204125562	4 1/8	4 3/4	9/16	$ 31.88
31204125562B	4 1/8	4 3/4	9/16	$ 35.56
31204250	4 1/4	4 7/8	5/16	$ 31.67
31204250562B	4 1/4	4 7/8	9/16	$ 34.81
31204375	4 3/8	5	5/16	$ 32.75
31204375500B	4 3/8	5	1/2	$ 45.85
31204375562	4 3/8	5	9/16	$ 38.60
31204375562B	4 3/8	5	9/16	$ 45.86
31204500	4 1/2	5 1/8	5/16	$ 33.25
31204500500B	4 1/2	5 1/8	1/2	$ 48.00
31204500625B	4 1/2	5 1/8	5/8	$ 36.80
31204625625B	4 5/8	5 1/4	5/8	$ 40.52
31204750	4 3/4	5 3/8	5/16	$ 30.29
31204750500B	4 3/4	5 3/8	1/2	$ 50.70
31204750625B	4 3/4	5 3/8	5/8	$ 34.07
31204875	4 7/8	5 1/2	5/16	$ 37.97
31205000	5	5 5/8	5/16	$ 36.05
31205000625B	5	5 5/8	5/8	$ 37.47
31205125	5 1/8	5 3/4	5/16	$ 36.25
31205250	5 1/4	5 7/8	5/16	$ 36.93
31205250625B	5 1/4	5 7/8	5/8	$ 44.67
31205375	5 3/8	6	5/16	$ 37.45
31205375625	5 3/8	6	5/8	$ 42.16
31205375625B	5 3/8	6	5/8	$ 46.40
31205500	5 1/2	6 1/8	5/16	$ 42.16
31205500375B	5 1/2	6 1/8	3/8	$ 47.40
31205500625B	5 1/2	6 1/8	5/8	$ 54.20
31205625	5 5/8	6 1/4	5/16	$ 53.20
31205625625B	5 5/8	6 1/4	5/8	$ 47.63
31205750625B	5 3/4	6 3/8	5/8	$ 47.64
31205875	5 7/8	6 1/2	5/16	$ 39.51
31205875375B	5 7/8	6 1/2	3/8	$ 66.03
31206000	6	6 5/8	5/16	$ 45.98
31206000625B	6	6 5/8	5/8	$ 55.54
31206125	6 1/8	6 3/4	5/16	$ 52.73
31206250	6 1/4	6 7/8	5/16	$ 46.74

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PNEU-DRAULICS

LOADED U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
5/16" CROSS SECTION				
31206375	6 3/8	7	5/16	$ 47.04
31206375625	6 3/8	7	5/8	$ 57.77
31206500	6 1/2	7 1/8	5/16	$ 48.81
31206500625B	6 1/2	7 1/8	5/8	$ 61.74
31206625	6 5/8	7 1/4	5/16	$ 48.87
31206750	6 3/4	7 3/8	5/16	$ 47.04
31206750625B	6 3/4	7 3/8	5/8	$ 63.80
31207000	7	7 5/8	5/16	$ 50.71
31207000625B	7	7 5/8	5/8	$ 64.84
31207250	7 1/4	7 7/8	5/16	$ 51.52
31207250625B	7 1/4	7 7/8	5/8	$ 65.50
31207375	7 3/8	8	5/16	$ 51.83
31207500	7 1/2	8 1/8	5/16	$ 55.79
31207500625	7 1/2	8 1/8	5/8	$ 84.62
31208000	8	8 5/8	5/16	$ 58.52
31208000625B	8	8 5/8	5/8	$ 84.80
31209000500	9	9 5/8	1/2	$ 91.67
31209250625B	9 1/4	9 7/8	5/8	$ 85.20
31209375625B	9 3/8	10	5/8	$ 94.65
31209750625B	9 3/4	10 3/8	5/8	$ 89.01
11/32" CROSS SECTION				
34301812	1 13/16	2 1/2	11/32	$ 19.02
34302312	2 5/16	3	11/32	$ 23.31
3/8" CROSS SECTION				
37500500	1/2	1 1/4	3/8	$ 15.21
37500625	5/8	1 3/8	3/8	$ 15.89
37500750	3/4	1 1/2	3/8	$ 16.18
37500750625	3/4	1 1/2	5/8	$ 14.09
37500812	13/16	1 9/16	3/8	$ 19.72
37500875	7/8	1 5/8	3/8	$ 16.68
37500937	15/16	1 11/16	3/8	$ 16.86
37501000	1	1 3/4	3/8	$ 14.67
37501000625	1	1 3/4	5/8	$ 18.49
37501125	1 1/8	1 7/8	3/8	$ 17.80
37501250	1 1/4	2	3/8	$ 15.56
37501250625	1 1/4	2	5/8	$ 20.72
37501312	1 5/16	2 1/16	3/8	$ 16.51
37501375	1 3/8	2 1/8	3/8	$ 16.98
37501375625B	1 3/8	2 1/8	5/8	$ 20.84
37501500	1 1/2	2 1/4	3/8	$ 17.62
37501500500B	1 1/2	2 1/4	1/2	$ 23.10
37501500625B	1 1/2	2 1/4	5/8	$ 19.63
37501562	1 9/16	2 5/16	3/8	$ 21.41
37501625	1 5/8	2 3/8	3/8	$ 18.21
37501625625B	1 5/8	2 3/8	5/8	$ 23.77
37501750	1 3/4	2 1/2	3/8	$ 18.57
37501750500	1 3/4	2 1/2	1/2	$ 25.96
37501750625B	1 3/4	2 1/2	5/8	$ 20.20
37501875	1 7/8	2 5/8	3/8	$ 24.56

U-CUPS

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
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LOADED U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
		3/8" CROSS SECTION		
37501875625	1 7/8	2 5/8	5/8	$ 26.99
37502000	2	2 3/4	3/8	$ 22.95
37502000437B	2	2 3/4	7/16	$ 35.94
37502000500B	2	2 3/4	1/2	$ 24.92
37502000625	2	2 3/4	5/8	$ 27.62
37502000625B	2	2 3/4	5/86	$ 23.34
37502062	2 1/16	2 13/16	3/8	$ 27.00
37502125	2 1/8	2 7/8	3/8	$ 23.64
37502125625	2 1/8	2 7/8	5/8	$ 28.91
37502125625B	2 1/8	2 7/8	5/8	$ 31.62
37502187625B	2 3/16	2 15/16	5/8	$ 32.90
37502250	2 1/4	3	3/8	$ 23.92
37502250500B	2 1/4	3	1/2	$ 27.74
37502250625	2 1/4	3	5/8	$ 28.54
37502250625B	2 1/4	3	5/8	$ 23.52
37502375	2 3/8	3 1/8	3/8	$ 30.26
37502375500B	2 3/8	3 1/8	1/2	$ 32.65
37502375625B	2 3/8	3 1/8	5/8	$ 24.86
37502437	2 7/16	3 3/16	3/8	$ 30.83
37502500	2 1/2	3 1/4	3/8	$ 25.72
37502500500	2 1/2	3 1/4	1/2	$ 35.51
37502500500B	2 1/2	3 1/4	1/2	$ 37.22
37502500625	2 1/2	3 1/4	5/8	$ 29.44
37502500625B	2 1/2	3 1/4	5/8	$ 29.72
37502562	2 9/16	3 5/16	3/8	$ 37.07
37502625	2 5/8	3 3/8	3/8	$ 32.79
37502625625B	2 5/8	3 3/8	5/8	$ 30.84
37502750	2 3/4	3 1/2	3/8	$ 37.94
37502750625	2 3/4	3 1/2	5/8	$ 30.59
37502750625B	2 3/4	3 1/2	5/8	$ 29.78
37502812	2 13/16	3 9/16	3/8	$ 39.41
37502875	2 7/8	3 5/8	3/8	$ 34.88
37502875500B	2 7/8	3 5/8	1/2	$ 46.65
37502875625B	2 7/8	3 5/8	5/8	$ 37.32
37502937	2 15/16	3 11/16	3/8	$ 35.56
37503000	3	3 3/4	3/8	$ 30.95
37503000500B	3	3 3/4	1/2	$ 33.52
37503000625B	3	3 3/4	5/8	$ 56.27
37503125	3 1/8	3 7/8	3/8	$ 38.31
37503125625B	3 1/8	3 7/8	5/8	$ 35.92
37503250	3 1/4	4	3/8	$ 32.84
37503250500B	3 1/4	4	1/2	$ 36.62
37503250625	3 1/4	4	5/8	$ 34.08
37503250625B	3 1/4	4	5/8	$ 37.60
37503375	3 3/8	4 1/8	3/8	$ 34.07
37503375625	3 3/8	4 1/8	5/8	$ 35.38
37503375625B	3 3/8	4 1/8	5/8	$ 32.74
37503500	3 1/2	4 1/4	3/8	$ 35.32
37503500500	3 1/2	4 1/4	1/2	$ 41.10
37503500500B	3 1/2	4 1/4	1/2	$ 59.40

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PNEU-DRAULICS

LOADED U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
		3/8" CROSS SECTION		
37503500625	3 1/2	4 1/4	5/8	$ 36.82
37503500625B	3 1/2	4 1/4	5/8	$ 34.19
37503625	3 5/8	4 3/8	3/8	$ 36.84
37503625500B	3 5/8	4 3/8	1/2	$ 56.18
37503625625B	3 5/8	4 3/8	5/8	$ 39.48
37503750	3 3/4	4 1/2	3/8	$ 37.23
37503750500	3 3/4	4 1/2	1/2	$ 38.36
37503750500B	3 3/4	4 1/2	1/2	$ 51.15
37503750625	3 3/4	4 1/2	5/8	$ 41.19
37503750625B	3 3/4	4 1/2	5/8	$ 36.39
37503875	3 7/8	4 5/8	3/8	$ 38.32
37503875625B	3 7/8	4 5/8	5/8	$ 47.50
37504000	4	4 3/4	3/8	$ 39.00
37504000500	4	4 3/4	1/2	$ 54.20
37504000500B	4	4 3/4	1/2	$ 55.77
37504000625	4	4 3/4	5/8	$ 39.79
37504000625B	4	4 3/4	5/8	$ 38.62
37504125	4 1/8	4 7/8	3/8	$ 39.89
37504125625B	4 1/8	4 7/8	5/8	$ 49.53
37504250	4 1/4	5	3/8	$ 40.83
37504250500	4 1/4	5	1/2	$ 41.18
37504250500B	4 1/4	5	1/2	$ 46.29
37504250625	4 1/4	5	5/8	$ 41.95
37504250625B	4 1/4	5	5/8	$ 41.24
37504375	4 3/8	5 1/8	3/8	$ 41.80
37504375500B	4 3/8	5 1/8	1/2	$ 79.21
37504375625	4 3/8	5 1/8	5/8	$ 42.46
37504375625B	4 3/8	5 1/8	5/8	$ 49.76
37504500	4 1/2	5 1/4	3/8	$ 38.87
37504500500	4 1/2	5 1/4	1/2	$ 51.02
37504500625	4 1/2	5 1/4	5/8	$ 42.46
37504500625B	4 1/2	5 1/4	5/8	$ 42.46
37504625	4 5/8	5 3/8	3/8	$ 51.27
37504625625	4 5/8	5 3/8	5/8	$ 53.36
37504625625B	4 5/8	5 3/8	5/8	$ 54.38
37504750	4 3/4	5 1/2	3/8	$ 40.79
37504750500B	4 3/4	5 1/2	1/2	$ 50.84
37504750625	4 3/4	5 1/2	5/8	$ 46.71
37504750625B	4 3/4	5 1/2	5/8	$ 44.37
37504875	4 7/8	5 5/8	3/8	$ 53.93
37504875625B	4 7/8	5 5/8	5/8	$ 53.07
37505000	5	5 3/4	3/8	$ 42.82
37505000500B	5	5 3/4	1/2	$ 46.53
37505000625	5	5 3/4	5/8	$ 46.54
37505000625B	5	5 3/4	5/8	$ 46.56
37505125	5 1/8	5 7/8	3/8	$ 46.98
37505125625B	5 1/8	5 7/8	5/8	$ 59.56
37505250	5 1/4	6	3/8	$ 45.19
37505250500	5 1/4	6	1/2	$ 48.47
37505250500B	5 1/4	6	1/2	$ 48.47

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LOADED U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
		3/8" CROSS SECTION		
37505250625	5 1/4	6	5/8	$ 48.47
37505250625B	5 1/4	6	5/8	$ 48.47
37505375	5 3/8	6 1/8	3/8	$ 58.77
37505375625B	5 3/8	6 1/8	5/8	$ 61.97
37505437	5 7/16	6 3/16	3/8	$ 47.39
37505500	5 1/2	6 1/4	3/8	$ 46.58
37505500500B	5 1/2	6 1/4	1/2	$ 83.06
37505500625	5 1/2	6 1/4	5/8	$ 61.93
37505500625B	5 1/2	6 1/4	5/8	$ 54.12
37505625625B	5 5/8	6 3/8	5/8	$ 73.64
37505750	5 3/4	6 1/2	3/8	$ 55.29
37505750500	5 3/4	6 1/2	1/2	$ 55.60
37505750625	5 3/4	6 1/2	5/8	$ 56.21
37505750625B	5 3/4	6 1/2	5/8	$ 52.19
37505875	5 7/8	6 5/8	5/8	$ 66.09
37505875625B	5 7/8	6 5/8	5/8	$ 60.46
37506000	6	6 3/4	3/8	$ 53.20
37506000500B	6	6 3/4	1/2	$ 57.24
37506000625B	6	6 3/4	5/8	$ 51.30
37506250	6 1/4	7	3/8	$ 53.84
37506250500	6 1/4	7	1/2	$ 62.64
37506250500B	6 1/4	7	1/2	$ 60.46
37506250625	6 1/4	7	5/8	$ 60.46
37506250625B	6 1/4	7	5/8	$ 59.37
37506375	6 3/8	7 1/8	3/8	$ 100.96
37506500	6 1/2	7 1/4	3/8	$ 59.51
37506500500B	6 1/2	7 1/4	1/2	$ 66.69
37506500625B	6 1/2	7 1/4	5/8	$ 65.42
37506750	6 3/4	7 1/2	3/8	$ 61.40
37506750500B	6 3/4	7 1/2	1/2	$ 62.35
37506750625B	6 3/4	7 1/2	5/8	$ 62.35
37506875625B	6 7/8	7 5/8	5/8	$ 81.69
37507000	7	7 3/4	3/8	$ 59.00
37507000500B	7	7 3/4	1/2	$ 64.34
37507000625B	7	7 3/4	5/8	$ 64.34
37507250	7 1/4	8	3/8	$ 60.62
37507250500B	7 1/4	8	1/2	$ 89.64
37507250625	7 1/4	8	5/8	$ 67.20
37507250625B	7 1/4	8	5/8	$ 67.20
37507500	7 1/2	8 1/4	3/8	$ 62.42
37507500500B	7 1/2	8 1/4	1/2	$ 68.37
37507500625B	7 1/2	8 1/4	5/8	$ 68.37
37507625	7 5/8	8 3/8	3/8	$ 63.19
37507750	7 3/4	8 1/2	3/8	$ 64.02
37507750500B	7 3/4	8 1/2	1/2	$ 70.31
37507750625B	7 3/4	8 1/2	5/8	$ 70.31
37508000	8	8 3/4	3/8	$ 65.76
37508000500	8	8 3/4	1/2	$ 89.80
37508000625B	8	8 3/4	5/8	$ 72.36
37508250	8 1/4	9	3/8	$ 67.60

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PNEU-DRAULICS

LOADED U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
		3/8" CROSS SECTION		
37508250625	8 1/4	9	5/8	$ 74.35
37508250625B	8 1/4	9	5/8	$ 74.36
37508500	8 1/2	9 1/4	3/8	$ 85.47
37508500625B	8 1/2	9 1/4	5/8	$101.86
37508750	8 3/4	9 1/2	3/8	$ 92.96
37508750625	8 3/4	9 1/2	5/8	$ 98.99
37508875625B	8 7/8	9 5/8	5/8	$ 96.56
37509000	9	9 3/4	3/8	$ 90.09
37509000625	9	9 3/4	5/8	$ 91.3
37509000625B	9	9 3/4	5/8	$111.21
37509250	9 1/4	10	3/8	$108.57
37509250500	9 1/4	10	1/2	$112.85
37509250625	9 1/4	10	5/8	$111.05
37509250625B	9 1/4	10	5/8	$111.05
37509500	9 1/2	10 1/4	3/8	$ 99.56
37509500625B	9 1/2	10 1/4	5/8	$147.71
37509750	9 3/4	10 1/2	3/8	$ 94.12
37509750500	9 3/4	10 1/2	1/2	$130.21
37509750625	9 3/4	10 1/2	5/8	$119.39
37509875	9 7/8	10 5/8	3/8	$102.83
37510000	10	10 3/4	3/8	$ 94.12
37510250	10 1/4	11	3/8	$ 95.95
37510250500B	10 1/4	11	1/2	$143.84
37510250625	10 1/4	11	3/4	$143.84
37510500	10 1/2	11 1/4	3/8	$150.98
37510500625B	10 1/2	11 1/4	5/8	$154.93
37510750625B	10 3/4	11 1/2	5/8	$171.56
37511000	11	11 3/4	3/8	$112.33
37511250	11 1/4	12	3/8	$ 97.70
37511250625B	11 1/4	12	5/8	$149.52
37511500	11 1/2	12 1/4	3/8	$126.64
37511500625	11 1/2	12 1/4	5/8	$163.78
37511750	11 3/4	12 1/2	3/8	$122.25
37512000	12	12 3/4	3/8	$122.99
37512250	12 1/4	13	3/8	$120.67
37512500	12 1/2	13 1/4	3/8	$141.29
37512500625	12 1/2	13 1/4	5/8	$194.25
37512750	12 3/4	13 1/2	3/8	$145.91
37513000625B	13	13 1/4	5/8	$191.39
37513250	13 1/4	14	3/8	$129.87
37513250625	13 1/4	14	5/8	$259.37
37513500	13 1/2	14 1/4	3/8	$212.01
37513750	13 3/4	14 1/2	3/8	$170.14
37514500	14 1/2	15 1/4	3/8	$151.39
37515000	15	15 3/4	3/8	$156.39
37515250625	15 1/4	16	5/8	$241.23
37517250	17 1/4	18	3/8	$176.56

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LOADED U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
7/16" CROSS SECTION				
43701500	1 1/4	2 3/8	7/16	$ 22.53
43701875	1 7/8	2 3/4	7/16	$ 26.70
43702000	2	2 7/8	7/16	$ 28.57
43702250625B	2 1/4	3 1/8	5/8	$ 32.27
43702500	2 1/2	3 3/8	7/16	$ 30.83
43702750	2 3/4	3 5/8	7/16	$ 59.85
43703000	3	3 7/8	7/16	$ 38.27
43703125	3 1/8	4	7/16	$ 40.68
43703250	3 1/4	4 1/8	7/16	$ 41.35
43703625	3 5/8	4 1/2	7/16	$ 44.84
43703875750B	3 7/8	4 3/4	3/4	$ 50.32
43704000	4	4 3/4	7/16	$ 41.83
43704000625B	4	4 7/8	5/8	$ 50.32
43704000750B	4	4 7/8	3/4	$ 83.49
43704125	4 1/8	5	7/16	$ 63.66
43704500	4 1/2	5 3/8	7/16	$ 53.07
43704500750B	4 1/2	5 3/8	3/4	$ 57.13
43704750	4 3/4	5 5/8	7/16	$ 55.50
43704750625	4 3/4	5 5/8	5/8	$ 50.97
43704750750B	4 3/4	5 5/8	3/4	$ 59.90
43705125	5 1/8	6	7/16	$ 60.46
43705125500	5 1/8	6 1/8	1/2	$ 62.08
43705500	5 1/2	6 3/8	7/16	$ 63.21
1/2" CROSS SECTION				
50000625	5/8	1 5/8	1/2	$ 30.99
50001000	1	2	1/2	$ 22.53
50001250	1 1/4	2 1/4	1/2	$ 26.21
50001500	1 1/2	2 1/2	1/2	$ 24.03
50001750	1 3/4	2 3/4	1/2	$ 30.20
50002000	2	3	1/2	$ 30.59
50002000750B	2	3	3/4	$ 29.36
50002250	2 1/4	3 1/4	1/2	$ 35.83
50002375	2 3/8	12 1/8	1/2	$ 39.86
50002500	2 1/2	3 1/2	1/2	$ 35.51
50002500750B	2 1/2	3 1/2	3/4	$ 35.29
50002750	2 3/4	3 3/4	1/2	$ 36.82
50003000	3	4	1/2	$ 37.22
50003000750B	3	4	3/4	$ 41.17
50003250	3 1/4	4 1/4	1/2	$ 52.46
50003500	3 1/2	4 1/2	1/2	$ 51.47
50003500750B	3 1/2	4 1/2	3/4	$ 59.90
50003625	3 5/8	4 5/8	1/2	$ 56.79
50003750	3 3/4	4 3/4	1/2	$ 58.03
50003875750B	3 7/8	4 7/8	3/4	$ 64.18
50004000	4	5	1/2	$ 54.51
50004000750	4	5	3/4	$ 55.25
50004000750B	4	5	3/4	$100.61
50004125	4 1/8	5 1/8	1/2	$ 63.05
50004250	4 1/4	5 1/4	1/2	$ 50.43

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PNEU-DRAULICS

LOADED U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
		1/2" CROSS SECTION		
50004250750B	4 1/4	5 1/4	3/4	$ 55.55
50004375	4 3/8	5 3/8	1/2	$ 66.14
50004500	4 1/2	5 1/2	1/2	$ 59.19
50004500750B	4 1/2	5 1/2	3/4	$ 58.55
50004750	4 3/4	5 3/4	1/2	$ 70.65
50004750750B	4 3/4	5 3/4	3/4	$ 66.48
50005000	5	6	1/2	$ 65.19
50005000750B	5	6	3/4	$ 76.46
50005250	5 1/4	6 1/4	1/2	$ 77.52
50005250750B	5 1/4	6 1/4	3/4	$ 65.58
50005375	5 3/8	6 3/8	1/2	$ 61.95
50005375750B	5 3/8	6 3/8	3/4	$120.70
50005500	5 1/2	6 1/2	1/2	$ 80.63
50005500625B	5 1/2	6 1/2	5/8	$116.50
50005500750B	5 1/2	6 1/2	3/4	$ 80.40
50005750	5 3/4	6 3/4	1/2	$ 86.08
50005750750B	5 3/4	6 3/4	3/4	$ 89.12
50006000	6	7	1/2	$ 76.37
50006000750B	6	7	3/4	$ 74.23
50006250	6 1/4	7 1/4	1/2	$ 70.53
50006250750B	6 1/4	7 1/4	3/4	$ 74.57
50006375	6 3/8	7 3/8	1/2	$ 93.92
50006500	6 1/2	7 1/2	1/2	$ 83.02
50006500750B	6 1/2	7 1/2	3/4	$ 91.67
50007000	7	8	1/2	$ 86.47
50007000750	7	8	3/4	$ 87.32
50007000750B	7	8	3/4	$ 81.51
50007125	7 1/8	8 1/8	1/2	$131.49
50007250750B	7 1/4	8 1/4	3/4	$ 76.58
50007500	7 1/2	8 1/2	1/2	$ 91.25
50007500750	7 1/2	8 1/2	3/4	$ 87.01
50008000	8	9	1/2	$ 84.26
50008000750	8	9	3/4	$ 97.21
50008000750B	8	9	3/4	$ 92.71
50008250	8 1/4	9 1/4	1/2	$ 113.57
50008250750B	8 1/4	9 1/4	3/4	$ 121.69
50008500	8 1/2	9 1/2	1/2	$ 109.59
50008500750B	8 1/2	9 1/2	3/4	$ 125.81
50008750	8 3/4	9 3/4	1/2	$ 119.39
50008750750B	8 3/4	9 3/4	3/4	$ 127.95
50009000	9	10	1/2	$ 106.23
50009000750B	9	10	3/4	$ 120.06
50009500	9 1/2	10 1/2	1/2	$ 128.45
50009500750	9 1/2	10 1/2	3/4	$ 130.21
50009500750B	9 1/2	10 1/2	3/4	$ 132.95
50009750	9 3/4	10 3/4	1/2	$ 131.49
50010000	10	11	1/2	$ 111.55
50010000750	10	11	3/4	$ 143.88
50010000750B	10	11	3/4	$ 140.84

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LOADED U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
		1/2" CROSS SECTION		
50010250750B	10 1/4	11 1/4	3/4	$ 164.35
50010500	10 1/2	11 1/2	1/2	$ 116.84
50011000	11	12	1/2	$ 122.32
50011000750	11	12	3/4	$ 186.54
50011000750B	11	12	3/4	$ 216.81
50011250	11 1/4	12 1/4	1/2	$ 124.91
50011500	11 1/2	12 1/2	1/2	$ 127.77
50011500750	11 1/2	12 1/2	3/4	$ 212.95
50013000	13	14	1/2	$ 144.06
50013000750B	13	14	3/4	$ 277.47
50013250750	13 1/4	14 1/4	3/4	$ 293.86
50013500750	13 1/2	14 3/4	3/4	$ 283.44
50014000	14	15	1/2	$ 191.21
50014000750B	14	15	3/4	$ 314.81
50014750750B	14 3/4	15 3/4	3/4	$ 326.41
50015000	15	16	1/2	$ 215.20
50015000750B	15	16	3/4	$ 183.79
50015500750	15 1/2	16 1/2	3/4	$ 343.22
50016000	16	17	1/2	$ 367.40
50016500	16 1/2	17 1/2	1/2	$ 183.05
50017000	17	18	1/2	$ 226.88
50017000750B	17	18	3/4	$ 338.47
50017500	17 1/2	18 1/2	1/2	$ 233.19
50017500750B	17 1/2	18 1/2	3/4	$ 350.03
50018000	18	19	1/2	$ 353.23
50018000750B	18	19	3/4	$ 294.06
50018500750	18 1/2	19 1/2	3/4	$ 414.41
50019000	19	20	1/2	$ 251.04
50019000750	19	20	3/4	$ 392.67
50019500	19 1/2	20 1/2	1/2	$ 257.08
50020000750	20	21	3/4	$ 425.57
50020500750	20 1/2	21 1/2	3/4	$ 435.37zz
50025000	25	26	1/2	$ 537.97
50026500	26 1/2	27 1/2	1/2	$ 532.46
50028500	28 1/2	29 1/2	1/2	$ 841.76
50032000	32	33	1/2	$ 894.54

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PNEU-DRAULICS

LOADED U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
9/16" CROSS SECTION				
56204125	4 1/8	5 1/4	9/16	$ 51.83
5/8" CROSS SECTION				
62501250	1 1/4	2 1/2	5/8	$ 32.79
62502000	2	3 1/4	5/8	$ 44.12
62502500	2 1/2	3 3/4	5/8	$ 51.83
62502750	2 3/4	4	5/8	$ 41.62
625027501000	2 3/4	4	1	$ 59.22
62503000	3	4 1/4	5/8	$ 59.04
62503250	3 1/4	4 1/2	5/8	$ 54.67
62503500	3 1/2	4 3/4	5/8	$ 66.43
62503750	3 3/4	5 5/8	5/8	$ 70.31
625037501000B	3 3/4	5	1	$ 69.02
62504000	4	5 1/4	5/8	$ 73.87
62504250	4 1/4	5 1/2	5/8	$ 67.46
62504250750B	4 1/4	5 1/2	3/4	$ 33.33
62504500	4 1/2	5 3/4	5/8	$ 81.31
62504750	4 3/4	6	5/8	$ 64.52
62504750750	4 3/4	6	3/4	$108.10
62505000	5	6 1/4	5/8	$ 93.63
62505250	5 1/4	6 1/2	5/8	$129.12
625052501000B	5 1/4	6 1/2	1	$ 82.15
62505500	5 1/2	6 3/4	5/8	$104.40
62505750	5 3/4	7	5/8	$104.97
62506000	6	7 1/4	5/8	$110.87
625060001000B	6	7 1/4	1	$112.79
62506250	6 1/4	7 1/2	5/8	$158.08
62506750	6 3/4	8	5/8	$103.43
62507000	7	8 1/4	5/8	$131.11
625070001000B	7	8 1/4	1	$133.25
62507250	7 1/4	8 1/2	5/8	$146.70
625075001000B	7 1/2	8 3/4	1	$133.24
62507750	7 3/4	9	5/8	$143.72
62508000	8	9 1/4	5/8	$147.89
62508750	8 3/4	10	5/8	$160.44
62509000	9	10 1/4	5/8	$134.98
62509750	9 3/4	11	5/8	$138.89
62510000	10	11 1/4	5/8	$149.29
62511000	11	12 1/4	5/8	$163.55

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

LOADED U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
5/8" CROSS SECTION				
625110001000B	11	12 1/4	1	$ 198.41
625115001000B	11 1/2	12 3/4	1	$ 252.38
62511750	11 3/4	13	5/8	$ 267.75
62512000	12	13 1/4	5/8	$ 263.60
62512750	12 3/4	14	5/8	$ 210.31
62513000	13	14 1/4	5/8	$ 221.40
62516750	16 3/4	18	5/8	$ 292.22
62518750	18 3/4	20	5/8	$ 322.65
3/4" CROSS SECTION				
75003000	3	4 1/2	3/4	$ 74.93
75003500	3 1/2	5	3/4	$ 84.01
75004000	4	5 1/2	3/4	$ 92.57
75004500	4 1/2	6	3/4	$ 102.49
75005500	5 1/2	7	3/4	$ 123.58
75006000	6	7 1/2	3/4	$ 135.50
750062501250	6 1/4	7 3/4	1 1/4	$ 148.05
75006500	6 1/2	8	3/4	$ 144.06
75007000	7	8 1/2	3/4	$ 152.29
75008000	8	9 1/2	3/4	$ 171.22
750080001250B	8	9 1/2	1 1/4	$ 175.54
75008250	8 1/4	9 3/4	3/4	$ 175.95
75008500	8 1/2	10	3/4	$ 180.68
750085001125B	8 1/2	10	1 1/8	$ 195.89
75009500	9 1/2	11	3/4	$ 199.21
75010000	10	11 1/2	3/4	$ 169.91
750100001250B	10	11 1/2	1 1/4	$ 270.71
75010500	10 1/ 2	12	3/4	$ 177.64
750105001000B	10 1/ 2	12	1	$ 281.64
75011000	11	12 1/2	3/4	$ 185.23
75012500	12 1/2	14	3/4	$ 244.34
75014000	14	15 1/2	3/4	$ 294.48
75014500	14 1/2	16	3/4	$ 309.13
750150001250	15	16 1/2	1 1/4	$ 517.80
75016000	16	17 1/2	3/4	$ 342.64
750176251250B	17 5/8	19 1/8	1 1/4	$ 618.69

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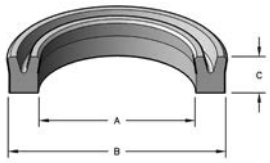
PNEU-DRAULICS

HIGH PERFORMANCE SYMMETRICAL U-CUPS



-50°F to +200°F
5000 PSI
Urethane

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
		1/8" CROSS SECTION		
12500625G	5/8	7/8	1/8	$ 2.72
12500750250G	3/4	1	1/4	$ 3.57
12500875G	7/8	1 1/8	1/8	$ 10.64
12501000250G	1	1 1/4	1/4	$ 7.71
12501125G	1 1/8	1 3/8	1/8	$ 6.93
12501250G	1 1/4	1 1/2	1/8	$ 12.50
12501250250G	1 1/4	1 1/2	1/4	$ 9.80
12501500G	1 1/2	1 3/4	1/8	$ 7.21
12503000G	3	2 1/4	1/8	$10.08
		3/16" CROSS SECTION		
18700750312G	3/4	1 1/8	5/16	$ 4.07
18700875312G	7/8	1 1/4	5/16	$ 4.29
18701000250G	1	1 3/8	1/4	$ 15.79
18701000312G	1	1 3/8	5/16	$ 4.07
18701125G	1 1/8	1 1/2	3/16	$ 8.64
18701250G	1 1/4	1 5/8	3/16	$ 6.57
18701250250G	1 1/4	1 5/8	1/4	$ 4.21
18701250312G	1 1/4	1 5/8	5/16	$ 11.62
18701250375G	1 1/4	1 5/8	3/8	$ 4.50
18701375G	1 3/8	1 3/4	3/16	$ 8.79
18701375250G	1 3/8	1 3/4	1/4	$ 9.01
18701375312G	1 3/8	1 3/4	5/16	$ 7.00
18701500250G	1 1/2	1 7/8	1/4	$ 13.57
18701500312G	1 1/2	1 7/8	5/16	$ 11.71
18701500G	1 1/2	1 7/8	3/16	$ 13.57
18701500375G	1 1/2	1 7/8	3/8	$ 5.07
18701625G	1 5/8	2	3/16	$ 9.50
18701625250G	1 5/8	2	1/4	$ 11.79
18701625312G	1 5/8	2	5/16	$ 4.39
18701625375G	1 5/8	2	3/8	$ 6.79
18701750G	1 3/4	2 1/8	3/16	$ 9.86
18701750250G	1 3/4	2 1/8	1/4	$ 13.37
18701750375G	1 3/4	2 1/8	3/8	$ 15.79
18702000G	2	2 3/8	3/16	$ 10.29
18702000250G	2	2 3/8	1/4	$ 12.96
18702000312G	2	2 3/8	5/16	$ 8.07
18702000375G	2	2 3/8	3/8	$ 8.36
18702125G	2 1/8	2 1/2	3/16	$ 10.57
18702125250G	2 1/8	2 1/2	1/4	$ 6.64
18702125312G	2 1/8	2 1/2	5/16	$ 17.57

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
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HIGH PERFORMANCE SYMMETRICAL U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
3/16" CROSS SECTION				
18702250312G	2 1/4	2 5/8	5/16	$ 7.14
18702500G	2 1/2	2 7/8	3/16	$ 6.92
18702500312G	2 1/2	2 7/8	5/16	$ 7.07
18702500375G	2 1/2	2 7/8	3/8	$ 5.80
18702625375G	2 5/8	3	3/8	$ 7.64
18702750G	2 3/4	3 1/8	3/16	$11.22
18702875250G	2 7/8	3 1/4	1/4	$23.71
18703125375G	3 1/8	3 1/2	3/8	$ 9.50
18703625375G	3 5/8	4	3/8	$30.86
1/4" CROSS SECTION				
25000750G	3/4	1 1/4	1/4	$ 9.80
25001000G	1	1 1/2	1/4	$ 4.14
25001000375G	1	1 1/2	3/8	$ 12.36
25001125G	1 1/8	1 5/8	1/4	$ 8.79
25001250G	1 1/4	1 3/4	1/4	$ 10.62
25001250375G	1 1/4	1 3/4	3/8	$ 3.99
25001375G	1 3/8	1 7/8	1/4	$ 8.54
25001375375G	1 3/8	1 7/8	3/8	$ 3.99
25001500G	1 1/2	2	1/4	$10.66
25001500375G	1 1/2	2	3/8	$10.31
25001750G	1 3/4	2 1/4	1/4	$18.43
25001750375G	1 3/4	2 1/4	3/8	$ 8.13
25002000G	2	2 1/2	1/4	$ 7.09
25002000312G	2	2 1/2	5/16	$13.86
25002000375G	2	2 1/2	3/8	$13.79
25002000500G	2	2 1/2	1/2	$12.67
25002125375G	2 1/8	2 5/8	3/8	$ 7.50
25002250312G	2 1/4	2 3/4	5/16	$12.99
25002250375G	2 1/4	2 3/4	3/8	$19.43
25002500312G	2 1/2	3	5/16	$14.68
25002500375G	2 1/2	3	3/8	$20.86
25002750375G	2 3/4	3 1/4	3/8	$ 9.00
25003000G	3	3 1/2	1/4	$23.34
25003000375G	3	3 1/2	3/8	$23.69
25003250375G	3 1/4	3 3/4	3/8	$11.41
25003500G	3 1/2	4	1/4	$30.86
25003500312G	3 1/2	4	5/16	$11.15
25003500375G	3 1/2	4	3/8	$14.16
25003750375G	3 3/4	4 1/4	3/8	$25.39
25003750500G	3 3/4	4 1/4	1/2	$22.28
25004000G	4	4 1/2	1/4	$20.33
25004000375G	4	4 1/2	3/8	$12.86
25004000500G	4	4 1/2	1/2	$14.00
25004000562G	4	4 1/2	9/16	$14.50
25004250375G	4 1/4	4 3/4	3/8	$29.25

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PNEU-DRAULICS

HIGH PERFORMANCE SYMMETRICAL U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
1/4" CROSS SECTION				
25004500G	4 1/2	5	1/4	$ 29.57
25004500375G	4 1/2	5	3/8	$ 16.00
25004500500G	4 1/2	5	1/2	$ 34.20
25004500562G	4 1/2	5	9/16	$ 30.65
25004750562G	4 3/4	5 1/4	9/16	$ 36.99
25005000G	5	5 1/2	1/4	$ 48.93
25005000375G	5	5 1/2	3/8	$ 65.62
25005500G	5 1/2	6	1/4	$ 34.85
25005500375G	5 1/2	6	3/8	$ 25.93
25005500562G	5 1/2	6	9/16	$ 20.29
5/16" CROSS SECTION				
31201500G	1 1/2	2 1/8	5/16	$ 10.16
31201750G	1 3/4	2 3/8	5/16	$ 13.95
31201750500G	1 3/4	2 3/8	1/2	$ 17.29
31201875375G	1 7/8	2 1/2	3/8	$ 16.00
31201875500G	1 7/8	2 1/2	1/2	$ 18.95
31202250375G	2 1/4	2 7/8	3/8	$ 15.41
31202250500G	2 1/4	2 7/8	1/2	$ 15.41
31202375375G	2 3/8	3	3/8	$ 16.73
31202500500G	2 1/2	3 1/8	1/2	$ 20.57
31203000375G	3	3 5/8	3/8	$ 20.82
31203000500G	3	3 5/8	1/2	$ 11.59
31203375375G	3 3/8	4	3/8	$ 8.19
31203500500G	3 1/2	4 1/8	1/2	$ 24.50
31203750875G	3 3/4	4 3/8	7/8	$ 29.60
31204000375G	4	4 5/8	3/8	$ 27.04
31204375562G	4 3/8	5	9/16	$ 37.00
3/8" CROSS SECTION				
37502000G	2	2 3/4	3/8	$ 18.11
37502250625G	2 1/4	3	5/8	$ 25.08
37502500G	2 1/2	3 1/4	3/8	$ 21.46
37502500500G	2 1/2	3 1/4	1/2	$ 23.22
37502750G	2 3/4	3 1/2	3/8	$ 24.09
37502750500G	2 3/4	3 1/2	1/2	$ 20.13
37503000G	3	3 3/4	3/8	$ 26.28
37503000500G	3	3 3/4	1/2	$ 24.63
37503000625G	3	3 3/4	5/8	$ 12.58

PNEU-DRAULICS
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HIGH PERFORMANCE SYMMETRICAL U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
3/8" CROSS SECTION				
37503250G	3 1/4	4	3/8	$ 27.84
37503250500G	3 1/4	4	1/2	$ 28.84
37503250625G	3 1/4	4	5/8	$ 32.90
37503500G	3 1/2	4 1/4	3/8	$ 29.96
37503750G	3 3/4	4 1/2	3/8	$ 41.50
37503750625G	3 3/4	4 1/2	5/8	$ 35.03
37504000625G	4	4 3/4	5/8	$ 36.25
37504250G	4 1/4	5	3/8	$ 30.65
37504250500G	4 1/4	5	1/2	$ 38.16
37504250625G	4 1/4	5	5/8	$ 38.88
37504375G	4 3/8	5 1/8	3/8	$ 36.38
37504500500G	4 1/2	5 1/4	1/2	$ 38.16
37504750500G	4 3/4	5 1/2	1/2	$ 41.76
37504750625G	4 3/4	5 1/2	5/8	$ 43.57
37505000500G	5	5 3/4	1/2	$ 56.05
37505250500G	5 1/4	6	1/2	$ 19.68
37505250562G	5 1/4	6	9/16	$ 47.55
37505250625G	5 1/4	6	5/8	$ 47.55
37505500562G	5 1/2	6 1/4	9/16	$ 47.75
37506250G	6 1/4	7	3/8	$ 22.25
37506250500G	6 1/4	7	1/2	$ 55.58
37506250625G	6 1/4	7	5/8	$ 74.15
1/2" CROSS SECTION				
50002000G	2	3	1/2	$ 25.62
50003000G	3	4	1/2	$ 39.19
50003500G	3 1/2	4 1/2	1/2	$ 37.14
50004500G	4 1/2	5 1/2	1/2	$ 50.94
50005000G	5	6	1/2	$ 61.63
50005500750G	5 1/2	6 1/2	3/4	$ 64.68
50006000750G	6	7	3/4	$ 67.78
50007000625G	7	8	5/8	$ 108.56

Parker DISTRIBUTOR

111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

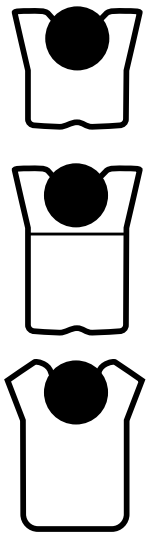
PNEU-DRAULICS

POLYMYTE U-CUPS

STANDARD
Standard U-Cup seals are square in cross-section and are suitable for a wide variety of rod and piston applications. Available in cross-sections from1/8" to 1" and diameters to 90", the Standard U-Cup is ideal for retrofit of existing seal grooves.

DEEP
Deep U-Cup seals are rectangular versions of the Standard. The added length improves stability in high-shock, heavy duty applications. Available in cross-sections from 1/8" to 1" in diameters to 90"

TYPE "B"
Type "B" U-Cup seals add a back-bevel lip to the Deep shape and thus align the seal interface near the centerline of the O-Spring to provide increased squeeze (and sealability). This hightly stable configuration provides excellent low pressure sealing as well as "super-pressure" capability. Available in all sizes from 1/8" to over 90" diameter.

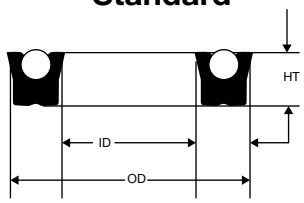


Hytrel is an elastoplastic material with exceptionally high tear strength and abrasion resistance. It's high modulus and high durometer (53 & 65 Shore D) make it very suitable for high pressure service where extrusion is a problem.

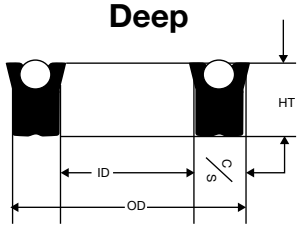
-65°F to +275°F
0 to 7000 PSI
Hytrel: Petroleum based fluids, water base fluids (HWBF), phosphate ester fluids, some chlorinated fluids and solvents 180°F in water and water based fluids. (Available with Viton 75 or Nitrile (N70) O-ring expander.)

(Other sizes available call for price and delivery.) (Fluoromyte also available -65° to +300°)

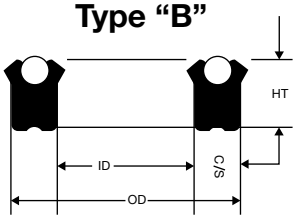
Standard



Deep



Type "B"



PMT - Hytrel (orange)
FMT - Fluoromyte (purple)

N70 = Nitrile O-ring 70 duro.
V75 = Viton O-ring 75 duro.

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
1/8" CROSS SECTION				
12500187/PMT/V75	3/16	7/16	1/8	$ 10.58
12500250/PMT/V75	1/4	1/2	1/8	$ 10.82
12500250250B/PMT/V75	1/4	1/2	1/4	$ 10.59
12500312/PMT/V75	5/16	9/16	1/8	$ 10.64
12500375/PMT/V75	3/8	5/8	1/8	$ 10.64
12501125/PMT/N70	1 1/8	1 3/8	1/8	$ 10.50
12501250/PMT/V75	1 1/4	1 1/2	1/8	$ 12.70
12501375250B/PMT/V75	1 3/8	1 5/8	1/4	$ 15.27

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
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POLYMYTE U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
3/16" CROSS SECTION				
18701250/PMT/N70	1 1/4	1 5/8	3/16	$ 13.76
18701375312B/PMT/V75	1 3/8	1 3/4	5/16	$ 11.22
18701500/PMT/N70	1 1/2	1 7/8	3/16	$ 14.65
18701500250B/PMT/V75	1 1/2	1 7/8	1/4	$ 15.23
18701500375B/PMT/N70	1 1/2	1 7/8	3/8	$ 14.09
18701625/PMT/V75	1 5/8	2	3/16	$ 16.29
18701750/PMT/N70	1 3/4	2 1/8	3/16	$ 15.42
18701875375/PMT/V75	1 7/8	2 1/4	3/8	$ 17.07
18702000375B/PMT/V75	2	2 3/8	3/8	$ 16.99
18702125/PMT/V75	2 1/8	2 1/2	3/16	$ 15.89
18702125375B/PMT/V75	2 1/8	2 1/2	3/8	$ 19.58
18702250/PMT/N70	1 3/4	2 5/8	3/16	$ 14.65
18702500375B/PMT/V75	2 1/2	2 7/8	3/8	$ 24.60
18702750375B/PMT/V75	2 3/4	3 1/8	3/8	$ 24.37
18703500/PMT/N70	3 1/2	3 7/8	3/16	$ 22.8
18703500375B/PMT/V75	3 1/2	3 7/8	3/8	$ 31.54
1/4" CROSS SECTION				
25000750375B/PMT/V75	3/4	1 1/4	3/8	$ 15.31
25001000375B/PMT/V75	1	1 1/2	3/8	$ 16.37
25001125/PMT/N70	1 1/8	1 5/8	1/4	$ 15.22
25001125375/PMT/N70	1 1/8	1 5/8	3/8	$ 15.17
25001375375B/PMT/V75	1 3/8	1 7/8	3/8	$ 20.52
25001500/PMT/V75	1 1/2	2	1/4	$ 13.90
25001500375B/PMT/V75	1 1/2	2	3/8	$ 15.23
25001750375B/PMT/V75	1 3/4	2 1/4	3/8	$ 18.26
25002000375/PMT/V75	2	2 1/2	3/8	$ 21.50
25002500/PMT/V75	2 1/2	3	1/4	$ 19.87
25002500375B/PMT/V75	2 1/2	3	3/8	$ 27.80
25002500375/PMT/V75	2 1/2	3	3/8	$ 25.00
25002750375B/PMT/V75	2 3/4	3 1/4	3/8	$ 27.48
25003000375B/PMT/V75	3	3 1/2	3/8	$ 39.08
25003500/PMT/V75	3 1/2	4	1/4	$ 40.87
25003500375B/PMT/V75	3 1/2	4	3/8	$ 41.46
25003750375B/PMT/V75	3 3/4	4 1/4	3/8	$ 39.87
25004000375B/PMT/V75	4	4 1/2	3/8	$ 42.31
25004500/PMT/V75	4 1/2	5	1/4	$ 45.61
25004500375B/PMT/V75	4 1/2	5	3/8	$ 52.91
25004500562B/PMT/V75	4 1/2	5	9/16	$ 42.05
25004750562B/PMT/V75	4 3/4	5 1/4	9/16	$ 59.06
25005750/PMT/V75	5 3/4	6 1/4	1/4	$ 50.00
25005750562B/PMT/V75	5 3/4	6 1/4	9/16	$ 67.39
25006500562/PMT/V75	6 1/2	7	9/16	$ 74.93
25008000562B/PMT/N70	8	8 1/2	9/16	$ 82.05

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PNEU-DRAULICS

POLYMYTE U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
5/16" CROSS SECTION				
31201750500B/PMT/N70	1 3/4	2 3/8	1/2	$ 24.10
31202000/PMT/V75	2	2 5/8	5/16	$ 23.38
31202000500B/PMT/V75	2	2 5/8	1/2	$ 27.79
31202500500B/PMT/V75	2 1/2	3 1/8	1/2	$ 29.99
31203625/PMT/N70	3 5/8	4 1/4	5/16	$ 34.65
31205000625B/PMT/V75	5	5 5/8	5/8	$ 67.82
31207250/PMT/V75	7 1/4	7 7/8	5/16	$ 50.61
3/8" CROSS SECTION				
37502250625/PMT/V75	2 1/4	3	5/8	$ 35.77
37502750625B/PMT/V75	2 3/4	3 1/2	5/8	$ 45.07
37503000625B/PMT/V75	3	3 3/4	5/8	$ 50.11
37503500625/PMT/N70	3 1/2	4 1/4	5/8	$ 49.19
37504000625B/PMT/V75	4	4 3/4	5/8	$ 69.32
37504250625B/PMT/V75	4 1/4	5	5/8	$ 62.41
37504250625/PMT/V75	4 1/4	5	5/8	$ 62.64
37505250625B/PMT/V75	5 1/4	6	5/8	$ 71.38
37505750625B/PMT/V75	5 3/4	6 1/2	5/8	$ 99.08
37506250625B/PMT/V75	6 1/4	7	5/8	$ 89.85
37507000625B/PMT/V75	7	7 3/4	5/8	$ 116.00
37507250/PMT/V75	7 1/4	8	3/8	$ 104.15
37507250625B/PMT/V75	7 1/4	8	5/8	$ 123.83
1/2" CROSS SECTION				
50002500/PMT/N70	2 1/2	3 1/2	1/2	$ 59.23
50004000750B/PMT/N70	4	5	3/4	$ 83.22
50004500750B/PMT/V75	4 1/2	5 1/2	3/4	$ 96.13
50005000/PMT/N70	5	6	1/2	$ 85.88

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
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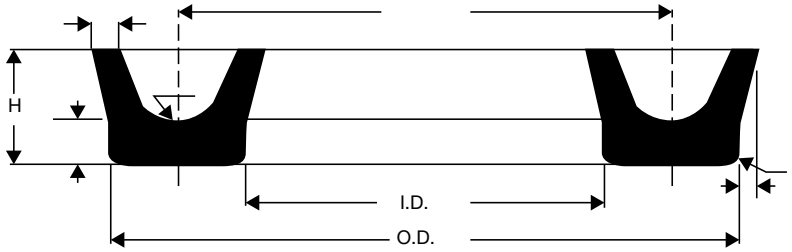
RUBBER U-CUPS



-40°F to +250°F
80 duro. Nitrile
0 to 2000 PSI

* (Viton available upon request.) (Other sizes available call for price and delivery.)

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
1/16" CROSS SECTION				
06250375RU.....	3/8	1/2	1/16	$ 4.03
3/32" CROSS SECTION				
09370125RU.....	1/8	5/16	3/32	$ 3.56
09370312RU.....	5/16	1/2	3/32	$ 3.76
09370562RU.....	9/16	3/4	3/32	$ 4.21
1/8" CROSS SECTION				
12500125RU.....	1/8	3/8	1/8	$ 3.64
12500250RU.....	1/4	1/2	1/8	$ 3.81
12500375RU.....	3/8	5/8	1/8	$ 3.89
12500500RU.....	1/2	3/4	1/8	$ 4.10
12500625RU.....	5/8	7/8	1/8	$ 4.16
12500687RU.....	11/16	15/16	1/8	$ 4.22
12500750RU.....	3/4	1	1/8	$ 4.34
12500875RU.....	7/8	1 1/8	1/8	$ 4.49
12500937RU.....	15/16	1 13/16	1/8	$ 4.62
12501000RU.....	1	1 1/4	1/8	$ 4.69
12501125RU.....	1 1/8	1 3/8	1/8	$ 4.67
12501250RU.....	1 1/4	1 1/2	1/8	$ 4.79
12501375RU.....	1 3/8	1 5/8	1/8	$ 4.96
12501500RU.....	1 1/2	1 3/4	1/8	$ 5.29
12501625RU.....	1 5/8	1 7/8	1/8	$ 5.62
12501750RU.....	1 3/4	2	1/8	$ 6.21
5/32" CROSS SECTION				
15600500RU.....	1/2	13/16	5/32	$ 4.00
15601000RU.....	1	1 5/16	5/32	$ 4.49
15601062RU.....	1 1/16	1 3/8	5/32	$ 4.62
15601187RU.....	1 3/16	1 1/2	5/32	$ 4.86
15601250RU.....	1 1/4	1 9/16	5/32	$ 4.95
15601375RU.....	1 3/8	1 11/16	5/32	$ 5.22

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Nicholasville, KY 40340-0037

PNEU-DRAULICS

RUBBER U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
3/16" CROSS SECTION				
18700375RU.....	3/8	3/4	3/16	$ 3.70
18700500RU.....	1/2	7/8	3/16	$ 3.76
18700625RU.....	5/8	1	3/16	$ 3.89
18700750RU.....	3/4	1 1/8	3/16	$ 3.97
18701000RU.....	1	1 3/8	3/16	$ 4.23
18701125RU.....	1 1/8	1 1/2	3/16	$ 4.23
18701250RU.....	1 1/4	1 5/8	3/16	$ 4.27
18701375RU.....	1 3/8	1 3/4	3/16	$ 4.27
18701500RU.....	1 1/2	1 7/8	3/16	$ 4.43
18701625RU.....	1 5/8	2	3/16	$ 4.50
18701750RU.....	1 3/4	2 1/8	3/16	$ 4.56
18701875RU.....	1 7/8	2 1/4	3/16	$ 9.24
18702000RU.....	2	2 3/8	3/16	$ 5.75
18702125RU.....	2 1/8	2 1/2	3/16	$ 4.89
18702500RU.....	2 1/2	2 7/8	3/16	$ 5.75
18702625RU.....	2 5/8	3	3/16	$ 5.82
18702875RU.....	2 7/8	3 1/4	3/16	$ 6.00
18703000RU.....	3	3 3/8	3/16	$ 6.61
18703250RU.....	3 1/4	3 5/8	3/16	$ 6.61
18703625RU.....	3 5/8	4	3/16	$ 6.61
7/32" CROSS SECTION				
21802500RU.....	2 1/2	2 15/16	7/32	$ 4.81
21802812RU.....	2 13/16	3 1/4	7/32	$15.15
21803000RU.....	3	3 7/16	7/32	$ 6.21
21803062RU.....	3 1/16	3 1/2	7/32	$ 6.42
1/4" CROSS SECTION				
25000500RU.....	1/2	1	1/4	$ 4.39
25000625RU.....	5/8	1 1/8	1/4	$ 3.55
25000875RU.....	7/8	1 3/8	1/4	$ 4.63
25001000RU.....	1	1 1/2	1/4	$ 5.09
25001250RU.....	1 1/4	1 3/4	1/4	$ 5.09
25001375RU.....	1 3/8	1 7/8	1/4	$ 5.09
25001500RU.....	1 1/2	2	1/4	$ 5.15
25001750RU.....	1 3/4	2 1/4	1/4	$ 5.21
25001875RU.....	1 7/8	2 3/8	1/4	$ 3.57
25002000RU.....	2	2 1/2	1/4	$ 5.29
25002500RU.....	2 1/2	3	1/4	$ 5.56
25002750RU.....	2 3/4	3 1/4	1/4	$ 5.82
25003000RU.....	3	3 1/2	1/4	$11.43
25003500RU.....	3 1/2	4	1/4	$ 7.14
25004000RU.....	4	4 1/2	1/4	$ 7.93
25004250RU.....	4 1/4	4 3/4	1/4	$ 8.47
25004500RU.....	4 1/2	5	1/4	$ 8.93
25004750RU.....	4 3/4	5 1/4	1/4	$10.91
25005500RU.....	5 1/2	6	1/4	$ 9.92

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

RUBBER U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
9/32" CROSS SECTION				
28104437RU.....	4 7/16	5	9/32	$ 9.25
28105437RU.....	5 7/16	6	9/32	$11.24
5/16" CROSS SECTION				
31201375RU.....	1 3/8	2	5/16	$ 4.66
31201625RU.....	1 5/8	2 1/4	5/16	$ 4.83
31201875RU.....	1 7/8	2 1/2	5/16	$ 4.96
31202000RU.....	2	2 5/8	5/16	$ 5.06
31202375RU.....	2 3/8	3	5/16	$ 5.96
31202875RU.....	2 7/8	3 1/2	5/16	$ 14.04
31204375RU.....	4 3/8	5	5/16	$ 15.42
31205375RU.....	5 3/8	6	5/16	$ 11.56
31207375RU.....	7 3/8	8	5/16	$ 27.42
3/8" CROSS SECTION				
37502250RU.....	2 1/4	3	3/8	$ 6.08
37502750RU.....	2 3/4	3 1/2	3/8	$ 6.94
37503250RU.....	3 1/4	4	3/8	$ 7.93
37503750RU.....	3 3/4	4 1/2	3/8	$ 8.26
37504250RU.....	4 1/4	5	3/8	$ 9.18
37509250RU.....	9 1/4	10	3/8	$38.34
1/2" CROSS SECTION				
50007000RU.....	7	8	1/2	$27.26
50009000RU.....	9	10	1/2	$48.91

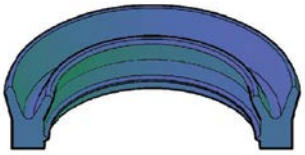
WE ALSO STOCK VITON U-CUPS.
CALL FOR PRICE AND AVAILABILITY.

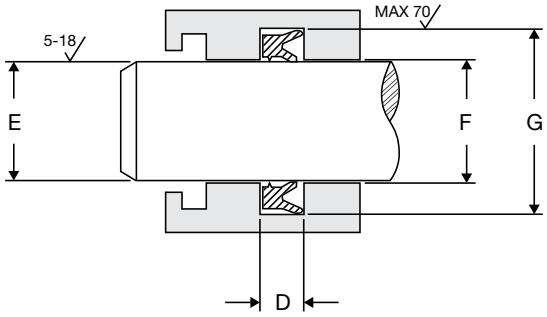
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

PNEU-DRAULICS

HALLITE TWIN LIP 605 ROD SEAL

The twin lip design is an asymmetric seal offering superlative dry rod sealing for light and medium duty applications. The twin lip offers lower friction, improved sealing, primary lip protection, increase seal stability and easy installation.





Polyurethane -50°F to +230°F
0 to 6000 PSI

(Other sizes available - call for price and delivery)

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
1/8" CROSS SECTION				
12500625250/605	5/8	7/8	1/4	$ 5.54
12500750250/605	3/4	1	1/4	$ 5.39
12500875250/605	7/8	1 1/18	1/4	$ 5.93
12501000187/605	1	1 1/4	3/16	$ 5.93
12501000250/605	1	1 1/4	1/4	$ 6.16
12501125187/605	1 1/8	1 3/8	3/16	$ 6.45
12501125250/605	1 1/8	1 3/8	1/4	$ 6.45
12501250250/605	1 1/4	1 1/2	1/4	$ 6.43
12501375250/605	1 3/8	1 5/8	1/4	$ 6.70
12501500250/605	1 1/2	1 3/4	1/4	$ 6.97
12502000250/605	2	2 1/4	1/4	$12.94
3/16" CROSS SECTION				
18700750312/605	3/4	1 1/8	5/16	$ 6.72
18701000250/605	1	1 3/8	1/4	$ 6.37
18701000312/605	1	1 3/8	5/16	$ 6.37
18701250/605	1 1/4	1 5/8	3/16	$ 6.80
18701250250/605	1 1/4	1 5/8	1/4	$ 6.80
18701250312/605	1 1/4	1 5/8	5/16	$ 9.65
18701375/605	1 3/8	1 3/4	3/16	$ 7.00
18701375312/605	1 3/8	1 3/4	5/16	$ 7.15
18701500250/605	1 1/2	1 7/8	1/4	$ 8.46
18701500312/605	1 1/2	1 7/8	5/16	$ 7.34
18701500375/605	1 1/2	1 7/8	3/8	$ 7.34
18701625312/605	1 5/8	2	5/16	$ 8.35
18701625375/605	1 5/8	2	3/8	$ 8.35
18701750250/605	1 3/4	2 1/8	1/4	$ 7.75
18701750312/605	1 3/4	2 1/8	5/16	$ 7.75
18701750375/605	1 3/4	2 1/8	3/8	$ 7.75
18701875375/605	1 7/8	2 1/4	3/8	$ 8.47
18702000250/605	2	2 3/8	1/4	$ 9.16
18702000312/605	2	2 3/8	5/16	$ 9.16
18702000375/605	2	2 3/8	3/8	$10.17

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

HALLITE TWIN LIP 605 ROD SEAL

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
		3/16" CROSS SECTION		
18702125375/605	2 1/8	2 1/2	3/8	$ 9.83
18702375375/605	2 3/8	2 3/4	3/8	$10.90
18702500312/605	2 1/2	2 7/8	5/16	$11.32
18702500375/605	2 1/2	2 7/8	3/8	$11.32
18702625375/605	2 5/8	3	3/8	$11.32
18702750375/605	2 3/4	3 1/8	3/8	$11.98
18702875375/605	2 7/8	3 1/4	3/8	$12.69
18703000375/605	3	3 3/8	3/8	$12.74
18703125625/605	3 1/8	3 1/2	5/8	$16.38
18703250562/605	3 1/4	3 5/8	9/16	$14.64
18703500375/605	3 1/2	3 7/8	3/8	$15.90
18703750375/605	3 3/4	4 1/8	3/8	$16.88
18704000375/605	4	4 3/8	3/8	$18.68
		1/4" CROSS SECTION		
25001000/605	1	1 1/2	1/4	$ 7.21
25001000375/605	1	1 1/2	3/8	$ 6.89
25001125/605	1 1/8	1 5/8	1/4	$ 7.33
25001250/605	1 1/4	1 3/4	1/4	$ 6.92
25001250375/605	1 1/4	1 3/4	3/8	$10.25
25001375375/605	1 3/8	1 7/8	3/8	$ 7.53
25001500/605	1 1/2	2	1/4	$ 8.35
25001500375/605	1 1/2	2	3/8	$ 8.35
25001625375/605	1 5/8	2 1/8	3/8	$ 9.19
25001750/605	1 3/4	2 1/4	1/4	$ 9.24
25001750375/605	1 3/4	2 1/4	3/8	$ 9.24
25001750500/605	1 3/4	2 1/4	1/2	$ 9.24
25001875375/605	1 7/8	2 3/8	3/8	$ 9.24
25002000/605	2	2 1/2	1/4	$10.07
25002000312/605	2	2 1/2	5/16	$10.07
25002000375/605	2	2 1/2	3/8	$12.94
25002250375/605	2 1/4	2 3/4	3/8	$10.90
25002375375/605	2 3/8	2 7/8	3/8	$12.13
25002500/605	2 1/2	3	1/4	$12.41
25002500375/605	2 1/2	3	3/8	$15.84
25002625500/605	2 5/8	3 1/8	1/2	$14.10
25002750375/605	2 3/4	3 1/4	3/8	$13.65
25003000375/605	3	3 1/2	3/8	$15.75
25003000625/605	3	3 1/2	5/8	$14.74
25003250375/605	3 1/4	3 3/4	3/8	$15.71
25003500312/605	3 1/2	4	5/16	$16.94
25003500375/605	3 1/2	4	3/8	$16.94
25003625375/605	3 5/8	4 1/8	3/8	$18.03
25003750375/605	3 3/4	4 1/4	3/8	$18.35
25003750500/605	3 3/4	4 1/4	1/2	$18.35
25004000312/605	4	4 1/2	5/16	$19.25
25004000375/605	4	4 1/2	3/8	$18.98
25004000562/605	4	4 1/2	9/16	$18.98
25004000781/605	4	4 1/2	.781	$20.27
25004500375/605	4 1/2	5	3/8	$20.35
25004750625/605	4 3/4	5 1/4	5/8	$25.48
25005000375/605	5	5 1/2	3/8	$26.46
25005000562/605	5	5 1/2	9/16	$26.45
25005000781/605	5	5 1/2	.781	$26.45
25005125562/605	5 1/8	5 5/8	9/16	$29.81

111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

PNEU-DRAULICS

HALLITE TWIN LIP 605 ROD SEAL

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
1/4" CROSS SECTION				
25005375625/605	5 3/8	5 7/8	5/8	$ 29.90
25005500375/605	5 1/2	6	3/8	$ 30.29
25005500562/605	5 1/2	6	9/16	$ 30.29
25006000562/605	6	6 1/2	9/16	$ 34.78
25006000781/605	6	6 1/2	.781	$ 33.36
25007000562/605	7	7 1/2	9/16	$ 38.52
25007000780/605	7	7 1/2	.780	$ 38.52
25008000562/605	8	8 1/2	9/16	$ 47.25
25008125781/605	8 1/8	8 5/8	.781	$ 46.73
25009000562/605	9	9 1/2	9/16	$ 56.81
25009375781/605	9 3/8	9 7/8	.781	$ 62.59
5/16" CROSS SECTION				
31201500375/605	1 1/2	2 1/8	3/8	$ 9.83
31202000/605	2	2 5/8	5/16	$ 12.16
31202000500/605	2	2 5/8	1/2	$ 12.16
31202500500/605	2 1/2	3 1/8	1/2	$ 18.94
31202750375/605	2 3/4	3 3/8	3/8	$ 15.84
31202750500/605	2 3/4	3 3/8	1/2	$ 15.84
31202750805/605	2 3/4	3 3/8	.805	$ 17.14
31203000500/605	3	3 5/8	1/2	$ 17.00
31203500500/605	3 1/2	4 1/8	1/2	$ 19.67
31204000375/605	4	4 5/8	3/8	$ 18.30
31204000500/605	4	4 5/8	1/2	$ 22.38
31204500500/605	4 1/2	5 1/8	1/2	$ 25.16
31204500625/605	4 1/2	5 1/8	5/8	$ 26.11
31205000500/605	5	5 5/8	1/2	$ 26.11
31205500/605	5 1/2	6 1/8	5/16	$ 39.44
3/8" CROSS SECTION				
37502000625/605	2	2 3/4	5/8	$ 16.51
37502250511/605	2 1/4	3	.511	$ 18.23
37502500625/605	2 1/2	3 1/4	5/8	$ 20.08
37502750625/605	2 3/4	3 1/2	5/8	$ 21.97
37503000625/605	3	3 3/4	5/8	$ 23.88
37503500625/605	3 1/2	4 1/4	5/8	$ 27.16
37504000500/605	4	4 3/4	1/2	$ 30.63
37504000625/605	4	4 3/4	5/8	$ 30.10
37504250625/605	4 1/4	5	5/8	$ 32.11
37504500625/605	4 1/2	5 1/4	5/8	$ 33.72
37505000625/605	5	5 3/4	5/8	$ 53.66
37505500625/605	5 1/2	6 1/4	5/8	$ 40.02
37506000625/605	6	6 3/4	5/8	$ 42.18
37506500625/605	6 1/2	7 1/4	5/8	$ 47.55
37507000625/605	7	7 3/4	5/8	$ 50.78
37507750625/605	7 3/4	8 1/2	5/8	$ 54.67
37508000625/605	8	8 3/4	5/8	$ 54.67
37509250625/605	9 1/4	10	5/8	$ 61.22

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

Parker DISTRIBUTOR

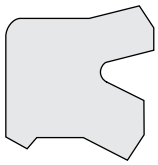
BT Profile, Premium U-cup Rod Seal with Secondary Stabilizing Lip

The BT profile is a non-symmetrical design for use in hydraulic rod sealing applications. Using Finite Element Analysis, the BT profile was designed to provide improved sealing performance and stability in the gland. A knife trimming process is used to form the beveled lip which is best for removing fluid from the rod. By design, the BT profile has a more robust primary sealing lip than the BS profile and the secondary lip is located at the base of the heel. The standard compound for the BT profile is Parker's proprietary Resilon® polyurethane compound. The BT profile provides long life, extrusion resistance, low compression set, shock load resistance and increased sealing performance at zero pressure. The BT profile is designed for use as a stand alone rod seal or for use with the BR or OD profile buffer seals for more critical sealing applications.

Technical Data

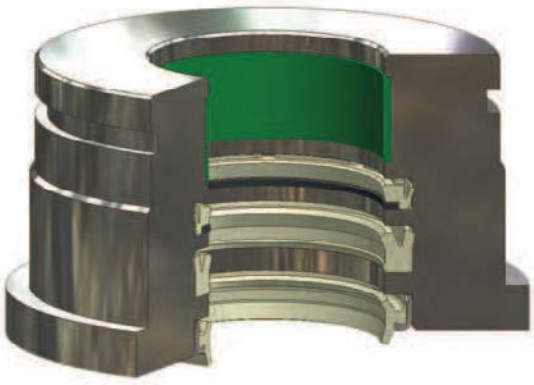
Standard Materials*	Temperature Range	Pressure Range†	Surface Speed
P4300A90	-65°F to 275°F (-54°C to 135°C)	5000 psi (344 bar)	< 1.6 ft/s (0.5 m/s)
4301A90	-65°F to 275°F (-54°C to 135°C)	5000 psi (344 bar)	< 1.6 ft/s (0.5 m/s)

***Alternate Materials:** For applications that may require an alternate material, please contact your local customer service representative.



BT Cross-Section

Coming soon, please call for availability of select sizes



BT Installed in Rod Gland

ROD SEALS

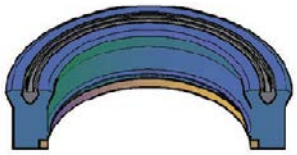
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

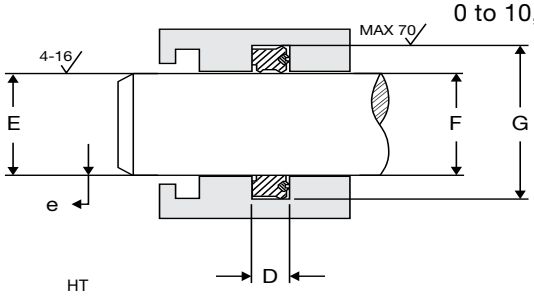
PNEU-DRAULICS

HALLITE TWIN LIP 621 ROD SEAL

Featuring high pressure and shock load capability. The twin lip design offering lower friction, improved sealing, primary lip protection, increased seal stability, and a polyacetal Anti-Extrusion Ring.

Polyurethane
-50°F to +230°F
0 to 10,000 PSI





MAXIMUM EXTRUSION GAP

2400	3750	6000	7500	10,000
.040"	.032"	.024"	.016"	.010"

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
3/16" CROSS SECTION				
18701500250B/621	1 1/2	1 7/8	1/4	$17.39
18701500312B/621	1 1/2	1 7/8	5/16	$16.68
18701750250B/621	1 3/4	2 1/8	1/4	$17.81
18701750375B/621	1 3/4	2 1/8	3/8	$18.06
18702000375B/621	2	2 3/8	3/8	$15.65
1/4" CROSS SECTION				
25001500375B/621	1 1/2	2	3/8	$ 24.13
25001750375B/621	1 3/4	2 1/4	3/8	$ 19.06
25002000375B/621	2	2 1/2	3/8	$ 16.91
25002250375B/621	2 1/4	2 3/4	3/8	$ 22.63
25002375375B/621	2 3/8	2 7/8	3/8	$ 17.68
25002500375B/621	2 1/2	3	3/8	$ 19.89
25002750375B/621	2 3/4	3 1/4	3/8	$ 27.44
25003000375B/621	3	3 1/2	3/8	$ 26.33
25003250375B/621	3 1/4	3 3/4	3/8	$ 25.44
25003500375B/621	3 1/2	4	3/8	$ 26.71
25004000375B/621	4	4 1/2	3/8	$ 28.99
25004000562B/621	4	4 1/2	9/16	$ 30.39
25004500375B/621	4 1/2	5	3/8	$ 34.89
25004500562B/621	4 1/2	5	9/16	$ 37.83
25005000562B/621	5	5 1/2	9/16	$ 40.43
25005500562B/621	5 1/2	6	9/16	$ 45.94
25006000562B/621	6	6 1/2	9/16	$ 67.31
5/16" CROSS SECTION				
31203000500B/621	3	3 5/8	1/2	$ 26.16
31203500500B/621	3 1/2	4 1/8	1/2	$ 31.27
31204000562B/621	4	4 5/8	9/16	$ 35.02
31205000625B/621	5	5 5/8	5/8	$ 44.91
3/8" CROSS SECTION				
37503000625B/621	3	3 3/4	5/8	$ 38.55
37503500625B/621	3 1/2	4 1/4	5/8	$ 41.25
37504000625B/621	4	4 3/4	5/8	$ 48.87
37504500625B/621	4 1/2	5 1/4	5/8	$ 49.04
37505000625B/621	5	5 3/4	5/8	$ 59.01
37506000625B/621	6	6 3/4	5/8	$ 58.21

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

Parker DISTRIBUTOR

BD Profile, Premium O-ring Energized Lip Seal

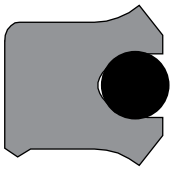
The BD profile is a non-symmetrical profile rod seal. Its rectangular shaped cross section ensures stability in the gland. The o-ring energizer functions as a spring to maintain sealing contact under low pressure or vacuum applications. The knife trimmed, beveled lip does an excellent job wiping fluid film. A secondary sealing lip is located below the primary sealing lip, just above the base of the seal, to provide enhanced sealing performance and ensure a tight, stable fit in the gland. Available in Parker's proprietary urethanes, the BD profile provides long life, extrusion resistance, low compression set, shock load resistance and increased sealing performance at zero pressure. The BD profile is designed to be used as a stand alone rod seal or for use with the BR or OD profile buffer seals for more critical sealing applications. Also available with a positively-activated back-up.

Technical Data

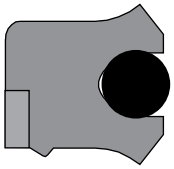
Standard Materials*	Temperature Range	Pressure Range†	Surface Speed
P4300A90	-65°F to 275°F (-54°C to 135°C)	5000 psi (344 bar)	< 1.6 ft/s (0.5 m/s)
P4301A90	-65°F to 275°F (-54°C to 135°C)	5000 psi (344 bar)	< 1.6 ft/s (0.5 m/s)
P4700A90	-65°F to 200°F (-54°C to 93°C)	5000 psi (344 bar)	< 1.6 ft/s (0.5 m/s)
P5065A88	-70°F to 200°F (-57°C to 93°C)	3500 psi (241 bar)	< 1.6 ft/s (0.5 m/s)

***Alternate Materials:** For applications that may require an alternate material, please contact your customer service representative.
Pressure Range with positively-activated back-up to 10,000 psi (688 bar).

A back-up ring located in the heel of the BD profile can be provided for enhanced extrusion protection. See part number nomenclature for designating this option. Contact your representative for price and availability.



BD Cross-Section



BD Cross-Section with Back-up

Coming soon, please call for availability of select sizes

BD Installed in Rod Gland

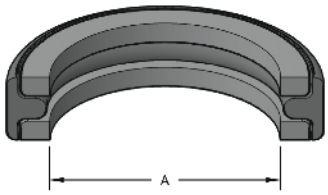
ROD SEALS

111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

PNEU-DRAULICS

"T" SEALS FOR ROD

T-Seals are designed to take the place of o-rings in dynamic fluid power applications. They help reduce extrusion, spiral or twisting failure.



-65°F to +220°F
0 to 5,000 PSI
Nitrile Rubber Seal with nylon split back-up rings.

(Other sizes available, call for price and delivery.)

PART NUMBER	I/D	O/D	LIST PRICE/EA.
TR108	1/4	7/16	$ 7.65
TR205	7/16	11/16	$ 14.23
TR206	1/2	3/4	$ 12.51
TR208	5/8	7/8	$ 8.39
TR210	3/4	1	$ 9.37
TR214	1	1-1/4	$ 8.92
TR216	1-1/8	1-3/8	$ 8.48
TR218	1-1/4	1-1/2	$ 14.20
TR220	1-3/8	1-5/8	$ 9.66
TR326	1-5/8	2	$ 14.57
TR327	1-3/4	2-1/8	$ 15.24
TR329	2	2-3/8	$ 16.99
TR332	2-3/8	2-3/4	$ 19.46
TR333	2-1/2	2-7/8	$ 20.25
TR335	2-3/4	3-1/8	$ 28.57
TR336	2-7/8	3-1/4	$ 33.00
TR337	3	3-3/8	$ 29.24
TR338	3-1/8	3-1/2	$ 34.35
TR339	3-1/4	3-5/8	$ 37.20
TR340	3-3/8	3-3/4	$ 37.62
TR342	3-5/8	4	$ 42.40
TR343	3-3/4	4-1/8	$ 40.56
TR344	3-7/8	4-1/4	$ 41.85
TR345	4	4-3/8	$ 44.47
TR349	4-1/2	4-7/8	$ 63.23
TR437	6	6-1/2	$ 87.65

PNEU-DRAULICS
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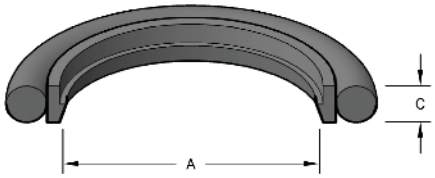
Nicholasville, KY 40340-0037

ROD BUFFER SEAL

This is a bronze filled PTFE seal with a rubber energizer that absorbs the shock of pressure spikes, protecting the rod.

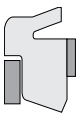


Material: Bronze filled PTFE
Rubber energizer

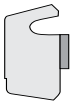
-40 to 220
0 to 5000 PSI

PART NUMBER	SEAL ID	GROOVE DIA	SEAL WIDTH	GROOVE WIDTH	LIST PRICE
KR-10001	1.0000	1.298 +.003/-0	0.122	0.126 +.010/-0	$13.22
KR-10002	1.0000	1.433 +.004/-0	0.155	0.166 +.010/-0	$ 8.12
KR-11201	1.1250	1.418 +.003/-0	0.122	0.126 +.010/-0	$13.12
KR-12501	1.2500	1.548 +.003/-0	0.122	0.126 +.010/-0	$14.27
KR-12502	1.2500	1.674 +.004/-0	0.155	0.166 +.010/-0	$14.29
KR-13702	1.3750	1.794 +.003/-0	0.155	0.166 +.010/-0	$14.31
KR-15001	1.5000	1.798 +.003/-0	0.122	0.126 +.010/-0	$14.77
KR-15002	1.5000	1.924 +.004/-0	0.155	0.166 +.010/-0	$14.77
KR-15003	1.5000	2.116 +.005/-0	0.235	0.247 +.010/-0	$16.82
KR-17501	1.7500	2.048 +.003/-0	0.122	0.126 +.010/-0	$15.62
KR-17502	1.7500	2.174 +.004/-0	0.155	0.166 +.010/-0	$16.94
KR-17503	1.7500	2.366 +.005/-0	0.235	0.247 +.010/-0	$17.54
KR-18702	1.8750	2.299 +.004/-0	0.155	0.166 +.010/-0	$26.44
KR-20002	2.0000	2.424 +.004/-0	0.155	0.166 +.010/-0	$18.71
KR-20003	2.0000	2.616 +.005/-0	0.235	0.247 +.010/-0	$19.00
KR-21202	2.1250	2.544 +.004/-0	0.155	0.166 +.010/-0	$19.00
KR-22502	2.2500	2.674 +.004/-0	0.155	0.166 +.010/-0	$19.53
KR-25002	2.5000	2.924 +.004/-0	0.155	0.166 +.010/-0	$21.04
KR-25003	2.5000	3.116 +.005/-0	0.235	0.247 +.010/-0	$27.62
KR-26203	2.6250	3.241 +.005/-0	0.235	0.247 +.010/-0	$26.76
KR-27503	2.7500	3.366 +.005/-0	0.235	0.247 +.010/-0	$26.71
KR-30002	3.0000	3.424 +.004/-0	0.155	0.166 +.010/-0	$28.97
KR-32503	3.2500	3.866 +.005/-0	0.235	0.247 +.010/-0	$32.03
KR-35003	3.5000	4.116 +.005/-0	0.235	0.247 +.010/-0	$34.69
KR-40002	4.0000	4.424 +.004/-0	0.155	0.166 +.010/-0	$47.72
KR-40003	4.0000	4.616 +.005/-0	0.235	0.247 +.010/-0	$43.61
KR-40004	4.0000	4.830 +.006/-0	0.305	0.320 +.010/-0	$61.27
KR-50003	5.0000	5.616 +.005/-0	0.235	0.247 +.010/-0	$56.33
KR-55004	5.5000	6.330 +.006/-0	0.305	0.320 +.010/-0	$72.94

BR Profile, Premium Buffer Seal



BR Cross-Section with Back-up



BR Cross-Section without Back-up

The BR profile is a compact rod seal designed to act as a buffer seal for the primary rod seal. As a buffer seal, the BR profile provides the majority of the rod sealing performance while allowing fluid to by pass onto and energize the primary rod seal. Fluid located between the BR profile and the rod seal will relieve back into the cylinder by flowing past the BR profile's flexible static side lip and slotted pedestals. This relieving or check valve function allows the BR profile and primary rod seal to work as a sealing system without the danger of developing a pressure trap. As a sealing system, the BR profile and primary rod seal provide optimal performance in the most difficult applications.

Call for availability

111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

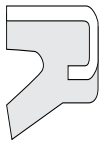
Parker DISTRIBUTOR

PNEU-DRAULICS

PARKER J WIPERS (CANNED)

The J performance canned wiper guards against O.D. contamination and consists of a polyurethane scraper element encased in a metal shell. This enables it to be pressed into an open face gland without the aid of other retention devices such as snap rings or face plates. This wiper is ideal for medium and heavy duty hydraulic cylinders in the most demanding applications.

-65°F to +200°F
90 duro. Urethane



J CROSS SECTION

(Other sizes available call for price and delivery.)

PART NUMBER	ROD	O/D	HT.	LIST PRICE/EA.
MC0750	3/4	1 1/4	5/16	$ 8.16
MC0875	7/8	1 3/8	5/16	$ 9.58
MC1000	1	1 1/2	5/16	$ 7.64
MC1125	1 1/8	1 5/8	5/16	$ 8.47
MC1250	1 1/4	1 3/4	5/16	$10.50
MC1375	1 3/8	1 7/8	5/16	$11.59
MC1500	1 1/2	2	5/16	$ 9.89
MC1625	1 5/8	2 1/8	5/16	$10.44
MC1750	1 3/4	2 1/4	5/16	$11.52
MC2000	2	2 1/2	5/16	$11.73
MC2250	2 1/4	2 3/4	5/16	$15.39
MC2500	2 1/2	3	5/16	$16.08
MC2750	2 3/4	3 1/4	5/16	$14.60
MC3000	3	3 1/2	5/16	$16.86
MC3250	3 1/4	3 7/8	5/16	$27.70
MC3500	3 1/2	4 1/8	5/16	$22.72
MC3750	3 3/4	4 3/8	5/16	$25.08
MC4000	4	4 5/8	5/16	$27.16
MC4250	4 1/4	4 7/8	5/16	$27.86
MC4500	4 1/2	5 1/8	5/16	$42.40
MC5000	5	5 5/8	5/16	$44.73

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

MCU WIPERS

The MCU wipers are urethane lip with a metal shell. They are used to keep contaminants from the rod.

-65°F to +200°F
90 duro. Urethane

(Other sizes available call, for price and delivery.)

PART NUMBER	ROD	O/D	BASE THICKNESS	LIST PRICE/EA.
MCU-1187	1 3/16	1 5/8	1/4	$20.85
MCU-1250	1 1/4	1 3/4	5/16	$18.35
MCU-1505	1 1/2	2 1/8	5/16	$23.70
MCU-1506	1 1/2	2 1/4	3/8	$15.37
MCU-1755	1 3/4	2 7/16	3/8	$16.88
MCU-1756	1 3/4	2 1/2	3/8	$19.81
MCU-1875	1 7/8	2 3/8	5/16	$19.81
MCU-2001	2	2 3/8	1/4	$24.56
MCU-2003	2	2 3/4	3/8	$24.24
MCU-2006	2	2 11/16	3/8	$21.15
MCU-2252	2 1/4	3	1/4	$38.37
MCU-2253	2 1/4	3	3/8	$20.35
MCU-2375	2 3/8	2 7/8	5/16	$19.88
MCU-2376	2 3/8	3 1/8	3/8	$21.34
MCU-2501	2 1/2	3 1/4	1/4	$25.77
MCU-2502	2 1/2	3 1/4	3/8	$25.32
MCU-2503	2 1/2	3	3/16	$26.06
MCU-2625	2 5/8	3 1/8	3/16	$27.14
MCU-2755	2 3/4	3 3/4	1/2	$26.61
MCU-2756	2 3/4	3 1/2	3/8	$30.33
MCU-2758	2 3/4	3 1/2	1/2	$31.45
MCU-3006	3	3 3/4	3/8	$26.24
MCU-3008	3	4	1/2	$29.25
MCU-3125	3 1/8	3 3/4	3/8	$34.65
MCU-3250	3 1/4	4 1/4	1/2	$30.37
MCU-3254	3 1/4	3 3/4	5/16	$29.25
MCU-3500	3 1/2	4	5/16	$34.07
MCU-3508	3 1/2	4 1/2	1/2	$35.43
MCU-3751	3 3/4	4 3/4	1/2	$45.99
MCU-4000	4	5	1/2	$45.99
MCU-4002	4	4 3/4	5/16	$55.18
MCU-4005	4	4 5/8	5/16	$55.18
MCU-4250	4 1/4	5 1/4	1/2	$73.47
MCU-4375	4 3/8	5	5/16	$68.40
MCU-4750	4 3/4	5 3/4	1/2	$80.12

111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

PNEU-DRAULICS

MCN WIPERS

The MCN wipers are nitrile lip with a metal shell.

-40°F to +250°F
Nitrile seal element

(Other sizes available, call for price and delivery.)

PART NUMBER	ROD	O/D	BASE THICKNESS	LIST PRICE/EA.
MCN-0500	1/2	11/16	3/32	$ 2.95
MCN-0625	5/8	15/16	3/16	$ 3.83
MCN-0626	5/8	7/8	1/8	$ 3.83
MCN-0751	3/4	1	1/8	$ 3.92
MCN-0873	7/8	1 1/8	1/8	$ 3.94
MCN-0875	7/8	1 1/4	3/16	$ 3.94
MCN-1001	1	1 1/4	1/8	$ 3.96
MCN-1003	1	1 3/8	3/16	$ 3.91
MCN-1004	1	1 7/16	1/4	$ 4.39
MCN-1125	1 1/8	1 1/2	3/16	$ 4.46
MCN-1126	1 1/8	1 3/8	1/8	$ 4.46
MCN-1251	1 1/4	1 1/2	1/8	$ 4.51
MCN-1253	1 1/4	1 11/16	3/16	$ 4.54
MCN-1254	1 1/4	1 3/4	1/4	$ 4.62
MCN-1255	1 1/4	1 7/8	1/4	$ 5.01
MCN-1375	1 3/8	1 3/4	3/16	$ 4.62
MCN-1376	1 3/8	1 7/8	1/4	$ 4.29
MCN-1377	1 3/8	1 5/8	1/8	$ 5.08
MCN-1502	1 1/2	1 7/8	1/4	$ 5.03
MCN-1503	1 1/2	1 7/8	3/16	$ 4.73
MCN-1504	1 1/2	2	1/4	$ 4.73
MCN-1625	1 5/8	2 1/8	1/4	$ 5.25
MCN-1753	1 3/4	2 1/8	3/16	$ 5.25
MCN-1755	1 3/4	2 3/8	1/4	$ 5.38
MCN-1756	1 3/4	2 5/8	1/4	$ 5.79
MCN-1877	1 7/8	2 1/4	3/16	$ 7.22
MCN-1879	1 7/8	2 1/2	1/4	$ 7.22
MCN-2001	2	2 3/8	3/16	$ 7.22
MCN-2002	2	2 5/8	1/4	$ 7.22
MCN-2003	2	2 1/2	1/4	$ 7.22
MCN-2006	2	2 3/4	1/4	$ 8.09
MCN-2125	2 1/8	2 1/2	3/16	$ 7.22
MCN-2251	2 1/4	2 5/8	1/4	$ 7.22
MCN-2253	2 1/4	2 3/4	1/4	$ 7.22
MCN-2255	2 1/4	2 7/8	1/4	$ 7.22
MCN-2371	2 3/8	3	1/4	$ 7.57
MCN-2756	2 3/4	3 3/4	3/8	$10.53
MCN-3504	3 1/2	4	1/4	$10.98

PNEU-DRAULICS
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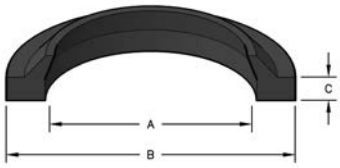
Nicholasville, KY 40340-0037

AN-WIPERS (959)



-60°F to +200°F 95 duro. Urethane

Viton, HNBR & Hytrel available upon request. Other sizes available call for availability.

PART NUMBER	ROD	O/D	BASE THICKNESS	LIST PRICE/EA.
959-1	(1/2)	.766	.104	$ 2.75
959-2	(9/16)	.829	.104	$ 2.57
959-3	(5/8)	.891	.104	$ 2.78
959-4	(11/16)	.954	.104	$ 2.81
959-5	(3/4)	1.016	.104	$ 2.82
959-6	(13/16)	1.090	.104	$ 2.82
959-7	(7/8)	1.153	.104	$ 2.89
959-8	(15/16)	1.215	.104	$ 2.96
959-9	(1)	1.278	.104	$ 2.99
959-10	(1 1/16)	1.340	.104	$ 3.06
959-11	(1 1/8)	1.403	.104	$ 3.34
959-12	(1 3/16)	1.465	.104	$ 3.33
959-13	(1 1/4)	1.528	.104	$ 3.67
959-14	(1 5/16)	1.622	.104	$ 3.82
959-15	(1 3/8)	1.685	.104	$ 5.04
959-16	(1 7/16)	1.747	.104	$ 4.22
959-17	(1 1/2)	1.810	.104	$ 4.41
959-18	(1 5/8)	1.935	.104	$ 4.61
959-19	(1 3/4)	2.060	.104	$ 4.86
959-20	(1 7/8)	2.185	.104	$ 4.51
959-21	(2)	2.310	.104	$ 5.19
959-22	(2 1/8)	2.435	.104	$ 5.39
959-23	(2 1/4)	2.560	.104	$ 5.56
959-24	(2 3/8)	2.685	.104	$ 6.50
959-25	(2 1/2)	2.810	.104	$ 7.41
959-26	(2 5/8)	2.999	.119	$ 6.85
959-27	(2 3/4)	3.124	.119	$ 7.00
959-28	(2 7/8)	3.249	.119	$ 7.50
959-29	(3)	3.374	.119	$ 7.84
959-30	(3 1/8)	3.499	.119	$ 8.34
959-31	(3 1/4)	3.624	.119	$ 8.87
959-32	(3 3/8)	3.749	.119	$ 9.90
959-33	(3 1/2)	3.874	.119	$10.41
959-34	(3 5/8)	3.999	.119	$10.41
959-35	(3 3/4)	4.124	.119	$10.80
959-36	(3 7/8)	4.249	.119	$11.53
959-37	(4)	4.439	.135	$12.67
959-38	(4 1/8)	4.564	.135	$13.15
959-39	(4 1/4)	4.689	.135	$14.74
959-40	(4 3/8)	4.814	.135	$16.08

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PNEU-DRAULICS

AN-WIPERS (959)

PART NUMBER	ROD	O/D	BASE THICKNESS	LIST PRICE/EA.
959-41	(4 1/2)	4.939	.135	$15.98
959-42	(4 5/8)	5.064	.135	$16.32
959-43	(4 3/4)	5.189	.135	$19.18
959-44	(4 7/8)	5.314	.135	$18.91
959-45	(5)	5.439	.135	$18.91
959-46	(5 1/8)	5.564	.135	$22.26
959-47	(5 1/4)	5.689	.135	$19.52
959-48	(5 3/8)	5.814	.135	$23.43
959-49	(5 1/2)	5.939	.135	$21.70
959-51	(5 3/4)	6.254	.151	$22.69
959-52	(5 7/8)	6.379	.151	$20.38
959-53	(6)	6.504	.151	$26.30
959-54	(6 1/4)	6.754	.151	$27.02
959-55	(6 1/2)	7.004	.151	$25.38
959-56	(6 3/4)	7.254	.151	$25.94
959-57	(7)	7.504	.151	$27.17
959-58	(7 1/4)	7.754	.151	$28.66
959-59	(7 1/2)	8.004	.151	$30.53
959-60	(7 3/4)	8.254	.151	$34.98
959-61	(8)	8.504	.151	$33.08
959-62	(8 1/2)	9.004	.151	$33.81
959-63	(9)	9.504	.151	$36.84
959-65	(10)	10.504	.151	$49.29
959-66	(10 1/2)	11.004	.151	$42.32
959-67	(11)	11.504	.151	$44.14

PNEU-DRAULICS
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D WIPERS

-60°F to +200°F 95
Duro Urethane

Viton & Hytrel & HNBR available upon request. Other sizes available call for availability.

PART NUMBER	ROD	O/D	HT.	BASE	LIST PRICE/EA.
D0250	1/4	1/2	3/16	1/8	$ 5.00
D0312	5/16	9/16	3/16	1/8	$ 6.25
D0375	3/8	5/8	3/16	1/8	$ 5.00
D0437	7/16	11/16	3/16	1/8	$ 5.00
D0500	1/2	3/4	3/16	1/8	$ 5.25
D0562	9/16	13/16	3/16	1/8	$ 5.25
D0625	5/8	7/8	3/16	1/8	$ 5.25
D0750	3/4	1 1/8	9/32	3/16	$ 5.61
D0812	13/16	1 3/16	9/32	3/16	$ 1.45
D0875	7/8	1 1/4	9/32	3/16	$ 3.64
D0937	15/16	1 5/16	9/32	3/16	$ 2.93
D1000	1	1 3/8	9/32	3/16	$ 5.83
D1062	1 1/16	1 7/16	9/32	3/16	$ 5.62
D1125	1 1/8	1 1/2	9/32	3/16	$ 6.02
D1187	1 3/16	1 9/16	9/32	3/16	$ 5.79
D1250	1 1/4	1 5/8	9/32	3/16	$ 6.16
D1375	1 3/8	1 3/4	9/32	3/16	$ 6.48
D1500	1 1/2	1 7/8	9/32	3/16	$ 6.92
D1625	1 5/8	2	9/32	3/16	$ 7.68
D1750	1 3/4	2 1/8	9/32	3/16	$ 7.85
D1875	1 7/8	2 1/4	9/32	3/16	$ 8.08
D2000	2	2 1/2	9/32	1/4	$ 8.43
D2125	2 1/8	2 5/8	9/32	1/4	$11.13
D2250	2 1/4	2 3/4	9/32	1/4	$ 8.90
D2375	2 3/8	2 7/8	9/32	1/4	$ 9.14
D2500	2 1/2	3	9/32	1/4	$ 9.32
D2562	2 9/16	3 1/16	3/8	1/4	$ 8.73
D2625	2 5/8	3 1/8	3/8	1/4	$ 9.57
D2750	2 3/4	3 1/4	3/8	1/4	$ 9.82
D2875	2 7/8	3 3/8	3/8	1/4	$ 9.28
D3000	3	3 1/2	3/8	1/4	$10.22
D3125	3 1/8	3 5/8	3/8	1/4	$ 9.75
D3250	3 1/4	3 3/4	3/8	1/4	$10.92
D3375	3 3/8	3 7/8	3/8	1/4	$11.42
D3500	3 1/2	4	3/8	1/4	$11.73
D3625	3 5/8	4 1/8	3/8	1/4	$12.55
D3750	3 3/4	4 1/4	3/8	1/4	$13.24
D3875	3 7/8	4 3/8	3/8	1/4	$13.21
D4000	4	4 1/2	3/8	1/4	$15.03
D4125	4 1/8	4 5/8	3/8	1/4	$14.21

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PNEU-DRAULICS

D WIPERS

PART NUMBER	ROD	O/D	HT.	BASE THICKNESS	LIST PRICE/EA.
D4250	4 1/4	4 3/4	3/8	1/4	$16.53
D4375	4 3/8	4 7/8	3/8	1/4	$19.18
D4500	4 1/2	5 1/4	9/16	3/8	$25.63
D4750	4 3/4	5 1/2	9/16	3/8	$27.68
D4875	4 7/8	5 5/8	9/16	3/8	$27.16
D5000	5	5 3/4	9/16	3/8	$30.90
D5125	5 1/8	5 7/8	9/16	3/8	$30.09
D5250	5 1/4	6	9/16	3/8	$34.04
D5375	5 3/8	6 1/8	9/16	3/8	$35.62
D5500	5 1/2	6 1/4	9/16	3/8	$35.42
D5750	5 3/4	6 1/2	9/16	3/8	$39.20
D6000	6	6 3/4	9/16	3/8	$41.00
D6250	6 1/4	7	9/16	3/8	$42.21
D6500	6 1/2	7 1/4	9/16	3/8	$40.81
D6750	6 3/4	7 1/2	9/16	3/8	$42.47
D7000	7	7 3/4	9/16	3/8	$47.67
D7500	7 1/2	8 1/4	9/16	3/8	$50.65
D7750	7 3/4	8 1/2	9/16	3/8	$52.04
D8000	8	8 3/4	9/16	3/8	$53.62
D8250	8 1/4	9	9/16	3/8	$35.45
D8500	8 1/2	9 1/4	9/16	3/8	$33.85
D8750	8 3/4	9 1/2	9/16	3/8	$51.45
D9000	9	9 3/4	9/16	3/8	$49.90

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Parker DISTRIBUTOR

YD Profile, Premium Snap-in Wiper with O.D. Exclusion Technology

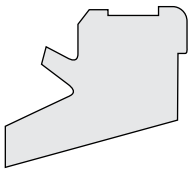
The YD wiper is the premier design among high performance, snap-in excluders. Featuring a secondary O.D. lip which seals against the shoulder region of the gland, the YD prevents water and other contaminants from entering around the static side of the wiper. For ultimate performance, the YD also incorporates an aggressive, knife-trimmed wiping lip to ensure maximum exclusion along the rod. A true zero-radius lip provides the most effective wiping action available.

Technical Data

Standard Materials*	Temperature Range	Surface Speed
P4300A90	-65°F to 275°F (-54° to 135°C)	<1.6 ft/s (0.5 m/s)

***Alternate Materials:** For applications that may require an alternate material, please contact your customer service representative.

4	3	0	0	YD	0	1	5	0	0
Seal Compound 4-Digit Material Code Example: 4300 = 90A Resilon® 4300 Polyurethane				Profile	Nominal Rod Diameter (x1000) Example: 1.500 x 1000 = 01500				



YD Cross-Section

YD installed in Rod Gland

WIPERS

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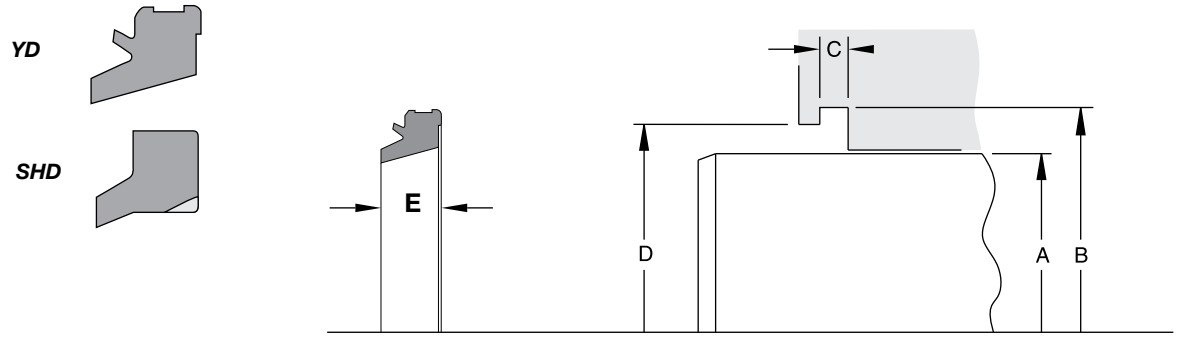
Gland Dimensions — YD and D Profiles



YD, D Gland Dimensions — Inch

A Rod Diameter	B Groove Diameter	C Groove Diameter	D Shoulder Diameter	E Max. Wiper Axial Width	Compound Codes (X = Standard Offering)								Part Number		
					SHD					SHX		YD	Compound Code	Profile	Rod Size
					4615	5065	4263	4208	4207	4615	5065	4300			
+.000/-.002	+.006/-.000	+.004/-.000	+.005/-.000												
0.250	0.497	0.124	0.410	0.210	x	x			x				XXXX	xxx	00250
0.312	0.560	0.124	0.475	0.210	x	x	x		x				XXXX	xxx	00312
0.375	0.622	0.124	0.535	0.210	x	x			x				XXXX	xxx	00375
0.437	0.685	0.124	0.600	0.210	x	x							XXXX	xxx	00437
0.500	0.747	0.124	0.660	0.210	x	x	x	x		x	x		XXXX	xxx	00500
0.562	0.810	0.124	0.725	0.210	x	x		x					XXXX	xxx	00562
0.625	0.872	0.124	0.785	0.210	x	x		x		x	x		XXXX	xxx	00625
0.687	0.935	0.124	0.850	0.210	x	x							XXXX	xxx	00687
0.750	1.122	0.187	0.995	0.305	x	x	x	x	x	x	x	x	XXXX	xxx	00750
0.875	1.247	0.187	1.120	0.305	x	x				x	x		XXXX	xxx	00875
1.000	1.372	0.187	1.245	0.305	x	x		x		x	x	x	XXXX	xxx	01000
1.125	1.497	0.187	1.370	0.305	x	x				x	x	x	XXXX	xxx	01125
1.187	1.560	0.187	1.435	0.305	x	x							XXXX	xxx	01187
1.250	1.622	0.187	1.495	0.305	x	x				x	x	x	XXXX	xxx	01250
1.375	1.747	0.187	1.620	0.305	x	x	x			x	x	x	XXXX	xxx	01375
1.500	1.872	0.187	1.745	0.305	x	x				x	x	x	XXXX	xxx	01500
1.625	1.997	0.187	1.870	0.305	x	x	x			x	x	x	XXXX	xxx	01625
1.750	2.112	0.187	1.995	0.305	x	x	x	x	x	x	x	x	XXXX	xxx	01750
1.875	2.247	0.187	2.120	0.305	x	x	x			x	x	x	XXXX	xxx	01875
2.000	2.497	0.249	2.327	0.395	x	x	x		x	x	x	x	XXXX	xxx	02000
+.000/-.003	+.006/-.000	+.004/-.000	+.005/-.000												
2.125	2.622	0.249	2.452	0.395	x	x		x		x	x		XXXX	xxx	02125
2.250	2.747	0.249	2.577	0.395	x	x	x	x		x	x	x	XXXX	xxx	02250
2.375	2.872	0.249	2.702	0.395	x	x		x					XXXX	xxx	02375
2.500	2.997	0.249	2.827	0.395	x	x	x			x	x	x	XXXX	xxx	02500
2.625	3.122	0.249	2.952	0.395	x	x	x	x				x	XXXX	xxx	02625

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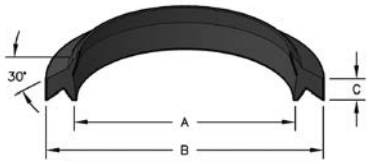
K-WIPERS

The K Wiper is a one piece snap in rod wiper with two lips. One scrapes foreign matter and the other traps slight leakage in high pressure hydraulic systems.



-60°F to +200°F
95 duro. Urethane

(Other sizes available call for price and delivery.)

PART NUMBER	ROD	O/D	BASE THICKNESS	LIST PRICE/EA.
K0750	.750	1 1/8	.190	$ 2.67
K0875	.875	1 1/4	.190	$ 2.73
K1000X3	1.000	1 3/8	.190	$ 5.75
K1125X3	1.125	1 1/2	.190	$ 4.91
K1250X3	1.250	1 5/8	.190	$ 7.05
K1375	1.375	1 3/4	.190	$ 3.81
K1500X3	1.500	1 7/8	.190	$ 3.73
K1750X3	1.750	2 1/8	.190	$ 4.50
K1875	1.875	2 1/4	.190	$ 4.73
K2000	2.000	2 3/8	.190	$ 4.73
K2125	2.125	2 1/2	.190	$ 5.53
K2250	2.250	2 3/4	.250	$ 5.75
K2250-187	2.250	2 5/8	.190	$ 5.75
K2500X4	2.500	3	.250	$ 6.11
K2500X3	2.500	2 7/8	.190	$ 6.11
K2625X4	2.625	3 1/8	.250	$ 6.36
K2750	2.750	3 1/4	.250	$ 6.47
K3000X4	3.000	3 1/2	.250	$ 8.59
K3000-187	3.000	3 3/8	.190	$ 8.47
K3250	3.250	3 3/4	.250	$ 9.48
K3375	3.375	3 7/8	.250	$10.03
K3500X4	3.500	4	.250	$10.57
K3500-187	3.500	3 7/8	.190	$13.21
K3625X4	3.625	4 1/8	.250	$11.11
K3750	3.750	4 1/4	.250	$11.62
K3750-187	3.750	4 1/8	.187	$11.62
K4000	4.000	4 1/2	.250	$11.95
K4500	4.500	5	.250	$13.26
K4750X4	4.750	5 1/4	.250	$14.62
K5000	5.000	5 1/2	.250	$13.88
K5250	5.250	5 3/4	.250	$14.22
K5500	5.500	6	.250	$14.65
K6000X4	6.000	6 1/2	.250	$16.18

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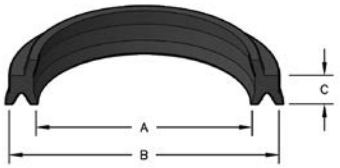
PNEU-DRAULICS

H-WIPERS

The H Wiper is a one piece snap in rod wiper with two lips. One scrapes foreign matter and the other traps slight leakage in high pressure hydraulic systems.



-60°F to +200°F
95 duro. Urethane

Nitrile, HNBR & Viton available upon request. Other sizes available call for availability.

PART NUMBER	ROD	O/D	BASE THICKNESS	LIST PRICE/EA.
H0500	.500	13/16	.194	$ 2.55
H0625	.625	15/16	.194	$ 3.85
H0750	.750	1 1/16	.194	$ 3.85
H0875	.875	1 1/4	.212	$ 2.69
H1000	1.000	1 3/8	.212	$ 4.02
H1125	1.125	1 1/2	.212	$ 3.19
H1250	1.250	1 5/8	.212	$ 3.06
H1375	1.375	1 3/4	.212	$ 3.71
H1500	1.500	1 7/8	.212	$ 4.78
H1625	1.625	2	.212	$ 4.24
H1750	1.750	2 1/8	.212	$ 4.20
H1875	1.875	2 1/4	.212	$ 4.48
H2000	2.000	2 3/8	.212	$ 4.78
H2125	2.125	2 1/2	.212	$ 5.36
H2250	2.250	2 3/4	.275	$ 6.00
H2375	2.375	2 7/8	.275	$ 5.22
H2500	2.500	3	.275	$ 5.51
H2625	2.625	3 1/8	.275	$ 7.00
H2750	2.750	3 1/4	.275	$ 7.41
H3000	3.000	3 1/2	.275	$ 7.11
H3250	3.250	3 3/4	.275	$ 8.00
H3500	3.500	4	.275	$ 8.72
H3750	3.750	4 1/4	.275	$ 9.65
H3875	3.875	4 3/8	.275	$10.03
H4000	4.000	4 1/2	.275	$ 9.82
H4500	4.500	5	.275	$12.18
H5000	5.000	5 1/2	.275	$18.69
H7000	7.000	7 1/2	.275	$25.98
H8000	8.000	8 1/2	.275	$31.11
H8500	8.500	9	.275	$34.91

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COMMERCIAL STYLE WIPERS

PART NUMBER	SIZE	LIST PRICE/EA.
CS2750	2 3/4	$ 6.81
CS3750	3 3/4	$ 8.51
CS4750	4 3/4	$11.58
CS5750	5 3/4	$13.64
CS6750	6 3/4	$15.59

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PNEU-DRAULICS

OIL SEALS

Shaft Specifications

Shaft
To achieve the optimum sealing function from a shaft seal, careful consideration must be given to the design parameters of the shaft. Important criteria for the shaft include the material, hardness, finish, eccentricity, tolerance, and rotating speed.

Shaft Material
Shaft seals perform the best when the shaft is made out of a medium to high carbon steel or stainless steel material. If a softer material is used for the shaft, then it is recommended that the shaft be plated with either nickel or chrome to provide a hard sealing surface. If a nickel or chrome plating is not available, typically only seals with a sleeve included in the design will work as the sealing lip would groove the soft material too quickly.

Shaft Hardness
The hardness of the shaft is critical in the area where the sealing lip will be running. If the hardness of the shaft is too soft, the sealing lip will wear a groove into the shaft leading to seal failure and requiring that the shaft be replaced. To minimize shaft grooving, it is recommended that the shaft hardness be a minimum of 45 HRc in the area where the sealing lip(s) will be running. In applications where lubrication is doubtful, abrasive matter is present, or the shaft speed is greater than 46 ft/s (14 m/s), a minimum shaft hardness of 55 HRc is recommended. It is recommended that all shafts be heat treated or nitrided prior to assembly.

Shaft Finish
Shaft finish is a measure of how rough the surface of the shaft is. For a shaft seal to function properly, the shaft finish needs to fall within a certain range. A shaft finish can be measured using several different techniques, the most common of which is Ra and Rz. Ra is the average roughness of the shaft. For a shaft seal to function properly, it is recommended that the Ra shaft finish be 10 to 20 µin (0.2 to 0.8 µm). Rz is the average distance between the highest peak and lowest valley over a certain length. For a shaft seal to function properly, it is recommended that the Rz shaft finish be 39 to 197 µin (1 to 5 µm). To achieve the desired shaft finish, it is recommended that the shaft be centerless ground or plunge ground. After grinding it is important to check for shaft lead. The maximum permissible shaft lead angle is 0±0.05 degrees.

Shaft Eccentricity
Two types of shaft eccentricity affect seal performance. They are dynamic run-out (double dynamic eccentricity) and shaft-to-bore-misalignment (STBM or static eccentricity). Dynamic run-out is the amount in which the shaft is not rotating about its true center. Dynamic run-out is typically caused by the shaft being bent, the shaft being out of balance, or misalignment caused during assembly. STBM is the amount in which the center of the shaft is off from the center of the bore. STBM is typically caused by machining and assembly issues.

The greater that the eccentricity is in an application, the harder it is for the sealing lip to remain in contact with the shaft while it is rotating. If an application has high eccentricity, then a special seal will need to be designed to allow the sealing lip to follow the shaft during rotation. The allowable dynamic run-out and shaft-to-bore-misalignment for an application is shown in the following two figures.

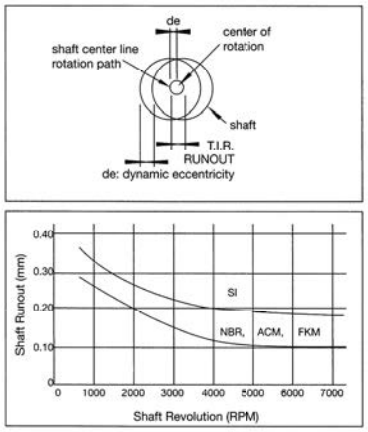

Figure 1: Dynamic Runout

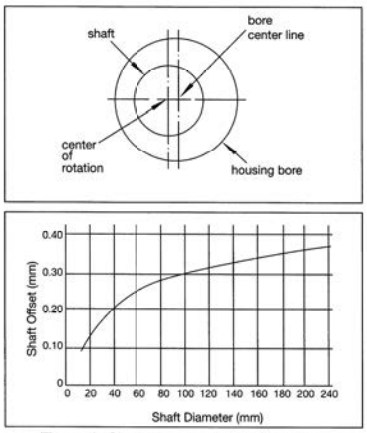

Figure 2: Shaft-To-Bore-Misalignment

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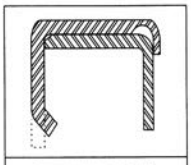
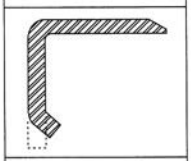
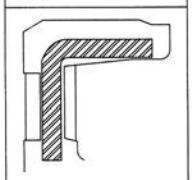
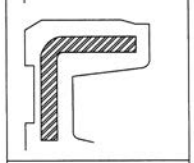
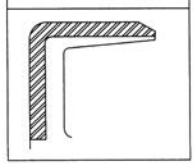
OIL SEALS

Standard Seal Case Designs

The following table identifies the most common case designs for Pneu-Draulics shaft seals. It is important to remember that other, more complex, designs are available for special applications. However, the case designs shown here represent those which will fill the needs of most seal requirements.

A = Metal O.D. with Reinforcing Plate
B = Metal O.D. with Lead-in Chamfer
C = Rubber Covered O.D.
F = Fully Rubber Covered Case
G = Rubber Covered O.D. with Ribs
J = Rubber Covered O.D. with Flange
L = Ground Metal O.D. with Rolled Leading Edge
M = Ground Metal O.D./Rubber Coated on I.D.
Z = Ground Metal O.D. with Rubber Covered Lead-in Chamfer

Of the above case designs, there are five principal case designs, shown in the illustration below. These five principal case designs are also supplemented by a range of more specialized designs for more specific application requirements.

	Profile Diagram	Remarks
A		**Outer Metal Case With Reinforcing Plate.** This type is designed with an additional inner case providing increased structural rigidity when a more robust design is required. Particularly suitable for larger diameters or when the seal is fitted from behind.
B		**Outer Metal Case.** This type is most suitable for steel or cast iron hosuing materials. The metal case gives a particularly firm and accurate seat in the hosuing, but static sealing on the O.D. is partially limited.
C		**Rubber Covered O.D.** This type is preferred for soft alloy or plastic housing materials, as well as cast iron or steel. It is also more suitable to use this design in a replacement environment where minor damage to the housing surface has occurred.
F		**Rubber Covered O.D.** Similar to design C but additional rubber covering fully protecting the internal steel case. Particularly suitable for applications where corrosion could be a problem.
M		**Outer Metal Case With Rubber Lining.** Similar to design B but an additional rubber lining covering the interanl face of the steel case. Particularly suitable for applications where corrosion could be a problem.

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PNEU-DRAULICS

OIL SEALS

Seal Storage

When storing shaft seals, there are several factors to keep in mind that will affect the shelf life of the seal. Such factors include the temperature, humidity, ozone, fumes, insects and rodents, and dust or dirt.

Temperature and Humidity
The area in which the seals are stored should be kept cool, roughly between 59°F to 86°F (15°C to 30°C), with an average relative humidity of 40% to 70%. Excessive heat may decrease the service life of the seal by prematurely aging the rubber. A higher humidity in the storage area may result in the corrosion of the metal case and/or the spring.

Ozone
To avoid premature aging of the sealing elements on a shaft seal the seal needs to be stored away from any potential ozone sources. Thus, store seals away from any direct or reflected sunlight and away from any electrical equipment that may be emitting ozone. Exposure of the seal to ozone may cause premature aging of the sealing element and thus reduce the sealing life of the seal.

Fumes
Seals need to be protected from fumes that may be emitted. Depending on the elastomer that the seal is made out of, certain fumes may cause deterioration of the seal.

Insects and Rodents
Seals need to be protected from exposure to insects and rodents during storage. Some insects and rodents may destroy the seals if they gain access to them.

Dust and Dirt
Sealing lips should be protected from dust and dirt during the storage of the seal. It is recommended to leave the seals in their original wrapping or in a closed container until it is time to install the seals into the application.

Shelf Life
If the above factors are all taken into consideration and the seals are stored appropriately, then the expected shelf life for common materials will be as shown in the table below.

Table 11: Seal Shelf Life for Common Materials

Type of Lip Material	Shelf Life (Years)
NBR, HNBR, CR	7
EPDM	8
FKM, VMQ, FVMQ	10
PTFE	Unlimited

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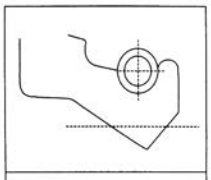
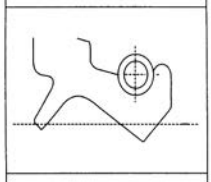
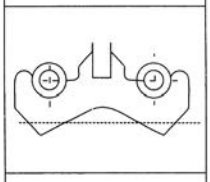
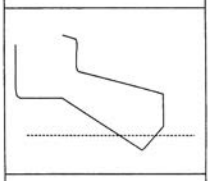
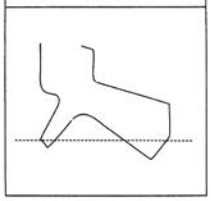
OIL SEALS

Standard Seal Lip Designs

The following table identifies the most common lip designs for Pneu-Draulics shaft seals. It is important to remember that other, more complex, designs are available for special applications. However, the lip designs shown here represent those which will fill the needs of most seal requirements.

V = Single Lip
K = Twin Lip
S = Single Lip, Spring Loaded
T = Twin Lip Spring Loaded
U = Triple Lip
D = Double Lip, Double Spring Loaded
O = Seals on Housing
OB = Oil Bath (Prefix)

Of the above lip designs, there are five principal lip designs, shown in the illustration below. These five principal lip designs are also supplemented by a range of more specialized designs for more specific application requirements.

	Profile Diagram	Remarks
S		**Single Lip With A Garter Spring.** Generally used for sealing lower pressure applications. However, not recommended for use in applications where the surrounding environment contains any dirt or cotaminants.
T		**Dual Lip With A Garter Spring.** Generally used for sealing lower pressure applications. The additional dust lip provides increased protection for the primary lip. The cavity between the two lips can also be filled with grease to limit shaft corrosion and allow brief operation without media lubrication.
D		**Double Lip With Garter Springs.** Designed to separate two media.
V		**Single Lip Without A Garter Spring.** Generally used for sealing a non-pressure medium, especially for sealing grease or viscous fluids. These seals are also used for dust or dirt exclusion.
K		**Dual Lip Without A Garter Spring** As type V above, but the additional dust lip provides increased protection for the primary lip. The cavity between the two lips can also be filled with grease to limit shaft corrosion and allow brief operation without media lubrication.

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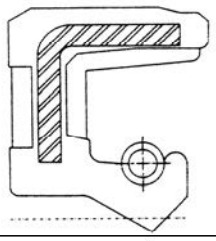
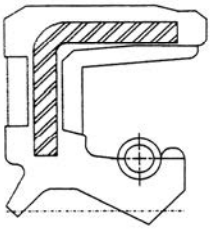
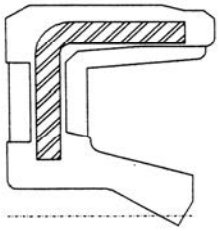
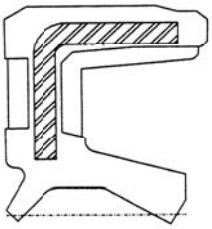
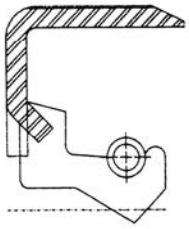
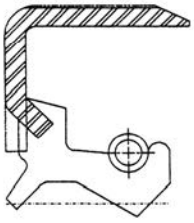
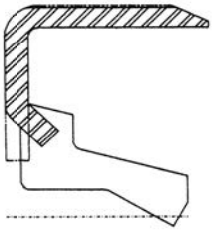
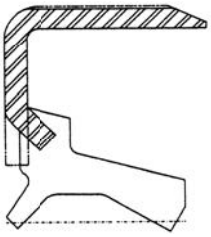
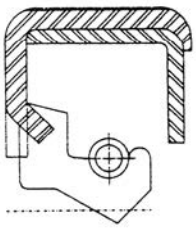
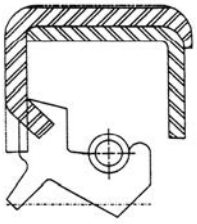
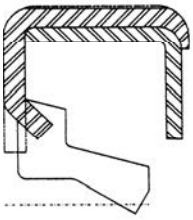
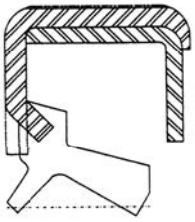
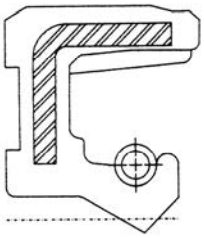
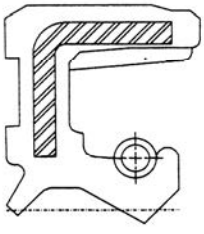
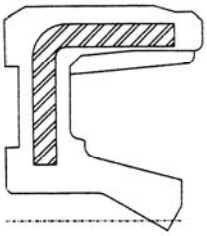
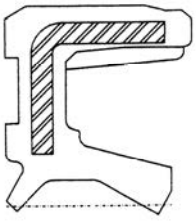
OIL SEALS

	Lip Style	"S"	"T"	"V"	"K"
		Low-pressure single lip with garter spring without protection from contaminates.	Low-pressure dual lip with garter spring with protection from contaminates.	Non-pressure single lip without garter spring without protection from contaminates.	Non-pressure dual lip without garter spring with protection from contaminates.
"C"	Rubber cover OD for improving OD sealing ability.	SC 	TC 	VC 	KC 
"B"	Precision ground OD surface with a lead-in chamfer for ease of installation.	SB 	TB 	VB 	KB 
"A"	Precision ground OD surface with a inner case providing increased structural rigidity.	SA 	TA 	VA 	KA 
	Rubber cover OD for improving OD sealing ability, with additional rubber fully protecting the inner case.	SF 	TF 	VF 	KF 

OIL SEALS

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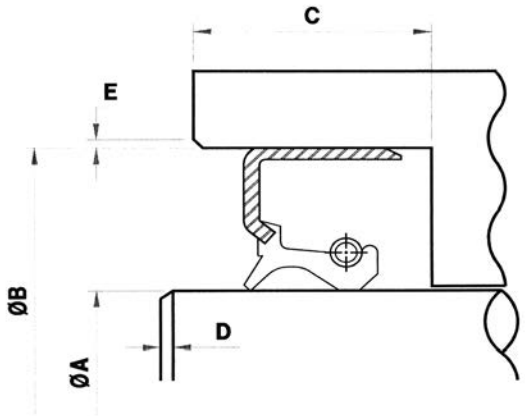
OIL SEALS

PARTS IDENTIFICATION FORM

Customer & Division					
Address					
City/State/Zip					
Contact					
Telephone					
Customer P/N					
Type of Equipment					
Application					
☐ OEM ☐ Aftermarket	Date Required	A. Shaft Diameter_____ D. Shaft Chamfer & Angle:_____			
Annual Usage	Peak Month Usage	B. Bore Diameter_____ E. Bore Chamfer & Angle:_____			
		C. Max Seal OD Width:_____			
SHAFT	☐ Horizontal ☐ Vertical	Material	Finish	Hardness	
BORE	Material	Finish	Hardness	Installation Direction ☐ ☐	
MOTION	☐ Rotating	RPM's	Direction From Air Side:		
		Normal / Max	☐ Clockwise ☐ Counter-clockwise ☐ Bi-rotational		
		Shaft Runout (TIR)	Misalignment	Frequency of Rotation ☐ Continuous ☐ Intermittent	
	☐ Reciprocating	Stroke Length	Cycles/Min.	Special Operating Conditions	
	☐ Oscillating	Degrees of Arc	Cycles/Min.		
FLUID	Internal	Type / Level	☐ Dry ☐ Flooded ☐ Mist		
	External	Type			
TEMP.	☐ C ☐ F	Minimum	Normal	Maximum	
PRESSURE	Normal PSI	Maximum PSI			
BEARING	☐ Ball or Roller Bearing		☐ Bushing		

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OIL SEALS

PART NUMBER	LIST PRICE/EA.	PART NUMBER	LIST PRICE/EA.
.250X.500X.125VC	$ 7.37	1.00X1.563X.312SC	$ 9.49
.37X.68X.15VM	$ 1.03	1.00X1.625X.25	$ 1.70
.434V.999X.250TC	$ 6.25	1.00X1.68X.25TB	$ 4.90
.500X.75X.12VM	$ 3.75	1.00X1.75X.25TB	$ 1.87
.500X.875X.188TC	$ 6.40	1.00X1.75X.25TB	$ 3.26
.500X1.125X.25SB	$ 8.70	1.062X1.85X.433 TC	$ 8.26
.562X.750X.093VM	$ 9.01	1.125X1.625X.25TC	$ 4.64
.562X1.00X.25TC	$ 1.05	1.125X1.75X.25TB	$ 5.47
.562X1.125X.25TB	$ 1.06	1.125X2.00X.25SB	$ 8.92
.625X1.12X.25TB	$ 1.10	1.187X1.68X.25SB	$ 1.73
.625X1X.250-SM	$ 1.10	1.25X1.50X0.12VB	$ 2.72
.62X1.00X12VMY	$ 1.10	1.25X1.62X.18SB	$ 3.45
.62X1.12X.25TC	$ .00	1.25X1.62X.25TC	$ 2.87
.687X1.25X.25TZ	$ 1.20	1.25X1.68X.25TC	$ 1.48
.68X1.37X.31TC	$ 1.11	1.25X1.75X25TB	$ 1.50
.75X1.06X.18TB	$ 1.74	1.25X2.062X.25TB	$ 5.95
.75X1.125X.25TC	$ 1.63	1.375X1.828X.313SB	$ 7.45
.75X1.25X.18SC	$10.94	1.375X1.82X.312SB	$ 7.45
.75X1.25X.25TC	$ 1.85	1.375X1.875X.250TCN	$19.35
.75X1.312X.25TB	$ 1.13	1.375X1.875X.25SB	$14.31
.75X1.375X.250TC	$ 1.65	1.375X1.93X.25TC	$ 3.35
.75X1.50X.25TB	$ 1.59	1.375X2.37X.31	$ 2.51
.75X1.62X.25TB	$ 7.25	1.437X2X.312TC	$ 1.87
.75X1.75X.31TZ	$ 7.74	1.500X2.125X.312TB	$ 5.83
.874X1.25X.375-DMY	$13.68	1.500X2.375X.312TB	$ 2.99
.875X1.25X.187SB	$ 1.08	1.625X2.00X.25SB	$ 3.28
.875X1.50X.312SC	$ 2.09	1.625X2.12X.25SB	$ 1.80
.875X1.625X.25TB	$ 1.49	1.750X2.375X.312TB	$ 3.00
.875X1.875X250SB	$ 6.96	1.750X2.437X.313 TB	$11.74
.87X1.37X.25SB	$ 1.10	1.750X2.50X.25TC	$15.80
0.43X1.00X0.37SB	$ 2.55	1.750X2.50X.31TB	$ 6.46
0.87X1.12X0.12VM	$ 1.09	1.750X2.75X31TB	$ 3.45
1.00X1.25X0.25TC	$ 1.39	1.875X2.50X.25SC	$15.50
1.00X1.31X0.12TC	$ .99		
1.00X1.50X.18VB	$ 5.83		

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Parker DISTRIBUTOR

PARKER MOLYGARD wear rings

WHAT ARE MOLYGARD wear rings?

COMPOUND NO. W4650NHH MolyGard Wear Rings are nylon bearings especially compounded with high strength reinforced materials to meet the demanding requirements of today's fluid power reciprocating piston and rod applications to prevent metal-to-metal contact of moving parts.

MolyGard Wear Rings have low-swell characteristics to prevent binding. They have bearing capability meeting or exceeding that of most metals used for this purpose.

MolyGard Wear Rings are useful in most hydraulic fluids at operating temperatures up to 250°F.

WHY ARE wear rings USED?

MolyGard Wear Rings are used to prevent the metal-to-metal contact of moving parts in hydraulic and pneumatic cylinders.

Use of MolyGard wear rings can result in the following: (W4650NHH)

FEATURES	ADVANTAGES	BENEFITS
Allows use of aluminum piston and head.	Easier to machine than cast iron.	Reduces maching time – lowers manufacturing costs. Lowers weight of cylinder – adds to flexibility of equipment and also lowers handling costs.
Allows use of steel piston and head.	Considerabily lighter than cast iron.	
Centered piston and rod.	Decrease unit weight/increases structural strength of component.	Lowers manufacturing cost – more compact design.
Lower coefficient of friction of MolyGard material.	Lessens the possibility of rod or bore scoring. Avoids overstressed condition on seal caused by side loading.	Extends seal life – lowers warranty costs and increases customer satisfaction.
Strength and flexibility of MolyGard material.	Lowers operating temperature.	Extends seal life.
MolyGard material itself.	Standard thickness only 1/8"	Maximum efficiency in installation keeps cost down.
	Abosorbs system contaminants such as metal chips. Optimum compressive strength	Avoid scoring and seal damage. Under load conforms to mating surface creating larger bearing area.

Note: Caution should be taken when using MolyGard in water base fluids due to swell of Molygard in water.

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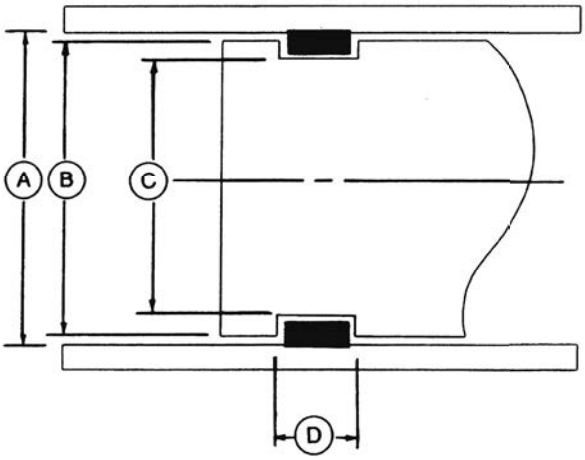
PNEU-DRAULICS

MOLYGARD wear rings
PISTON INSTALLATIONS



W1 1/16" CS
W2 1/8" CS

BORE DIA.	PART NUMBER	PISTON DIA.	GROOVE DIA.	GROOVE LENGTH
(A)		(B)	(C)	(D)
		± 000 005	± 000 005	± 010 000
1-1/4	W1-1250-500	1.225	1.090	.510
1-1/2	W1-1500-500	1.475	1.340	.510
1-3/4	W1-1750-500	1.725	1.590	.510
2-1/2	W1-2500-500	2.475	2.340	.510
1	W2-1000-625	.975	.750	.635
1-1/2	W2-1500-375	1.475	1.250	.385
1-1/2	W2-1500-500	1.475	1.250	.510
1-5/8	W2-1625-375	1.600	1.375	.385
1-3/4	W2-1750-500	1.725	1.500	.510
2	W2-2000-375	1.975	1.750	.385
2	W2-2000-500	1.975	1.750	.510
2	W2-2000-625	1.975	1.750	.635
2-1/4	W2-2250-500	2.225	2.000	.510
2-1/4	W2-2250-750	2.225	2.000	.760
2-1/2	W2-2500-375	2.475	2.250	.385
2-1/2	W2-2500-500	2.475	2.250	.510
2-5/8	W2-2625-750	2.600	2.375	.760
2-3/4	W2-2750-500	2.725	2.500	.510
2-7/8	W2-2875-750	2.850	2.625	.760
3	W2-3000-375	2.975	2.750	.385
3	W2-3000-500	2.975	2.750	.510
3	W2-3000-1000	2.975	2.750	1.010
3-1/4	W2-3250-500	3.225	3.000	.510
3-1/4	W2-3250-750	3.225	3.000	.760
3-1/2	W2-3500-375	3.475	3.250	.385

CONSULT THE PLANT FOR SPECIFIC SIZES NOT SHOWN.
NON RECURRING SET-UP CHARGES ARE REQUIRED FOR SIZES NOT SHOWN.

BORE DIA.	PART NUMBER	PISTON DIA.	GROOVE DIA.	GROOVE LENGTH
(A)		(B)	(C)	(D)
		± 000 005	± 000 005	± 010 000
3-1/2	W2-3500-500	3.475	3.250	.510
3-1/2	W2-3500-625	3.475	3.250	.635
3-5/8	W2-3625-1000	3.600	3.375	1.010
3-3/4	W2-3750-500	3.725	3.500	.510
3-3/4	W2-3750-1000	3.725	3.500	1.010
3-7/8	W2-3875-1000	3.850	3.625	1.010
4	W2-4000-375	3.975	3.750	.385
4	W2-4000-500	3.975	3.750	.510
4	W2-4000-1000	3.975	3.750	1.010
4-1/8	W2-4125-500	4.100	3.875	.510
4-1/4	W2-4250-500	4.225	4.000	.510
4-1/4	W2-4250-750	4.225	4.000	.765
4-1/4	W2-4250-1000	4.225	4.000	1.010
4-1/2	W2-4500-500	4.475	4.250	.510
4-1/2	W2-4500-1000	4.475	4.250	1.010
4-3/4	W2-4750-500	4.725	4.500	.510
4-3/4	W2-4750-1000	4.725	4.500	1.010
5	W2-5000-500	4.975	4.750	.510
5	W2-5000-1000	4.975	4.750	1.010
5	W2-5000-1750	4.975	4.750	1.760
5-1/8	W2-5125-500	5.100	4.875	.510
5-1/4	W2-5250-500	5.225	5.000	.510
5-1/4	W2-5250-1000	5.225	5.000	1.010
5-1/2	W2-5500-500	5.475	5.250	.510
5-1/2	W2-5500-750	5.475	5.250	.760
5-1/2	W2-5000-1000	5.475	5.250	1.010
5-3/4	W2-5750-500	5.725	5.500	.510
5-3/4	W2-5750-625	5.725	5.500	.635
5-3/4	W2-5750-875	5.725	5.500	.885
5-3/4	W2-5750-1000	5.725	5.500	1.010
5-3/4	W2-5750-1750	5.725	5.500	1.760
6	W2-6000-500	5.975	5.750	.510
6	W2-6000-750	5.975	5.750	.760
6	W2-6000-875	5.975	5.750	.885
6	W2-6000-1000	5.975	5.750	1.010
6-1/4	W2-6250-500	6.225	6.000	.510
6-1/4	W2-6250-625	6.225	6.000	.635
6-1/4	W2-6250-750	6.225	6.000	.760
6-1/4	W2-6250-1000	6.225	6.000	1.010
6-1/4	W2-6250-1500	6.225	6.000	1.510
6-1/2	W2-6500-500	6.475	6.250	.510
6-1/2	W2-6500-1000	6.475	6.250	1.010
6-3/4	W2-6750-500	6.725	6.500	.510

PNEU-DRAULICS
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MOLYGARD wear rings
SUGGESTED PISTON SIZES

BORE DIA.	PART NUMBER	PISTON DIA.	GROOVE DIA.	GROOVE LENGTH
(A)		(B)	(C)	(D)
		± 000 005	± 000 005	± 010 000
10	W2-10000-500	9.975	9.750	.510
10	W2-10000-1000	9.975	9.750	1.010
10-1/4	W2-10250-500	10.225	10.000	.510
10-1/2	W2-10500-500	10.475	10.250	.510
10-5/8	W2-10625-1000	10.600	10.375	1.010
11	W2-11000-312	10.975	10.750	.322
11	W2-11000-750	10.975	10.750	.760
11-1/2	W2-11500-625	11.475	11.250	.635
12	W2-12000-500	11.975	11.750	.510
12	W2-12000-750	11.975	11.750	.760

BORE DIA.	PART NUMBER	PISTON DIA.	GROOVE DIA.	GROOVE LENGTH
(A)		(B)	(C)	(D)
		± 000 005	± 000 005	± 010 000
6-3/4	W2-6750-625	6.725	6.500	.635
7	W2-7000-500	6.975	6.750	.510
7	W2-7000-750	6.975	6.750	.760
7	W2-7000-1000	6.975	6.750	1.010
7	W2-7000-1500	6.975	6.750	1.510
7-1/4	W2-7250-500	7.225	7.000	.510
7-1/4	W2-7250-750	7.225	7.000	.760
7-1/4	W2-7250-1000	7.225	7.000	1.010
7-1/2	W2-7500-500	7.475	7.250	.510
7-1/2	W2-7500-750	7.475	7.250	.760
7-1/2	W2-7500-1000	7.475	7.250	1.010
7-3/4	W2-7750-500	7.725	7.500	.510
8	W2-8000-500	7.975	7.750	.510
8	W2-8000-750	7.975	7.750	.760
8	W2-8000-1000	7.975	7.750	1.010
8-1/4	W2-8250-500	8.225	8.000	.510
8-1/4	W2-8250-750	8.225	8.000	.635
8-1/4	W2-8250-1000	8.225	8.000	.760
8-1/2	W2-8500-750	8.475	8.250	.760
8-1/2	W2-8500-1000	8.475	8.250	1.010
8-3/4	W2-8750-500	8.725	8.500	.510
8-3/4	W2-8750-750	8.725	8.500	.635
8-3/4	W2-8750-1000	8.725	8.500	.760
9	W2-9000-500	8.975	8.750	.510
9	W2-9000-750	8.975	8.750	.760
9-1/4	W2-9250-500	9.225	9.000	.510

FORMULA FOR CALCULATING PISTON WEAR RING GROOVES

1. **C** Max. Groove Dia. = **A** Min. Bore Dia. - 2 (Max. Wear Ring C/S).
   C Tolerance = ± .000" .005"

2. **B** Max. Piston Dia. = **A** Min. Bore Dia. - .025" ± .000" .005”

3. **D** Groove Length = Actual Part Length + .010” **D** Tolerance = ± .010” .000”

NOTES:

1. The piston diameter **B** will not correspond to diameters called out for piston seals. Additional clearances are required for wear ring use. Be sure the entire outsider diameter of the piston is no larger than **B**. Piston seal material should provide sufficient extrusion resistance to prevent extrusion of the piston seal with the increase in diametral clearance caused by wear ring use.

2. W2 sizes indicate wear ring cross-section of .120" to .125".

3. W1 sizes indicate wear ring cross-section of .075" to .080".

4. Radii MUST NOT EXCEED .010" MAXIMUM at corners on bottom of piston wear ring gland

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PNEU-DRAULICS

MOLYGARD wear rings
ROD INSTALLATIONS

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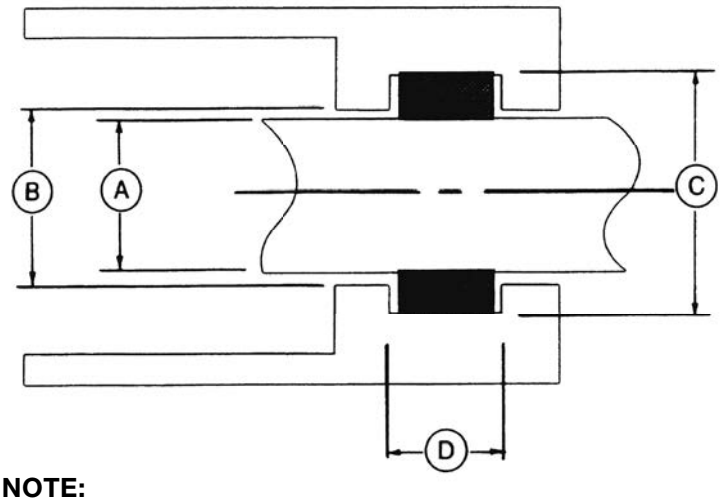

NOTE:
Split gland required for rod sizes 3/4" through 1 3/4" for ease of installation.

BORE DIA.	PART NUMBER	THROAT DIA.	GROOVE DIA.	GROOVE LENGTH
(A)		(B)	(C)	(D)
		± 000 005	± 000 005	± 010 000
3/4	W2-1000-625	.773	1.000	.635
1-1/4	W2-1500-375	1.273	1.500	.385
1-1/4	W2-1500-500	1.273	1.500	.510
1-3/8	W2-1625-375	1.398	1.625	.385
1-1/2	W2-1750-500	1.523	1.750	.510
1-3/4	W2-2000-375	1.773	2.000	.385
1-3/4	W2-2000-500	1.773	2.000	.510
1-3/4	W2-2000-625	1.773	2.000	.635
2	W2-2250-500	2.023	2.250	.510
2	W2-2250-750	2.023	2.250	.760
2-1/4	W2-2500-375	2.273	2.500	.385
2-1/4	W2-2500-500	2.273	2.500	.510
2-3/8	W2-2625-750	2.398	2.625	.760
2-1/2	W2-2750-500	2.523	2.750	.510
2-5/8	W2-2875-750	2.648	2.875	.760
2-3/4	W2-3000-375	2.773	3.000	.385
2-3/4	W2-3000-500	2.773	3.000	.510
2-3/4	W2-3000-1000	2.773	3.000	1.010
3	W2-3250-500	3.023	3.250	.510
3	W2-3250-750	3.023	3.250	.760
3-1/4	W2-3500-375	3.273	3.500	.385
3-1/4	W2-3500-500	3.273	3.500	.510
3-1/4	W2-3500-625	3.273	3.500	.635
3-3/8	W2-3625-1000	3.398	3.625	1.010
3-1/2	W2-3750-500	3.523	3.750	.510
3-1/2	W2-3750-1000	3.523	3.750	1.010
3-5/8	W2-3875-1000	3.648	3.875	1.010

BORE DIA.	PART NUMBER	THROAT DIA.	GROOVE DIA.	GROOVE LENGTH
(A)		(B)	(C)	(D)
		± 000 003	± 000 003	± 010 000
3-3/4	W2-4000-375	3.773	4.000	.385
3-3/4	W2-4000-500	3.773	4.000	.510
3-3/4	W2-4000-1000	3.773	4.000	1.010
3-7/8	W2-4125-500	3.898	4.125	.510
4	W2-4250-500	4.023	4.250	.510
4	W2-4250-750	4.023	4.250	.760
4	W2-4250-1000	4.023	4.250	1.010
4-1/4	W2-4500-500	4.273	4.500	.510
4-1/4	W2-4500-1000	4.273	4.500	1.010
4-1/2	W2-4750-500	4.523	4.750	.510
4-1/2	W2-4750-1000	4.523	4.750	1.010
4-3/4	W2-5000-500	4.773	5.000	.510
4-3/4	W2-5000-1000	4.773	5.000	1.010
4-3/4	W2-5000-1750	4.773	5.000	1.760
4-7/8	W2-5125-500	4.898	5.125	.510
5	W2-5250-500	5.023	5.250	.510
5	W2-5250-1000	5.023	5.250	1.010
5-1/4	W2-5500-500	5.273	5.500	.510
5-1/4	W2-5500-750	5.273	5.500	.760
5-1/4	W2-5500-1000	5.273	5.500	1.010
5-1/2	W2-5750-500	5.523	5.750	.510
5-1/2	W2-5750-625	5.523	5.750	.635
5-1/2	W2-5750-875	5.523	5.750	.885
5-1/2	W2-5750-1000	5.523	5.750	1.010
5-1/2	W2-5750-1750	5.523	5.750	1.760
5-3/4	W2-6000-500	5.773	6.000	.510
5-3/4	W2-6000-750	5.773	6.000	.760
5-3/4	W2-6000-875	5.773	6.000	.885
5-3/4	W2-6000-1000	5.773	6.000	1.010
6	W2-6250-500	6.023	6.250	.510
6	W2-6250-625	6.023	6.250	.635
6	W2-6250-750	6.023	6.250	.760
6	W2-6250-1000	6.023	6.250	1.010
6	W2-6250-1500	6.023	6.250	1.510
6-1/4	W2-6500-500	6.273	6.500	.510
6-1/4	W2-6500-1000	6.273	6.500	1.010
6-1/2	W2-6750-500	6.523	6.750	.510
6-1/2	W2-6750-625	6.523	6.750	.635
6-3/4	W2-7000-500	6.773	7.000	.510
6-3/4	W2-7000-750	6.773	7.000	.760
6-3/4	W2-7000-1000	6.773	7.000	1.010
6-3/4	W2-7000-1500	6.773	7.000	1.510
7	W2-7250-500	7.023	7.250	.510
7	W2-7250-750	7.023	7.250	.760
7	W2-7250-1000	7.023	7.250	1.010

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

WEAR RINGS

OUTSIDE DIAMETER	WIDTH	LIST PRICE/ EA.
1/8" CROSS SECTION		
1 1/4	1/4	$2.65
	1/2	$2.33
1 1/2	1/4	$2.19
	3/8	$2.25
	1/2	$2.32
1 5/8	1/4	$2.20
	3/8	$2.32
	1/2	$2.42
1 3/4	3/8	$2.38
	1/2	$2.45
2	1/4	$2.25
	3/8	$2.38
	1/2	$2.45
	5/8	$2.79
	3/4	$2.91
2 1/4	1/4	$4.26
	3/8	$2.38
	1/2	$2.52
	5/8	$2.82
	3/4	$2.91
	1	$3.51
2 3/8	1/2	$2.52
2 1/2	1/4	$2.38
	3/8	$2.38
	1/2	$2.55
	5/8	$2.90
	3/4	$3.04
2 3/4	1/4	$2.42
	3/8	$2.48
	1/2	$2.58
	5/8	$2.97
	3/4	$3.18
	1	$4.44
2 7/8	1/2	$2.65

OUTSIDE DIAMETER	WIDTH	LIST PRICE/ EA.
1/8" CROSS SECTION		
3	1/4	$2.45
	3/8	$2.52
	1/2	$2.65
	5/8	$3.05
	3/4	$3.31
	1	$3.70
3 1/4	1/4	$3.08
	3/8	$2.55
	1/2	$2.72
	5/8	$3.33
	3/4	$3.44
	1	$3.89
3 1/2	1/4	$2.45
	3/8	$2.61
	1/2	$2.65
	5/8	$3.23
	3/4	$3.71
	7/8	$3.98
	1	$4.22
3 5/8	1	$9.12
3 3/4	3/8	$2.65
	1/2	$2.79
	5/8	$3.24
	3/4	$3.64
	1	$4.22
4	1/4	$2.62
	3/8	$2.72
	1/2	$2.78
	5/8	$3.42
	3/4	$4.02
	7/8	$5.10
	1	$5.14
4 1/4	3/8	$3.44
	1/2	$3.58
	5/8	$4.11
	3/4	$5.00
	1	$5.22

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PNEU-DRAULICS

WEAR RINGS

OUTSIDE DIAMETER	WIDTH	LIST PRICE/ EA.
1/8" CROSS SECTION		
4 1/2	3/8	$ 3.44
	1/2	$ 3.91
	5/8	$ 4.57
	3/4	$ 4.68
	7/8	$ 5.41
	1	$ 5.44
4 3/4	1/2	$ 3.69
	3/4	$ 4.77
	1	$ 5.41
5	3/8	$ 3.49
	1/2	$ 3.68
	5/8	$ 4.24
	3/4	$ 4.82
	7/8	$ 5.30
	1	$ 5.50
5 1/4	3/8	$ 3.51
	1/2	$ 3.71
	5/8	$ 4.30
	3/4	$ 4.90
	1	$ 5.56
5 1/2	3/8	$ 3.51
	1/2	$ 3.77
	5/8	$ 4.30
	3/4	$ 4.90
	1	$ 5.59
5 3/4	3/8	$ 5.72
	1/2	$ 3.84
	3/4	$ 4.96
	1	$ 5.56
6	3/8	$ 3.71
	1/2	$ 3.84
	5/8	$ 4.50
	3/4	$ 5.14
	1	$ 5.69
6 1/4	1/2	$ 7.15
	5/8	$ 4.57
	3/4	$ 5.76
	1	$ 5.78
6 1/2	1/2	$ 3.95
	5/8	$ 4.43
	3/4	$ 5.89
	1	$ 5.74
6 3/4	1/2	$ 4.07
	1	$ 9.06
7	1/2	$ 7.97
	5/8	$ 4.98
	3/4	$ 8.86
	1	$15.15
7 1/4	1/2	$ 4.64
	1	$ 5.30

OUTSIDE DIAMETER	WIDTH	LIST PRICE/ EA.
1/8" CROSS SECTION		
7 1/2	1/2	$ 5.95
	5/8	$ 9.95
	3/4	$ 9.97
	1	$10.02
7 3/4	1/2	$10.67
8	1/2	$ 8.51
	3/4	$ 9.63
	1	$ 9.63
	1 1/2	$16.85
8 1/4	5/8	$13.90
	3/4	$ 9.74
	1	$10.25
8 1/2	1/2	$10.24
	3/4	$10.28
	1	$ 9.80
8 3/4	1	$17.01
9	1/2	$ 9.95
	3/4	$ 9.95
	1	$12.90
9 1/2	1/2	$12.33
	1	$12.52
10	1	$10.27
10 1/4	3/4	$10.92
	1	$12.77
	1 1/2	$71.85
12	1/2	$10.91
	3/4	$14.04
	1	$20.15
13	1	$12.15

Call for other material and color tight tolerance wear rings

PNEU-DRAULICS
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Parker DISTRIBUTOR

WRT Profile, Tight-Tolerance Rod Wear Ring

4	7	3	3	WRT	1	2	5	-	0	2	0	0	0	-	0	7	5	0				

Material
4 Digit Material Code
Example:
4733 = WearGard™
(4733 only for WRT)

Profile

Max. Cross-Section
Example: 125 = 1/8"

Nominal Rod Diameter
(x1000) (A1)
Example:
2.000" X 1000 = 02000

Nominal Width (x1000) (W)
Example: 0.750" X 1000 = 0750
(0125 to 2000 or larger)

End Cut
Example:
Blank = Butt Cut
($KIV, $TEP)

Gland Dimensions — WRT Profile

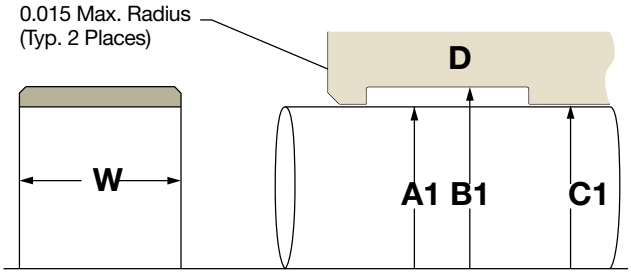

Table 9-8. WRT Gland Dimensions — Inch

A1 Rod Diameter	B1 Groove Diameter	C1 Throat Diameter	D1 Groove Width	Part Number
+.000/-.002	+.002/-.000	+.002/-.000	+.010/-.000	
0.875	1.000	0.892	D = W + 0.010"	4733WRT062-00875-XXXX
1.000	1.125	1.017	D = W + 0.010"	4733WRT062-01000-XXXX
1.125	1.250	1.142	D = W + 0.010"	4733WRT062-01125-XXXX
1.250	1.375	1.267	D = W + 0.010"	4733WRT062-01250-XXXX
1.375	1.500	1.392	D = W + 0.010"	4733WRT062-01375-XXXX
1.500	1.625	1.517	D = W + 0.010"	4733WRT062-01500-XXXX
1.625	1.750	1.642	D = W + 0.010"	4733WRT062-01625-XXXX
1.750	1.875	1.767	D = W + 0.010"	4733WRT062-01750-XXXX
2.250	2.375	2.267	D = W + 0.010"	4733WRT062-02250-XXXX
2.500	2.625	2.517	D = W + 0.010"	4733WRT062-02250-XXXX
+.000/-.002	+.002/-.000	+.002/-.000	+.010/-.000	
0.750	1.001	0.767	D = W + 0.010"	4733WRT125-00750-XXXX
0.875	1.126	0.892	D = W + 0.010"	4733WRT125-00875-XXXX
1.000	1.251	1.017	D = W + 0.010"	4733WRT125-01000-XXXX
1.125	1.376	1.142	D = W + 0.010"	4733WRT125-01125-XXXX
1.250	1.501	1.267	D = W + 0.010"	4733WRT125-01250-XXXX
1.375	1.626	1.392	D = W + 0.010"	4733WRT125-01375-XXXX
1.500	1.751	1.517	D = W + 0.010"	4733WRT125-01500-XXXX
1.625	1.876	1.642	D = W + 0.010"	4733WRT125-01625-XXXX
1.750	2.001	1.767	D = W + 0.010"	4733WRT125-01750-XXXX
1.875	2.126	1.892	D = W + 0.010"	4733WRT125-01875-XXXX

WRT Gland Dimensions — Inch (Continued)

A1 Rod Diameter	B1 Groove Diameter	C1 Throat Diameter	D1 Groove Width	Part Number
+.000/-.002	+.002/-.000	+.002/-.000	+.010/-.000	
2.000	2.251	2.017	D = W + 0.010"	4733WRT125-02000-XXXX
2.125	2.376	2.142	D = W + 0.010"	4733WRT125-02125-XXXX
2.250	2.501	2.267	D = W + 0.010"	4733WRT125-02250-XXXX
2.375	2.626	2.392	D = W + 0.010"	4733WRT125-02375-XXXX
2.500	2.751	2.517	D = W + 0.010"	4733WRT125-02500-XXXX
2.625	2.876	2.642	D = W + 0.010"	4733WRT125-02625-XXXX
2.750	3.001	2.767	D = W + 0.010"	4733WRT125-02750-XXXX
2.875	3.126	2.892	D = W + 0.010"	4733WRT125-02875-XXXX
3.000	3.251	3.017	D = W + 0.010"	4733WRT125-03000-XXXX
3.125	3.376	3.142	D = W + 0.010"	4733WRT125-03125-XXXX
3.250	3.501	3.267	D = W + 0.010"	4733WRT125-03250-XXXX
3.375	3.626	3.392	D = W + 0.010"	4733WRT125-03375-XXXX
3.500	3.751	3.517	D = W + 0.010"	4733WRT125-03500-XXXX
3.625	3.876	3.642	D = W + 0.010"	4733WRT125-03625-XXXX
3.750	4.001	3.767	D = W + 0.010"	4733WRT125-03750-XXXX
3.875	4.126	3.892	D = W + 0.010"	4733WRT125-03875-XXXX
3.937	4.188	3.954	D = W + 0.010"	4733WRT125-03937-XXXX
4.000	4.251	4.017	D = W + 0.010"	4733WRT125-04000-XXXX
4.125	4.376	4.142	D = W + 0.010"	4733WRT125-04125-XXXX
4.250	4.501	4.267	D = W + 0.010"	4733WRT125-04250-XXXX
4.375	4.626	4.392	D = W + 0.010"	4733WRT125-04375-XXXX
4.500	4.751	4.517	D = W + 0.010"	4733WRT125-04500-XXXX
4.625	4.876	4.642	D = W + 0.010"	4733WRT125-04625-XXXX
4.750	5.001	4.767	D = W + 0.010"	4733WRT125-04750-XXXX
4.875	5.126	4.892	D = W + 0.010"	4733WRT125-04875-XXXX
5.000	5.251	5.017	D = W + 0.010"	4733WRT125-05000-XXXX
5.125	5.376	5.142	D = W + 0.010"	4733WRT125-05125-XXXX
5.250	5.501	5.267	D = W + 0.010"	4733WRT125-05250-XXXX
5.375	5.626	5.392	D = W + 0.010"	4733WRT125-05375-XXXX
5.500	5.751	5.517	D = W + 0.010"	4733WRT125-05500-XXXX
5.625	5.876	5.642	D = W + 0.010"	4733WRT125-05625-XXXX
+.000/-.004	+.003/-.000	+.003/-.000	+.010/-.000	
5.750	6.001	5.770	D = W + 0.010"	4733WRT125-05750-XXXX
6.000	6.251	6.020	D = W + 0.010"	4733WRT125-06000-XXXX
6.250	6.501	6.270	D = W + 0.010"	4733WRT125-06250-XXXX
6.500	6.751	6.520	D = W + 0.010"	4733WRT125-06500-XXXX
6.750	7.001	6.770	D = W + 0.010"	4733WRT125-06750-XXXX
7.000	7.251	7.020	D = W + 0.010"	4733WRT125-07000-XXXX

PNEU-DRAULICS
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Nicholasville, KY 40340-0037

Parker DISTRIBUTOR

WPT Profile, Tight-Tolerance Piston Wear Ring

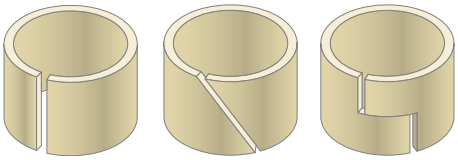
WPT tight-tolerance piston wear rings are the premier bearings for light- to heavy-duty hydraulic applications. WPTs are available in standard sizes from 1" up to 12" bore diameters (larger sizes upon request). WPT wear rings feature chamfered corners on the I.D. and are designed to snap closed during assembly to hold tight against the piston, eliminating bore interference and simplifying installation.

Technical Data

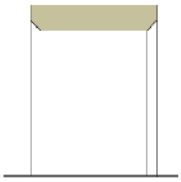
Standard Material
W4733 WearGard™

Radial Tolerance
+.000"/ -.002" (up to 6" O.D.); +.000/-.003" (6" to 12" O.D.)

End Cuts
Butt Cut, Angle Cut, Step Cut

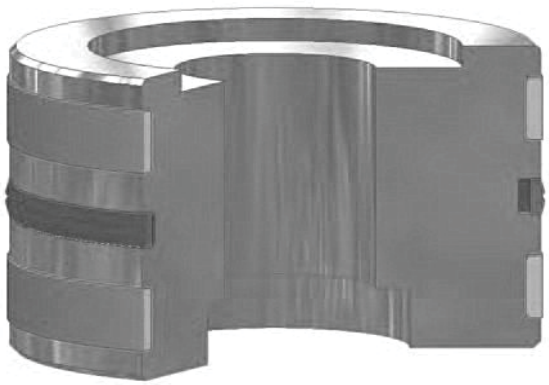


ButtCut ***AngleCut*** ***StepCut***



WPT Cross-Section

Options
Virtually any width can be produced without assessing a setup charge. Additionally, other cross-sections not shown are available when required.



Piston sealing system comprised of WPT wear rings and BP bi-directional piston seal

NATIONWIDE
CALL 1-800-333-SEAL
FAX (859) 887-4165
www.pneu-draulics.com

SALES OFFICE HOURS
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EASTERN STANDARD TIME

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4	7	3	3	WRT	1	2	5	-	0	4	0	0	0	-	0	5	0	0				

Material
4 Digit Material Code
Example:
4733 = WearGard™
(4733 only for WPT)

Profile

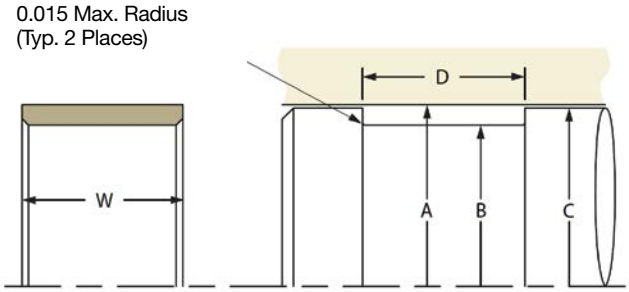
Max. Cross-Section
Example: 125 = 1/8"

Nominal Bore Diameter
(A) (x1000)
Example:
4.000" X 1000 = 04000

Nominal Width (W) (x1000)
Example: 0.500" X 1000 = 0500
(0125 to 2000 or larger)

End Cut
Example:
Blank = Butt Cut
($KIV, $TEP)

GLAND DIMENSIONS WPT PROFILE



WPT Gland Dimensions — Inch

A Bore Diameter	B Groove Diameter	C Piston Diameter	D Groove Width	Part Number
+.002/-.000	+.000/-.002	+.000/-.002	+.010/-.000	
1.000	0.875	0.983	D = W + 0.010"	4733WPT062-01000-XXXX
1.125	1.000	1.108	D = W + 0.010"	4733WPT062-01125-XXXX
1.250	1.125	1.233	D = W + 0.010"	4733WPT062-01250-XXXX
1.375	1.250	1.358	D = W + 0.010"	4733WPT062-01375-XXXX
1.500	1.375	1.483	D = W + 0.010"	4733WPT062-01500-XXXX
1.625	1.500	1.608	D = W + 0.010"	4733WPT062-01625-XXXX
1.750	1.625	1.733	D = W + 0.010"	4733WPT062-01750-XXXX
1.875	1.750	1.858	D = W + 0.010"	4733WPT062-01875-XXXX
2.375	2.250	2.358	D = W + 0.010"	4733WPT062-02375-XXXX
2.625	2.500	2.608	D = W + 0.010"	4733WPT062-02625-XXXX
+.002/-.000	+.000/-.002	+.000/-.002	+.010/-.000	
1.000	0.749	0.983	D = W + 0.010"	4733WPT125-01000-XXXX
1.125	0.874	1.108	D = W + 0.010"	4733WPT125-01125-XXXX
1.250	0.999	1.233	D = W + 0.010"	4733WPT125-01250-XXXX
1.375	1.124	1.358	D = W + 0.010"	4733WPT125-01375-XXXX
1.500	1.249	1.483	D = W + 0.010"	4733WPT125-01500-XXXX
1.625	1.374	1.608	D = W + 0.010"	4733WPT125-01625-XXXX
1.750	1.499	1.733	D = W + 0.010"	4733WPT125-01750-XXXX
1.875	1.624	1.858	D = W + 0.010"	4733WPT125-01875-XXXX

WPT Gland Dimensions — Inch

A Bore Diameter	B Groove Diameter	C Piston Diameter	D Groove Width	Part Number
+.002/-.000	+.000/-.002	+.000/-.002	+.010/-.000	
2.000	1.749	1.983	D = W + 0.010"	4733WPT125-02000-XXXX
2.125	1.874	2.108	D = W + 0.010"	4733WPT125-02125-XXXX
2.250	1.999	2.233	D = W + 0.010"	4733WPT125-02250-XXXX
2.375	2.124	2.358	D = W + 0.010"	4733WPT125-02375-XXXX
2.500	2.249	2.483	D = W + 0.010"	4733WPT125-02500-XXXX
2.625	2.374	2.608	D = W + 0.010"	4733WPT125-02625-XXXX
2.750	2.499	2.733	D = W + 0.010"	4733WPT125-02750-XXXX
2.875	2.624	2.858	D = W + 0.010"	4733WPT125-02875-XXXX
3.000	2.749	2.983	D = W + 0.010"	4733WPT125-03000-XXXX
3.125	2.874	3.108	D = W + 0.010"	4733WPT125-03125-XXXX
3.250	2.999	3.233	D = W + 0.010"	4733WPT125-03250-XXXX
3.375	3.124	3.358	D = W + 0.010"	4733WPT125-03375-XXXX
3.500	3.249	3.483	D = W + 0.010"	4733WPT125-03500-XXXX
3.625	3.374	3.608	D = W + 0.010"	4733WPT125-03625-XXXX
3.750	3.499	3.733	D = W + 0.010"	4733WPT125-03750-XXXX
3.875	3.624	3.858	D = W + 0.010"	4733WPT125-03875-XXXX
3.937	3.687	3.920	D = W + 0.010"	4733WPT125-03937-XXXX
4.000	3.749	3.983	D = W + 0.010"	4733WPT125-04000-XXXX
4.125	3.874	4.108	D = W + 0.010"	4733WPT125-04125-XXXX
4.250	3.999	4.233	D = W + 0.010"	4733WPT125-04250-XXXX
4.375	4.124	4.358	D = W + 0.010"	4733WPT125-04375-XXXX
4.500	4.249	4.483	D = W + 0.010"	4733WPT125-04500-XXXX
4.625	4.374	4.608	D = W + 0.010"	4733WPT125-04625-XXXX
4.750	4.499	4.733	D = W + 0.010"	4733WPT125-04750-XXXX
4.875	4.624	4.858	D = W + 0.010"	4733WPT125-04875-XXXX
+.004/-.000	+.000/-.003	+.000/-.003	+.010/-.000	
5.000	4.749	4.982	D = W + 0.010"	4733WPT125-05000-XXXX
5.125	4.874	5.107	D = W + 0.010"	4733WPT125-05125-XXXX
5.250	4.999	5.232	D = W + 0.010"	4733WPT125-05250-XXXX
5.375	5.124	5.357	D = W + 0.010"	4733WPT125-05375-XXXX
5.500	5.249	5.482	D = W + 0.010"	4733WPT125-05500-XXXX
5.625	5.374	5.607	D = W + 0.010"	4733WPT125-05625-XXXX
5.750	5.499	5.732	D = W + 0.010"	4733WPT125-05750-XXXX
6.000	5.749	5.980	D = W + 0.010"	4733WPT125-06000-XXXX
6.250	5.999	6.230	D = W + 0.010"	4733WPT125-06250-XXXX
6.500	6.249	6.480	D = W + 0.010"	4733WPT125-06500-XXXX
6.750	6.499	6.730	D = W + 0.010"	4733WPT125-06750-XXXX
7.000	6.749	6.980	D = W + 0.010"	4733WPT125-07000-XXXX
7.500	7.249	7.480	D = W + 0.010"	4733WPT125-07500-XXXX

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Parker DISTRIBUTOR

PNEU-DRAULICS

Pneu-Draulics Stock Sizes

Rod Wear Rings

PART NUMBER	ROD SIZE	LIST PRICE
4733WRT12503750-0750	3-3/4	$8.95
4733WRT12505000-0750	5	$13.86

Piston Wear Rings

PART NUMBER	PISTON SIZE	LIST PRICE
4733WPT12501500-0500	1-1/2	$13.38
4733WPT12502000-0375	2	$10.77
4733WPT12502500-0500	2-1/2	$13.91
4733WPT12502500-1000	2-1/2	$14.28
4733WPT12502750-0500	2-3/4	$14.50
4733WPT12503000-0500	3	$ 8.07
4733WPT12503000-0750	3	$16.02
4733WPT12503250-0375	3-1/4	$15.35
4733WPT12503250-0500	3-1/4	$15.30
4733WPT12503250-0750	3-1/4	$13.70
4733WPT12503500-0500	3-1/2	$20.65
4733WPT12503500-1000	3-1/2	$19.85
4733WPT12503750-0500	3-3/4	$14.93
4733WPT12504000-0375	4	$ 8.61
4733WPT12504000-0500	4	$ 8.33
4733WPT12504000-0625	4	$21.92
4733WPT12504000-0750	4	$10.91
4733WPT12504000-1000	4	$25.73
4733WPT12504250-0500	4-1/4	$12.90
4733WPT12504250-0750	4-1/4	$11.72
4733WPT12504250-1000	4-1/4	$17.33
4733WPT12504500-0500	4-1/2	$14.43
4733WPT12504750-0750	4-3/4	$20.97
4733WPT12505000-0500	5	$ 8.03
4733WPT12505250-0500	5-1/4	$11.15
4733WPT12505250-0750	5-1/4	$17.14
4733WPT12505500-0500	5-1/2	$14.87
4733WPT12506000-0500	6	
4733WPT12506000-0625	6	$26.13
4733WPT12506000-0750	6	$27.77
4733WPT12506000-1000	6	$26.40
4733WPT12506500-0500	6-1/2	$ 9.42
4733WPT12506500-0750	6-1/2	$25.84
4733WPT12507000-0500	7	$19.21
4733WPT12507000-0750	7	$33.06
4733WPT12507000-1000	7	$25.57

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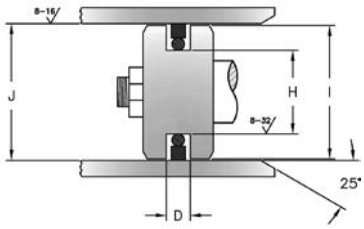
PNEU-DRAULICS

TEFLON PISTON SEALS



-40°F to +220°F
0 to 5000 PSI
Glass filled teflon seal with o-ring expander

(Other sizes available call for price and delivery.)

PART #	DESCRIPTION	BORE DIAMETER +/-.001	GROOVE DIAMETER +/-.002	PISTON DIAMETER +/-.001	GROOVE WIDTH +/-.002	LOADER RING	LIST PRICE/EA.
3/4 X 1/16 PS	TFE-S-2	.750	.491	.747	.083	013	$ 2.73
1 X 1/16 PS	TFE-S-3	1.00	.741	.997	.083	017	$ 2.73
1 1/4 X 1/16 PS	TFE-S-4	1.25	.991	1.247	.083	021	$ 2.62
1 1/2 X 1/16 PS	TFE-S-5	1.50	1.241	1.497	.083	025	$ 2.62
1 3/4 X 1/8 PS	TFE-S-6	1.75	1.360	1.747	.122	125	$ 2.62
2 X 1/8 PS	TFE-S-7	2.00	1.606	1.996	.130	129	$ 2.68
2 1/4 X 1/8 PS	TFE-S-8	2.25	1.856	2.246	.130	133	$ 2.79
2 1/2 X 1/8 PS	TFE-S-9	2.50	2.106	2.496	.130	137	$ 3.06
2 3/4 X 1/8 PS	TFE-S-10	2.75	2.356	2.746	.130	141	$ 3.19
3 X 1/8 PS	TFE-S-11	3.00	2.606	2.996	.130	145	$ 3.29
3 1/4 X 1/8 PS	TFE-S-12	3.25	2.856	3.246	.130	149	$ 4.20
3 1/2 X 1/8 PS	TFE-S-13	3.50	3.106	3.496	.130	151	$ 4.25
3 3/4 X 1/8 PS	TFE-S-14	3.75	3.356	3.746	.130	152	$ 4.32
4 X 1/8 PS	TFE-S-15	4.00	3.606	3.996	.130	153	$ 6.52
4 1/4 X 1/8 PS	TFE-S-16	4.25	3.856	4.246	.130	154	$ 6.52
4 1/2 X 1/8 PS	TFE-S-17	4.50	4.106	4.496	.130	155	$ 6.52
4 3/4 X 1/8 PS	TFE-S-18	4.75	4.356	4.746	.130	156	$ 7.08
5 X 1/8 PS	TFE-S-19	5.00	4.606	4.996	.130	157	$ 7.13
5 1/4 X 1/8 PS	TFE-S-20	5.25	4.856	5.246	.130	158	$ 7.18
5 1/2 X 1/8 PS	TFE-S-21	5.50	5.106	5.496	.130	159	$ 7.18
5 3/4 X 1/8 PS	TFE-S-22	5.75	5.232	5.746	.159	251	$ 8.25
6 X 1/8 PS	TFE-S-23	6.00	5.482	5.996	.159	253	$ 8.58
6 1/4 X 1/8 PS	TFE-S-24	6.25	5.732	6.246	.159	255	$12.72
6 1/2 X 1/8 PS	TFE-S-25	6.50	5.982	6.496	.159	257	$ 8.93
6 3/4 X 1/8 PS	TFE-S-26	6.75	6.232	6.746	.159	258	$ 8.93
7 X 1/8 PS	TFE-S-27	7.00	6.482	6.996	.159	259	$ 9.46
7 1/4 X 1/8 PS	TFE-S-28	7.25	6.732	7.246	.159	260	$10.21
7 3/4 X 1/8 PS	TFE-S-30	7.75	7.232	7.746	.159	262	$10.81
8 X 1/8 PS	TFE-S-31	8.00	7.482	7.996	.159	263	$11.04
8 1/4 X 1/8 PS	TFE-S-32	8.25	7.732	8.246	.159	264	$32.77
8 1/2 X 1/8 PS	TFE-S-33	8.50	7.982	8.493	.159	265	$24.96
9 X 1/8 PS	TFE-S-35	9.00	8.482	8.996	.159	267	$31.92
10 X 1/8 PS	TFE-S-39	10.00	9.482	9.996	.159	271	$54.86
11 X 1/8 PS	TFE-S-43	11.00	10.482	10.996	.159	275	$60.60
13 X 1/8 PS	TFE-S-46	13.00	12.482	12.996	.159	278	$87.45

For Bronze filled use multiplier of 1.50

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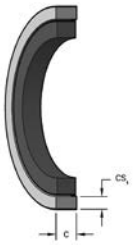
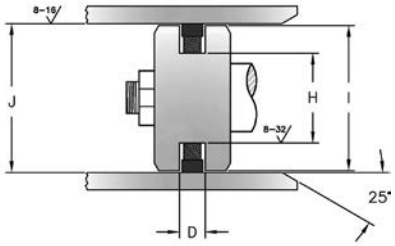
RECTANGULAR TEFLON PISTON SEALS





-40°F to +220°F
0 to 5000 PSI
Glass filled teflon seal with o-ring expander

(Other sizes available call for price and delivery.)

PART #	DESCRIPTION	BORE DIAMETER +/-.001	WIDTH +/-.002	GROOVE DIAMETER +/-.002	LOADER RING	LIST PRICE/ EA.
1 X 1/8 PS	TFE-R-1	1.00	.129	.692	115	$ 7.58
1 1/4 X 1/8 PS	TFE-R-2	1.25	.129	.942	119	$ 5.73
1 1/2 X 1/8 PS	TFE-R-3	1.50	.129	1.192	123	$ 6.02
1 3/4 X 1/8 PS	TFE-R-4	1.75	.129	1.443	127	$ 6.42
2 X 1/8 PS	TFE-R-5	2.00	.129	1.693	131	$ 7.18
2 1/4 X 1/8 PS	TFE-R-6	2.25	.129	1.943	135	$ 7.58
2 1/2 X 1/8 PS	TFE-R-7	2.50	.129	2.193	139	$ 7.91
2 3/4 x 1/8 PS	TFE-R-8	2.75	.129	2.443	143	$ 8.01
3 X 1/4 PS	TFE-R-9	3.00	.284	2.443	333	$ 8.25
3 1/4 X 1/4 PS	TFE-R-10	3.25	.284	2.695	335	$ 8.75
3 1/2 X 1/4 PS	TFE-R-11	3.50	.284	2.945	337	$ 9.07
3 3/4 X 1/4 PS	TFE-R-12	3.75	.284	3.195	339	$ 9.70
4 X 1/4 PS	TFE-R-13	4.00	.284	3.445	341	$ 10.36
4 1/4 X 1/4 PS	TFE-R-14	4.25	.284	3.695	343	$ 11.58
4 1/2 X 1/4 PS	TFE-R-15	4.50	.284	3.945	345	$ 12.25
4 3/4 X 1/4 PS	TFE-R-16	4.75	.284	4.195	347	$ 13.21
5 X 1/4 PS	TFE-R-17	5.00	.284	4.445	349	$ 13.93
5 1/4 X 3/8 PS	TFE-R-18	5.25	.379	4.488	425	$ 26.96
5 1/2 X 3/8 PS	TFE-R-19	5.50	.379	4.738	427	$ 26.96
5 3/4 X 3/8 PS	TFE-R-20	5.75	.379	4.988	429	$ 28.15
6 X 3/8 PS	TFE-R-21	6.00	.379	5.238	431	$ 21.56
6 1/4 X 3/8 PS	TFE-R-21.5	6.25	.379	5.488	433	$ 29.93
6 1/2 X 3/8 PS	TFE-R-22	6.50	.379	5.738	435	$ 24.74
7 X 3/8 PS	TFE-R-23	7.00	.379	6.238	438	$ 33.89
7 1/2 X 3/8 PS	TFE-R-24	7.50	.379	6.738	440	$ 34.87
8 X 3/8 PS	TFE-R-25	8.00	.379	7.238	442	$ 40.09
8 1/2 X 3/8 PS	TFE-R-26	8.50	.379	7.738	444	$ 47.28
9 X 3/8 PS	TFE-R-27	9.00	.379	8.122	445	$ 66.19
9 1/2 X 3/8 PS	TFE-R-28	9.50	.379	8.622	446	$ 69.01
10 X 3/8 PS	TFE-R-29	10	.379	9.122	447	$ 66.19
11 X 3/8 PS	TFE-R-30	11	.379	10.122	449	$149.76
12 X 3/8 PS	TFE-R-31	12	.379	11.122	451	$154.34
13 X 3/8 PS	TFE-R-32	13	.379	12.122	453	$165.71
14 X 3/8 PS	TFE-R-33	14	.379	13.122	455	$179.62

BRONZE AVAILABLE UPON REQUEST

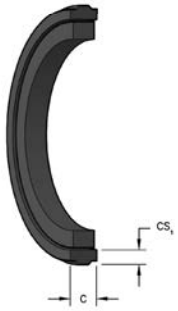
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

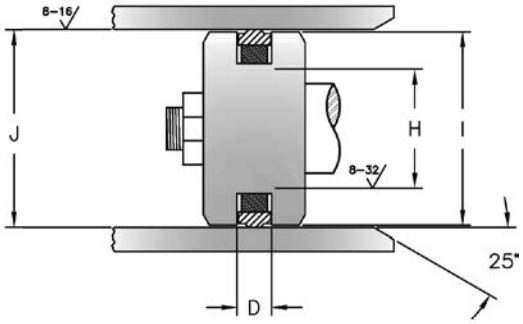
PNEU-DRAULICS

RECTANGULAR POLYESTER PISTON SEAL

Polyester piston rings are a compact, low friction seal for light to medium duty hydraulic cylinders. They have rapid recovery of face after assembly, unlike common PTFE faces, no resizing is required. Excellent position holding characteristics under load and wear resistance.

Hallite type 755





Red Polyester with Nitrile Expander
-40°F to +230°F
0 to 5000 PSI

PART NUMBER	OD	ID	L1	LIST PRICE/EA.
1 X 1/8 PSF	1.000	.691	.129	$ 5.86
1 1/4 X 1/8 PSF	1.250	.941	.129	$ 6.98
1 1/2 X 1/8 PSF	1.500	1.191	.129	$ 7.04
1 3/4 X 1/8 PSF	1.750	1.441	.129	$ 6.68
2 X 1/8 PSF	2.000	1.606	.129	$ 8.85
2 X 1.69 X 1/8 PSF	2.000	1.691	.129	$ 7.85
2 1/4 X 1/8 PSF	2.250	1.941	.129	$11.27
2 1/2 X 1/8 PSF	2.500	2.191	.129	$ 8.39
2 1/2 X 1/4 PSF	2.500	2.106	.283	$16.40
2 3/4 X 1/8 PSF	2.750	2.441	.129	$14.07
3 X 1/4 PSF	3.000	2.462	.283	$10.30
3 1/4 X 1/4 PSF	3.250	2.712	.283	$11.93
3 1/2 X 1/4 PSF	3.500	2.962	.283	$12.05
3 3/4 X 1/4 PSF	3.750	3.212	.283	$13.00
4 X 1/4 PSF	4.000	3.462	.283	$12.31
4 1/4 X 1/4 PSF	4.250	3.712	.283	$14.63
4 1/2 X 1/4 PSF	4.500	3.962	.283	$13.08
4 3/4 X 1/4 PSF	4.750	4.212	.283	$15.45
5 X 1/4 PSF	5.000	4.462	.283	$16.80
6 X 3/8 PSF	6.000	5.254	.378	$24.20
6 1/4 X 3/8 PSF	6.250	5.504	.378	$24.72
6 1/2 X 3/8 PSF	6.500	5.754	.378	$31.84
7 X 3/8 PSF	7.000	6.254	.378	$25.78
8 X 3/8 PSF	8.000	7.254	.378	$27.35

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

PS914 STYLE PISTON SEALS

This is a step-cut glass filled nylon piston seal that uses an oval loader

Material: Glass filled nylon
Rubber energizer

-40 to 220F
0 to 6000 PSI

PART NUMBER	BORE DIAMETER TOL. +.005/-0	SEAL HEIGHT	GROOVE WIDTH +.005/-.0	GROOVE TOL. DIAMETER TOL. +0/-0.005	PISTON DIAMETER	LIST PRICE
PS914-2000-282	2.000	0.274	0.282	1.462	1.999+0/-0.065	$ 47.00
PS914-2250-282	2.250	0.274	0.282	1.712	2.249+0/-0.065	$ 50.55
PS914-2500-282	2.500	0.274	0.282	1.962	2.499+0/-0.065	$ 47.60
PS914-2500-312	2.500	0.306	0.312	1.908	2.499+0/-0.065	$ 54.89
PS914-2750-282	2.750	0.274	0.282	2.212	2.749+0/-0.065	$ 52.80
PS914-3000-282	3.000	0.274	0.282	2.442	2.999+0/-0.080	$ 54.89
PS914-3000-312	3.000	0.306	0.312	2.408	2.999+0/-0.080	$ 53.21
PS914-3500-282	3.500	0.274	0.282	2.942	3.499+0/-0.080	$ 60.35
PS914-3500-312	3.500	0.306	0.312	2.908	3.499+0/-0.080	$ 63.54
PS914-4000-282	4.000	0.274	0.282	3.442	3.999+0/-0.080	$ 63.78
PS914-4000-312	4.000	0.306	0.312	3.908	3.999+0/-0.080	$ 65.71
PS914-4250-282	4.250	0.274	0.282	3.692	4.249+0/-0.080	$ 63.71
PS914-4500-282	4.500	0.274	0.282	3.942	4.499+0/-0.080	$ 74.55
PS914-4500-312	4.500	0.306	0.312	3.908	4.499+0/-0.080	$ 74.55
PS914-4750-282	4.750	0.274	0.282	4.192	4.749+0/-0.080	$ 74.13
PS914-5000-282	5.000	0.274	0.282	4.442	4.999+0/-0.080	$ 80.03
PS914-5000-375	5.000	0.370	0.377	4.240	4.999+0/-0.080	$ 94.10
PS914-5250-375	5.250	0.274	0.282	4.692	5.249+0/-0.006	$107.60
PS914-5500-375	5.500	0.370	0.377	4.740	5.499+0/-0.100	$ 90.22
PS914-6000-375	6.000	0.370	0.377	5.240	5.999+0/-0.100	$107.60
PS914-7000-375	7.000	0.370	0.377	6.240	6.999+0/-0.100	$102.44
PS914-8000-375	8.000	0.370	0.377	7.240	7.999+0/-0.100	$105.75
PS914-8500-375	8.500	0.370	0.377	7.740	8.499+0/-0.100	$106.84

111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

PNEU-DRAULICS

PS2000 STYLE PISTON SEALS

Material: Glass filled nylon
Rubber energizer

-40 to 220F
0 to 6000 PSI

These piston seals sometimes use a round loader instead of a square loader. Most are interchangeable with the PS914.

PART NUMBER	BORE DIAMETER TOL. +.005/-0	SEAL HEIGHT	GROOVE WIDTH +.005/-.0	GROOVE TOL. DIAMETER TOL. +0/-0.005	PISTON DIAMETER	LIST PRICE
PS2027-32	2.000	0.274	0.282	1.462	1.999+0/-0.065	$ 32.25
PS2027-40	2.500	0.274	0.282	1.962	2.499+0/-0.065	$ 20.44
PS2027-52	3.250	0.274	0.282	2.712	3.249+0/-0.080	$ 18.93
PS2031-56	3.500	0.305	0.312	2.908	3.499+0/-0.080	$ 9.61
PS2037-56	3.500	0.368	0.375	2.740	3.499+0/-0.080	$ 14.31
PS2027-56	3.500	0.274	0.282	2.942	3.499+0/-0.080	$ 23.94
PS2031-64	4.000	0.305	0.312	3.408	3.999+0/-0.080	$ 27.08
PS2027-64	4.000	0.274	0.282	3.442	3.999+0/-0.080	$ 27.01
PS2031-72	4.500	0.305	0.312	3.908	4.499+0/-0.080	$ 23.22
PS2031-80	5.000	0.305	0.312	4.408	4.499+0/-0.080	$ 30.95
PS2037-88	5.500	0.368	0.375	4.740	5.499+0/-0.100	$ 26.99
PS2031-88	5.500	0.305	0.312	4.908	5.499+0/-0.100	$ 39.12
PS2037-96	6.000	0.368	0.375	5.240	5.999+0/-0.100	$ 51.71
PS2037-100	6.250	0.368	0.375	5.490	6.249+0/-0.100	$193.59
PS2037-104	6.500	0.368	0.375	5.740	6.499+0/-0.100	$ 82.11
PS2037-112	7.000	0.368	0.375	6.240	6.999+0/-0.100	$ 96.56

PNEU-DRAULICS
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2 PC "PSM" PISTON SEAL

This seal profile utilizes the same groove dimensions as a standard o-ring to T-seal. One or two PTFE back-up rings may be used for wider grooves. Extrusion resistant by design, this seal also is resistant to rolling and twisting. Installation is an easy two step snap-in procedure.

Material:
93A Urethane

-65 to 220F 0
to 5000 PSI

PART NUMBER	BORE DIAMETER TOL. +.002-0.00	SEAL HEIGHT	GROOVE WIDTH TOL. +/-.002	GROOVE DIAMETER TOL. +/-.002	PISTON DIAMETER	LIST PRICE
PSM-218	1.500	0.165	0.185	1.254	1.499 +0/-0.005	$ 6.92
PSM-218 WB	1.500	0.265	0.275	1.258	1.499 +0/-0.005	$11.61
PSM-222	1.750	0.165	0.185	1.500	1.749 +0/-0.005	$13.86
PSM-326	2.000	0.265	0.280	1.625	1.999 +0/-0.005	$ 9.38
PSM-326 WB	2.000	0.375	0.394	1.625	1.999 +0/-0.005	$12.75
PSM-328	2.225	0.265	0.280	1.875	2.249 +0/-0.005	$ 8.97
PSM-330	2.500	0.265	0.280	2.125	2.499 +0/-0.005	$10.88
PSM-330 WB	2.500	0.395	0.410	2.125	2.499 +0/-0.005	$12.32
PSM-332	2.750	0.265	0.280	2.375	2.749 +0/-0.005	$11.50
PSM-334	3.000	0.265	0.280	2.625	2.999 +0/-0.005	$11.05
PSM-334 WB	3.000	0.395	0.410	2.625	2.999 +0/-0.005	$12.68
PSM-336	3.250	0.265	0.280	2.875	3.249 +0/-0.005	$12.25
PSM-338	3.500	0.265	0.280	3.125	3.499 +0/-0.005	$19.82
PSM-338 WB	3.500	0.395	0.410	3.125	3.499 +0/-0.005	$17.63
PSM-342	4.000	0.265	0.280	3.625	3.999 +0/-0.005	$13.40
PSM-342 WB	4.000	0.395	0.410	3.625	3.999 +0/-0.005	$16.30
PSM-344	4.250	0.265	0.280	3.875	4.249 +0/-0.005	$13.45
PSM-350	5.000	0.265	0.280	4.625	4.999 +0/-0.005	$27.61
PSM-425 WB	5.000	0.518	0.538	4.528	4.999 +0/-0.005	$28.40
PSM-433	6.000	0.350	0.365	5.520	5.999 +0/-0.005	$36.56
PSM-439	7.000	0.350	0.365	6.520	6.999 +0/-0.005	$39.95
PSM-443	8.000	0.350	0.365	7.520	7.999 +0/-0.005	$50.70

** OTHER SIZES AVAILABLE UPON REQUEST

111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

PNEU-DRAULICS

UNI-RING PISTON SEALS

The uni-ring is a one-piece double acting piston seal made of cast polyurethane. The tough outer layer is highly resistant to abrasion. The inner layer acts as a static seal and also energizes the OD.

Don't see the size you need?
Call **1-800-333-SEAL**.
We are constantly expanding
our inventory to service
our customers.

Material: Urethane 57A/60D

-65 to 220F 0 to 5000 PSI

PART NUMBER	BORE DIAMETER	SEAL HEIGHT	GROOVE WIDTH TOL. +0.015/-0	GROOVE DIAMETER TOL. +/-.002	PISTON DIAMETER	LIST PRICE
PSU-1.50X1.00X.375	1.50+0.006/-0	0.375	0.394	1.000 +.006/-0	1.499	$11.07
PSU-1.5X1.25X.187	1.50 +0.003/-0	0.187	0.196	1.250 +.003/-0	1.499	$ 7.74
PSU-1.75X1.37X.250	1.75 +0.004/-0	0.25	0.263	1.375 +.004/-0	1.749	$ 8.47
PSU-2.00X1.62X.312	2.00 +0.004/-0	0.312	0.328	1.625 +.004/-0	1.999	$11.04
PSU-2.00X1.62X.375	2.00 +0.004/-0	0.375	0.394	1.625 +.004/-0	1.999	$12.33
PSU-2.25X1.87X.312	2.25 +0.004/-0	0.312	0.328	1.875 +.004/-0	2.249	$13.25
PSU-2.50X2.00X.375	2.50 +0.004/-0	0.375	0.394	2.000 +.004/-0	2.499	$13.16
PSU-2.50X2.12X.312	2.50 +0.004/-0	0.312	0.328	2.125 +.004/-0	2.499	$12.34
PSU-2.50X2.12X.375	2.50 +0.004/-0	0.375	0.394	2.125 +.004/-0	2.499	$13.31
PSU-3.00X2.50X.375	3.00 +0.004/-0	0.375	0.394	2.500 +.004/-0	2.999	$14.42
PSU-3.00X2.62X.312	3.00 +0.004/-0	0.312	0.328	2.625 +.004/-0	2.999	$12.62
PSU-3.25X2.87X.312	3.25 +0.004/-0	0.312	0.328	2.875 +.004/-0	3.249	$13.04
PSU-3.50X3.12X.312	3.50 +0.004/-0	0.312	0.328	3.125 +.004/-0	3.499	$16.68
PSU-3.50X3.12X.375	3.50 +0.006/-0	0.312	0.328	3.125 +.006/-0	3.499	$15.45
PSU-4.00X3.50X.375	4.00 +0.006/-0	0.375	0.394	3.500 +.006/-0	3.999	$23.61
PSU-4.00X3.62X.375	4.00 +0.004/-0	0.375	0.394	3.625 +.004/-0	3.999	$16.42
PSU-5.00X4.50X.375	5.00 +0.006/-0	0.375	0.394	4.500 +.006/-0	4.999	$21.66
PSU-5.00X4.50X.500	5.00 +0.006/-0	0.5	0.562	4.500 +.006/-0	4.999	$35.63
PSU-6.00X5.50X.375	6.00 +0.006/-0	0.375	0.394	5.500 +.006/-0	5.999	$30.13

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
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CAPPED PISTON SEAL
4 PC PISTON SEAL

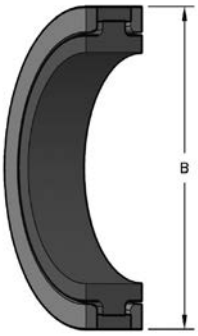
This is a heavy duty double-acting assembly, the capped piston T-seal exhibits excellent sealability, extrusion resistance and wearablitity. Many sizes are also available in bronze.

AUTHORIZED DISTRIBUTOR Hallite

Material:

PTFE Cap
Nylon Back-up
Rubber energizer

-40 to 220 F
0 to 6000 PSI



PART NUMBER	BORE DIAMETER	GROOVE DIAMETER	GROOVE WIDTH	PISTON DIAMETER	LIST PRICE
CPS-2000	2.00	1.626	0.424	1.999	$ 55.19
CPS-2500	2.50	2.125	0.424	2.499	$ 61.92
CPS-3000	3.00	2.520	0.579	2.999	$ 65.28
CPS-3250	3.25	2.770	0.579	3.249	$ 94.06
CPS-3500	3.50	3.020	0.579	3.499	$ 60.22
CPS-4000	4.00	3.520	0.579	3.999	$ 69.69
CPS-4250	4.25	3.770	0.579	4.249	$ 89.31
CPS-4500	4.50	4.020	0.579	4.499	$ 74.61
CPS-5000	5.00	4.27	0.750	4.999	$ 94.69
CPS-5250	5.25	4.520	0.750	5.249	$129.29
CPS-6000	6.00	5.270	0.750	5.999	$112.54
CPS-6500	6.50	5.770	0.750	6.499	$154.48
CPS-8000	8.00	7.270	0.750	7.999	$207.73

111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

PNEU-DRAULICS

PISTON SEAL QUAD LOADED

These piston seals provide bi-directional, low friction sealing with increased stability and superior leakage control. The square cut energizer provides low pressure sealing and eliminates backside leakage. This seal also effectively seals between different fluids on each side of the piston seal, making gas/liquid sealing combinations possible.

Material: Bronze filled PTFE
with rubber energizer and quad seal

-40 to 220F
0 to 5000 PSI

PART NUMBER	BORE DIAMETER	SEAL HEIGHT	GROOVE WIDTH	GROOVE DIAMETER	PISTON DIAMETER	LIST PRICE
PSQ-24	1.500 +.004/-0	0.271	.288/.293	0.884	1.499	$ 32.91
PSQ-32	2.000 +.004/-0	0.271	.288/.293	1.384	1.999	$ 31.24
PSQ-36	2.225 +.004/-0	0.271	.288/.294	1.630	2.249	$ 37.96
PSQ-40	2.500 +.004/-0	0.271	.288/.295	1.884	2.499	$ 30.03
PSQ-48	3.000 +.004/-0	0.271	.288/.296	2.384	2.999	$ 31.48
PSQ-52	3.250 +.004/-0	0.271	.288/.297	2.634	3.249	$ 43.11
PSQ-56	3.500 +.004/-0	0.271	.288/.298	2.884	3.499	$ 29.53
PSQ-64	4.000 +.004/-0	0.271	.288/.299	3.384	3.999	$ 29.72
PSQ-72	4.500 +.004/-0	0.271	.288/.300	3.884	4.499	$ 43.18
PSQ-80	5.000 +.004/-0	0.271	.288/.301	4.384	4.999	$ 46.59
PSQ-88	5.500 +.005/-0	0.352	.375/.380	4.660	5.499	$ 67.51
PSQ-96	6.000 +.005/-0	0.352	.375/.381	5.160	5.999	$ 67.71
PSQ-112	7.000 +.005/-0	0.352	.375/.383	6.170	6.999	$106.70
PSQ-128	8.000 +.005/-0	0.352	.375/.384	7.170	7.999	$134.89

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
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PS1600 PISTON SEALS

This is a glass filled piston seal. This piston seal offers some of the harder to find, in-between sizes.

Material:
15% glass filled PTFE
Rubber energizer

-40 to 220F
0 to 5000 PSI

PART NUMBER	BORE DIAMETER TOL. +0.002-0.00	SEAL HEIGHT TOL. +/-.005	CROSS SECTION TOL. +/-.005	GROOVE WIDTH TOL. +/-.002	GROOVE DIAMETER TOL. +/-.002	PISTON DIAMETER	LIST PRICE
PS1600-16	1.000	0.088	0.055	0.094	0.787	0.999 +0/-0.003	$ 7.57
PS1600-18	1.125	0.088	0.055	0.094	0.912	1.124 +0/-0.003	$ 6.81
PS1600-20	1.250	0.088	0.055	0.094	1.037	1.249 +0/-0.003	$ 5.01
PS1600-22	1.375	0.088	0.055	0.094	1.162	1.374 +0/-0.003	$16.49
PS1600-24	1.500	0.088	0.055	0.094	1.287	1.499 +0/-0.003	$ 7.05
PS1600-26	1.625	0.088	0.055	0.094	1.412	1.624 +0/-0.003	$ 7.92
PS1600-28	1.750	0.088	0.055	0.094	1.537	1.749 +0/-0.003	$ 7.92
PS1600-30	1.875	0.120	0.060	0.126	1.598	1.874 +0/-0.003	$ 8.87
PS1600-32	2.000	0.120	0.060	0.126	1.723	1.999 +0/-0.003	$ 7.04
PS1600-36	2.250	0.120	0.060	0.126	1.973	2.249 +0/-0.003	$ 9.05
PS1600-38	2.375	0.120	0.060	0.126	2.098	2.374 +0/-0.003	$16.68
PS1600-40	2.500	0.120	0.060	0.126	2.223	2.499 +0/-0.003	$ 7.96
PS1600-44	2.750	0.150	0.090	0.157	2.348	2.348 +0/-0.003	$ 7.19
PS1600-48	3.000	0.150	0.090	0.157	2.603	2.999 +0/-0.004	$ 8.80
PS1600-52	3.250	0.150	0.090	0.157	2.853	3.249 +0/-0.004	$ 8.80
PS1600-56	3.500	0.150	0.090	0.157	3.103	3.499 +0/-0.004	$ 8.14
PS1600-60	3.750	0.150	0.009	0.157	3.353	3.749 +0/-0.004	$12.87
PS1600-64	4.000	1.500	0.090	0.157	3.603	3.999 +0/-0.004	$10.69
PS1600-68	4.250	0.150	0.090	0.157	3.853	4.249 +0/-0.004	$10.69
PS1600-72	4.50	0.150	0.090	0.157	4.103	4.500 +0/-0.004	$11.32
PS1600-76	4.75	0.150	0.090	0.157	4.103	4.499 +0/-0.004	$20.85
PS1600-80	5.000	0.150	0.090	0.157	4.603	4.999 +0/-0.004	$14.56
PS1600-84	5.250	0.150	0.090	0.157	4.853	5.250 +0/-0.004	$31.93
PS1600-88	5.500	0.150	0.090	0.157	5.103	5.500 +0/-0.004	$32.02
PS1600-92	5.7500	0.150	0.090	0.157	5.353	5.750 +0/-0.004	$36.20
PS1600-96	6.000	0.287	0.120	0.293	5.305	6.000 +0/-0.004	$68.23
PS1600-112	7.000	0.287	0.120	0.293	6.305	7.000 +0/-0.004	$81.54

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Nicholasville, KY 40340-0037

PNEU-DRAULICS

CAT STYLE PISTON SEALS

PART NUMBER	BORE SIZES	LIST PRICE/EA.
5J7004	2"	$16.78
5J7010	2-3/4"	$17.82
6J1972	3"	$18.06
6J0793	3-1/4"	$18.53
5J7013	3-1/2"	$23.66
5J8011	3-3/4"	$23.61
5J5402	4"	$22.06
5J7854	4-1/4"	$32.25
5J4986	4-1/2"	$25.30
5J4987	4-3/4"	$26.65
5J5020	5"	$52.14
5J7234	5-1/4"	$30.28
5J4988	5-1/2"	$31.50
5J4989	6"	$34.65
5J4990	6-1/4"	$38.78
5J4991	6-1/2"	$36.64
5J4997	7"	$41.72

BRONZE PISTON SEALS WITH CAT STYLE LOADERS

PART NUMBER	BORE SIZES	LIST PRICE/EA.
5 X 3/8 PSBC	5"	$31.74
6 X 3/8 PSBC	6"	$40.87
6 1/2 X 3/8 PSBC	6 1/2"	$40.87
7 X 3/8 PSBC	7"	$57.96

PNEU-DRAULICS
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CAST IRON PISTON RINGS

Other sizes available call for price and delivery.

PART NUMBER	O/D	RING WIDTH	RING WALL	LIST PRICE/EA.
1 1/2 X 1/8 CIR	1.500	.1230/.1240	.052/.067	$ 9.98
1 5/8 X 1/8 CIR	1.625	.1230/.1240	.056/.071	$ 9.98
2 X 1/8 CIR	2.000	.1230/.1240	.065/.075	$24.62
2 X 5/32 CIR	2.000	.1540/.1550	.060/.075	$12.44
2 X 3/16 CIR	2.000	.1855/.1865	.060/.075	$17.15
2 1/4 X 1/8 CIR	2.250	.1230/.1240	.070/.085	$12.48
2 1/2 X 1/8 CIR	2.500	.1230/.1240	.082/.097	$11.31
2 1/2 X 3/16 CIR	2.500	.1855/.1865	.082/.097	$11.63
2 1/2 X 1/4 CIR	2.500	.2480/.2490	.082/.097	$11.63
2 3/4 X 1/8 CIR	2.750	.1230/.1240	.091/.106	$11.63
3 X 1/8 CIR	3.000	.1230/.1240	.095/.110	$11.64
3 X 3/16 CIR	3.000	.1855/.1865	.095/.110	$11.64
3 X 1/4 CIR	3.000	.2480/.2490	.095/.110	$17.37
3 1/4 X 1/8 CIR	3.250	.1230/.1240	.103/.118	$11.63
3 1/4 X 5/32 CIR	3.250	.156/.157	.103/.118	$11.63
3 1/4 X 3/16 CIR	3.250	.1855/.1865	.103/.118	$11.63
3 1/2 X 1/8 CIR	3.500	.1230/.1240	.109/.124	$12.25
3 1/2 X 3/16 CIR	3.500	.1855/.1865	.109/.124	$11.21
3 1/2 X 1/4 CIR	3.500	.2480/.2490	.109/.124	$12.71
3 1/2 X 5/16 CIR	3.500	.3100/.3110	.112/.127	$19.45
4 X 3/16 CIR	4.000	.1855/.1865	.127/.142	$11.25
4 X 1/4 CIR	4.000	.2480/.2490	.127/.142	$11.68
4 1/4 X 3/16 CIR	4.250	.1855/.1865	.127/.142	$24.27
4 1/4 X 1/4 CIR	4.250	.2480/.2490	.135/.150	$12.35
4 1/2 X 3/16 CIR	4.500	.1855/.1865	.145/.160	$12.35
4 1/2 X 1/4 CIR	4.500	.2480/.2490	.145/.160	$14.58
4 1/2 X 5/16 CIR	4.500	.3100/.3110	.145/.160	$12.79
4 3/4 X 1/4 CIR	4.750	.2480/.2490	.152/.167	$12.61
5 X 3/16 CIR	5.000	.1855/.1865	.160/.175	$15.35
5 X 1/4 CIR	5.000	.2480/.2490	.160/.175	$20.04
5 X 5/16 CIR	5.000	.3100/.3110	.160/.175	$20.04
5 X 3/8 CIR	5.000	.3720/.3730	.160/.175	$17.23
5 1/4 X 3/16 CIR	5.250	.187/.190	.181	$16.92
5 1/4 X 1/4 CIR	5.250	.2480/.2490	.166/.181	$20.20
5 1/2 X 3/16 CIR	5.500	.1855/.1865	.175/.190	$24.47
5 1/2 X 1/4 CIR	5.500	.2480/.2490	.175/.190	$19.91
5 3/4 x 1/4 CIR	5.750	.2480/.1490	.184/.199	$23.63
6 X 1/4 CIR	6.000	.2475/.2490	.191/.206	$29.51
6 X 5/16 CIR	6.000	.3095/.3110	.191/.206	$22.88
6 X 1/2 CIR	6.000	.4965/.4980	.191/.206	$23.79

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PNEU-DRAULICS

CAST IRON PISTON RINGS

PART NUMBER	O/D	RING WIDTH	RING WALL	LIST PRICE/EA.
6 1/4 X 1/4 CIR	6.250	.2475/.2490	.202/.217	$31.30
6 1/2 X 3/16 CIR	6.500	.1850/.1865	.211/.226	$32.93
6 1/2 X 1/4 CIR	6.500	.2475/.2490	.211/.226	$20.31
6 1/2 X 5/16 CIR	6.500	.3095/.3110	.211/.226	$22.88
7 X 1/4 CIR	7.000	.2475/.2490	.228/.243	$24.64
7 X 5/16 CIR	7.000	.3095/.3110	.228/.243	$31.97
7 1/4 X 1/4 CIR	7.250	.2475/.2490	.237/.252	$34.92
7 1/2 X 5/16 CIR	7.500	.3095/.3110	.244/.259	$33.22
7 3/4 X 5/16 CIR	7.750	.3095/.3110	.252/.267	$40.98
8 X 3/8 CIR	8.000	.3715/.3730	.260/.275	$65.66
8 X 1/2 CIR	8.000	.4965/.4980	.260/.275	$46.67
9 X 3/8 CIR	9.000	.3715/.3730	.294/.309	$59.17

PNEU-DRAULICS
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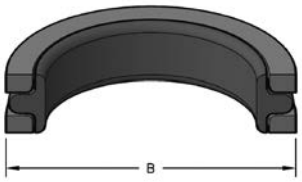
"T" SEALS FOR PISTON

T-Seals are designed to take the place of o-rings in dynamic fluid power applications. They help reduce extrusion, spiral or twisting failure.



-65°F to +220°F
0 to 5,000 PSI
Nitrile Rubber Seal with nylon split back-up rings.

Other sizes available call for price and delivery.

PART NUMBER	BORE DIAMETER	I/D	C/S	LIST PRICE/EA.
TP108	7/16	1/4	3/32	$ 6.80
TP206	3/4	1/2	1/8	$ 7.37
TP208	7/8	5/8	1/8	$11.46
TP210	1	3/4	1/8	$14.99
TP211	11/16	13/16	1/8	$14.98
TP212	1 1/8	7/8	1/8	$11.46
TP214	1 1/4	1	1/8	$12.97
TP216	1 3/8	1 1/8	1/8	$11.46
TP218	1 1/2	1 1/4	1/8	$11.87
TP220	1 5/8	1 3/8	1/8	$14.51
TP222	1 3/4	1 1/2	1/8	$13.02
TP326	2	1 5/8	3/16	$14.65
TP327	2 1/8	1 3/4	3/16	$15.46
TP328	2 1/4	1 7/8	3/16	$16.59
TP329	2 3/8	2	3/16	$17.23
TP330	2 1/2	2 1/8	3/16	$18.43
TP332	2 3/4	2 3/8	3/16	$30.66
TP333	2 7/8	2 1/2	3/16	$33.76
TP334	3	2 5/8	3/16	$33.97
TP335	3 1/8	2 3/4	3/16	$32.50
TP336	3 1/4	2 7/8	3/16	$41.64
TP338	3 1/2	3 1/8	3/16	$35.12
TP339	3 5/8	3 1/4	3/16	$36.12
TP340	3 3/4	3 3/8	3/16	$39.69
TP341	3 7/8	3 1/2	3/16	$42.74
TP342	4	3 5/8	3/16	$44.27
TP343	4 1/8	3 3/4	3/16	$40.07
TP344	4 1/4	3 7/8	3/16	$48.84
TP345	4 3/8	4	3/16	$51.92
TP346	4 1/2	4 1/8	3/16	$54.95
TP347	4 5/8	4 1/4	3/16	$57.17
TP348	4 3/4	4 3/8	3/16	$59.55
TP349	4 7/8	4 1/2	3/16	$64.10
TP350	5	4 5/8	3/16	$67.99
TP426	5 1/8	4 5/8	1/4	$71.77

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PNEU-DRAULICS

"T" SEALS FOR PISTON

PART NUMBER	BORE DIAMETER	I/D	C/S	LIST PRICE/EA.
TP427	5 1/4	4 3/4	1/4	$ 74.81
TP429	5 1/2	5	1/4	$ 80.90
TP430	5 5/8	5 1/8	1/4	$ 87.00
TP431	5 3/4	5 1/4	1/4	$ 87.00
TP433	6	5 1/2	1/4	$ 88.04
TP434	6 1/8	5 5/8	1/4	$ 94.66
TP437	6 1/2	6	1/4	$103.49
TP438	6 3/4	6 1/4	1/4	$106.84
TP439	7	6 1/2	1/4	$109.88
TP443	8	7 1/2	1/4	$111.41
TP445	8 1/2	8	1/4	$128.84
TP448	10	9 1/2	1/4	$161.02
TP452	12	11 1/2	1/4	$229.16

PNEU-DRAULICS
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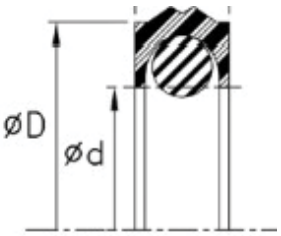
Parker DISTRIBUTOR

PARKER PSP SEAL

The PSP Seal is a bidirectional piston seal to replace o-rings, T-seals, and quad rings.



-65°F to +220°F
0 to 5,000 PSI
95 duro. Urethane Seal with o-rings.

(Other sizes available call for price and delivery.)

PART NUMBER	I/D	O/D	LIST PRICE/EA.
PSP210	3/4	1	$ 7.06
PSP212	7/8	1-1/8	$ 8.00
PSP214	1	1-1/4	$ 8.00
PSP216	1-1/8	1-3/8	$ 8.45
PSP218	1-1/4	1-1/2	$ 8.96
PSP328	1-7/8	2-1/4	$13.47
PSP329	2	2-3/8	$14.73
PSP330	2-1/8	2-1/2	$15.42
PSP331	2-1/4	2-5/8	$16.05
PSP332	2-3/8	2-3/4	$16.72
PSP333	2-1/2	2-7/8	$17.27
PSP334	2-5/8	3	$17.95
PSP336	2-7/8	3-1/4	$19.90
PSP339	3-1/4	3-5/8	$22.20
PSP340	3-3/8	3-3/4	$23.14
PSP342	3-5/8	4	$27.28
PSP344	3-7/8	4-1/4	$29.67
PSP345	4	4-3/8	$32.70
PSP346	4-1/8	4-1/2	$32.10
PSP348	4-3/8	4-3/4	$35.28
PSP350	4-5/8	5	$38.71
PSP425	4-1/2	5	$40.26
PSP427	4-3/4	5-1/4	$39.20
PSP429	5	5-1/2	$62.35
PSP433	5-1/2	6	$58.23
PSP437	6	6-1/2	$61.11
PSP439	6-1/2	7	$64.79

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PNEU-DRAULICS

FLUID SEALS

Fluid seals are double acting piston seals with a L shape bearing on each side.

FSWB = Fluid Seal with Wear Bands

Operating Conditions		
Maximum Working Pressure psi		
Maximum Speed	Temperature Range	Temperature Range
ft./sec.	-22°F + 176°F	-22°F + 176°F
1.5	6000 psi	3900 psi
0.5	10000 psi	6750 psi

TYPE 58

(Other sizes available call for price and delivery.)

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
2" FSWB	1 3/8	2	15/16	$ 54.60
2 3/8" FSWB	1 3/4	2 3/8	15/16	$ 61.60
2 1/2" FSWB	1 7/8	2 1/2	3/4	$ 61.35
3" FSWB	2 1/4	3	1 3/16	$ 64.53
3 1/4" FSWB	2 1/2	3 1/4	1 3/16	$ 67.44
4 1/4" FSWB	3 1/2	4 1/4	1 3/16	$ 72.05
4 1/2" FSWB	3 1/2	4 1/2	1 1/2	$ 85.49
5" FSWB	4	5	1 1/2	$ 90.83
5 1/4" FSWB	4 1/4	5 1/4	1 1/2	$112.54
5 1/2" FSWB	4 1/2	5 1/2	1 1/2	$135.82
6" FSWB	5	6	1 1/2	$159.78
6 3/4" FSWB	5 3/4	6 3/4	1 1/2	$344.93
8" FSWB	7	8	1 1/4	$246.88
9" FSWB	7 3/4	9	1 7/8	$302.40

DELTA SEALS

Design for light to medium duty one piece piston applications. The Delta Seal is a rubber seal and two scarf cut bearings.

TYPE 65

(Other sizes available call for price and delivery.)

Operating Conditions		
Maximum Working Pressure psi		
Maximum Speed	Temperature Range	Temperature Range
ft./sec.	-22°F + 176°F	-22°F + 212°F
1.5	2100 psi	1300 psi
0.5	3000 psi	1950 psi

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
DS250212	2 1/8	2 1/2	7/16	$ 28.19
DS300262	2 5/8	3	7/16	$ 34.80
DS350300	3	3 1/2	9/16	$ 35.21
DS500437	4 3/8	5	11/16	$ 50.78
DS600525	5 1/4	6	1	$ 57.74

PNEU-DRAULICS
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Nicholasville, KY 40340-0037

Notes

NATIONWIDE
CALL 1-800-333-SEAL
FAX (859) 887-4165
www.pneu-draulics.com

SALES OFFICE HOURS
7:30 A.M. to 5:30 P.M.
EASTERN STANDARD TIME

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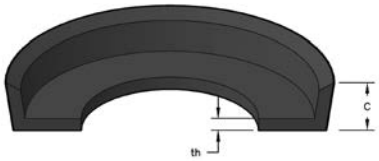
PNEU-DRAULICS

NEO-FAB PISTON CUPS ("A" CUPS)

The "A" Cups are fabric reinforced nitrile piston cups used in hydraulic applications.



-65°F to +220°F
Fabric and Nitrile
0 to 3000 PSI

(Center holes are available at an additional charge.) (Other sizes available call for price and delivery.)

PART NUMBER	O/D	HEIGHT	THICKNESS	LIST PRICE/EA.
1/2" A CUP	1/2	3/8	3/32	$ 6.55
7/8" A CUP	7/8	3/8	3/32	$ 6.55
1" A CUP	1	3/8	1/8	$ 7.57
1 1/4" A CUP	1 1/4	7/16	3/32	$ 9.15
1 1/2" A CUP	1 1/2	1/2	1/8	$ 10.73
1 5/8" A CUP	1 5/8	1/2	1/8	$ 11.19
1 3/4" A CUP	1 3/4	1/2	1/8	$ 12.38
2" A CUP	2	1/2	1/8	$ 14.44
2 1/8" A CUP	2 1/8	1/2	1/8	$ 12.98
2 1/4" A CUP	2 1/4	1/2	1/8	$ 15.68
2 3/8" A CUP	2 3/8	1/2	1/8	$ 20.46
2 1/2" A CUP	2 1/2	1/2	1/8	$ 18.29
2 5/8" A CUP	2 5/8	1/2	1/8	$ 16.63
2 3/4" A CUP	2 3/4	1/2	1/8	$ 21.81
2 7/8" A CUP	2 7/8	1/2	1/8	$ 18.13
3" A CUP	3	5/8	5/32	$ 23.38
3 1/8" A CUP	3 1/8	5/8	5/32	$ 19.81
3 1/4" A CUP	3 1/4	5/8	5/32	$ 20.62
3 1/2" A CUP	3 1/2	5/8	5/32	$ 24.20
3 3/4" A CUP	3 3/4	5/8	5/32	$ 29.43
4" A CUP	4	5/8	5/32	$ 35.75
4 1/4" A CUP	4 1/4	5/8	5/32	$ 34.52
4 1/2" A CUP	4 1/2	5/8	5/32	$ 34.52
4 3/4" A CUP	4 3/4	5/8	5/32	$ 34.02
5" A CUP	5	3/4	3/16	$ 46.48
5 1/4" A CUP	5 1/4	3/4	3/16	$ 47.03
5 1/2" A CUP	5 1/2	3/4	3/16	$ 41.46
5 3/4" A CUP	5 3/4	3/4	3/16	$ 57.82
6" A CUP	6	3/4	3/16	$ 68.61
6 1/4" A CUP	6 1/4	3/4	3/16	$ 50.19
6 1/2" A CUP	6 1/2	3/4	3/16	$ 53.76
7" A CUP	7	3/4	3/16	$ 87.67
8" A CUP	8	3/4	3/16	$109.87
9" A CUP	9	1	3/16	$124.99

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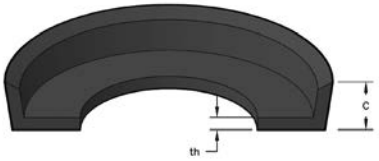
HOMOGENEOUS RUBBER PISTON CUPS

The Homogeneous Piston Cups are used in pneumatic and low pressure hydraulic applications.



-40°F to +212°F
80 duro. Nitrile 0
to 150 PSI

(Center holes are available at an additional charge.) (Other sizes available call for price and delivery.)

PART NUMBER	O/D	HEIGHT	THICKNESS	LIST PRICE/EA.
CR1250-437	1 1/4	7/16	3/32	$ 5.42
CR1375-437	1 3/8	7/16	1/8	$ 5.78
CR1500-500	1 1/2	1/2	1/8	$ 5.55
CR1875-500	1 7/8	1/2	1/8	$ 6.42
CR2000-500	2	1/2	1/8	$ 6.56
CR2250-500	2 1/4	1/2	1/8	$ 6.92
CR2375-500	2 3/8	1/2	1/8	$ 7.13
CR2500-500	2 1/2	1/2	1/8	$ 7.35
CR2750-500	2 3/4	1/2	1/8	$ 7.77
CR3000-625	3	5/8	5/32	$12.50
CR3500-625	3 1/2	5/8	5/32	$15.13
CR3750-625	3 3/4	5/8	5/32	$20.58
CR4000-625	4	5/8	5/32	$17.37
CR4500-625	4 1/2	5/8	5/32	$22.41
CR5000-750	5	3/4	3/16	$23.71
CR6000-750	6	3/4	3/16	$28.36
CR7000-750	7	3/4	3/16	$35.61
CR7500-750	7 1/2	3/4	3/16	$36.29

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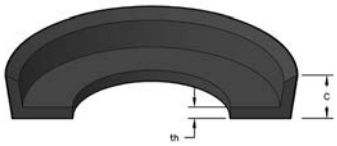
PNEU-DRAULICS

URETHANE PISTON CUPS

The CS Type Piston Cup is made of urethane and is recommended for hydraulic applications.



-65°F to +200°F
0 to 5000 PSI Urethane

(Center holes are available at an additional charge.) (Other sizes available call for price and delivery.)

PART NUMBER	O/D	HEIGHT	BASE THICKNESS	LIST PRICE/EA.
CS0500-250	1/2	1/4	3/32	$10.64
CS0750-250	3/4	1/4	3/32	$10.46
CS0750-375	3/4	3/8	3/32	$10.65
CS0875-250	7/8	1/4	3/32	$10.65
CS0875-375	7/8	3/8	3/32	$10.46
CS1000-500	1	1/2	1/8	$10.65
CS1125-500	1 1/8	1/2	1/8	$11.70
CS1250-500	1 1/4	1/2	1/8	$13.15
CS1375-437	1 3/8	7/16	1/8	$ 13.99
CS1375-500	1 3/8	1/2	1/8	$ 13.72
CS1500-500	1 1/2	1/2	1/8	$ 15.41
CS1625-375	1 5/8	3/8	1/8	$ 13.04
CS1625-500	1 5/8	1/2	1/8	$ 16.63
CS1750-500	1 3/4	1/2	1/8	$ 17.85
CS1875-500	1 7/8	1/2	1/8	$ 19.19
CS1937-500	1 15/16	1/2	1/8	$ 19.63
CS2000-500	2	1/2	1/8	$ 20.41
CS2250-500	2 1/4	1/2	1/8	$ 23.44
CS2500-500	2 1/2	1/2	1/8	$ 25.51
CS2625-500	2 5/8	1/2	1/8	$ 25.86
CS2750-625	2 3/4	5/8	3/16	$ 28.63
CS3000-625	3	5/8	3/16	$ 36.02
CS3250-500	3 1/4	1/2	3/16	$ 32.69
CS3250-625	3 1/4	5/8	3/16	$ 32.09
CS3500-625	3 1/2	5/8	3/16	$ 36.20
CS3750-625	3 3/4	5/8	3/16	$ 38.99
CS4000-625	4	5/8	3/16	$ 40.60
CS4125-625	4 1/8	5/8	3/16	$ 32.61
CS4500-625	4 1/2	5/8	3/16	$ 45.10
CS4750-750	4 3/4	3/4	3/16	$ 49.30
CS5000-625	5	5/8	3/16	$ 50.97
CS5000-750	5	3/4	3/16	$ 51.61
CS5750-750	5 3/4	3/4	3/16	$ 59.03
CS6500-750	6 1/2	3/4	3/16	$ 65.94
CS7000-750	7	3/4	3/16	$ 70.87
CS8000-1000	8	1	3/16	$ 80.06
CS9000-1000	9	1	3/16	$ 89.96

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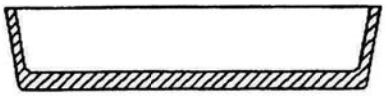
PNEUMATIC PISTON CUPS

The thin wall piston cups are used in air, water, and low pressure applications



-65°F to +200°F
0 to 1200 PSI Urethane

(Center holes are available at an additional charge.) (Other sizes available call for price and delivery.)

PART NUMBER	O/D	HEIGHT	BASE THICKNESS	LIST PRICE/EA.
CT750-375	3/4	3/8	3/32	$ 6.19
CT1000-437	1	7/16	3/32	$ 6.14
CT1125-437	1 1/8	7/16	3/32	$ 7.19
CT1250-437	1 1/4	7/16	3/32	$ 7.78
CT1500-437	1 1/2	7/16	3/32	$ 9.12
CT1625-437	1 5/8	7/16	3/32	$10.08
CT1750-437	1 3/4	7/16	3/32	$10.70
CT2000-312	2	5/16	1/8	$12.20
CT2000-437	2	7/16	1/8	$12.43
CT2000-500	2	1/2	1/8	$12.20
CT2375-500	2 3/8	1/2	1/8	$14.52
CT2500-500	2 1/2	1/2	1/8	$15.48
CT2625-500	2 5/8	1/2	1/8	$15.70
CT2750-500	2 3/4	1/2	1/8	$16.78
CT3000-625	3	5/8	1/8	$19.28
CT3250-625	3 1/4	5/8	1/8	$19.80
CT3375-625	3 3/8	5/8	1/8	$29.58
CT3500-625	3 1/2	5/8	1/8	$20.85
CT4000-625	4	5/8	1/8	$24.70
CT4250-625	4 1/4	5/8	1/8	$25.41
CT4500-625	4 1/2	5/8	1/8	$32.28
CT5000-750	5	3/4	1/8	$33.58
CT5250-750	5 1/4	3/4	1/8	$38.29
CT5500-750	5 1/2	3/4	1/8	$40.90
CT6000-750	6	3/4	1/8	$51.45

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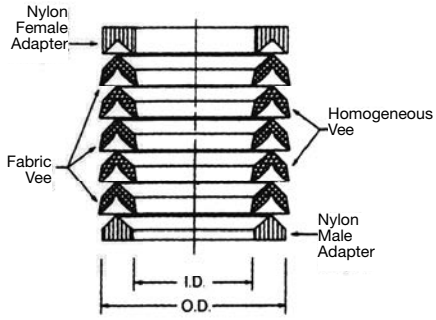
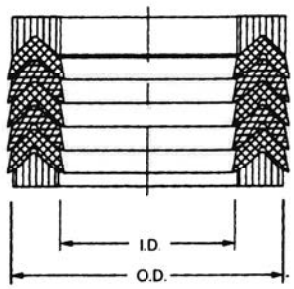
PNEU-DRAULICS

V-PACKINGS

The V-Packing come in sets of (1-3-2-1) and (1-5-1). The (1-3-2-1) set consists of 2 nylon adaptors for extrusion resistance, 2 homogeneous vees to aid in low pressure sealing and to wipe the rod completely dry, and 3 fabric vees. The (1-5-1) set consists of 2 nylon adaptors and 5 fabric and rubber vees.



(1-3-2-1)



(1-5-1)

-40°F to +220°F
0 to 5.000 PSI

(*=sets are 1-3-2-1) (All other sets are (1-5-1)

(Other sizes available call for price and delivery. Our part number is the I.D. and O.D. for both sets.)

**HNBR is also available as a custom seal

PART NUMBER	LIST PRICE/EA.	PART NUMBER	LIST PRICE/EA.
3/8 X 3/4	$25.75	1 1/4 X 2 1/8	$31.98
3/8 X 7/8	$38.80	1 1/4 X 2 1/4	$38.96
1/2 X 7/8	$17.64	1 3/8 X 1 7/8*	$19.85
1/2 X 1*	$25.13	1 3/8 X 2	$21.32
5/8 X 1	$19.11	1 3/8 X 2 1/4	$31.98
5/8 X 1 1/8	$20.58	1 1/2 X 2	$17.64
11/16 X 1 3/16	$46.61	1 1/2 X 2 1/8	$21.32
3/4 X 1 1/8	$18.44	1 1/2 X 2 1/4*	$34.92
3/4 X 1 1/4*	$29.15	1 1/2 X 2 3/8	$34.91
3/4 X 1 3/8*	$30.66	1 1/2 X 2 1/2*	$41.90
3/4 X 1 1/2*	$32.08	1 5/8 X 2 1/8	$20.58
13/16 X 1 5/16	$25.70	1 5/8 X 2 1/4	$26.95
7/8 X 1 1/4	$17.64	1 5/8 X 2 3/8	$31.73
7/8 X 1 3/8*	$18.37	1 5/8 X 2 1/8	$20.58
7/8 X 1 1/2	$30.65	1 3/4 X 2 1/4*	$20.58
7/8 X 1 5/8	$29.20	1 3/4 X 2 3/8*	$21.91
1 X 1 3/8	$18.37	1 3/4 X 2 1/2*	$31.60
1 X 1 1/2*	$18.37	1 3/4 X 2 3/4	$43.00
1 X 1 5/8*	$30.80	1 7/8 X 2 3/8*	$21.32
1 X 1 3/4*	$34.71	1 7/8 X 2 1/2*	$22.05
1 X 2	$31.85	1 7/8 X 2 5/8*	$34.18
1 1/8 X 1 5/8*	$19.48	2 X 2 3/8	$26.80
1 1/8 X 1 7/8	$27.93	2 X 2 1/2*	$21.68
1 1/8 X 1 3/4*	$20.58	2 X 2 5/8*	$22.05
1 3/16 X 1 9/16	$18.75	2 X 2 3/4*	$34.41
1 1/4 X 1 5/8	$21.32	2 X 3	$54.55
1 1/4 X 1 3/4*	$19.11	2 1/8 X 2 5/8	$22.05
1 1/4 X 1 7/8*	$38.50	2 1/8 X 2 3/4*	$24.31
1 1/4 X 2*	$33.52	2 1/8 X 2 7/8*	$22.78
		2 3/16 X 2 15/16	$36.01

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V-PACKINGS

PART NUMBER	LIST PRICE/EA.	PART NUMBER	LIST PRICE/EA.
2 1/4 X 2 3/4*	$22.05	4 X 4 1/2*	$ 27.34
2 1/4 X 2 7/8*	$26.20	4 X 4 5/8	$ 46.67
2 1/4 X 3*	$36.75	4 X 4 3/4*	$ 61.74
2 1/4 X 3 1/4	$60.90	4 X 4 7/8	$ 73.50
2 3/8 X 2 7/8*	$22.78	4 X 5	$ 81.64
2 3/8 X 3*	$35.55	4 1/4 X 4 3/4*	$ 38.96
2 3/8 X 3 1/8	$37.49	4 1/4 X 4 7/8	$ 52.19
2 1/2 X 2 7/8	$21.32	4 1/4 X 5*	$ 61.74
2 1/2 X 3*	$26.83	4 1/4 X 5 1/8	$ 73.50
2 1/2 X 3 1/8*	$25.73	4 1/4 X 5 1/4	$ 86.73
2 1/2 X 3 1/4*	$37.49	4 3/8 X 5	$ 52.19
2 1/2 X 3 1/2	$55.13	4.450 X 5	$ 47.41
		4 1/2 X 5*	$ 38.96
2 5/8 X 3 1/4*	$29.77	4 1/2 X 5 1/8	$ 52.19
2 5/8 X 3 3/8	$31.24	4 1/2 X 5 1/4*	$ 64.74
2 3/4 X 3 1/4*	$24.26	4 1/2 X 5 3/8	$ 76.81
2 3/4 X 3.270	$35.00	4 1/2 X 5 1/2*	$ 86.83
2 3/4 X 3 3/8*	$31.98	4.580 X 5.080	$ 41.90
2 3/4 X 3 1/2*	$38.96	4 5/8 X 5 1/4	$ 55.13
2 3/4 X 3 3/4	$95.97	4.700 X 5 1/4	$ 71.60
2 7/8 X 3 3/8	$25.36	4 3/4 X 5 1/4*	$ 58.05
2 7/8 X 3 1/2	$39.69	4 3/4 X 5 3/8*	$ 86.73
2.950 X 3 1/2	$31.60	4 3/4 X 5 1/2*	$ 78.75
2.970 X 3.520	$30.14	4 3/4 X 5 5/8	$ 88.20
3 X 3 1/2*	$26.83	4 3/4 X 5 3/4	$ 86.73
3 X 3 3/4*	$42.63	4.950 X 5 1/2*	$ 48.51
3 X 4*	$56.96	5 X 5 1/2	$ 43.37
3 X 3 5/8*	$40.06	5 X 5 3/4	$ 88.75
3 1/4 X 3 5/8	$38.60	5 X 5 7/8	$111.30
3 1/4 X 3 3/4*	$27.93	5 X 6*	$ 86.73
3 1/4 X 3 7/8	$42.02	5 1/4 X 5 3/4	$ 46.31
3 1/4 X 4	$49.24	5 1/4 X 6*	$ 66.15
3 1/4 X 4 1/4	$72.02	5 1/4 X 6 1/4	$ 91.51
3 3/8 X 3 7/8	$28.67	5.445 X 5.945	$ 48.51
3 3/8 X 4	$38.22	5 1/2 X 6*	$ 49.29
3.450 X 4	$38.22	5 1/2 X 6 1/4*	$ 68.72
3 1/2 X 4*	$49.98	5 1/2 X 6 1/2*	$ 49.24
3 1/2 X 4 1/8	$49.03	5 3/4 X 6 1/4	$ 50.72
3 1/2 X 4 1/4*	$52.55	5 3/4 X 6 3/8*	$ 71.29
3 1/2 X 4 1/2*	$74.24	5 3/4 X 6 1/2*	$ 70.56
3 5/8 X 4 1/4	$45.57	5 3/4 X 6 3/4*	$148.75
3 5/8 X 4 3/8	$52.19	6 X 6 1/2*	$ 50.72
3 3/4 X 4 1/4*	$36.00	6 X 6 5/8	$ 72.03
3 3/4 X 4 3/8*	$45.94	6 X 6 3/4	$ 90.66
3 3/4 X 4 1/2*	$53.65	6 X 7*	$109.38
3 3/4 X 4 3/4	$77.54	6 1/4 X 6 3/4	$ 62.11
3 7/8 X 4 3/8	$36.72	6 1/4 X 6 7/8	$ 73.13
3 7/8 X 4 1/2	$46.31	6 1/4 X 7	$110.25
3.950 X 4 1/2	$45.57	6 1/2 X 7*	$ 62.95
3.970 X 4.520	$45.57	6 1/2 X 7 1/4*	$107.68

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PNEU-DRAULICS

V-PACKINGS

PART NUMBER	LIST PRICE/EA.
6 1/2 X 7 1/2*	$142.80
6 5/8 X 7 1/4	$ 76.08
6 3/4 X 7 1/4*	$134.40
6 3/4 X 7 3/8*	$ 79.38
6 3/4 X 7 1/2*	$108.05
6.950 X 7 1/2	$ 80.11
7 X 7 1/2*	$ 59.54
7 X 7 3/4	$108.05
7 X 8	$170.52
7 1/4 X 8	$109.88
7 1/2 X 8	$ 60.01
7 1/2 X 8 1/4	$111.72
7 1/2 X 8 1/2	$184.49
7 3/4 X 8 3/8	$ 80.85
8 X 81/2*	$ 72.40
8 X 8 3/4	$117.23
8 X 9	$189.63
8 1/4 X 9	$121.28
8 1/2 X 9 1/4	$133.82
8 1/2 X 9 1/2	$ 98.76
9 X 9 1/2	$ 86.00
9 X 9 3/4	$200.11
9 1/8 X 9 3/4	$134.14

STACK HEIGHT OF VEE SETS WITH STANDARD ADAPTORS

CROSS SECTION		HEIGHT PER VEE	2 VEE RING SET	3 VEE RING SET	4 VEE RING SET	5 VEE RING SET	6 VEE RING SET
3/16	0.178	0.109	0.532	0.641	0.750	0.859	0.968
1/4	0.250	0.125	0.592	0.718	0.843	0.968	1.093
	0.275	0.138	0.640	0.781	0.921	1.062	1.203
5/16	0.312	0.156	0.687	0.843	1.000	1.156	1.312
3/8	0.375	0.187	0.781	0.968	1.156	1.343	1.531
7/16	0.437	0.218	0.875	1.093	1.312	1.531	1.750
1/2	0.500	0.250	0.968	1.218	1.468	1.718	1.968
5/8	0.625	0.281	1.156	1.468	1.781	2.093	2.406
3/4	0.750	0.312	1.343	1.718	2.093	2.468	2.843

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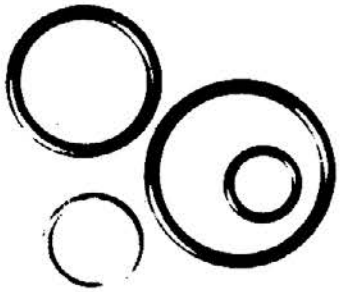
Notes

NATIONWIDE
CALL 1-800-333-SEAL
FAX (859) 887-4165
www.pneu-draulics.com

SALES OFFICE HOURS
7:30 A.M. to 5:30 P.M.
EASTERN STANDARD TIME

O-Rings: A Definition

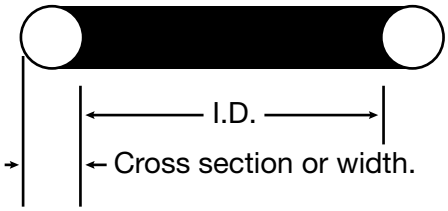


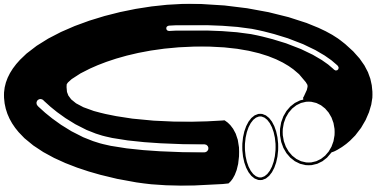
For those unfamiliar with sealing technology, we have provided this brief section to assist you in understanding the O-ring, its basic design principles, and the many sealing functions an O-ring may be expected to perform when properly specified and installed.

WHAT IS AN O-RING?

An O-ring is a torus, or a doughnut shaped object, generally made from an elastomer, although such materials as plastics and metal are sometimes used. This brochure will deal entirely with elas-tomeric O-rings used for sealing purposes.

ANATOMY OF AN O-RING

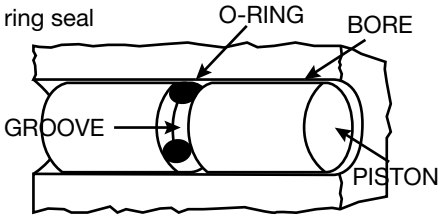




An Elastomeric O-ring section.

BASIC PRINCIPLES OF THE O-RING SEAL

An O-ring seal is a means of closing off a passageway and preventing an unwanted loss or transfer of fluid. The classic O-ring seal consists of two elements, the O-ring itself, and a properly designed gland or cavity to contain the elastometric material. The illustration below shows a typical O-ring seal.



Prevention of the fluid loss or transfer may be obtained by several methods: welding, soldering, brazing or the yielding of a softer material wholly or partially confined between two mating surfaces. This latter method best describes the design principle behind the operation of an O-ring seal.

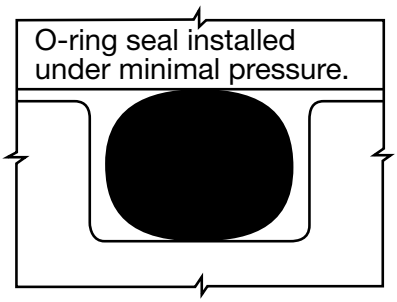
THE FUNCTION OF THE O-RING

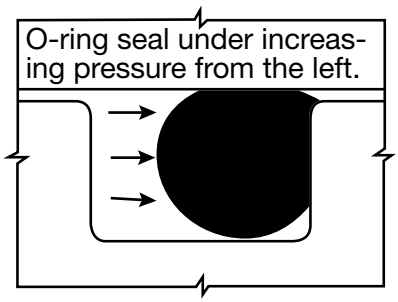
The elastomer is contained in the gland and forced into the surface imperfections of the glands and any clearance available to it, creating a condition of “zero” clearance and thus effecting a positive block to the fluid being sealed. The pressure which forces the O-ring to flow is supplied by mechanical pressure or “squeeze,” generated by proper gland design and material selection and by system pressure transmitted by the fluid itself to the seal element. In fact, the classic O-ring seal may be said to be “pressure assisted” in that the more system pressure, the more effective the seal, until the physical limits of the elastomer are exceeded and the O-ring begins to extrude into the clearance gap. This condition can usually be avoided by proper gland design, material selection, and the use of Parbak back-up rings.

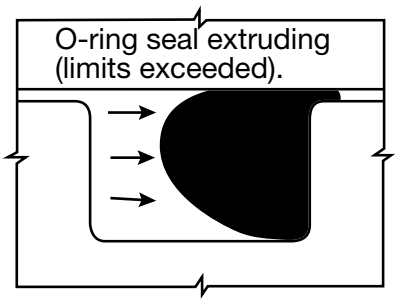
STATIC AND DYNAMIC O-RING SEALING APPLICATIONS

O-ring seals are generally divided into two main groups. **Static seals**, in which there is little or no relative motion between the mating surfaces; and **dynamic seals**, which must function between surfaces with definate relative motion, such as the seal on the piston of a hydraulic cylinder. Of the two types, dynamic seating is the more difficult and requires more critical design work and materials selection.

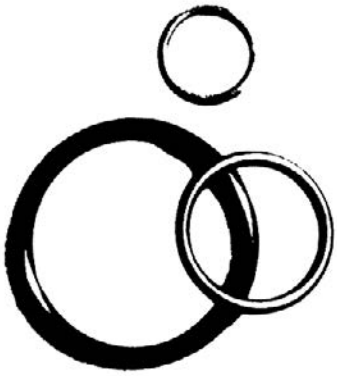
The most common type of dynamic motion utilizing an O-ring sealing system, is **reciprocal motion** as found in hydraulic cylinders, actuators and the like.







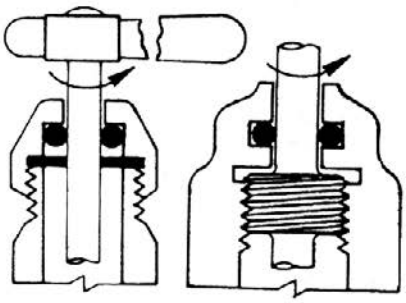
O-Rings Seals



OTHER COMMON O-RING SEAL CONFIGURATIONS

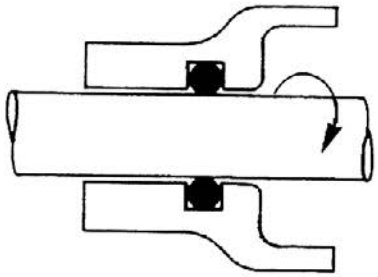
Aside from reciprocating seals, there are other types of motion where an O-ring seal may be utilized. For example:

OSCILLATING SEALS, in which the inner or outer member of the assembly moves in an arc relative to the other, rotating one of the members in relation to the O-ring.



Oscillating Seal

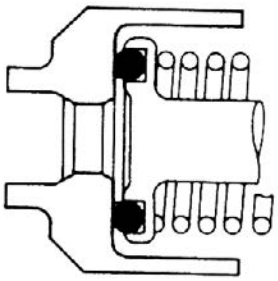
ROTARY SEALS, where an inner or outer member of the sealing assembly revolves around the shaft axis in only one direc-tion. The direction may be reversed. If there are multiple brief arcs of motion, the designer should refer to parameters for oscillating seals.



NOTE THAT GROOVE SIZE PREVENTS ROTATION OF O-RING

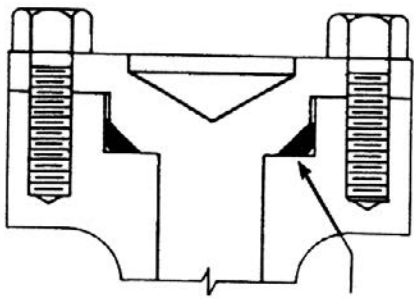
Rotary Seal

SEAT SEALS, utilize an O-ring to close a flow passage by distorting the face of the O-ring against the opposite contact face. Closing the passage distorts the seal element to create the closure.



Seat Seal

CRUSH SEALS, a variation of the static seal, literally crushes an O-ring into a space with a cross section different from the standard gland. Although often an effective seal, the O-ring is permanently deformed and must be replaced if the unit is opened.



O-RING VOLUME IS 90-95% GLAND VOLUME

Crush Installation

PNEUMATIC SEALS, may be any of the previously described types but are given a different classification because they seal a gas or vapor as opposed to a liq-uid. Thus, other design factors, such as adequate lubrication(for dynamic seals), temperature increases due to compres-sion of gasses and permeability of the seal element must be considered when the application is pneumatic.

VACUUM SEALS, also may be any the foregoing types (except pneumatic) and are classified separately because of special design considerations and the unusually low leakage requirements of vacuum systems.

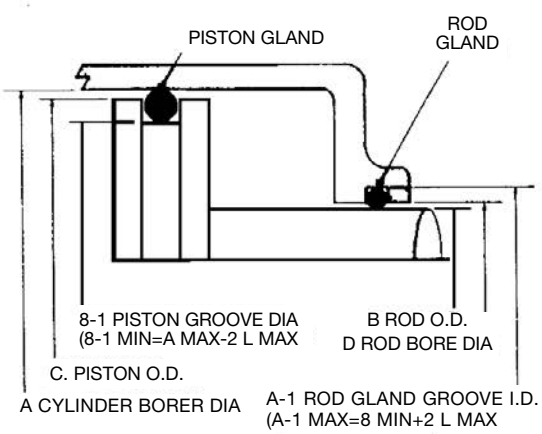
LIMITATIONS OF O-RING USE

Although the O-ring offers a dependable and reasonably economical approach to hydraulic sealing, they are not a “univer-sal” seal, applicable to all sealing problems. Certain limitations must be imposed upon their use, among them, high temperatures, high frictional (rub-bing) speeds, cylinder ports over which the seal element must pass and exces-sive clearances. O-rings therefore, may be considered for just about all sealing applications except:

1. **Rotary speeds exceeding 1500 fpm contact speed.**
2. **Environments (temperature and media) incompatible with any elastomeric material.**
3. **Insufficient structural support for anything but a flat gasket.**

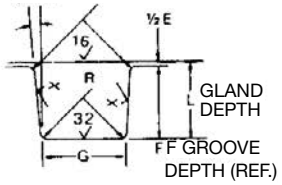
Given the above, and with a reasonable amount of care upon installation, the Parker O-ring will perform the job it was designed to do. If you have questions about your specific application, contact your Parker Distributor, Territory Manager, or call the Applications Engineering Department of Parker Seals in Lexington, KY., (859) 269-2351.

Gland Dimensions
Industrial Reciprocating Seals (1500 psi max.)

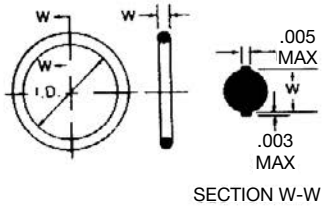


A – Bore Dia. of cylinder
B – OD of rod
C – OD of piston
D – Bore Dia. for rod

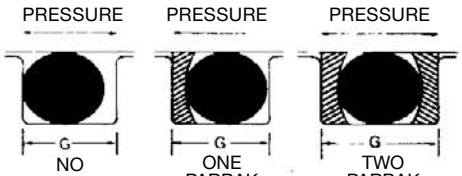
GLAND DETAIL
0" TO 5" BREAK CORNERS (TYP) APPROX .005 RAD.



SURFACE FINISH X
32 WITHOUT PARBAK RING
63 WITH PARBAK RING



SECTION W-W



Refer to design table below for demensions

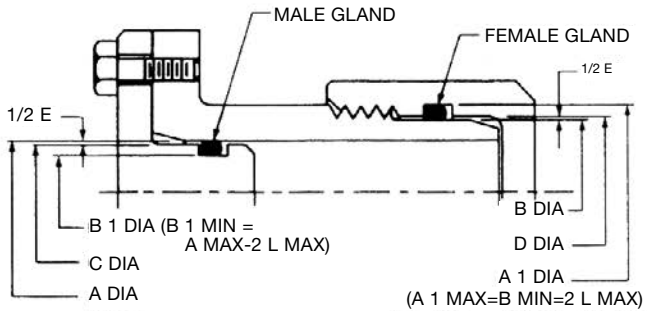
O-RING

DESIGN TABLE
FOR INDUSTRIAL RECIPROCATING O-RING PACKING GLANDS

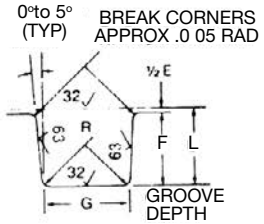
O-RING SIZE	W CROSS SECTION		L	SQUEEZE		E (a)	G GROOVE WIDTH			R	ECCEN-TRICITY
PARKER 2-	NOMINAL	ACTUAL	GLAND DEPTH	ACTUAL	%	DIAMETRAL CLEARANCE	NO PARBAK RINGS	ONE PARBAK RINGS	TWO PARBAK RINGS	GROOVE RADIUS	MAX. (b)
006 through 012	1/16	.070 ±.003	.005 to .057	.010 to .018	15 to 25	.002 to .005	.093 to .098	.138 to .143	.205 to .210	.005 to .015	.002
104 through 116	3/32	.103 ±.003	.088 to .090	.010 to .018	10 to 17	.002 to .005	.140 to .145	.171 to .176	.238 to .243	.005 to .015	.002
201 through 222	1/8	.139 ±.004	.121 to .123	.012 to .022	9 to 16	.003 to .006	.187 to .192	.208 to .213	.275 to .280	.010 to .025	.003
309 through 349	3/16	.210 ±.005	.185 to .188	.017 to .030	8 to 14	.003 to .006	.281 to .286	.311 to .316	.410 to .415	.020 to .035	.004
425 through 460	1/4	.275 ±.006	.237 to .240	.029 to .044	11 to 16	.004 to .007	.375 to .380	.408 to .413	.538 to .543	.020 to .035	.005

(a) Clearance gap must be held to a minimum consistant with design requirements for temperature range variation.
(b) Total indicator reading between groove and adjacent bearing surface.

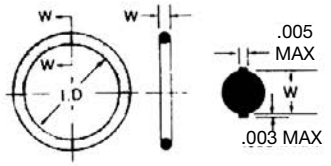
Gland Dimensions
Industrial Static Seals



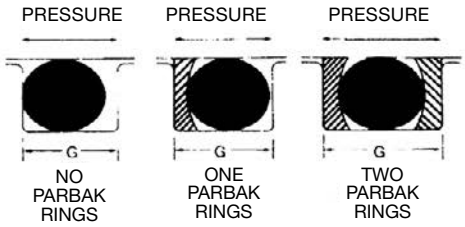
A – Bore dia (male gland)
A-1 – Groove dia. (female gland)
B – Tube OD (female gland)
B-1 – Groove dia. (male gland)
C – Plug dia. (male gland)
D – Throat dia. (female gland)
E – Diametrical Clearance



GLAND DETAIL
refer to design table below for dimension



SECTION W-W

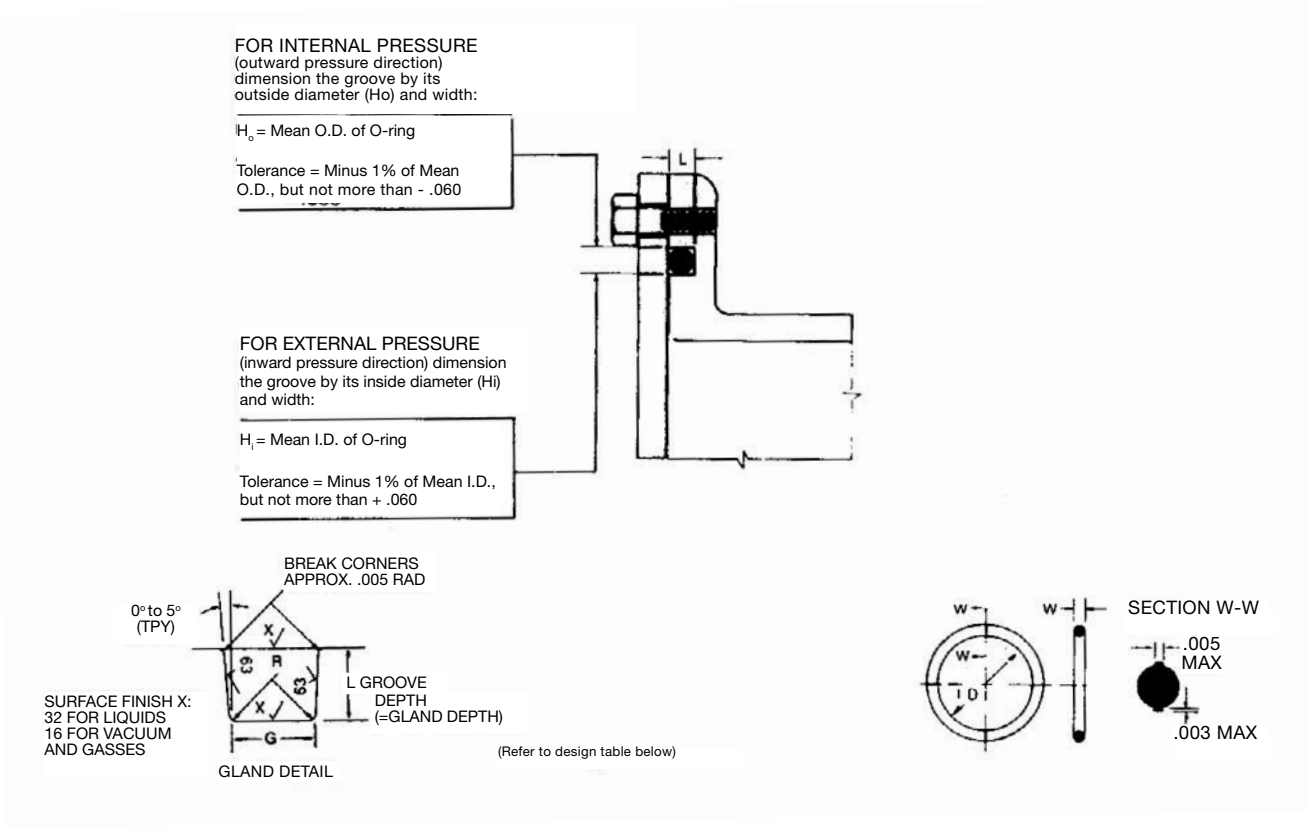


DESIGN TABLE
FOR INDUSTRIAL O-RING STATIC SEAL GLANDS

O-RING SIZE PARKER 2-	W CROSS SECTION		L (d)	SQUEEZE (d)		E (a) (c) DIAMETRAL CLEARANCE	G (d) GROOVE WIDTH			R GROOVE RADIUS	ECCENTRIC-ITY MAX. (b)
	NOMINAL	ACTUAL	GLAND DEPTH	ACTUAL	%		NO PARBAK RINGS	ONE PARBAK RINGS	TWO PARBAK RINGS		
004 through 050	1/16	.070 .003	.050 to .052	.015 to ±.023	22 to 32	.002 to .005	.093 to .098	.138 to .143	.205 to .210	.005 to .015	.002
102 through 178	3/32	.103 .003	.081 to .083	.017 to ±.025	17 to 24	.002 to .005	.140 to .145	.171 to .176	.238 to .243	.005 to .015	.002
201 through 284	1/8	.139 .004	.111 to .113	.022 to ±.032	16 to 23	.003 to .006	.187 to .192	.208 to .213	.275 to .280	.010 to .025	.003
309 through 395	3/16	.210 .005	.170 to .173	.032 to ±.045	15 to 21	.003 to .006	.281 to .286	.311 to .316	.410 to .415	.020 to .035	.004
425 through 475	1/4	.275 .006	.226 to .229	.040 to ±.055	15 to 20	.004 to .007	.375 to .380	.408 to .413	.538 to .543	.020 to .035	.005

(a) Clearance (extrusion gap) must be held to a minimum consistant with design requirements for temperature range variation.
(b) Total indicator reading between groove and adjacent bearing surface.
(c) Reduce maximum diametral clearance 50% when using silicone or fluorosilicone O-rings.
(d) For ease of assembly when Parbaks are used gland depth may be increased up to 5%.

Gland Dimensions
Face Seal Glands



O-RING

DESIGN TABLE
FOR O-RING FACE SEAL GLANDS

These dimensions are intended primarily for face type seals and low temperature applications.

O-RING SIZE PARKER 2-	W CROSS SECTION		L	SQUEEZE		G GROOVE WIDTH		R
	NOMINAL	ACTUAL	GLAND DEPTH	ACTUAL	%	LIQUIDS	VACUUM AND GASES	GROOVE RADIUS
004 through 050	1/16	.070 ± .003	.050 to .054	.013 to .023	19 to 32	.101 to .107	.084 to .089	.005 to .015
102 through 178	3/32	.103 ± .003	.074 to .080	.020 to .032	20 to 30	.136 to .142	.120 to .125	.005 to .015
201 through 284	1/8	.139 ± .004	.101 to .107	.028 to .042	20 to 30	.177 to .187	.158 to .164	.010 to .025
309 through 395	3/16	.210 ± .005	.152 to .162	.043 to .063	21 to 30	.270 to .290	.239 to .244	.020 to .035
425 through 475	1/4	.275 ± .006	.201 to .211	.058 to .080	21 to 29	.342 to .362	.309 to .314	.020 to .035
Special	3/8	.375 ± .007	.276 to .286	.082 to .108	22 to 28	.475 to .485	.419 to .424	.030 to .045
Special	1/2	.500 ± .008	.370 to .380	.112 to .138	22 to 27	.638 to .645	.560 to .565	.030 to .045

PNEU-DRAULICS
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Nicholasville, KY 40340-0037

FRACTIONAL (INCH) O-RING SIZES REFERENCE ONLY

AS568 dash number appears to right of O-Ring inside diameter (I.D.) and below sectional diameter.

	CROSS SECTION			
I.D.	1/16	3/32	1/8	3/16
1/32	001*			
3/64	002*			
1/16	003	102		
5/64	004			
3/32	005	103		
1/8	006	104		
5/32	007	105		
3/16	008	106	201	
7/32	009	107		
1/4	010	108	202	
5/16	011	109	203	
3/8	012	110	204	
7/16	013	111	205	309
1/2	014	112	206	310
9/16	015	113	207	311
5/8	016	114	208	312
11/16	017	115	209	313
3/4	018	116	210	314
13/16	019	117	211	315
7/8	020	118	212	316
15/16	021	119	213	317
1	022	120	214	318
1 1/16	023	121	215	319
1 1/8	024	122	216	320
1 13/16	025	123	217	321
1 1/4	026	124	218	322
1 5/16	027	125	219	323
1 3/8	028	126	220	324
1 7/16	127	221		
1 1/2	029	128	222	325
1 9/16	129			
1 5/8	030	130	223	326
1 11/16	131			
1 3/4	031	132	224	327
1 13/16	133			
1 7/8	032	134	225	328
1 15/16	135			
2	033	136	226	329
2 1/16	137			
2 1/8	034	138	227	330

	CROSS SECTION				
I.D.	1/16	3/32	1/8	3/16	1/4
2 3/16	139				
2 1/4	035	140	228	331	
2 5/16	141				
2 3/8	036	142	229	332	
2 7/16	143				
2 1/2	037	144	230	333	
2 9/16	145				
2 5/8	038	146	231	334	
2 11/16	147				
2 3/4	039	148	232	335	
2 13/16	149				
2 7/8	040	150	233	336	
3	041	151	234	337	
3 1/8	235	338			
3 1/4	042	152	236	339	
3 3/8	237	340			
3 1/2	043	153	238	341	
3 5/8	239	342			
3 3/4	044	154	240	343	
3 7/8	241	344			
4	045	155	242	345	
4 1/8	243	346			
4 1/4	046	156	244	347	
4 3/8	245	348			
4 1/2	047	157	246	349	425
4 5/8	247	350	426		
4 3/4	048	158	248	351	427
4 7/8	249	352	428		
5	049	159	250	353	429
5 1/8	251	354	430		
5 1/4	050	160	252	355	431
5 3/8	253	356	432		
5 1/2	161	254	357	433	
5 5/8	255	358	434		
5 3/4	162	256	359	435	
5 7/8	257	360	436		
6	163	258	361	437	
6 1/4	164	259	362	438	
6 1/2	165	260	363	439	
6 3/4	166	261	364	440	

	CROSS SECTION			
I.D.	3/32	1/8	3/16	1/4
7	167	262	365	441
7 1/4	168	263	366	442
7 1/2	169	264	367	443
7 3/4	170	265	368	444
8	171	266	369	445
8 1/4	172	267	370	
8 1/2	173	268	371	446
8 3/4	174	269	372	
9	175	270	373	447
9 1/4	176	271	374	
9 1/2	177	272	375	448
9 3/4	178	273	376	
10		274	377	449
10 1/2		275	378	450
11		276	379	451
11 1/2		277	380	452
12		278	381	453
12 1/2				454
13		279	382	455
13 1/2				456
14		280	383	457
14 1/2				458
15		281	384	459
15 1/2				460
16		282	385	461
16 1/2				462
17		283	386	463
17 1/2				464
18		284	387	465
18 1/2				466
19			388	467
19 1/2				468
20			389	469
21			390	470
22			391	471
23			392	472
24			393	473
25			394	474
26			395	475

*Cross section diameter of AS568-001 is 1/32. Cross section diameter of AS568-002 is 3/64.

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Nicholasville, KY 40340-0037

PNEU-DRAULICS

	DECIMALS	MILLIMETERS
1/64	0.015625	— 0.397
1/32	.03125	— 0.794
3/64	.046875	— 1.191
1/16	.0625	— 1.588
5/64	.078125	— 1.984
3/32	.09375	— 2.381
7/64	.109375	— 2.778
1/8	.1250	— 3.175
9/64	.140625	— 3.572
5/32	.15625	— 3.969
11/64	.171875	— 4.366
3/16	.1875	— 4.763
13/64	.203125	— 5.159
7/32	.21875	— 5.556
15/64	.234375	— 5.953
1/4	.2500	— 6.350
17/64	.265625	— 6.747
9/32	.28125	— 7.144
19/64	.296875	— 7.541
5/16	.3125	— 7.938
21/64	.328125	— 8.334
11/32	.34375	— 8.731
23/64	.359375	— 9.128
3/8	.3750	— 9.525
25/64	.390625	— 9.922
13/32	.40625	—10.319
27/64	.421875	—10.716
7/16	.4375	—11.113
29/64	.453125	—11.509
15/32	.46875	—11.906
31/64	.484375	—12.303
1/2	.5000	—12.700

1 mm = .03937"

	DECIMALS	MILLIMETERS
33/64	0.515625	—13.097
17/32	.53125	—13.494
35/64	.546875	—13.891
9/16	.5625	—14.288
37/64	.578125	—14.684
19/32	.59375	—15.081
39/64	.609375	—15.478
5/8	.6250	—15.875
41/64	.640625	—16.272
21/32	.65625	—16.669
43/64	.671875	—17.066
11/16	.6875	—17.463
45/64	.703125	—17.859
23/32	.71875	—18.256
47/64	.734375	—18.653
3/4	.7500	—19.050
49/64	.765625	—19.447
25/32	.78125	—19.844
51/64	.796875	—20.241
13/16	.8125	—20.638
53/64	.828125	—21.034
27/32	.84375	—21.431
55/64	.859375	—21.828
7/8	.8750	—22.225
57/64	.890625	—22.622
29/32	.90625	—23.019
59/64	.921875	—23.416
15/16	.9375	—23.813
61/64	.953125	—24.209
31/32	.96875	—24.606
63/64	.984375	—25.003
1	1.000	—25.400

.001" = .0254"

MM	INCHES
.1—	.0039
.2—	.0079
.3—	.0118
.4—	.0157
.5—	.0197
.6—	.0236
.7—	.0276
.8—	.0315
.9—	.0354
1—	.0394
2—	.0787
3—	.1181
4—	.1575
5—	.1969
6—	.2362
7—	.2756
8—	.3150
9—	.3543
10—	.3937
11—	.4331
12—	.4724
13—	.5118
14—	.5512
15—	.5906
16—	.6299
17—	.6693
18—	.7087
19—	.7480
20—	.7874
21—	.8268
22—	.8661
23—	.9055
24—	.9449
25—	.9843
26—	1.0236
27—	1.0630
28—	1.1024
29—	1.1417
30—	1.1811
31—	1.2205
32—	1.2598
33—	1.2992
34—	1.3386
35—	1.3780
36—	1.4173
37—	1.4567
38—	1.4961
39—	1.5354
40—	1.5748
41—	1.6142
42—	1.6535
43—	1.6929
44—	1.7323
45—	1.7717

MM	INCHES
46—	1.8110
47—	1.8504
48—	1.8898
49—	1.9291
50—	1.9685
51—	2.0079
52—	2.0472
53—	2.0866
54—	2.1260
55—	2.1654
56—	2.2047
57—	2.2441
58—	2.2835
59—	2.3228
60—	2.3622
61—	2.4016
62—	2.4409
63—	2.4803
64—	2.5197
65—	2.5591
66—	2.5984
67—	2.6378
68—	2.6772
69—	2.7165
70—	2.7559
71—	2.7953
72—	2.8346
73—	2.8740
74—	2.9134
75—	2.9528
76—	2.9921
77—	3.0315
78—	3.0709
79—	3.1102
80—	3.1496
81—	3.1890
82—	3.2283
83—	3.2677
84—	3.3071
85—	3.3465
86—	3.3858
87—	3.4252
88—	3.4646
89—	3.5039
90—	3.5433
91—	3.5827
92—	3.6220
93—	3.6614
94—	3.7008
95—	3.7402
96—	3.7795
97—	3.8189
98—	3.8583
99—	3.8916
100—	3.9370

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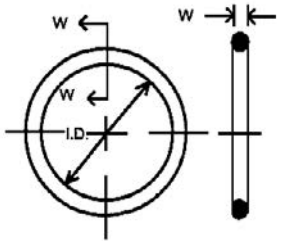
NITRILE 70 DUROMETER

Parker DISTRIBUTOR

*****HNBR NOW AVAILABLE UPON REQUEST. SELECT SIZES AVAILABLE IN STOCK**



1500 PSI
-40º to + 250º F
Nitrile (Buna N)
General purpose sealing: Petroleum oils and fluids: water, silicone, greases, and oils.

PART NUMBER	NORMAL SIZE ID	OD	W	LIST PRICE/ EA.
001 N70A	1/32	3/32	1/32	$ .35
002 N70A	3/64	9/64	1/32	$ .27
003 N70A	1/16	3/16	1/16	$ .27
004 N70A	5/64	13/64	1/16	$ .27
005 N70A	3/32	7/32	1/16	$ .28
006 N70A	1/8	1/4	1/16	$ .18
007 N70A	5/32	9/32	1/16	$ .20
008 N70A	3/16	5/16	1/16	$ .20
009 N07A	7/32	11/32	1/16	$ .20
010 N70A	1/4	3/8	1/16	$ .20
011 N70A	5/16	7/16	1/16	$ .21
012 N70A	3/8	1/2	1/16	$ .24
013 N70A	7/16	9/16	1/16	$ .24
014 N70A	1/2	5/8	1/16	$ .24
015 N70A	9/16	11/16	1/16	$ .27
016 N70A	5/8	3/4	1/16	$ .27
017 N70A	11/16	13/16	1/16	$ .27
018 N70A	3/4	7/8	1/16	$ .61
019 N70A	13/16	15/16	1/16	$ .30
020 N70A	7/8	1	1/16	$ .30
021 N70A	15/16	1 1/16	1/16	$ .33
022 N70A	1	1 1/8	1/16	$ .33
023 N70A	1 1/16	1 3/16	1/16	$ .36
024 N70A	1 1/8	1 1/4	1/16	$ .36
025 N70A	1 3/16	1 5/16	1/16	$ .41
026 N70A	1 1/4	1 3/8	1/16	$ .42
027 N70A	1 5/16	1 7/16	1/16	$ .42
028 N70A	1 3/8	1 1/2	1/16	$ .45
029 N70A	1 1/2	1 5/8	1/16	$ .53
030 N70A	1 5/8	1 3/4	1/16	$ .56
031 N70A	1 3/4	1 7/8	1/16	$ .69
032 N70A	1 7/8	2	1/16	$ .71
033 N70A	2	2 1/8	1/16	$ .89
034 N70A	2 1/8	2 1/4	1/16	$ .92
035 N70A	2 1/4	2 3/8	1/16	$ .95

PART NUMBER	NOMINAL SIZE ID	OD	W	LIST PRICE/ EA.
036 N70A	23/8	21/2	1/16	$1.00
037 N70A	21/2	25/8	1/16	$1.07
038 N70A	25/8	23/4	1/16	$1.12
039 N70A	23/4	27/8	1/16	$1.18
040 N70A	27/8	3	1/16	$1.21
041 N70A	3	31/8	1/16	$1.30
042 N70A	31/4	33/8	1/16	$1.51
043 N70A	31/2	35/8	1/16	$1.63
044 N70A	33/4	37/8	1/16	$1.87
045 N70A	4	41/8	1/16	$1.96
046 N70A	41/4	43/8	1/16	$2.49
047 N70A	41/2	45/8	1/16	$2.63
048 N70A	43/4	47/8	1/16	$2.85
049 N70A	5	51/8	1/16	$3.23
050 N70A	51/4	53/8	1/16	$3.52
102 N70A	/16	1/4	3/32	$ .27
103 N70A	3/32	9/32	3/32	$ .27
104 N70A	1/8	5/16	3/32	$ .18
105 N70A	5/3	11/32	3/32	$ .18
106 N70A	3/16	3/8	3/32	$ .20
107 N70A	7/32	13/32	3/32	$ .20
108 N70A	1/4	7/16	3/32	$ .20
109 N70A	5/16	1/2	3/32	$ .18
110 N70A	3/8	9/16	3/32	$ .31
111 N70A	7/16	5/8	3/32	$ .24
112 N70A	1/2	11/16	3/32	$ .24
113 N70A	9/16	3/4	3/32	$ .24
114 N70A	5/8	13/16	3/32	$ .24
115 N70A	11/16	7/8	3/32	$ 24
116 N70A	3/4	15/16	3/32	$ .27
117 N70A	13/16	1	3/32	$ .29
118 N70A	7/8	11/16	3/32	$ .32
119 N70A	15/16	11/8	3/32	$ .33
120 N70A	1	13/16	3/32	$ ..36
121 N70A	11/16	11/4	3/32	$ .37

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NITRILE 70 DUROMETER

PART NUMBER	NORMAL SIZE ID	OD	W	LIST PRICE/ EA.
122 N70A	1 1/8	1 5/16	3/32	$ .38
123 N70A	1 3/16	1 3/8	3/32	$ .40
124 N70A	1 1/4	1 7/16	3/32	$ .45
125 N70A	1 5/16	1 1/2	3/32	$ .46
126 N70A	1 3/8	1 9/16	3/32	$ .50
127 N70A	1 7/16	1 5/8	3/32	$ .51
128 N70A	1 1/2	1 11/16	3/32	$ .60
129 N70A	1 9/16	1 3/4	3/32	$ .60
130 N70A	1 5/8	1 13/16	3/32	$ .65
131 N70A	1 11/16	1 7/8	3/32	$ .69
132 N70A	1 3/4	1 15/16	3/32	$ .69
133 N70A	1 13/16	2	3/32	$ .78
134 N70A	1 7/8	2 1/16	3/32	$ .78
135 N70A	1 15/16	2 1/8	3/32	$ .83
136 N70A	2	2 3/16	3/32	$ .86
137 N70A	2 1/16	2 1/4	3/32	$ .89
138 N70A	2 1/8	2 5/16	3/32	$ .92
139 N70A	2 3/16	2 3/8	3/32	$ 1.07
140 N70A	2 1/4	2 7/16	3/32	$ .99
141 N70A	2 5/16	2 1/2	3/32	$ 1.00
142 N70A	2 3/8	2 9/16	3/32	$ 1.03
143 N70A	2 7/16	2 5/8	3/32	$ 1.07
144 N70A	2 1/2	2 11/16	3/32	$ 1.07
145 N70A	2 9/16	2 3/4	3/32	$ 1.09
146 N70A	2 5/8	2 13/16	3/32	$ 1.16
147 N70A	2 11/16	2 7/8	3/32	$ 1.16
148 N70A	2 3/4	2 15/16	3/32	$ 1.18
149 N70A	2 13/16	3	3/32	$ 1.07
150 N70A	2 7/8	3 1/16	3/32	$ 1.30
151 N70A	3	3 3/16	3/32	$ 1.33
152 N70A	3 1/4	3 7/16	3/32	$ 1.56
153 N70A	3 1/2	3 11/16	3/32	$ 1.60
154 N70A	3 3/4	3 15/16	3/32	$ 1.81
155 N70A	4	4 3/16	3/32	$ 2.14
156 N70A	4 1/4	4 7/16	3/32	$ 2.49
157 N70A	4 1/2	4 11/16	3/32	$ 2.99
158 N70A	4 3/4	4 15/16	3/32	$ 3.19
159 N70A	5	5 3/16	3/32	$ 3.64
160 N70A	5 1/4	5 7/16	3/32	$ 4.08
161 N70A	5 1/2	5 11/16	3/32	$ 4.32
162 N70A	5 3/4	5 15/16	3/32	$ 4.88
163 N70A	6	6 3/16	3/32	$ 5.17
164 N70A	6 1/4	6 7/16	3/32	$ 6.31
165 N70A	6 1/2	6 11/16	3/32	$ 6.66
166 N70A	6 3/4	6 15/16	3/32	$ 7.13

PART NUMBER	NOMINAL SIZE ID	OD	W	LIST PRICE/ EA.
167 N70A	7	7 3/16	3/32	3 $ 6.73
168 N70A	7 1/4	7 7/16	3/32	3 $ 7.69
169 N70A	7 1/2	7 11/16	3/32	3 $ 8.02
170 N70A	7 3/4	7 15/16	3/32	3 $ 7.56
171 N70A	8	8 3/16	3/32	2 $ 8.51
172 N70A	8 1/4	8 7/16	3/32	2 $ 8.88
173 N70A	8 1/2	8 11/16	3/32	2 $ 9.15
174 N70A	8 3/4	8 15/16	3/32	2 $10.39
175 N70A	9	9 3/16	3/32	2 $ 9.72
176 N70A	9 1/4	9 7/16	3/32	2 $10.09
177 N70A	9 1/2	9 11/16	3/32	2 $10.47
178 N70A	9 3/4	9 15/16	3/32	2 $10.82
201 N70A	3/16	7/16	1/8	90 $ .18
202 N70A	1/4	1/2	1/8	79 $ .24
203 N70A	5/16	9/16	1/8	79 $ .24
204 N70A	3/8	5/8	1/8	79 $ .24
205 N70A	7/16	11/16	1/8	79 $ .22
206 N70A	1/2	3/4	1/8	63 $ .29
207 N70A	9/16	13/16	1/8	63 $ .29
208 N70A	5/8	7/8	1/8	57 $ .33
209 N70A	11/16	15/16	1/8	57 $ .30
210 N70A	3/4	1	1/8	53 $ .36
211 N70A	13/16	1 1/16	1/8	53 $ .36
212 N70A	7/8	1 1/8	1/8	49 $ .38
213 N70A	15/16	1 3/16	1/8	45 $ .42
214 N70A	1	1 1/4	1/8	42 $ .45
215 N70A	1 1/16	1 5/16	1/8	37 $ .51
216 N70A	1 1/8	1 3/8	1/8	35 $ .53
217 N70A	1 3/16	1 7/16	1/8	33 $ .56
218 N70A	1 1/4	1 1/2	1/8	32 $ .60
219 N70A	1 5/16	1 9/16	1/8	32 $ .62
220 N70A	1 3/8	1 5/8	1/8	29 $ .65
221 N70A	1 7/16	1 11/16	1/8	28 $ .69
222 N70A	1 1/2	1 3/4	1/8	22 $ .88
223 N70A	1 5/8	1 7/8	1/8	22 $ .86
224 N70A	1 3/4	2	1/8	21 $ .93
225 N70A	1 7/8	2 1/8	1/8	20 $ 1.09
226 N70A	2	2 1/4	1/8	19 $ 1.00
227 N70A	2 1/8	2 3/8	1/8	18 $ 1.07
228 N70A	2 1/4	2 1/2	1/8	17 $ 1.16
229 N70A	2 3/8	2 5/8	1/8	16 $ 1.21
230 N70A	2 1/2	2 3/4	1/8	15 $ 1.25
231 N70A	2 5/8	2 7/8	1/8	14 $ 1.36
232 N70A	2 3/4	3	1/8	13 $ 1.45
233 N70A	2 7/8	3 1/8	1/8	13 $ 1.47

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PART NUMBER	NORMAL SIZE ID	OD	W	MINIMUM TO ORDER	LIST PRICE/ EA.
234 N70A	3	3 1/4	1/8		$ 1.51
235 N70A	3 1/8	3 3/8	1/8		$ 1.72
236 N70A	3 1/4	3 1/2	1/8		$ 1.81
237 N70A	3 3/8	3 5/8	1/8		$ 1.83
238 N70A	3 1/2	3 3/4	1/8		$ 1.83
239 N70A	3 5/8	3 7/8	1/8		$ 2.01
240 N70A	3 3/4	4	1/8		$ 2.01
241 N70A	3 7/8	4 1/8	1/8		$ 2.05
242 N70A	4	4 1/4	1/8		$ 2.31
243 N70A	4 1/8	4 3/8	1/8		$ 2.28
244 N70A	4 1/4	4 1/2	1/8		$ 2.31
245 N70A	4 3/8	4 5/8	1/8		$ 2.34
246 N70A	4 1/2	4 3/4	1/8		$ 2.72
247 N70A	4 5/8	4 7/8	1/8		$ 2.87
248 N70A	4 3/4	5	1/8		$ 3.08
249 N70A	4 7/8	5 1/8	1/8		$ 3.17
250 N70A	5	5 1/4	1/8		$ 3.28
251 N70A	5 1/8	5 3/8	1/8		$ 3.46
252 N70A	5 1/4	5 1/2	1/8		$ 4.04
253 N70A	5 3/8	5 5/8	1/8		$ 3.85
254 N70A	5 1/2	5 3/4	1/8		$ 4.03
255 N70A	5 5/8	5 7/8	1/8		$ 4.17
256 N70A	5 3/4	6	1/8		$ 4.50
257 N70A	5 7/8	6 1/8	1/8		$ 4.68
258 N70A	6	6 1/4	1/8		$ 4.74
259 N70A	6 1/4	6 1/2	1/8		$ 4.83
260 N70A	6 1/2	6 3/4	1/8		$ 4.97
261 N70A	6 3/4	7	1/8		$ 5.26
262 N70A	7	7 1/4	1/8		$ 5.62
263 N70A	7 1/4	7 1/2	1/8		$ 5.71
264 N70A	7 1/2	7 3/4	1/8		$ 6.24
265 N70A	7 3/4	8	1/8		$ 6.57
266 N70A	8	8 1/4	1/8		$ 6.72
267 N70A	8 1/4	8 1/2	1/8		$ 7.58
268 N70A	8 1/2	8 3/4	1/8		$ 7.07
269 N70A	8 3/4	9	1/8		$ 8.08
270 N70A	9	9 1/4	1/8		$ 8.40
271 N70A	9 1/4	9 1/2	1/8		$ 8.82
272 N70A	9 1/2	9 3/4	1/8		$ 9.23
273 N70A	9 3/4	10	1/8		$ 9.53
274 N70A	10	10 1/4	1/8		$10.00
275 N70A	10 1/2	10 3/4	1/8		$10.91
276 N70A	11	11 1/4	1/8		$15.70
277 N70A	11 1/2	11 3/4	1/8		$15.72
278 N70A	12	12 1/4	1/8		$14.47

PART NUMBER	NOMINAL SIZE ID	OD	W	MINIMUM TO ORDER	LIST PRICE/ EA.
279 N70A	13	13 1/4	1/8		$18.38
280 N70A	14	14 1/4	1/8		$18.62
281 N70A	15	15 1/4	1/8		$21.28
282 N70A	16	16 1/4	1/8		$22.50
283 N70A	17	17 1/4	1/8		$24.53
284 N70A	18	18 1/4	1/8		$22.97
309 N70A	7/16	13/16	3/16		$ 0.38
310 N70A	1/2	7/8	3/16		$ 0.38
311 N70A	9/16	15/16	3/16		$ 0.38
312 N70A	5/8	1	3/16		$ 0.40
313 N70A	11/16	1 1/16	3/16		$ 0.46
314 N70A	3/4	1 1/8	3/16		$ 0.53
315 N70A	13/16	1 3/16	3/16		$ 0.49
316 N70A	7/8	1 1/4	3/16		$ 0.51
317 N70A	15/16	1 5/16	3/16		$ 0.51
318 N70A	1	1 3/8	3/16		$ 0.55
319 N70A	1 1/16	1 7/16	3/16		$ 0.57
320 N70A	1 1/8	1 1/2	3/16		$ 0.65
321 N70A	1 3/16	1 9/16	3/16		$ 0.74
322 N70A	1 1/4	1 5/8	3/16		$ 0.74
323 N70A	1 5/16	1 11/16	3/16		$ 0.75
324 N70A	1 3/8	1 3/4	3/16		$ 0.86
325 N70A	1 1/2	1 7/8	3/16		$ 0.92
326 N70A	1 5/8	2	3/16		$ 1.00
327 N70A	1 3/4	2 1/8	3/16		$ 1.03
328 N70A	1 7/8	2 1/4	3/16		$ 1.16
329 N70A	2	2 3/8	3/16		$ 1.30
330 N70A	2 1/8	2 1/2	3/16		$ 1.36
331 N70A	2 1/4	2 5/8	3/16		$ 1.47
332 N70A	2 3/8	2 3/4	3/16		$ 1.86
333 N70A	2 1/2	2 7/8	3/16		$ 1.72
334 N70A	2 5/8	3	3/16		$ 2.07
335 N70A	2 3/4	3 1/8	3/16		$ 1.92
336 N70A	2 7/8	3 1/4	3/16		$ 1.96
337 N70A	3	3 3/8	3/16		$ 2.01
338 N70A	3 1/8	3 1/2	3/16		$ 2.24
339 N70A	3 1/4	3 5/8	3/16		$ 2.34
340 N70A	3 3/8	3 3/4	3/16		$ 2.50
341 N70A	3 1/2	3 7/8	3/16		$ 2.61
342 N70A	3 5/8	4	3/16		$ 3.51
343 N70A	3 3/4	4 1/8	3/16		$ 2.67
344 N70A	3 7/8	4 1/4	3/16		$ 2.85
345 N70A	4	4 3/8	3/16		$ 2.96
346 N70A	4 1/8	4 1/2	3/16		$ 2.99
347 N70A	4 1/4	4 5/8	3/16		$ 2.80

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PART NUMBER	NORMAL SIZE ID	OD	W	LIST PRICE/ EA.
348 N70A	4 3/8	4 3/4	3/16	$ 3.11
349 N70A	4 1/2	4 7/8	3/16	$ 3.20
350 N70A	4 5/8	5	3/16	$ 3.28
351 N70A	4 3/4	5 1/8	3/16	$ 3.43
352 N70A	4 7/8	5 1/4	3/16	$ 3.70
353 N70A	5	5 3/8	3/16	$ 3.78
354 N70A	5 1/8	5 1/2	3/16	$ 3.84
355 N70A	5 1/4	5 5/8	3/16	$ 4.25
356 N70A	5 3/8	5 3/4	3/16	$ 3.86
357 N70A	5 1/2	5 7/8	3/16	$ 4.51
358 N70A	5 5/8	6	3/16	$ 4.67
359 N70A	5 3/4	6 1/8	3/16	$ 4.36
360 N70A	5 7/8	6 1/4	3/16	$ 4.87
361 N70A	6	6 3/8	3/16	$ 5.02
362 N70A	6 1/4	6 5/8	3/16	$ 4.85
363 N70A	6 1/2	6 7/8	3/16	$ 5.40
364 N70A	6 3/4	7 1/8	3/16	$ 5.67
365 N70A	7	7 3/8	3/16	$ 5.82
366 N70A	7 1/4	7 5/8	3/16	$ 6.00
367 N70A	7 1/2	7 7/8	3/16	$ 6.61
368 N70A	7 3/4	8 1/8	3/16	$ 6.79
369 N70A	8	8 3/8	3/16	$ 7.84
370 N70A	8 1/4	8 5/8	3/16	$ 7.97
371 N70A	8 1/2	8 7/8	3/16	$ 7.58
372 N70A	8 3/4	9 1/8	3/16	$ 8.66
373 N70A	9	9 3/8	3/16	$ 8.67
374 N70A	9 1/4	9 5/8	3/16	$ 9.00
375 N70A	9 1/2	9 7/8	3/16	$ 9.25
376 N70A	9 3/4	10 1/8	3/16	$ 8.55
377 N70A	10	10 3/8	3/16	$10.37
378 N70A	10 1/2	10 7/8	3/16	$15.72
379 N70A	11	11 3/8	3/16	$17.91
380 N70A	11 1/2	11 7/8	3/16	$18.05
381 N70A	12	12 3/8	3/16	$19.00
382 N70A	13	13 3/8	3/16	$19.03
383 N70A	14	14 3/8	3/16	$20.06
384 N70A	15	15 3/8	3/16	$20.72
385 N70A	16	16 3/8	3/16	$24.06
386 N70A	17	17 3/8	3/16	$25.66
387 N70A	18	18 3/8	3/16	$26.89
388 N70A	19	19 3/8	3/16	$25.97
389 N70A	20	20 3/8	3/16	$30.52
390 N70A	21	21 3/8	3/16	$30.82
391 N70A	22	22 3/8	3/16	$35.26
392 N70A	23	23 3/8	3/16	$33.52

PART NUMBER	NOMINAL SIZE ID	OD	W	LIST PRICE/ EA.
393 N70A	24	24 3/8	3/16	$39.33
394 N70A	25	25 3/8	3/16	$38.25
395 N70A	26	26 3/8	3/16	$38.61
425 N70A	4 1/2	5	1/4	$ 4.60
426 N70A	4 5/8	5 1/8	1/4	$ 4.79
427 N70A	4 3/4	5 1/4	1/4	$ 4.82
428 N70A	4 7/8	5 3/8	1/4	$ 4.56
429 N70A	5	5 1/2	1/4	$ 5.15
430 N70A	5 1/8	5 5/8	1/4	$ 5.53
431 N70A	5 1/4	5 3/4	1/4	$ 5.62
432 N70A	5 3/8	5 7/8	1/4	$ 5.17
433 N70A	5 1/2	6	1/4	$ 6.33
434 N70A	5 5/8	6 1/8	1/4	$ 5.76
435 N70A	5 3/4	6 1/4	1/4	$ 5.91
436 N70A	5 7/8	6 3/8	1/4	$ 6.10
437 N70A	6	6 1/2	1/4	$ 6.94
438 N70A	6 1/4	6 3/4	1/4	$ 7.11
439 N70A	6 1/2	7	1/4	$ 7.25
440 N70A	6 3/4	7 1/4	1/4	$ 7.61
441 N70A	7	7 1/2	1/4	$ 9.08
442 N70A	7 1/4	7 3/4	1/4	$ 9.24
443 N70A	7 1/2	8	1/4	$ 9.52
444 N70A	7 3/4	8 1/4	1/4	$ 8.75
445 N70A	8	8 1/2	1/4	$ 9.81
446 N70A	8 1/2	9	1/4	$10.26
447 N70A	9	9 1/2	1/4	$10.41
448 N70A	9 1/2	10	1/4	$10.68
449 N70A	10	10 1/2	1/4	$10.80
450 N70A	10 1/2	11	1/4	$21.34
451 N70A	11	11 1/2	1/4	$22.13
452 N70A	11 1/2	12	1/4	$20.28
453 N70A	12	12 1/2	1/4	$20.72
454 N70A	12 1/2	13	1/4	$21.24
455 N70A	13	13 1/2	1/4	$21.25
456 N70A	13 1/2	14	1/4	$21.86
457 N70A	14	14 1/2	1/4	$27.74
458 N70A	14 1/2	15	1/4	$23.06
459 N70A	15	15 1/2	1/4	$21.52
460 N70A	15 1/2	16	1/4	$24.15
461 N70A	16	16 1/2	1/4	$25.73
462 N70A	16 1/2	17	1/4	$25.93
463 N70A	17	17 1/2	1/4	$26.53
464 N70A	17 1/2	18	1/4	$27.60
465 N70A	18	18 1/2	1/4	$27.71
466 N70A	18 1/2	19	1/4	$29.90

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PART NUMBER	NORMAL SIZE ID	OD	W	LIST PRICE/ EA.
467 N70A	19	19 1/2	1/4	$29.94
468 N70A	19 1/2	20	1/4	$30.25
469 N70A	20	20 1/2	1/4	$32.19
470 N70A	21	21 1/2	1/4	$30.20
471 N70A	22	22 1/2	1/4	$35.58
472 N70A	23	23 1/2	1/4	$39.06
473 N70A	24	24 1/2	1/4	$39.46
474 N70A	25	25 1/2	1/4	$43.26
475 N70A	26	26 1/2	1/4	$43.54

NITRILE 70 DUROMETER (900 SERIES)

PART NUMBER	ACTUAL SIZE ID	+/-	W	+/-	LIST PRICE/ EA.
901 N70A	185	005	056	003	$ .20
902 N70A	239	005	064	003	$ .23
903 N70A	301	005	064	003	$ .24
904 N70A	351	005	072	003	$ .24
905 N70A	414	005	072	003	$ .22
906 N70A	468	005	078	003	$ .24
907 N70A	530	007	082	003	$ .24
908 N70A	644	009	087	003	$ .27
909 N70A	706	009	097	003	$ .25
910 N70A	755	009	097	003	$ .33
911 N70A	863	009	116	004	$ .37
912 N70A	924	009	116	004	$ .42
913 N70A	986	010	116	004	$ .40
914 N70A	1.047	010	116	004	$ .43
916 N70A	1.171	010	116	004	$ .53
918 N70A	1.355	012	116	004	$ .55
920 N70A	1.475	014	118	004	$ .65
924 N70A	1.720	014	118	004	$ .94
928 N70A	2.090	018	118	004	$ 1.04
932 N70A	2.337	018	118	004	$ 1.18

NITRILE 70 DUROMETER O-RING CORD STOCK

PART NUMBER	NOMINAL C/S	LIST PRICE/ PER FOOT
.070CS N70	1/16	$ .31
.103CS N70	3/32	$ .57
.125CS N70	1/8	$ .57
.139CS N70	1/8	$ .57
.156CS N70	5/32	$ .79
.188CS N70	3/16	$ .79
.210CS N70	3/16	$ .79
.250CS N70	1/4	$ .94
.275CS N70	1/4	$ 1.03
.312CS N70	5/16	$ 1.51
.375CS N70	3/8	$ 1.98
.500CS N70	1/2	$ 2.72
.625CS N70	5/8	$ 4.99
.750CS N70	3/4	$ 5.47

HOT VULCANIZED SPLICED RINGS 70 DURO NITRILE

Internal Diameter
2.5" to 80.5"

Larger sizes available upon request.
Call for price and delivery.

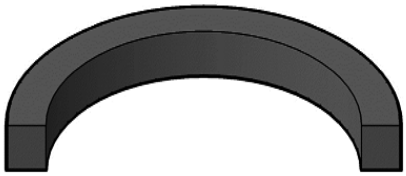
*****HNBR NOW AVAILABLE UPON REQUEST. SELECT SIZES AVAILABLE IN STOCK**

111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

PNEU-DRAULICS

SQUARE NITRILE 70 DUROMETER

Viton available upon request.) (Other sizes available call for price and delivery.)



-40° to +212° 70 duro. Nitrile

PART NUMBER	NORMAL SIZE ID	OD	W	MINIMUM TO ORDER	LIST PRICE/ EA.
012S N70	3/8	1/2	1/16	21	$ .34
013S N70	7/16	9/16	1/16	21	$ .34
014S N70	1/2	5/8	1/16	33	$ .22
015S N70	9/16	11/16	1/16	37	$ .19
016S N70	5/8	3/4	1/16	37	$ .19
017S N70	11/16	13/16	1/16	40	$ .18
018S N70	3/4	7/8	1/16	40	$ .18
019S N70	13/16	15/16	1/16	40	$ .18
024S N70	1 1/8	1 1/4	1/16	33	$ .22
032S N70	1 7/8	2	1/16	30	$ .24
033S N70	2	2 1/8	1/16	30	$ .24
037S N70	2 1/2	2 5/8	1/16	25	$ .30
038S N70	2 5/8	2 3/4	1/16	25	$ .30
040S N70	2 7/8	3	1/16	17	$ .31
041S N70	3	3 1/8	1/16	24	$ .31
044S N70	3 3/4	3 7/8	1/16	21	$ .34
115S N70	11/16	7/8	3/32	19	$ .37
117S N70	13/16	1	3/32	19	$ .37
118S N70	7/8	1 1/16	3/32	19	$ .37
119S N70	15/16	1 1/8	3/32	19	$ .37
120S N70	1	1 3/16	3/32	19	$ .37
121S N70	1 1/16	1 1/4	3/32	18	$ .40
122S N70	1 1/8	1 5/16	3/32	18	$ .40
123S N70	1 3/16	1 3/8	3/32	18	$ .40
124S N70	1 1/4	1 7/16	3/32	17	$ .43
125S N70	1 5/16	1 1/2	3/32	17	$ .43
126S N70	1 3/8	1 9/16	3/32	17	$ .43
127S N70	1 7/16	1 5/8	3/32	17	$ .43
128S N70	1 1/2	1 11/16	3/32	17	$ .43
129S N70	1 9/16	1 3/4	3/32	17	$ .43
130S N70	1 5/8	1 13/16	3/32	17	$ .43
131S N70	1 11/16	1 7/8	3/32	17	$ .43
132S N70	1 3/4	1 15/16	3/32	16	$ .45
133S N70	1 13/16	2	3/32	16	$ .45
134S N70	1 7/8	2 1/16	3/32	16	$ .45

PART NUMBER	NOMINAL SIZE ID	OD	W	MINIMUM TO ORDER	LIST PRICE/ EA.
135S N70	1 15/16	2 1/8	3/32	16	$ .45
136S N70	2	2 3/16	3/32	16	$ .45
139S N70	2 3/16	2 3/8	3/32	16	$ .45
143S N70	2 7/16	2 5/8	3/32	16	$ .45
144S N70	2 1/2	2 11/16	3/32	16	$ .45
145S N70	2 9/16	2 3/4	3/32	16	$ .55
146S N70	2 5/8	2 13/16	3/32	16	$ .55
151S N70	3	3 3/16	3/32	14	$ .55
153S N70	3 1/2	3 11/16	3/32	14	$ .52
154S N70	3 3/4	3 15/16	3/32	13	$ .55
155S N70	4	4 3/16	3/32	13	$ .56
156S N70	4 1/4	4 7/16	3/32	11	$ .58
157S N70	4 1/2	4 11/16	3/32	8	$ .68
159S N70	5	5 3/16	3/32	7	$ 1.00
160S N70	5 1/4	5 7/16	3/32	6	$ 1.14
163S N70	6	6 3/16	3/32	4	$ 1.28
204S N70	3/8	5/8	1/8	10	$ 1.99
210S N70	3/4	1	1/8	17	$ .74
211S N70	13/16	1 1/16	1/8	17	$ .43
212S N70	7/8	1 1/8	1/8	16	$ .44
215S N70	1 1/16	1 5/16	1/8	16	$ .45
216S N70	1 1/8	1 3/8	1/8	16	$ .47
217S N70	1 3/16	1 7/16	1/8	15	$ .47
218S N70	1 1/4	1 1/2	1/8	15	$ .48
219S N70	1 5/16	1 9/16	1/8	15	$ .49
220S N70	1 3/8	1 5/8	1/8	15	$ .49
221S N70	1 7/16	1 11/16	1/8	15	$ .50
222S N70	1 1/2	1 3/4	1/8	14	$ .50
223S N70	1 5/8	1 7/8	1/8	14	$ .51
224S N70	1 3/4	2	1/8	13	$ .51
225S N70	1 7/8	2 1/8	1/8	13	$ .55
226S N70	2	2 1/4	1/8	13	$ .56
227S N70	2 1/16	2 3/8	1/8	11	$ .57
228S N70	2 1/4	2 1/2	1/8	11	$ .65
229S N70	2 3/8	2 5/8	1/8	11	$ .66

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

SQUARE NITRILE 70 DUROMETER

PART NUMBER	NORMAL SIZE ID	OD	W	MINIMUM TO ORDER	LIST PRICE/ EA.
230S N70	2 1/2	2 3/4	1/8	11	$ .69
232S N70	2 3/4	3	1/8	10	$ .73
233S N70	2 7/8	3 1/8	1/8	10	$ .74
234S N70	3	3 1/4	1/8	10	$ .76
236S N70	3 1/4	3 1/2	1/8	9	$ .79
237S N70	3 3/8	3 5/8	1/8	9	$ .81
238S N70	3 1/2	3 3/4	1/8	9	$ .83
239S N70	3 5/8	3 7/8	1/8	9	$ .84
240S N70	3 3/4	4	1/8	9	$ .87
241S N70	3 7/8	4 1/8	1/8	8	$ .90
242S N70	4	4 1/4	1/8	8	$ .91
243S N70	4 1/8	4 3/8	1/8	8	$ 1.01
244S N70	4 1/4	4 1/2	1/8	7	$ 1.02
245S N70	4 3/8	4 5/8	1/8	7	$ 1.04
246S N70	4 1/2	4 3/4	1/8	7	$ 1.06
247S N70	4 5/8	4 7/8	1/8	7	$ 1.07
248S N70	4 3/4	5	1/8	7	$ 1.09
249S N70	4 7/8	5 1/8	1/8	7	$ 1.12
250S N70	5	5 1/4	1/8	7	$ 1.15
251S N70	5 1/8	5 3/8	1/8	7	$ 1.16
252S N70	5 1/4	5 1/2	1/8	7	$ 1.18
254S N70	5 1/2	5 3/4	1/8	6	$ 1.22
256S N70	5 3/4	6	1/8	6	$ 1.25
258S N70	6	6 1/4	1/8	6	$ 1.27
259S N70	6 1/4	6 1/2	1/8	6	$ 1.40
260S N70	6 1/2	6 3/4	1/8	5	$ 1.43
261S N70	6 3/4	7	1/8	5	$ 2.65
262S N70	7	7 1/4	1/8	5	$ 1.50
263S N70	7 1/4	7 1/2	1/8	5	$ 1.53
264S N70	7 1/2	7 3/4	1/8	5	$ 1.57
266S N70	8	8 1/4	1/8	5	$ 1.64
267S N70	8 1/4	8 1/2	1/8	5	$ 1.77
270S N70	9	9 1/4	1/8	3	$ 3.23
326S N70	1 5/8	2	3/16	25	$ .37
329S N70	2	2 3/8	3/16	9	$ .79
333S N70	2 1/2	2 7/8	3/16	8	$ .97
335S N70	2 3/4	3 1/8	3/16	7	$ 1.04
336S N70	2 7/8	3 1/4	3/16	7	$ 1.07
337S N70	3	3 3/8	3/16	7	$ 1.09
339S N70	3 1/4	3 5/8	3/16	7	$ 1.15
340S N70	3 3/8	3 3/4	3/16	7	$ .64
341S N70	3 1/2	3 7/8	3/16	6	$ 1.19
342S N70	3 5/8	4	3/16	6	$ 1.23
343S N70	3 3/4	4 1/8	3/16	6	$ 1.35
344S N70	3 7/8	4 1/4	3/16	6	$ 1.41

PART NUMBER	NOMINAL SIZE ID	OD	W	MINIMUM TO ORDER	LIST PRICE/ EA.
345S N70	4	4 3/8	3/16	5	$ 1.44
347S N70	4 1/4	4 5/8	3/16	5	$ 1.60
348S N70	4 3/8	4 3/4	3/16	5	$ 1.62
349S N70	4 1/2	4 7/8	3/16	5	$ 1.66
425S N70	4 1/2	5	1/4	3	$ 2.57
427S N70	4 3/4	5 1/4	1/4	3	$ 2.66
429S N70	5	5 1/2	1/4	3	$ 2.75
431S N70	5 1/4	5 3/4	1/4	3	$ 2.84
433S N70	5 1/2	6	1/4	3	$ 2.94
435S N70	5 3/4	6 1/4	1/4	3	$ 3.03
437S N70	6	6 1/2	1/4	3	$ 3.12
438S N70	6 1/4	6 3/4	1/4	3	$ 3.37
440S N70	6 3/4	7 1/4	1/4	2	$ 3.55
442S N70	7 1/4	7 3/4	1/4	2	$ 3.74
443S N70	7 1/2	8	1/4	2	$ 3.77
444S N70	7 3/4	8 1/4	1/4	2	$ 3.91
445S N70	8	8 1/2	1/4	2	$ 4.14
446S N70	8 1/2	9	1/4	2	$ 4.27
447S N70	9	9 1/2	1/4	2	$ 4.93

111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

PNEU-DRAULICS

QUAD 70 DUROMETER NITRILE RINGS

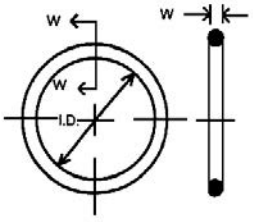
1500 PSI
-40° to +212°F
Nitrile (Buna N)
General purpose sealing: Petroleum oils and fluids: water, silicone, greases and oils.

(OTHER SIZES AVAILABLE CALL FOR PRICE AND DELIVERY.)

PART NUMBER	MIN QTY.	LIST PRICE/ EA.	PART NUMBER	MIN QTY.	LIST PRICE/ EA.	PART NUMBER	MIN QTY.	LIST PRICE/ EA.	PART NUMBER	MIN QTY.	LIST PRICE/ EA.
004 QUAD	9	$ .84	132 QUAD	4	$ 1.92	241 QUAD	2	$ 3.94	345 QUAD	1	$ 6.75
005 QUAD	9	$ .84	133 QUAD	4	$ 1.97	242 QUAD	2	$ 4.05	346 QUAD	1	$ 7.31
006 QUAD	9	$ .84	136 QUAD	4	$ 2.11	244 QUAD	2	$ 4.15	347 QUAD	1	$ 7.87
008 QUAD	9	$ .84	151 QUAD	2	$ 3.94	246 QUAD	2	$ 4.50	349 QUAD	1	$ 9.00
010 QUAD	8	$ .90	153 QUAD	2	$ 4.22	247 QUAD	2	$ 4.50	351 QUAD	1	$ 9.93
011 QUAD	8	$ .90	206 QUAD	9	$ .87	248 QUAD	2	$ 4.61	352 QUAD	1	$10.21
012 QUAD	8	$ .90	207 QUAD	8	$ .96	250 QUAD	2	$ 4.72	353 QUAD	1	$10.31
013 QUAD	8	$ .90	208 QUAD	7	$ 1.03	251 QUAD	2	$ 4.78	354 QUAD	1	$10.68
014 QUAD	8	$ .96	209 QUAD	7	$ 1.07	253 QUAD	2	$ 6.58	362 QUAD	1	$14.06
015 QUAD	8	$ .96	210 QUAD	7	$ 1.12	256 QUAD	2	$ 6.97	363 QUAD	1	$14.83
016 QUAD	8	$ .96	211 QUAD	7	$ 1.12	259 QUAD	1	$ 7.53	425 QUAD	1	$ 7.25
017 QUAD	8	$ .96	212 QUAD	6	$ 1.18	261 QUAD	1	$ 8.66	426 QUAD	1	$ 7.37
018 QUAD	8	$ .96	213 QUAD	6	$ 1.18	263 QUAD	1	$ 9.73	432 QUAD	1	$ 9.84
019 QUAD	8	$ .96	214 QUAD	6	$ 1.18	267 QUAD	1	$ 14.06	435 QUAD	1	$ 9.90
037 QUAD	4	$ 2.19	215 QUAD	6	$ 1.20	270 QUAD	1	$ 16.47	438 QUAD	1	$14.77
038 QUAD	3	$ 2.61	216 QUAD	6	$ 1.24	318 QUAD	4	$ 2.16	445 QUAD	1	$16.31
109 QUAD	9	$ .84	217 QUAD	6	$ 1.29	321 QUAD	3	$ 2.19	448 QUAD	1	$20.46
110 QUAD	9	$ .84	218 QUAD	5	$ 1.52	322 QUAD	4	$ 2.25			
111 QUAD	9	$ .84	219 QUAD	5	$ 1.54	324 QUAD	4	$ 2.31			
112 QUAD	9	$ .84	220 QUAD	5	$ 1.57	326 QUAD	3	$ 2.42			
113 QUAD	8	$ .90	221 QUAD	5	$ 1.63	327 QUAD	3	$ 2.47			
114 QUAD	8	$ .90	222 QUAD	4	$ 1.86	328 QUAD	3	$ 2.53			
115 QUAD	8	$ .96	223 QUAD	4	$ 2.09	329 QUAD	3	$ 2.59			
116 QUAD	8	$ .96	224 QUAD	4	$ 2.16	330 QUAD	3	$ 2.64			
117 QUAD	8	$ .96	225 QUAD	4	$ 2.20	331 QUAD	3	$ 2.70			
118 QUAD	7	$ 1.07	226 QUAD	4	$ 2.31	332 QUAD	3	$ 2.81			
119 QUAD	7	$ 1.07	227 QUAD	3	$ 2.36	333 QUAD	3	$ 2.92			
120 QUAD	7	$ 1.09	228 QUAD	3	$ 2.47	334 QUAD	3	$ 3.09			
121 QUAD	7	$ 1.12	229 QUAD	3	$ 2.50	335 QUAD	3	$ 3.24			
122 QUAD	6	$ 1.18	230 QUAD	3	$ 2.53	336 QUAD	3	$ 3.37			
123 QUAD	6	$ 1.24	232 QUAD	3	$ 2.59	337 QUAD	2	$ 3.52			
124 QUAD	6	$ 1.35	235 QUAD	3	$ 2.81	338 QUAD	2	$ 3.65			
125 QUAD	5	$ 1.41	236 QUAD	3	$ 2.98	340 QUAD	2	$ 3.94			
128 QUAD	5	$ 1.58	237 QUAD	2	$ 3.60	341 QUAD	2	$ 4.08			
129 QUAD	5	$ 1.69	240 QUAD	2	$ 3.88	342 QUAD	2	$ 4.22			

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

NITRILE 90 DUROMETER



2000 - 2500 PSI
-40° to +212°F
Nitrile (Buna N)
General purpose sealing: Petroleum oils and fluids: water, silicone, greases and oils.

(Other sizes available call for price and delivery.)

PART NUMBER	NOMINAL SIZE ID	OD	W	LIST PRICE/ EA.
006 N90A	1/8	1/4	1/16	$ .20
007 N90A	5/32	9/32	1/16	$ .20
008 N90A	3/16	5/16	1/16	$ .20
009 N90A	7/32	11/32	1/16	$ .21
010 N90A	1/4	3/8	1/16	$ .22
011 N90A	5/16	7/16	1/16	$ .23
012 N90A	3/8	1/2	1/16	$ .23
013 N90A	7/16	9/16	1/16	$ .25
014 N90A	1/2	5/8	1/16	$ .26
015 N90A	9/16	11/16	1/16	$ .27
016 N90A	5/8	3/4	1/16	$ .28
017 N90A	11/16	13/16	1/16	$ .29
018 N90A	3/4	7/8	1/16	$ .30
019 N90A	13/16	15/16	1/16	$ .33
020 N90A	7/8	1	1/16	$ .33
021 N90A	15/16	1 1/16	1/16	$ .34
022 N90A	1	1 1/8	1/16	$ .38
023 N90A	1 1/16	1 3/16	1/16	$ .40
024 N90A	1 1/8	1 1/4	1/16	$ .43
025 N90A	1 3/16	1 5/16	1/16	$ .46
026 N90A	1 1/4	1 3/8	1/16	$ .49
027 N90A	1 5/16	1 7/16	1/16	$ .49
028 N90A	1 3/8	1 1/2	1/16	$ .50
029 N90A	1 1/2	1 5/8	1/16	$ .58
030 N90A	1 5/8	1 3/4	1/16	$ .60
031 N90A	1 3/4	1 7/8	1/16	$ .76
032 N90A	1 7/8	2	1/16	$ .79
033 N90A	2	2 1/8	1/16	$ .98
034 N90A	2 1/8	2 1/4	1/16	$ 1.03
035 N90A	2 1/4	2 3/8	1/16	$ 1.08
036 N90A	2 3/8	2 1/2	1/16	$ 1.12
037 N90A	2 1/2	2 5/8	1/16	$ 1.21
038 N90A	2 5/8	2 3/4	1/16	$ 1.28
039 N90A	2 3/4	2 7/8	1/16	$ 1.36
040 N90A	2 7/8	3	1/16	$ 1.38
041 N90A	3	3 1/8	1/16	$ 1.48
042 N90A	3 1/4	3 3/8	1/16	$ 1.68
043 N90A	3 1/2	3 5/8	1/16	$ 1.83
044 N90A	3 3/4	3 7/8	1/16	$ 2.08
045 N90A	4	4 1/8	1/16	$ 1.86
047 N90A	4 1/2	4 5/8	1/16	$ 2.53
048 N90A	4 3/4	4 7/8	1/16	$ 2.71
108 N90A	1/4	7/16	3/32	$ .22
109 N90A	5/16	1/2	3/32	$ .29
110 N90A	3/8	9/16	3/32	$ .23
111 N90A	7/16	5/8	3/32	$ .23
112 N90A	1/2	11/16	3/32	$ .23
113 N90A	9/16	3/4	3/32	$ .23
114 N90A	5/8	13/16	3/32	$ .23
115 N90A	11/16	7/8	3/32	$ .27
116 N90A	3/4	15/16	3/32	$ .28
117 N90A	13/16	1	3/32	$ .29
118 N90A	7/8	1 1/16	3/32	$ .29
119 N90A	15/16	1 1/8	3/32	$ .33
120 N90A	1	1 3/16	3/32	$ .34
121 N90A	1 1/16	1 1/4	3/32	$ .37
122 N90A	1 1/8	1 5/16	3/32	$ .48
123 N90A	1 3/16	1 3/8	3/32	$ .41
124 N90A	1 1/4	1 1/16	3/32	$ .43
125 N90A	1 5/16	1 1/2	3/32	$ .45
126 N90A	1 3/8	1 9/16	3/32	$ .57
127 N90A	1 7/16	1 5/8	3/32	$ .57
128 N90A	1 1/2	1 11/16	3/32	$ .65
129 N90A	1 9/16	1 3/4	3/32	$ .57
130 N90A	1 5/8	1 13/16	3/32	$ .63
131 N90A	1 11/16	1 7/8	3/32	$ .72
132 N90A	1 3/4	1 15/16	3/32	$ .76
133 N90A	1 13/16	2	3/32	$ .72
134 N90A	1 7/8	2 1/16	3/32	$ .75
135 N90A	1 15/16	2 1/8	3/32	$ .91

111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

PNEU-DRAULICS

NITRILE 90 DUROMETER

PART NUMBER	NORMAL SIZE ID	OD	W	LIST PRICE/ EA.
136 N90A	2	2 3/16	3/32	$ .90
137 N90A	2 1/16	2 1/4	3/32	$ .88
138 N90A	2 1/8	2 5/16	3/32	$ 1.04
139 N90A	2 3/16	2 3/8	3/32	$ .90
140 N90A	2 1/4	2 7/16	3/32	$ .94
141 N90A	2 5/16	2 1/2	3/32	$ 1.06
142 N90A	2 3/8	2 9/16	3/32	$ 1.15
143 N90A	2 7/16	2 5/8	3/32	$ 1.15
144 N90A	2 1/2	2 11/16	3/32	$ 1.07
145 N90A	2 9/16	2 3/4	3/32	$ 1.05
146 N90A	2 5/8	2 13/16	3/32	$ 1.09
147 N90A	2 11/16	2 7/8	3/32	$ 1.60
148 N90A	2 3/4	2 15/16	3/32	$ 1.13
149 N90A	2 13/16	3	3/32	$ 1.13
150 N90A	2 7/8	3 1/16	3/32	$ 1.40
151 N90A	3	3 3/16	3/32	$ 1.28
152 N90A	3 1/4	3 1/16	3/32	$ 1.73
153 N90A	3 1/2	3 11/16	3/32	$ 1.53
154 N90A	3 3/4	3 15/16	3/32	$ 2.01
155 N90A	4	4 3/16	3/32	$ 2.02
156 N90A	4 1/4	4 9/16	3/32	$ 2.79
157 N90A	4 1/2	4 11/16	3/32	$ 3.31
158 N90A	4 3/4	4 15/16	3/32	$ 3.48
160 N90A	5 1/4	5 7/16	3/32	$ 4.50
161 N90A	5 1/2	5 11/16	3/32	$ 4.36
162 N90A	5 3/4	5 15/16	3/32	$ 4.70
164 N90A	6 1/4	6 7/16	3/32	$ 7.00
165 N90A	6 1/2	6 11/16	3/32	$ 7.20
166 N90A	6 3/4	6 15/16	3/32	$ 7.50
167 N90A	7	7 3/16	3/32	$10.17
168 N90A	7 1/4	7 7/16	3/32	$ 8.79
169 N90A	7 1/2	7 11/16	3/32	$ 8.84
170 N90A	7 3/4	7 15/16	3/32	$ 9.30
171 N90A	8	8 3/16	3/32	$10.41
172 N90A	8 1/4	8 7/16	3/32	$10.72
173 N90A	8 1/2	8 11/16	3/32	$10.89
202 N90A	1/4	1/2	1/8	$ .23
203 N90A	5/16	9/16	1/8	$ .23
204 N90A	3/8	5/8	1/8	$ .25
205 N90A	7/16	11/16	1/8	$ .27
206 N90A	1/2	3/4	1/8	$ .32
207 N90A	9/16	13/16	1/8	$ .34
208 N90A	5/8	7/8	1/8	$ .35
209 N90A	11/16	15/16	1/8	$ .37
210 N90A	3/4	1	1/8	$ .38
211 N90A	13/16	1 1/16	1/8	$ .41
212 N90A	7/8	1 1/8	1/8	$ .44
213 N90A	15/16	1 3/16	1/8	$ .47
214 N90A	1	1 1/4	1/8	$ .48
215 N90A	1 1/16	1 5/16	1/8	$ .55

PART NUMBER	NOMINAL SIZE ID	OD	W	LIST PRICE/ EA.
216 N90A	1 1/8	1 3/8	1/8	$ .59
217 N90A	1 3/16	1 7/16	1/8	$ .60
218 N90A	1 1/4	1 1/2	1/8	$ .62
219 N90A	1 5/16	1 9/16	1/8	$ .67
220 N90A	1 3/8	1 5/8	1/8	$ .72
221 N90A	1 7/16	1 11/16	1/8	$ .77
222 N90A	1 1/2	1 3/4	1/8	$ .81
223 N90A	1 5/8	1 7/8	1/8	$ .92
224 N90A	1 3/4	2	1/8	$ .96
225 N90A	1 7/8	2 1/8	1/8	$ 1.01
226 N90A	2	2 1/4	1/8	$ 1.05
227 N90A	2 1/8	2 1/8	1/8	$ 1.15
228 N90A	2 1/4	2 1/2	1/8	$ 1.20
229 N90A	2 3/8	2 5/8	1/8	$ 1.32
230 N90A	2 1/2	2 3/4	1/8	$ 1.32
231 N90A	2 5/8	2 7/8	1/8	$ 1.40
232 N90A	2 3/4	3	1/8	$ 1.52
233 N90A	2 7/8	3 1/8	1/8	$ 1.98
234 N90A	3	3 1/4	1/8	$ 1.62
235 N90A	3 1/8	3 3/8	1/8	$ 1.86
236 N90A	3 1/4	3 1/2	1/8	$ 1.89
237 N90A	3 3/8	3 5/8	1/8	$ 1.91
238 N90A	3 1/2	3 3/4	1/8	$ 1.96
239 N90A	3 5/8	3 7/8	1/8	$ 2.06
240 N90A	3 3/4	4	1/8	$ 2.15
241 N90A	3 7/8	4 1/8	1/8	$ 2.19
242 N90A	4	4 1/4	1/8	$ 2.23
243 N90A	4 1/8	4 3/8	1/8	$ 2.33
244 N90A	4 1/4	4 1/2	1/8	$ 2.20
245 N90A	4 3/8	4 5/8	1/8	$ 2.51
246 N90A	4 1/2	4 3/4	1/8	$ 2.84
247 N90A	4 5/8	4 7/8	1/8	$ 3.01
248 N90A	4 3/4	5	1/8	$ 3.06
249 N90A	4 7/8	5 1/8	1/8	$ 3.22
250 N90A	5	5 1/4	1/8	$ 3.38
251 N90A	5 1/8	5 3/8	1/8	$ 3.54
252 N90A	5 1/4	5 1/2	1/8	$ 3.69
253 N90A	5 3/8	5 5/8	1/8	$ 4.02
254 N90A	5 1/2	5 3/4	1/8	$ 3.82
255 N90A	5 5/8	5 7/8	1/8	$ 4.27
256 N90A	5 3/4	6	1/8	$ 4.69
257 N90A	5 7/8	6 1/8	1/8	$ 4.79
258 N90A	6	6 1/4	1/8	$ 4.83
259 N90A	6 1/4	6 1/2	1/8	$ 4.88
260 N90A	6 1/2	6 3/4	1/8	$ 5.18
261 N90A	6 3/4	7	1/8	$ 5.63
262 N90A	7	7 1/4	1/8	$ 6.02
263 N90A	7 1/4	7 1/2	1/8	$ 6.02
264 N90A	7 1/2	7 3/4	1/8	$ 6.95
265 N90A	7 3/4	8	1/8	$ 7.10

O-RING

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

NITRILE 90 DUROMETER

PART NUMBER	NOMINAL SIZE ID	OD	W	MINIMUM TO ORDER	LIST PRICE/ EA.
266 N90A	8	8 1/4	1/8		$ 7.42
267 N90A	8 1/4	8 1/2	1/8		$ 7.82
268 N90A	8 1/2	8 3/4	1/8		$ 8.21
269 N90A	8 3/4	9	1/8		$ 8.54
270 N90A	9	9 1/4	1/8		$ 9.30
271 N90A	9 1/4	9 1/2	1/8		$ 10.02
272 N90A	9 1/2	9 3/4	1/8		$ 10.16
273 N90A	9 3/4	10	1/8		$ 10.32
274 N90A	10	10 1/4	1/8		$ 11.18
275 N90A	10 1/2	10 3/4	1/8		$ 11.63
276 N90A	11	11 1/4	1/8		$ 16.90
277 N90A	11 1/2	11 3/4	1/8		$ 17.32
278 N90A	12	12 1/4	1/8		$ 18.21
279 N90A	13	13 1/4	1/8		$ 21.42
280 N90A	14	14 1/4	1/8		$ 23.24
284 N90A	18	18 1/4	1/8		$ 27.63
310 N90A	1/2	7/8	3/16		$ .46
312 N90A	5/8	1	3/16		$ .53
313 N90A	11/16	1 1/16	3/16		$ .62
314 N90A	3/4	1 1/8	3/16		$ .81
315 N90A	13/16	1 3/16	3/16		$ .87
316 N90A	7/8	1 1/4	3/16		$ .88
317 N90A	15/16	1 5/16	3/16		$ 1.00
320 N90A	1 1/8	1 1/2	3/16		$ 1.09
321 N90A	1 3/16	1 9/16	3/16		$ .86
323 N90A	1 5/16	1 11/16	3/16		$ .86
324 N90A	1 3/8	1 3/4	3/16		$ 1.24
325 N90A	1 1/2	1 7/8	3/16		$ 1.28
326 N90A	1 5/8	2	3/16		$ 1.39
327 N90A	1 3/4	2 1/8	3/16		$ 1.49
328 N90A	1 7/8	2 1/4	3/16		$ 1.66
329 N90A	2	2 3/8	3/16		$ 1.71
330 N90A	2 1/8	2 1/2	3/16		$ 1.85
331 N90A	2 1/4	2 5/8	3/16		$ 1.86
332 N90A	2 3/8	2 3/4	3/16		$ 1.94
333 N90A	2 1/2	2 7/8	3/16		$ 2.11
334 N90A	2 5/8	3	3/16		$ 2.24
335 N90A	2 3/4	3 1/8	3/16		$ 2.30
336 N90A	2 7/8	3 1/4	3/16		$ 2.21
337 N90A	3	3 3/8	3/16		$ 2.36
338 N90A	3 1/8	3 1/2	3/16		$ 2.45
339 N90A	3 1/4	3 5/8	3/16		$ 2.51
340 N90A	3 3/8	3 3/4	3/16		$ 2.58
341 N90A	3 1/2	3 7/8	3/16		$ 2.79
342 N90A	3 5/8	4	3/16		$ 2.84
343 N90A	3 3/4	4 1/8	3/16		$ 2.88
344 N90A	3 7/8	4 1/4	3/16		$ 3.16
345 N90A	4	4 3/8	3/16		$ 3.22
346 N90A	4 1/8	4 1/2	3/16		$ 3.30
347 N90A	4 1/4	4 5/8	3/16		$ 3.31
348 N90A	4 3/8	4 3/4	3/16		$ 3.36
349 N90A	4 1/2	4 7/8	3/16		$ 3.44
350 N90A	4 5/8	5	3/16		$ 3.46
351 N90A	4 3/4	5 1/8	3/16		$ 3.46
352 N90A	4 7/8	5 1/4	3/16		$ 3.74
353 N90A	5	5 3/8	3/16		$ 3.93
355 N90A	5 1/4	5 5/8	3/16		$ 4.57
356 N90A	5 3/8	5 3/4	3/16		$ 4.57
357 N90A	5 1/2	5 7/8	3/16		$ 4.24
358 N90A	5 5/8	6	3/16		$15.19
359 N90A	5 3/4	6 1/8	3/16		$ 4.95
360 N90A	5 7/8	6 1/4	3/16		$ 5.01
361 N90A	6	6 3/8	3/16		$ 5.49
362 N90A	6 1/4	6 5/8	3/16		$ 5.83
363 N90A	6 1/2	6 7/8	3/16		$ 5.90
364 N90A	6 3/4	7 1/8	3/16		$ 6.18
365 N90A	7	7 3/8	3/16		$ 6.45
367 N90A	7 1/2	7 7/8	3/16		$ 7.35
368 N90A	7 3/4	8 1/8	3/16		$ 7.84
370 N90A	8 1/4	8 5/8	3/16		$ 7.35
372 N90A	8 3/4	9 1/8	3/16		$ 9.47
375 N90A	9 1/2	9 7/8	3/16		$10.02
376 N90A	9 3/4	10 1/8	3/16		$10.13
377 N90A	10	10 3/8	3/16		$10.24
378 N90A	10 1/2	10 7/8	3/16		$17.99
380 N90A	11 1/2	11 7/8	3/16		$19.00
381 N90A	12	12 3/8	3/16		$19.08
382 N90A	13	13 3/8	3/16		$20.40
390 N90A	21	21 3/8	3/16		$19.00
425 N90A	4 1/2	5	1/4		$ 5.01
426 N90A	4 5/8	5 1/8	1/4		$ 5.09
427 N90A	4 3/4	5 1/4	1/4		$ 5.11
429 N90A	5	5 1/2	1/4		$ 5.38
430 N90A	5 1/8	5 5/8	1/4		$ 5.73
431 N90A	5 1/4	5 3/4	1/4		$ 6.19
432 N90A	5 3/8	5 7/8	1/4		$ 6.24
433 N90A	5 1/2	6	1/4		$ 6.27
435 N90A	5 3/4	6 1/4	1/4		$ 6.33
436 N90A	5 7/8	6 3/8	1/4		$ 6.93
437 N90A	6	6 1/2	1/4		$ 7.03
438 N90A	6 1/4	6 3/4	1/4		$ 7.40
439 N90A	6 1/2	7	1/4		$ 7.76
440 N90A	6 3/4	7 1/4	1/4		$ 7.96
441 N90A	7	7 1/2	1/4		$ 9.53
443 N90A	7 1/2	8	1/4		$ 9.82
445 N90A	8	8 1/2	1/4		$10.62
446 N90A	8 1/2	9	1/4		$11.04
448 N90A	9 1/2	10	1/4		$11.22
449 N90A	10	10 1/2	1/4		$12.03
450 N90A	10 1/2	11	1/4		$20.86

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Nicholasville, KY 40340-0037

PNEU-DRAULICS

NITRILE 90 DUROMETER

PART NUMBER	NOMINAL SIZE ID	OD	W	LIST PRICE/ EA.
451 N90A	11	111/2	1/4	$21.28
452 N90A	111/2	12	1/4	$21.71
453 N90A	12	121/2	1/4	$22.27
454 N90A	121/2	13	1/4	$22.83
455 N90A	13	131/2	1/4	$22.90
456 N90A	131/2	14	1/4	$22.97
457 N90A	14	141/2	1/4	$24.12
458 N90A	141/2	15	1/4	$24.35
459 N90A	15	151/2	1/4	$24.59
461 N90A	16	161/2	1/4	$28.24
462 N90A	161/2	17	1/4	$28.63
463 N90A	17	171/2	1/4	$29.50
464 N90A	171/2	18	1/4	$30.10
466 N90A	181/2	19	1/4	$28.25
467 N90A	19	191/2	1/4	$33.57
469 N90A	20	201/2	1/4	$35.15
470 N90A	21	211/2	1/4	$37.30
472 N90A	23	231/2	1/4	$41.48
473 N90A	23	231/2	1/4	$44.73
474 N90A	25	251/2	1/4	$48.12

NITRILE 90 DUROMETER (900 SERIES)

PART NUMBER	NORMAL SIZE ID	+/-	W	+/-	LIST PRICE/ EA.
901 N90A	239	005	064	003	$ .23
902 N90A	239	005	064	003	$ .23
903 N90A	301	005	064	003	$ .24
904 N90A	351	005	072	003	$ .25
905 N90A	414	005	072	003	$ .25
906 N90A	468	005	078	003	$ .25
907 N90A	530	007	082	003	$ .27
908 N90A	644	009	087	003	$ .28
909 N90A	706	009	097	003	$ .31
910 N90A	755	009	097	003	$ .33
911 N90A	863	009	116	004	$ .39
912 N90A	924	009	116	004	$ .46
913 N90A	986	010	116	004	$ .46
914 N90A	1.047	010	116	004	$ .49
916 N90A	1.171	010	116	004	$ .54
918 N90A	1.355	012	116	004	$ .67
920 N90A	1.475	014	118	004	$ .68
924 N90A	1.720	014	118	004	$ 1.01
928 N90A	2.090	018	118	004	$ 1.20
932 N90A	2.337	018	118	004	$ 1.41

PNEU-DRAULICS
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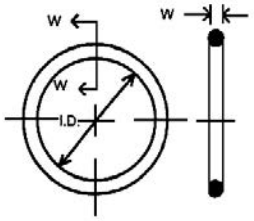
VITON 75 DUROMETER

-20° to +400°F
Fluorocarbon (Viton) Domestic
Petroleum Oils - Diester and Silicate
Based Lubricants - Silicone fluids and greases
selected phosphate ester fluids.
Pneu-Draulics sells domestic Parker Viton to the
A7276 mil spec.



Parker DISTRIBUTOR

(Other sizes available call for price and delivery.)
(For Brown Viton use Multiplier 1.10.)

PART NUMBER	NOMINAL SIZE ID	OD	W	LIST PRICE/ EA.
001 V75	1/32	3/32	1/32	$ .72
003 V75	1/16	3/16	1/16	$ .38
004 V75	5/64	13/64	1/16	$ .33
005 V75	3/32	7/32	1/16	$ .28
006 V75	1/8	1/4	1/16	$ .18
007 V75	5/32	9/32	1/16	$ .18
008 V75	3/16	5/16	1/16	$ .18
009 V75	7/32	11/32	1/16	$ .18
010 V75	1/4	3/8	1/16	$ .22
011 V75	5/16	7/16	1/16	$ .25
012 V75	3/8	1/2	1/16	$ .28
013 V75	7/16	9/16	1/16	$ .32
014 V75	1/2	5/8	1/16	$ .36
015 V75	9/16	11/16	1/16	$ .42
016 V75	5/8	3/4	1/16	$ .42
017 V75	11/16	13/16	1/16	$ .42
018 V75	3/4	7/8	1/16	$ .42
019 V75	13/16	15/16	1/16	$ .46
020 V75	7/8	1	1/16	$ .50
021 V75	15/16	1 1/16	1/16	$ .50
022 V75	1	1 1/8	1/16	$ .50
023 V75	1 1/16	1 3/16	1/16	$ .53
024 V75	1 1/8	1 1/4	1/16	$ .64
025 V75	1 3/16	1 5/16	1/16	$ .67
026 V75	1 1/4	1 3/8	1/16	$ .74
027 V75	1 5/16	1 7/16	1/16	$ .78
028 V75	1 3/8	1 1/2	1/16	$ .74
029 V75	1 1/2	1 5/8	1/16	$ .84
030 V75	1 5/8	1 3/4	1/16	$ .95
031 V75	1 3/4	1 7/8	1/16	$ 1.06
032 V75	1 7/8	2	1/16	$ 1.31
033 V75	2	2 1/8	1/16	$ 1.31
034 V75	2 1/8	2 1/4	1/16	$ 1.51
035 V75	2 1/4	2 3/8	1/16	$ 1.53
036 V75	2 3/8	2 1/2	1/16	$ 1.75
037 V75	2 1/2	2 5/8	1/16	$ 1.79
038 V75	2 5/8	2 3/4	1/16	$ 1.93
039 V75	2 3/4	2 7/8	1/16	$ 1.96
040 V75	2 7/8	3	1/16	$ 2.10
041 V75	3	3 1/8	1/16	$ 2.17

PART NUMBER	NOMINAL SIZE ID	OD	W	LIST PRICE/ EA.
042 V75	3 1/4	3 3/8	1/16	$ 2.43
043 V75	3 1/2	3 5/8	1/16	$ 2.45
044 V75	3 3/4	3 7/8	1/16	$ 2.63
045 V75	4	4 1/8	1/16	$ 2.73
046 V75	4 1/4	4 3/8	1/16	$ 2.84
047 V75	4 1/2	4 5/8	1/16	$ 3.20
048 V75	4 3/4	4 7/8	1/16	$ 3.99
049 V75	5	5 1/8	1/16	$ 4.34
050 V75	5 1/4	5 3/8	1/16	$ 4.62
102 V75	1/16	1/4	3/32	$ .55
103 V75	3/32	9/32	3/32	$ .48
104 V75	1/8	5/16	3/32	$ .44
105 V75	5/32	11/32	3/32	$ .51
106 V75	3/16	3/8	3/32	$ .43
107 V75	7/32	13/32	3/32	$ .42
108 V75	1/4	7/16	3/32	$ .46
109 V75	5/16	1/2	3/32	$ .46
110 V75	3/8	9/16	3/32	$ .49
111 V75	7/16	5/8	3/32	$ .49
112 V75	1/2	11/16	3/32	$ .53
113 V75	9/16	3/4	3/32	$ .56
114 V75	5/8	13/16	3/32	$ .63
115 V75	11/16	7/8	3/32	$ .63
116 V75	3/4	15/16	3/32	$ .63
117 V75	13/16	1	3/32	$ .61
118 V75	7/8	1 1/16	3/32	$ .67
119 V75	15/16	1 1/8	3/32	$ .74
120 V75	1	1 3/16	3/32	$ .77
121 V75	1 1/16	1 1/4	3/32	$ .81
122 V75	1 1/8	5/16	3/32	$ .84
123 V75	1 3/16	1 3/8	3/32	$ .80
124 V75	1 1/4	1 7/16	3/32	$ .95
125 V75	1 5/16	1 1/2	3/32	$ 1.05
126 V75	1 3/8	1 9/16	3/32	$ 1.16
127 V75	1 7/16	1 5/8	3/32	$ 1.19
128 V75	1 1/2	1 11/16	3/32	$ 1.19
129 V75	1 9/16	1 3/4	3/32	$ 1.25
130 V75	1 5/8	1 13/16	3/32	$ 1.44
131 V75	1 11/16	1 7/8	3/32	$ 2.73
132 V75	1 3/4	1 15/16	3/32	$ 1.63

111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

PNEU-DRAULICS

VITON 75 DUROMETER

PART NUMBER	NOMINAL SIZE ID	OD	W	MINIMUM TO ORDER	LIST PRICE/ EA.
133 V75	1 13/16	2	3/32		$ 1.63
134 V75	1 7/8	2 1/16	3/32		$ 1.86
135 V75	1 13/16	2 1/8	3/32		$ 1.86
136 V75	2	2 3/16	3/32		$ 1.89
137 V75	2 1/16	2 1/4	3/32		$ 1.89
138 V75	2 1/8	2 5/16	3/32		$ 1.93
139 V75	2 3/16	2 3/8	3/32		$ 1.78
140 V75	2 1/4	2 3/32	3/32		$ 1.78
141 V75	2 5/16	2 1/2	3/32		$ 2.03
142 V75	2 3/8	2 9/16	3/32		$ 4.58
143 V75	2 7/16	2 5/8	3/32		$ 1.91
144 V75	2 1/2	2 11/16	3/32		$ 2.10
145 V75	2 9/16	2 3/4	3/32		$ 2.01
146 V75	2 5/8	2 13/16	3/32		$ 2.28
147 V75	2 11/16	2 7/8	3/32		$ 2.52
148 V75	2 3/4	2 15/16	3/32		$ 2.63
149 V75	2 13/16	3	3/32		$ 2.55
150 V75	2 7/8	3 1/16	3/32		$ 2.84
151 V75	3	3 3/16	3/32		$ 3.27
152 V75	3 1/4	3 7/16	3/32		$ 3.41
153 V75	3 1/2	3 11/16	3/32		$ 3.71
154 V75	3 3/4	3 15/16	3/32		$ 3.79
155 V75	4	4 3/16	3/32		$ 4.02
156 V75	4 1/4	4 7/16	3/32		$ 4.34
157 V75	4 1/2	4 11/16	3/32		$ 4.88
158 V75	4 3/4	4 15/16	3/32		$ 5.16
159 V75	5	5 3/16	3/32		$ 5.51
160 V75	5 1/4	5 7/16	3/32		$ 5.96
161 V75	5 1/2	5 11/16	3/32		$ 6.24
162 V75	5 3/4	5 15/16	3/32		$ 6.52
163 V75	6	6 3/16	3/32		$ 6.22
164 V75	6 1/4	6 7/16	3/32		$ 7.12
165 V75	6 1/2	6 11/16	3/32		$ 7.47
166 V75	6 3/4	6 15/16	3/32		$ 7.61
167 V75	7	7 3/16	3/32		$ 7.68
168 V75	7 1/4	7 7/16	3/32		$ 7.05
169 V75	7 1/2	7 11/16	3/32		$ 7.13
170 V75	7 3/4	7 15/16	3/32		$ 7.92
171 V75	8	8 3/16	3/32		$ 7.33
172 V75	8 1/4	8 7/16	3/32		$ 7.39
173 V75	8 1/2	8 11/16	3/32		$ 9.01
174 V75	8 3/4	8 15/16	3/32		$ 8.64
175 V75	9	9 3/16	3/32		$10.02
176 V75	9 1/4	9 7/16	3/32		$10.30
177 V75	9 1/2	9 11/16	3/32		$ 9.49
178 V75	9 3/4	9 15/16	3/32		$10.51
201 V75	3/16	7/16	1/8		$ .55
202 V75	1/4	1/2	1/8		$ .63
203 V75	5/16	9/16	1/8		$ .67
204 V75	3/8	5/8	1/8		$ .70
205 V75	7/16	11/16	1/8	12	$ .68
206 V75	1/2	3/4	1/8	10	$ .88
207 V75	9/16	13/16	1/8	10	$ .83
208 V75	5/8	7/8	1/8	10	$ .87
209 V75	11/16	15/16	1/8	9	$ .98
210 V75	3/4	1	1/8	9	$ 1.09
211 V75	13/16	1 1/16	1/8	8	$ 1.16
212 V75	7/8	1 1/8	1/8	7	$ 1.37
213 V75	15/16	1 3/16	1/8	7	$ 1.40
214 V75	1	1 1/4	1/8	6	$ 1.47
215 V75	1 1/16	1 5/16	1/8	6	$ 1.44
216 V75	1 1/8	1 3/8	1/8	6	$ 1.68
217 V75	1 3/16	1 7/16	1/8	5	$ 1.79
218 V75	1 1/4	1 1/2	1/8	5	$ 1.86
219 V75	1 5/16	1 9/16	1/8	5	$ 1.93
220 V75	1 3/8	1 5/8	1/8	5	$ 2.03
221 V75	1 7/16	1 11/16	1/8	5	$ 2.14
222 V75	1 1/2	1 3/4	1/8	5	$ 2.17
223 V75	1 5/8	1 7/8	1/8	4	$ 2.24
224 V75	1 3/4	2	1/8	4	$ 2.31
225 V75	1 7/8	2 1/8	1/8	4	$ 2.45
226 V75	2	2 1/4	1/8	4	$ 2.70
227 V75	2 1/8	2 1/8	1/8	4	$ 2.77
228 V75	2 1/4	2 1/2	1/8	3	$ 3.06
229 V75	2 3/8	2 5/8	1/8	3	$ 3.20
230 V75	2 1/2	2 3/4	1/8	3	$ 3.34
231 V75	2 5/8	2 7/8	1/8	3	$ 3.62
232 V75	2 3/4	3	1/8	3	$ 3.85
233 V75	2 7/8	3 1/8	1/8	3	$ 4.06
234 V75	3	3 1/4	1/8	3	$ 4.13
235 V75	3 1/8	3 3/8	1/8	2	$ 4.48
236 V75	3 1/4	3 1/2	1/8	2	$ 4.14
237 V75	3 3/8	3 5/8	1/8	2	$ 5.08
238 V75	3 1/2	3 3/4	1/8	2	$ 4.81
239 V75	3 5/8	3 7/8	1/8	2	$ 5.09
240 V75	3 3/4	4	1/8	2	$ 5.16
241 V75	3 7/8	4 1/8	1/8	2	$ 5.37
242 V75	4	4 1/4	1/8	2	$ 6.13
243 V75	4 1/8	4 3/8	1/8	2	$ 5.35
244 V75	4 1/4	4 1/2	1/8	2	$ 6.03
245 V75	4 3/8	4 5/8	1/8	2	$ 6.24
246 V75	4 1/2	4 3/4	1/8	2	$ 5.86
247 V75	4 5/8	4 7/8	1/8	2	$ 6.66
248 V75	4 3/4	5	1/8	2	$ 6.84
249 V75	4 7/8	5 1/8	1/8	2	$ 6.98
250 V75	5	5 1/4	1/8	2	$ 7.12
251 V75	5 1/8	5 3/8	1/8	2	$ 6.60
252 V75	5 1/4	5 1/2	1/8	2	$ 7.40
253 V75	5 3/8	5 5/8	1/8	2	$ 7.47
254 V75	5 1/2	5 3/4	1/8	2	$ 7.61

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

VITON 75 DUROMETER

PART NUMBER	NOMINAL SIZE ID	OD	W	LIST PRICE/ EA.
255 V75	5 5/8	5 7/8	1/8	$ 7.75
256 V75	5 3/4	6	1/8	$ 8.69
257 V75	5 7/8	6 1/8	1/8	$ 8.94
258 V75	6	6 1/4	1/8	$ 8.26
259 V75	6 1/4	6 1/2	1/8	$ 9.43
260 V75	6 1/2	6 3/4	1/8	$ 9.64
261 V75	6 3/4	7	1/8	$ 9.85
262 V75	7	7 1/4	1/8	$10.44
263 V75	7 1/4	7 1/2	1/8	$10.86
264 V75	7 1/2	7 3/4	1/8	$11.18
265 V75	7 3/4	8	1/8	$11.39
266 V75	8	8 1/4	1/8	$11.98
267 V75	8 1/4	8 1/2	1/8	$12.12
268 V75	8 1/2	8 3/4	1/8	$12.33
269 V75	8 3/4	9	1/8	$12.82
270 V75	9	9 1/4	1/8	$13.22
271 V75	9 1/4	9 1/2	1/8	$13.64
272 V75	9 1/2	9 3/4	1/8	$14.15
273 V75	9 3/4	10	1/8	$14.79
274 V75	10	10 1/4	1/8	$15.95
275 V75	10 1/2	10 3/4	1/8	$16.26
276 V75	11	11 1/4	1/8	$16.54
277 V75	11 1/2	11 3/4	1/8	$17.10
278 V75	12	12 1/4	1/8	$17.45
279 V75	13	13 1/4	1/8	$18.50
280 V75	14	14 1/4	1/8	$20.67
281 V75	15	15 1/4	1/8	$23.19
282 V75	16	16 1/4	1/8	$24.67
283 V75	17	17 1/4	1/8	$30.58
284 V75	18	18 1/4	1/8	$28.45
309 V75	7/16	13/16	3/16	$ 1.31
314 V75	3/4	1 1/8	3/16	$ 2.66
315 V75	13/16	1 3/16	3/16	$ 2.46
316 V75	7/8	1 1/4	3/16	$ 2.59
317 V75	15/16	1 5/16	3/16	$ 2.65
318 V75	1	1 3/8	3/16	$ 2.71
320 V75	1 1/8	1 1/2	3/16	$ 3.27
321 V75	1 3/16	1 9/16	3/16	$ 3.10
322 V75	1 1/4	1 5/8	3/16	$ 3.34
324 V75	1 3/8	1 3/4	3/16	$ 3.78
325 V75	1 1/2	1 7/8	3/16	$ 3.85
326 V75	1 5/8	2	3/16	$ 3.92
327 V75	1 3/4	2 1/8	3/16	$ 3.70
328 V75	1 7/8	2 1/4	3/16	$ 4.27
329 V75	2	2 3/8	3/16	$ 4.47
330 V75	2 1/8	2 1/2	3/16	$ 5.02
331 V75	2 1/4	2 5/8	3/16	$ 5.30
332 V75	2 3/8	2 3/4	3/16	$ 5.01
333 V75	2 1/2	2 7/8	3/16	$ 5.89
334 V75	2 5/8	3	3/16	$ 6.10

PART NUMBER	NOMINAL SIZE ID	OD	W	LIST PRICE/ EA.
335 V75	2 3/4	3 1/8	3/16	$ 6.52
336 V75	2 7/8	3 1/4	3/16	$ 7.05
337 V75	3	3 3/8	3/16	$ 7.40
338 V75	3 1/8	3 1/2	3/16	$ 7.85
339 V75	3 1/4	3 5/8	3/16	$ 8.34
340 V75	3 3/8	3 3/4	3/16	$ 8.62
341 V75	3 1/2	3 7/8	3/16	$ 8.83
342 V75	3 5/8	4	3/16	$ 9.01
343 V75	3 3/4	4 1/8	3/16	$ 8.32
344 V75	3 7/8	4 1/4	3/16	$ 8.57
345 V75	4	4 3/8	3/16	$ 9.71
346 V75	4 1/8	4 1/2	3/16	$ 9.95
347 V75	4 1/4	4 5/8	3/16	$ 10.09
348 V75	4 3/8	4 3/4	3/16	$ 10.42
349 V75	4 1/2	4 7/8	3/16	$ 10.58
350 V75	4 5/8	5	3/16	$ 10.79
351 V75	4 3/4	5 1/8	3/16	$ 11.38
352 V75	4 7/8	5 1/4	3/16	$ 11.92
353 V75	5	5 3/8	3/16	$ 12.29
354 V75	5 1/8	5 1/2	3/16	$ 12.65
355 V75	5 1/4	5 5/8	3/16	$ 13.25
356 V75	5 3/8	5 3/4	3/16	$ 12.19
357 V75	5 1/2	5 7/8	3/16	$ 12.26
358 V75	5 5/8	6	3/16	$ 13.55
359 V75	5 3/4	6 1/8	3/16	$ 12.53
360 V75	5 7/8	6 1/4	3/16	$ 14.07
361 V75	6	6 3/8	3/16	$ 13.54
362 V75	6 1/4	6 5/8	3/16	$ 15.86
363 V75	6 1/2	6 7/8	3/16	$ 16.68
364 V75	6 3/4	7 1/8	3/16	$ 15.57
365 V75	7	7 3/8	3/16	$ 15.91
366 V75	7 1/4	7 5/8	3/16	$ 18.01
367 V75	7 1/2	7 7/8	3/16	$ 18.62
368 V75	7 3/4	8 1/8	3/16	$ 17.26
369 V75	8	8 3/8	3/16	$ 18.28
370 V75	8 1/4	8 5/8	3/16	$ 18.62
371 V75	8 1/2	8 7/8	3/16	$ 20.85
372 V75	8 3/4	9 1/8	3/16	$ 21.23
373 V75	9	9 3/8	3/16	$ 21.97
374 V75	9 1/4	9 5/8	3/16	$ 20.32
375 V75	9 1/2	9 7/8	3/16	$ 22.49
376 V75	9 3/4	10 1/8	3/16	$ 22.84
377 V75	10	10 3/8	3/16	$ 23.94
378 V75	10 1/2	10 7/8	3/16	$ 26.84
379 V75	11	11 3/8	3/16	$ 26.37
380 V75	11 1/2	11 7/8	3/16	$ 32.62
381 V75	12	12 3/8	3/16	$ 37.88
382 V75	13	13 3/8	3/16	$ 42.79
383 V75	14	14 3/8	3/16	$ 49.75
384 V75	15	15 3/8	3/16	$ 43.52

O-RING

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Nicholasville, KY 40340-0037

PNEU-DRAULICS

VITON 75 DUROMETER

PART NUMBER	NOMINAL SIZE ID	OD	W	LIST PRICE/ EA.
385 V75	16	16 3/8	3/16	$47.78
386 V75	17	17 3/8	3/16	$50.68
387 V75	18	18 3/8	3/16	$50.63
388 V75	19	19 3/8	3/16	$51.38
389 V75	20	20 3/8	3/16	$47.04
390 V75	21	21 3/8	3/16	$48.07
392 V75	23	23 3/8	3/16	$63.29
394 V75	25	25 3/8	3/16	$63.88
425 V75	4 1/2	5	1/4	$17.95
426 V75	4 5/8	5 1/8	1/4	$19.07
427 V75	4 3/4	5 1/4	1/4	$14.08
428 V75	4 7/8	5 3/8	1/4	$14.38
429 V75	5	5 1/2	1/4	$16.91
431 V75	5 1/4	5 3/4	1/4	$16.54
432 V75	5 3/8	5 7/8	1/4	$18.47
433 V75	5 1/2	6	1/4	$20.75
434 V75	5 5/8	6 1/8	1/4	$22.19
435 V75	5 3/4	6 1/4	1/4	$20.58
436 V75	5 7/8	6 3/8	1/4	$22.84
437 V75	6	6 1/2	1/4	$25.07
438 V75	6 1/4	6 3/4	1/4	$25.87
439 V75	6 1/2	7	1/4	$25.87
440 V75	6 3/4	7 1/4	1/4	$31.13
441 V75	7	7 1/2	1/4	$25.39
442 V75	7 1/4	7 3/4	1/4	$29.24
443 V75	7 1/2	8	1/4	$27.53
444 V75	7 3/4	8 1/4	1/4	$27.35
445 V75	8	8 1/2	1/4	$31.47
446 V75	8 1/2	9	1/4	$32.35
447 V75	9	9 1/2	1/4	$35.90
448 V75	9 1/2	10	1/4	$34.25
449 V75	10	10 1/2	1/4	$36.50
450 V75	10 1/2	11	1/4	$38.38
451 V75	11	11 1/2	1/4	$41.38
452 V75	11 1/2	12	1/4	$43.69
453 V75	12	12 1/2	1/4	$52.05
454 V75	12 1/2	13	1/4	$47.40
455 V75	13	13 1/2	1/4	$53.08
456 V75	13 1/2	14	1/4	$58.41
457 V75	14	14 1/2	1/4	$52.75
458 V75	14 1/2	15	1/4	$58.50
459 V75	15	15 1/2	1/4	$61.21
460 V75	15 1/2	16	1/4	$63.56
462 V75	16 1/2	17	1/4	$76.71
463 V75	17	17 1/2	1/4	$72.82
464 V75	17 1/2	18	1/4	$81.80
465 V75	18	18 1/2	1/4	$80.79
466 V75	18 1/2	19	1/4	$89.43
467 V75	19	19 1/2	1/4	$90.53
468 V75	19 1/2	20	1/4	$84.07
469 V75	20	20 1/2	1/4	$94.09
470 V75	21	21 1/2	1/4	$100.17
471 V75	22	22 1/2	1/4	$100.17
472 V75	23	23 1/2	1/4	$101.60
473 V75	24	24 1/2	1/4	$92.68
474 V75	25	25 1/2	1/4	$102.19
475 V75	26	26 1/2	1/4	$109.04

VITON 75 DUROMETER

PART NUMBER	ACTUAL SIZE ID	+/-	W	+/-	MINIMUM TO ORDER	LIST PRICE/ EA.
901 V75	185	005	056	00	32	$ .25
902 V75	239	005	064	003	32	$ .25
903 V75	301	005	064	003	28	$ .29
904 V75	351	005	072	003	25	$ .36
905 V75	414	005	072	003	25	$ .32
906 V75	468	005	078	003	25	$ .62
907 V75	530	007	082	003	21	$ .38
908 V75	644	009	087	003	18	$ .50
909 V75	706	009	097	003	16	$ .51
910 V75	755	009	097	003	14	$ .67
911 V75	863	009	116	004	12	$ .67
912 V75	924	009	116	004	9	$ 1.06
913 V75	986	010	116	004	8	$ 1.12
914 V75	1.047	010	116	004	7	$ 1.25
916 V75	1.171	010	116	004	7	$ 1.45
918 V75	1.355	012	116	004	6	$ 1.40
920 V75	1.475	014	118	004	5	$ 1.96
924 V75	1.720	014	118	004	4	$ 2.33
932 V75	2.337	018	118	004	3	$ 3.28

HOT VULCANIZED SPLICED RINGS 75 DURO VITON

Internal Diameter
2.5" to 80.5"

Larger sizes and quantities available upon request.

Call for price and delivery.

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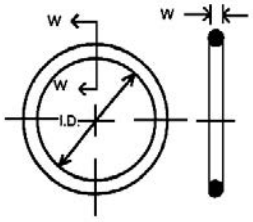
VITON 90 DUROMETER



-20°to +400°F
Fluorocarbon (viton)
Petroleum oils - Diester and Silicate Based
Based lubricants - Silicone Fluids and greases. Selected phosphate ester fluids.

(Other sizes available call for price and delivery.)

PART NUMBER	NOMINAL SIZE ID	OD	W	MINIMUM TO ORDER	LIST PRICE/ EA.
008 V90	3/16	5/16	1/16	36	$ .19
010 V90	1/4	3/8	1/16	14	$ .46
013 V90	7/16	9/16	1/16	21	$ .33
014 V90	1/2	5/8	1/16	17	$ .40
015 V90	9/16	11/16	1/16	14	$ .45
017 V90	11/16	13/16	1/16	14	$ .46
018 V90	3/4	7/8	1/16	13	$ .53
019 V90	13/16	15/16	1/16	17	$ .38
025 V90	1 3/16	1 5/16	1/16	9	$ .72
029 V90	1 1/2	1 5/8	1/16	5	$ 1.30
036 V90	2 3/8	2 1/2	1/16	5	$ 1.47
037 V90	2 1/2	2 5/8	1/16	5	$ 1.52
038 V90	2 5/8	2 3/4	1/16	5	$ 1.40
039 V90	2 3/4	2 7/8	1/16	4	$ 1.73
041 V90	3	3 1/8	1/16	4	$ 1.86
042 V90	3 1/4	3 3/8	1/16	4	$ 1.98
043 V90	3 1/2	3 5/8	1/16	4	$ 2.10
044 V90	3 3/4	3 7/8	1/16	3	$ 2.23
046 V90	4 1/4	4 3/8	1/16	3	$ 2.43
047 V90	4 1/2	4 5/8	1/16	3	$ 2.71
108 V90	1/4	7/16	3/32	17	$ .39
112 V90	1/2	11/16	3/32	15	$ .45
113 V90	9/16	3/4	3/32	13	$ .48
115 V90	11/16	7/8	3/32	14	$ .47
116 V90	3/4	15/16	3/32	14	$ .50
117 V90	13/16	1	3/32	13	$ .59
119 V90	15/16	1 1/8	3/32	11	$ .61
124 V90	1 1/4	1 7/16	3/32	9	$ .80
128 V90	1 1/2	1 11/16	3/32	6	$ 2.10
129 V90	1 9/16	1 3/4	3/32	6	$ 1.16
132 V90	1 3/4	1 15/16	3/32	5	$ 1.42
143 V90	2 7/16	2 5/8	3/32	4	$ 1.76
150 V90	2 7/8	3 1/16	3/32	4	$ 2.13
151 V90	3	3 3/16	3/32	3	$ 4.50
152 V90	3 1/4	3 7/16	3/32	3	$ 4.25
153 V90	3 1/2	3 11/16	3/32	3	$ 2.89
154 V90	3 3/4	3 15/16	3/32	3	$ 3.31
157 V90	4 1/2	4 11/16	3/32	2	$ 4.15
158 V90	4 3/4	4 15/16	3/32	2	$ 4.39
159 V90	5	5 3/16	3/32	2	$ 4.99
160 V90	5 1/4	5 7/16	3/32	2	$ 5.07
161 V90	5 1/2	5 11/16	3/32	2	$ 5.38
162 V90	5 3/4	5 15/16	3/32	2	$ 6.04
163 V90	6	6 3/16	3/32	2	$ 6.08
164 V90	6 1/4	6 7/16	3/32	2	$ 6.13
165 V90	6 1/2	6 11/16	3/32	1	$ 6.51
167 V90	7	7 3/16	3/32	1	$ 6.63
207 V90	9/16	13/16	1/8	5	$ 1.29
219 V90	1 5/16	1 9/16	1/8	5	$ 1.63
222 V90	1 1/2	1 3/4	1/8	4	$ 1.84
223 V90	1 5/8	1 7/8	1/8	4	$ 1.98
225 V90	1 7/8	2 1/8	1/8	3	$ 2.08
226 V90	2	2 1/4	1/8	3	$ 2.29
228 V90	2 1/4	2 1/2	1/8	3	$ 2.60
230 V90	2 1/2	2 3/4	1/8	3	$ 2.78
232 V90	2 3/4	3	1/8	3	$ 3.09
233 V90	2 7/8	3 1/8	1/8	2	$ 3.47
236 V90	3 1/4	3 1/2	1/8	2	$ 3.90
239 V90	3 5/8	3 7/8	1/8	2	$ 4.39
240 V90	3 3/4	4	1/8	2	$ 4.39
241 V90	3 7/8	4 1/8	1/8	2	$ 4.62
254 V90	5 1/2	5 3/4	1/8	1	$ 8.40
258 V90	6	6 1/4	1/8	1	$ 7.70
261 V90	6 3/4	7	1/8	1	$ 7.09
267 V90	8 1/4	8 1/2	1/8	1	$ 10.55
269 V90	8 3/4	9	1/8	1	$ 11.16
277 V90	11 1/2	11 3/4	1/8	1	$ 15.02
342 V90	3 5/8	4	3/16	1	$ 16.14
345 V90	4	4 3/8	3/16	1	$ 16.23

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PNEU-DRAULICS

VITON 90 DUROMETER

PART NUMBER	NOMINAL SIZE ID	OD	W	MINIMUM TO ORDER	LIST PRICE/ EA.
380 V90	11 1/2	11 7/8	3/16	1	$ 31.20
425 V90	4 1/2	5	1/4	1	$ 13.56
438 V90	6 1/4	6 3/4	1/4	1	$ 16.67
439 V90	6 1/2	7	1/4	1	$ 18.06
443 V90	7 1/2	8	1/4	1	$ 20.06
445 V90	8	8 1/2	1/4	1	$ 21.88
446 V90	8 1/2	9	1/4	1	$ 22.40
448 V90	9 1/2	10	1/4	1	$ 23.70
449 V90	10	10 1/2	1/4	1	$ 25.26
453 V90	12	12 1/2	1/4	1	$ 33.69
459 V90	15	15 1/2	1/4	1	$ 41.16
463 V90	17	17 1/2	1/4	1	$ 46.87
467 V90	19	19 1/2	1/4	1	$ 56.00
470 V90	21	21 1/2	1/4	1	$ 61.20

PART NUMBER	ACTUAL SIZE ID	+/-	W	+/-	MINIMUM TO ORDER	LIST PRICE/ EA.
902 V90	.239	.005	.056	.003	37	$ .19
904 V90	.351	.005	.072	.003	23	$ .30
905 V90	.414	.005	.072	.003	14	$ .49
906 V90	.468	.005	.078	.003	21	$ .32
908 V90	.644	.009	.087	.003	16	$ .45
910 V90	.755	.009	.097	.003	12	$ .62
912 V90	.924	.009	.116	.004	8	$ .99
916 V90	1.171	.010	.116	.004	6	$ 1.28
918 V90	1.355	.012	.116	.004	5	$ 1.34
920 V90	1.475	.014	.118	.004	5	$ 1.54
932 V90	2.337	.018	.118	.004	3	$ 3.16

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

Notes

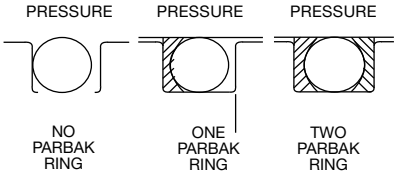
NATIONWIDE
CALL 1-800-333-SEAL
FAX (859) 887-4165
www.pneu-draulics.com

SALES OFFICE HOURS
7:30 A.M. to 5:30 P.M.
EASTERN STANDARD TIME

111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

PNEU-DRAULICS

NITRILE BACK-UP RINGS



Other back up ring materials available include
Hytrel, Urethane, and Teflon (solid, split, and spiral)
Just ask for pricing and availability

(Other sizes available call for price and delivery.)

PART NUMBER	MINIMUM TO ORDER	LIST PRICE/ EA.	PART NUMBER	MINIMUM TO ORDER	LIST PRICE/ EA.	PART NUMBER	MINIMUM TO ORDER	LIST PRICE/ EA.
18-004 N90A.....	25	$ .43	18-045 N90A.....	2	$ 4.10	18-139 N90A.....	7	$ .99
18-006 N90A.....	25	$ .43	18-046 N90A.....	2	$ 4.19	18-140 N90A.....	7	$ 1.01
18-007 N90A.....	25	$ .47	18-047 N90A.....	2	$ 4.58	18-141 N90A.....	5	$ 1.05
18-008 N90A.....	25	$ .47	18-048 N90A.....	2	$ 4.84	18-142 N90A.....	6	$ 1.10
18-009 N90A.....	25	$ .52	18-049 N90A.....	1	$ 5.61	18-143 N90A.....	3	$ 2.86
18-010 N90A.....	25	$ .48	18-050 N90A.....	1	$ 6.07	18-144 N90A.....	6	$ 1.16
18-011 N90A.....	25	$ .48	18-105 N90A.....	1	$ .97	18-145 N90A.....	5	$ 1.24
18-012 N90A.....	7	$ 1.05	18-106 N90A.....	1	$ .98	18-146 N90A.....	4.63	$ 1.42
18-013 N90A.....	7	$ 1.06	18-107 N90A.....	1	$ 1.00	18-147 N90A.....	6	$ 1.24
18-014 N90A.....	7	$ 1.08	18-108 N90A.....	1	$ 1.00	18-148 N90A.....	6	$ 1.26
18-015 N90A.....	7	$ 1.11	18-109 N90A.....	1	$ 1.01	18-149 N90A.....	6	$ 1.27
18-016 N90A.....	7	$ 1.11	18-110 N90A.....	1	$ 1.01	18-150 N90A.....	5	$ 1.36
18-017 N90A.....	25	$ .55	18-111 N90A.....	7	$ 1.03	18-151 N90A.....	5	$ 1.56
18-018 N90A.....	20	$ .66	18-112 N90A.....	16	$ .43	18-152 N90A.....	5	$ 1.58
18-019 N90A.....	14	$ .50	18-113 N90A.....	16	$ .43	18-153 N90A.....	5	$ 2.14
18-020 N90A.....	14	$ .50	18-114 N90A.....	16	$ .50	18-154 N90A.....	5	$ 2.86
18-021 N90A.....	6	$ 1.28	18-115 N90A.....	14	$ .50	18-155 N90A.....	4	$ 3.00
18-022 N90A.....	23	$ 1.40	18-116 N90A.....	14	$ .51	18-156 N90A.....	4	$ 3.67
18-023 N90A.....	12	$ .56	18-117 N90A.....	25	$ 1.19	18-157 N90A.....	4	$ 3.79
18-024 N90A.....	12	$ .59	18-118 N90A.....	14	$ .52	18-158 N90A.....	3	$ 4.37
18-025 N90A.....	11	$ .60	18-119 N90A.....	13	$ .52	18-159 N90A.....	3	$ 4.84
18-026 N90A.....	11	$ .62	18-120 N90A.....	13	$ .53	18-160 N90A.....	3	$ 5.09
18-027 N90A.....	10	$ .63	18-121 N90A.....	5	$ 1.52	18-161 N90A.....	3	$ 5.83
18-028 N90A.....	10	$ .66	18-122 N90A.....	5	$ .58	18-162 N90A.....	2	$ 6.25
18-029 N90A.....	6	$ .66	18-123 N90A.....	20	$ 1.45	18-163 N90A.....	2	$ 7.06
18-030 N90A.....	10	$ .71	18-124 N90A.....	17	$ 1.49	18-164 N90A.....	2	$ 7.26
18-031 N90A.....	9	$ .77	18-125 N90A.....	12	$ .60	18-165 N90A.....	1	$ 7.46
18-032 N90A.....	9	$ .78	18-126 N90A.....	11	$ .65	18-166 N90A.....	1	$ 7.85
18-033 N90A.....	8	$ .91	18-127 N90A.....	4	$ 1.72	18-167 N90A.....	1	$ 7.86
18-034 N90A.....	8	$ .93	18-128 N90A.....	10	$ .72	18-168 N90A.....	1	$ 9.16
18-035 N90A.....	7	$ 1.01	18-129 N90A.....	9	$ .76	18-169 N90A.....	1	$ 9.49
18-036 N90A.....	5	$ 1.05	18-130 N90A.....	5	$ 1.05	18-170 N90A.....	1	$ 9.81
18-037 N90A.....	6	$ 1.10	18-131 N90A.....	9	$ 1.35	18-171 N90A.....	1	$10.84
18-038 N90A.....	6	$ 1.11	18-132 N90A.....	9	$ 1.05	18-172 N90A.....	1	$11.24
18-039 N90A.....	6	$ 1.26	18-133 N90A.....	9	$ .81	18-173 N90A.....	1	$11.74
18-040 N90A.....	5	$ 1.44	18-134 N90A.....	12	$ 2.08	18-174 N90A.....	1	$12.04
18-041 N90A.....	5	$ 2.04	18-135 N90A.....	8	$ .89	18-175 N90A.....	1	$12.35
18-042 N90A.....	4	$ 2.70	18-136 N90A.....	9	$ .85	18-177 N90A.....	1	$13.23
18-043 N90A.....	5	$ 2.98	18-137 N90A.....	5	$ 1.31			
18-044 N90A.....	3	$ 3.15	18-138 N90A.....	4	$ 1.92			

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

NITRILE BACK-UP RINGS

PART NUMBER	MINIMUM TO ORDER	LIST PRICE/ EA.	PART NUMBER	MINIMUM TO ORDER	LIST PRICE/ EA.	PART NUMBER	MINIMUM TO ORDER	LIST PRICE/ EA.
18-178 N90A.....	1	$13.64	18-249 N90A.....	2	$ 3.02	18-324 N90A.....	18	$ .88
18-201 N90A.....	7	$ 1.05	18-250 N90A.....	2	$ 3.39	18-325 N90A.....	17	$ .97
18-202 N90A.....	7	$ .43	18-251 N90A.....	3	$ 2.64	18-326 N90A.....	15	$ .98
18-203 N90A.....	7	$ .43	18-252 N90A.....	2	$ 3.68	18-327 N90A.....	14	$ 1.05
18-204 N90A.....	6	$ .44	18-253 N90A.....	2	$ 3.76	18-327 U90.....	0	$ .00
18-205 N90A.....	6	$ .45	18-254 N90A.....	2	$ 3.81	18-328 N90A.....	13	$ 1.12
18-206 N90A.....	7	$ .45	18-255 N90A.....	4	$ 3.93	18-329 N90A.....	12	$ 1.22
18-207 N90A.....	7	$ .45	18-256 N90A.....	2	$ 4.00	18-330 N90A.....	12	$ 1.35
18-208 N90A.....	7	$ .48	18-257 N90A.....	2	$ 4.45	18-331 N90A.....	11	$ 3.26
18-209 N90A.....	13	$ .49	18-258 N90A.....	2	$ 4.53	18-332 N90A.....	11	$ 1.43
18-210 N90A.....	13	$ .50	18-259 N90A.....	2	$ 4.66	18-333 N90A.....	10	$ 1.45
18-211 N90A.....	13	$ .50	18-260 N90A.....	2	$ 4.88	18-334 N90A.....	1	$ 1.51
18-212 N90A.....	13	$ .50	18-261 N90A.....	2	$ 5.26	18-335 N90A.....	9	$ 1.65
18-213 N90A.....	13	$ .51	18-262 N90A.....	2	$ 5.86	18-336 N90A.....	4	$ 1.92
18-214 N90A.....	13	$ .51	18-263 N90A.....	2	$ 6.26	18-337 N90A.....	4	$ 1.96
18-215 N90A.....	21	$ .57	18-264 N90A.....	2	$ 6.98	18-338 N90A.....	7	$ 2.10
18-216 N90A.....	20	$ .58	18-265 N90A.....	2	$ 7.26	18-339 N90A.....	7	$ 2.12
18-217 N90A.....	12	$ .59	18-266 N90A.....	2	$ 7.40	18-340 N90A.....	6	$ 2.14
18-218 N90A.....	12	$ .61	18-267 N90A.....	2	$ 7.72	18-341 N90A.....	6	$ 2.15
18-219 N90A.....	11	$ .63	18-268 N90A.....	2	$ 7.30	18-342 N90A.....	3	$ 2.91
18-220 N90A.....	11	$ .65	18-269 N90A.....	2	$ 7.60	18-343 N90A.....	3	$ 2.48
18-221 N90A.....	11	$ .66	18-270 N90A.....	2	$ 8.04	18-344 N90A.....	3	$ 2.65
18-222 N90A.....	11	$ .67	18-271 N90A.....	2	$ 8.15	18-345 N90A.....	3	$ 2.68
18-223 N90A.....	12	$ .58	18-272 N90A.....	2	$ 9.49	18-346 N90A.....	5	$ 2.73
18-224 N90A.....	11	$ .60	18-273 N90A.....	2	$ 9.57	18-347 N90A.....	3	$ 2.77
18-225 N90A.....	9	$ .89	18-274 N90A.....	2	$ 9.62	18-348 N90A.....	2	$ 2.80
18-226 N90A.....	10	$ .95	18-275 N90A.....	1	$ 8.94	18-349 N90A.....	2	$ 2.82
18-227 N90A.....	9	$ .97	18-276 N90A.....	1	$ 9.01	18-350 N90A.....	1	$ 2.97
18-228 N90A.....	9	$ 1.00	18-277 N90A.....	1	$11.36	18-351 N90A.....	2	$ 3.01
18-229 N90A.....	8	$ 2.79	18-278 N90A.....	1	$13.65	18-352 N90A.....	2	$ 3.40
18-230 N90A.....	8	$ 1.12	18-279 N90A.....	1	$13.65	18-353 N90A.....	2	$ 3.63
18-231 N90A.....	7	$ 1.26	18-280 N90A.....	1	$13.67	18-354 N90A.....	2	$ 3.81
18-232 N90A.....	8	$ 1.31	18-281 N90A.....	1	$13.67	18-355 N90A.....	2	$ 3.96
18-233 N90A.....	10	$ 3.68	18-282 N90A.....	1	$18.05	18-356 N90A.....	3	$ 4.12
18-234 N90A.....	8	$ 1.47	18-283 N90A.....	1	$16.41	18-357 N90A.....	3	$ 4.64
18-235 N90A.....	4	$ 2.10	18-284 N90A.....	1	$13.70	18-358 N90A.....	3	$ 4.72
18-236 N90A.....	4	$ 2.12	18-310 N90A.....	14	$ .50	18-359 N90A.....	2	$ 4.77
18-237 N90A.....	8	$ 1.63	18-311 N90A.....	13	$ .52	18-360 N90A.....	2	$ 4.81
18-238 N90A.....	8	$ 1.65	18-312 N90A.....	5	$ .57	18-361 N90A.....	2	$ 4.81
18-239 N90A.....	4	$ 1.74	18-313 N90A.....	5	$ .54	18-362 N90A.....	2	$ 5.65
18-240 N90A.....	4	$ 1.83	18-314 N90A.....	5	$ .55	18-363 N90A.....	3	$ 5.82
18-241 N90A.....	7	$ 1.97	18-315 N90A.....	5	$ .65	18-364 N90A.....	2	$ 5.93
18-242 N90A.....	4	$ 2.05	18-316 N90A.....	28	$ .60	18-365 N90A.....	3	$ 6.87
18-243 N90A.....	4	$ 2.14	18-317 N90A.....	20	$ .60	18-366 N90A.....	2	$ 7.67
18-244 N90A.....	3	$ 2.26	18-318 N90A.....	25	$ .65	18-367 N90A.....	2	$ 7.72
18-245 N90A.....	3	$ 2.51	18-319 N90A.....	23	$ .69	18-368 N90A.....	2	$ 7.75
18-246 N90A.....	6	$ 2.63	18-320 N90A.....	21	$ .82	18-369 N90A.....	2	$ 7.78
18-247 N90A.....	3	$ 2.70	18-321 N90A.....	21	$ .84	18-370 N90A.....	2	$ 7.98
18-248 N90A.....	3	$ 2.71	18-322 N90A.....	20	$ .89	18-371 N90A.....	1	$ 8.51
			18-323 N90A.....	18	$ .91	18-372 N90A.....	1	$ 8.63

111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

PNEU-DRAULICS

NITRILE BACK-UP RINGS

PART NUMBER	MINIMUM TO ORDER	LIST PRICE/ EA.	PART NUMBER	MINIMUM TO ORDER	LIST PRICE/ EA.	PART NUMBER	MINIMUM TO ORDER	LIST PRICE/ EA.
18-373 N90A.....	1	$ 8.66	18-434 N90A.....	3	$ 5.30	18-459 N90A.....	1	$23.69
18-374 N90A.....	1	$ 9.45	18-435 N90A.....	2	$ 5.27	18-460 N90A.....	1	$23.94
18-375 N90A.....	2	$10.26	18-436 N90A.....	2	$ 5.55	18-461 N90A.....	1	$24.19
18-376 N90A.....	1	$10.65	18-437 N90A.....	2	$ 5.76	18-462 N90A.....	1	$24.40
18-377 N90A.....	1	$10.74	18-438 N90A.....	2	$ 6.87	18-463 N90A.....	1	$24.47
18-378 N90A.....	1	$17.46	18-439 N90A.....	2	$ 6.95	18-464 N90A.....	1	$24.89
18-379 N90A.....	1	$17.49	18-440 N90A.....	2	$ 7.01	18-465 N90A.....	1	$26.87
18-380 N90A.....	1	$17.53	18-441 N90A.....	2	$ 8.47	18-466 N90A.....	1	$27.83
18-381 N90A.....	1	$17.97	18-442 N90A.....	2	$ 8.63	18-467 N90A.....	1	$28.62
18-382 N90A.....	1	$19.41	18-443 N90A.....	2	$ 9.98	18-468 N90A.....	1	$28.92
18-383 N90A.....	1	$21.08	18-444 N90A.....	2	$ 8.95	18-469 N90A.....	1	$29.17
18-385 N90A.....	1	$22.85	18-445 N90A.....	2	$ 9.12	18-471 N90A.....	1	$33.87
18-386 N90A.....	1	$23.29	18-446 N90A.....	1	$23.05	18-472 N90A.....	1	$34.19
18-387 N90A.....	1	$25.10	18-447 N90A.....	1	$ 9.50	18-473 N90A.....	1	$30.19
18-389 N90A.....	1	$28.92	18-448 N90A.....	2	$ 9.71	18-474 N90A.....	1	$38.40
18-392 N90A.....	1	$34.90	18-449 N90A.....	1	$12.00	18-475 N90A.....	1	$39.10
18-425 N90A.....	4	$ 3.57	18-450 N90A.....	1	$18.44			
18-426 N90A.....	4	$ 9.68	18-451 N90A.....	1	$19.05			
18-427 N90A.....	3	$ 9.77	18-452 N90A.....	1	$19.66			
18-428 N90A.....	3	$ 3.89	18-453 N90A.....	1	$19.72			
18-429 N90A.....	2	$ 3.91	18-454 N90A.....	1	$19.78			
18-430 N90A.....	2	$ 5.02	18-455 N90A.....	1	$19.81			
18-431 N90A.....	2	$ 4.90	18-456 N90A.....	1	$20.24			
18-432 N90A.....	1	$ 5.20	18-457 N90A.....	1	$20.92			
18-433 N90A.....	2	$ 5.24	18-458 N90A.....	1	$21.80			

PNEU-DRAULICS
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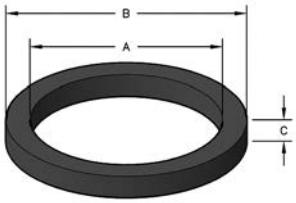
Parker DISTRIBUTOR

MODULAR BACK-UPS



-65°to +200°F
0 to 5000PSI Urethane

(Other sizes available call for price and delivery.)

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
12501000MB	1	1 1/4	1/8	$ 6.54
18702000MB	2	2 3/8	3/16	$ 18.01
25002000MB	2	2 1/2	1/4	$ 11.32
25002500MB	2 1/2	3	1/4	$ 13.67
25002750MB	2 3/4	3 1/4	1/4	$ 15.04
25003500MB	3 1/2	4	1/4	$ 18.27
25004000MB	4	4 1/2	1/4	$ 20.60
25004250MB	4 1/4	4 3/4	1/4	$ 21.83
25007500MB	7 1/2	8	1/4	$ 42.96
31202500MB	2 1/2	3 1/8	5/16	$ 16.30
37502250MB	2 1/4	3	3/8	$ 20.51
37502750MB	2 3/4	3 1/2	3/8	$ 24.34
37503000MB	3	3 3/4	3/8	$ 26.63
37503500MB	3 1/2	4 1/4	3/8	$ 30.33
37504000MB	4	4 3/4	3/8	$ 34.04
37504500MB	4 1/2	5 1/4	3/8	$ 37.50
37504750MB	4 3/4	5 1/2	3/8	$ 39.75
50002000MB	2	3	1/2	$ 25.98
50002250MB	2 1/4	3 1/4	1/2	$ 28.58
50003500MB	3 1/2	4 1/2	1/2	$ 41.11
50004000MB	4	5	1/2	$ 46.55
50005000MB	5	6	1/2	$ 56.78
50005500MB	5 1/2	6 1/2	1/2	$ 61.67
50007000MB	7	8	1/2	$ 69.91
50009000MB	9	10	1/2	$ 86.78

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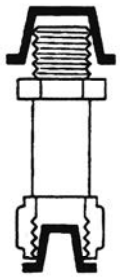
Nicholasville, KY 40340-0037

PNEU-DRAULICS

CAP PLUGS

selection charts

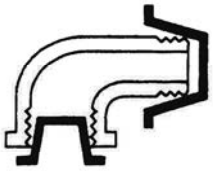
Recommended closures for tube and hydraulic fittings*



Dash No.	Tubing O.D.	Thread	Cap Plug As Plug	Cap Plug As Caps
-2	1/8	5/16 - 24	1	2
-3	3/16	3/8 - 24	2	3-X
-4	1/4	7/16 - 20	3	4-X
-5	5/16	1/2 - 20	4	5
-6	3/8	9/16 - 18	5	6-X
—	3/8	5/8 - 18	6	7
-8	1/2	3/4 - 16	8	9-X
-10	5/8	7/8 - 14	10	11-X
-12	3/4	1 1/16 - 12	12-X	13-X
-16	1	1 5/16 - 12	14-X	15-X
-20	1 1/4	1 5/8 - 12	17-S	18
-24	1 1/2	1 7/8 - 12	19	20
-28	1 3/4	2 1/4 - 12	221	230
-32	2	2 1/2 - 12	240	250
-40	2 1/2	3 - 12	500	

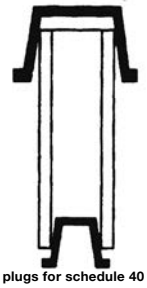
Recommended closures for threshold external and internal NPT fittings**

Based on average tapped hole fit. It is suggested that sample Cap Plugs be tried for size before ordering in quantity.



Size	Cap Plug As Plugs	Cap Plug As Caps	Size	Cap Plug As Plugs	Cap Plug As Caps
1/8"	2-X	4	2"	24-S	240
1/4"	4	6	2 1/2"	44	45-A
3/8"	6-X	8-X	3"	501	96-A
1/2"	9	11	3 1/2"	502	502
3/4"	12-X	13-X	4"	1070	1072
1"	14	15-X	5"	1086	1086
1 1/4"	17-S	18	6"	1103	1103
1 1/2"	20-S	20			

Recommended closures for unthreaded standard weight pipe**



Size	Cap Plug As Plugs	Cap Plug As Caps	Size	Cap Plug As Plugs	Cap Plug As Caps
1/8"	1	4	2"	220	240
1/4"	2-X	6-X	2 1/2"	250	45-A
3/8"	5	8-X	3"	53	1050
1/2"	7	11	3 1/2"	1050	1064
3/4"	10	13-X	4"	1064	1072
1"	13	16	5"	1080	—
1 1/4"	16	18-X	6"	1097	1107
1 1/2"	18	210	8"	1128	1139

‡ Recommended plugs for schedule 40 standard pipe.

MISC.

PART NUMBER	MINIMUM TO ORDER	LIST PRICE/ EA.	PART NUMBER	MINIMUM TO ORDER	LIST PRICE/ EA.
#3X CAP PLUG	16	$ .39	#12 CAP PLUG	4	$ .62
#4 CAP PLUG	16	$ .41	#12X CAP PLUG	11	$ .73
#4X CAP PLUG	16	$ .39	#13 CAP PLUG	10	$ .75
#6 CAP PLUG	13	$ .41	#13X CAP PLUG	10	$ .75
#6X CAP PLUG	16	$ .44	#14 CAP PLUG	10	$ .75
#8 CAP PLUG	13	$ .57	#14X CAP PLUG	8	$ .89
#8X CAP PLUG	13	$ .57	#15X CAP PLUG	8	$ .85
#9 CAP PLUG	13	$ .57	#16 CAP PLUG	8	$ .94
#10 CAP PLUG	14	$ .52	#16S CAP PLUG	8	$ .94
			#20 CAP PLUG	6	$1.35

PNEU-DRAULICS
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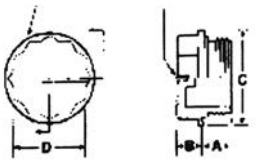
CAP PLUGS

Dual Sealing Plugs For Flat Face Hydraulic Fittings

12 point head for socket on wrench tightening

SCREWDRIVER SLOT



MATERIAL/COLOR:
High Density Polyethylene/Red

CAP PLUG NO.	TO PLUG THREAD SIZE	DIMENSIONS A IN	A MM	B IN	B MM	C IN	C MM	12-POINT SOCKET SIZE D
RPO-104	7/16-20	.34	8.64	.26	6.60	.66	16.76	3/8
RPO-105	1/2 - 20	.34	8.64	.30	7.62	.73	18.54	7/16
RPO-106	9/16 - 18	.36	9.14	.30	7.62	.80	20.32	1/2
RPO-108	3/4 - 16	.41	10.41	.31	7.87	1.02	25.91	11/16
RPO-110	7/8 - 14	.47	11.94	.31	7.87	1.16	29.47	13/16
RPO-112	1-1/16 - 12	.61	15.49	.31	7.87	1.45	36.83	1
RPO-116	1-5/16 - 12	.61	15.49	.33	8.38	1.74	44.20	1-1/4
RPO-120	1-5/8 - 12	.61	15.49	.33	8.38	2.17	55.12	1-9/16

PART NUMBER	MINIMUM TO ORDER	LIST PRICE/ EA.
RPO-105	8	$ .89
RPO-108	7	$ 1.08
RPO-110	5	$ 1.16
RPO-112	5	$ 1.27
RPO-116	3	$ 1.49
RPO-120	2	$ 1.89

MALE THREADED PLUGS FOR PIPE FITTING

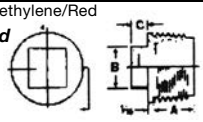
Tapered Thread

Cap Plug No.

P-18
P-28
P-38
P-48

MATERIAL/COLOR:
High Density Polyethylene/Red

Tapered Thread



P-68H
P-88H

MATERIAL/COLOR:
High Density Polyethylene/Red

CAP PLUG NO.	TO FIT	DIMENSIONS A IN	A MM	B IN	B MM	C IN	C MM
P-18	1/8" NPT	.44	11.18	.28	7.11	—	—
P-28	1/4" NPT	.50	12.70	.37	9.40	—	—
P-38	3/8" NPT	.56	14.22	.44	11.18	—	—
P -48	1/2" NPT	.59	14.99	.56	14.22	—	—
P-68H	3/4" NPT	.62	15.75	.62	15.75	.25	6.35
P-88H	1" NPT	.72	18.29	.81	20.57	.31	7.87

PART NUMBER	MINIMUM TO ORDER	LIST PRICE/ EA.
P28	24	$1.31
P38	2	$1.36
P48	2	$1.50
P68H	2	$1.93
P88H	3	$2.07

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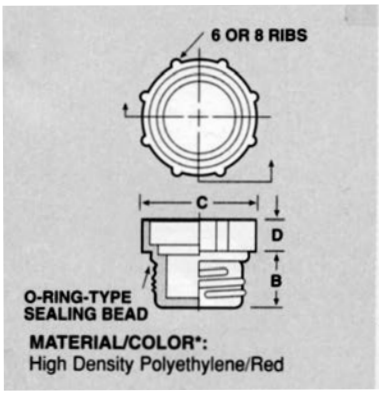
PNEU-DRAULICS

THREADED PLUGS FOR SAE O-RING PORTS



Caplug No.	To Fit Thread	Dimensions B In	B mm	C In	C mm	D In	D mm
PDO-104	7/16-20	.32	8.13	.65	16.51	.38	9.65
PDO-105	1/2-20	.32	8.13	.72	18.29	.38	9.65
PDO-106	9/16-18	.36	9.14	.78	19.81	.38	9.65
PDO-108	3/4-16	.40	10.16	.98	24.89	.38	9.65
PDO-110	7/8-14	.45	11.43	1.11	28.20	.38	9.65
PDO-112	1 1/16-12	.62	15.75	1.31	33.27	.38	9.65
PDO-116	1 5/16-12	.62	15.75	1.56	39.63	.38	9.65
PDO-120	1 5/8-12	.62	15.75	1.88	47.75	.38	9.65

PDO plugs provide positive sealing for SAE straight threaded O-Ring type parts. Integral O-Ring type bead seats in the bevel of the port to prevent oil leakage or entrance of contaminants.

PART NUMBER	MINIMUM TO ORDER	LIST PRICE / EA.
PDO-104	25	.76
PDO-105	21	.75
PDO-106	18	.99
PDO-108	17	1.20
PDO-110	15	1.27
PDO-112	13	1.54
PDO-116	10	2.00
PDO-120	3	2.40

PNEU-DRAULICS
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BRASS TOOLS

O-ring installation and extraction tool kits contain two unique double ended brass tools.

PART NUMBER	DESCRIPTION	LIST PRICE/ EA.
Parker Brass Tool	O-Ring Extraction Tool Kit	$37.88

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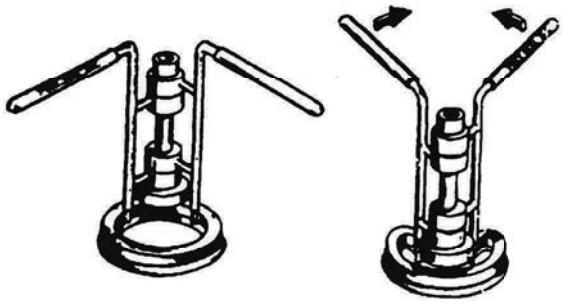
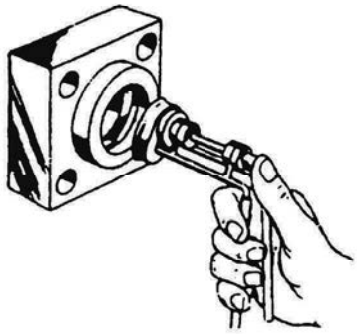
PNEU-DRAULICS

U-CUP INSTALLATION TOOLS



1. **Place seal on flat surface with seal lip down.**
2. **Open tool so that center pin is outside the seal O.D. and the handle pins are inside the I.D.**
3. **Rotate handles to deform seal (SEE ABOVE).**
4. **Install seal in groove from external end of bore.**
5. **Release pressure and remove tool.**
6. **With finger pressure, snap remaining part of seal into groove.**



PART NUMBER	DESCRIPTION	LIST PRICE/ EA.
IT100	3/4" I.D. TO 1 1/2" I.D.	$136.75
IT150	1 1/2" I.D. TO 2" I.D.	$145.37
IT200	2" I.D. TO 3" I.D.	$147.41

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O-RING LUBRICANT

Parker O-Lube

Prolongs life of synthetic rubber seals

Parker O-Lube is a barium base petro-leum grease formulated to facilitate installation and extend service life of synthetic rubber O-Rings and seals. A thin film of Parker O-Lube applied to the seal itself as well as the surfaces over which the seal will travel is sug-gested for best results. Parker O-Lube combines excellent surface adherence characteristics and lubricity with inherent water resistance. This lubricant is espcially recommended for low pressure pneumatic systems as well as reciprocating and low speed rotary or oscillating applications.

SEE NOTE (1)

Parker O-Lube is well suited for most sealing service within a -20°F to +300°F temperature range. Parker O-Lube is NOT recommended for use in systems having micronic filters or in contact with seal materials unsuited for petroleum oil service such as sili-cone, butyl or ethylene propylene. For these applications use of Parker Super O-Lube should be considered.

DO NOT USE IN SYSTEMS WHERE PURE OXYGEN IS PRESENT - FIRE OR EXPLOSION MAY RESULT.

Parker Super O-Lube

Prolongs life of synthetic rubber seals

Parker Super O-Lube is a silicone based lubricant intended to compliment Parker O-Lube in that it can be used with virtually any rubber polymer. Super O-Lube can also be used over a wider temperature range and in most cases will provide improved environmental protection to the elastomer. It is recommended that Super O-Lube be used sparingly as only a thin film is necessary for optimum results. This lubricant is useful with a wide variety of fluid media since it is quite inert. High pressure systems as well as vacuum uses are typical applications where Super O-Lube is beneficial. Temperature range is -65°F to +400°F.

SEE NOTE (1)

Parker Super O-Lube is non-toxic and non-irritating under normal conditions. It will not clog 30 micron filters and is unusually moisture resistant and adheres with unusual tenacity.

MISC.

PART NUMBER	DESCRIPTION	LIST PRICE/ EA.
PARKER-O-LUBE	2 OZ. TUBE	$ 22.36
PARKER SUPER O-LUBE	2 OZ. TUBE	$ 45.82
PARKER O-LUBE/PAIL	35 LB. PAIL	$1275.68

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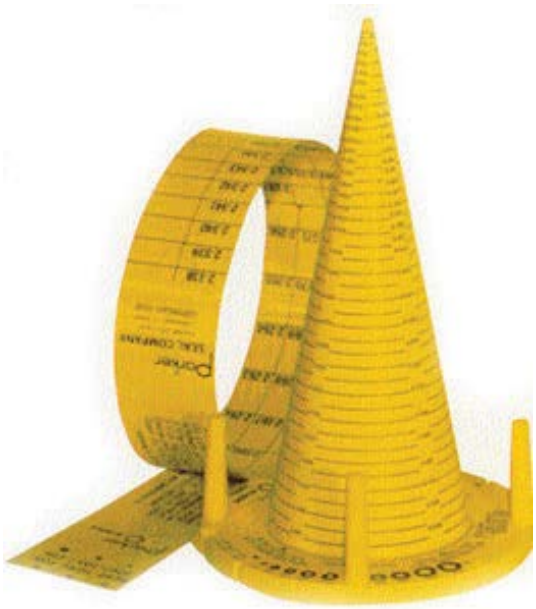
PNEU-DRAULICS

O-RING GAUGES



PART NUMBER	DESCRIPTION	LIST PRICE/ EA.
PARKER		
O-RING GAUGE	CONE	$103.15
MD000999ROI	BLUE NATIONAL O-RING GAUGE	$110.35
SUPER O-RING CONE	17 1/2 INCHES TALL	$163.50

Super O-Ring Cone

Our super deluxe O-Ring Measurement Cone is the ideal tool for quick and easy identification of standard O-Ring dash number sizes. This is a must for any distributor or repair shop that sells O-Rings over the counter. Features include:

- Stands a full 17-1/2 inches tall
- Made from extremely durable, high density polyethylene
- Color is bright yellow
- Measures a total of 184 widely used O-Ring sizes from 5/16" ID in five standard widths
- Base includes thickness gauge

To use the cone: simply slip the O-Ring into the proper slot in the base to determine the thickness. Then, drop the O-Ring onto the cone and read the size from the step it fits on. That's all there is to it!

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INTERNAL RETAINING RING

Spiral Rings Available Upon Request.

(Other sizes available call for price and delivery.)

PART NUMBER	BORE	LIST PRICE/ EA.	PART NUMBER	BORE	LIST PRICE/ EA.
3000-150	1.500	$ 1.83	3000-325	3.250	$17.58
3000-156	1.562	$ 2.07	3000-350	3.500	$15.73
3000-162	1.625	$ 2.13	3000-362	3.625	$25.06
3000-165	1.653	$ 6.25	3000-375	3.750	$26.33
3000-168	1.688	$ 6.88	3000-387	3.875	$27.58
3000-175	1.750	$ 2.38	3000-400	4.000	$18.20
3000-200	2.000	$ 2.83	3000-425	4.250	$29.70
3000-206	2.062	$ 4.55	3000-450	4.500	$27.10
3000-225	2.250	$ 5.30	3000-475	4.750	$28.68
3000-244	2.438	$ 7.83	3000-500	5.000	$30.63
3000-250	2.500	$ 6.08	3000-550	5.500	$53.58
3000-256	2.562	$ 7.70	3000-600	6.000	$79.58
3000-262	2.625	$12.50			
3000-275	2.750	$ 8.50			
3000-281	2.812	$18.75			
3000-287	2.875	$ 9.38			
3000-300	3.000	$ 9.38			
3000-306	3.062	$16.63			
3000-312	3.125	$16.63			
3000-315	3.149	$17.50			

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PNEU-DRAULICS

EXTERNAL RETAINING RING

Spiral Rings Available Upon Request.

(Other sizes available call for price and delivery.)

PART NUMBER	SHAFT	LIST PRICE/ EA.	PART NUMBER	SHAFT	LIST PRICE/ EA.
3100-162	1.625	$ 6.25	3100-325	3.250	$18.75
3100-175	1.750	$ 2.80	3100-354	3.543	$21.13
3100-187	1.875	$ 9.38	3100-375	3.750	$28.75
3100-196	1.969	$10.00	3100-400	4.000	$29.80
3100-200	2.000	$ 3.33	3100-425	4.250	$37.50
3100-206	2.062	$10.25	3100-437	4.375	$43.75
3100-225	2.250	$ 6.17	3100-450	4.500	$65.63
3100-237	2.375	$10.50			
3100-243	2.438	$10.63			
3100-250	2.500	$ 7.00			
3100-255	2.559	$10.95			
3100-262	2.265	$ 7.43			
3100-275	2.750	$ 9.75			
3100-300	3.000	$10.63			
3100-312	3.125	$18.75			

MISC.

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

Notes

NATIONWIDE
CALL 1-800-333-SEAL
FAX (859) 887-4165
www.pneu-draulics.com

SALES OFFICE HOURS
7:30 A.M. to 5:30 P.M.
EASTERN STANDARD TIME

111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

PNEU-DRAULICS

KIT SECTION

Maintenance Kits (O-ring, Backup, Metric, Quad, Splicing, Snapring, Caplug).....**152**
Commercial **153**
Char-Lynn.....**154**
Custom Hoist **155**
Hydro-Line.....**156-173**
Miller Fluid Power.....**174-181**
Parker Hannifin.....**182-193**
Vickers.....**194-195**

Other kits available. Call for price and delivery. Caterpillar, JI Case, John Deere, Komatsu, Atlas, Allis Chalmers, Bakerlift Truck, Barko, Bell Tree Harvester, Bobcat, Bulldog Kits, Champion, Clark, Ditch Witch, Dresser, Euclid, Fossi Crane, Fontaine, Ford, Galion, Gresen, Grove Crane, Hanna, Heil, Hiab, Hitachi, International Harvester, JCB, Jiffy Lift, Kawasaki, Leach, Lin Act, Link Belt, Michigan, Milwaukee, Myers, Perfection, Prince, Sheffer, Tomkins-Johnson, Texas Hyd, Volvo, Wabco and Ward.

The OEM Pneu-draulics seal kits are assembled for the repair man. You can install our kit and expect performance equal to or greater than parts supplied by the OEM. Our kits are not manufactured by the OEM, but are direct replacements, requiring no modifications.

PNEU-DRAULICS
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MAINTENANCE KITS

KIT NUMBER	CONTENTS	DESCRIPTION	LIST PRICE/EA.
PD21144P	32 SIZES/407 RINGS	NITRILE 70 DURO. O-RING KIT	$ 65.65
O-RING KIT	36 SIZES/436 RINGS	NITRILE 70 DURO. O-RING KIT	$ 74.60
SQUARE KIT 30	30 SIZES/382 RINGS	NITRILE SQUARE RING KIT	$ 234.05
N70 SPLC KIT	5 SIZES/3FEET EACH	NITRILE SPLICING KIT	$ 103.15
QUATTRO KIT	36 SIZES/226 RINGS	NITRILE 70 DURO. QUAD RINGS	$ 129.25
KIT 1001	150 SIZES/1110 RINGS	NITRILE TABLE TOP 70 DURO.	$ 571.50
BOSS KIT	20 SIZES/250 RINGS	NITRILE 90 DURO. 900 SERIES O-RINGS	$ 75.80
O-RINGS KIT-90	36 SIZES/436 RINGS	NITRILE 90 DURO. O-RINGS KIT VITON 75	$ 97.30
VITON KIT	30 SIZES/382 RINGS	DURO. O-RINGS KIT	$ 335.75
JAPANESE 380X36J KIT	36 SIZES/380 RINGS	JAPANESE (JIS) O-RING KIT	$ 113.09
METRIC 500X36	36 SIZES/500 RINGS	INDUSTRIAL & AUTOMOTIVE - EUROPEAN	$ 94.50
CT-4C4782	32 SIZES/570 RINGS	CAT NITRILE O-RING KIT	$ 191.52
CT-4C4784	9 SIZES	CAT O-RINGS	$ 175.29
CT-4C8253	32 SIZES/149 RINGS	CAT SILICONE O-RINGS	$ 311.04
CAPLUG KIT	24 SIZES/553 PLUGS	CAPLUG ASSORTMENT KIT	$190.05
SNAP RING KIT	9 SIZES/12 EA.	INTERNAL	$250.93

Flat Face O-ring Crossover Chart

Dash #	John Deere	Caterpillar	JI Case	Pneu-Draulics Part #
-4	T77814	4J4577	238-6011	011 N90A
-6	T77613	6V8397	238-6012	012 N90A
-8	T77857	6V8398	238-6014	014 N90A
-10	T77932	7J9108	238-6016	016 N90A
-12	T77858	6V9746	238-6018	018 N90A
-16	T76938	5K9090	238-6021	021 N90A
-20	T78612	6V8400	238-6025	025 N90A
-24	T78784	8T0135	238-6029	029 N90A

IF YOU DON'T SEE THE KIT AND MATERIAL YOU NEED, CALL FOR PRICE AND AVAILABILITY.

STAGE PACKING DIMENSIONS
TELESCOPIC CYLINDERS

HYCO	3.00 X 3.50	4.00 X 4.50	5.00 X 5.50	6.00 X 6.500	7.00 X 7.50	8.00 X 8.50	8.125 X 8.625	8.250 X 9.00	9 X 9.750	9.125 X 9.750	9.750 X 10.50
	HY-RSK-30	HY-RSK-40	HY-RSK-50	HY-RSK-60	HY-RSK-70	HY-RSK-80	HY-RSK-81	HY-RSK-82	HY-RSK-90	HY-RSK-91	HY-RSK-97

CUSTOM HOIST	3.00 X 3.50	4.00 X 4.50	5.00 X 5.50	6.00 X 6.500	7.00 X 7.50	8.00 X 8.50	9.125 X 9.750	9.750 X 10.50
	CH-RSK30	CH-RSK-40	CH-RSK-50	CH-RSK-60	CH-RSK-70	CH-RSK-80	CH-RSK-91	CH-RSK-97

PEABODY/ GALION	1.97 X 2.520	2.97 X 3.520	3.97 X 4.520	4.97 X 5.520	5.97 X 6.520	6.97 X 7.520	7.97 X 8.520	9.125 X 9.675
	PG-RSK-30	PG-RSK-30	PG-RSK-40	PG-RSK-50	PG-RSK-60	PG-RSK-70	PG-RSK-80	PG-RSK-91

COMMERCIAL	2.75 X 3.375	3.75 X 4.375	4.75 X 5.375	5.75 X 6.375	6.75 X 7.375	7.905 X 8.543	9.375 X 10.00
	CS-RSK-30	CS-RSK-40	CS-RSK-50	CS-RSK-60	CS-RSK-70	CS-RSK-80	CS-RSK-93

WARD	2.95 X 3.50	3.95 X 4.50	4.95 X 5.50	5.95 X 6.50	6.95 X 7.50	7.95 X 8.50	8.95 X 9.50
	WD-RSK-30	WD-RSK-40	WD-RSK-50	WD-RSK-60	WD-RSK-70	WD-RSK-80	WD-RSK-90

PERFECTION	2.95 X 3.50	3.95 X 4.50	4.95 X 5.50	5.95 X 6.50	6.95 X 7.50	7.95 X 8.50
	PF-RSK-30	PF-RSK-40	PF-RSK-50	PF-RSK-60	PF-RSK-70	PF-RSK-80

HEIL	2.00 X 2.50	3.00 X 3.50	4.00 X 4.50	5.00 X 5.50	6.00 X 6.50	3.125 X 3.50
	HE-26B2090-2A	HE-26B2090-3A	HE-26B2260-1A	HE-26B2260-2A	HE-26N2260-3A	HE-26B2266-1A

QUIK TIPS TO IDENTIFY POPULAR TELESCOPIC CYLINDERS

HYCO-OLD STYLE, SERIES C900-C2000 & C9000
- Neofab vee's 1/4" cross section
- Urethane wiper snaps into headnut
- Two spiral retainers with 3/4" bronze or glass filled bearings
HYCO-NEW STYLE, SERIES C30,000 & C20,000
- Nylon top bearing machined as packing top adaptor
- Bottom bearing with machined step for 3/8" wide retainer ring
- Two 1/2" wide waer rings
(cyl's mfg after 3/84 use only one)
- Urethane snap in wiper
PEABODY GALION, CYLINDER # EX: 63124DA
- Bronze or urethane wiper lies in headnut
- Cast iron bearing machined as top adaptor
- Two spiral retainer rings
- Two piece cast iron piston bearing
COMMERCIAL, CYLINDER #EX: S85DC-40-220 S/A SD85MC-15-220 D/A
- "S" single acting "SD" double acting
- Urethane snap in wiper
- Bronze or nylon top bearing
- Wave spring & threaded stop ring
- Bronze or nylon piston wear ring
HEIL OLD & NEW STYLE HPT SERIES, CYLINDER #EX: 1-1972, 1-4141,
1-4143
- Old style, cast iron top & bottom bearing
- Top & bottom machined as package adaptor
- Cast iron piston bearing/wear ring, one spiral retainer
- New style, nylon top & bottom wear ring with two nylon piston bearing s/wear ring
- No retainer ring, vee packing or u-seal depending on cylinder number/mfg date
WARD, CYLINDER #EX: 5000-4-0420-05, 5300-4-0130-07
- Nylon top & bottom bearing with 1/4" square retainer ring
- Two nylon piston bearings/wear rings, snap in urethane wiper
PERFECTION, CYLINDER #EX: A27123, 63105V, 73130V
- Bronze or nylon top and bottom bearings threaded stop ring
- Urethane snap in wiper, bronze piston bearing/wear ring
- Bearing/wear ring held in with two retainer rings
CUSTOM HOIST, CYLINDER #EX: 63-2-120, 85-11-220, 85-402-190
- Bronze or glass filled bearing, 3/4" or 1-1/2" tall
- Two retainer rings with steel spacer and steel impact ring
- "T" shaped piston bearing/waer ring
Cylinder part numbers are stamped on tags and cast into the cylinder body.
Always ask your customer for a part number and serial number first.
D/A - Double Acting, S/A - Single Acting, Hyco 20,000 Series, Double Acting
Hyco series C900 Thru C2000 Single Acting, C9000 Double Acting.

KITS

PNEU-DRAULICS
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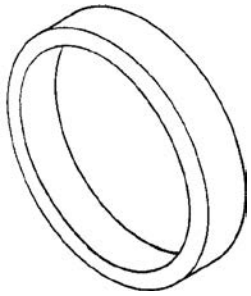
Nicholasville, KY 40340-0037

COMMERCIAL (CS) MAINTENANCE KITS

STAGE OUTSIDE DIAMETERS - 3.75, 4.75, 5.75, 6.75, 7.905, 9.375

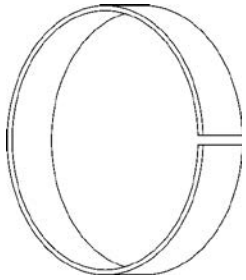
GLAND BEARINGS

PART NUMBER	STAGE	DESCRIPTION	LIST PRICE/EA.
CS-J-1003-1	2-3/4	NYLON	$ 19.90
CS-J-1003-2	3-3/4	NYLON	$ 19.75
CS-J-1003-3	4-3/4	NYLON	$ 30.56
CS-J-1003-4	5-3/4	NYLON	$ 36.15
CS-J-1003-5	6-3/4	NYLON	$ 37.28
CS-J-1003-6	7.905	NYLON	$ 38.90



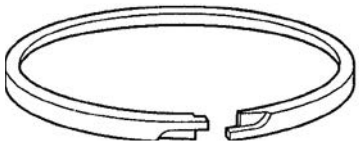
PISTON BEARINGS

PART NUMBER	STAGE	DESCRIPTION	LIST PRICE/EA.
CS-U3023-32	2-3/4	NYLON	$5.85
CS-U3023-42	3-3/4	NYLON	$8.10
CS-U3023-52	4-3/4	NYLON	$9.25
CS-U3023-62	5-3/4	NYLON	$9.25
CS-U3023-72	6-3/4	NYLON	$11.50
CS-U3023-84	7.905	NYLON	$16.65
CS-U3023-98	9-3/8	NYLON	$25.82



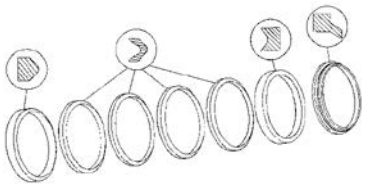
PISTON RINGS (DOUBLE ACTING)

PART NUMBER	STAGE	DESCRIPTION	LIST PRICE/EA.
CS-X78-4.25	3-3/4	CAST IRON	$12.02
CS-X78-5.25	4-3/4	CAST IRON	$15.87
CS-X78-6.25	5-3/4	CAST IRON	$18.67
CS-X78-7.25	6-3/4	CAST IRON	$27.66
CS-X78-8.437	7.905	CAST IRON	$38.41
CS-X78-9.88	9-3/8	CAST IRON	$80.99



VEE SET WITH ROD WIPER

PART NUMBER	STAGE	DESCRIPTION	LIST PRICE/EA.
CS-RSK-30	2-3/4	ONE STAGE	$29.18
CS-RSK-40	3-3/4	ONE STAGE	$35.30
CS-RSK-50	4-3/4	ONE STAGE	$51.75
CS-RSK-60	5-3/4	ONE STAGE	$66.75
CS-RSK-70	6-3/4	ONE STAGE	$79.70
CS-RSK-80	7.905	ONE STAGE	$77.17
CS-RSK-93	9-3/8	ONE STAGE	$158.99
CS-RSK-48	3-3/4-7.905	FIVE STAGES	$225.72



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Nicholasville, KY 40340-0037

PNEU-DRAULICS

CHAR-LYNN (CL) MAINTENANCE KITS

KIT NUMBER	SERIES	DESCRIPTION	LIST PRICE/EA.
CL-60023	SERIES H	BUNA N SEAL KIT	$30.22
CL-60026	SERIES S	BUNA N SEAL KIT	$31.13
CL-60036	SERIES H	BUNA N SEAL KIT	$23.65
CL-60042	SERIES S	BUNA N SEAL KIT	$31.36
CL-60533	SERIES S	BUNA N SEAL KIT	$29.07
CL-60539	SERIES S	BUNA N SEAL KIT	$35.79
CL-60540	SERIES A,H	BUNA N SEAL KIT	$34.42
CL-61104	SERIES 6000	BUNA N SEAL KIT	$62.04
CL-61105	SERIES 6000	BUNA N SEAL KIT	$37.73
CL-61234	SERIES 4000	BUNA N SEAL KIT	$34.77
CL-61235	SERIES 4000	BUNA N SEAL KIT	$34.21
CL-61236	SERIES 4000	BUNA N SEAL KIT	$38.00
CL-61237	SERIES 6000	BUNA N SEAL KIT	$46.32
CL-61238	SERIES 6000	BUNA N SEAL KIT	$42.22
CL-61252	SERIES 2000	BUNA N SEAL KIT	$66.27
CL-61258	SERIES 2000	BUNA N SEAL KIT	$66.07
CL-61259	SERIES 2000	BUNA N SEAL KIT	$36.46
CL-61263	SERIES 2000	BUNA N SEAL KIT	$96.55
CL-6405	SERIES10,000	MOTOR SEAL KIT	$41.39
CL-6406	SERIES10,000	SHAFT SEAL KIT	$37.36
CL-64417	SERIES 3,6,12	STEERING CONTROL	$18.73
CL-64418		STEERING CONTROL	$29.06

PNEU-DRAULICS
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CUSTOM HOIST (CH) MAINTENANCE KITS

KIT NUMBER	STAGE	DESCRIPTION	LIST PRICE/EA.
CH-1-BU-11-3	3	NYLON GLAND BEARING	$ 15.11
CH-1-BU-11-4	4	NYLON GLAND BEARING	$ 15.11
CH-1-BU-11-5	5	NYLON GLAND BEARING	$ 15.82
CH-1-BU-11-6	6	NYLON GLAND BEARING	$ 18.73
CH-1-BU-11-7	7	NYLON GLAND BEARING	$ 20.48
CH-1-BU-11-8	8	NYLON GLAND BEARING	$ 23.82
CH-1-BU-11-91	9-1/8	NYLON GLAND BEARING	$ 84.19
CH-RSK-30	3	VEE SET WITH WIPER	$ 22.88
CH-RSK-40	4	VEE SET WITH WIPER	$ 36.20
CH-RSK-50	5	VEE SET WITH WIPER	$ 28.54
CH-RSK-60	6	VEE SET WITH WIPER	$ 33.78
CH-RSK-70	7	VEE SET WITH WIPER	$ 36.52
CH-RSK-80	8	VEE SET WITH WIPER	$ 44.29
CH-RSK-82	8-1/4	VEE SET WITH WIPER	$ 101.12
CH-RSK-91	9-1/8	VEE SET WITH WIPER	$ 131.58
CH-RSK-97	9-3/4	VEE SET WITH WIPER	$ 217.97
CH-RSK-48	4,5,6,7,8	VEE SET WITH WIPER	$ 155.64
CH-2-GR-6-3	3	NYLON PISTON T-BEARING	$ 9.03
CH-2-GR-6-4	4	NYLON PISTON T-BEARING	$ 9.72
CH-2-GR-6-5	5	NYLON PISTON T-BEARING	$ 10.57
CH-2-GR-6-6	6	NYLON PISTON T-BEARING	$ 13.08
CH-2-GR-6-7	7	NYLON PISTON T-BEARING	$ 14.23
CH-2-GR-6-8	8	NYLON PISTON T-BEARING	$ 23.47
CH-2-GR-6-82	8-1/4	NYLON PISTON T-BEARING	$ 33.54
CH-2-GR-6-91	9-1/8	NYLON PISTON T-BEARING	$ 33.56
CH-2-GR-6-97	9-3/4	NYLON PISTON T-BEARING	$ 35.21
CH-PR-3-35	3	CAST IRON PISTON RING	$ 11.31
CH-PR-3-45	4	CAST IRON PISTON RING	$ 15.14
CH-PR-3-55	5	CAST IRON PISTON RING	$ 19.44
CH-PR-3-65	6	CAST IRON PISTON RING	$ 31.46
CH-PR-3-75	7	CAST IRON PISTON RING	$ 33.24
CH-PR-3-85	8	CAST IRON PISTON RING	$ 41.09
CH-PR-3-97	9-3/4	CAST IRON PISTON RING	$ 91.02

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PNEU-DRAULICS

HYDRO-LINE REPLACEMENT SEAL KITS

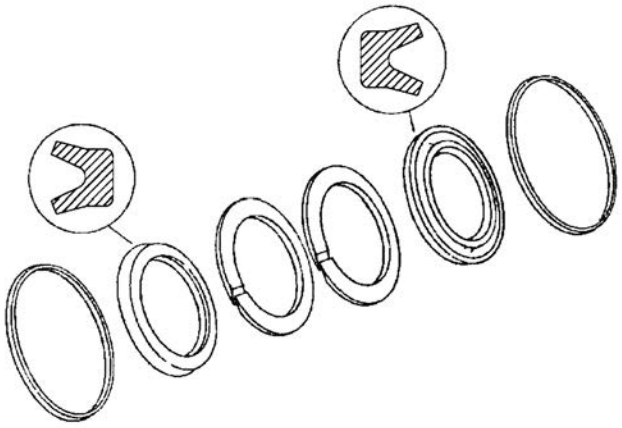
A5, HA5, LA5 SERIES
PISTON KITS / PARTS

NITRILE SEAL KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKA5-512-03	1-1/2	$ 19.47
H-SKA5-512-04	2	$ 20.76
H-SKA5-512-05	2-1/2	$ 22.36
H-SKA5-512-065	3-1/4	$ 24.13
H-SKA5-512-08	4	$ 28.07
H-SKA5-512-10	5	$ 35.08
H-SKA5-512-12	6	$ 45.88

VITON® SEAL KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKA5-512-03V	1-1/2	$ 43.77
H-SKA5-512-04V	2	$ 60.11
H-SKA5-512-05V	2-1/2	$ 64.56
H-SKA5-512-065V	3-1/4	$ 76.12
H-SKA5-512-08V	4	$ 91.86
H-SKA5-512-10V	5	$ 93.16
H-SKA5-512-12V	6	$ 149.89



ROD KITS / PARTS

NITRILE SEAL KIT

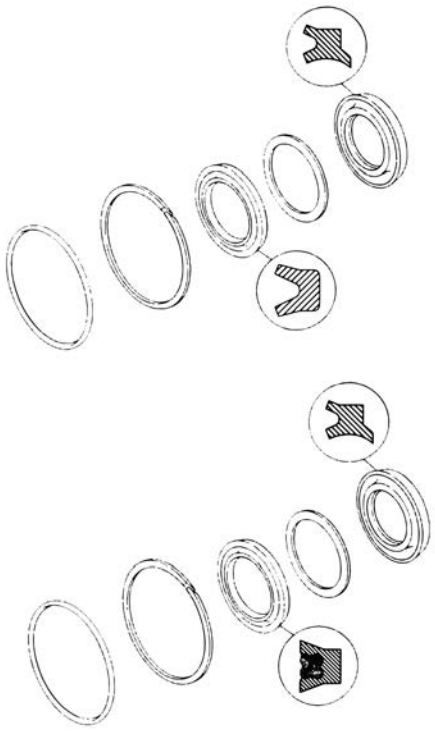
KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKN5-660-05	5/8	$ 10.38
H-SKN5-660-08	1	$ 10.84
H-SKN5-660-11	1-3/8	$ 13.36

VITON® SEAL KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKN5-660-05V	5/8	$ 31.56
H-SKN5-660-08V	1	$ 33.51
H-SKN5-660-11V	1-3/8	$ 41.47

NITRILE POLYSEAL KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKN5-660-05PS	5/8	$ 12.79
H-SKN5-660-08PS	1	$ 13.31
H-SKN5-660-11PS	1-3/8	$ 16.92

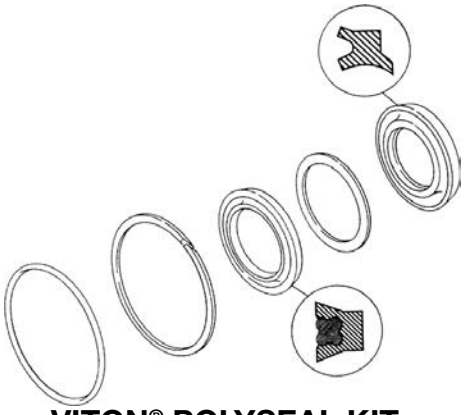


KITS

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

HYDRO-LINE REPLACEMENT SEAL KITS

A5, HA5, LA5 SERIES
ROD KITS / PARTS



VITON® POLYSEAL KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKN5-660-05VPS	5/8	$ 44.71
H-SKN5-660-08VPS	1	$ 50.75
H-SKN5-660-11VPS	1-3/8	$ 62.17

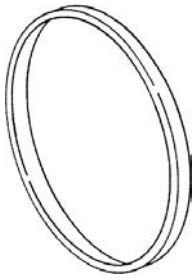
URETHANE SEAL KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKN5-681-05	5/8	$14.35
H-SKN5-681-08	1	$15.21
H-SKN5-681-11	1-3/8	$16.92

TUBE END SEALS

TEFLON® SEAL

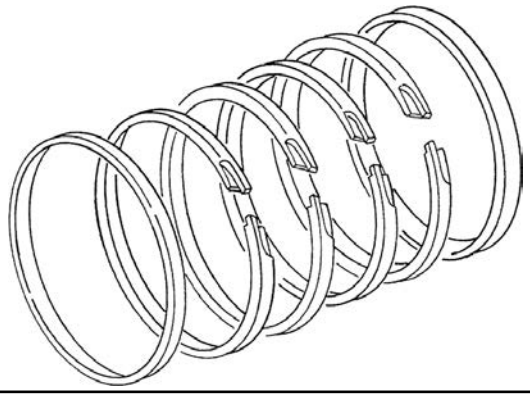
KIT NUMBER	SIZE	LIST PRICE/EA.
H-C-221-03	1-1/2	$ 9.80
H-C-221-04	2	$ 10.71
H-C-221-05	2-1/2	$ 11.62
H-C-221-065	3-1/4	$ 12.77
H-C-221-08	4	$ 13.79
H-C-221-10	5	$ 17.12
H-C-221-12	6	$ 19.54



N2, N3, LN3, N7 SERIES
PISTON KITS / PARTS

IRON PISTON RING KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKN2-511-03	1-1/2	$ 76.60
H-SKN2-511-04	2	$ 80.53
H-SKN2-511-05	2-1/2	$ 86.05
H-SKN2-511-065	3-1/4	$ 97.08
H-SKN2-511-08	4	$ 111.14
H-SKN2-511-10	5	$ 122.82
H-SKN2-511-12	6	$ 135.87
H-SKN2-511-14	7	$ 139.68
H-SKN2-511-16	8	$ 180.94
H-SKN2-511-20	10	$ 435.60
H-SKN2-511-24	12	$ 522.91



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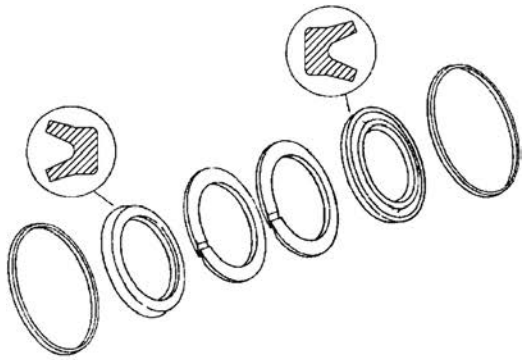
PNEU-DRAULICS

HYDRO-LINE REPLACEMENT SEAL KITS

N2, N3, LN3, N7 SERIES
PISTON KITS / PARTS

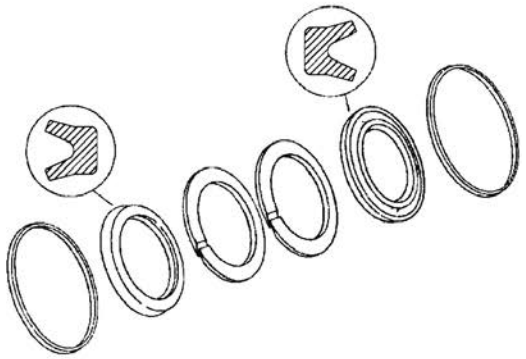
NITRILE SEAL KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKN2-512-03	1-1/2	$ 26.31
H-SKN2-512-04	2	$ 28.78
H-SKN2-512-05	2-1/2	$ 33.56
H-SKN2-512-065	3-1/4	$ 45.24
H-SKN2-512-08	4	$ 56.95
H-SKN2-512-10	5	$ 66.49
H-SKN2-512-12	6	$ 81.13
H-SKN2-512-14	7	$ 113.97
H-SKN2-512-16	8	$ 149.27



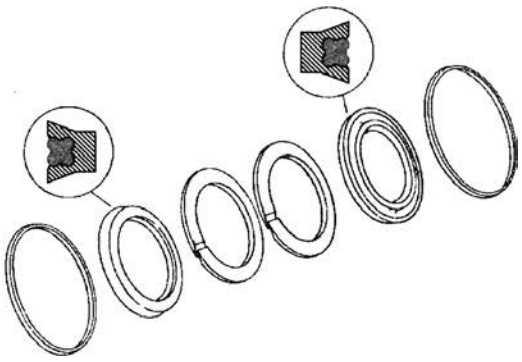
VITON® SEAL KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKN2-512-03V	1-1/2	$ 56.83
H-SKN2-512-04V	2	$ 84.60
H-SKN2-512-05V	2-1/2	$ 91.04
H-SKN2-512-065V	3-1/4	$ 143.86
H-SKN2-512-08V	4	$ 125.33
H-SKN2-512-10V	5	$ 131.89
H-SKN2-512-12V	6	$ 200.51
H-SKN2-512-14V	7	$ 246.32
H-SKN2-512-16V	8	$ 255.12
H-SKN2-512-20V	10	$ 396.14
H-SKN2-512-24V	12	$ 597.21



VITON® POLYSEAL KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKN2-512-04VPS	2	$ 117.17
H-SKN2-512-05VPS	2-1/2	$ 126.07
H-SKN2-512-0065VPS	3-1/4	$ 146.86
H-SKN2-512-08VPS	4	$ 197.44
H-SKN2-512-10VPS	5	$ 288.94
H-SKN2-512-12VPS	6	$ 319.57



PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
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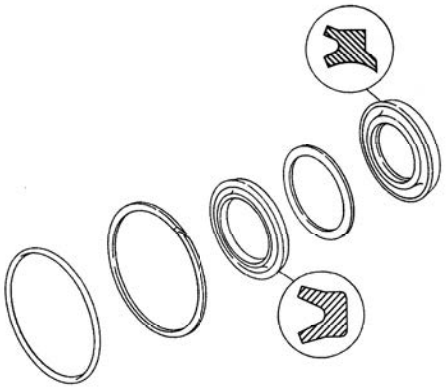
HYDRO-LINE REPLACEMENT SEAL KITS

N2, N3, LN3, N7 SERIES
ROD KITS / PARTS

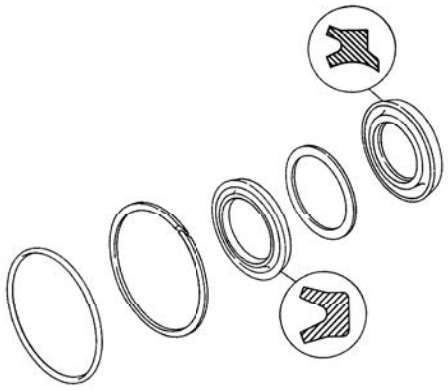
NITRILE SEAL KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKN2-661-05	5/8	$ 10.38
H-SKN2-661-08	1	$ 10.84
H-SKN2-661-11	1-3/8	$ 13.36
H-SKN2-661-14	1-3/4	$ 15.61
H-SKN2-661-16	2	$ 17.50
H-SKN2-661-20	2-1/2	$ 26.10
H-SKN2-661-24	3	$ 30.41
H-SKN2-661-28	3-1/2	$ 32.98
H-SKN2-661-32	4	$ 37.41
H-SKN2-661-36	4-1/2	$ 39.18
H-SKN2-661-40	5	$ 43.83
H-SKN2-661-44	5-1/2	$ 52.49
H-SKN2-661-56	7	$ 116.98



VITON® SEAL KIT

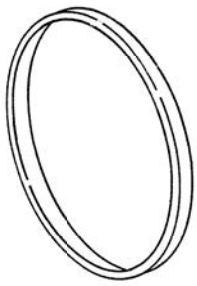
KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKN2-661-05V	5/8	$ 31.56
H-SKN2-661-08V	1	$ 33.51
H-SKN2-661-11V	1-3/8	$ 41.47
H-SKN2-661-14V	1-3/4	$ 43.77
H-SKN2-661-16V	2	$ 46.30
H-SKN2-661-20V	2-1/2	$ 57.31
H-SKN2-661-24V	3	$ 75.67
H-SKN2-661-28V	3-1/2	$ 88.35
H-SKN2-661-32V	4	$ 99.42
H-SKN2-661-36V	4-1/2	$ 97.47
H-SKN2-661-40V	5	$ 117.20
H-SKN2-661-44V	5-1/2	$ 135.68
H-SKN2-661-56V	7	$ 258.43
H-SKN2-661-64V	8	$ 589.46



TUBE END SEALS

TEFLON® SEAL

KIT NUMBER	SIZE	LIST PRICE/EA.
H-C-124-03	1-1/2	$ 11.24
H-C-124-04	2	$ 12.29
H-C-124-05	2-1/4	$ 13.33
H-C-124-065	3-1/4	$ 14.65
H-C-124-08	4	$ 15.82
H-C-124-10	5	$ 19.64
H-C-124-12	6	$ 22.42
H-C-124-14	7	$ 26.24
H-C-124-16	8	$ 27.77
H-C-124-20	10	$ 41.58
H-C-124-24	12	$ 56.09



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Nicholasville, KY 40340-0037

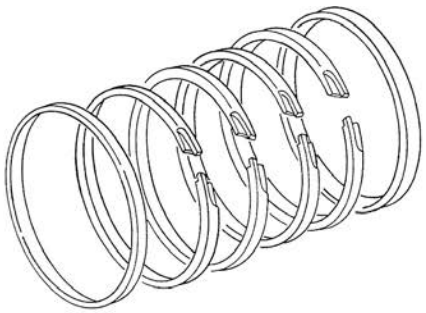
PNEU-DRAULICS

HYDRO-LINE REPLACEMENT SEAL KITS

N5, AN5, LAN5 SERIES
PISTON KITS / PARTS

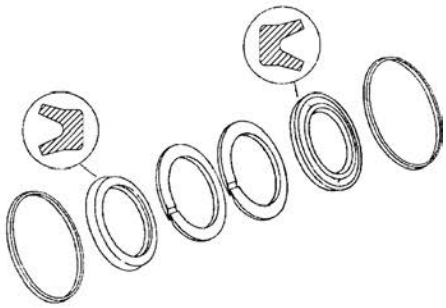
IRON PISTON RING KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKN5-511-03	1-1/2	$ 75.49
H-SKN5-511-04	2	$ 78.89
H-SKN2-511-05	2-1/2	$ 84.28
H-SKN5-511-065	3-1/4	$ 94.90
H-SKN5-511-08	4	$ 108.79
H-SKN5-511-10	5	$ 119.92
H-SKN5-511-12	6	$ 132.55
H-SKN5-511-14	7	$ 135.98
H-SKN5-511-16	8	$ 177.27



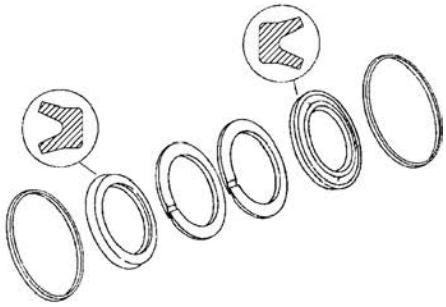
NITRILE SEAL KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKN5-512-03	1-1/2	$ 25.75
H-SKN5-512-04	2	$ 27.07
H-SKN5-512-05	2-1/2	$ 32.56
H-SKN5-512-065	3-1/4	$ 44.15
H-SKN5-512-08	4	$ 55.73
H-SKN5-512-10	5	$ 65.03
H-SKN5-512-12	6	$ 79.47
H-SKN5-512-14	7	$ 112.02
H-SKN5-512-16	8	$ 147.21



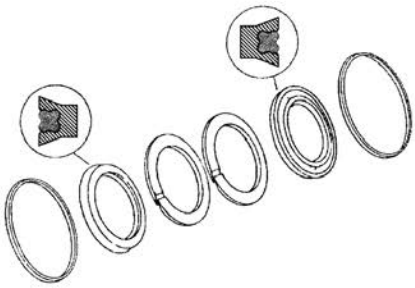
VITON® SEAL KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKN5-512-03V	1-1/2	$ 56.28
H-SKN5-512-04V	2	$ 83.69
H-SKN5-512-05V	2-1/2	$ 90.04
H-SKN5-512-065V	3-1/4	$ 104.90
H-SKN5-512-08V	4	$ 124.16
H-SKN5-512-10V	5	$ 130.43
H-SKN5-512-12V	6	$ 198.85
H-SKN5-512-14V	7	$ 244.37
H-SKN5-512-16V	8	$ 253.06
H-SKN5-512-20V	10	$ 404.40



URETHANE KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKN5-516-03	1-1/2	$ 36.06
H-SKN5-516-04	2	$ 39.02
H-SKN5-516-05	2-1/2	$ 45.58
H-SKN5-516-065	3-1/4	$ 61.81
H-SKN5-516-08	4	$ 78.08
H-SKN5-516-10	5	$ 91.04
H-SKN5-516-12	6	$ 111.25
H-SKN5-516-16	8	$ 206.09



PNEU-DRAULICS
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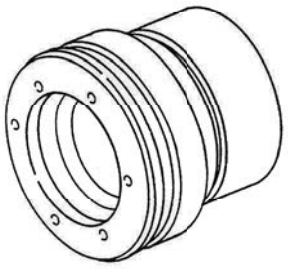
HYDRO-LINE REPLACEMENT SEAL KITS

N5, AN5, LAN5 SERIES
ROD KITS / PARTS

IRON GLAND

KIT NUMBER	SIZE	LIST PRICE/EA.
H-N5-650-05	5/8	$ 109.00
H-N5-650-08	1	$ 133.85
H-N5-650-11	1-3/8	$ 142.61
H-N5-650-14	1-3/4	$ 164.46
H-N5-650-16	2	$ 171.91
H-N5-650-20	2-1/2	$ 231.08
H-N5-650-24	3	$ 309.79
H-N5-650-28	3-1/2	$ 344.21
H-N5-650-32	4	$ 385.23
H-N5-650-36	4-1/2	$ 504.95
H-N5-650-40	5	$ 620.80
H-N5-650-44	5-1/2	$ 736.72



IRON GLAND KIT - NITRILE

KIT NUMBER	SIZE	LIST PRICE/EA.
H-N5-660-05	5/8	$ 121.79
H-N5-660-08	1	$ 140.30
H-N5-660-11	1-3/8	$ 154.02
H-N5-660-14	1-3/4	$ 179.09
H-N5-660-16	2	$ 208.98
H-N5-660-20	2-1/2	$ 239.82
H-N5-660-24	3	$ 349.38
H-N5-660-28	3-1/2	$ 388.90
H-N5-660-32	4	$ 445.47
H-N5-660-36	4-1/2	$ 568.18
H-N5-660-40	5	$ 655.38
H-N5-660-44	5-1/2	$ 815.32

IRON GLAND KIT - VITON®

KIT NUMBER	SIZE	LIST PRICE/EA.
H-N5-660-05V	5/8	$ 143.19
H-N5-660-08V	1	$ 162.67
H-N5-660-11V	1-3/8	$ 183.21
H-N5-660-14V	1-3/4	$ 208.98
H-N5-660-16V	2	$ 225.32
H-N5-660-20V	2-1/2	$ 296.42
H-N5-660-24V	3	$ 393.26
H-N5-660-28V	3-1/2	$ 438.82
H-N5-660-32V	4	$ 488.32
H-N5-660-36V	4-1/2	$ 617.12
H-N5-660-40V	5	$ 721.73
H-N5-660-44V	5-1/2	$ 904.07

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PNEU-DRAULICS

HYDRO-LINE REPLACEMENT SEAL KITS

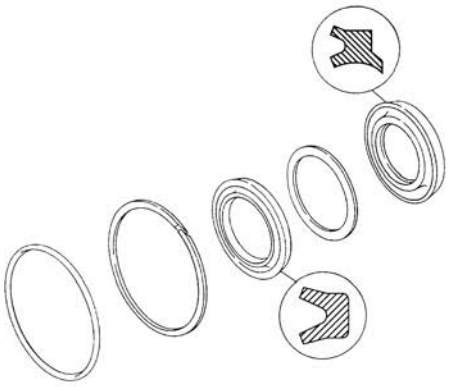
N5, AN5, LAN5 SERIES
ROD KITS / PARTS

ROD GLAND KIT - URETHANE

KIT NUMBER	SIZE	LIST PRICE/EA.
H-N5-681-05	5/8	$ 120.90
H-N5-681-08	1	$ 156.03
H-N5-681-11	1-3/8	$ 166.08
H-N5-681-14	1-3/4	$ 189.14
H-N5-681-16	2	$ 363.10
H-N5-681-20	2-1/2	$ 268.80
H-N5-681-24	3	$ 363.10
H-N5-681-28	3-1/2	$ 411.75
H-N5-681-32	4	$ 400.84
H-N5-681-36	4-1/2	$ 603.10
H-N5-681-40	5	$ 680.90
H-N5-681-44	5-1/2	$ 757.10

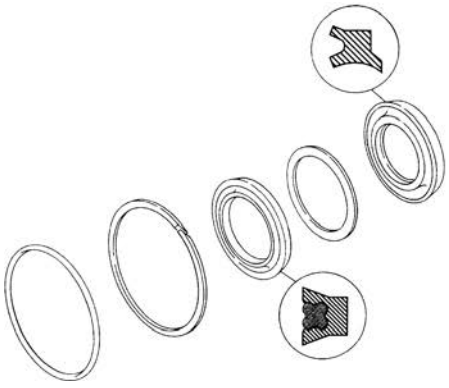
NITRILE SEAL KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKN5-660-05	5/8	$ 10.38
H-SKN5-660-08	1	$ 10.84
H-SKN5-660-11	1-3/8	$ 13.36
H-SKN5-660-14	1-3/4	$ 15.61
H-SKN5-660-16	2	$ 18.25
H-SKN5-660-20	2-1/2	$ 26.10
H-SKN5-660-24	3	$ 30.41
H-SKN5-660-28	3-1/2	$ 32.98
H-SKN5-660-32	4	$ 37.41
H-SKN5-660-36	4-1/2	$ 39.18
H-SKN5-660-40	5	$ 43.83
H-SKN5-660-44	5-1/2	$ 52.49



NITRILE POLYSEAL KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKN5-660-05PS	5/8	$ 12.79
H-SKN5-660-08PS	1	$ 13.31
H-SKN5-660-11PS	1-3/8	$ 16.92
H-SKN5-660-14PS	1-3/4	$ 20.76
H-SKN5-660-16PS	2	$ 23.81
H-SKN5-660-20PS	2-1/2	$ 28.74
H-SKN5-660-24PS	3	$ 39.59
H-SKN5-660-28PS	3-1/2	$ 44.69
H-SKN5-660-32PS	4	$ 60.24
H-SKN5-660-36PS	4-1/2	$ 63.22
H-SKN5-660-40PS	5	$ 69.30
H-SKN5-660-44PS	5-1/2	$ 78.60



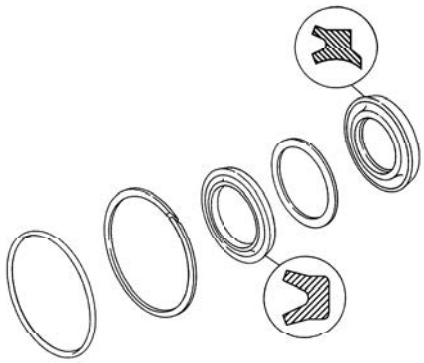
PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

HYDRO-LINE REPLACEMENT SEAL KITS

N5, AN5, LAN5 SERIES
ROD KITS / PARTS

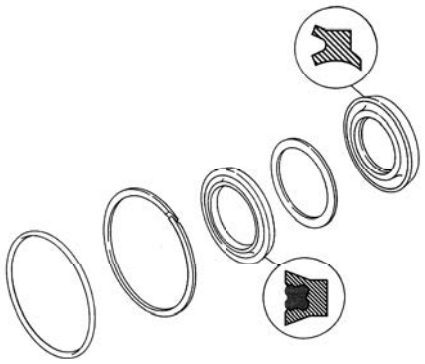
VITON® SEAL KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKN5-660-05V	5/8	$ 31.56
H-SKN5-660-08V	1	$ 38.27
H-SKN5-660-11V	1-3/8	$ 38.79
H-SKN5-660-14V	1-3/4	$ 41.47
H-SKN5-600-16V	2	$ 53.76
H-SKN5-660-20V	2-1/2	$ 65.34
H-SKN5-660-24V	3	$ 83.47
H-SKN5-660-28V	3-1/2	$ 88.35
H-SKN5-660-32V	4	$ 103.10
H-SKN5-660-36V	4-1/2	$ 97.47
H-SKN5-660-40V	5	$ 126.61
H-SKN5-660-44V	5-1/2	$ 135.68



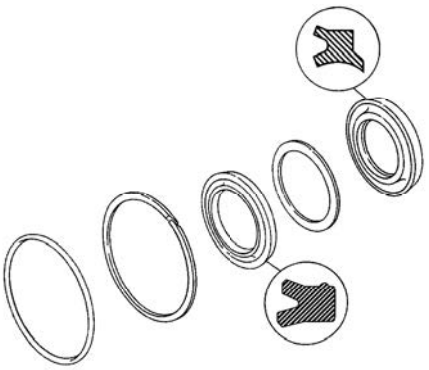
VITON® POLYSEAL KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKN5-660-05VPS	5/8	$ 44.71
H-SKN5-660-08VPS	1	$ 50.75
H-SKN5-660-11VPS	1-3/8	$ 62.17
H-SKN5-660-14VPS	1-3/4	$ 68.52
H-SKN5-660-16VPS	2	$ 71.36
H-SKN5-660-20VPS	2-1/2	$ 104.05
H-SKN5-660-24VPS	3	$119.83
H-SKN5-660-28VPS	3-1/2	$ 133.80
H-SKN5-660-32VPS	4	$161.60
H-SKN5-660-36VPS	4-1/2	$ 173.32
H-SKN5-660-40VPS	5	$197.39
H-SKN5-660-44VPS	5-1/2	$ 201.81



URETHANE SEAL KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKN5-681-05	5/8	$ 14.35
H-SKN5-681-08	1	$ 15.21
H-SKN5-681-11	1-3/8	$ 16.92
H-SKN5-681-14	1-3/4	$ 18.36
H-SKN5-681-16	2	$ 23.56
H-SKN5-681-20	2-1/2	$ 33.20
H-SKN5-681-24	3	$ 36.20
H-SKN5-681-28	3-1/2	$ 40.16
H-SKN5-681-32	4	$ 40.48
H-SKN5-681-36	4-1/2	$ 61.09
H-SKN5-681-40	5	$ 68.95
H-SKN5-681-44	5-1/2	$ 80.32



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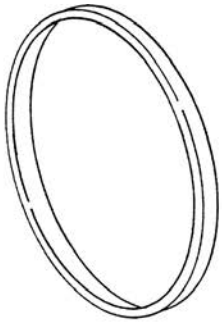
PNEU-DRAULICS

HYDRO-LINE REPLACEMENT SEAL KITS

N5, AN5, LAN5 SERIES
TUBE END SEALS

TEFLON SEAL

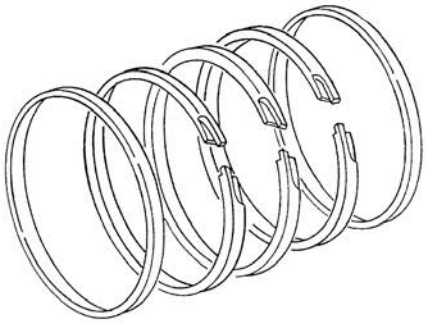
KIT NUMBER	SIZE	LIST PRICE/EA.
H-C-255-03	1-1/2	$ 10.69
H-C-255-04	2	$ 11.37
H-C-255-05	2-1/2	$ 12.33
H-C-255-065	3-1/4	$ 13.56
H-C-255-08	4	$ 14.65
H-C-255-10	5	$ 18.19
H-C-255-12	6	$ 20.75
H-C-255-14	7	$ 24.30
H-C-255-16	8	$ 25.70
H-C-255-20	10	$ 38.49



R2, LR2, HR2 SERIES
PISTON KITS / PARTS

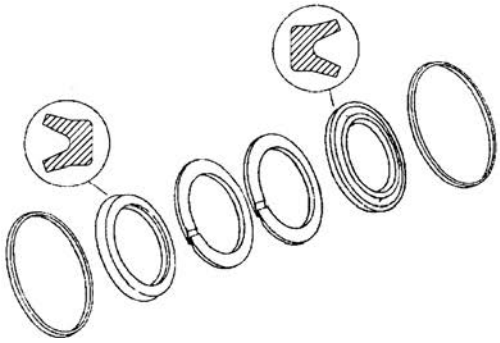
IRON PISTON RING KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKR5-511-03	1-1/2	$ 74.94
H-SKR5-511-04	2	$ 78.30
H-SKR5-511-05	2-1/2	$ 84.10
H-SKR5-511-065	3-1/4	$ 94.03
H-SKR5-511-08	4	$ 106.68
H-SKR5-511-10	5	$ 117.19
H-SKR5-511-12	6	$ 133.13
H-SKR5-511-16	8	$ 140.50
H-SKR5-511-20	10	$ 292.55



NITRILE SEAL KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKR5-512-02	1	$ 19.93
H-SKR5-512-03	1-1/2	$ 21.06
H-SKR5-512-04	2	$ 23.03
H-SKR5-512-05	2-1/2	$ 25.16
H-SKR5-512-065	3-1/4	$ 27.92
H-SKR5-512-08	4	$ 32.75
H-SKR5-512-10	5	$ 41.46
H-SKR5-512-12	6	$ 52.60
H-SKR5-512-16	8	$ 120.39
H-SKR5-512-20	10	$ 132.57
H-SKR5-512-24	12	$ 205.93



PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
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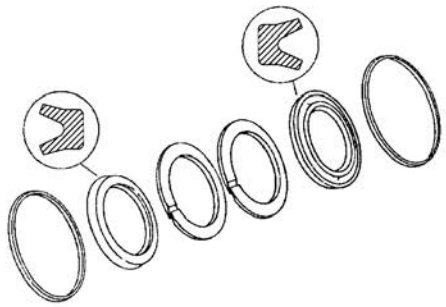
HYDRO-LINE REPLACEMENT SEAL KITS

R2, LR2, HR2 SERIES
PISTON KITS / PARTS

VITON® SEAL KIT

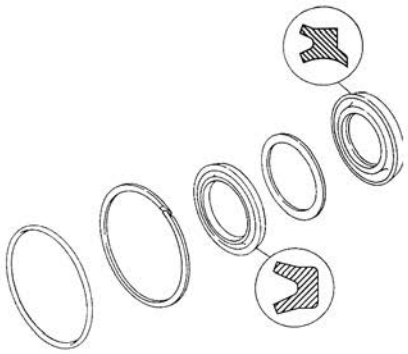
KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKR5-512-02V	1	$ 42.58
H-SKR5-512-03V	1-1/2	$ 44.57
H-SKR5-512-04V	2	$ 68.96
H-SKR5-512-05V	2-1/2	$ 74.08
H-SKR5-512-065V	3-1/4	$ 87.33
H-SKR5-512-08V	4	$ 105.19
H-SKR5-512-10V	5	$ 106.88
H-SKR5-512-12V	6	$ 171.98
H-SKR5-512-16V	8	$ 238.56
H-SKR5-512-20V	10	$ 343.22
H-SKR5-512-24V	12	$ 525.83



ROD KITS / PARTS

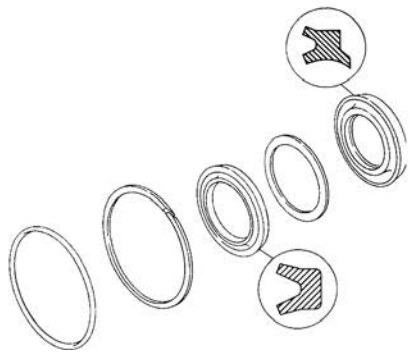
NITRILE SEAL KIT

KIT NUMBER	SIZE	DESCRIPTION	LIST PRICE/EA.
H-SKN2-661-05	5/8	NITRILE SEAL KIT	$ 10.38
H-SKR2-662-05A	5/8	1" BORE	$ 10.38
H-SKN2-661-08	1	NITRILE SEAL KIT	$ 10.84
H-SKR2-662-08	1	1-1/2", 2", 2-1/2" BORE	$ 10.84
H-SKN2-661-11	1-3/8	NITRILE SEAL KIT	$ 13.36
H-SKR2-662-11	1-3/8	2", 2-1/2" BORE	$ 13.36
H-SKN2-661-14	1-3/4	NITRILE SEAL KIT	$ 15.61
H-SKR2-662-14	1-3/4	2-1/2", 4" BORE	$ 15.61
H-SKN2-661-16	2	NITRILE SEAL KIT	$ 17.50
H-SKN2-661-20	2-1/2	NITRILE SEAL KIT	$ 26.10
H-SKN2-661-24	3	NITRILE SEAL KIT	$ 30.41
H-SKN2-661-28	3-1/2	NITRILE SEAL KIT	$ 32.98
H-SKN2-661-32	4	NITRILE SEAL KIT	$ 37.41



VITON® SEAL KIT

KIT NUMBER	SIZE	DESCRIPTION	LIST PRICE/EA.
H-SKN2-661-05V	5/8	VITON SEAL KIT	$ 31.56
H-SKR2-662-05AV	5/8	1" BORE	$ 31.56
H-SKN2-661-08V	1	VITON SEAL KIT	$ 33.51
H-SKR2-662-08V	1	1-1/2", 2", 2-1/2" BORE	$ 33.51
H-SKN2-661-11V	1-3/8	VITON SEAL KIT	$ 41.47
H-SKR5-662-11V	1-3/8	2", 2-1/2" BORE	$ 41.47
H-SKN2-661-14V	1-3/4	VITON SEAL KIT	$ 43.77
H-SKR2-662-14V	1-3/4	2-1/2", 4" BORE	$ 43.77
H-SKN2-661-16V	2	VITON SEAL KIT	$ 46.30
H-SKN2-661-20V	2-1/2	VITON SEAL KIT	$ 57.31
H-SKN2-661-24V	3	VITON SEAL KIT	$ 75.67
H-SKN2-661-28V	3-1/2	VITON SEAL KIT	$ 88.35
H-SKN2-661-32V	4	VITON SEAL KIT	$ 99.42



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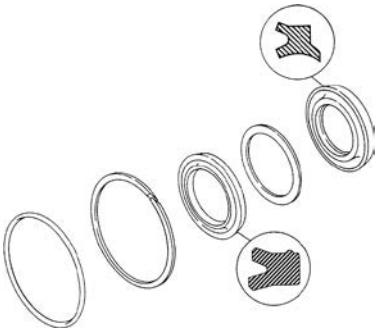
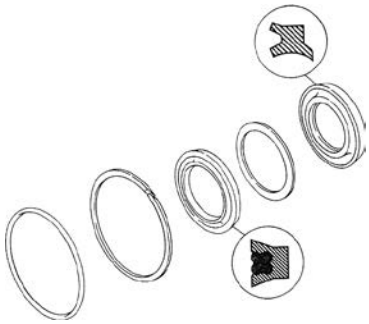
PNEU-DRAULICS

HYDRO-LINE REPLACEMENT SEAL KITS

R2, LR2, HR2 SERIES
ROD KITS / PARTS





URETHANE SEAL KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKR2-681-05A	5/8	$ 14.35
H-SKR2-681-08	1	$ 15.21
H-SKR2-681-11	1-3/8	$ 16.64
H-SKR2-681-14	1-3/4	$ 18.36

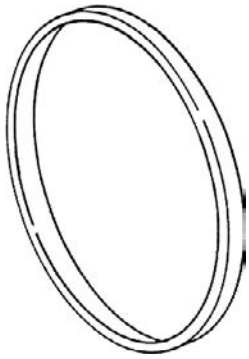
VITON® POLYSEAL KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKR2-681-08V	1	$ 51.16
H-SKR2-681-11V	1-3/8	$ 61.43

TUBE END SEALS

TEFLON SEAL

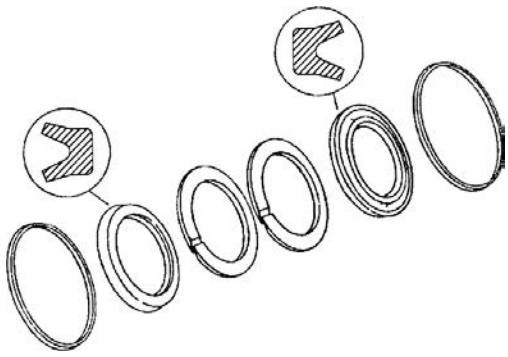
KIT NUMBER	SIZE	LIST PRICE/EA.
H-C-221-02	1	$ 8.95
H-C-221-03	1-1/2	$ 9.80
H-C-221-04	2	$ 10.71
H-C-221-05	2-1/2	$ 11.62
H-C-221-065	3-1/4	$ 12.77
H-C-221-08	4	$ 13.79
H-C-221-10	5	$ 17.12
H-C-221-12	6	$ 19.54
H-C-221-16	8	$ 22.95
H-C-221-20	10	$ 34.97
H-C-221-24	12	$ 46.35



R5, HR5, LR5 SERIES
PISTON KITS / PARTS

NITRILE SEAL KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKR5-512-02	1	$ 19.93
H-SKR5-512-03	1-1/2	$ 21.06
H-SKR5-512-04	2	$ 23.03
H-SKR5-512-05	2-1/2	$ 25.16
H-SKR5-512-065	3-1/4	$ 27.92
H-SKR5-512-08	4	$ 32.75
H-SKR5-512-10	5	$ 41.46
H-SKR5-512-12	6	$ 52.60
H-SKR5-512-16	8	$ 120.39
H-SKR5-512-20	10	$ 132.57
H-SKR5-512-24	12	$ 205.93



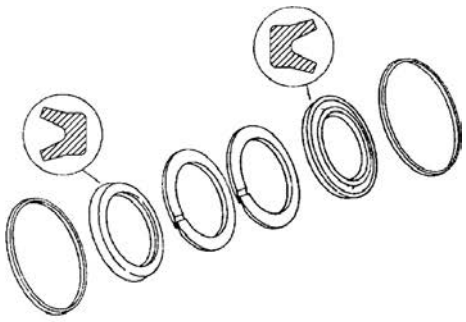
PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

HYDRO-LINE REPLACEMENT SEAL KITS

R5, HR5, LR5 SERIES
PISTON KITS / PARTS

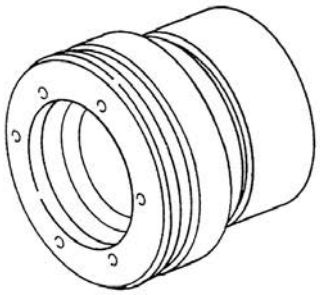
VITON® SEAL KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKR5-512-02V	1	$ 42.58
H-SKR5-512-03V	1-1/2	$ 44.57
H-SKR5-512-04V	2	$ 68.96
H-SKR5-512-05V	2-1/2	$ 74.08
H-SKR5-512-065V	3-1/4	$ 87.33
H-SKR5-512-08V	4	$ 105.19
H-SKR5-512-10V	5	$ 106.88
H-SKR5-512-12V	6	$ 171.98
H-SKR5-512-16V	8	$ 238.56
H-SKR5-512-20V	10	$ 299.14
H-SKR5-512-24V	12	$ 458.29



IRON GLAND

KIT NUMBER	SIZE	LIST PRICE/EA.
H-N5-650-05	5/8	$ 109.00
H-N5-650-08	1	$ 133.85
H-N5-650-11	1-3/8	$ 142.61
H-N5-650-14	1-3/4	$ 164.46
H-N5-650-16	2	$ 171.91
H-N5-650-20	2-1/2	$ 231.08
H-N5-650-24	3	$ 309.79
H-N5-650-28	3-1/2	$ 344.21
H-N5-650-32	4	$ 385.28
H-N5-650-36	4-1/2	$ 504.95
H-N5-650-40	5	$ 620.80
H-N5-650-44	5-1/2	$ 736.72



IRON GLAND - NITRILE

KIT NUMBER	SIZE	LIST PRICE/EA.
H-N5-650-05	5/8	$ 109.99
H-N5-650-08	1	$ 133.85
H-N5-660-11	1-3/8	$ 142.61
H-N5-650-14	1-3/4	$ 164.46
N-N5-660-16	2	$ 171.91
H-N5-660-20	2-1/2	$ 231.08
H-N5-660-24	3	$ 309.79
H-N5-660-28	3-1/2	$ 344.21
H-N5-660-32	4	$ 385.23
H-N5-660-36	4-1/2	$ 504.95
H-N5-660-40	5	$ 620.80
H-N5-660-44	5-1/2	$ 736.72

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PNEU-DRAULICS

HYDRO-LINE REPLACEMENT SEAL KITS

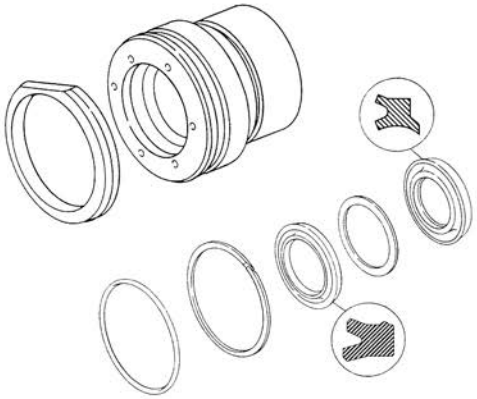
R5, HR5, LR5 SERIES
ROD KITS / PARTS

IRON GLAND KIT - VITON®

KIT NUMBER	SIZE	LIST PRICE/EA.
H-N5-660-05V	5/8	$ 143.19
H-N5-660-08V	1	$ 162.67
H-N5-660-11V	1-3/8	$ 183.21
H-N5-660-14V	1-3/4	$ 208.98
H-N5-660-16V	2	$ 225.32
H-N5-660-20V	2-1/2	$ 296.42
H-N5-660-24V	3	$ 393.26
H-N5-660-28V	3-1/2	$ 438.83
H-N5-660-32V	4	$ 488.32
H-N5-660-36V	4-1/2	$ 617.12
H-N5-660-40V	5	$ 721.73
H-N5-660-44V	5-1/2	$ 904.07

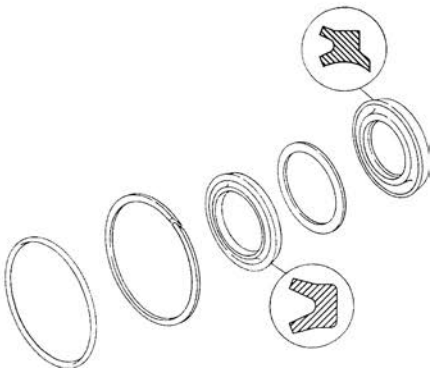
IRON GLAND KIT - URETHANE

KIT NUMBER	SIZE	LIST PRICE/EA.
H-N5-681-05	5/8	$ 120.90
H-N5-681-08	1	$ 156.03
H-N5-681-11	1-3/8	$ 166.08
H-N5-681-14	1-3/4	$ 189.14
H-N5-681-16	2	$ 205.13
H-N5-681-20	2-1/2	$ 268.80
H-N5-681-24	3	$ 363.10
H-N5-681-28	3-1/2	$ 411.75
H-N5-681-32	4	$ 440.50
H-N5-681-36	4-1/2	$ 603.10
H-N5-681-40	5	$ 680.90
H-N5-681-44	5-1/2	$ 757.10



NITRILE SEAL KIT

KIT NUMBER	SIZE	DESCRIPTION	LIST PRICE/EA.
H-SKN5-660-05	5/8	NITRILE SEAL KIT	$ 10.38
H-SKR5-662-05A	5/8	1" BORE	$ 10.38
H-SKN5-660-08	1	NITRILE SEAL KIT	$ 10.84
H-SKR5-662-08	1	1-1/2" BORE	$ 10.84
H-SKN5-660-11	1-3/8	NITRILE SEAL KIT	$ 13.36
H-SKR5-662-11	1-3/8	1-1/12", 2" BORE	$ 13.36
H-SKN5-660-14	1-3/4	NITRILE SEAL KIT	$ 15.61
H-SKN5-660-16	2	NITRILE SEAL KIT	$ 18.25
H-SKN5-660-20	2-1/2	NITRILE SEAL KIT	$ 26.10
H-SKN5-660-24	3	NITRILE SEAL KIT	$ 30.41
H-SKN5-660-28	3-1/2	NITRILE SEAL KIT	$ 32.98
H-SKN5-660-32	4	NITRILE SEAL KIT	$ 37.41
H-SKN5-660-36	4-1/2	NITRILE SEAL KIT	$ 39.18
H-SKN5-660-40	5	NITRILE SEAL KIT	$ 43.83
H-SKN5-660-44	5-1/2	NITRILE SEAL KIT	$ 52.49



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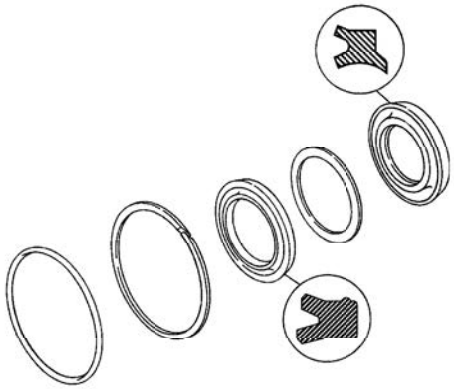
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

HYDRO-LINE REPLACEMENT SEAL KITS

R5, HR5, LR5 SERIES
ROD KITS / PARTS

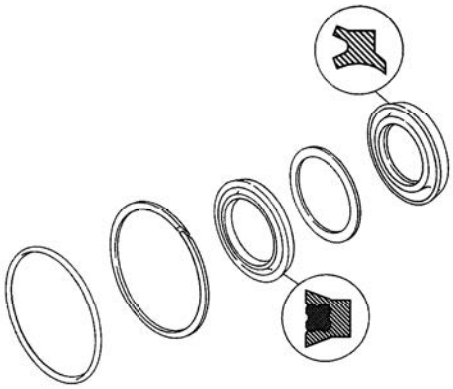
URETHANE SEAL KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKN5-681-05	5/8	$14.35
H-SKN5-681-08	1	$15.21
H-SKN5-681-11	1-3/8	$16.92
H-SKN5-681-14	1-3/4	$18.36
H-SKN5-681-16	2	$23.56
H-SKN5-681-20	2-1/2	$33.20
H-SKN5-681-24	3	$36.20
H-SKN5-681-28	3-1/2	$40.16
H-SKN5-681-32	4	$48.48
H-SKN5-681-36	4-1/2	$61.09
H-SKN5-681-40	5	$68.95
H-SKN5-681-44	5-1/2	$78.04



VITON® SEAL KIT

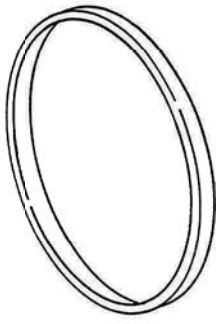
KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKR5-662-05AV	5/8	$ 34.19
H-SKR5-662-08V	1	$ 35.68
H-SKR5-662-11V	1-3/8	$ 45.33



TUBE END SEALS

TEFLON® SEAL

KIT NUMBER	SIZE	LIST PRICE/EA.
H-C-221-02	1	$ 8.95
H-C-221-03	1-1/2	$ 9.80
H-C-221-04	2	$ 10.71
H-C-221-05	2-1/2	$ 11.62
H-C-221-065	3-1/4	$ 12.77
H-C-221-08	4	$ 13.79
H-C-221-10	5	$ 17.12
H-C-221-12	6	$ 19.54
H-C-221-16	8	$ 22.95
H-C-221-20	10	$ 34.97
H-C-221-24	12	$ 60.26



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PNEU-DRAULICS

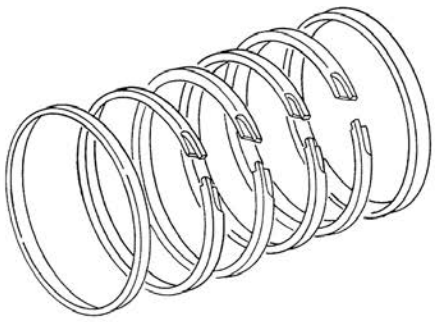
HYDRO-LINE REPLACEMENT SEAL KITS

UNIVERSAL KITS

PISTON KITS / PARTS - N2 & N5 SERIES

IRON PISTON RING KIT

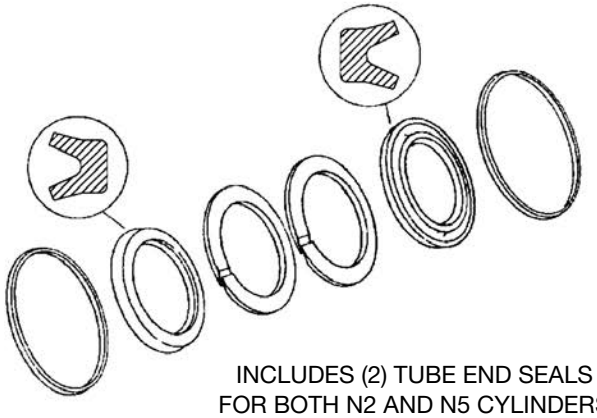
KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKN25-511-03	1-1/2	$ 97.98
H-SKN25-511-04	2	$ 103.26
H-SKN25-511-05	2-1/2	$ 110.73
H-SKN25-511-065	3-1/4	$ 124.21
H-SKN25-511-08	4	$ 140.44
H-SKN25-511-10	5	$ 159.19
H-SKN25-511-12	6	$ 177.39
H-SKN25-511-14	7	$ 188.46
H-SKN25-511-16	8	$ 232.35



INCLUDES (2) TUBE END SEALS
FOR BOTH N2 AND N5 CYLINDERS

NITRILE SEAL KIT

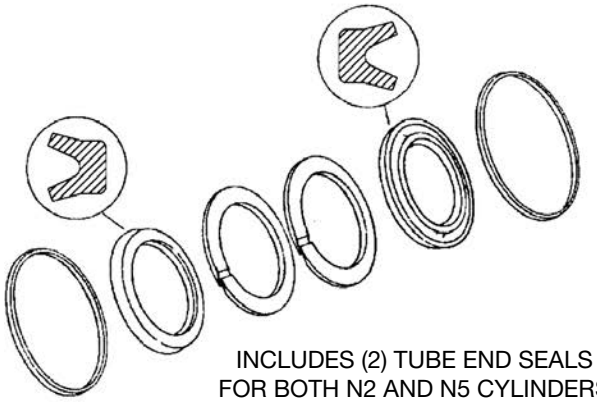
KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKN25-512-03	1-1/2	$ 37.01
H-SKN25-512-04	2	$ 40.16
H-SKN25-512-05	2-1/2	$ 45.89
H-SKN25-512-065	3-1/4	$ 58.81
H-SKN25-512-08	4	$ 71.59
H-SKN25-512-10	5	$ 84.67
H-SKN25-512-12	6	$ 101.88
H-SKN25-512-14	7	$ 138.26
H-SKN25-512-16	8	$ 174.98



INCLUDES (2) TUBE END SEALS
FOR BOTH N2 AND N5 CYLINDERS

VITON® SEAL KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKN25-512-03V	1-1/2	$ 67.53
H-SKN25-512-04V	2	$ 95.98
H-SKN25-512-05V	2-1/2	$ 103.37
H-SKN25-512-065V	3-1/4	$ 119.56
H-SKN25-512-08V	4	$ 139.98
H-SKN25-512-10V	5	$ 150.07
H-SKN25-512-12V	6	$ 221.28
H-SKN25-512-14V	7	$ 270.61
H-SKN25-512-16V	8	$ 280.82



INCLUDES (2) TUBE END SEALS
FOR BOTH N2 AND N5 CYLINDERS

KITS

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

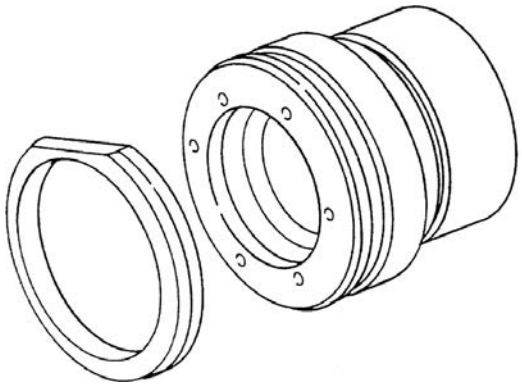
HYDRO-LINE REPLACEMENT SEAL KITS

UNIVERSAL KITS

PISTON KITS / PARTS - A5, N2, N5, R2 & R5 SERIES

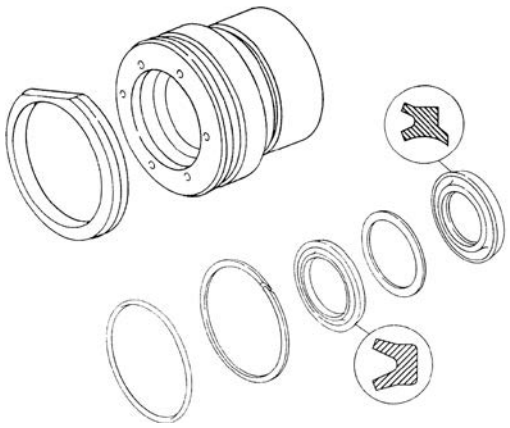
IRON GLAND & SPACER

KIT NUMBER	SIZE	LIST PRICE/EA.
H-N5-655-05	5/8	$ 124.37
H-N5-655-08	1	$ 163.82
H-N5-655-11	1-3/8	$ 173.92
H-N5-655-14	1-3/4	$ 198.65
H-N5-655-16	2	$ 213.04
H-N5-655-20	2-1/2	$ 280.01
H-N5-655-24	3	$ 382.07
H-N5-655-28	3-1/2	$ 432.27
H-N5-655-32	4	$ 456.94
H-N5-655-36	4-1/2	$ 634.04
H-N5-655-40	5	$ 712.28
H-N5-655-44	5-1/2	$ 788.35



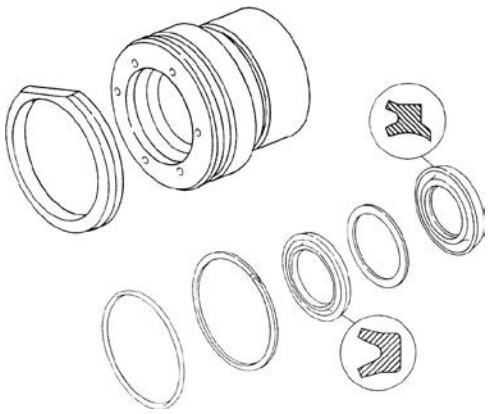
IRON GLAND KIT - NITRILE

KIT NUMBER	SIZE	LIST PRICE/EA.
H-N5-665-05	5/8	$ 137.17
H-N5-665-08	1	$ 177.13
H-N5-665-11	1-3/8	$ 190.84
H-N5-665-14	1-3/4	$ 219.43
H-N5-665-16	2	$ 236.85
H-N5-665-20	2-1/2	$ 308.75
H-N5-665-24	3	$ 421.66
H-N5-665-28	3-1/2	$ 476.96
H-N5-665-32	4	$ 517.17
H-N5-665-36	4-1/2	$ 697.25
H-N5-665-40	5	$ 781.59
H-N5-665-44	5-1/2	$ 866.95



IRON GLAND KIT - VITON®

KIT NUMBER	SIZE	LIST PRICE/EA.
H-N5-655-05V	5/8	$ 158.57
H-N5-655-08V	1	$ 199.518
H-N5-665-11V	1-3/8	$ 219.24
H-N5-665-14V	1-3/4	$ 243.91
H-N5-665-16V	2	$ 266.80
H-N5-665-20V	2-1/2	$ 345.36
H-N5-665-24V	3	$ 465.54
H-N5-665-28V	3-1/2	$ 526.93
H-N5-665-32V	4	$ 560.03
H-N5-665-36V	4-1/2	$ 746.19
H-N5-665-40V	5	$ 838.89
H-N5-665-44V	5-1/2	$ 955.70



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PNEU-DRAULICS

HYDRO-LINE REPLACEMENT SEAL KITS

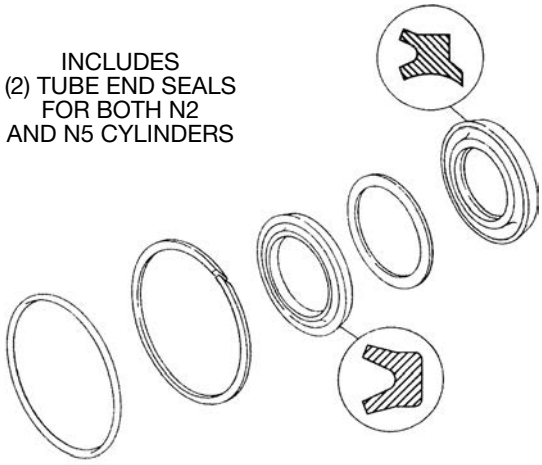
UNIVERSAL KITS

ROD KITS / PARTS - A5, N2, N5, R2 & R5 SERIES

NITRILE SEAL KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKN25-665-05	5/8	$ 12.79
H-SKN25-665-08	1	$ 13.31
H-SKN25-665-11	1-3/8	$ 16.92
H-SKN25-665-14	1-3/4	$ 20.76
H-SKN25-665-16	2	$ 23.61
H-SKN25-665-20	2-1/2	$ 28.74
H-SKN25-665-24	3	$ 39.59
H-SKN25-665-28	3-1/2	$ 44.69
H-SKN25-665-32	4	$ 60.24
H-SKN25-665-36	4-1/2	$ 63.22
H-SKN25-665-40	5	$ 69.30
H-SKN25-665-44	5-1/2	$ 78.60

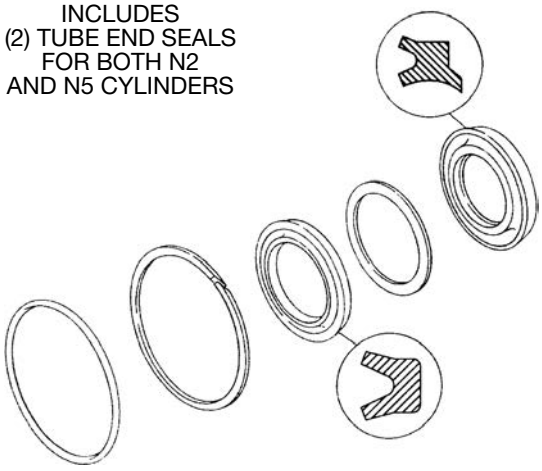
INCLUDES
(2) TUBE END SEALS
FOR BOTH N2
AND N5 CYLINDERS



VITON® SEAL KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
H-SKN25-665-05V	5/8	$ 34.19
H-SKN25-665-08V	1	$ 35.68
H-SKN25-665-11V	1-3/8	$ 45.33
H-SKN25-665-14V	1-3/4	$ 50.65
H-SKN25-665-16V	2	$ 53.76
H-SKN25-665-20V	2-1/2	$ 65.34
H-SKN25-665-24V	3	$ 83.47
H-SKN25-665-28V	3-1/2	$ 94.66
H-SKN25-665-32V	4	$ 103.10
H-SKN25-665-36V	4-1/2	$ 112.15
H-SKN25-665-40V	5	$ 126.61
H-SKN25-665-44V	5-1/2	$ 167.35

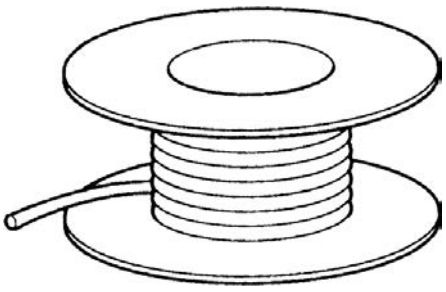
INCLUDES
(2) TUBE END SEALS
FOR BOTH N2
AND N5 CYLINDERS



TUBE END SEALS

ROLL TUBE END SEAL

KIT NUMBER	SERIES	SIZE	LIST PRICE/EA.
H-C-124-ROLL	N2	.065 X .143 X 25 Ft.	$ 117.14
H-C-221-ROLL	R5	.062 x .092 x 25 Ft.	$ 112.90



KITS

PNEU-DRAULICS
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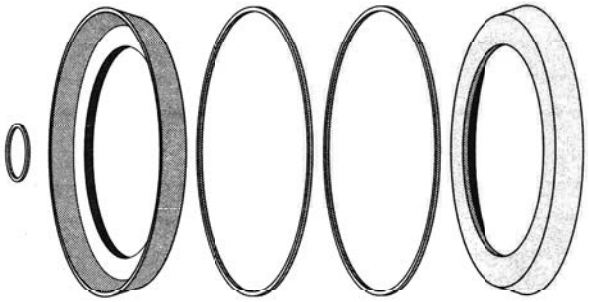
Nicholasville, KY 40340-0037

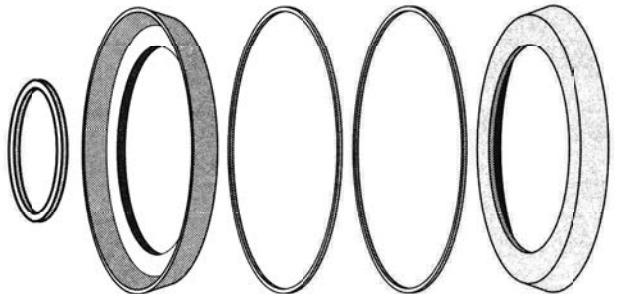
MILLER FLUID POWER REPLACEMENT KITS

BORE KITS
(SORTED BY TYPE AND SIZE)



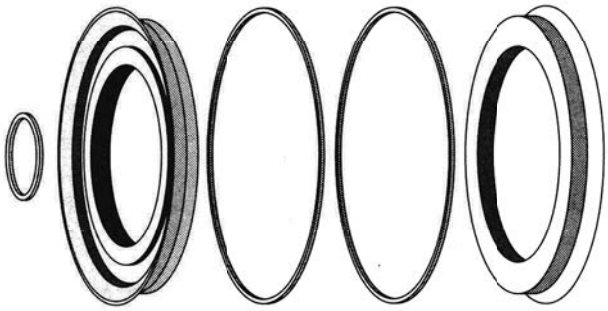
PISTON CUP KIT - LEATHER

KIT NUMBER	SIZE	LIST PRICE/EA.
M-111-KB001-150	1-1/2	$ 52.03
M-111-KB001-200	2	$ 70.35
M-111-KB001-250	2-1/2	$ 84.03
M-111-KB001-325	3-1/4	$ 114.13
M-111-KB001-400	4	$ 143.83
M-111-KB001-500	5	$ 189.43
M-111-KB001-600	6	$ 249.43
M-111-KB001-800	8	$ 543.23



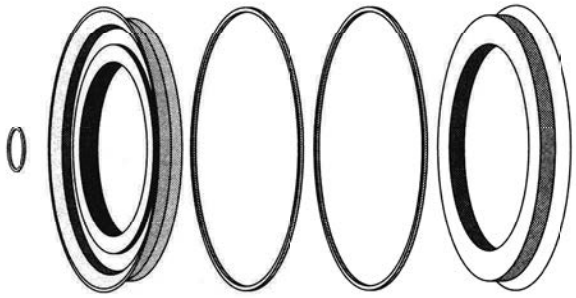
PISTON CUP KIT - LEATHER

KIT NUMBER	SIZE	LIST PRICE/EA.
M-150-KB001-150	1-1/2	$ 75.72
M-150-KB001-200	2	$ 96.88
M-150-KB001-250	2-1/2	$ 120.65
M-150-KB001-325	3-1/4	$ 163.28
M-150-KB001-400	4	$ 199.52
M-150-KB001-500	5	$ 256.39
M-150-KB001-600	6	$ 332.42
M-150-KB001-800	8	$ 685.88



PISTON CUP KIT - PTFE

KIT NUMBER	SIZE	LIST PRICE/EA.
M-113-KB001-150	1-1/2	$ 66.90
M-113-KB001-200	2	$ 95.77
M-113-KB001-250	2-1/2	$ 104.47
M-113-KB001-325	3-1/4	$ 127.58
M-113-KB001-400	4	$ 160.25
M-113-KB001-500	5	$ 228.86
M-113-KB001-600	6	$ 276.20
M-113-KB001-800	8	$ 428.00



PISTON CUP KIT - PTFE

KIT NUMBER	SIZE	LIST PRICE/EA.
M-153-KB001-150	1-1/2	$ 79.83
M-153-KB001-200	2	$ 107.74
M-153-KB001-250	2-1/2	$ 123.66
M-153-KB001-325	3-1/4	$ 153.05
M-153-KB001-400	4	$ 187.02
M-153-KB001-500	5	$ 256.53
M-153-KB001-600	6	$ 307.44
M-153-KB001-800	8	$ 457.83

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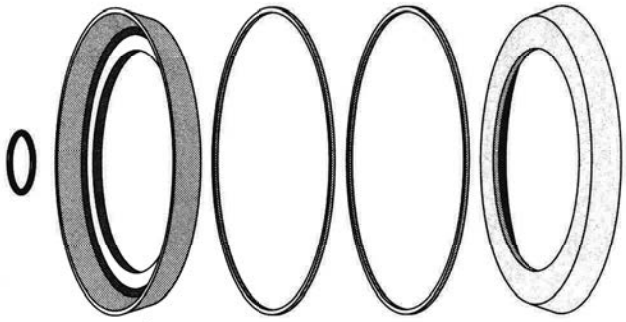
PNEU-DRAULICS

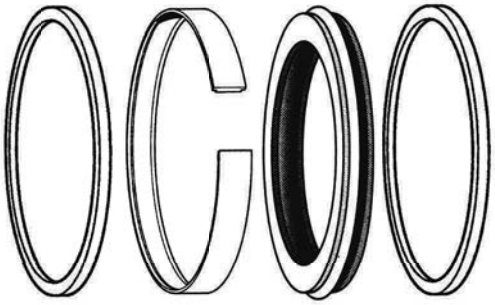
MILLER FLUID POWER REPLACEMENT KITS

BORE KITS
(SORTED BY TYPE AND SIZE)



PISTON CUP KIT - NITRILE

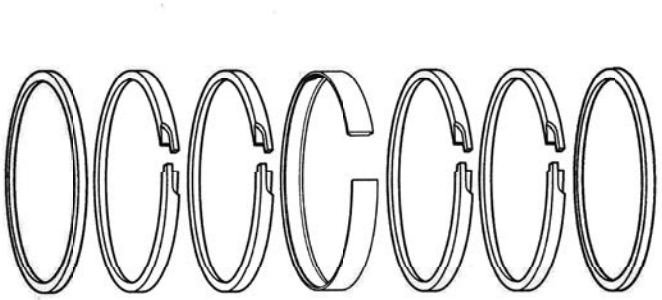
KIT NUMBER	SIZE	LIST PRICE/EA.
M-110-KB001-150	1-1/2	$ 48.20
M-110-KB001-200	2	$ 62.31
M-110-KB001-250	2-1/2	$ 66.41
M-110-KB001-325	3-1/4	$ 79.76
M-110-KB001-400	4	$ 108.44
M-110-KB001-500	5	$ 139.00
M-110-KB001-600	6	$ 161.36
M-110-KB001-700	7	$ 142.25
M-110-KB001-800	8	$ 210.28



HV SERIES

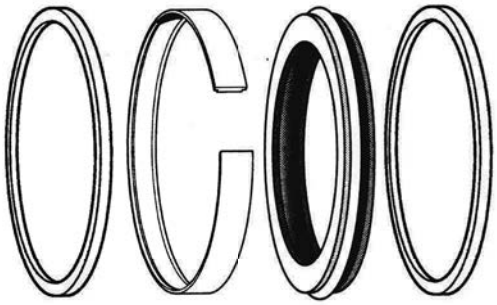
SEAL KIT - URETHANE

KIT NUMBER	SIZE	LIST PRICE/EA.
M-181-KB001-150	1-1/2	$ 50.73
M-181-KB001-200	2	$ 55.07
M-181-KB001-250	2-1/2	$ 58.27
M-181-KB001-325	3-1/4	$ 63.53
M-181-KB001-400	4	$ 68.75
M-181-KB001-500	5	$ 82.61
M-181-KB001-600	6	$ 94.51
M-181-KB001-700	7	$ 96.62
M-181-KB001-800	8	$ 136.24



PISTON RING KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
M-171-KB003-200	2	$ 142.22
M-171-KB003-250	2-1/2	$ 156.30



HV SERIES

SEAL KIT - VITON®

KIT NUMBER	SIZE	LIST PRICE/EA.
M-181-KB002-150	1-1/2	$ 202.91
M-181-KB002-325	3-1/4	$ 254.11
M-181-KB002-700	7	$ 386.48

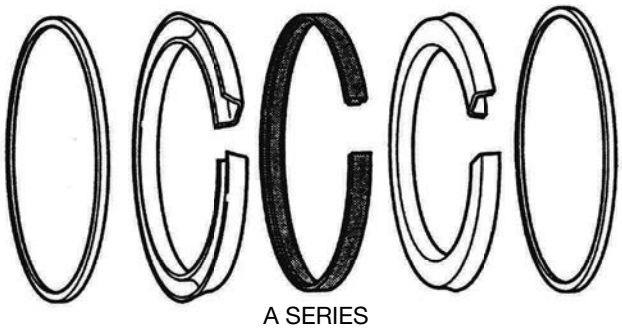
Piston Cups Seal / Kits are used with Three Piece Pistons.

KITS

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

MILLER FLUID POWER REPLACEMENT KITS

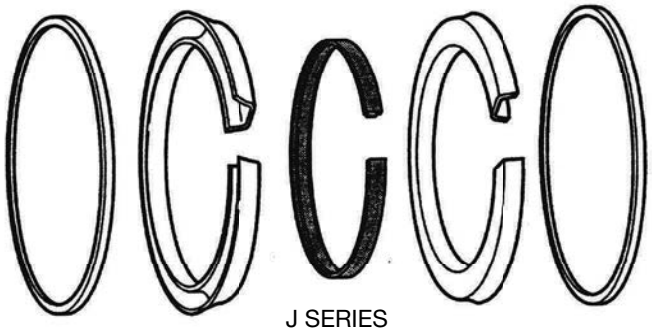
BORE KITS
(SORTED BY TYPE AND SIZE)



A SERIES

U-CUP KIT - NITRILE

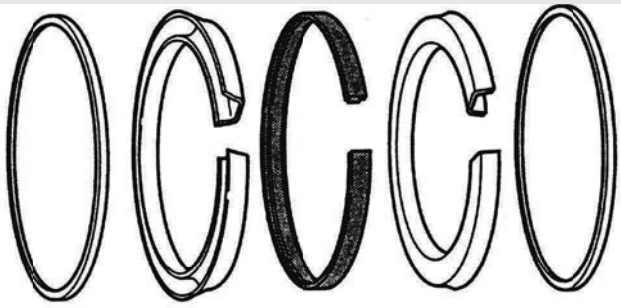
KIT NUMBER	SIZE	LIST PRICE/EA.
M-090-KB001-150	1-1/2	$ 71.25
M-090-KB001-200	2	$ 90.89
M-090-KB001-250	2-1/2	$ 10.265
M-090-KB001-325	3-1/4	$ 119.16
M-090-KB001-400	4	$ 139.00
M-090-KB001-500	5	$ 170.35
M-090-KB001-600	6	$ 213.37
M-090-KB001-700	7	$ 242.63
M-090-KB001-800	8	$ 365.59
M-090-KB001-1000	10	$ 508.20
M-090-KB001-1200	12	$ 586.25



J SERIES

U-CUP KIT - PTFE

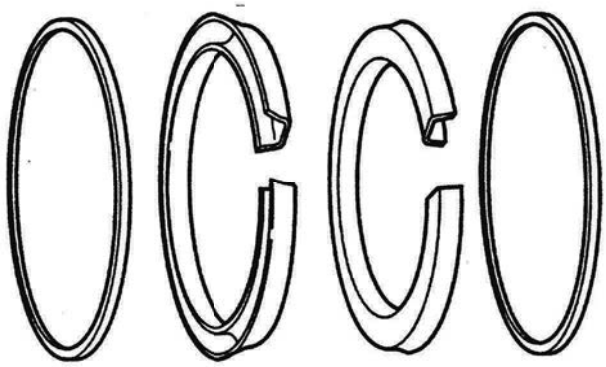
KIT NUMBER	SIZE	LIST PRICE/EA.
M-091-KB001-150	1-1/2	$ 80.00
M-091-KB001-200	2	$ 93.55
M-091-KB001-250	2-1/2	$ 104.42
M-091-KB001-325	3-1/4	$ 127.61
M-091-KB001-400	4	$ 162.80
M-091-KB001-500	5	$ 213.47
M-091-KB001-600	6	$ 260.88
M-091-KB001-700	7	$ 305.32
M-091-KB001-800	8	$ 355.70
M-091-KB001-1000	10	$ 482.41
M-091-KB001-1200	12	$ 786.93



A SERIES

U-CUP KIT - VITON®

KIT NUMBER	SIZE	LIST PRICE/EA.
M-090-KB002-400	4	$111.12



J SERIES

U-CUP KIT - PTFE

KIT NUMBER	SIZE	LIST PRICE/EA.
M-091-KB002-150	1-1/2	$ 53.76
M-091-KB002-200	2	$ 63.65
M-091-KB002-250	2-1/2	$ 72.72
M-091-KB002-325	3-1/4	$ 85.53
M-091-KB002-400	4	$ 111.12
M-091-KB002-500	5	$ 152.78
M-091-KB002-600	6	$ 183.58

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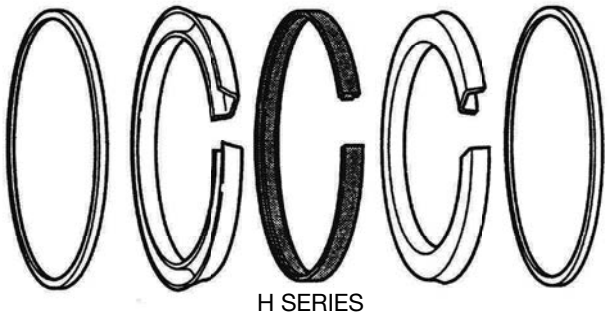
PNEU-DRAULICS

MILLER FLUID POWER REPLACEMENT KITS

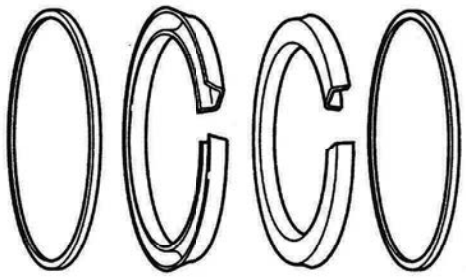
BORE KITS
(SORTED BY TYPE AND SIZE)



H SERIES

U-CUP KIT - PTFE

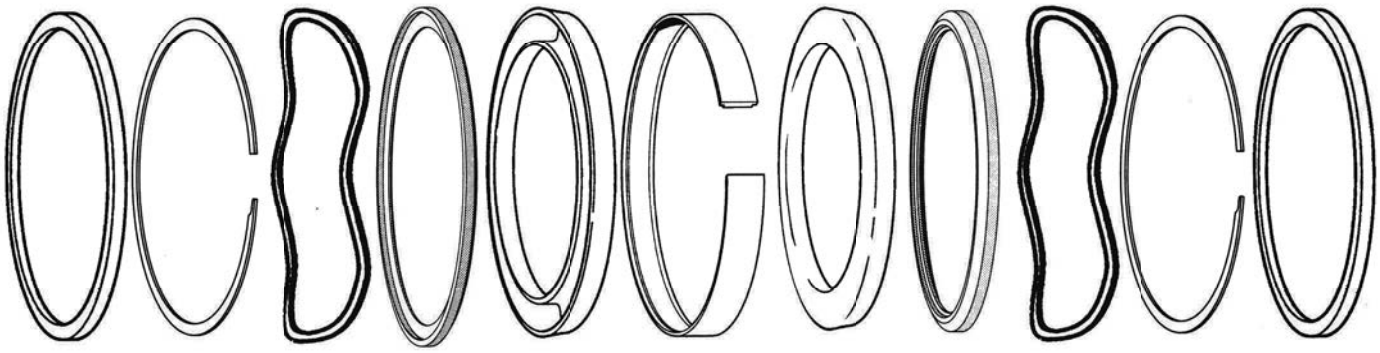
KIT NUMBER	SIZE	LIST PRICE/EA.
M-171-KB001-150	1-1/2	$ 79.47
M-171-KB001-200	2	$ 119.40
M-171-KB001-250	2-1/2	$ 149.15
M-171-KB001-325	3-1/4	$ 189.20
M-171-KB001-400	4	$ 189.94
M-171-KB001-500	5	$ 307.38
M-171-KB001-600	6	$ 370.72
M-171-KB001-700	7	$ 451.95
M-171-KB001-800	8	$ 574.36
M-171-KB001-1000	10	$ 741.07
M-171-KB001-1200	12	$ 659.44



H SERIES

U-CUP KIT - PTFE

KIT NUMBER	SIZE	LIST PRICE/EA.
M-171-KB002-200	2	$ 86.56
M-171-KB002-250	2-1/2	$ 104.05



U-CUP KIT - PTFE

KIT NUMBER	SIZE	LIST PRICE/EA.
M-173-KB002-250	2-1/2	$ 220.99
M-173-KB002-325	3-1/4	$ 268.36
M-173-KB002-400	4	$ 332.09

KITS

PNEU-DRAULICS
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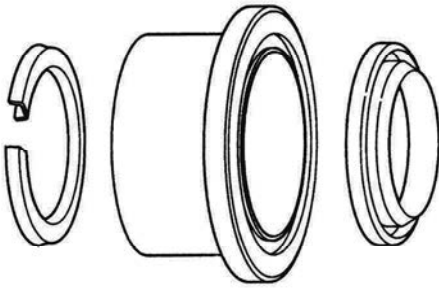
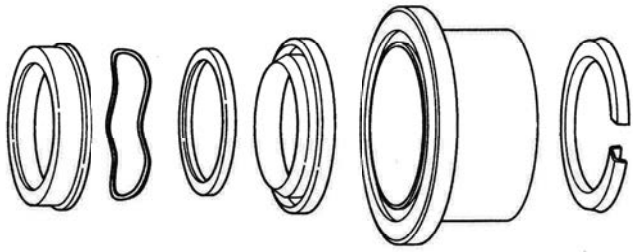
Nicholasville, KY 40340-0037

MILLER FLUID POWER REPLACEMENT KITS

BORE KITS
(SORTED BY TYPE AND SIZE)



BUNA N SEAL & TEFLON® WIPER
AIR



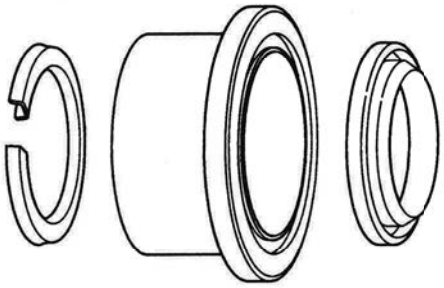
PTFE SEAL & TEFLON® WIPER
HYDRAULIC

RETAINER HELD - BRONZE

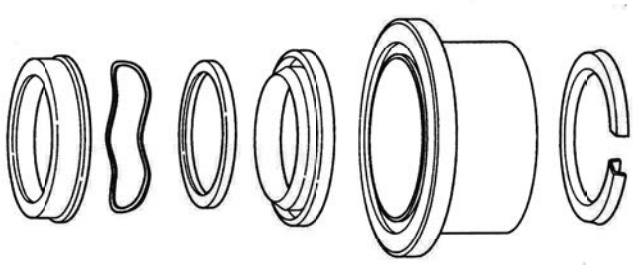
KIT NUMBER	SIZE	LIST PRICE/EA.
M-051-KR009-63	5/8	$ 96.21
M-051-KR009-100	1	$ 118.06
M-051-KR009-138	1-3/8	$ 142.35
M-051-KR009-175	1-3/4	$ 198.88

RETAINER HELD - BRONZE

KIT NUMBER	SIZE	LIST PRICE/EA.
M-051-KR013-63	5/8	$ 159.18
M-051-KR013-100	1	$ 193.42
M-051-KR013-138	1-3/8	$ 235.36
M-051-KR013-175	1-3/4	$ 307.57



BUNA N SEAL & TEFLON® WIPER
AIR



PTFE SEAL & TEFLON® WIPER
HYDRAULIC

RETAINER HELD - IRON

KIT NUMBER	SIZE	LIST PRICE/EA.
M-051-KR010-63	5/8	$ 89.08
M-051-KR010-100	1	$ 109.11
M-051-KR010-138	1-3/8	$ 131.51
M-051-KR010-175	1-3/4	$ 183.40
M-051-KR010-200	2	$ 228.38
M-051-KR010-250	2-1/2	$ 360.90
M-051-KR010-300	3	$ 370.87
M-051-KR010-350	3-1/2	$ 405.54

RETAINER HELD - IRON

KIT NUMBER	SIZE	LIST PRICE/EA.
M-051-KR014-63	5/8	$ 152.07
M-051-KR014-100	1	$ 230.67
M-051-KR014-138	1-3/8	$ 283.51
M-051-KR014-175	1-3/4	$ 349.16
M-051-KR014-200	2	$ 392.93
M-051-KR014-250	2-1/2	$ 467.50
M-051-KR014-300	3	$ 583.06
M-051-KR014-350	3-1/2	$ 659.45

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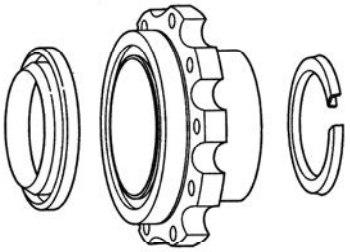
PNEU-DRAULICS

MILLER FLUID POWER REPLACEMENT KITS

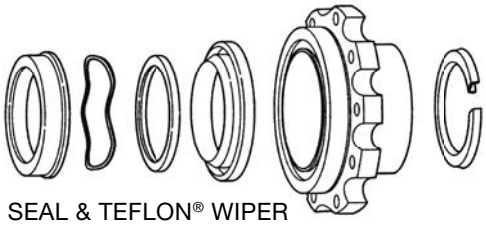
ROD KITS
(SORTED BY TYPE AND SIZE)



BUNA N SEAL & TEFLON® WIPER
AIR

BOLTED - IRON

KIT NUMBER	SIZE	LIST PRICE/EA.
M-051-KR011-63	5/8	$ 130.51
M-051-KR011-100	1	$ 155.31
M-051-KR011-138	1-3/8	$ 190.51
M-051-KR011-175	1-3/4	$ 240.47
M-051-KR011-200	2	$ 272.95
M-051-KR011-250	2-1/2	$ 325.25
M-051-KR011-300	3	$ 382.94
M-051-KR011-350	3-1/2	$ 446.79
M-051-KR011-400	4	$ 535.66
M-051-KR011-450	4-1/2	$ 664.16
M-051-KR011-500	5	$ 815.14
M-051-KR011-550	5-1/2	$ 895.78



PTFE SEAL & TEFLON® WIPER
HYDRAULIC

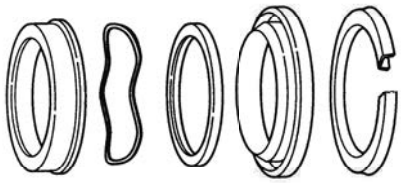
BOLTED - IRON

KIT NUMBER	SIZE	LIST PRICE/EA.
M-051-KR015-63	5/8	$ 193.49
M-051-KR015-100	1	$ 230.67
M-051-KR015-138	1-3/8	$ 283.51
M-051-KR015-175	1-3/4	$ 349.16
M-051-KR015-200	2	$ 392.93
M-051-KR015-250	2-1/2	$ 467.50
M-051-KR015-300	3	$ 582.06
M-051-KR015-350	3-1/2	$ 659.45
M-051-KR015-400	4	$ 768.81
M-051-KR015-450	4-1/2	$ 931.14
M-051-KR015-500	5	$ 1115.67
M-051-KR015-550	5-1/2	$ 1,232.35

NO WIPER,
PTFE SEAL
HYDRAULIC

CAGE ASSEMBLY - NO WIPER

KIT NUMBER	SIZE	LIST PRICE/EA.
M-051-KR024-63	5/8	$ 60.65
M-051-KR024-100	1	$ 71.40
M-051-KR024-138	1-3/8	$ 86.75
M-051-KR024-175	1-3/4	$ 102.25
M-051-KR024-200	2	$ 115.45
M-051-KR024-250	2-1/2	$ 135.08
M-051-KR024-300	3	$ 188.00
M-051-KR024-350	3-1/2	$ 208.10
M-051-KR024-400	4	$ 231.20
M-051-KR024-450	4-1/2	$ 265.01
M-051-KR024-500	5	$ 297.50
M-051-KR024-550	5-1/2	$ 334.42



PTFE SEAL & TEFLON® WIPER
HYDRAULIC

CAGE ASSEMBLY

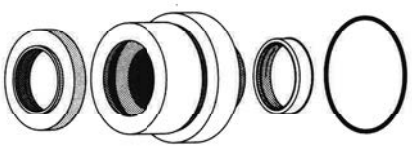
KIT NUMBER	SIZE	LIST PRICE/EA.
M-051-KR012-63	5/8	$ 80.79
M-051-KR012-100	1	$ 95.11
M-051-KR012-138	1-3/8	$ 116.13
M-051-KR012-175	1-3/4	$ 137.19
M-051-KR015-200	2	$ 155.14
M-051-KR012-250	2-1/2	$ 192.99
M-051-KR012-300	3	$ 257.29
M-051-KR012-350	3-1/2	$ 284.56
M-051-KR012-400	4	$ 315.43
M-051-KR012-450	4-1/2	$ 368.33
M-051-KR012-500	5	$ 410.94
M-051-KR012-550	5-1/2	$ 456.20
M-051-KR012-800	8	$ 801.23

KITS

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

MILLER FLUID POWER REPLACEMENT KITS

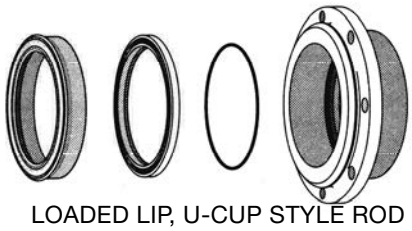
ROD KITS
(SORTED BY TYPE AND SIZE)



URETHANE LOADED LIP, U-CUP STYLE ROD SEAL

STAR CI - RETAINER HELD

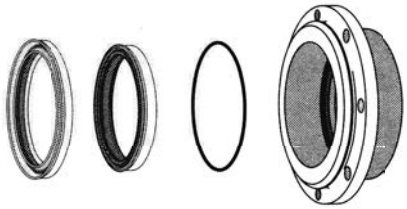
KIT NUMBER	SIZE	LIST PRICE/EA.
M-051-KR064-63	5/8	$ 86.27
M-051-KR064-100	1	$ 105.75
M-051-KR064-138	1-3/8	$ 118.28



LOADED LIP, U-CUP STYLE ROD SEAL

STAR CI - BOLTED KIT

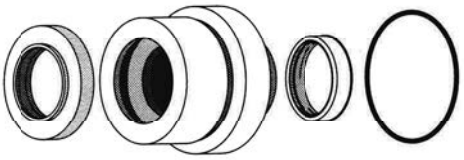
KIT NUMBER	SIZE	LIST PRICE/EA.
M-051-KR065-63	5/8	$ 114.74
M-051-KR065-100	1	$ 141.98
M-051-KR065-138	1-3/8	$ 170.00
M-051-KR065-175	1-3/4	$ 231.08
M-051-KR065-200	2	$ 241.94
M-051-KR065-250	2-1/2	$ 248.04
M-051-KR065-300	3	$ 382.66



U-CUP STYLE ROD SEAL

STAR CI - BOLTED VITON®

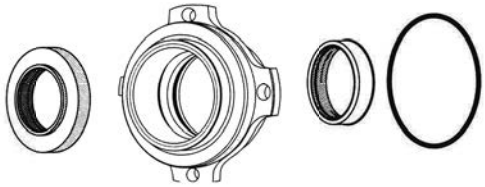
KIT NUMBER	SIZE	LIST PRICE/EA.
M-051-KR069-63	5/8	$163.05
M-051-KR069-175	1-3/4	$257.26
M-051-KR069-200	2	$282.62
M-051-KR069-300	3	$393.72



URETHANE DOUBLED LIP, U-CUP STYLE ROD SEAL

STAR CI - RETAINER HELD

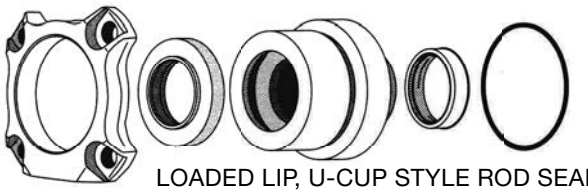
KIT NUMBER	SIZE	LIST PRICE/EA.
M-051-KR074-63	5/8	$ 118.76
M-051-KR074-100	1	$ 152.04
M-051-KR074-138	1-3/8	$ 179.24



URETHANE DOUBLED LIP, U-CUP STYLE ROD SEAL

STAR CI - BOLTED KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
M-051-KR075-63	5/8	$ 192.70
M-051-KR075-100	1	$ 234.00
M-051-KR075-138	1-3/8	$ 267.08
M-051-KR075-175	1-3/4	$ 289.19
M-051-KR075-200	2	$ 336.29
M-051-KR075-250	2-1/2	$ 484.01
M-051-KR075-300	3	$ 590.05
M-051-KR075-350	3-1/2	$ 678.26
M-051-KR075-400	4	$ 883.65
M-051-KR075-450	4-1/2	$ 958.72
M-051-KR075-500	5	$ 1195.67
M-051-KR075-550	5-1/2	$ 1505.63



LOADED LIP, U-CUP STYLE ROD SEAL

STAR CI - BOLTED VITON®

KIT NUMBER	SIZE	LIST PRICE/EA.
M-051-KR082-63	5/8	$ 233.18
M-051-KR082-100	1	$ 276.58
M-051-KR082-138	1-3/8	$ 314.43

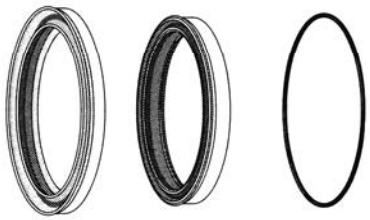
KITS

111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

PNEU-DRAULICS

MILLER FLUID POWER REPLACEMENT KITS

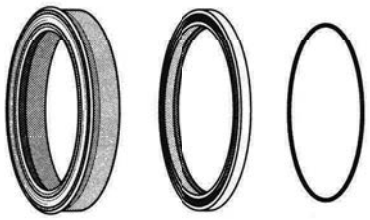
ROD KITS
(SORTED BY TYPE AND SIZE)



DUAL LIP URETHANE, U-CUP STYLE ROD SEAL LOADED

STAR SEAL KIT U-CUP

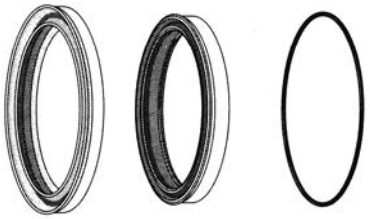
KIT NUMBER	SIZE	LIST PRICE/EA.
M-051-KR080-63	5/8	$ 19.93
M-051-KR080-100	1	$ 32.91
M-051-KR080-138	1-3/8	$ 43.23
M-051-KR080-175	1-3/4	$ 55.85
M-051-KR080-200	2	$ 62.49
M-051-KR080-250	2-1/2	$ 75.30
M-051-KR080-300	3	$ 135.45
M-051-KR080-350	3-1/2	$ 146.74
M-051-KR080-400	4	$ 164.07
M-051-KR080-450	4-1/2	$ 179.84
M-051-KR080-500	5	$ 195.95
M-051-KR080-550	5-1/2	$ 300.13



LIP URETHANE, U-CUP STYLE ROD SEAL

ROD SEAL KIT HB

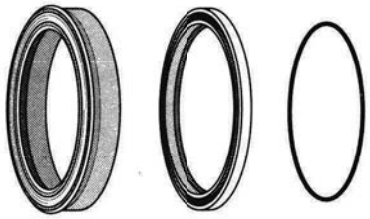
KIT NUMBER	SIZE	LIST PRICE/EA.
M-051-KR070-100	1	$ 17.16
M-051-KR070-138	1-3/8	$ 19.58
M-051-KR070-175	1-3/4	$ 22.00
M-051-KR070-200	2	$ 27.35
M-051-KR070-250	2-1/2	$ 46.93
M-051-KR070-300	3	$ 56.98
M-051-KR070-350	3-1/2	$ 72.40
M-051-KR070-400	4	$ 105.39
M-051-KR070-550	5-1/2	$ 126.30



DUAL LIP URETHANE, U-CUP STYLE ROD SEAL

ROD SEAL KIT - VITON®

KIT NUMBER	SIZE	LIST PRICE/EA.
M-051-KR083-100	1	$ 164.53
M-051-KR083-138	1-3/8	$ 216.16
M-051-KR083-175	1-3/4	$3279.27



LOADED LIP, U-CUP STYLE ROD SEAL

ROD SEAL KIT - VITON®

KIT NUMBER	SIZE	LIST PRICE/EA.
M-051-KR071-175	1-3/4	$ 105.67
M-051-KR071-350	3-1/2	$ 241.58

We can change U-Cup Styles or Materials in all Rod Seal or Gland Kits.
Call Customer Service for help.

KITS

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

PARKER HANNIFIN REPLACEMENT SEAL KITS

MA SERIES KITS
(SORTED BY STYLE AND SIZE)

TUBE END SEAL KIT - NITRILE

KIT NUMBER	SIZE	LIST PRICE/EA.	KIT NUMBER	SIZE	LIST PRICE/EA.
PH-CB1502MA01	1-1/2	$6.10	PH-CB3202MA01	3-1/4	$8.04
PH-CB2002MA01	2	$7.00			

TUBE END SEAL KIT - VITON®

KIT NUMBER	SIZE	LIST PRICE/EA.	KIT NUMBER	SIZE	LIST PRICE/EA.
PH-CB1502MA05	1-1/2	$12.89	PH-CB3202MA05	3-1/4	$12.87
PH-CB2002MA05	2	$8.34			

U-CUPS - NITRILE

KIT NUMBER	SIZE	LIST PRICE/EA.	KIT NUMBER	SIZE	LIST PRICE/EA.
PH-PK1502MA01	1-1/2	$21.92	PH-PK4002MA01	4	$61.56
PH-PK2002MA01	2	$22.55	PH-PK5002MA01	5	$66.88
PH-PK2502MA01	2-1/2	$23.61	PH-PK6002MA01	6	$83.15
PH-PK3202MA01	3-1/4	$28.37	PH-PK8002MA01	8	$138.02

U-CUPS - VITON®

KIT NUMBER	SIZE	LIST PRICE/EA.	KIT NUMBER	SIZE	LIST PRICE/EA.
PH-PK1502MA05	1-1/2	$52.29	PH-PK3202MA05	3-1/4	$68.98
PH-PK2002MA05	2	$56.18			

THREADED MA GLAND KIT - NITRILE

KIT NUMBER	SIZE	LIST PRICE/EA.	KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RG02MA0101	1	$35.19	PH-RG02MA0131	1-3/8	$45.00

THREADED MA GLAND KIT - VITON®

KIT NUMBER	SIZE	LIST PRICE/EA.	KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RG02MA0105	1	$55.45	PH-RG02MA0135	1-3/8	$74.86

NON-THREADED MA GLAND KIT - NITRILE

KIT NUMBER	SIZE	LIST PRICE/EA.	KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RGL6948MA1	5/8	$51.50	PH-RGL6950MA1	1-3/8	$50.96
PH-RGL6949MA1	1	$58.39			

NON-THREADED MA GLAND KIT - VITON®

KIT NUMBER	SIZE	LIST PRICE/EA.	KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RGL6948MA5	5/8	$58.99	PH-RGL6950MA5	1-3/8	$71.25
PH-RGL6949MA5	1	$57.99			

ROD SEAL KIT - NITRILE

KIT NUMBER	SIZE	LIST PRICE/EA.	KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RK02MA0061	5/8	$15.42	PH-RK02MA0131	1-3/8	$11.70
PH-RK02MA0101	1	$ 15.78	PH-RK02MA0171	1-3/4	$16.28

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PNEU-DRAULICS

PARKER HANNIFIN REPLACEMENT SEAL KITS

MA SERIES KITS
(SORTED BY STYLE AND SIZE)

ROD SEAL KIT - VITON®

KIT NUMBER	SIZE	LIST PRICE/EA.	KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RK02MA0065	5/8	$15.86	PH-RK02MA0135	1-3/8	$23.00
PH-RK02MA0105	1	$18.00	PH-RK02MA0175	1-3/4	$24.50

SEAL REPAIR KIT - NITRILE

KIT NUMBER	SIZE	LIST PRICE/EA.	KIT NUMBER	SIZE	LIST PRICE/EA.
PH-SKL7000MA-1	5/8X-1/2	$18.22	PH-SKL7006MA-1	1-3/8X3-1/4	$19.12
PH-SKL7001MA-1	5/8X2	$18.39	PH-SKL7007MA-1	1X4	$22.91
PH-SKL7002MA-1	1X2	$19.21	PH-SKL7008MA-1	1-3/8X4	$28.31
PH-SKL7003MA-1	5/8X2-1/2	$20.13	PH-SKL7009MA-1	1X5	$27.32
PH-SKL7004MA-1	1X2-1/2	$21.32	PH-SKL7010MA-1	1-3/8X5	$26.84
PH-SKL7005MA-1	1X3-1/4	$21.97	PH-SKL7098MA-1	1-3/8X6	$33.36

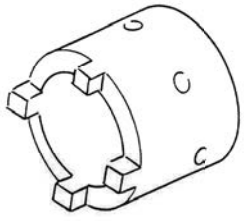
SEAL REPAIR KIT - VITON®

KIT NUMBER	SIZE	LIST PRICE/EA.	KIT NUMBER	SIZE	LIST PRICE/EA.
PH-SKL7000MA-5	5/8X1-1/2	$42.64	PH-SKL7006MA-5	1-3/8X3-1/4	$ 77.60
PH-SKL7001MA-5	5/8X2	$44.30	PH-SKL7007MA-5	1X4	$ 73.60
PH-SKL7002MA-5	1X2	$46.85	PH-SKL7008MA-5	1-3/8X4	$ 76.77
PH-SKL7003MA-5	5/8X2-1/2	$52.75	PH-SKL7009MA-5	1X5	$ 98.33
PH-SKL7004MA-5	1X2-1/2	$54.65	PH-SKL7010MA-5	1-3/8X5	$ 94.47
PH-SKL7005MA-5	1X3-1/4	$60.10	PH-SKL7098MA-5	1-3/8X6	$132.48

MISCELLANEOUS
(SORTED BY PART NUMBER)

ROD GLAND WRENCH

KIT NUMBER	SIZE	LIST PRICE/EA.
PH-0695900000	1/2, 5/8	$ 109.40
PH-0695910000	1	$ 108.87
PH-0695920000	1-3/8	$ 109.65
PH-0695930000	1-3/4	$ 116.74
PH-0695940000	2	$ 131.35
PH-0695950000	2-1/2	$ 124.03



VEE PACKING SET - F&R

KIT NUMBER	SIZE	LIST PRICE/EA.	KIT NUMBER	SIZE	LIST PRICE/EA.
PH-L0691710137	1-3/8X2	$85.76	PH-RK902H07O1	7	$615.00

ACCUMULATOR KIT - VITON®

KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RK0200E00	2	$362.86

KITS

PNEU-DRAULICS
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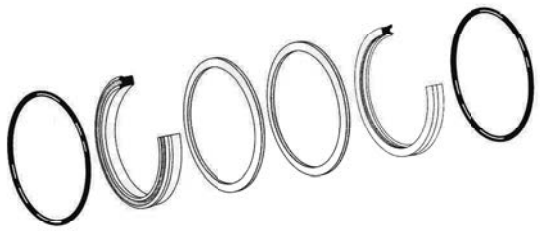
PARKER HANNIFIN REPLACEMENT SEAL KITS

PISTON SEAL KITS - AIR
(SORTED BY MATERIAL AND SIZE)

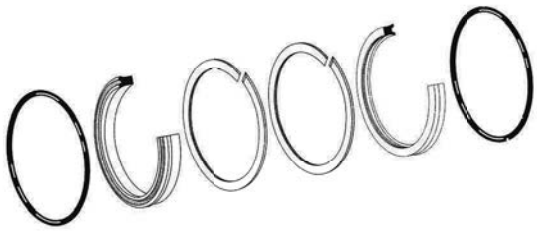
U-CUPS NITRILE

KIT NUMBER	SIZE	LIST PRICE/EA.
PH-PK1002A001	1	$ 8.32
PH-PK1502A001	1-1/2	$ 10.15
PH-PK2002A001	2	$ 10.45
PH-PK2502A001	2-1/2	$ 11.79
PH-PK3202A001	3-1/4	$ 15.36
PH-PK4002A001	4	$ 21.78
PH-PK5002A001	5	$ 26.36
PH-PK6002A001	6	$ 29.30
PH-PK7002A001	7	$ 72.57
PH-PK8002A001	8	$ 88.99
PH-PK9002A001	10	$ 125.15
PH-PK9202A001	12	$ 170.03



U-CUPS - VITON®

KIT NUMBER	SIZE	LIST PRICE/EA.
PH-PK1002A005	1	$ 27.87
PH-PK1502A005	1-1/2	$ 39.29
PH-PK2002A005	2	$ 44.83
PH-PK2502A005	2-1/2	$ 62.89
PH-PK3202A005	3-1/4	$ 73.37
PH-PK4002A005	4	$ 79.14
PH-PK5002A005	5	$ 100.40
PH-PK6002A005	6	$ 133.46
PH-PK7002A005	7	$ 211.51
PH-PK8002A005	8	$ 289.25
PH-PK9002A005	10	$ 367.15
PH-PK9202A005	12	$ 563.97



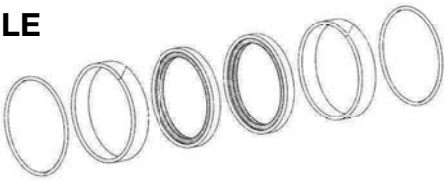
AN U-CUP KIT - NITRILE

KIT NUMBER	SIZE	LIST PRICE/EA.
PH-PK2002AN01	2	$ 23.75
PH-PK2502AN01	2-1/2	$ 25.40
PH-PK4002AN01	4	$ 46.18
PH-PK6002AN01	6	$ 85.76
PH-PK8002AN01	8	$ 118.76
PH-PK9002AN01	10	$ 164.93

PISTON SEAL KITS - HI LOAD
(SORTED BY MATERIAL AND SIZE)

FILLED PTFE - NITRILE

KIT NUMBER	SIZE	LIST PRICE/EA.
PH-PK152HK001	1-1/2	$22.56
PH-PK202HK001	2	$25.33
PH-PK252HK001	2-1/2	$27.70
PH-PK322HK001	3-1/4	$32.26



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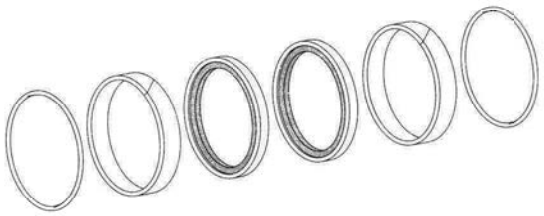
PNEU-DRAULICS

PARKER HANNIFIN REPLACEMENT SEAL KITS

PISTON SEAL KITS - HI LOAD
(SORTED BY MATERIAL AND SIZE)

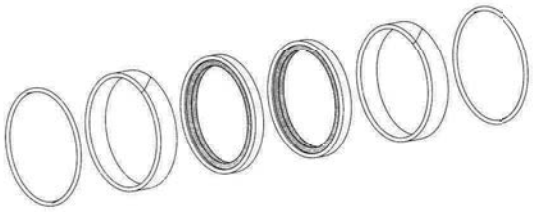
FILLED PTFE - NITRILE

KIT NUMBER	SIZE	LIST PRICE/EA.
PH-PK402HK001	4	$ 33.02
PH-PK502HK001	5	$ 37.07
PH-PK602HK001	6	$ 68.05
PH-PK702HK001	7	$ 130.15
PH-PK802HK001	8	$ 137.67
PH-PK902HK001	10	$ 283.75
PH-PK922HK001	12	$ 562.42
PH-PN025HM01	25MM	$ 23.75



FILLED PTFE - VITON®

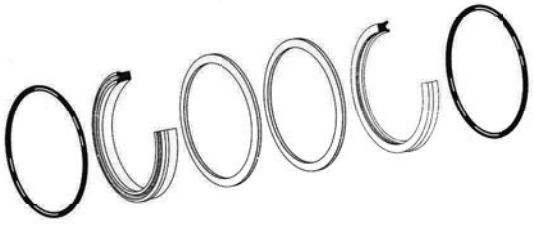
KIT NUMBER	SIZE	LIST PRICE/EA.
PH-PK152HK005	1-1/2	$ 27.04
PH-PK202HK005	2	$ 38.32
PH-PK252HK005	2-1/2	$ 41.23
PH-PK322HK005	3-1/4	$ 90.75
PH-PK402HK005	4	$ 100.43
PH-PK502HK005	5	$ 111.13
PH-PK602HK005	6	$ 173.27
PH-PK702HK005	7	$ 256.98
PH-PK802HK005	8	$ 375.88
PH-PK902HK005	10	$ 524.76



PISTON SEAL KITS - HYDRAULIC
(SORTED BY MATERIAL AND SIZE)

U-CUPS - NITRILE

KIT NUMBER	SIZE	LIST PRICE/EA.
PH-PK102HLL01	1	$ 8.63
PH-PK152HLL01	1-1/2	$ 10.04
PH-PK202HLL01	2	$ 10.45
PH-PK252HLL01	2-1/2	$ 11.79
PH-PK322HLL01	3-1/4	$ 15.36
PH-PK402HLL01	4	$ 21.78
PH-PK502HLL01	5	$ 26.27
PH-PK602HLL01	6	$ 31.50
PH-PK702HLL01	7	$ 77.14
PH-PK802HLL01	8	$ 88.99
PH-PK902HLL01	10	$ 150.68
PH-PK922HLL01	12	$ 211.61
PH-PK9023H001	10	$ 138.54



PNEU-DRAULICS
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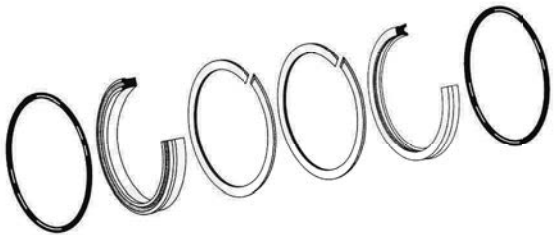
PARKER HANNIFIN REPLACEMENT SEAL KITS

PISTON SEAL KITS - HYDRAULIC

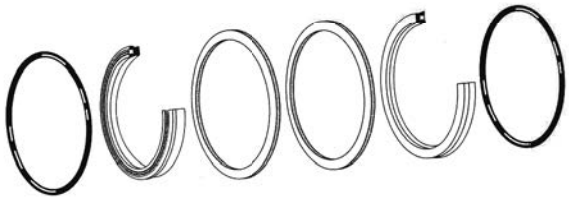
(SORTED BY MATERIAL AND SIZE)

U-CUPS - VITON®



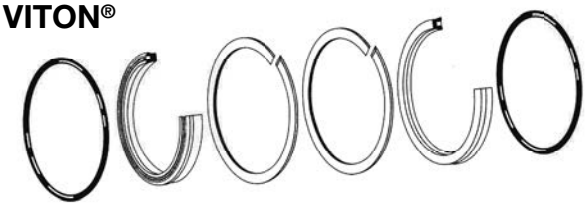
KIT NUMBER	SIZE	LIST PRICE/EA.
PH-PK102HLL05	1	$ 37.82
PH-PK152HLL05	1-1/2	$ 39.29
PH-PK202HLL05	2	$ 61.21
PH-PK252HLL05	2-1/2	$ 62.01
PH-PK322HLL05	3-1/4	$ 66.87
PH-PK402HLL05	4	$ 83.47
PH-PK502HLL05	5	$ 99.74
PH-PK602HLL05	6	$ 133.36
PH-PK702HLL05	7	$ 211.44
PH-PK802HLL05	8	$ 289.25
PH-PK902HLL05	10	$ 452.03
PH-PK922HLL05	12	$ 563.97
CARB-NITRILE		
PH-PK252HLL06	2-1/2	$ 21.11

LOADED LIP - NITRILE



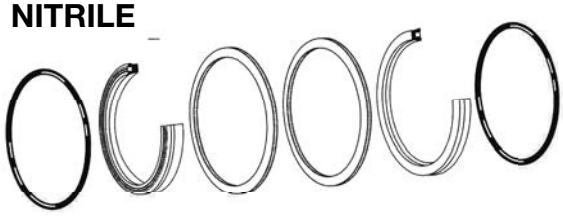
KIT NUMBER	SIZE	LIST PRICE/EA.
PH-PK102HLLP1	1	$ 22.11
PH-PK252HLLP1	2-1/2	$ 18.37
PH-PK322HLLP1	3-1/4	$ 28.56
PH-PK402HLLP1	4	$ 33.17
PH-PK502HLLP1	5	$ 49.47
PH-PK602HLLP1	5	$ 78.38
PH-PK702HLLP1	7	$ 91.04
CARB-NITRILE		
PH-PK202HLLP6	2	$ 28.66

LOADED LIP - VITON®



KIT NUMBER	SIZE	LIST PRICE/EA.
PH-PK252HLLP5	2-1/2	$ 68.35
PH-PK322HLLP5	3-1/4	$ 126.11
PH-PK402HLLP5	4	$ 147.87
PH-PK602HLLP5	6	$ 354.40

PISTON SEAL KIT - NITRILE



KIT NUMBER	SIZE	LIST PRICE/EA.
PH-PK30MT2H01	3	$ 28.37
PH-PSKHTR3.7SP3	1-1/2	$ 79.17

KITS

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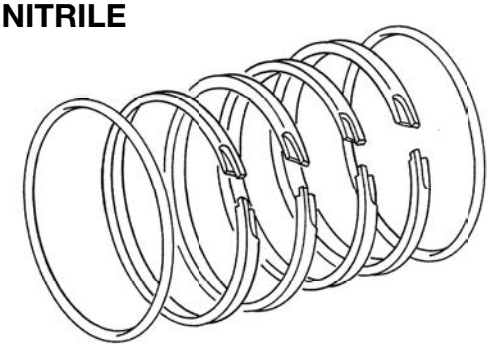
PNEU-DRAULICS

PARKER HANNIFIN REPLACEMENT SEAL KITS

PISTON SEAL KITS - CAST IRON RINGS
(SORTED BY TYPE AND SIZE)

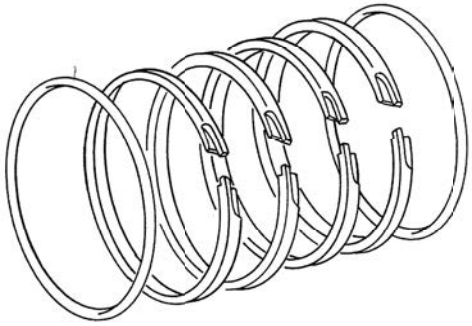
PISTON RING KIT - NITRILE

KIT NUMBER	SIZE	LIST PRICE/EA.
PH-PR102H0001	1	$ 63.97
PH-PR152H0001	1-1/2	$ 35.79
PH-PR202H0001	2	$ 41.17
PH-PR252H0001	2-1/2	$ 41.64
PH-PR322H0001	3-1/4	$ 42.75
PH-PR402H0001	4	$ 44.26
PH-PR502H0001	5	$ 66.57
PH-PR602H0001	6	$ 100.10
PH-PR702H0001	7	$ 111.82
PH-PR802H0001	8	$ 170.97



PISTON RING KIT - VITON®

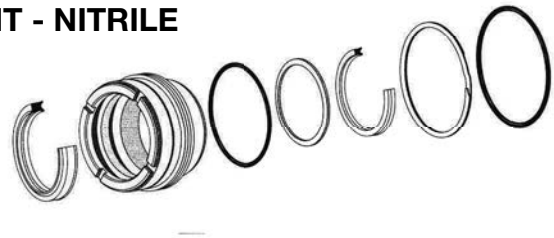
KIT NUMBER	SIZE	LIST PRICE/EA.
PH-PR102H0005	1	$ 64.36
PH-PR152H0005	1-1/2	$ 41.45
PH-PR202H0005	2	$ 43.78
PH-PR252H0005	2-1/2	$ 46.36
PH-PR322H0005	3-1/4	$ 51.90
PH-PR402H0005	4	$ 52.88
PH-PR502H0005	5	$ 88.21
PH-PR602H0005	6	$ 106.76
PH-PR702H0005	7	$ 130.63
PH-PR802H0005	8	$ 182.36



ROD GLAND KITS
(SORTED BY TYPE AND SIZE)

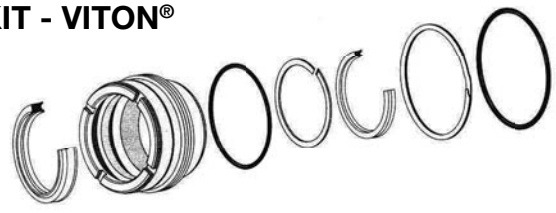
DRAIN GLAND KIT - NITRILE

KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RGGDHL0101	1	$ 80.75
PH-RGGDHL0131	1-3/8	$ 90.05
PH-RGGDHL0171	1-3/4	$ 110.84
PH-RGGDHL0201	2	$ 131.61
PH-RGGDHL0251	2-1/2	$ 173.19



DRAIN GLAND KIT - VITON®

KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RGGDHL0105	1	$ 112.15
PH-RGGDHL0135	1-3/8	$ 121.39
PH-RGGDHL0175	1-3/4	$ 158.97
PH-RGGDHL0205	2	$ 244.49
PH-RGGDHL0255	2-1/2	$ 329.87



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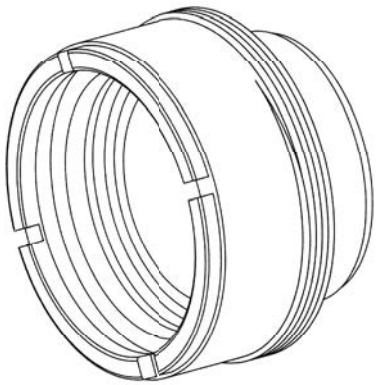
PARKER HANNIFIN REPLACEMENT SEAL KITS

ROD GLAND KITS
(SORTED BY TYPE AND SIZE)

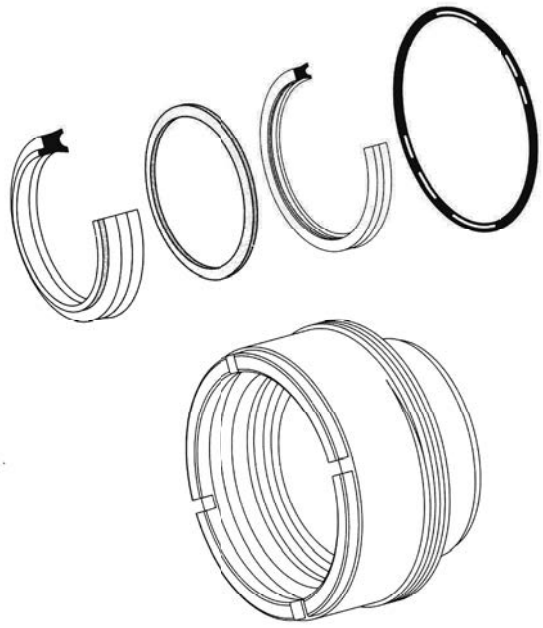
ROD GLAND BUSHING

KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RG-0050	1/2	$ 67.91
PH-RG-0062	5/8	$ 45.52
PH-RG-0100	1	$ 67.97
PH-RG-0137	1-3/8	$ 75.33
PH-RG-0175	1-3/4	$ 105.58
PH-RG-0200	2	$ 117.38
PH-RG-0250	2-1/2	$ 163.80
PH-RG-0300	3	$ 186.31
PH-RG-0350	3-1/2	$ 326.41
PH-RG-0400	4	$ 410.65
PH-RG-0450	4-1/2	$ 438.83
PH-RG-0500	5	$ 444.23
PH-RG-0550	5-1/2	$ 468.49



GLAND KIT - NITRILE U-CUP

KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RG2AHL0051	1/2	$ 73.92
PH-RG2AHL0061	5/8	$ 44.34
PH-RG2AHL0101	1	$ 54.36
PH-RG2AHL0131	1-3/8	$ 66.27
PH-RG2AHL0171	1-3/4	$ 76.76
PH-RG2AHL0201	2	$ 95.76
PH-RG2AHL0251	2-1/2	$ 122.94
PH-RG2AHL0301	3	$ 167.67
PH-RG2AHL0351	3-1/2	$ 354.60
PH-RG2AHL0401	4	$ 447.06
PH-RG2AHL0451	4-1/2	$ 494.83
PH-RG2AHL0501	5	$ 550.54
PH-RG2AHL0551	5-1/2	$ 567.80
WITH ESDM U-CUP		
PH-RG2AHL0403	4	$ 455.22
PH-RG2AN00051	1/2	$ 63.89
PH-RG2AN00061	5/8	$ 45.57
PH-RG2AN00101	1	$ 50.04
PH-RG2AN00131	1-3/8	$ 60.88
PH-RG2AN00171	1-3/4	$ 65.08
PH-RG2AN00201	2	$ 90.33
PH-RG2AN00251	2-1/2	$ 119.38



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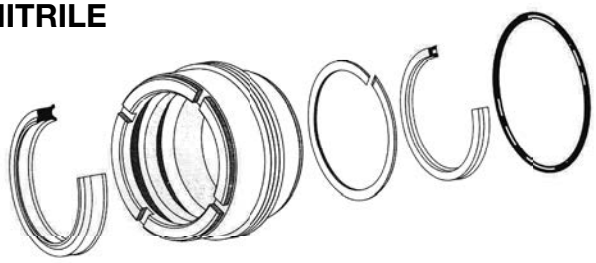
PNEU-DRAULICS

PARKER HANNIFIN REPLACEMENT SEAL KITS

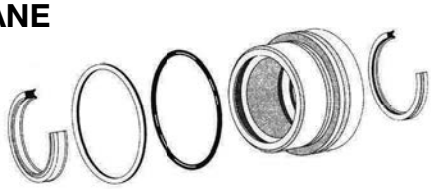
ROD GLAND KITS
(SORTED BY TYPE AND SIZE)

LOADED LIP - NITRILE

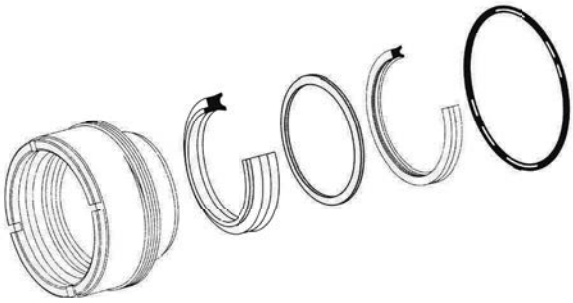


KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RG2AHL0051PS	1/2	$ 61.03
PH-RG2AHL0061PS	5/8	$ 51.17
PH-RG2AHL0101PS	1	$ 55.05
PH-RG2AHL0131PS	1-3/8	$ 70.38
PH-RG2AHL0171PS	1-3/4	$ 72.60
PH-RG2AHL0201PS	2	$ 99.12
PH-RG2AHL0251PS	2-1/2	$ 130.63
PH-RG2AHL0301PS	3	$ 189.54
PH-RG2AHL0351PS	3-1/2	$ 338.75
PH-RG2AHL0401PS	4	$ 447.77
PH-RG2AHL0451PS	4-1/2	$ 472.70
PH-RG2AHL0501PS	5	$ 525.93

DOUBLE LIP - URETHANE

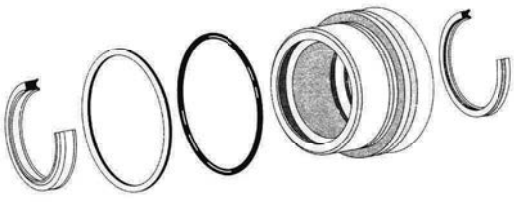


KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RG1HDL0101	1	$ 77.32
PH-RG1HDL0131	1-3/8	$ 110.76
PH-RG1HDL0171	1-3/4	$ 117.30
PH-RG1HDL0201	2	$ 168.79



KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RG2HLTS061	5/8	$ 82.54
PH-RG2HLTS101	1	$ 93.65
PH-RG2HLTS131	1-3/8	$ 109.58
PH-RG2HLTS171	1-3/4	$ 117.58
PH-RG2HLTS201	2	$ 152.89
PH-RG2HLTS251	2-1/2	$ 198.44
PH-RG2HLTS301	3	$ 245.97
PH-RG2HLTS351	3-1/2	$ 240.52
PH-RG2HLTS401	4	$ 454.89
PH-RG2HLTS451	4-1/2	$ 494.81
PH-RG2HLTS501	5	$ 581.11
PH-RG2HLTS551	5-1/2	$ 599.72

DOUBLE LIP - VITON®



THIS ILLUSTRATION FOR THE FOLLOWING KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RG1HDL0135	1-3/8	$121.30

THIS ILLUSTRATION FOR THE FOLLOWING 3 KITS

KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RG2HLTS105	1	$ 95.50
PH-RG2HLTS505	5	$ 857.66
PH-RG2HLTS555	5-1/2	$ 956.62

KITS

PNEU-DRAULICS
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PARKER HANNIFIN REPLACEMENT SEAL KITS

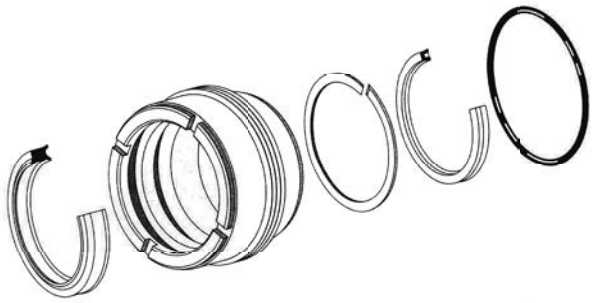
ROD GLAND KITS
(SORTED BY TYPE AND SIZE)

U-CUPS - VITON®

KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RG2AHL0055	1/2	$ 82.26
PH-RG2AHL0065	5/8	$ 63.04
PH-RG2AHL0105	1	$ 71.35
PH-RG2AHL0135	1-3/8	$ 89.64
PH-RG2AHL0175	1-3/4	$ 97.88
PH-RG2AHL0205	2	$ 116.51
PH-RG2AHL0255	2-1/2	$ 142.36
PH-RG2AHL0305	3	$ 165.91
PH-RG2AHL0355	3-1/2	$ 334.93
PH-RG2AHL0405	4	$ 409.10
PH-RG2AHL0455	4-1/2	$ 471.50
PH-RG2AHL0505	5	$ 543.14
PH-RG2AHL0555	5-1/2	$ 592.57

LOADED LIP - VITON®

KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RG2AHL0055PS	1/2	$ 82.80
PH-RG2AHL0065PS	5/8	$ 64.40
PH-RG2AHL0105PS	1	$ 74.75
PH-RG2AHL0135PS	1-3/8	$ 89.70
PH-RG2AHL0175PS	1-3/4	$ 98.90
PH-RG2AHL0205PS	2	$ 120.75
PH-RG2AHL0255PS	2-1/2	$ 143.75
PH-RG2AHL0305PS	3	$ 194.79
PH-RG2AHL0355PS	3-1/2	$ 339.46
PH-RG2AHL0405PS	4	$ 443.77
PH-RG2AHL0455PS	4-1/2	$ 465.66
PH-RG2AHL0505PS	5	$ 543.14



ROD SEAL KITS - NO GLAND
(SORTED BY TYPE AND SIZE)

SEAL GUARD KIT

KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RKWAHL0101	1	$ 40.25
PH-RKWAHL0131	1-3/8	$ 55.20

KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RKWAHL0201	2	$ 102.06
PH-RKWAHL0251	2-1/2	$ 170.49

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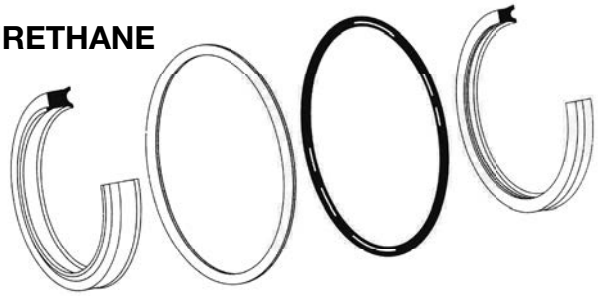
PNEU-DRAULICS

PARKER HANNIFIN REPLACEMENT SEAL KITS

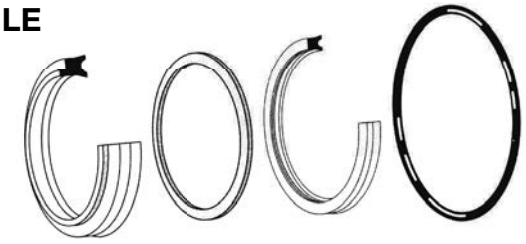
ROD SEAL KITS - NO GLAND
(SORTED BY TYPE AND SIZE)

DOUBLE LIP - URETHANE



KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RK1HDL0061	5/8	$ 21.11
PH-RK1HDL0101	1	$ 23.03
PH-RK1HDL0131	1-3/8	$ 26.39
PH-RK1HDL0171	1-3/4	$ 31.67
PH-RK1HDL0201	2	$ 36.28
PH-RK1HDL0251	2-1/2	$ 46.18
PH-RK1HDL0351	3-1/2	$ 98.96
PH-RK1HDL0401	4	$ 125.35
PH-RK1HDL0551	5	$ 164.93

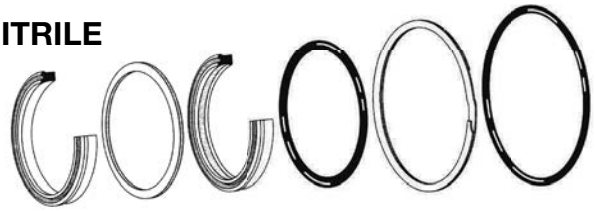
U-CUP - NITRILE



KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RK2AHL0051	1/2	$ 6.99
PH-RK2AHL0061	5/8	$ 10.26
PH-PK2AHL0101	1	$ 8.70
PH-PK2AHL0131	1-3/8	$ 9.23
PH-PK2AHL0171	1-3/4	$ 9.44
PH-PK2AHL0201	2	$ 10.43
PH-PK2AHL0251	2-1/2	$ 13.74
PH-PK2AHL0301	3	$ 17.82
PH-RK2AHL0351	3-1/2	$ 70.91
PH-RK2AHL0401	4	$ 79.76
PH-RKWAHL0451	4-1/2	$ 103.32
PH-RK2AHL0501	5	$ 117.61
PH-RK2AHL0551	5-1/2	$ 143.64

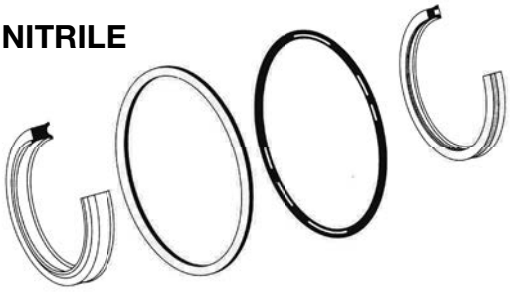
KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RK2AN00051	1/2	$ 7.92
PH-RK2AN00061	5/8	$ 8.35
PH-RK2AN00101	1	$ 8.64
PH-RK2AN00131	1-3/8	$ 8.95
PH-RK2AN00171	1-3/4	$ 9.69
PH-RK2AN00201	2	$ 11.48
PH-RK2AN00251	2-1/2	$ 17.10

U-CUP - NITRILE



KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RKGDHL0101	1	$ 19.79
PH-RKGDHL0131	1-3/8	$ 26.39
PH-RKGDHL0171	1-3/4	$ 31.67
PH-RKGDHL0201	2	$ 39.59
PH-RKGDHL0251	2-1/2	$ 42.22

LOADED LIP KIT - NITRILE



KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RK2AHL0051PS	1/2	$ 12.12
PH-RK2AHL0061PS	5/8	$ 11.81
PH-RK2AHL0101PS	1	$ 13.85
PH-RK2AHL0131PS	1-3/8	$ 16.71
PH-RK2AHL0171PS	1-3/4	$ 16.82
PH-RK2AHL0201PS	2	$ 18.12
PH-RK2AHL0251PS	2-1/2	$ 27.39

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PARKER HANNIFIN REPLACEMENT SEAL KITS

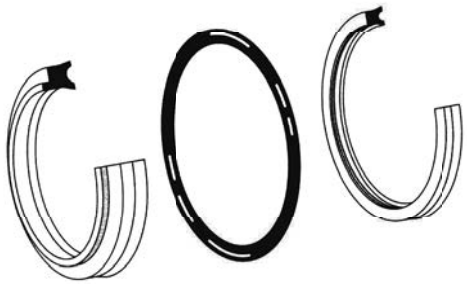
ROD SEAL KITS - NO GLAND
(SORTED BY TYPE AND SIZE)

LOADED LIP KIT - NITRILE

KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RK2AHL0301PS	3	$ 44.26
PH-RK2AHL0351PS	3-1/2	$ 70.91
PH-RK2AHL0401PS	4	$ 79.76
PH-RK2AHL0451PS	4-1/2	$ 103.32
PH-RK2AHL0501PS	5	$ 117.61

URETHANE SEALS

KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RK2HLTS061	5/8	$ 21.11
PH-RK2HLTS101	1	$ 21.40
PH-RK2HLTS131	1-3/8	$ 25.26
PH-RK2HLTS171	1-3/4	$ 29.37
PH-RK2HLTS201	2	$ 33.66
PH-RK2HLTS251	2-1/2	$ 35.99
PH-RK2HLTS301	3	$ 39.13
PH-RK2HLTS351	3-1/2	$ 46.89
PH-RK2HLTS401	4	$ 52.39
PH-RK2HLTS451	4-1/2	$ 57.20
PH-RK2HLTS501	5	$ 62.05
PH-RK2HLTS551	5-1/2	$ 68.14



VITON® SEALS

KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RK1HDL0065	5/8	$ 27.20
PH-RK1HDL0105	1	$ 34.14
PH-RK1DHL0135	1-3/8	$ 45.00
PH-RK1HDL0175	1-3/4	$ 62.14
PH-RK1HDL0205	2	$ 80.82
PH-RK1HDL0255	2-1/2	$ 103.24
PH-RK1HDL0355	3-1/2	$ 120.44
PH-RK1HDL0405	4	$ 135.18
PH-RK2AHL0055	1/2	$ 24.62
PH-RK2AHL0065	5/8	$ 27.04
PH-RK2AHL0105	1	$ 30.41
PH-RK2AHL0135	1-3/8	$ 39.36
PH-RK2AHL0175	1-3/4	$ 40.99
PH-RK2AHL0205	2	$ 42.74
PH-RK2AHL0255	2-1/2	$ 46.76
PH-RK2AHL0305	3	$ 56.44
PH-RK2AHL0355	3-1/2	$ 117.05
PH-RK2AHL0405	4-1/2	$ 135.65
PH-RK2AHLO455	4-1/2	$ 169.77
PH-RK2AHL0505	5	$ 198.35
PH-RK2AHL0555	5-1/2	$ 284.58

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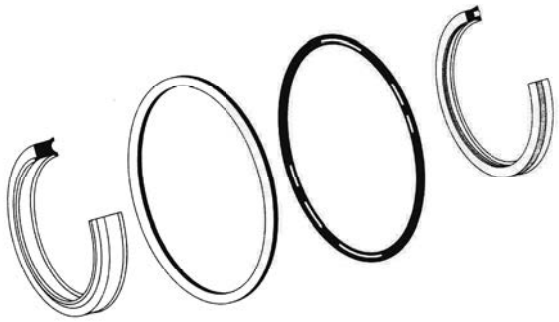
PNEU-DRAULICS

PARKER HANNIFIN REPLACEMENT SEAL KITS

ROD SEAL KITS - NO GLAND
(SORTED BY TYPE AND SIZE)

LOADED LIP KIT - VITON®

KIT NUMBER	SIZE	LIST PRICE/EA.
PH-RK2AHL0055PS	1/2	$ 25.08
PH-RK2AHL0065PS	5.8	$ 28.12
PH-RK2AHL0105PS	1	$ 32.01
PH-RK2AHL0135PS	1-3/8	$ 39.59
PH-RK2AHL0175PS	1-3/4	$ 42.95
PH-RK2AHL0205PS	2	$ 43.73
PH-RK2AHL0255PS	2-1/2	$ 56.29
PH-RK2AHL0305PS	3	$ 75.45
PH-RK2AHL0355PS	3-1/2	$ 117.05
PH-RK2AHL0405PS	4	$ 135.65
PH-RK2AHL0455PS	4-1/2	$ 169.77
PH-RK2AHL0555PS	5-1/2	$ 233.34



KITS

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VICKERS (VK) MAINTENANCE KITS

MOBILE VANE PUMPS

KIT NUMBER	ROD X BORE	DESCRIPTION	LIST PRICE/EA.
VK-920015	35VQ	SEAL KIT	$ 33.25
VK-920016	35VQ	SEAL KIT-DBL LIP	$ 36.42
VK-920021	25VQ	SEAL KIT	$ 29.70
VK-920022	25VQ	SEAL KIT-DBL LIP	$ 35.36
VK-920023	25VQ	SEAL KIT-VITON	$ 50.66
VK-920024	25VQ	SEAL KIT-DBL LIP VITON	$ 58.58
VK-920025	45VQ	SEAL KIT	$ 34.83
VK-920026	45VQ	SEAL KIT-DBL LIP	$ 38.00
VK-920027	45VQ	SEAL KIT-VITON	$ 59.64
VK-920028	45VQ	SEAL KIT-DBL LIP VITON	$ 62.80
VK-920029	35VQ	SEAL KIT-VITON	$ 54.36
VK-920030	35VQ	SEAL KIT-DBL LIP VITON	$ 62.46
VK-920040	2520VQ	SEAL KIT	$ 46.98
VK-920041	2520VQ	SEAL KIT-DBL LIP	$ 52.56
VK-920042	2520VQ	SEAL KIT-VITON	$ 78.11
VK-920043	2520VQ	SEAL KIT-DBL LIP VITON	$ 85.51
VK-920048	3520VQ	SEAL KIT	$ 49.62
VK-920049	3520VQ	SEAL KIT-DBL LIP	$ 53.84
VK-920050	3520VQ	SEAL KIT-VITON	$ 53.84
VK-920051	3520VQ	SEAL KIT-DBL LIP VITON	$ 81.81
VK-920056	3525VQ	SEAL KIT	$ 50.66
VK-920057	3525VQ	SEAL KIT-DBL LIP	$ 54.36
VK-920058	3525VQ	SEAL KIT-VITON	$ 87.09
VK-920059	3525VQ	SEAL KIT-DBL LIP VITON	$ 95.53
VK-920060	4520VQ	SEAL KIT	$ 52.26
VK-920061	4520VQ	SEAL KIT-DBL LIP	$ 55.94
VK-920062	4520VQ	SEAL KIT-VITON	$ 87.61
VK-920063	4520VQ	SEAL KIT-DBL LIP VITON	$ 97.11
VK-920068	4525VQ	SEAL KIT	$ 54.36
VK-920069	4525VQ	SEAL KIT-DBL LIP	$ 58.58
VK-920070	4525VQ	SEAL KIT-VITON	$ 95.00
VK-920071	4525VQ	SEAL KIT-DBL LIP VITON	$ 02.39
VK-920072	4535VQ	SEAL KIT	$ 54.36
VK-920073	4535VQ	SEAL KIT-DBL LIP	$ 58.58
VK-920074	4535VQ	SEAL KIT-VITON	$ 97.64
VK-920075	4535VQ	SEAL KIT-DBL LIP VITON	$104.50

PISTON PUMPS

VK-02-102244	PVH57	SEAL KIT	$153.06
VK-02-102262	PVH74	SEAL KIT	$201.41
VK-02-102264	PVH98	SEAL KIT	$198.00
VK-02-102266	PVH131	SEAL KIT	$153.06
VK-919191	PVB5/6	SEAL KIT	$231.75
VK-919192	MPVB10/15	SEAL KIT	$ 38.00
VK-919640	PVB45	SEAL KIT	$ 45.92
VK-919682	PVB10/15	SEAL KIT	$ 35.36
VK-919683	PVB20/29	SEAL KIT	$ 41.70
VK-919847	PVB20/29	SEAL KIT	$105.56
VK-923006	MPVB29	SEAL KIT	$ 35.89
VK-923214	TA15	SEAL KIT	$ 35.36

VANE MOTORS

VK-919530	MHT150	SEAL KIT	$131.95
VK-919873	MHT250	SEAL KIT	$138.54
VK-923157	25M	SEAL KIT	$ 27.45
VK-923163	35M	SEAL KIT	$ 36.95
VK-923106	45M	SEAL KIT	$ 39.06
VK-923096	50M	SEAL KIT	$ 59.64

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Nicholasville, KY 40340-0037

PNEU-DRAULICS

VICKERS (VK) MAINTENANCE KITS

VANE PUMPS

KIT NUMBER	ROD X BORE	DESCRIPTION	LIST PRICE/EA.
VK-919246	4535V	SEAL KIT-VITON	$125.35
VK-919262	35V	SEAL KIT-VITON	$ 72.57
VK-919303	2520V	SEAL KIT-VITON	$ 85.76
VK-919304	3520V	SEAL KIT-VITON	$ 95.00
VK-919305	3525V	SEAL KIT-VITON	$102.92
VK-919345	4525V	SEAL KIT-VITON	$118.76
VK-919616	4520V	SEAL KIT-VITON	$112.15
VK-919632	45V	SEAL KIT-VITON	$ 79.17
VK-919656	25V	SEAL KIT-VITON	$ 59.37
VK-919850	45V	SEAL KIT	$ 19.00
VK-922732	V210	SEAL KIT	$ 7.92
VK-922733	V20	SEAL KIT	$ 11.22
VK-922770	V330	SEAL KIT	$ 27.53
VK-922850	25V	SEAL KIT	$ 15.31
VK-922851	35V	SEAL KIT	$ 19.00
VK-922853	50V	SEAL KIT	$ 38.00
VK-922856	2520V	SEAL KIT	$ 24.81
VK-922859	3520V	SEAL KIT	$ 27.30
VK-922862	3525V	SEAL KIT	$ 26.91
VK-922863	4520V	SEAL KIT	$ 26.91
VK-922865	4525V	SEAL KIT	$ 29.95
VK-922866	4535V	SEAL KIT	$ 30.61
VK-922904	VTM	SEAL KIT	$ 19.00
VK-923174	V2020	SEAL KIT	$ 18.47
VK-923548	V10	SEAL KIT	$ 13.72
VK-923577	V2010	SEAL KIT	$ 19.79

MISC. PARTS

VK-188323	V110	NITRILE OIL SEAL	$ 5.46
VK-197412	50V	NITRILE OIL SEAL	$ 10.56
VK-229235	V20	NITRILE OIL SEAL	$ 9.77
VK-229236	V210	NITRILE OIL SEAL	$ 6.86
VK-237014	PVB516	NITRILE OIL SEAL	$ 9.89
VK-244956	PVB	GASKET	$ 1.31
VK-245976	PVB20/29	GASKET	$ 17.82
VK-263585	V10	NITRILE OIL SEAL	$ 12.14
VK-279615	PVB516	GASKET	$ 1.31
VK-287458	PVB45	NITRILE OIL SEAL	$ 12.08
VK-295262	PVB20/29	NITRILE OIL SEAL	$ 12.34
VK-317162	PVB10/15	GASKET	$ 15.83
VK-322367	2525VMQ	VITON OIL SEAL	$ 25.01
VK-394973	35V	NITRILE OIL SEAL	$ 10.33
VK-394974	45V	NITRILE OIL SEAL	$ 7.79
VK-394976	25V	NITRILE OIL SEAL	$ 7.94
VK-419672	20V	GLASS/PTFE SEAL RING	$ 4.36
VK-419673	25V	GLASS/PTFE SEAL RING	$ 4.36
VK-419674	35V	GLASS/PTFE SEAL RING	$ 4.43
VK-419675	45V	GLASS/PTFE SEAL RING	$ 6.17
VK-427139	PVB 29	VITON OIL SEAL	$ 16.71
VK-429281	35V VT S/S	VITON OIL SEAL	$ 19.47
VK-429282	45V VT S/S	VITON OIL SEAL	$ 12.83
VK-429283	25V VT S/S	VITON OIL SEAL	$ 12.42
VK-429284	35V VT	VITON OIL SEAL	$ 13.38
VK-429285	45V VT	VITON OIL SEAL	$ 16.71
VK-429286	25V VT	VITON OIL SEAL	$ 11.33
VK-433761	20VQ	CUP SEAL	$ 3.16
VK-433763	25VQ	CUP SEAL	$ 3.70
VK-433765	35VQ	CUP SEAL	$ 3.16
VK-433767	45VQ	CUP SEAL	$ 3.47
VK-864200	PVH131	VITON OIL SEAL	$ 14.25

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111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

Notes

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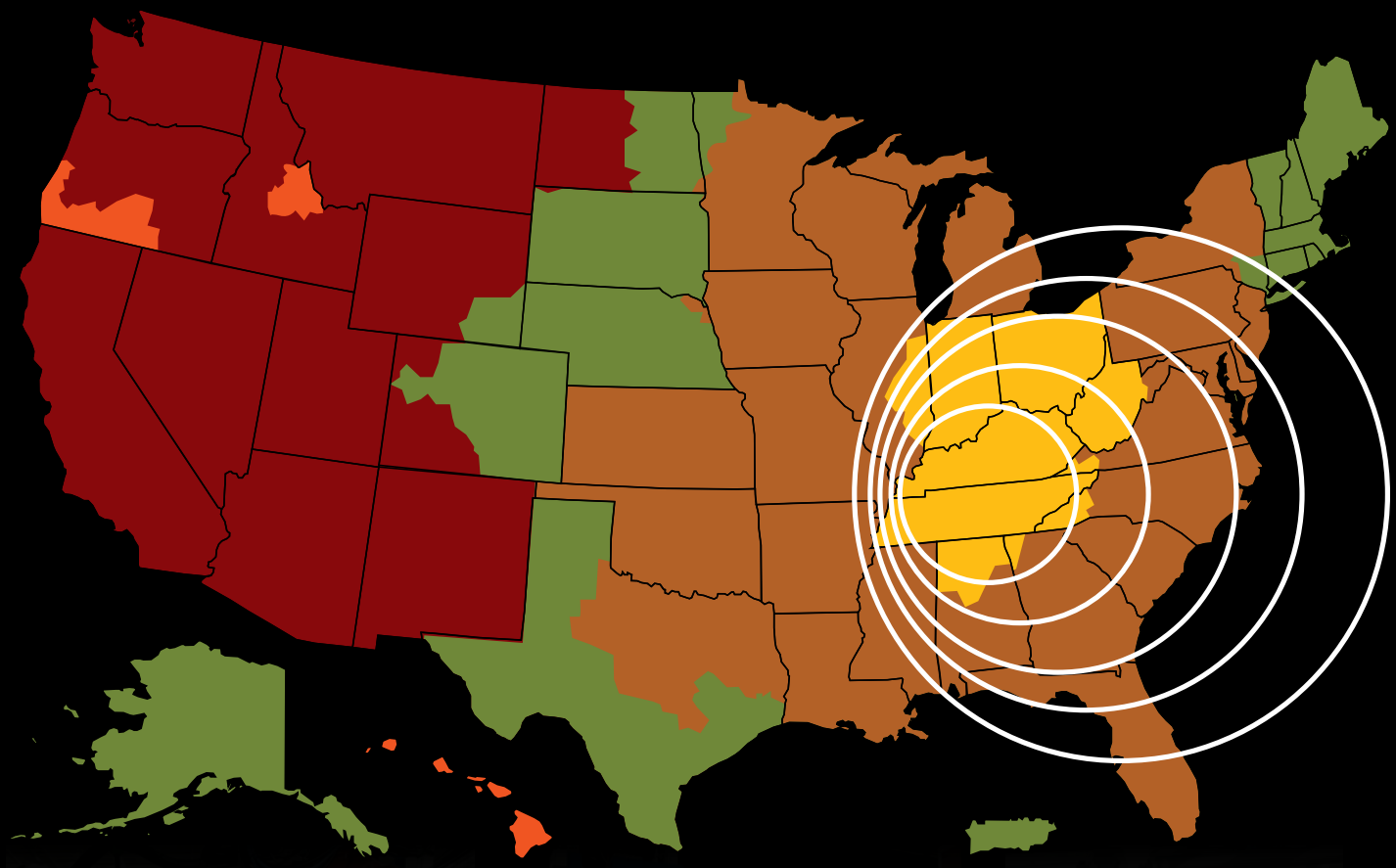
CALL 1-800-333-SEAL
FAX (859) 887-4165
www.pneu-draulics.com

SALES OFFICE HOURS
7:30 A.M. to 5:30 P.M.
EASTERN STANDARD TIME

METRIC SECTION

Pneu-Draulics, Inc. offers the largest selection of metric seals in Kentucky.



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PNEU-DRAULICS

METRIC ROD/PISTON U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
4X10X4	4	10	4	$3.53
4X10X4.5	4	10	4.5	$3.86
4.5X12.5X4.4	4.5	12.5	4.4	$5.76
5X11X5	5	11	5	$2.60
5X12X6	5	12	6	$5.64
6X12X4	6	12	4	$4.58
6X12X5	6	12	5	$5.01
6X12X6	6	12	6	$6.49
6X12X8	6	12	8	$9.45
8X14X6	8	14	6	$3.87
8X16X5.7	8	16	5.7	$4.70
11.2X19.2X5	11.2	19.2	5	$3.62
12X18X6	12	18	6	$5.83
12X20X8	12	20	8	$5.36
12X22X5	12	22	5	$5.90
12X22X8	12	22	8	$5.53
12X25X8	12	25	8	$7.03
14X20X4.8	14	20	4.8	$5.53
14X22X11	14	22	11	$4.67
14X22X5	14	22	5	$7.03
14X22X6	14	22	6	$4.18
15X25X5	15	25	5	$7.06
15X25X8	15	25	8	$7.32
16X22X4	16	22	4	$4.07
16X22X5	16	22	5	$5.67
16X24X5	16	24	5	$4.65
16X26X5	16	26	5	$6.73
16X26X8	16	26	8	$6.51
17X25X10	17	25	10	$8.33
18X25X5	18	25	5	$4.86
18X26X5	18	26	5	$6.17
18X26X6.5	18	26	6.5	$6.90
18X26X8	18	26	8	$5.22
18X28X8	18	28	8	$6.74
18X30X8	18	30	8	$11.08
20X28X4	20	28	4	$8.20
20X28X5	20	28	5	$6.51
20X28X8	20	28	8	$7.31
20X30X10	20	30	10	$7.71
20X32X7.5	20	32	7.5	$7.40
20X35X12	20	35	12	$8.05
20X40X10	20	40	10	$8.77
20X40X12	20	40	12	$6.51
22.4X30X5	22.4	30	5	$4.40
22X28X8	22	28	8	$9.37
22X30X4.4	22	30	4.4	$6.83
22X30X6	22	30	6	$7.40
22X30X7	22	30	7	$6.15
22X32X8	22	32	8	$5.96
22X35X10	22	35	10	$7.16
22X40X10	22	40	10	$8.70
24X32X7	24	32	7	$6.87
24X40X8	24	40	8	$10.24
24X40X9	24	40	9	$7.30
25X30X8	25	30	8	$10.24
25X33X5.7	25	33	5.7	$5.43
25X33X5	25	33	5	$6.73
25X33X8	25	33	8	$6.26
25X35X10	25	35	10	$7.13
25X35X5	25	35	5	$5.84

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
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METRIC ROD/PISTON U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
25X35X6	25	35	6	$9.91
25X35X8	25	35	8	$6.73
25X38X10	25	38	10	$7.87
25X40X10	25	40	10	$7.80
25X40X11	25	40	11	$10.32
25X45X10	25	45	10	$5.37
28X35.5X5	28	35.5	5	$6.73
28X36X5	28	36	5	$7.89
28X36X6.5	28	36	6.5	$7.87
28X38X5.6	28	38	5.6	$6.96
28X38X7	28	38	7	$10.21
28X43X10	28	43	10	$10.66
28X44X8	28	44	8	$8.62
30X38X5	30	38	5	$5.95
30X38X6	30	38	6	$6.89
30X38X7	30	38	7	$8.59
30X40X10	30	40	10	$7.12
30X40X5.5	30	40	5.5	$7.67
30X40X5	30	40	5	$9.06
30X40X6	30	40	6	$7.98
30X40X7	30	40	7	$5.88
30X42X10	30	42	10	$8.74
30X42X6	30	42	6	$5.19
30X42X9	30	42	9	$10.49
30X45X10	30	45	10	$7.04
30X50X10	30	50	10	$11.57
31.5X41.5X6	31.5	41.5	6	$8.16
32X40X10	32	40	10	$5.00
32X40X5.5	32	40	5.5	$5.30
32X40X6	32	40	6	$24.35
32X40X8	32	40	8	$7.06
32X42X5.6	32	42	5.6	$17.90
32X42X5.8	32	42	5.8	$5.61
32X42X6	32	42	6	$8.56
35X42X8	35	42	8	$7.73
35X43X6	35	43	6	$6.39
35X45X10	35	45	10	$10.58
35X45X6	35	45	6	$9.27
35X45X7	35	45	7	$9.27
35X45X8	35	45	8	$7.24
35X48X10	35	48	10	$10.58
35X50X10	35	50	10	$11.57
35X50X8	35	50	8	$9.27
35X55X10	35	55	10	$11.90
36X45X10	36	45	10	$19.16
36X46X5.6	36	46	5.6	$19.44
36X46X7.5	36	46	7.5	$10.96
36X46X7	36	46	7	$11.67
38X45X5	38	45	5	$12.48
38X48X6	38	48	6	$9.27
38X50X10	38	50	10	$8.54
40X50X10	40	50	10	$8.15
40X50X5	40	50	5	$11.99
40X50X6.5	40	50	6.5	$9.42
40X50X6	40	50	6	$8.11
40X50X8	40	50	8	$13.12
40X52X9	40	52	9	$15.66
40X55X10	40	55	10	$10.36
40X60X10	40	60	10	$11.57
40X60X12	40	60	12	$11.48

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PNEU-DRAULICS

METRIC ROD/PISTON U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
40X60X13	40	60	13	$14.80
40X60X18	40	60	18	$15.12
42X50X8	42	50	8	$10.91
45X55X10	45	55	10	$8.48
45X55X6.5	45	55	6.5	$12.42
45X56X7	45	56	7	$8.16
45X58X10	45	58	10	$13.12
45X60X10	45	60	10	$10.48
45X60X11	45	60	11	$39.50
45X60X7.5	45	60	7.5	$8.66
45X65X10	45	65	10	$15.07
45X65X12	45	65	12	$15.03
48X58X10	48	58	10	$13.12
48X63X10	48	63	10	$9.47
50X60X10	50	60	10	$10.47
50X60X5	50	60	5	$9.18
50X60X6	50	60	6	$8.35
50X63X10	50	63	10	$9.00
50X63X6	50	63	6	$15.04
50X65X10	50	65	10	$12.07
50X70X10	50	70	10	$15.23
50X70X12	50	70	12	$15.78
52X62X10	52	62	10	$12.24
52X62X12	52	62	12	$16.36
53X63X5	53	63	5	$6.88
53X63X6	53	63	6	$8.92
53X63X6.5	53	63	6.5	$12.07
55X63X5	55	63	5	$18.88
55X65X10	55	65	10	$11.72
55X65X12	55	65	12	$15.09
55X65X6	55	65	6	$11.69
55X70X10	55	70	10	$9.68
55X70X12	55	70	12	$13.94
55X75X10	55	75	10	$20.36
55X75X12	55	75	12	$15.39
56X66X6	56	66	6	$10.00
56X71X11	56	71	11	$13.96
58X68X6	58	68	6	$7.07
60X70X10	60	70	10	$11.43
60X70X12	60	70	12	$13.15
60X70X6	60	70	6	$11.51
60X70X8	60	70	8	$14.87
60X70X9	60	70	9	$10.28
60X75X10	60	75	10	$19.57
60X75X12	60	75	12	$18.27
60X80X10	60	80	10	$14.74
60X80X12	60	80	12	$13.15
63X73X6	63	73	6	$10.56
63X75X10	63	75	10	$12.40
63X78X10	63	78	10	$16.93
63X78X11	63	78	11	$17.33
65X75X6	65	75	6	$10.56
65X80X12	65	80	12	$16.86
65X85X12	65	85	12	$17.87
66X80X10	66	80	10	$10.32
67X77X6	67	77	6	$11.66
70X80X10	70	80	10	$13.91
70X80X12	70	80	12	$14.61
70X80X5	70	80	5	$16.75
70X80X6	70	80	6	$12.00

PNEU-DRAULICS
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METRIC ROD/PISTON U-CUPS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
70X80X8	70	80	8	$12.48
70X85X12	70	85	12	$14.23
71X80X6	71	80	6	$10.01
75X85X12	75	85	12	$17.50
75X85X6	75	85	6	$12.79
75X90X12	75	90	12	$14.41
75X90X7.5	75	90	7.5	$17.56
75X95X12	75	95	12	$14.02
80X100X10	80	100	10	$15.07
80X100X18	80	100	18	$93.28
80X90X10	80	90	10	$18.04
80X90X6	80	90	6	$21.15
80X90X8	80	90	8	$18.53
80X95X12	80	95	12	$15.42
80X95X8.4	80	95	8.4	$29.79
80X95X9	80	95	9	$11.99
84X104X12	84	104	12	$29.45
85X100X12	85	100	12	$13.45
85X100X9	85	100	9	$17.13
85X105X12	85	105	12	$15.79
85X95X12	85	95	12	$15.54
90X100X12	90	100	12	$18.94
90X100X7	90	100	7	$15.44
90X100X8	90	100	8	$14.90
90X105X12	90	105	12	$13.87
90X105X9	90	105	9	$14.52
95X110X9	95	110	9	$13.25
95X115X12	95	115	12	$20.57
100X110X8	100	110	8	$15.09
100X115X9	100	115	9	$29.75
100X120X12	100	120	12	$37.16
100X120X15	100	120	15	$15.93
100X125X12	100	125	12	$58.48
100X125X15	100	125	15	$29.93
105X120X15	105	120	15	$21.87
105X125X11.4	105	125	11.4	$37.69
105X125X15	105	125	15	$23.57
110X125X15	110	125	15	$23.95
110X130X10	110	130	10	$15.51
110X130X15	110	130	15	$24.56
112X125X9	112	125	9	$36.30
115X135X15	115	135	15	$26.59
120X135X15	120	135	15	$34.07
120X140X15	120	140	15	$21.98
125X140X11	125	140	11	$27.60
125X145X15	125	145	15	$45.34
125X150X12	125	150	12	$52.28
140X155X9	140	155	9	$21.22
140X160X15	140	160	15	$30.52
160X175X9	160	175	9	$46.07
160X185X15	160	185	15	$86.37

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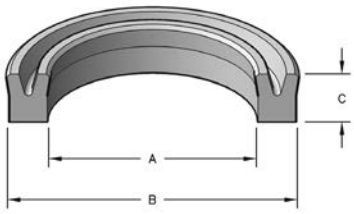
PNEU-DRAULICS

METRIC ROD U-CUP

This rod u-cup fits tightly in the groove while providing increased radial force on the rod



Urethane
-65F to 220F
0 to 5000 PSI

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
20X28X5.7-MR	20	28	5.7	$13.26
25X33X10-MR	25	33	10	$13.20
25X33X5-MR	25	33	5	$13.25
25X33X5.7-MR	25	33	5.7	$12.38
25X33X6.3-MR	25	33	6.3	$6.71
25X35X5-MR	25	35	5	$11.35
25X35X7.2-MR	25	35	7.2	$7.52
30X40X7.3-MR	30	40	7.3	$10.74
30X40X8-MR	30	40	8	$14.36
30X43X9-MR	30	43	9	$8.54
30X45X9-MR	30	45	9	$17.76
32X40X5.7-MR	32	40	5.7	$7.84
32X42X7.3-MR	32	42	7.3	$13.00
33X43X10-MR	33	43	10	$8.98
35X43X5.7-MR	35	43	5.7	$10.34
35X45X6-MR	35	45	6	$14.46
35X45X7.3-MR	35	45	7.3	$17.76
36X44X5.7-MR	36	44	5.7	$19.92
36X46X7-MR	36	46	7	$12.04
36X51X10-MR	36	51	10	$8.24
40X48X5.7-MR	40	48	5.7	$12.50
40X50X6-MR	40	50	6	$14.16
40X50X7.3-MR	40	50	7.3	$12.99
40X55X9-MR	40	55	9	$16.07
40X56X12-MR	40	56	12	$18.68
42X52X7.3-MR	42	52	7.3	$22.52
45X55X6-MR	45	55	6	$14.28
45X60X9-MR	45	60	9	$17.61
45X65X12-MR	45	65	12	$20.39
50X58X8.2-MR	50	58	8.2	$17.71
50X60X7.3-MR	50	60	7.3	$15.48
50X60X8-MR	50	60	8	$22.47
50X63X10-MR	50	63	10	$19.10
50X63X8-MR	55	63	8	$17.61

PNEU-DRAULICS
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METRIC ROD U-CUP

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
50X65X9-MR	50	65	9	$19.69
55X65X6-MR	55	65	6	$16.22
55X65X7.2-MR	55	65	7.2	$10.14
55X68X10-MR	55	68	10	$20.66
55X70X10-MR	55	70	10	$14.23
55X71X12-MR	55	71	12	$29.75
56X66X7.3-MR	56	66	7.3	$16.33
56X71X10-MR	56	71	10	$11.13
56X71X9-MR	56	71	9	$25.47
60X73X10-MR	60	73	10	$23.26
63X78X11.5-MR	63	78	11.5	$101.59
63X83X12-MR	63	83	12	$35.64
65X78X10-MR	65	78	10	$25.31
65X85X12-MR	65	85	12	$33.34
70X83X10-MR	70	83	10	$26.15
70X85X10-MR	70	85	10	$12.29
70X85X12-MR	70	85	12	$12.38
70X85X9-MR	70	85	9	$27.04
75X88X10-MR	75	88	10	$29.26
75X95X12-MR	75	95	12	$31.10
80X100X12-MR	80	100	12	$35.60
80X93X10-MR	80	93	10	$28.39
80X95X10-MR	80	95	10	$30.98
80X95X11.5-MR	80	95	11.5	$11.73
80X95X9-MR	80	95	9	$31.36
90X105X10-MR	90	105	10	$34.07
95X115X12-MR	95	115	12	$13.36
100X115X10-MR	100	115	10	$39.23
100X120X15-MR	100	120	15	$17.61
105X120X10-MR	105	120	10	$45.34
105X120X9-MR	105	120	9	$45.33
105X125X15-MR	105	125	15	$56.04
115X130X11-MR	115	130	11	$41.80
115X130X9-MR	115	130	9	$41.81
120X135X9-MR	120	135	9	$54.78
130X150X12-MR	130	150	12	$72.94
140X160X12-MR	140	160	12	$24.68

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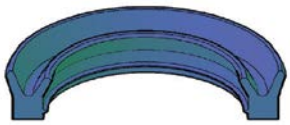
PNEU-DRAULICS

TWIN LIP ROD SEALS

This seal has an additional lip near the heel. It provides stability, friction-reducing lube retention, and a contaminant blocker.



Polyurethane
-50F to +230F
0 to 6000 PSI

** Other sizes available - call for price and delivery

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
12X20X5.7	12	20	5.7	$12.05
15.37X25.48X6.35	15.37	25.48	6.35	$6.90
16X24X5.7	16	24	5.7	$15.92
18X25X5	18	25	5	$12.05
20X26X5	20	26	5	$10.90
20X28X5.7	20	28	5.7	$12.54
20X30X7.7	20	30	7.7	$12.57
22X30X5.7	22	30	5.7	$12.56
22X32X7.3	22	32	7.3	$12.56
25X33X5.7	25	33	5.7	$13.38
28X38X7.3	28	38	7.3	$13.02
28X43X11.4	28	43	11.4	$13.02
30X38X5.7	30	38	5.7	$8.32
30X40X10	30	40	10	$13.03
30X42X10.9	30	42	10.9	$9.13
32X40X6	32	40	6	$10.46
32X40X7.7	32	40	7.7	$13.02
32X42X7.3	32	42	7.3	$7.90
35X43X6.3	35	43	6.3	$13.02
35X43X8.2	35	43	8.2	$13.02
35X45X10	35	45	10	$13.02
35X50X10	35	50	10	$15.72
36X44X8	36	44	8	$16.40
38X48X8	38	48	8	$9.65
40X48X8.2	40	48	8.2	$8.36
40X50X7	40	50	7	$14.42
40X50X8	40	50	8	$20.24
40X55X10	40	55	10	$17.77
45X57.7X9.5	45	57.7	9.5	$9.05
50X65X10	50	65	10	$17.77
50X65X11	50	65	11	$18.32
55X65X10	55	65	10	$17.77
55X70X11.8	55	70	11.8	$20.48
56X66X10	56	66	10	$29.18
56X71X12.5	56	71	12.5	$11.30

PNEU-DRAULICS
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TWIN LIP ROD SEALS

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
60X72X10	60	72	10	$16.20
60X75X10	60	75	10	$20.48
63X73X12	63	73	12	$18.32
63X78X10	63	78	10	$20.45
63X78X11.4	63	78	11.4	$20.24
65X75X11.8	65	75	11.8	$17.77
70X85X11.4	70	85	11.4	$11.95
75X85X11.8	75	85	11.8	$10.05
75X85X6	75	85	6	$7.78
75X88X10	75	88	10	$29.57
80X100X12-605	80	100	12	$38.48
80X95X12	80	95	12	$28.44
85X100X9	85	100	9	$29.51
90X105X11.4	90	105	11.4	$33.42
95X110X10	95	110	10	$26.00
120X130X11.5	120	130	11.5	$18.62
125X145X12	125	145	12	$44.94
140X160X14.5	140	160	14.5	$78.62
150X170X13	150	170	13	$84.61

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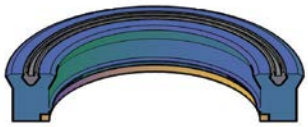
PNEU-DRAULICS

HEAVY DUTY ROD SEALS

Featuring high pressure and shock load capability. The twin lip design offering lower friction, improved sealing, primary lip protection, increased seal stability, and a polyacetal anti-extrusion ring.



Urethane
-50F to +230F
0 to 10,000 PSI

**Other sizes may be available upon request

PART NUMBER	I/D	O/D	HT.	LIST PRICE/EA.
35X45X10	35	45	10	$36.82
35X50X9.5	35	50	9.5	$27.76
36X46X7.3	36	46	7.3	$52.35
40X50X7.3	40	50	7.3	$39.38
45X60X11.4	45	60	11.4	$36.61
50X60X7.3	50	60	7.3	$39.14
56X71X11.4	56	71	11.4	$41.15
60X75X11.4	60	75	11.4	$53.98
63X78X11.4	63	78	11.4	$51.12
70X85X11.4	70	85	11.4	$66.84
80X95X11.4	80	95	11.4	$71.64
95X110X13	95	110	13	$58.81
110X130X16	110	130	16	$71.42

PNEU-DRAULICS
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METRIC H WIPER

This wiper features a wiper lip as well as a sealing lip for secondary sealing.

Urethane
-30F to +220F

PART NUMBER	I/D	O/D	BASE HT.	LIST PRICE/EA.
12X18X3.6	12	18	3.6	$25.81
14X22X4.5	14	22	4.5	$3.18
16X24X4.5	16	24	4.5	$4.16
18X26X4.5	18	26	4.5	$3.91
20X26X4	20	26	4	$10.69
20X28X4.5	20	28	4.5	$4.10
20X28X4.5	20	28	4.5	$4.10
22.4X30.4X4.5	22.4	30.4	4.5	$4.22
22X28X3.6	22	28	3.6	$28.53
23.5X31.5X4.5	23.5	31.5	4.5	$4.11
25X32X3.75	25	32	3.75	$8.99
25X33X4.5	25	33	4.5	$4.37
25X33X4.5	25	33	4.5	$4.37
28X36X4.5	28	36	4.5	$4.00
30X38X5	30	38	5	$5.18
32X40X5	32	40	5	$5.67
32X40X6	32	40	6	$24.03
35.5X43.5X5	35.5	43.5	5	$5.94
35X44X3.6	35	44	3.6	$22.00
35X45X6	35	45	6	$10.31
40X48X5	40	48	5	$7.82
40X48X6	40	48	6	$14.88
40X50.6X4.6	40	50.6	4.6	$6.90
42X51X4.5	42	51	4.5	$27.48
45X53X5	45	53	5	$7.37
50X58X4.5	50	58	4.5	$8.62
50X58X5	50	58	5	$7.71
50X59X3.6	50	59	3.6	$10.01
50X60X5	50	60	5	$20.71
50X60X5	50	60	5	$20.71
55X63X5	55	63	5	$7.20
56X64X5	56	64	5	$7.20
60X68X5	60	68	5	$9.94
65X73X5	65	73	5	$8.12
67X75X5	67	75	5	$10.91
71X81X6	71	81	6	$11.12
75X85X5.5	75	85	5.5	$30.48
75X85X6	75	85	6	$10.86
80X90X6	80	90	6	$10.57
85X95X6	85	95	6	$11.51
90X100X6	90	100	6	$12.01
90X102.2X8.1	90	102.2	8.1	$25.27
98X108X4.5	98	108	4.5	$18.68
100X110X6	100	110	6	$18.41
110X125X7.5	110	125	7.5	$64.02
125X138X7	125	138	7	$22.33
140X153X7	140	153	7	$21.36
145X158X7	145	158	7.5	$23.86

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PNEU-DRAULICS

METRIC D STEP WIPER

This wiper features a double stepped shoulder to fit tightly in the gland throat.

Urethane
-30F to +220F

PART NUMBER	I/D	O/D	BASE HT.	LIST PRICE/EA.
16X24X4	16	24	4	$1.76
20X28X4	20	28	4	$4.43
22X30X4	22	30	4	$7.79
25X33X4	25	33	4	$2.86
28X36X4	28	36	4	$4.68
30X38X4	30	38	4	$3.92
32X40X4	32	40	4	$2.93
35X43X4	35	43	4	$12.07
36X44X4	36	44	4	$2.85
40X48X4	40	48	4	$2.30
42X50X4	42	50	4	$3.19
45X53X4	45	53	4	$3.66
50X58X4	50	58	4	$4.17
55X63X4	55	63	4	$4.53
56X64X4	56	64	4	$5.07
60X68X4	60	68	4	$4.19
65X73X4	65	73	4	$4.47
70X78X4	70	78	4	$4.53
85X93X4	85	93	4	$18.21
90X98X4	90	98	4	$5.72
100X108X4	100	108	4	$21.91

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METRIC D WIPERS

These may be molded in Urethane or Nitrile.

Nitrile Wipers
-22F to +212F

Urethane Wipers
-30F to +220F

PART NUMBER	I/D	O/D	BASE HT.	MATERIAL	LIST PRICE/EA.
16X22X3	16	22	3	Urethane	$2.38
20X28X5	20	28	5	Urethane	$2.37
25X33X5	25	33	7	Urethane	$3.60
30X38X5	30	38	5	Urethane	$3.21
32X40X5	32	40	5	Urethane	$11.51
32X42X5	32	42	5	Nitrile	$11.94
32X44X6	32	44	6		$6.26
35X43X5	35	43	5	Urethane	$4.53
35X47X6	35	47	5	Nitrile	$14.91
36X44X5	36	44	6	Urethane	$4.53
38X46X5	38	46	5	Nitrile	$6.85
40X50X5	40	50	5	Urethane	$10.36
40X50X7	40	50	7	Urethane	$7.30
40X52X6	40	52	6	Nitrile	$4.36
42X50X4	42	50	4		$18.64
45X53X5	45	53	5	Urethane	$2.94
45X55X5	45	55	5	Urethane	$8.38
50X58X5	50	58	5	Metrc D Urethane	$5.91
50X60X5	50	60	5	Urethane	$5.36
50X60X7	50	60	7	Urethane	$7.70
50X62X5	50	62	5	Nitrile	$9.40
50X62X6	50	62	6	Nitrile	$4.36
55X63X5	55	63	5	Urethane	$5.19
55X65X5	55	65	5	Nitrile D	$3.86
56X64X5	56	64	5	Urethane	$4.70
56X66X5	56	66	5	Nitrile	$4.59
60X68X5	60	68	5	Urethane	$6.97
60X70X5	60	70	5	Nitrile	$4.03
60X70X7	60	70	7	Urethane	$6.79
63X73X5	63	73	5	Urethane	$12.47
65X73X5	65	73	5	Urethane	$4.53
65X75X5	65	75	5	Nitrile D	$4.19
70X80X5	70	80	5	Nitrile	$4.53
75X83X5	75	83	5	Urethane	$7.66

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PNEU-DRAULICS

METRIC D WIPERS

PART NUMBER	I/D	O/D	BASE HT.	MATERIAL	LIST PRICE/EA.
80X88X5	80	88	5	Urethane	$5.19
80X92X7	80	92	7	Urethane	$8.93
85X93X5	85	93	5	Urethane	$8.99
85X97X7	85	97	7	Nitrile	$8.74
90X100X6.3	90	100	6.3	Urethane	$16.59
90X102X7	90	102	7	Urethane	$5.70
90X98X5	90	98	5	Urethane	$10.44
95X107X7	95	107	7	Urethane	$10.66
105X113X5	105	113	5	Urethane	$13.58
105X117X7	105	117	7	Nitrile	$16.76
110X122X7	110	122	7	Urethane	$6.73
120X128X5	120	128	5	Urethane	$12.11
120X132X7	120	132	7	Urethane	$9.67
125X137X7	125	137	7	Urethane	$10.96
125X140X9	125	140	9	Urethane	$60.30
95X107X12-D	95	107	12	Urethane	$9.14
105X113X5-D	105	113	5	Urethane	$12.57
105X117X7-D	105	117	7	Nitrile	$15.99
110X122X7-D	110	122	7	Urethane	$6.23
120X128X5-D	120	128	5	Urethane	$11.21
120X132X7-D	120	132	7	Urethane	$8.95
125X137X7-D	125	137	7	Urethane	$10.15
125X140X9-D	125	140	9	Urethane	$55.83

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METRIC METAL CLAD "D" WIPERS

This wiper is a single lip design molded from a high-grade urethane or nitrile and bonded to a carbon steel case

Urethane or Nitrile
Carbon steel case
-30F to +220F

PART NUMBER	I/D	O/D	BASE HT.	MATERIAL	LIST PRICE/EA.
8X14X3.5-MCD	8	14	3.5	Urethane	$8.36
10X16X3- MCD	10	16	3	Nitrile	$3.56
12X18X3.5-MCD	12	18	3.5	Nitrile	$2.79
14X22X3-MCD	14	22	3	Nitrile	$3.18
16X22X3-MCD	16	22	3	Nitrile	$3.61
16X26X5-MCD	16	26	5	Nitrile	$3.11
18X26X3-MCD	18	26	3	Nitrile	$3.01
18X28X7-MCD	18	28	7	Nitrile	$3.01
20X26X5-MCD	20	26	5	Nitrile	$3.31
20X28X3.5-MCD	20	28	3.5	Nitrile	$5.13
20X28X5-MCD	20	28	5	Urethane	$2.58
20X30X5-MCD	20	30	5	Urethane	$14.06
20X30X7-MCD	20	30	7	Urethane	$15.12
22X28X5-MCD	22	28	5	Nitrile	$2.80
22X32X5-MCD	22	32	5	Nitrile	$2.87
22X32X7-MCD	22	32	7	Nitrile	$1.71
22X35X5-MCD	22	35	5	Nitrile	$2.06
25X33X4-MCD	25	33	4	Nitrile	$3.66
25X35X5-MCD	25	35	5	Nitrile	$12.80
25X35X7-MCD	25	35	7	Nitrile	$13.35
28X38X5-MCD	28	38	5	Urethane	$12.52
28X38X7-MCD	28	38	7	Urethane	$17.06
28X40X7-MCD	28	40	7	Nitrile	$1.88
30X40X5-MCD	30	40	5	Urethane	$18.96
30X40X7-MCD	30	40	7	Nitrile	$4.43
30X42X6-MCD	30	42	6	Urethane	$8.35
32X42X5-MCD	30	42	5	Nitrile	$2.88
32X42X7-MCD	32	42	7	Nitrile	$3.90
32X45X4-MCD	32	45	4	Nitrile	$2.85
32X45X7-MCD	32	45	7	Urethane	$16.58
32X52X8-MCD	32	52	8	Urethane	$10.83
33X43X7-MCD	33	43	7	Buna	$2.06
35X45X7-MCD	35	45	7	Urethane	$15.35
35X47X7-MCD	35	47	7	Nitrile	$5.01
36X45X7-MCD	36	45	7	Urethane	$7.32

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PNEU-DRAULICS

METRIC METAL CLAD "D" WIPERS

PART NUMBER	I/D	O/D	BASE HT.	MATERIAL	LIST PRICE/EA.
36X46X5-MCD	36	46	5	Nitrile	$3.34
36X46X7-MCD	36	46	7	Urethane	$21.29
38X48X7-MCD	38	48	7	Nitrile	$2.94
40X50X5-MCD	40	50	5	Nitrile	$16.00
40X50X7-MCD	40	50	7	Nitrile	$6.13
40X50X7-MCD/U	40	50	7	Urethane	$16.56
40X52X7-MCD	40	52	7	Nitrile	$8.68
42X52X7-MCD	42	52	7	Urethane	$27.81
45X55X5-MCD	45	55	5	Nitrile	$2.86
45X55X7-MCD	45	55	7	Urethane or Buna	$20.20
45X57X7-MCD	45	57	7	Nitrile	$2.68
45X60X7-MCD	45	60	7	Nitrile	$3.19
50X56X5-MCD	50	56	5	Nitrile	$3.52
50X60X5-MCD	50	60	5	Nitrile	$3.02
50X60X7-MCD/N	50	60	7	Nitrile	$2.49
50X60X7-MCD/U	50	60	7	Urethane	$16.13
50X62X7-MCD	50	62	7	Urethane	$10.53
50X65X7-MCD	50	65	7	Nitrile	$3.74
55X63X7-MCD	55	63	7	Nitrile	$5.90
55X65X7-MCD	55	65	7	Nitrile	$3.76
55X69X8-MCD	55	69	8	Urethane	$11.79
56X66X7-MCD	56	66	7	Urethane or Buna	$18.47
60X70X7-MCD	60	70	7	Urethane	$24.83
60X74X8-MCD	60	74	8	Urethane	$8.86
60X75X7-MCD	60	75	7	Nitrile	$5.44
63X75X7-MCD	63	75	7	Urethane	$20.08
63X77X8-MCD	63	77	8	Urethane	$13.12
65X75X7-MCD	65	75	7	Urethane	$21.08
65X79X8-MCD	65	79	8	Urethane	$11.52
70X80X5-MCD	70	80	5	Nitrile	$8.50
70X80X7-MCD	70	80	7	Nitrile	$4.56
70X80X7-MCD/U	70	80	7	Urethane	$20.79
70X84X8-MCD	70	84	8	Urethane	$20.58
75X83X7-MCD	75	83	7	Nitrile	$10.08
75X85X7-MCD	75	85	7	Nitrile	$10.45
80X90X7-MCD	80	90	7	Urethane	$24.31
80X94X8-MCD	80	94	8	Urethane	$14.75
85X99X8-MCD	85	99	8	Urethane	$15.38
90X100X7-MCD	90	100	7	Nitrile	$8.38
90X104X8-MCD	90	104	8	Urethane	$14.86

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METRIC METAL CLAD "D" WIPERS

PART NUMBER	I/D	O/D	BASE HT.	MATERIAL	LIST PRICE/EA.
95X105X7-MCD	95	105	7	Urethane	$55.90
100X110X7-MCD	100	110	7	Nitrile	$9.07
100X110X7-MCD/U	100	110	7	Urethane	$33.37
105X115X7-MCD	105	115	7	Urethane	$37.66
115X125X7-MCD	115	125	7	Urethane	$27.13
120X130X7-MCD	120	130	7	Urethane	$28.69
125X140X9-MCD	125	140	9	Nitrile	$8.21
130X145X9-MCD	130	145	9	Urethane	$17.22
140X155X9-MCD	140	155	9	Urethane	$29.94
160X175X9-MCD	160	175	9	Nitrile	$11.90

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PNEU-DRAULICS

METAL CLAD K WIPERS

This wiper prevents contaminant ingression at the wiping lip and around the outer case.

Nitrile/Steel
-220F to +250F

PART NUMBER	I/D	O/D	BASE HT.	LIST PRICE/EA.
20X32X6-MCK	20	32	6	$6.88
22X34X6-MCK	22	34	6	$5.70
25X37X6- MCK	25	37	6	$6.47
30X42X6-MCK	30	42	6	$12.29
30X45X6-MCK	30	45	6	$5.48
30X47X7 MCK	30	47	7	$33.56
35X47X7-MCK	35	47	7	$7.07
36X48X7-MCK	36	48	7	$40.63
40X50X7-MCK	40	50	7	$7.37
40X52X7-MCK	40	52	7	$7.40
40X62X8-MCK	40	62	8	$47.63
45X57X7-MCK	45	57	7	$8.01
50X60X7-MCK	50	60	7	$26.07
50X62X7-MCK	50	62	7	$8.01
50X72X8-MCK	50	72	8	$30.81
55X69X8-MCK	55	69	8	$11.26
60X74X8-MCK	60	74	8	$9.84
65X79X8-MCK	65	79	8	$11.25
70X82X7-MCK	70	82	7	$11.94
70X84X8-MCK	70	84	8	$17.53
75X87X7-MCK	75	87	7	$14.83
75X89X8-MCK	75	89	8	$12.75
80X92X7-MCK	80	92	7	$19.89
80X94X8-MCK	80	94	8	$15.57
85X99X8-MCK	85	99	8	$23.37
90X104X8-MCK	90	104	8	$13.63
95X107X9-MCK	95	107	9	$118.63
95X109X8-MCK	95	109	8	$24.60
100X114X8-MCK	100	114	8	$17.83
105X121X9-MCK	105	121	9	$16.19
110X126X9-MCK	110	126	9	$17.41
115X127X9/MCK	115	127	9	$35.88
120X136X9-MCK	120	136	9	$42.08
140X160X10-MCK	140	160	10	$33.57
170X190X10-MCK	170	190	10	$56.69

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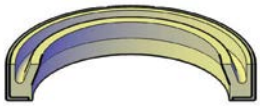
MCW WIPERS

This wiper is a single lip design molded from high-grade urethane and bonded to a carbon steel case



Urethane
Carbon steel case
-30F to 220F

PART NUMBER	I/D	O/D	BASE HT.	LIST PRICE/EA.
25X35X4	25	35	4	$5.69
35X45X6	35	45	6	$71.82
35X50X9	35	50	9	$49.75
40X50X5	40	50	5	$36.38
40X50X7	40	50	7	$24.06
40X52X7	40	52	7	$8.74
40X55X9	40	55	9	$21.31
45X57X7	45	57	7	$7.46
45X60X7.5	45	60	7.5	$13.56
50X63X8	50	63	8	$8.25
50X64X8	50	64	8	$46.22
50X65X7.5	50	65	7.5	$10.88
50X65X9	50	65	9	$15.55
55X65X4	55	65	4	$7.75
55X69X8	55	69	8	$14.00
55X70X7.5	55	70	7.5	$8.51
56X68X7	56	68	7	$44.99
56X71X9	56	71	9	$15.48
60X70X5	60	70	5	$8.13
60X70X7	60	70	7	$18.75
60X73X6	60	73	6	$24.25
60X75X4	60	75	4	$8.25
60X75X5	60	75	5	$21.38
60X75X6	60	75	6	$8.81
60X75X7.5	60	75	7.5	$24.56
60X75X7.5	60	75	7.5	$9.88
60X75X8	60	75	8	$9.25
63X75X7	63	75	7	$31.48
63X78X7.5	63	78	7.5	$34.93
63X78X9	63	78	9	$22.91
63X83X10	63	83	10	$33.48
65X80X5	65	80	5	$52.06
65X80X5	65	80	5	$52.06
65X80X8	65	80	8	$9.63
70X80X5	70	80	5	$63.81
70X83X8	70	83	8	$10.19
70X84X8	70	84	8	$12.90
70X85X7.5	70	85	7.5	$9.75

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PNEU-DRAULICS

MCW WIPERS

PART NUMBER	I/D	O/D	BASE HT.	LIST PRICE/EA.
70X85X7	70	85	7	$44.13
70X85X8	70	85	8	$38.93
70X85X8	70	85	8	$10.00
71X85X6	71	85	6	$31.38
71X86X5	71	86	5	$10.82
75X89X8	75	89	8	$13.19
75X90X8	75	90	8	$11.94
75X95X10	75	95	10	$30.69
80X100X10	80	100	10	$84.65
80X90X3.18	80	90	3.18	$30.87
80X90X7	80	90	7	$36.44
80X95X5	80	95	5	$10.94
80X95X6	80	95	6	$12.88
80X95X8	80	95	8	$83.56
80X95X8	80	95	8	$10.94
85X100X8	85	100	8	$13.13
85X99X8	85	99	8	$13.85
90X100X7	90	100	7	$27.75
90X105X5	90	105	5	$11.75
90X105X6	90	105	6	$25.38
90X105X7	90	105	7	$133.13
90X105X8	90	105	8	$13.88
90X106X8	90	106	8	$36.43
95X109X8	95	109	8	$19.47
95X110X8	95	110	8	$24.38
100X110X7	100	110	7	$25.94
100X115X7	100	115	7	$32.88
100X115X8	100	115	8	$17.13
100X116X8	100	116	8	$47.94
100X120X8	100	120	8	$17.06
110X125X4	110	125	4	$17.63
110X130X10	110	130	10	$26.07
110X130X8	110	130	8	$111.94
120X135X8	120	135	8	$17.94
125X140X8	120	140	8	$136.56
125X140X9	125	140	9	$149.19
130X146X9	130	146	9	$26.75
140X155X8	140	155	8	$26.32
150X170X10	150	170	10	$49.19
160X180X8	160	180	8	$74.19

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OIL SEALS

Shaft Specifications

Shaft
To achieve the optimum sealing function from a shaft seal, careful consideration must be given to the design parameters of the shaft. Important criteria for the shaft include the material, hardness, finish, eccentricity, tolerance, and rotating speed.

Shaft Material
Shaft seals perform the best when the shaft is made out of a medium to high carbon steel or stainless steel material. If a softer material is used for the shaft, then it is recommended that the shaft be plated with either nickel or chrome to provide a hard sealing surface. If a nickel or chrome plating is not available, typically only seals with a sleeve included in the design will work as the sealing lip would groove the soft material too quickly.

Shaft Hardness
The hardness of the shaft is critical in the area where the sealing lip will be running. If the hardness of the shaft is too soft, the sealing lip will wear a groove into the shaft leading to seal failure and requiring that the shaft be replaced. To minimize shaft grooving, it is recommended that the shaft hardness be a minimum of 45 HRc in the area where the sealing lip(s) will be running. In applications where lubrication is doubtful, abrasive matter is present, or the shaft speed is greater than 46 ft/s (14 m/s), a minimum shaft hardness of 55 HRc is recommended. It is recommended that all shafts be heat treated or nitrided prior to assembly.

Shaft Finish
Shaft finish is a measure of how rough the surface of the shaft is. For a shaft seal to function properly, the shaft finish needs to fall within a certain range. A shaft finish can be measured using several different techniques, the most common of which is Ra and Rz. Ra is the average roughness of the shaft. For a shaft seal to function properly, it is recommended that the Ra shaft finish be 10 to 20 µin (0.2 to 0.8 µm). Rz is the average distance between the highest peak and lowest valley over a certain length. For a shaft seal to function properly, it is recommended that the Rz shaft finish be 39 to 197 µin (1 to 5 µm). To achieve the desired shaft finish, it is recommended that the shaft be centerless ground or plunge ground. After grinding it is important to check for shaft lead. The maximum permissible shaft lead angle is 0±0.05 degrees.

Shaft Eccentricity
Two types of shaft eccentricity affect seal performance. They are dynamic run-out (double dynamic eccentricity) and shaft-to-bore-misalignment (STBM or static eccentricity). Dynamic run-out is the amount in which the shaft is not rotating about its true center. Dynamic run-out is typically caused by the shaft being bent, the shaft being out of balance, or misalignment caused during assembly. STBM is the amount in which the center of the shaft is off from the center of the bore. STBM is typically caused by machining and assembly issues.

The greater that the eccentricity is in an application, the harder it is for the sealing lip to remain in contact with the shaft while it is rotating.If an application has high eccentricity, then a special seal will need to be designed to allow the sealing lip to follow the shaft during rotation. The allowable dynamic run-out and shaft-to-bore-mis-alignment for an application is shown in the following two figures.

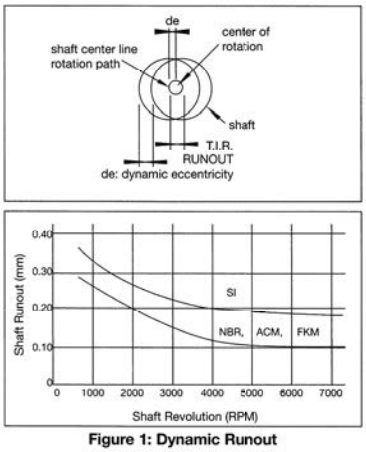

Figure 1: Dynamic Runout

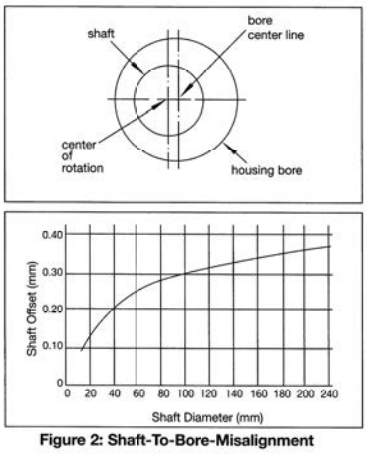

Figure 2: Shaft-To-Bore-Misalignment

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PNEU-DRAULICS

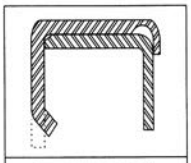
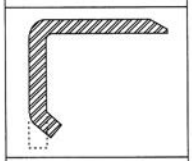
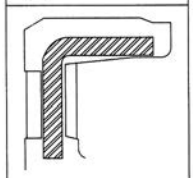
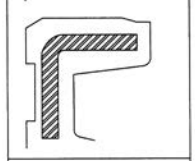
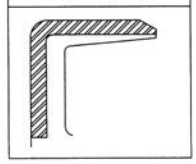
OIL SEALS

Standard Seal Case Designs

The following table identifies the most common case designs for Pneu-Draulics shaft seals. It is important to remember that other, more complex, designs are available for special applications. However, the case designs shown here represent those which will fill the needs of most seal requirements.

A = Metal O.D. with Reinforcing Plate
B = Metal O.D. with Lead-in Chamfer
C = Rubber Covered O.D.
F = Fully Rubber Covered Case
G = Rubber Covered O.D. with Ribs
J = Rubber Covered O.D. with Flange
L = Ground Metal O.D. with Rolled Leading Edge
M = Ground Metal O.D./Rubber Coated on I.D.
Z = Ground Metal O.D. with Rubber Covered Lead-in Chamfer

Of the above case designs, there are five principal case designs, shown in the illustration below. These five principal case designs are also supplemented by a range of more specialized designs for more specific application requirements.

	Profile Diagram	Remarks
A		**Outer Metal Case With Reinforcing Plate.** This type is designed with an additional inner case providing increased structural rigidity when a more robust design is required. Particularly suitable for larger diameters or when the seal is fitted from behind.
B		**Outer Metal Case.** This type is most suitable for steel or cast iron hosuing materials. The metal case gives a particularly firm and accurate seat in the hosuing, but static sealing on the O.D. is partially limited.
C		**Rubber Covered O.D.** This type is preferred for soft alloy or plastic housing materials, as well as cast iron or steel. It is also more suitable to use this design in a replacement environment where minor damage to the housing surface has occurred.
F		**Rubber Covered O.D.** Similar to design C but additional rubber covering fully protecting the internal steel case. Particularly suitable for applications where corrosion could be a problem.
M		**Outer Metal Case With Rubber Lining.** Similar to design B but an additional rubber lining covering the interanl face of the steel case. Particularly suitable for applications where corrosion could be a problem.

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OIL SEALS

Seal Storage

When storing shaft seals, there are several factors to keep in mind that will affect the shelf life of the seal. Such factors include the temperature, humidity, ozone, fumes, insects and rodents, and dust or dirt.

Temperature and Humidity
The area in which the seals are stored should be kept cool, roughly between 59°F to 86°F (15°C to 30°C), with an average relative humidity of 40% to 70%. Excessive heat may decrease the service life of the seal by prematurely aging the rubber. A higher humidity in the storage area may result in the corrosion of the metal case and/or the spring.

Ozone
To avoid premature aging of the sealing elements on a shaft seal the seal needs to be stored away from any potential ozone sources. Thus, store seals away from any direct or reflected sunlight and away from any electrical equipment that may be emitting ozone. Exposure of the seal to ozone may cause premature aging of the sealing element and thus reduce the sealing life of the seal.

Fumes
Seals need to be protected from fumes that may be emitted. Depending on the elastomer that the seal is made out of, certain fumes may cause deterioration of the seal.

Insects and Rodents
Seals need to be protected from exposure to insects and rodents during storage. Some insects and rodents may destroy the seals if they gain access to them.

Dust and Dirt
Sealing lips should be protected from dust and dirt during the storage of the seal. It is recommended to leave the seals in their original wrapping or in a closed container until it is time to install the seals into the application.

Shelf Life
If the above factors are all taken into consideration and the seals are stored appropriately, then the expected shelf life for common materials will be as shown in the table below.

Table 11: Seal Shelf Life for Common Materials

Type of Lip Material	Shelf Life (Years)
NBR, HNBR, CR	7
EPDM	8
FKM, VMQ, FVMQ	10
PTFE	Unlimited

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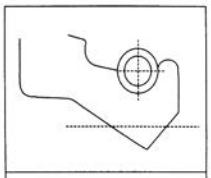
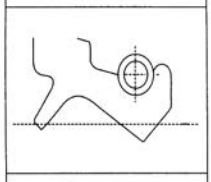
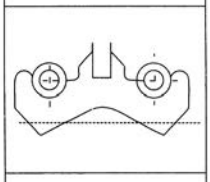
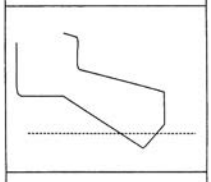
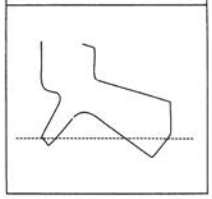
OIL SEALS

Standard Seal Lip Designs

The following table identifies the most common lip designs for Pneu-Draulics shaft seals. It is important to remember that other, more complex, designs are available for special applications. However, the lip designs shown here represent those which will fill the needs of most seal requirements.

V = Single Lip
K = Twin Lip
S = Single Lip, Spring Loaded
T = Twin Lip Spring Loaded
U = Triple Lip
D = Double Lip, Double Spring Loaded
O = Seals on Housing
OB = Oil Bath (Prefix)

Of the above lip designs, there are five principal lip designs, shown in the illustration below. These five principal lip designs are also supplemented by a range of more specialized designs for more specific application requirements.

	Profile Diagram	Remarks
S		**Single Lip With A Garter Spring.** Generally used for sealing lower pressure applications. However, not recommended for use in applications where the surrounding environment contains any dirt or cotaminants.
T		**Dual Lip With A Garter Spring.** Generally used for sealing lower pressure applications. The additional dust lip provides increased protection for the primary lip. The cavity between the two lips can also be filled with grease to limit shaft corrosion and allow brief operation without media lubrication.
D		**Double Lip With Garter Springs.** Designed to separate two media.
V		**Single Lip Without A Garter Spring.** Generally used for sealing a non-pressure medium, especially for sealing grease or viscous fluids. These seals are also used for dust or dirt exclusion.
K		**Dual Lip Without A Garter Spring** As type V above, but the additional dust lip provides increased protection for the primary lip. The cavity between the two lips can also be filled with grease to limit shaft corrosion and allow brief operation without media lubrication.

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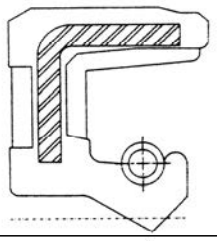
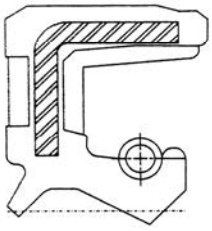
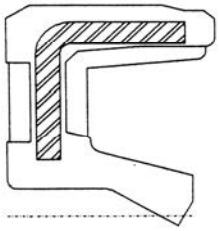
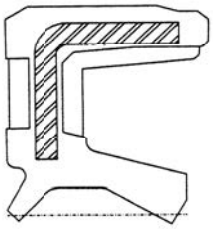
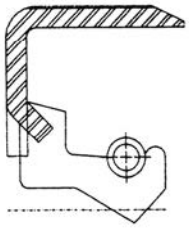
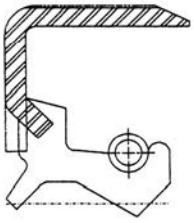
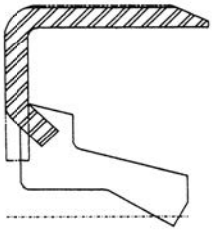
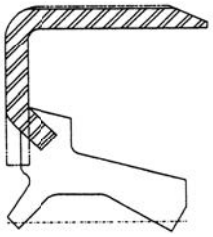
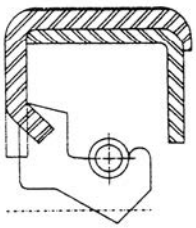
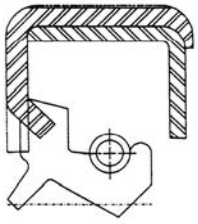
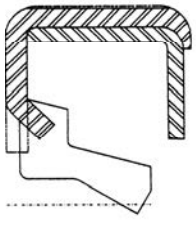
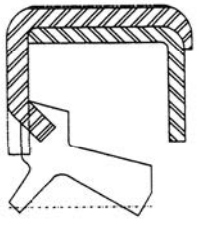
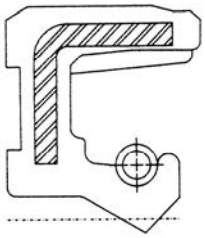
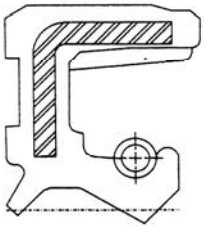
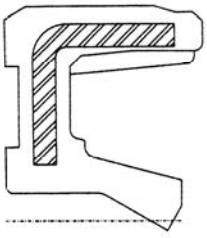
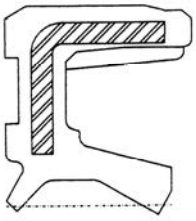
OIL SEALS

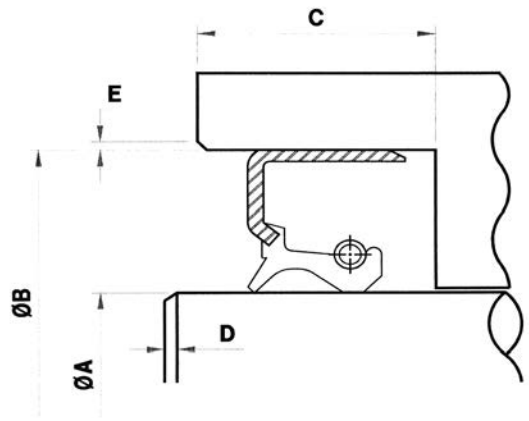
	Lip Style	"S"	"T"	"V"	"K"
		Low-pressure single lip with garter spring without protection from contaminates.	Low-pressure dual lip with garter spring with protection from contaminates.	Non-pressure single lip without garter spring without protection from contaminates.	Non-pressure dual lip without garter spring with protection from contaminates.
"C"	Rubber cover OD for improving OD sealing ability.	SC 	TC 	VC 	KC 
"B"	Precision ground OD surface with a lead-in chamfer for ease of installation.	SB 	TB 	VB 	KB 
"A"	Precision ground OD surface with a inner case providing increased structural rigidity.	SA 	TA 	VA 	KA 
	Rubber cover OD for improving OD sealing ability, with additional rubber fully protecting the inner case.	SF 	TF 	VF 	KF 

111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

PNEU-DRAULICS

OIL SEALS

PARTS IDENTIFICATION FORM

Customer & Division					
Address					
City/State/Zip					
Contact					
Telephone					
Customer P/N					
Type of Equipment					
Application					
☐ OEM ☐ Aftermarket	Date Required	A. Shaft Diameter_____ D. Shaft Chamfer & Angle:_____			
Annual Usage	Peak Month Usage	B. Bore Diameter_____ E. Bore Chamfer & Angle:_____			
		C. Max Seal OD Width:_____			
SHAFT	☐ Horizontal ☐ Vertical	Material	Finish	Hardness	
BORE	Material	Finish	Hardness	Installation Direction ☐ ☐	
MOTION	☐ Rotating	RPM's	Direction From Air Side:		
		Normal Max	☐ Clockwise ☐ Counter-clockwise ☐ Bi-rotational		
		Shaft Runout (TIR)	Misalignment	Frequency of Rotation ☐ Continuous ☐ Intermittent	
	☐ Reciprocating	Stroke Length	Cycles/Min.	Special Operating Conditions	
	☐ Oscillating	Degrees of Arc	Cycles/Min.		
FLUID	Internal	Type Level	☐ Dry ☐ Flooded ☐ Mist		
	External	Type			
TEMP.	☐ C ☐ F	Minimum	Normal	Maximum	
PRESSURE	Normal PSI	Maximum PSI			
BEARING	☐ Ball or Roller Bearing	☐ Bushing			

NATIONWIDE
CALL 1-800-333-SEAL
FAX (859) 887-4165
www.pneu-draulics.com

SALES OFFICE HOURS
7:30 A.M. to 5:30 P.M.
EASTERN STANDARD TIME

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

OIL SEALS

PART NUMBER	LIST PRICE/EA.	PART NUMBER	LIST PRICE/EA.
10X20X7TC	$ 2.25	28X40X7TC	$ 5.23
12X22X7TC	$ 4.50	30X42X7TC	$ 5.81
12X25X55C	$13.04	30X42X8SC	$ 4.75
12X25X5TC	$11.03	30X46X8TC	$ 13.44
12X25X7TC	$ 3.08	30X50X7TC	$ 4.79
13X25X7TC	$ 3.38	35X45X7TC	$ 8.63
15X24X5TC	$ 8.66	35X47X7TC	$ 3.98
15X25.5X4.6SC	$17.06	35X50X8TC	$ 4.75
15X35X7TC	$ 3.00	35X52X7TC	$ 10.23
17X30X7TC	$ 2.88	35X54X8TC	$ 9.02
17X30X8-TC	$ 2.63	35X55X11TC	$ 4.51
17X32X7TC	$ 2.79	35X55X7TC	$ 28.59
17X47X7TC	$ 8.19	35X62X10TC	$ 16.16
18X28X7TC	$ 4.13	38X58X10TC	$ 8.58
18X30X5TC	$28.70	40X52X7TC	$ 9.88
18X30X6TC	$12.67	40X55X8TC	$ 8.25
18X30X7TC	$ 5.69	40X58X8TC	$ 5.31
18X30X8TC	$ 9.33	40X90X10SC	$ 11.00
18X35X7TC	$ 3.50	42X56X7TC	$ 7.00
20X26X4TC	$15.19	45X62X7TC	$ 7.02
20X35X7TC	$ 3.35	50X64X10SC	$ 7.75
22X35X8TC	$ 5.69	50X72X8TC	$ 7.75
22X36X7TC	$ 3.78	50X90X10TC	$ 28.18
22X40X7-TC	$ 3.83	52X100X10TC	$ 62.50
24X35X7TC	$15.38	55X80X10TC	$ 34.75
25X35X8TC	$10.23	55X90X10TC	$ 13.88
25X42X10TC	$27.50	60X75X8TC	$ 7.43
25X42X7TC	$ 5.81	60X80X8TC	$ 9.75
25X45X10	$ 8.12	70X90X7TC	$ 17.19
25X47X7 TC	$17.84	70X95X13TC	$ 29.60
25X52X10TC	$ 5.44	80X100X10TC	$ 20.25
25X52X7TC	$ 4.50	8X25X8TC	$ 3.71
26X40X7TC	$ 3.83	90X110X12 TC	$ 27.00
27X47X11TC	$20.66	90X120X12SA	$112.65
28X38X7TC	$ 3.41	9X17X4.5SM	$ 4.00

111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

PNEU-DRAULICS

JAPANESE PACKING

Japanese Packings popular in industrial maintenance

**Other sizes and profiles may be available upon request

PART NUMBER	SEAL DIMENSIONS	DESCRIPTION	LIST PRICE
GLY-40	40X50X6	Rod or Piston u cup for pre-lubed cylinders	$31.93
GLY-53	53X63X6	Rod or Piston u cup for pre-lubed cylinders	$35.02
PDU-20	20X28X7.3	Seal and Wiper used for pre-lubed cylinders	$22.66
PNY-16	16X24X5.2	Rod packing wear resistant seals	$41.20
SCB-20	20X32X6/9	Metal wiper	$33.48
SCB-25	25X37X6/9	Metal wiper	$41.20
SCB-40	40X52X7/10	Metal wiper	$49.96
SCB-60	60X74X8/11	Metal wiper	$54.08
SCB-70	70X84X8/11	Metal wiper	$65.10
SDR-16	16X24X4.5/6	Snap in wiper	$20.09
SDR-18	18X26X4.5/6	Snap in wiper	$20.91
SDR-20	20X28X4.5/6	Snap in wiper	$55.88
SDR-22	22X30X4.5/6	Snap in wiper	$24.21
SDR-28	28X36X4.5/6	Snap in wiper	$39.14
SDR-30	30X38X5/6.5	Snap in wiper	$36.15
SDR-31.5	31.5X39.5X5/6.5	Snap in wiper	$37.39
SDR-32	32X40X5/6.5	Snap in wiper	$39.40
SDR-35	35X43X5/6.5	Snap in wiper	$37.29
SDR-35.5	35.5X43.5X5/6.5	Snap in wiper	$37.29
SDR-36	36X44X5/6.5	Snap in wiper	$39.14
SDR-40	40X48X5/6.5	Snap in wiper	$53.05
SDR-45	45X53X5/6.5	Snap in wiper	$41.72
SDR-50	50X58X5/6.5	Snap in wiper	$51.24
SDR-55	55X63X5/6.5	Snap in wiper	$43.78
SDR-60	60X68X5/6.5	Snap in wiper	$45.53
SDR-65	65X73X5/6.5	Snap in wiper	$46.76
SDR-70	70X80X6/8	Snap in wiper	$83.02
SDR-85	85X95X6/8	Snap in wiper	$84.98
SDR-90	90X100X6/8	Snap in wiper	$90.95
SER-18	18X22X2.9/3.9	Wiper ideal for applications on valves	$13.60
SFR-25	25X33X4.5/6	Low friction pneumatic wiper	$24.72
SFR28	28X36X4.5/6	Low friction pneumatic wiper	$21.88
SFR-40	40X48X5/6.5	Low friction pneumatic wiper	$26.27
SFR-50	50X58X5/6.5	Low friction pneumatic wiper	$36.05
SKY-18	18X26X5	Piston or Rod Hydraulic U cup	$21.63
SKY-20	20X28X5	Piston or Rod Hydraulic U cup	$45.53
SKY-22.4	22.4X30X5	Piston or Rod Hydraulic U cup	$35.02
SKY-28	28X35.5X5	Piston or Rod Hydraulic U cup	$31.42
SKY-35	35X45X6	Piston or Rod Hydraulic U cup	$42.23
SKY-36	36X46X6	Piston or Rod Hydraulic U cup	$39.14

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

JAPANESE PACKING

PART NUMBER	SEAL DIMENSIONS	DESCRIPTION	LIST PRICE
SKY-40	40X50X6	Piston or Rod Hydraulic U cup	$56.65
SKY-50	50X60X6	Piston or Rod Hydraulic U cup	$49.70
SKY-53	53X63X6	Piston or Rod Hydraulic U cup	$69.53
SKY-55	55X65X6	Piston or Rod Hydraulic U cup	$88.37
SKY-60	60X70X6	Piston or Rod Hydraulic U cup	$67.47
SKY-67	67X77X6	Piston or Rod Hydraulic U cup	$90.85
SKY-71	71X80X6	Piston or Rod Hydraulic U cup	$75.29
SKY-85	85X100X9	Piston or Rod Hydraulic U cup	$99.91
SKY-95	95X110X9	Piston or Rod Hydraulic U cup	$96.82
SKY-112	112X125X8.5	Piston or Rod Hydraulic U cup	$150.89
SWA-80	80X76X8	Phenolic wear rings	$90.85
SWA-100	100X95X10	Phenolic wear rings	$132.36
WPB-80	80X71X20	Plastic Bearing for Pistons	$59.23

111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

PNEU-DRAULICS

METRIC POLYESTER PISTON SEAL

The double acting piston seal is a compact low friction seal for light to medium duty hydraulic cylinder. Elastomeric material will stretch sufficiently without problems.

Red Polyester with Nitrile O-Ring
-40°F to +230°F
0 to 5000 PSI

PART NUMBER	OD	ID	GROOVE WIDTH	LIST PRICE
15X3.20 PSF	15	7.5	3.2	$25.85
25X3.2 PSF	25	17.5	3.2	$9.85
30X3.2 PSF	30	22.5	3.2	$6.12
40X4.2 PSF	40	29	4.2	$10.48
45X4.20 PSF	45	34	4.2	$6.54
50X4.2 PSF	50	39	4.2	$11.25
50X6.3 PSF	50	39.5	6.3	$11.25
55X4.2 PSF	55	44	4.2	$7.08
55X6.3 PSF	55	39.5	6.3	$16.00
60X4.20 PSF	60	49	4.2	$7.23
60X44.5X6.3	60	44.5	6.3	$8.98
63X4.2MM PSF	63	52	4.3	$7.12
63X47.5X6.3-MKPD	63	47.5	6.3	$14.70
63X52X4.2-MKPD	63	52	4.2	$10.02
63X6.3 PSF	63	50	6.3	$14.82
65X4.2 PSF	65	54	4.2	$7.68
65X54X4.2-MKPD	65	54	4.2	$9.51
65X6.3 PSF	65	52	6.3	$13.44
70X6.3 PSF	70	57	6.3	$11.22
75X4.2 PSF	75	64	4.2	$16.27
75X6.3 PSF	75	59.5	6.3	$9.88
80X6.3 PSF	80	64.5	6	$17.36
90X6.3 PSF	90	74.5	6.3	$18.12
100X6 PSF	100	84.5	6.3	$18.44
110X6.3 PSF	110	94.5	6.3	$34.16
120X10X4-PSF	120	99	10.5	$90.44
125X8.1 PSF	125	104	8.1	$17.25

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

METRIC 2 PC PISTON SEALS

These seals feature low friction and excellent wear characteristics. They use nitrile o-rings for energizers

Filled TFE
-40F to +230F
0 to 5000 PSI

PART NUMBER	BORE	SEAL WIDTH	SEAL CROSS	GROOVE WIDTH	LIST PRICE
12X2X1	12	2	1	2.2	$7.63
15X3X2	15	3	2	3.2	$8.13
16X2X1	16	2	1	2.2	$6.87
20X3X2	20	3	2	3.2	$7.56
22X3X2	22	3	2	3.2	$10.13
25X3X2	25	3	2	3.2	$10.63
30X2X1	30	2	1	2.2	$14.88
30X3X2	30	3	2	3.2	$7.50
32X3X2	32	3	2	3.2	$19.09
35X3X2	35	3	2	3.2	$12.25
40X3X2	40	3	2	3.2	$8.82
40X4X2.9	40	4	2.9	4.2	$14.01
40X6X3.5	40	6	3.5	6.3	$26.19
42X4X2.9	42	4	2.9	4.2	$11.41
45X3.8X1.5	45	3.8	1.5	4.2	$11.99
45X4.3X2	45	4.3	2	4.5	$17.94
45X4.4X1.2	45	4.4	1.2	4.6	$27.58
45X4X2.9	45	4	2.9	4.2	$15.11
48X4X2.9	48	4	2.9	4.2	$23.59
50X2.7X2.5	50	2.7	2.5	2.9	$21.16
50X3X2	50	3	2	3.2	$12.98
50X4.3X2	50	4.3	2	4.5	$29.06
50X4.4X1.2	50	4.4	1.2	4.6	$18.24
50X4X2.9	50	4	2.9	4.2	$19.48
50X6X3.5	50	6	3.5	6.3	$20.70
52X4X2.9	52	4	2.9	4.2	$12.87
53X4X2.5	53	4	2.5	4.2	$46.00
55X4.3X2	55	4.3	2	4.5	$31.31
55X4X2.9	55	4	2.9	4.2	$12.87
55X6X3.5	55	6	3.5	6.3	$20.70
56X4X2.9	56	4	2.9	4.2	$12.87
60X3.8X2	60	3.8	2	4.2	$7.52
60X4.9X2.5	60	4.9	2.5	5.1	$26.02
60X4X2.9	60	4	2.9	4.2	$13.85
60X6X3.5	60	6	3.5	6.3	$17.08

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Nicholasville, KY 40340-0037

PNEU-DRAULICS

METRIC 2 PC PISTON SEALS

PART NUMBER	BORE	SEAL WIDTH	SEAL CROSS	GROOVE WIDTH	LIST PRICE
60X7X2.5	60	7	2.5	7.2	7.2
63X4X2.9	63	4	2.9	4.2	4.2
63X6X3.5	63	6	3.5	6.2	6.2
63X7.3X2.5	63	7.3	2.5	7.5	7.5
65X4X2.9	65	4	2.9	4.2	4.2
65X6X3.5	65	6	3.5	6.3	6.3
65X7.3X2.5MPS	65	7.3	2.5	7.5	7.5
70X4X1.8	70	4	1.8	4.2	4.2
70X4X2.5	70	4	2.5	4.2	4.2
70X4X2.9	70	4	2.9	4.2	4.2
70X6.2X2.5	70	6.2	2.5	6.5	6.5
70X6X3.5	70	6	3.5	6.3	6.3
70X7.3X2.5	70	7.3	2.5	7.5	7.5
70X7X2.5	70	7	2.5	7.2	7.2
71X7.3X2.5	71	7.3	2.5	7.5	7.5
75X4X2.9	75	4	2.9	4.2	4.2
75X6.2X2.5	75	6.2	2.5	6.5	6.5
75X6X3.5	75	6	3.5	7.2	6.3
75X7.3X2.5	75	7.3	2.5	6.3	7.5
80X4X2.9	80	4	2.9	4.2	4.2
80X5X2.5	80	5	2.5	5.2	5.2
80X6.2X2.5	80	6.2	2.5	6.5	6.5
80X6X3.5	80	6	3.5	6.3	6.3
80X7.3X2.5	80	7.3	2.5	7.5	7.5
80X7.9X5	80	7.9	5	8.1	8.1
80X7X2.5	80	7	2.5	7.2	7.2
85X6X3.5	85	6	3.5	6.3	6.3
85X7.9X5	85	7.9	5	8.1	8.1
90X6X2.5	90	6	2.5	6.2	6.2
90X6X3.5	90	6	3.5	6.2	6.2
90X7.3X2.5	90	7.3	2.5	7.5	7.5
90X7.9X5	90	7.9	5	8.1	8.1
90X7X2.5	90	7	2.5	7.2	7.2
95X6X3.5	95	6	3.5	6.3	6.3
95X7.9X5	95	7.9	5	8.1	8.1
100X6.2X2.4	100	6.2	2.4	6.5	6.5
100X6X3.5	100	6	3.5	6.2	6.2
100X7.9X5	100	7.9	5	8.1	8.1
100X7X2.5	100	7	2.5	7.2	7.2
100X85X7.5	100	85	7.5	7.5	7.5
105X6X3.5	105	6	3.5	6.2	6.2

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
Nicholasville, KY 40340-0037

METRIC 2 PC PISTON SEALS

PART NUMBER	BORE	SEAL WIDTH	SEAL CROSS	GROOVE WIDTH	LIST PRICE
110X6X3.5	110	6	3.5	6.2	$39.98
110X7.9X5	110	7.9	5	8.1	$42.44
110X7X2.5	110	7	2.5	7.2	$19.38
115X6X3.5	115	6	3.5	6.2	$34.35
115X7.9X5	115	7.9	5	8.1	$38.52
115X7X2.5	115	7	2.5	7.2	$41.65
120X6X3.5	120	6	3.5	6.2	$70.90
120X7.9X5	120	7.9	5	8.1	$42.28
125X6X3.5	125	6	3.5	6.2	$28.72
125X7.9X5	125	7.9	5	8.1	$46.47
125X7X2.5	125	7	2.5	7.2	$20.52
130X6X3.5	130	6	3.5	6.3	$29.82
130X7.9X5	130	7.9	5	8.1	$47.41
135X7.9X5	135	7.9	5	8.1	$49.06
140X7.9X5	140	7.9	5	8.1	$50.84
145X7.9X5	145	7.9	5	8.1	$60.82
150X7.9X5	150	7.9	5	8.1	$51.19
160X7.9X5	160	7.9	5	8.1	$65.86
160X8.9X3.5	160	8.9	3.5	9.1	$93.94
165X7.9X5	165	7.9	5	8.1	$99.45
170X7.9X5	170	7.9	5	8.1	$55.66
180X7.9X5	180	7.9	5	8.1	$48.75
190X7.9X5	190	7.9	5	8.1	$92.93
200X7.9X5	200	7.9	5	8.1	$67.48
225X7.9X5	225	7.9	5	8.1	$96.13
240X7.9X5	240	7.9	5	8.1	$107.25

111 Brookside Drive • P.O. Box 37
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PNEU-DRAULICS

CAPPED PISTON SEAL
4 PC PISTON SEAL

This is a heavy duty double-acting assembly, the capped piston T-seal exhibits excellent sealability, extrusion resistance and wearability.

PTFE Cap
Nylon Back-up
Rubber energizer

-40°F to 220°F
0 to 6000 PSI

PART NUMBER	OD	ID	GROOVE WIDTH	LIST PRICE/EA.
50X36X8.5-MCPS	50	36	8.5	$62.34
50X40X7.5-MCPS	50	40	7.5	$37.66
56X45X8-MCPS	56	45	8	$72.37
60X46X8.5-MCPS	60	46	8.5	$26.73
63X53X7.5-MCPS	63	53	7.5	$57.15
65X50X10.5-MCPS	65	50	10.5	$22.76
65X51X8.5-MCPS	65	51	8.5	$57.67
70X55X10.5-MCPS	70	55	10.5	$31.07
70X55X12-MCPS	70	55	12	$39.67
70X60X7.5-MCPS	70	60	7.5	$39.75
75X60X10.5-MCPS	75	60	10.5	$39.74
75X63X8.6-MCPS	75	63	8.6	$57.92
80X65X11.5-MCPS	80	65	11.5	$39.14
80X65X12-MCPS	80	65	12	$37.75
85X70X10.5-MCPS	85	70	10.5	$37.45
90X75X10.5-MCPS	90	75	10.5	$38.24
90X75X11.5-MCPS	90	75	11.5	$46.02
90X75X12.5-MCPS	90	75	12.5	$46.13
95X80X10.5-MCPS	95	80	10.5	$39.38
100X85X12-MCPS	100	85	12	$55.77
105X90X12-MCPS	105	90	12	$59.54
110X95X12-MCPS	110	95	12	$59.45
115X100X12-MCPS	115	100	12	$61.34
120X100X15.5-MCPS	120	100	15.5	$78.95
120X105X12-MCPS	120	105	12	$35.85
125X102X15.5-MCPS	125	102	15.5	$49.27
130X107X15.5-MCPS	130	107	15.5	$48.08
135X112X15.5-MCPS	135	112	15.5	$49.65
140X117X15.5-MCPS	140	117	15.5	$52.87
150X127X15.5-MCPS	150	127	15.5	$51.16
160X137X15.5-MCPS	160	137	15.5	$56.56
160X140X15.5-MCPS	160	140	15.5	$112.04
160X140X18.5-MCPS	160	140	18.5	$150.07
165X142X15.5-MCPS	165	142	15.5	$92.85
180X160X15.5-MCPS	180	160	15.5	$115.03
225X202X15.5-MCPS	225	202	15.5	$147.29

PNEU-DRAULICS
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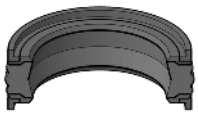
MPSA FIVE PIECE PISTON SEALS

Designed to fit on one or two piece pistons, this piston seal employs a nitrile seal for high sealability, nylon split back ups for extrusion resistance, and two split bearing rings. No further support bearings are required



70A NBR Seal
Nylon Back-Up & Bearing
-22 to +212F
0 to 6000 PSI

PART NUMBER	OD	ID	BEARING GROOVE DIAMETER	HT	BEARING GROOVE WIDTH	LIST
MPSA-032	32	22	27.40	16.30	6.35	$11.79
MPSA-040E	40	30	35.40	16.40	6.35	$18.08
MPSA-040G	40	32	36.00	15.50	3.20	$14.90
MPSA-040H	40	32	37.00	10.00	4.00	$9.73
MPSA-050	50	34	45.40	18.40	6.35	$18.15
MPSA-050A	50	38	46.00	20.50	4.20	$18.41
MPSA-050B	50	40	47.00	12.50	4.00	$15.68
MPSA-050D	50	34	45.00	20.50	3.10	$18.41
MPSA-060	60	44	55.40	18.40	6.35	$22.84
MPSA-060C	60	44	56.00	20.50	3.10	$22.84
MPSA-063	63	47	47.00	19.40	6.35	$23.87
MPSA-063A	63	51	59.00	20.15	4.20	$21.13
MPSA-063B	63	53	60.00	12.50	4.00	$21.13
MPSA-063C	63	47	59.00	20.05	3.10	$24.40
MPSA-063E	63	47	58.40	18.40	6.35	$19.79
MPSA-065	65	50	60.40	18.40	6.35	$20.66
MPSA-070	70	50	64.20	22.40	6.35	$25.11
MPSA-070B	70	54	54.00	20.50	3.10	$22.17
MPSA-075	75	55	55.00	22.40	6.35	$25.39
MPSA-075A	75	59	71.00	20.50	3.10	$20.52
MPSA-080	80	60	74.20	22.40	6.35	$26.94
MPSA-080A	80	66	76.00	22.50	5.20	$25.67
MPSA-085	85	65	79.20	22.40	6.35	$25.27
MPSA-090	90	70	84.20	22.40	6.35	$32.54
MPSA-090B	90	76	86.00	22.50	3.60	$30.59
MPSA-100	100	75	93.20	22.40	6.35	$34.25
MPSA-110	110	85	103.10	22.40	6.35	$37.74
MPSA-110D	110	92	106.00	22.50	3.60	$30.40
MPSA-115	115	90	108.10	22.40	8.35	$33.83
MPSA-120	120	95	113.10	22.40	3.60	$41.00
MPSA-125	125	100	118.00	25.40	6.35	$41.92
MPSA-150D	150	125	143.00	25.50	6.35	$41.74
MPSA-165A	165	140	157.60	25.30	9.50	$74.64
MPSA-180	180	155	171.70	25.40	12.70	$80.27
MPSA-180A	180	150	173.00	35.40	6.35	$79.83

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PNEU-DRAULICS

METRIC ROD BUFFER SEALS

This is a molded PTFE seal with a rubber energizer that absorbs the shock of pressure spikes, protecting the rod

Material: Filled PTFE
Rubber energizer

-40 to 220F
0 to 5000 PSI

PART NUMBER	I/D	O/D	HT.	LIST PRICE
18X23X2-MKR	18	23	2	$10.65
20X31X4-MKR	20	31	4	$10.89
22X29.5X3-MKR	22	29.5	3	$11.26
25X32.5X3-MKR	25	32.5	3	$10.30
25X35.7X4-MKR	25	35.7	4	$14.14
28X35.5X3-MKR	28	35.5	3	$12.11
28X39X4-MKR	28	39	4	$10.69
30X40.7X3.9-MKR	30	40.7	3.9	$17.85
36X43.5X3-MKR	36	43.5	3	$14.50
36X47X4-MKR	36	47	4	$11.47
40X51X4-MKR	40	51	4	$14.75
40X52.6X4-MKR	40	52.6	4	$16.14
40X55.5X5.9-MKR	40	55.5	5.9	$23.22
45X56X4-MKR	45	56	4	$27.94
45X57.6X4-MKR	45	57.6	4	$16.10
45X60.5X5.9-MKR	45	60.5	5.9	$17.26
50X60X4.5-MKR	50	60	4.5	$19.20
50X61X4-MKR	50	61	4	$14.55
50X62.6X4-MKR	50	62.6	4	$13.36
50X65.5X5.9-MKR	50	65.5	5.9	$11.02
56X68.6X4-MKR	56	68.6	4	$18.54
56X71.5X5.9-MKR	56	71.5	5.9	$18.63
63X78.5X5.9-MKR	63	78.5	5.9	$20.72
65X80.5X5.9-MKR	65	80.5	5.9	$24.33
70X81X4-MKR	70	81	4	$21.91
70X85.5X5.9-MKR	70	85.5	5.9	$15.90
75X90.5X5.9-MKR	75	90.5	5.9	$15.71
80X95.5X5.9-MKR	80	95.5	5.9	$28.67
85X100.5X5.9-MKR	85	100.5	5.9	$32.19
90X105.5X5.9-MKR	90	105.5	5.9	$38.11
95X110.5X5.9-MKR	95	110.5	5.9	$34.19
100X115.5X5.9-MKR	100	115.5	5.9	$31.28
110X125.5X5.9-MKR	110	125.5	5.9	$31.42
130X145.5X5.9-MKR	130	145.5	5.9	$47.88

PNEU-DRAULICS
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MYR STYLE ROD BUFFER

Designed to fit on one or two piece pistons, this piston seal employs a nitrile seal for high sealability, nylon split back ups for extrusion resistance, and two split bearing rings. No further support bearings are required

Material: Urethane Buffer
Nylon Back Up

-30° TO 220°F
0 to 000 PSI

PART NUMBER	I/D	O/D	HT.	LIST PRICE
40X50.7X3.9	40	50.7	3.9	$13.06
40X55.1X5.9	40	55.1	5.9	$44.95
40X55.5X5.9	40	55.5	5.9	$8.10
45X55.7X3.9	45	55.7	3.9	$88.66
45X60.1X5.9	45	60.1	5.9	$52.23
45X60.5X5.9	45	60.5	5.9	$17.60
50X62.9X3.6	50	62.9	3.6	$56.59
50X65.1X5.9	50	65.1	5.9	$49.97
55X70.5X5.9	55	70.5	5.9	$6.88
56X71.5X5.9	55	71.5	5.9	$11.57
60X75.5X5.9	60	75.5	5.9	$7.44
63X78.1X5.9	63	78.1	5.9	$58.80
63X78.5X5.9	63	78.5	5.9	$6.83
65X80.5X5.9	65	80.5	5.9	$7.64
70X85.1X5.9	70	85.1	5.9	$78.81
70X85.5X5.9	70	85.5	5.9	$27.85
75X90.5X5.9	75	90.5	5.9	$8.33
75X90.5X5	75	90.5	5	$8.63
85X100.5X5.9	85	100.5	5.9	$9.25
95X110.5X5.9	95	110.5	5.9	$9.81
100X115.5X5.9	100	115.5	5.9	$10.19
110X125.5X5.9	110	125.5	5.9	$11.00
115X130.5X5.9	115	130.5	5.9	$14.38
120X135.5X5.9	120	135.5	5.9	$12.03
120X135.5X6	120	135.5	6	$228.00
140X155.5X6	140	155.5	6	$247.94
160X175.5X6	160	175.5	6	$319.34

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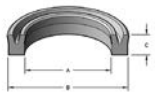
PNEU-DRAULICS

METRIC WEAR RINGS

Wear Rings are used as a piston & rod bearing to prevent scratching and irregularity of the piston by absorbing transverse loads on the rod and they also improve the durability of packing in a hydraulic cylinder.

Nylon or
Phenolic



PART NUMBER	O/D	HT	CROSS SECTION	MATERIAL	LIST PRICE
25X4X1.5	25	4	1.5	PHENOLIC	$24.65
28X10X1.5	28	10	1.5	NYLON	$13.13
30X10X2.5	30	10	2.5	PHENOLIC	$6.25
33X5.3X2.5	33	5.3	2.5	PHENOLIC	$4.88
35X15.9X1.5	35	15.9	1.5	NYLON	$37.84
35X16X1.5	35	16	1.5	PHENOLIC	$6.48
35X4X1.5	35	4	1.5	NYLON	$13.31
35X9.5X1.5	35	9.5	1.5	NYLON	$35.63
36X9.5X2	36	9.5	2	PHENOLIC	$5.10
37X10X2.5	37	10	2.5	PHENOLIC	$8.99
39X16X1.5	39	16	1.5	NYLON	$33.05
40X5.5X2.5	40	5.5	2.5	PHENOLIC	$4.49
40X9.5X2.5	40	9.5	2.5	PHENOLIC	$6.48
40X9.7X2	40	9.7	2	PHENOLIC	$5.22
41X5.6X2.5	41	5.6	2.5	PHENOLIC	$4.63
41X9.7X2.5	41	9.7	2.5	PHENOLIC	$5.21
43X15.9X1.5	43	15.9	1.5	NYLON	$32.01
44X9.7X2	44	9.7	2	PHENOLIC	$6.94
45X10X2.5	45	10	2.5	PHENOLIC	$4.61
45X14.5X3	45	14.5	3	NYLON	$8.75
45X14X2.5	45	14	2.5		$3.65
45X15X2.5	45	15	2.5	PHENOLIC	$6.72
45X20X2.5	45	20	2.5	PHENOLIC	$5.90
45X9.7X2.5	45	9.7	2.5	NYLON	$44.21
46X20X3	46	20	3	PHENOLIC	$6.40
48X22.5X1.5	48	22.5	1.5	NYLON	$13.93
48X25X1.5	48	25	1.5	NYLON	$13.93
49X25X2	49	25	2	PHENOLIC	$10.19
49X8X2	49	8	2	PHENOLIC	$5.79
50X10X2.5	50	10	2.5	PHENOLIC	$6.48
50X10X2	50	10	2	NYLON	$21.19
50X12.6X3.3	50	12.6	3.3	PHENOLIC	$10.96
50X14.5X2	50	14.5	2	PHENOLIC	$4.86
50X14.8X2.5	50	14.8	2.5	NYLON	$13.55
50X15X2.5	50	15	2.5	PHENOLIC	$5.04
50X19X3.17	50	19	3.17	NYLON	$9.97
50X20X2.5	50	20	2.5	PHENOLIC	$9.72
50X25X3.5	50	25	3.5	PHENOLIC	$28.50
50X5.6X2.5	50	5.6	2.5	NYLON	$13.63
50X5X2.5	50	5	2.5	PHENOLIC	$4.67
50X6.8X2.5	50	6.8	2.5	PHENOLIC	$5.18
50X9.5X2.5	50	9.5	2.5	NYLON	$8.80
50X9.5X2.5	50	9.5	2.5	PHENOLIC	$6.72

PNEU-DRAULICS
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METRIC WEAR RINGS

PART NUMBER	O/D	HT	CROSS SECTION	MATERIAL	LIST PRICE
50X9.5X2	50	9.5	2	NYLON	$9.03
50X9.7X2	50	9.7	2	PHENOLIC	$5.88
50X9X2.5	50	9	2.5	PHENOLIC	$7.04
51.4X25.4X3.2	51.4	25.4	3.2	NYLON	$12.38
51X22.2X3	51	22.2	3	NYLON	$45.81
51X22.5X3	51	22.5	3	PHENOLIC	$9.06
51X9.6X3	51	9.6	3	NYLON	$3.04
53X24.5X1.5	53	24.5	1.5	NYLON	$19.22
55X14.7X2.5	55	14.7	2.5	PHENOLIC	$7.41
55X15.5X3	55	15.5	3	NYLON	$11.13
55X15X2.5	55	15	2.5	PHENOLIC	$5.61
55X16X2.5	55	16	2.5	NYLON	$6.02
55X20X2.5	55	20	2.5	PHENOLIC	$12.09
55X30X2.5	55	30	2.5	PHENOLIC	$11.64
55X5.4X2.5	55	5.4	2.5	PHENOLIC	$7.06
55X7.9X2.5	55	7.9	2.5	NYLON	$6.48
55X9.5X2.5	55	9.5	2.5	PHENOLIC	$6.48
55X9.7X2.5	55	9.7	2.5	PHENOLIC	$5.90
56X12.7X3	56	12.7	3	NYLON	$6.95
56X25X3	56	25	3	PHENOLIC	$9.43
60X10X2.5	60	10	2.5	PHENOLIC	$12.38
60X10X2	60	10	2	PHENOLIC	$8.56
60X12.3X2.85	60	12.3	2.85	PHENOLIC	$9.14
60X12.3X3	60	12.3	3	PHENOLIC	$9.14
60X12.7X3.17	60	12.7	3.17	NYLON	$16.09
60X14.5X2.5	60	14.5	2.5	NYLON	$14.08
60X15X2.5	60	15	2.5	PHENOLIC	$7.31
60X19X3.17	60	19	3.17	NYLON	$15.38
60X7X2.5	60	7	2.5	PHENOLIC	$4.63
60X8X2.5	60	8	2.5	PHENOLIC	$4.50
60X9.7X2.5	60	9.7	2.5	PHENOLIC	$6.48
62X25X3	62	25	3	PHENOLIC	$12.92
63X12X2	63	12	2	NYLON	$15.28
63X15.7X3	63	15.7	3	PHENOLIC	$10.34
63X15X2.5	63	15	2.5	PHENOLIC	$15.39
63X20X2.5	63	20	2.5	NYLON	$10.59
63X5.3X2.5	63	5.3	2.5	PHENOLIC	$4.72
63X5.6X2.5	63	5.6	2.5	NYLON	$4.47
63X5X3.1	63	5	3.1	NYLON	$17.93
63X7X2.5	63	7	2.5	PHENOLIC	$9.22
63X9.7X2.5	63	9.7	2.5	PHENOLIC	$6.65
65X10X2.5	65	10	2.5	NYLON	$11.75
65X15.5X3	65	15.5	3	PHENOLIC	$9.25

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PNEU-DRAULICS

METRIC WEAR RINGS

PART NUMBER	O/D	HT	CROSS SECTION	MATERIAL	LIST PRICE
65X15X2.5	65	15	2.5	NYLON	$22.78
65X25X2.5	65	9.5	2.5	PHENOLIC	$11.81
65X9.5X2.5	65	24.5	2.5	PHENOLIC	$18.76
68X25X2.5	68	12.5	2.5	PHENOLIC	$11.47
68X9.7X2.5	68	14.8	2.5	PHENOLIC	$7.18
69X30X3	69	15	3	NYLON	$17.50
69X30X3	69	15	3	PHENOLIC	$15.28
69X31.5X3	69	15	3	PHENOLIC	$14.59
69X31X3	69	7.9	3	NYLON	$34.38
69X35X2	69	9.5	2	PHENOLIC	$19.69
70X10X2.5	70	14.8	2.5	PHENOLIC	$9.50
70X10X3.12	70	15	3.12	NYLON	$7.28
70X12.4X3	70	20	3	PHENOLIC	$8.05
70X12X2.5	70	30	2.5	PHENOLIC	$11.28
70X12X4T	70	7.9	4T	TEFLON	$47.34
70X15.5X3	70	8	3	NYLON	$14.46
70X15X2.5	70	14.8	2.5	NYLON	$50.56
70X19.5X3	70	16.8	3	NYLON	$19.20
70X20X2.5	70	20	2.5	PHENOLIC	$12.22
70X5.5X2.5	70	7.9	2.5	TEFLON	$67.69
70X6.8X2.5	70	9.5	2.5	PHENOLIC	$5.51
70X9.5X2.4	70	12	2.4	NYLON	$15.84
75X10X2.5	75	9.5	2.5	PHENOLIC	$15.92
75X10X3	75	14.8	3	PHENOLIC	$5.94
75X11.8X4	75	25	4	TEFLON	$66.78
75X12.7X3	75	7.9	3	NYLON	$16.40
75X14.5X2.5	75	9.7	2.5	PHENOLIC	$13.91
75X15X2	75	9.8	2	NYLON	$8.56
75X18X2.5	75	14.8	2.5	PHENOLIC	$9.27
75X20X2.5	75	9.5	2.5	PHENOLIC	$14.18
75X25X3.15	75	9.7	3.15	NYLON	$13.25
75X25X3	75	20	3	PHENOLIC	$16.19
75X30X2.5	75	35	2.5	PHENOLIC	$16.39
75X5.4X2.5	75	8	2.5	NYLON	$10.90
75X83X18	75	9.5	18	TEFLON	$11.79
75X9.5X2.5	75	20	2.5	PHENOLIC	$6.32
75X9.5X3.15	75	20	3.15	NYLON	$7.85
76X31.5X3.12	76	14.8	3.15	PHENOLIC	$24.41
76X35X3	76	9.5	3	PHENOLIC	$23.31
76X39.7X3	76	25	3	PHENOLIC	$20.94
80X10X2.5	80	14.8	2.5	PHENOLIC	$5.95
80X10X2	80	20	2	PHENOLIC	$10.54
80X10X3.12	80	15	3.12	NYLON	$7.60

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METRIC WEAR RINGS

PART NUMBER	O/D	HT	CROSS SECTION	MATERIAL	LIST PRICE
80X10X3	80	10	3	PHENOLIC	$6.81
80X11.8X4	80	11.8	4	TEFLON	$50.69
80X12.6X3.18	80	12.6	3.18	NYLON	$18.50
80X13X2.5	80	13	2.5	NYLON	$10.55
80X14.5X2.5	80	14.5	2.5	PHENOLIC	$14.08
80X15.5X3	80	15.5	3	NYLON	$7.28
80X15X2.5	80	15	2.5	PHENOLIC	$8.45
80X19.5X3	80	19.5	3	NYLON	$16.69
80X20X2.5	80	20	2.5	NYLON	$14.58
80X25X3	80	25	3	NYLON	$13.56
80X5.4X2.5	80	5.4	2.5	PHENOLIC	$4.71
80X5X2.5	80	5	2.5	NYLON	$64.34
80X6X3.12	80	6	3.12	NYLON	$30.03
80X9.35X3.17	80	9.35	3.17	NYLON	$14.69
80X9.7X2.5	80	9.7	2.5	PHENOLIC	$7.85
83X25X1.5	80	25	1.5	NYLON	$40.28
85X12.5X3	80	12	3	PHENOLIC	$10.44
85X15X2.5	85	15	2.5	NYLON	$23.87
85X15X4	80	15	4	TEFLON	$15.40
85X20X3	85	20	3	PHENOLIC	$13.27
85X25X2.5	85	25	2.5	NYLON	$62.06
85X25X3	85	25	3	PHENOLIC	$15.19
85X29.9X3.25	85	29.9	3.25	NYLON	$37.75
85X5.35X2.4	85	5.35	2.4	NYLON	$29.53
85X6X2.5	85	6	2.5	NYLON	$28.01
85X9.5X2.5	85	9.5	2.5	NYLON	$23.04
86X25X3	90	25	3	NYLON	$14.36
86X40X3	90	40	3	PHENOLIC	$22.91
90X10X2.5	90	10	2.5	TEFLON	$54.16
90X10X3	90	10	3	PHENOLIC	$9.97
90X12.5X3	90	12.5	3	NYLON	$10.55
90X14.8X4	90	14.8	4	TEFLON	$59.25
90X15X2.5	90	15	2.5	PHENOLIC	$11.00
90X15X2	90	15	2	PHENOLIC	$10.31
90X15X3.15	90	15	3.15	NYLON	$7.78
90X15X4	90	15	4	PHENOLIC	$12.84
90X25X3	90	25	3	NYLON	$12.83
90X5X2.5	90	5	2.5	PHENOLIC	$10.19
90X6X2.5	90	6	2.5	NYLON	$29.94
90X6X4	90	6	4	PHENOLIC	$6.62

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METRIC WEAR RINGS

PART NUMBER	O/D	HT	CROSS SECTION	MATERIAL	LIST PRICE
90X9.7X2.5	90	9.7	2.5	PHENOLIC	$6.60
95X12.4X3	95	12.4	3	PHENOLIC	$9.38
95X14.8X2.5	95	14.8	2.5	PHENOLIC	$10.75
95X15X2.5	95	15	2.5	PHENOLIC	$10.77
95X15X2.5	95	15	2.5	NYLON	$15.07
95X6X2.5	95	6	2.5	PHENOLIC	$4.94
95X6X4	95	6	4	TEFLON	$35.41
95X9.5X2.5	95	9.5	2.5	PHENOLIC	$9.71
96X29X3	96	29	3	PHENOLIC	$19.79
97X9.7X2.5	97	9.7	2.5	TEFLON	$5.47
100X10X3	100	10	3	PHENOLIC	$8.09
100X10X4.5	100	10	4.5	NYLON	$20.94
100X12.3X2.85	100	12.3	2.85	PHENOLIC	$10.88
100X12.5X3	100	12.5	3	PHENOLIC	$14.05
100X14.7X2.5	100	14.7	2.5	PHENOLIC	$12.50
100X14.8X3	100	14.8	3	PHENOLIC	$12.06
100X15X2.5	100	15	3.5	NYLON	$3.98
100X15X3.15	100	15	3.15	NYLON	$13.93
100X20X3	100	20	3	PHENOLIC	$14.34
100X22.4X3	100	22.4	3	NYLON	$26.57
100X25X2.5	100	25	2.5	PHENOLIC	$17.38
100X25X3	100	25	3	NYLON	$15.70
100X28.3X3.24	100	28.3	3.24	NYLON	$53.13
100X30X3	100	30	3	PHENOLIC	$18.88
100X40X3.12	100	40	3.12	PHENOLIC	$20.72
100X5.9X3	100	5.9	3	NYLON	$24.66
100X5.9X4	100	5.9	4	PHENOLIC	$10.30
100X5.9X4	100	5.9	4	TEFLON	$36.69
100X5.9X4	100	5.9	4	TEFLONWGROOVE	$13.38
100X6X2.5	100	6	2.5	PHENOLIC	$13.07
100X9.5X2.5	100	9.5	6	PHENOLIC	$12.39
101X39.5X3	101	39.5	3	PHENOLIC	$36.00
105X10X4.5	105	10	2.5	NYLON	$27.66
105X14.8X2.5	105	14.8	4	PHENOLIC	$10.67
105X15X2.5	105	15	3	PHENOLIC	$11.23
105X15X3	105	15	3	NYLON	$34.63
105X24.5X3	105	24.5	3	PHENOLIC	$33.88
105X6.2X4	105	6.2	4	NYLON	$33.41
105X6X2.5	105	6	2.5	PHENOLIC	$7.75
105X6X4T	105	6	4T	TEFLON	$26.05
105X9.7X3	105	9.7	3	PHENOLIC	$9.25
110X12.5X3	110	12.5	3	PHENOLIC	$16.10
110X12.5X4.5	110	12.5	4.5	NYLON	$10.06

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METRIC WEAR RINGS

PART NUMBER	O/D	HT	CROSS SECTION	MATERIAL	LIST PRICE
110X15X2.5	110	15	2.5	PHENOLIC	$13.19
110X15X3	110	15	3	PHENOLIC	$15.05
110X15X4	110	15	4	PHENOLIC	$15.62
110X30X3	110	30	3	PHENOLIC	$21.63
110X5.9X3	110	5.9	3	NYLON	$20.69
110X5.9X4	110	5.9	4	PHENOLIC	$13.03
110X7.9X3.12	110	7.9	3.12	NYLON	$21.76
115X15X3	115	15	3	NYLON	$12.17
115X6X4T	115	6	4T	TEFLON	$16.78
115X7.9X2.5	115	7.9	2.5	NYLON	$12.38
115X9.5X2.5	115	9.5	2.5	PHENOLIC	$10.41
115X9.7X3	115	9.7	3	PHENOLIC	$11.72
120X12.3X2.85	120	12.3	2.85	PHENOLIC	$13.09
120X14.8X2.5	120	14.8	2.5	PHENOLIC	$21.79
120X14.8X3	120	14.8	3	PHENOLIC	$13.09
120X15X3	120	15	3	NYLON	$26.76
120X15X4.5	120	15	4.5	NYLON	$31.38
120X2.5X3	120	2.5	3	PHENOLIC	$19.56
120X20X3.12	120	20	3.12	NYLON	$19.81
120X25X3	120	25	3	PHENOLIC	$19.56
120X30X3	120	30	3	NYLON	$18.38
120X5.9X4	120	5.9	4	PHENOLIC	$9.77
120X6X4	120	6	4	TEFLON	$16.56
120X7.9X2.5	120	7.9	2.5	NYLON	$10.31
120X8X4	120	8	4	TEFLON	$38.60
120X9.5X2.5	120	9.5	2.5	PHENOLIC	$8.66
125X10X3.1	125	10	3.1	NYLON	$13.95
125X15X3	125	15	3	NYLON	$17.19
125X16.8X3.5	125	16.8	3.5	PHENOLIC	$17.48
125X20X3	125	20	3	NYLON	$27.75
125X7.9X2.5	125	7.9	2.5	NYLON	$9.14
125X9.5X2.5	125	9.5	2.5	PHENOLIC	$9.18
125X9.9X3	125	9.9	3	PHENOLIC	$9.95
130X12X3	130	12	3	NYLON	$11.00
130X14.8X2.5	130	14.8	2.5		$13.78
130X15X2.5	130	15	2.5	PHENOLIC	$14.47
130X15X3.5	130	15	3.5	NYLON	$23.75
130X15X5	130	15	5	PHENOLIC	$17.94
130X20X4	130	20	4	PHENOLIC	$29.16
130X7.9X2.5	130	7.9	2.5	PHENOLIC	$8.19

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METRIC WEAR RINGS

PART NUMBER	O/D	HT	CROSS SECTION	MATERIAL	LIST PRICE
130X9.5X2.5	130	9.5	2.5	PHENOLIC	$11.77
130X9.5X4	130	9.5	4	TEFLON	$24.72
135X14.8X2.5	135	14.8	2.5	PHENOLIC	$14.81
135X14.8X3.5	135	14.8	3.5	NYLON	$24.48
135X15X5	135	15	5	NYLON	$51.34
135X25X3.5	135	25	3.5	PHENOLIC	$23.16
135X7.75X4	135	7.75	4	NYLON	$34.44
135X7.9X2.5	135	7.9	2.5	NYLON	$14.74
135X8X4	135	8	4	TEFLON	$43.63
135X9.5X2.5	135	9.5	2.5	PHENOLIC	$12.61
135X9.7X4	135	9.7	4	TEFLON	$34.60
135X9.8X3.5	135	9.8	3.5	PHEONLIC	$20.70
140X10X3.12	140	10	3.12	NYLON	$16.81
140X17.5X6	140	17.5	6	NYLON	$65.54
140X20X3.5	140	20	3.5	PHENOLIC	$21.66
140X35X3.5	140	35	3.5	PHENOLIC	$15.72
140X40X3.5	140	40	3.5	PHENOLIC	$38.88
140X50X3	140	50	3	PHENOLIC	$36.90
140X8X4	140	8	4	TEFLON	$45.49
140X9.5X2.5	140	9.5	2.5	NYLON	$10.58
140X9.5X2.5	140	9.5	2.5	PHENOLIC	$14.34
140X9.7X4	140	9.7	4	TEFLON	$54.17
145X14.8X2.5	145	14.8	2.5	PHENOLIC	$15.63
145X25X2.5	145	25	2.5	PHENOLIC	$22.00
145x9.5x2.5	145	9.5	2.5	NYLON	$14.34
145X9.5X3.5	145	9.5	3.5	PHENOLIC	$14.91
145X9.7X4	145	9.7	4	TEFLON	$45.50
150X14.8X2.5	150	14.8	2.5	PHENOLIC	$15.97
150X14.8X3.5	150	14.8	3.5	PHENOLIC	$18.98
150X20X3.5	150	20	3.5	PHENOLIC	$19.69
150X25X3.5	150	25	3.5	PHENOLIC	$28.50
150X35X3.5	150	35	3.5	NYLON	$47.50
150X40X3.5	150	40	3.5	PHENOLIC	$40.16
150X6X4	150	6	4	TEFLON	$19.56
150X7.8X4	150	7.8	4	PHENOLIC	$14.25
150X8X4	150	8	4	TEFLON	$48.03
150X9.5X2.5	150	9.5	2.5	PHENOLIC	$11.53
155X14.8X2.5	155	14.8	2.5	PHENOLIC	$16.55
160X14.35X2.5	160	14.38	2.5	PHENOLIC	$16.53
160X14.8X2.5	160	14.8	2.5	PHENOLIC	$33.51
160X20X3.12	160	20	3.12	NYLON	$17.72
160X20X3.5	160	20	3.5	NYLON	$24.77
160X20X6	160	20	6	PHENOLIC	$31.44

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METRIC WEAR RINGS

PART NUMBER	O/D	HT	CROSS SECTION	MATERIAL	LIST PRICE
160X40X3.5	160	40	3.5	NYLON	$102.54
160X9.5X2.5	160	9.5	2.5	NYLON	$13.19
165X14.8X2.5	165	14.8	2.5	PHENOLIC	$23.73
165X9.5X2.5	165	9.5	2.5	PHENOLIC	$19.61
170X14.8X2.5	170	14.8	2.5	PHENOLIC	$19.44
170X25X4	170	25	4	PHENOLIC	$28.28
170X50X4	170	50	4	NYLON	$93.53
170X9.7X4	170	9.7	4	TEFLON	$37.03
175X25X2.5	175	25	2.5	PHENOLIC	$27.69
180X14.8X2.5	180	14.8	2.5	PHENOLIC	$19.67
180X14.8X3	180	14.8	3	PHENOLIC	$35.02
180X20X3	180	20	3	NYLON	$21.23
190X14.8X3	190	14.8	3	PHENOLIC	$32.38
190X15X2.5	190	15	2.5	PHENOLIC	$22.46
190X9.5X4	190	9.5	4	NYLON	$42.13
200X15X3	200	15	3	PHENOLIC	$23.84
200X9.7X2.5	200	9.7	2.5	PHENOLIC	$16.91

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PNEU-DRAULICS

JIS METRIC REFERENCE CHART

***These 0-rings are available in a variety of materials including nitrile 70 and 90 durometer, viton 70 and 90 durometer

JIS B 2401	Thickness W (mm)		Inner Diameter d (mm)	
P 3			2.8	±0.14
P 4			3.8	±0.14
P 5			4.8	±0.15
P 6			5.8	±0.15
P 7	1.9	±0.08	6.8	±0.16
P 8			7.8	±0.16
P 9			8.8	±0.17
P 10			9.8	±0.17
P 10A			9.8	±0.17
P 11			10.8	±0.18
P 11.2			11.0	±0.18
P 12			11.8	±0.19
P 12.5			12.3	±0.19
P 14			13.8	±0.19
P 15	2.4	±0.09	14.8	±0.20
P 16			15.8	±0.20
P 18			17.8	±0.21
P 20			19.8	±0.22
P 21			20.8	±0.23
P 22			21.8	±0.24
P 22A			21.7	±0.24
P 22.4			22.1	±0.24
P 24			23.7	±0.24
P 25			24.7	±0.25
P 25.5			25.2	±0.25
P 26			25.7	±0.26
P 28			27.7	±0.28
P 29			28.7	±0.29
P 29.5			29.2	±0.29
P 30			29.7	±0.29
P 31	3.5	±0.10	30.7	±0.30
P 31.5			31.2	±0.31
P 32			31.7	±0.31
P 34			33.7	±0.33
P 35			34.7	±0.34
P 35.5			35.2	±0.34
P 36			35.7	±0.34
P 38			37.7	±0.37
P 39			38.7	±0.37
P 40			39.7	±0.37
P 41			40.7	±0.38
P 42			41.7	±0.39
P 44			43.7	±0.41
P 45			44.7	±0.41
P 46			45.7	±0.42

JIS B 2401	Thickness W (mm)		Inner Diameter d (mm)	
P 48			47.7	±0.44
P 49	3.5	±0.10	48.7	±0.45
P 50			49.7	±0.45
P 48A			47.6	±0.45
P 50A			49.6	±0.45
P 52			51.6	±0.47
P 53			52.6	±0.48
P 55			54.6	±0.49
P 56			55.6	±0.50
P 58			57.6	±0.52
P 60			59.6	±0.53
P 62			61.6	±0.55
P 63			62.6	±0.56
P 65			64.6	±0.57
P 67			66.6	±0.59
P 70			69.6	±0.61
P 71			70.6	±0.62
P 75			74.6	±0.65
P 80	5.7	±0.13	79.6	±0.69
P 85			84.6	±0.73
P 90			89.6	±0.77
P 95			94.6	±0.81
P 100			99.6	±0.84
P 102			101.6	±0.85
P 105			104.6	±0.87
P 110			109.6	±0.91
P 112			111.6	±0.92
P 115			114.6	±0.94
P 120			119.6	±0.98
P 125			124.6	±1.01
P 130			129.6	±1.05
P 132			131.6	±1.06
P 135			134.6	±1.09
P 140			139.6	±1.12
P 145			144.6	±1.16
P 150			149.6	±1.19
P 150A			149.5	±1.19
P 155			154.5	±1.23
P 160			159.5	±1.26
P 165			164.5	±1.30
P 170			169.5	±1.33
P 175	8.4	±0.15	174.5	±1.37
P 180			179.5	±1.40
P 185			184.5	±1.44
P 190			189.5	±1.48
P 195			194.5	±1.51

JIS B 2401	Thickness W (mm)		Inner Diameter d (mm)	
P 200			199.5	±1.55
P 205			204.5	±1.58
P 209			208.5	±1.61
P 210			209.5	±1.62
P 215			214.5	±1.65
P 220			219.5	±1.68
P 225			224.5	±1.71
P 230			229.5	±1.75
P 235			234.5	±1.78
P 240			239.5	±1.81
P 245	8.4	±0.15	244.5	±1.84
P 250			249.5	±1.88
P 255			254.5	±1.91
P 260			259.5	±1.94
P 265			264.5	±1.97
P 270			269.5	±2.01
P 275			274.5	±2.04
P 280			279.5	±2.07
P 285			284.5	±2.10
P 290			289.5	±2.14
P 295			294.5	±2.17
P 300			299.5	±2.20
P 315			314.5	±2.30
P 320			319.5	±2.33
P 335			334.5	±2.42
P 340			339.5	±2.45
P 355			354.5	±2.54
P 360			359.5	±2.57
P 375			374.5	±2.67
P 385			384.5	±2.73
P 400			399.5	±2.82
G 25			24.4	±0.25
G 30			29.4	±0.29
G 35			34.4	±0.33
G 40			39.4	±0.37
G 45			44.4	±0.41
G 50			49.4	±0.45
G 55			54.4	±0.49
G 60			50.4	±0.53
G 65			64.4	±0.57
G 70			69.4	±0.61
G 75			74.4	±0.65
G 80			79.4	±0.69
G 85	3.1	±0.10	84.4	±0.73
G 90			89.4	±0.77
G 95			94.4	±0.81

JIS B 2401	Thickness W (mm)		Inner Diameter d (mm)	
G 100			99.4	±0.85
G 105			104.4	±0.87
G 110			109.4	±0.91
G 115			114.4	±0.94
G 120			119.4	±0.98
G 125	3.1	±0.10	124.4	±1.01
G 130			129.4	±1.05
G 135			134.4	±1.08
G 140			139.4	±1.12
G 145			144.4	±1.16
G 150			149.3	±1.19
G 155			154.3	±1.23
G 160			159.3	±1.26
G 165			164.3	±1.30
G 170			169.3	±1.33
G 175			174.3	±1.37
G 180			179.3	±1.40
G 185	5.7	±0.13	184.3	±1.44
G 190			189.3	±1.47
G 195			194.3	±1.51

JIS B 2401	Thickness W (mm)		Inner Diameter d (mm)	
G 200			199.3	±1.55
G 205			204.3	±1.58
G 210			209.3	±1.61
G 215			214.3	±1.64
G 220			219.3	±1.68
G 225			224.3	±1.71
G 230			229.3	±1.73
G 235	5.7	±0.13	234.3	±1.77
G 240			239.3	±1.81
G 245			244.3	±1.84
G 250			249.3	±1.88
G 255			254.3	±1.91
G 260			259.3	±1.94
G 265			264.3	±1.97
G 270			269.3	±2.01
G 275			274.3	±2.04
G 280			279.3	±2.07
G 285			284.3	±2.10
G 290			289.3	±2.14
G 295			294.3	±2.17

JIS B 2401	Thickness W (mm)		Inner Diameter d (mm)	
G 300			299.3	±2.20
G 305			304.3	±2.24
G 310			309.3	±2.27
G 315			314.3	±2.30
G 320			319.3	±2.33
G 325			324.3	±2.36
G 330			329.3	±2.39
G 335	5.7	±0.13	334.3	±2.42
G 340			339.3	±2.45
G 345			344.3	±2.48
G 350			349.3	±2.51
G 355			354.3	±2.54
G 360			359.3	±2.57
G 365			364.3	±2.60
G 370			369.3	±2.63
G 375			374.3	±2.67
G 380			379.3	±2.70
G 385			384.3	±2.73
G 390			389.3	±2.76
G 395			394.3	±2.79
G 400			399.3	±2.82

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
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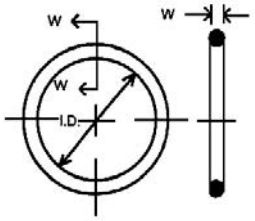
METRIC O-RINGS NITRILE 70 DUROMETER

Metric o-rings are listed by inside diameter and width.

*Other compounds available. Please inquire.



-40°to +240°F
Nitrile (Buna N)
General purpose sealing: Petroleum oils and fluids: water, silicone, greases and oils.

PNEU-DRAULICS PART #	DESCRIPTION	LIST
1.15X1MM N70	BUNA METRIC ORING 70 DURO	$0.22
1.5X1MM N70	70 DURO METRIC NITRILE	$0.22
1.8X1MM N70	70 DURO METRIC NITRILE	$0.22
2X1MM N70	70 DURO METRIC NITRILE	$0.23
2X1.5MM N70	70 DURO METRIC NITRILE	$0.22
2X1.8MM N70	BUNA METRIC ORING 70 DURO	$0.18
2X2MM N70	BUNA METRIC ORING 70 DURO	$0.20
2.2X1.6MM N70	METRIC ORING 70 DURO	$0.22
2.24X1.78MM N70	BUNA METRIC ORING	$0.18
2.4X1.9MM N70	BUNA METRIC ORING 70 DURO	$0.24
2.5X1MM N70	BUNA METRIC ORING 70 DURO	$0.23
2.5X1.5MM N70	BUNA METRIC ORING 70 DURO S3	$0.22
2.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.22
2.6X1.9MM N70	BUNA METRIC ORING 70 DURO	$0.24
2.75X1.6MM N70	BUNA METRIC ORING 70 DURO	$0.23
2.8X1.8MM N70	BUNA METRIC ORING 70 DURO	$0.18
2.8X1.9MM N70	BUNA METRIC ORING P3	$0.49
3X1MM N70	70 DUROMETER METRIC NITRILE	$0.23
3X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.22
3.1X1.6MM N70	BUNA METRIC ORING	$0.23
3.15X1.8MM N70	BUNA METRIC ORING 70 DURO	$0.19
3.2X1.6MM N70	BUNA METRIC ORING 70 DURO	$0.24
3X3MM N70	BUNA METRIC ORING 70 DURO	$0.26
3.3X1MM N70	BUNA METRIC ORING 70 DURO	$0.41
3.3X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.28
3.4X1.9MM N70	BUNA METRIC ORING 70 DURO	$0.24
3.5X1MM N70	70 DURO METRIC NITRILE	$0.23
3.5X1.5MM N70	METRIC ORING 70 DURO	$0.24
3.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.22
3.5X3MM N70	BUNA METRIC ORING 70 DURO	$0.26
3.55X1.8MM N70	BUNA METRIC ORING 70 DURO	$0.19
3.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.28
3.8X1.9MM N70	BUNA METRIC ORING P4	$0.49
4X1MM N70	METRIC ORING NITRILE	$0.24
4X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.24

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PNEU-DRAULICS

METRIC O-RINGS NITRILE 70 DUROMETER

PNEU-DRAULICS PART #	DESCRIPTION	LIST
4X1.5MM N70A	75 DURO METRIC BUNA	$0.24
4X1.8MM N70	BUNA METRIC ORING	$0.20
4X2MM N70	BUNA METRIC ORING	$0.22
4X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.27
4X3MM N70	BUNA METRIC ORING 70 DURO	$0.26
4.1X1.6MM N70	BUNA METRIC 70 DURO	$0.24
4.1X1.6MM N70A	BUNA METRIC ORING	$0.24
4.2X1.9MM N70	BUNA METRIC ORING 70 DURO	$0.24
4.3X2.4MM N70	BUNA METRIC ORING	$0.28
4.5X1.5MM N70	BUNA METRIC 70 DURO S5	$0.25
4.5X1.5MM N70A	70 DURO METRIC NITRILE	$0.25
4.5X1.8MM N70	BUNA METRIC ORING 70 DURO	$0.20
4.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.23
4.5X3MM N70	BUNA METRIC ORING 70 DURO	$0.27
4.6X2MM N70	BUNA METRIC ORING 70 DURO	$0.36
4.6X2.4MM N70	70 DURO METRIC NITRILE	$0.28
4.6X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.27
4.7X1.6MM N70	BUNA METRIC ORING 70 DURO	$0.26
4.76X1.78MM N70	BUNA METRIC ORING 70 DURO	$0.18
4.8X1.9MM N70	P-5 70 DURO METRIC BUNA	$0.49
4.9X1.9MM N70	BUNA METRIC ORING 70 DURO	$0.26
5X1MM N70	BUNA METRIC ORING N70	$0.25
5X1.5MM N70	BUNA METRIC ORING	$0.25
5X1.6MM N70	BUNA METRIC ORING 70 DURO	$0.27
5X1.8MM N70	METRIC NITRILE ORING	$0.21
5X2MM N70	NITRILE 70 DURO METRIC	$0.23
5X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.27
5X3MM N70	BUNA METRIC ORING	$0.27
5X4MM N70	METRIC NITRILE 70 DURO ORING	$0.39
5.1X1.6MM N70	BUNA METRIC ORING 70 DURO	$0.28
5.15X1.78MM N70	BUNA METRIC ORING 70 DURO	$0.22
5.3X1.8MM N70	BUNA METRIC ORING 70 DURO	$0.22
5.3X2.4MM N70	BUNA METRIC ORING	$0.28
5.5X1MM N70	70 DURO METRIC NITRILE	$0.26
5.5X1.5MM N70	BUNA METRIC ORING 70 DURO S6	$0.26
5.5X1.5MM N70A	70 DURO METRIC NITRILE	$0.26
5.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.24
5.6X1.8MM N70	BUNA METRIC ORING 70 DURO	$0.22
5.6X2.4MM N70	BUNA METRIC ORING	$0.28
5.7X1.9MM N70	BUNA METRIC ORING 70 DURO	$0.32

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METRIC O-RINGS NITRILE 70 DUROMETER

PNEU-DRAULICS PART #	DESCRIPTION	LIST
5.8X1.9MM N70	BUNA METRIC ORING 70 DURO	$0.49
6X1MM N70	BUNA METRIC ORING 70 DURO	$0.26
6X1.5MM N70	NITRILE METRIC ORING	$0.26
6X1.8MM N70	BUNA METRIC ORING 70 DURO	$0.22
6X2MM N70	PD1061 70A BUNA METRIC ORING	$0.24
6X2.2MM N70	BUNA METRIC ORING	$0.28
6X2.5MM N70	BUNA METRIC ORING	$0.27
6X3MM N70	70 DURO METRIC NITRILE	$0.27
6.1X1.6MM N70	METRIC ORING 70 DURO	$0.28
6.3X1.8MM N70	BUNA METRIC ORING 70 DURO	$0.23
6.3X2.4MM N70	BUNA METRIC ORING	$0.28
6.35X1.78MM N70	BUNA METRIC ORING 70 DURO	$0.20
6.4X1.9MM N70	BUNA METRIC ORING 70 DURO	$0.34
6.5X1MM N70	BUNA METRIC ORING 70 DURO	$0.27
6.5X1.5MM N70	BUNA METRIC ORING 70 DURO S7	$0.28
6.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.28
6.5X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.27
6.5X3MM N70	70 DURO METRIC NITRILE ORING	$0.29
6.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.28
6.7X1.8MM N70	BUNA METRIC ORING 70 DURO	$0.23
6.75X1.78MM N70	70 DURO METRIC NITRILE	$0.20
6.8X1.42MM N70	70A NITRILE ORING	$0.20
6.8X1.9MM N70	70 DURO METRIC NITRILE	$0.53
6.9X1.8MM N70	BUNA METRIC ORING	$0.23
7X1MM N70	METRIC ORING N70	$0.27
7X1.5MM N70	70 DURO METRIC NITRILE	$0.28
7X2MM N70	BUNA METRIC ORING	$0.28
7X2MM N70A	70 DURO METRIC NITRILE	$0.03
7X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.27
7X3MM N70	BUNA METRIC ORING 70 DURO	$0.29
7X3MM N70A	70 DURO NITRILE	$4.46
7.1X1.6MM N70	BUNA METRIC ORING	$0.28
7.1X1.8MM N70	BUNA METRIC ORING 70 DURO	$0.23
7.2X1.9MM N70	BUNA METRIC ORING 70 DURO	$0.36
7.3X2.4MM N70	BUNA METRIC	$0.28
7.5X1MM N70	BUNA METRIC ORING 70 DURO	$0.29
7.5X1.5MM N70	BUNA METRIC ORING S8	$0.28
7.5X2MM N70	70D DURO METRIC NITRILE	$0.28
7.5X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.28
7.5X3MM N70	BUNA METRIC ORING 70 DURO	$0.29

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METRIC O-RINGS NITRILE 70 DUROMETER

PNEU-DRAULICS PART #	DESCRIPTION	LIST
7.6X2.4MM N70	BUNA METRIC ORING	$0.28
7.8X1.9MM N70	P8 METRIC BUNA ORING	$0.53
7.94X1.78MM N70	BUNA METRIC ORING 70 DURO	$0.23
8X1MM N70	70 DURO METRIC NITRILE	$0.29
8X1.5MM N70	BUNA 70 DURO METRIC ORING	$0.28
8X1.8MM N70	BUNA METRIC ORING	$0.24
8X1.9MM N70	BUNA METRIC ORING	$0.87
8X2MM N70	BUNA METRIC ORING	$0.28
8X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.30
8X2.5MM N70	70 DURO METRIC NITRILE	$0.27
8X3MM N70	BUNA METRIC ORING 70 DURO	$0.29
8.1X1.6MM N70	BUNA METRIC ORING 70 DURO	$0.29
8.3X2.4MM N70	BUNA METRIC ORING	$0.30
8.5X1MM N70	BUNA METRIC ORING 70 DURO	$0.29
8.5X1.5MM N70	BUNA METRIC ORING 70 DURO S9	$0.28
8.5X1.5MM N70A	70 DURO METRIC NITRILE	$0.28
8.5X1.8MM N70	BUNA METRIC ORING 70 DURO	$0.24
8.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.28
8.5X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.29
8.5X3MM N70	BUNA METRIC ORING 70 DURO	$0.35
8.6X2.4MM N70	BUNA METRIC ORING	$0.30
8.73X1.78MM N70	BUNA METRIC ORING 70 DURO	$0.23
8.9X1.9MM N70	BUNA METRIC ORING 70 DURO	$0.40
8.9X2.7MM N70	BUNA METRIC ORING 70 DURO	$0.26
9X1MM N70	NITRILE 70 METRIC ORING	$0.29
9X1.5MM N70	BUNA METRIC	$0.28
9X1.8MM N70	BUNA METRIC ORING 70 DURO	$0.25
9X2MM N70	BUNA METRIC ORING	$0.28
9X2.2MM N70	BUNA METRIC ORING 70 DURO	$0.51
9X2.5MM N70	BUNA METRIC ORING	$0.29
9X3MM N70	BUNA METRIC ORING	$0.35
9X4MM N70	70 DURO METRIC NITRILE	$0.55
9.1X1.6MM N70	BUNA METRIC ORING	$0.30
9.13X2.62MM N70	BUNA METRIC ORING 70 DURO	$0.26
9.3X2.4MM N70	70 DURO METRIC NITRILE	$0.32
9.5X1.0MM N70	BUNA METRIC 70 DURO	$0.30
9.5X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.30
9.5X1.5MM N70A	70 DURO METRIC NITRILE	$0.30
9.5X1.8MM N70	BUNA METRIC ORING 70 DURO	$0.25
9.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.32

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METRIC O-RINGS NITRILE 70 DUROMETER

PNEU-DRAULICS PART #	DESCRIPTION	LIST
9.5X2.5MM N70A	70 DURO METRIC NITRILE	$0.30
9.5X3MM N70	BUNA METRIC ORING 70 DURO	$0.36
9.52X1.78MM N70	BUNA METRIC ORING	$0.25
9.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.32
9.8X1.9MM N70	BUNA METRIC ORING P10	$0.74
9.8X2.4MM N70	BUNA METRIC ORING	$0.79
9.9X2.62MM N70	BUNA METRIC ORING 70 DURO	$0.27
10X1MM N70	70 DURO METRIC NITRILE	$0.30
10X1MM N70A	70 DURO METRIC NITRILE	$0.30
10X1.5MM N70	70 DUROMETER METRIC NITRILE	$0.30
10X1.8MM N70	BUNA METRIC ORING 70 DURO	$0.25
10X2MM N70	METRIC ORING	$0.32
10X2.5MM N70	METRIC ORING BUNA	$0.32
10X3MM N70	BUNA METRIC ORING	$0.36
10X3.5MM N70	BUNA METRIC ORING 70 DURO	$0.44
10.1X1.6MM N70	BUNA 70 METRIC ORING	$0.31
10.3X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.35
10.5X1MM N70	NITRILE METRIC ORING	$0.31
10.5X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.31
10.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.32
10.5X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.32
10.5X2.7MM N70	BUNA METRIC ORING 70 DURO	$0.32
10.5X3MM N70	BUNA METRIC ORING 70 DURO	$0.38
10.6X1.8MM N70	BUNA METRIC ORING 70 DURO	$0.26
10.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.35
10.8X2.4MM N70	P11 BUNA METRIC ORING 70 DURO	$0.79
11X1MM N70	NITRILE METRIC ORING	$0.31
11X1.5MM N70	BUNA METRIC ORING	$0.31
11X2MM N70	BUNA METRIC ORING	$0.32
11X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.79
11X2.5MM N70	BUNA METRIC ORING	$0.35
11X3MM N70	BUNA METRIC ORING 70	$0.38
11.1X1.6MM N70	70 DURO METRIC NITRILE ORING	$0.32
11.11X1.78MM N70	BUNA METRIC ORING 70 DURO	$0.26
11.2X1.8MM N70	BUNA METRIC ORING 70 DURO	$0.26
11.3X2.4MM N70	BUNA METRIC	$0.35
11.5X1MM N70	BUNA METRIC ORING 70 DURO	$0.32
11.5X1.5MM N70	BUNA METRIC ORING 70 DURO S12	$0.32
11.5X1.5MM N70A	70 DURO METRIC NITRILE	$0.32
11.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.32

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METRIC O-RINGS NITRILE 70 DUROMETER

PNEU-DRAULICS PART #	DESCRIPTION	LIST
11.5X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.35
11.5X3MM N70	BUNA METRIC ORING 70 DURO	$0.38
11.6X2.4MM N70	METRIC ORING	$0.35
11.8X1.8MM N70	BUNA METRIC ORING 70 DURO	$0.26
11.8X2.4MM N70	BUNA METRIC ORING P-12	$0.96
11.91X1.78MM N70	BUNA METRIC ORING 70 DURO	$0.59
11.91X2.62MM N70	BUNA METRIC ORING 70 DURO	$0.32
12X1MM N70	BUNA METRIC ORING 70 DURO	$0.32
12X1.5MM N70	BUNA METRIC ORING S12.5	$0.32
12X2MM N70	70A NITRILE METRIC ORING	$0.32
12X2.5MM N70	METRIC ORING BUNA	$0.35
12X2.5MM N70A	70 DURO METRIC NITRILE	$0.05
12X3MM N70	METRIC ORING	$0.38
12.1X1.6MM N70	70 DURO METRIC NITRILE	$0.32
12.1X2.7MM N70	BUNA METRIC ORING 70 DURO	$0.32
12.3X2.4MM N70	P12.5 METRIC BUNA ORING	$0.96
12.5X1MM N70	NITRILE METRIC ORING	$0.32
12.5X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.35
12.5X1.8MM N70	BUNA METRIC ORING 70 DURO	$0.28
12.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.37
12.5X2.5MM N70	70 DURO NITRILE METRIC ORING	$0.37
12.5X3MM N70	METRIC ORING 70 DURO	$0.41
12.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.37
13X1MM N70	70 DURO METRIC NITRILE	$0.32
13X1.5MM N70	BUNA METRIC ORING	$0.35
13X2MM N70	METRIC BUNA ORING	$0.37
13X2.5MM N70	BUNA METRIC ORING	$0.37
13X3MM N70	70 DURO METRIC NITRILE	$0.42
13X3.5MM N70	BUNA METRIC ORING 70 DURO	$0.53
13X4MM N70A	METRIC ORING	$0.66
13.1X1.6MM N70	BUNA METRIC ORING	$0.38
13.1X2.62MM N70	BUNA METRIC ORING 70 DURO	$0.37
13.2X1.8MM N70	BUNA METRIC ORING 70 DURO	$0.28
13.3X2.4MM N70	BUNA METRIC 70 DURO	$0.38
13.5X1MM N70	BUNA METRIC ORING 70 DURO	$0.34
13.5X1.5MM N70	BUNA METRIC ORING 70 DURO S14	$0.38
13.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.37
13.5X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.39
13.5X3MM N70	METRIC ORING 70 DURO	$0.43
13.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.39

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PNEU-DRAULICS PART #	DESCRIPTION	LIST
13.6X2.7MM N70	BUNA METRIC ORING 70 DURO	$0.41
13.8X2.4MM N70	METRIC ORING P14	$0.96
14X1MM N70	BUNA METRIC ORING 70 DURO	$0.34
14X1.5MM N70	BUNA METRIC ORING	$0.38
14X1.8MM N70	BUNA METRIC ORING 70 DURO	$0.29
14X2MM N70	METRIC NITRILE ORING	$0.37
14X2.5MM N70	METRIC ORING BUNA	$0.39
14X2.65MM N70	BUNA METRIC ORING 70 DURO	$0.39
14X3MM N70	BUNA METRIC 70 DURO	$0.43
14.1X1.6MM N70	BUNA METRIC ORING 70 DURO	$0.38
14.3X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.39
14.5X1MM N70	BUNA METRIC ORING 70 DURO	$0.36
14.5X1.5MM N70	BUNA METRIC ORING 70 DURO S15	$0.38
14.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.40
14.5X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.39
14.5X3MM N70	BUNA METRIC ORING 70 DURO	$0.47
14.6X2.4MM N70	METRIC NITRILE ORING	$0.39
14.8X2.4MM N70	BUNA METRIC ORING	$1.10
15X1MM N70	70 DUROMETER METRIC NITRILE	$0.36
15X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.39
15X1.8MM N70	BUNA METRIC ORING 70 DURO	$0.32
15X2MM N70	BUNA METRIC ORING	$0.40
15X2.5MM N70	BUNA METRIC ORING	$0.39
15X2.65MM N70	BUNA METRIC ORING 70 DURO	$0.39
15X3MM N70	METRIC BUNA ORING	$0.47
15X3.5MM N70	70 DURO METRIC NITRILE	$0.54
15X4MM N70	METRIC ORING BUNA 70 DURO	$1.00
15.08X2.62MM N70	BUNA METRIC ORING 70 DURO	$0.39
15.1X1.6MM N70	BUNA METRIC ORING 70 DURO	$0.43
15.1X2.7MM N70	BUNA METRIC ORING 70 DURO	$0.41
15.5X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.40
15.5X2MM N70	BUNA METRIC ORING	$0.43
15.5X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.41
15.5X3MM N70	BUNA METRIC ORING 70 DURO	$0.51
15.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.50
15.8X2.4MM N70	BUNA METRIC ORING P16	$1.10
15.88X2.62MM N70	BUNA METRIC ORING 70 DURO	$0.39
15.9X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.50
16X1MM N70	BUNA 70 METRIC ORING	$0.38
16X1.5MM N70	BUNA METRIC ORING	$0.40

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METRIC O-RINGS NITRILE 70 DUROMETER

PNEU-DRAULICS PART #	DESCRIPTION	LIST
16X1.8MM N70	BUNA METRIC ORING 70 DURO	$0.33
16X2MM N70	METRIC ORING	$0.43
16X2.5MM N70	METRIC ORING BUNA	$0.48
16X2.65MM N70	BUNA METRIC ORING 70 DURO	$0.39
16X3MM N70	METRIC ORING	$0.51
16X4MM N70	BUNA METRIC ORING	$0.75
16.1X1.6MM N70	70 DURO METRIC NITRILE	$0.45
16.3X2.4MM N70	70 DURO METRIC NITRILE	$0.50
16.5X1MM N70	BUNA METRIC ORING 70 DURO	$0.43
16.5X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.45
16.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.44
16.5X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.49
16.5X3MM N70	70 DURO METRIC NITRILE	$0.59
16.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.50
16.9X2.7MM N70	BUNA METRIC 70 DURO	$0.50
17X1MM N70	BUNA METRIC ORING 70 DURO	$0.43
17X1.5MM N70	BUNA METRIC ORING	$0.45
17X2MM N70	METRIC ORING	$0.44
17X2.5MM N70	BUNA METRIC ORING	$0.49
17X2.65MM N70	BUNA METRIC ORING 70 DURO	$0.50
17X3MM N70	NITRILE METRIC ORING 70 DURO	$0.59
17X4MM N70	70 DURO METRIC NITRILE	$0.79
17.1X1.6MM N70	BUNA METRIC ORING 70 DURO	$0.45
17.3X2.4MM N70	BUNA METRIC 70 DURO	$0.50
17.5X1MM N70	BUNA METRIC ORING 70 DURO	$0.45
17.5X1.5MM N70	BUNA METRIC ORING 70 DURO S18	$0.46
17.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.44
17.5X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.50
17.5X3MM N70	BUNA METRIC ORING 70 DURO	$0.59
17.8X2.4MM N70	BUNA METRIC ORING P18	$0.50
17.86X2.62MM N70	70 DURO METRIC NITRILE	$0.42
18X1MM N70	BUNA METRIC ORING	$0.45
18X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.46
18X2MM N70	METRIC NITRILE ORING	$0.44
18X2.2MM N70	BUNA METRIC ORING	$10.50
18X2.5MM N70	BUNA METRIC ORING	$0.50
18X2.65MM N70	BUNA METRIC ORING 70 DURO	$0.50
18X3MM N70	BUNA METRIC ORING	$0.59
18X4MM N70	METRIC ORING	$0.83
18.1X1.6MM N70	BUNA METRIC ORING 70 DURO	$0.45

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PNEU-DRAULICS PART #	DESCRIPTION	LIST
18.2X3MM N70	BUNA METRIC ORING 70 DURO	$0.60
18.3X2.4MM N70	BUNA METRIC ORING 70 DURO	$1.37
18.4X2.7MM N70	BUNA METRIC ORING 70 DURO	$0.50
18.5X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.48
18.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.45
18.5X2.5MM N70	70 DURO METRIC NITRILE	$0.50
18.5X3MM N70	BUNA METRIC ORING 70 DURO	$0.60
18.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.50
19X1MM N70	METRIC BUNA ORING	$0.48
19X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.48
19X2MM N70	METRIC ORING	$0.45
19X2.5MM N70	METRIC ORING	$0.50
19X2.65MM N70	BUNA METRIC ORING 70 DURO	$0.55
19X3MM N70	METRIC ORING BUNA	$0.60
19X3.5MM N70	70 DURO NITRILE	$0.67
19X4MM N70	METRIC ORING	$0.92
19.1X1.6MM N70	BUNA METRIC ORING 70 DURO	$0.45
19.15X1.78MM N70	BUNA METRIC ORING 70 DURO	$0.74
19.2X3MM N70	BUNA METRIC ORING	$0.67
19.3X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.50
19.5X1MM N70	BUNA METRIC ORING 70 DURO	$0.49
19.5X1.5MM N70	BUNA METRIC ORING 70 DURO S20	$0.48
19.5X1.5MM N70A	70 DURO METRIC NITRILE	$0.48
19.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.45
19.5X2.5M N70	METRIC O RING	$0.51
19.5X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.51
19.5X3MM N70	70 DUROMETER METRIC NITRILE	$0.67
19.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.50
20X1MM N70	BUNA METRIC ORING 70 DURO	$0.49
20X1MM N70A	70 DURO METRIC NITRILE	$0.48
20X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.48
20X2MM N70	BUNA METRIC ORING	$0.45
20X2.5MM N70	METRIC NITRILE ORING	$0.51
20X2.65MM N70	BUNA METRIC ORING	$0.55
20X3MM N70	METRIC ORING BUNA	$0.67
20X3.5MM N70	70 DURO METRIC NITRILE	$0.69
20X5MM N70	3J 4015 METRIC ORING	$1.14
20.2X3MM N70	BUNA METRIC ORING	$0.00
20.3X1.6MM N70	BUNA METRIC ORING 70 DURO	$0.59
20.3X2.4MM N70	70 DURO METRIC NITRILE	$0.51

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METRIC O-RINGS NITRILE 70 DUROMETER

PNEU-DRAULICS PART #	DESCRIPTION	LIST
20.5X1MM N70	BUNA METRIC ORING 70 DURO	$0.50
20.5X2MM N70	BUNA METRIC ORING	$0.45
20.5X2.58MM N70	BUNA METRIC ORING 70 DURO	$0.54
20.5X3MM N70	BUNA METRIC ORING 70 DURO	$0.69
20.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$1.61
20.64X2.62MM N70	BUNA METRIC ORING	$0.56
21X1MM N70	NITRILE METRIC ORING	$0.50
21X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.56
21X2MM N70	BUNA METRIC ORING 70 DURO	$0.45
21X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.55
21X3MM N70	NITRILE METRIC	$0.69
21X4MM N70	METRIC ORING	$0.99
21.1X1.6MM N70	BUNA METRIC ORING 70 DURO	$0.59
21.3X2.4MM N70	METRIC NITRILE ORING 70 DURO	$0.58
21.5X1MM N70	BUNA METRIC ORING 70 DURO	$0.54
21.5X1.5MM N70	BUNA METRIC ORING 70 DURO S22	$0.58
21.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.58
21.5X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.58
21.5X3MM N70	BUNA METRIC ORING 70 DURO	$0.69
21.6X2.4MM N70	BUNA METRIC	$0.58
21.7X3.5MM N70	70 DURO METRIC NITRILE	$1.65
21.8X2.4MM N70	P22 70 DURO METRIC NITRILE	$1.51
22X1MM N70	BUNA METRIC ORING N70	$0.54
22X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.58
22X2MM N70	BUNA METRIC ORING	$0.58
22X2MM N70A	METRIC BUNA ORING	$0.58
22X2.5MM N70	3J 9271 METRIC BUNA ORING	$0.62
22X3MM N70	METRIC ORING BUNA	$0.69
22X3.5MM N70	BUNA METRIC ORING	$0.71
22.1X1.6MM N70	METRIC ORING BUNA 70 DURO	$0.59
22.1X3.5MM N70	P22.4 BUNA METRIC ORING	$1.65
22.2X3MM N70	BUNA METRIC ORING	$0.72
22.23X2.62MM N70	BUNA METRIC ORING 70 DURO	$0.59
22.3X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.66
22.4X2.65MM N70	BUNA METRIC ORING 70 DURO	$0.55
22.5X1MM N70	BUNA METRIC ORING 70 DURO	$0.59
22.5X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.59
22.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.59
22.5X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.62
22.5X3MM N70	BUNA METRIC ORING 70 DURO	$0.72

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METRIC O-RINGS NITRILE 70 DUROMETER

PNEU-DRAULICS PART #	DESCRIPTION	LIST
23X1MM N70	BUNA METRIC ORING N70	$0.59
23X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.59
23X2MM N70	METRIC ORING BUNA 70 DURO	$0.59
23X2.5MM N70	BUNA METRIC ORING	$0.63
23X3MM N70	BUNA METRIC ORING 70 DURO	$0.72
23X4MM N70	METRIC NITRILE ORING	$1.02
23.3X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.66
23.5X1MM N70	BUNA METRIC ORING 70 DURO	$0.62
23.5X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.59
23.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.59
23.5X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.64
23.5X3MM N70	BUNA METRIC ORING 70 DURO	$0.75
23.6X2.65MM N70	BUNA METRIC ORING 70 DURO	$0.66
23.7X3.5MM N70A	70 DURO METRIC NITRILE P24	$1.79
23.81X2.62MM N70	BUNA METRIC ORING 70 DURO	$0.63
24X1MM N70	BUNA METRIC 70 DURO	$0.62
24X1.5MM N70	BUNA METRIC 70 DURO	$0.59
24X2MM N70	BUNA METRIC ORING 70 DURO	$0.59
24X2.5MM N70	NITRILE METRIC ORING	$0.64
24X3MM N70	70 DURO METRIC NITRILE	$0.75
24X3.5MM N70	METRIC BUNA ORING	$0.71
24X4MM N70	METRIC ORING	$1.03
24.2X3MM N70	BUNA METRIC	$0.78
24.3X2.4MM N70	NITRILE METRIC ORING	$0.67
24.4X3.1MM N70	G25 70 DURO METRIC NITRILE	$0.98
24.5X1MM N70	BUNA METRIC ORING 70 DURO	$0.65
24.5X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.59
24.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.68
24.5X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.67
24.5X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.68
24.5X3MM N70	70 DURO BUNA METRIC ORING	$0.78
24.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.67
24.7X3.5MM N70	BUNA METRIC O-RING P-25	$1.79
25X1MM N70	METRIC NITRILE ORING N70	$0.65
25X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.59
25X2MM N70	BUNA METRIC ORING 70 DURO	$0.68
25X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.68
25X2.5MM N70	70 DURO METRIC NITRILE	$0.70
25X2.65MM N70	BUNA METRIC ORING 70 DURO	$0.66
25X3MM N70	METRIC ORING BUNA	$0.87

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METRIC O-RINGS NITRILE 70 DUROMETER

PNEU-DRAULICS PART #	DESCRIPTION	LIST
25X3.5MM N70	BUNA METRIC ORING	$0.71
25.1X1.6MM N70	NITRILE METRIC ORING	$0.66
25.3X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.75
25.5X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.69
25.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.69
25.5X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.72
25.5X3MM N70	BUNA METRIC ORING 70 DURO	$0.87
25.7X3.5MM N70	70 DURO METRIC ORING	$2.03
26X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.69
26X2MM N70	70 DURO METRIC NITRILE	$0.69
26X2.5MM N70	70 DURO METRIC NITRILE	$0.75
26X3MM N70	METRIC ORING	$0.87
26X3.5MM N70	70 DURO NITRILE	$0.87
26.2X3MM N70	BUNA METRIC ORING	$0.88
26.5X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.70
26.5X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.77
26.5X2.65MM N70	BUNA METRIC ORING 70 DURO	$0.68
26.5X3MM N70	BUNA METRIC ORING 70 DURO	$0.88
27X1.5MM N70	BUNA METRIC ORING	$0.70
27X2MM N70	BUNA METRIC ORING	$0.69
27X2.5MM N70	70 DURO METRIC NITRILE	$0.77
27X3MM N70	70 DURO METRIC NITRILE	$0.88
27X3.5MM N70	70 DURO NITRILE	$0.97
27X4MM N70	70 DUROMETER METRIC NITRILE	$1.13
27.1X1.6MM N70	BUNA METRIC ORING 70 DURO	$0.69
27.3X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.75
27.5X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.70
27.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.70
27.5X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.80
27.5X3MM N70	BUNA METRIC ORING 70 DURO	$0.89
27.7X3.5MM N70	METRIC ORING	$15.75
28X1MM N70	METRIC BUNA 70	$0.74
28X1.5MM N70	METRIC ORING 70 DURO BUNA	$0.70
28X2MM N70	BUNA METRIC ORING 70 DURO	$0.74
28X2.5MM N70	70 DURO METRIC NITRILE	$0.80
28X3MM N70	70 DURO METRIC NITRILE	$0.89
28X3.5MM N70	BUNA METRIC ORING 70 DURO	$0.98
28X4MM N70	BUNA METRIC ORING	$1.22
28.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.76
28.5X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.84

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PNEU-DRAULICS PART #	DESCRIPTION	LIST
28.5X3MM N70	BUNA METRIC ORING 70 DURO	$0.89
28.7X3.5MM N70	NITRILE 70 DURO METRIC ORING P29	$2.21
29X1.5MM N70	BUNA METRIC ORING	$0.70
29X2MM N70	BUNA METRIC ORING 70 DURO	$0.77
29X2.5MM N70	70 DURO NITRILE	$0.84
29X3MM N70	METRIC NITRILE 70 DURO ORING	$0.92
29X4MM N70	METRIC ORING	$1.23
29X5MM N70	BUNA METRIC ORING 70 DURO	$1.49
29.1X1.6MM N70	BUNA METRIC ORING 70 DURO	$0.69
29.2X3MM N70	METRIC ORING	$0.92
29.4X1MM N70	BUNA METRIC ORING 70 DURO	$1.16
29.4X3.1MM N70	BUNA METRIC ORING	$1.92
29.4X3.1MM N90	METRIC ORING	$0.64
29.5X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.70
29.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.79
29.5X3MM N70	70 DURO BUNA METRIC ORING	$0.92
29.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.75
29.7X3.5MM N70	METRIC ORING	$2.21
29.9X1MM N70	METRIC ORING 70 DURO	$1.35
30X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.70
30X2MM N70	70 DURO METRIC NITRILE	$0.79
30X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.89
30X2.65MM N70	BUNA METRIC ORING 70 DURO	$0.80
30X3MM N70	METRIC ORING BUNA	$0.92
30X3.5MM N70	BUNA METRIC ORING	$0.99
30X4.5MM N70	70 DURO METRIC NITRILE	$1.31
30.2X3MM N70	METRIC ORING	$0.98
30.3X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.79
30.5X1MM N70	BUNA METRIC ORING 70 DURO	$1.74
31X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.74
31X2MM N70	METRIC ORING 70 DURO	$0.83
31X2.5MM	BUNA METRIC ORING 70 DURO	$0.93
31X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.93
31X3MM N70	BUNA METRIC ORING 70 DURO	$0.98
31X4MM N70	METRIC ORING BUNA 70 DURO	$1.40
31.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.84
31.5X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.93
31.5X3MM N70	BUNA METRIC ORING 70 DURO	$0.98
31.5X4.5MM N70	70 DURO METRIC NITRILE	$1.40
31.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.82

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PNEU-DRAULICS PART #	DESCRIPTION	LIST
31.7X3.5MM N70A	70 DURO METRIC NITRILE	$2.80
32X1MM N70	BUNA METRIC ORING 70 DURO	$1.74
32X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.86
32X2MM N70	BUNA METRIC ORING	$0.84
32X2.5MM N70	NITRILE 70 DURO METRIC	$0.93
32X3MM N70	BUNA METRIC ORING	$0.98
32X4.5MM N70	70 DURO METRIC NITRILE	$1.49
32.1X1.6MM N70	BUNA METRIC ORING 70 DURO	$0.87
32.2X3MM N70	BUNA METRIC ORING	$1.08
32.5X2.5MM N70	BUNA METRIC ORING 70 DURO	$0.97
32.5X3MM N70	70 DURO BUNA METRIC ORING	$1.08
33X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.86
33X2MM N70	BUNA METRIC ORING 70 DURO	$0.86
33X2.5MM N70	70 DURO METRIC NITRILE	$0.97
33X3MM N70	BUNA METRIC ORING	$1.08
33X5MM N70	BUNA METRIC ORING	$1.66
33.3X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.82
33.5X2.65MM N70	BUNA METRIC ORING 70 DURO	$0.92
33.5X3MM N70	BUNA METRIC ORING 70 DURO	$1.08
33.7X3.5MM N70	P34 70 DURO NITRILE	$2.95
34X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.94
34X2MM N70	BUNA METRIC ORING 70 DURO	$0.89
34X2.5MM	METRIC NITRILE ORING	$0.97
34X2.5MM N70	METRIC ORING	$0.97
34X3MM N70	BUNA METRIC ORING 70 DURO	$1.08
34X3.5MM N70	METRIC NITRILE ORING 70 DURO	$1.13
34X4.5MM N70	70 DURO METRIC NITRILE	$1.73
34.2X3MM N70	BUNA METRIC	$1.13
34.4X3.1MM N70	BUNA METRIC ORING G-35	$2.36
34.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.91
34.5X3MM N70	BUNA METRIC ORING 70 DURO	$1.13
34.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.90
34.7X3.5MM N70	P35	$2.99
35X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.96
35X2MM N70	BUNA METRIC 70 DURO	$0.92
35X2MM N70A	BUNA METRIC ORING	$0.92
35X2.5MM N70	METRIC ORING	$1.01
35X3MM N70	BUNA METRIC ORING	$1.13
35X3.5MM N70	METRIC ORING	$1.19
35X4MM N70	NITRILE METRIC ORING	$1.58

PNEU-DRAULICS
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METRIC O-RINGS NITRILE 70 DUROMETER

PNEU-DRAULICS PART #	DESCRIPTION	LIST
35.1X1.6MM N70	BUNA METRIC ORING 70 DURO	$0.96
35.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.92
35.5X2.5MM N70	BUNA METRIC ORING 70 DURO	$1.01
35.5X3MM N70	BUNA METRIC ORING 70 DURO	$1.13
36X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.97
36X1.78MM N70	BUNA METRIC ORING 70 DURO	$0.87
36X2MM N70	BUNA METRIC ORING	$0.93
36X2.5MM N70	BUNA METRIC ORING 70 DURO	$1.01
36X3MM N70	70 DURO METRIC ORING	$1.13
36X4MM N70	BUNA METRIC ORING 70 DURO	$1.62
36X4.5MM N70	70 DURO METRIC NITRILE	$1.75
36.2X3MM N70	70 DURO METRIC NITRILE	$1.14
36.27X1.78MM N70	BUNA METRIC ORING 70 DURO	$0.87
36.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.94
36.5X2.65MM N70	BUNA METRIC ORING 70 DURO	$0.98
36.5X3MM N70	BUNA METRIC ORING 70 DURO	$1.14
37X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.99
37X2MM N70	METRIC ORING BUNA 70 DURO	$0.96
37X2.5MM N70	BUNA METRIC ORING 70 DURO	$3.36
37X3MM N70	METRIC ORING	$1.14
37X4MM N70	METRIC BUNA ORING 70 DURO	$1.66
37.1X1.6MM N70	70 DURO METRIC NITRILE	$0.98
37.2X3MM N70	METRIC BUNA ORING 70 DURO	$1.31
37.5X2MM N70	METRIC ORING	$0.97
37.5X3MM N70	BUNA METRIC ORING 70 DURO	$1.16
37.6X2.4MM N70	70 DURO METRIC NITRILE	$0.90
37.7X3.5MM N70	70 DURO METRIC NITRILE	$3.71
38X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.01
38X2MM N70	BUNA METRIC ORING 70 DURO	$0.97
38X2.5MM N70	BUNA METRIC ORING 70 DURO	$1.05
38X3MM N70	BUNA METRIC ORING 70 DURO	$1.16
38X3MM N70A	70 DURO METRIC NITRILE	$1.16
38X3.5MM N70	METRIC ORING	$1.32
38X4MM N70	NITRILE METRIC ORING	$1.71
38X4.5MM N70	70 DURO METRIC NITRILE	$1.87
38.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.98
38.5X3MM N70	BUNA METRIC ORING 70 DURO	$1.17
38.7X2.65MM N70	BUNA METRIC ORING 70 DURO	$1.09
39X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.03
39X2MM N70	BUNA METRIC ORING 70 DURO	$0.98

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METRIC O-RINGS NITRILE 70 DUROMETER

PNEU-DRAULICS PART #	DESCRIPTION	LIST
39X2.5MM N70	BUNA METRIC ORING 70 DURO	$1.10
39X3MM N70	BUNA METRIC ORING 70 DURO	$1.17
39.2X3MM N70	BUNA METRIC ORING 70 DURO	$1.18
39.4X3.1MM N70	G40 METRIC ORING	$2.95
39.45X1.78MM N70	BUNA METRIC ORING 70 DURO	$0.90
39.5X2MM N70	BUNA METRIC ORING 70 DURO	$0.98
39.5X3MM N70	BUNA METRIC 70 DURO	$1.18
39.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.96
39.7X3.5MM N70A	70 DURO METRIC NITRILE P40	$1.31
40X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.05
40X2MM N70	NITRILE METRIC ORING	$0.98
40X2.5MM N70	METRIC ORING	$1.10
40X3MM N70	NITRILE METRIC ORING	$1.18
40X3.5MM N70	70 DURO METRIC NITRILE	$1.40
40X4.5MM N70	70 DURO METRIC NITRILE	$1.92
40X5MM N70	BUNA METRIC ORING 70 DURO	$2.00
41X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.06
41X2MM N70	BUNA METRIC ORING 70 DURO	$1.06
41X2.5MM N70	BUNA METRIC ORING 70 DURO	$1.13
41X3MM N70	BUNA METRIC ORING 70 DURO	$1.33
41X4MM N70	NITRILE METRIC ORING	$1.86
41.5X3MM N70	BUNA METRIC ORING 70 DURO	$1.33
41.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$0.99
41.7X3.5MM N70	P42 70 DURO METRIC NITRILE	$4.13
42X1MM N70	BUNA METRIC ORING 70 DURO	$3.58
42X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.08
42X2MM N70	BUNA METRIC ORING 70 DURO	$1.06
42X2.5MM N70	BUNA METRIC ORING 70 DURO	$1.13
42X3MM N70	BUNA METRIC ORING	$1.87
42X3.5MM N70	BUNA METRIC ORING	$1.48
42X4.5MM N70	70 DURO METRIC NITRILE	$2.06
42.2X1.78MM N70	BUNA METRIC ORING 70 DURO	$2.89
42.2X3MM N70	BUNA METRIC ORING 70 DURO	$1.33
42.5X3MM N70	BUNA METRIC ORING 70 DURO	$1.42
43X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.08
43X2MM N70	70 DURO METRIC NITRILE	$1.08
43X2.5MM N70	70 DUROMETER METRIC NITRILE	$1.13
43X3MM N70	70 DURO METRIC NITRILE	$1.42
43X3.5MM N70	BUNA METRIC ORING 70 DURO	$1.53
43X4MM N70	70 DURO NITRILE	$1.91

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METRIC O-RINGS NITRILE 70 DUROMETER

PNEU-DRAULICS PART #	DESCRIPTION	LIST
44X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.08
44X2MM N70	BUNA METRIC ORING 70 DURO	$1.08
44X2.5MM N70	BUNA METRIC ORING	$1.14
44X3MM N70	METRIC BUNA ORING 70 DURO	$1.44
44X3.5MM N70	BUNA METRIC ORING	$1.58
44X4MM N70	BUNA METRIC ORING	$1.94
44X5MM N70	NITRILE METRIC ORING	$2.18
44.2X3MM N70	BUNA METRIC ORING 70 DURO	$1.52
44.4X3.1MM N70	G45	$3.41
44.5X2MM N70	BUNA METRIC ORING 70 DURO	$1.08
44.5X3MM N70	BUNA METRIC ORING 70 DURO	$1.52
44.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$1.05
44.7X3.5MM N70	BUNA METRIC ORING P45	$4.37
45X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.18
45X2MM N70	BUNA METRIC ORING	$1.08
45X2.5MM N70	METRIC ORING NITRILE 70 DURO	$1.33
45X3MM N70	BUNA METRIC ORING	$1.52
45X3.5MM N70	METRIC NITRILE ORING 70 DURO	$1.62
45X4.5MM N70	70 DURO METRIC NITRILE	$2.12
45.7X3.5MM N70	P46 BUNA METRIC ORING	$4.57
45.84X1.78MM N70	BUNA METRIC ORING 70 DURO	$1.79
46X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.32
46X2MM N70	METRIC ORING BUNA 70 DURO	$1.22
46X2.5MM N70	BUNA METRIC ORING 70 DURO	$1.33
46X3MM N70	NITRILE METRIC ORING	$1.55
46X3.5MM N70	70 DURO METRIC NITRILE	$1.66
46X4MM N70	BUNA METRIC ORING	$2.02
47X1.5MM N70	70 DURO METRIC NITRILE	$1.22
47X2MM N70	BUNA METRIC ORING 70 DURO	$1.24
47X2.5MM N70	BUNA METRIC ORING	$1.42
47X3MM N70	BUNA METRIC ORING 70 DURO	$1.63
47X4MM N70	METRIC NITRILE ORING	$2.06
47.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$1.21
47.7X3.5MM N70	BUNA METRIC ORING	$4.34
48X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.22
48X2MM N70	70 DURO METRIC NITRILE	$1.24
48X2.5MM N70	BUNA METRIC ORING 70 DURO	$1.42
48X3MM N70	METRIC NITRILE ORING	$1.63
48X4MM N70	BUNA METRIC ORING 70 DURO	$2.10
48X5MM N70	METRIC BUNA ORING 70 DURO	$2.36

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METRIC O-RINGS NITRILE 70 DUROMETER

PNEU-DRAULICS PART #	DESCRIPTION	LIST
48.7X3.5MM N70	BUNA METRIC ORING P49	$6.68
49X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.22
49X2MM N70	70 DURO METRIC NITRILE	$1.24
49X2.5MM N70	BUNA METRIC ORING 70 DURO	$1.50
49X3MM N70	METRIC BUNA ORING	$1.71
49.4X3.1MM N70	70 DURO METRIC NITRILE	$4.76
49.5X3MM N70	BUNA METRIC ORING	$1.71
49.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$1.37
49.6X5.7MM N70	P50A METRIC NITRILE ORING	$1.91
49.7X3.5MM N70	BUNA METRIC ORING P50	$6.78
50X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.26
50X2MM N70	NITRILE METRIC ORING	$1.24
50X2.5MM N70	BUNA METRIC ORING 70 DURO	$1.50
50X3MM N70	70 DURO METRIC NITRILE	$1.71
50X3.5MM N70	BUNA METRIC ORING	$1.80
50X4MM N70	BUNA METRIC ORING	$2.34
50X5MM N70	METRIC BUNA ORING 70 DURO	$2.42
50.5X3MM N70	BUNA METRIC ORING 70 DURO	$1.73
51X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.26
51X2MM N70	METRIC ORING	$1.24
51X2.5MM N70	BUNA METRIC ORING 70 DURO	$1.54
51X3MM N70	NITRILE METRIC ORING	$1.74
51X4.5MM N70	METRIC NITRILE ORING	$2.36
51.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$1.49
51.6X5.7MM N70A	70 DURO METRIC NITRILE	$0.99
52X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.26
52X2MM N70	BUNA METRIC ORING 70 DURO	$1.32
52X2.5MM N70	BUNA METRIC ORING 70 DURO	$1.54
52X3MM N70	BUNA METRIC ORING 70 DURO	$1.88
52X5MM N70	BUNA METRIC ORING 70 DURO	$2.50
53X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.26
53X2MM N70	BUNA METRIC ORING 70 DURO	$1.32
53X2.5MM N70	BUNA METRIC ORING 70 DURO	$1.62
53X3MM N70	BUNA METRIC ORING 70 DURO	$1.80
53X4MM N70	METRIC ORING	$2.32
54X1.5MM N70	70 DURO METRIC NITRILE	$1.26
54X2MM N70	BUNA METRIC ORING 70 DURO	$1.32
54X2.5MM N70	BUNA METRIC ORING 70 DURO	$1.60
54X3MM N70	BUNA METRIC ORING	$1.80
54X4MM N70	70 DURO METRIC NITRILE	$2.36

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METRIC O-RINGS NITRILE 70 DUROMETER

PNEU-DRAULICS PART #	DESCRIPTION	LIST
54.2X3MM N70	BUNA METRIC ORING 70 DURO	$1.81
54.4X3.1MM N70	70 DURO METRIC NITRILE	$5.12
54.5X3MM N70	BUNA METRIC ORING	$1.81
54.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$1.58
54.6X5.7MM N70	P55 METRIC BUNA ORING	$2.04
55X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.33
55X2MM N70	70 DURO METRIC NITRILE	$1.32
55X2.5MM N70	70 DURO METRIC NITRILE	$1.65
55X3MM N70	METRIC ORING BUNA 70 DURO	$1.82
55X4MM N70	NITRILE METRIC ORING	$2.42
55X5MM N70	METRIC ORING	$2.59
56X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.33
56X2MM N70	METRIC ORING	$1.32
56X2.5MM N70	BUNA METRIC ORING 70 DURO	$1.65
56X3MM N70	BUNA METRIC ORING 70 DURO	$1.83
56X3.5MM N70	70 DURO METRIC NITRILE	$2.04
56X5MM N70	METRIC BUNA ORING	$2.63
56.2X3MM N70	BUNA METRIC ORING 70 DURO	$1.84
57X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.43
57X2MM N70	BUNA METRIC ORING 70 DURO	$1.42
57X2.5MM N70	BUNA METRIC ORING 70 DURO	$1.70
57X3MM N70	BUNA METRIC ORING	$1.84
57X3.5MM N70	BUNA METRIC ORING	$2.06
57X4MM N70	BUNA METRIC ORING 70 DURO	$2.50
57.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$1.63
58X1.5MM N70	BUNA METRIC ORING 70 DURO	$0.46
58X2MM N70	METRIC ORING BUNA 70 DURO	$1.42
58X2.5MM N70	METRIC ORING NITRILE 70	$1.70
58X3MM N70	METRIC ORING NITRILE 70 DURO	$1.84
59X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.43
59X2MM N70	BUNA METRIC ORING 70 DURO	$1.43
59X2.5MM N70	BUNA METRIC ORING 70 DURO	$1.74
59X3MM N70	BUNA METRIC ORING 70 DURO	$1.85
59.2X5.7MM N70	BUNA METRIC ORING	$1.87
59.4X3.1MM N70	BUNA METRIC ORING G-60	$5.70
59.5X3MM N70	BUNA METRIC ORING 70 DURO	$1.87
59.5X3MM N70A	NITRILE METRIC ORING	$1.87
59.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$1.68
59.6X5.7MM N70A	70 DURO METRIC NITRILE	$1.68
60X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.45

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METRIC O-RINGS NITRILE 70 DUROMETER

PNEU-DRAULICS PART #	DESCRIPTION	LIST
60X2MM N70	BUNA METRIC ORING 70 DURO	$1.72
60X2.5MM N70	METRIC ORING NITRILE 70 DURO	$1.74
60X3MM N70	METRIC NITRILE ORING 70 DURO	$1.87
60X3.5MM N70	BUNA METRIC ORING 70 DURO	$2.18
60X4MM N70	BUNA METRIC ORING 70 DURO	$2.80
60X5MM N70	BUNA METRIC ORING	$2.61
61X2MM N70	BUNA METRIC ORING 70 DURO	$1.76
61X2.5MM N70	BUNA METRIC ORING 70 DURO	$1.79
61X3MM N70	BUNA METRIC ORING 70 DURO	$1.88
61.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$1.79
62X1.5MM N70	BUNA METRIC ORING N70	$1.46
62X2MM N70	BUNA METRIC ORING 70 DURO	$1.76
62X2.5MM N70	BUNA METRIC ORING 70 DURO	$1.79
62X3MM N70	BUNA METRIC ORING 70 DURO	$1.89
62X4MM N70	BUNA METRIC ORING 70 DURO	$2.85
63X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.46
63X2MM N70	BUNA METRIC ORING 70 DURO	$1.76
63X2.5MM N70	BUNA METRIC ORING 70 DURO	$2.34
63X3MM N70	BUNA METRIC ORING 70 DURO	$1.91
64X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.46
64X2MM N70	BUNA METRIC ORING 70 DURO	$1.77
64X2.5MM N70	BUNA METRIC ORING 70 DURO	$1.83
64X3MM N70	BUNA 70 DURO METRIC ORING	$1.97
64.2X5.7MM N70	BUNA METRIC ORING	$3.15
64.4X3.1MM N70	G65 70 DURO METRIC NITRILE	$6.84
64.5X3MM N70	NITRILE METRIC ORING	$1.93
64.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$1.79
65X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.47
65X2MM N70	BUNA METRIC ORING 70 DURO	$1.92
65X2.5MM N70	BUNA METRIC ORING 70 DURO	$1.87
65X3MM N70	BUNA METRIC ORING	$1.94
65X4MM N70	METRIC NITRILE ORING	$2.79
65X5MM N70	BUNA METRIC ORING	$3.07
66X1.5MM N70	BUNA METRIC ORING	$1.50
66X2MM N70	BUNA METRIC ORING 70 DURO	$1.92
66X2.5MM N70	BUNA METRIC ORING 70 DURO	$1.87
66X3MM N70	METRIC ORING	$1.97
67X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.54
67X2MM N70	BUNA METRIC ORING 70 DURO	$1.92
67X2.5MM N70	BUNA METRIC ORING 70 DURO	$1.92

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PNEU-DRAULICS PART #	DESCRIPTION	LIST
67X3MM N70	METRIC BUNA ORING	$1.98
67X3.5MM N70	BUNA METRIC ORING	$2.43
67.6X2.4MM N70	BUNA METRIC ORING 70 DURO	$1.94
68X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.58
68X2MM N70	METRIC ORING	$1.92
68X2.5MM N70	BUNA METRIC ORING 70 DURO	$1.92
68X3MM N70	BUNA METRIC ORING 70 DURO	$2.03
68X4MM N70	BUNA METRIC ORING 70 DURO	$2.90
69X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.61
69X2MM N70	BUNA METRIC ORING 70 DURO	$1.92
69X2.5MM N70	BUNA METRIC ORING 70 DURO	$2.01
69X3MM N70	BUNA METRIC ORING 70 DURO	$2.05
69X3.5MM N70	METRIC ORING	$2.52
69.4X3.1MM N70	METRIC NITRILE ORING	$7.98
69.5X3MM N70	BUNA METRIC ORING 70 DURO	$2.09
69.6X5.7MM N70	BUNA METRIC ORING P70	$2.30
70X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.64
70X2MM N70	BUNA METRIC ORING	$1.92
70X2.5MM N70	METRIC ORING NITRILE 70 DURO	$2.01
70X3MM N70	BUNA METRIC ORING 70 DURO	$2.10
70X4MM N70	METRIC BUNA ORING 70 DURO	$2.93
71X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.66
71X2MM N70	BUNA METRIC ORING 70 DURO	$2.14
71X3MM N70	BUNA METRIC ORING 70 DURO	$2.14
71X4MM N70	70 DURO NITRILE	$3.15
72X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.71
72X2MM N70	BUNA METRIC ORING 70 DURO	$2.14
72X2.5MM N70	BUNA METRIC ORING 70 DURO	$2.09
72X3MM N70	BUNA METRIC ORING 70 DURO	$2.17
72X4MM N70	70 DURO METRIC ORING	$3.02
73X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.74
73X2MM N70	BUNA METRIC ORING	$2.17
73X2.5MM N70	BUNA METRIC ORING	$2.17
73X3MM N70	BUNA METRIC ORING 70 DURO	$2.23
73X4MM N70	BUNA METRIC ORING 70 DURO	$3.23
74X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.79
74X2MM N70	BUNA METRIC ORING	$2.12
74X2.5MM N70	BUNA METRIC ORING 70 DURO BUNA	$2.17
74X3MM N70	METRIC ORING BUNA 70 DURO	$2.27
74.2X5.7MM N70	BUNA METRIC ORING	$2.18

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METRIC O-RINGS NITRILE 70 DUROMETER

PNEU-DRAULICS PART #	DESCRIPTION	LIST
74.3X2.62MM N70	BUNA METRIC ORING 70 DURO	$2.22
74.4X3.1MM N70	BUNA METRIC ORING G75	$8.54
74.5X3MM N70	BUNA METRIC ORING 70 DURO	$2.32
75X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.84
75X2MM N70	BUNA METRIC ORING 70 DURO	$2.13
75X2.5MM N70	NITRILE METRIC ORING	$2.27
75X3MM N70	BUNA METRIC ORING	$2.36
75X3.5MM N70	BUNA METRIC ORING	$2.79
75X4MM N70	70 DURO METRIC NITRILE	$3.20
76X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.90
76X2MM N70	BUNA METRIC ORING 70 DURO	$2.22
76X2.5MM N70A	BUNA METRIC ORING	$2.27
76X3MM N70	BUNA METRIC ORING 70 DURO	$2.40
76X4MM N70	METRIC ORING 70 DURO	$3.33
77X1.5MM N70	BUNA METRIC ORING 70 DURO	$1.98
77X2MM N70	BUNA METRIC ORING 70 DURO	$2.22
77X3MM N70	METRIC BUNA ORING 70 DURO	$2.45
77X3.5MM N70	BUNA METRIC ORING 70 DURO	$2.89
77.5X2.62MM N70	BUNA METRIC ORING 70 DURO	$2.36
78X1.5MM N70	BUNA METRIC ORING	$2.08
78X2MM N70	METRIC BUNA ORING	$2.22
78X2.5MM N70	BUNA METRIC ORING 70 DURO	$2.36
78X3MM N70	BUNA METRIC ORING 70 DURO	$2.47
78X4MM N70	70 DUROMETER METRIC NITRILE	$3.41
79X1.5MM N70	BUNA METRIC ORING 70 DURO	$2.16
79X1.78MM N70	BUNA METRIC 70	$2.27
79X2MM N70	BUNA METRIC ORING 70 DURO	$2.22
79X2.5MM N70	BUNA METRIC ORING 70 DURO	$2.44
79X3MM N70	BUNA METRIC ORING 70 DURO	$2.51
79.2X5.7MM N70	BUNA METRIC ORING	$2.33
79.4X3.1MM N70	BUNA METRIC ORING G80	$8.62
79.5X3MM N70	BUNA METRIC ORING 70 DURO	$2.55
80X1.5MM N70	70 DURO METRIC NITRILE	$2.21
80X2MM N70	BUNA METRIC ORING 70 DURO	$2.22
80X2.5MM N70	70 DURO METRIC NITRILE	$2.44
80X3MM N70	BUNA METRIC ORING 70 DURO	$2.57
80X3.5MM N70	BUNA METRIC ORING 70 DURO	$2.99
80.6X2.62MM N70	BUNA METRIC ORING 70 DURO	$2.47
81X2MM N70	BUNA METRIC ORING 70 DURO	$2.36
81X2.5MM N70	BUNA METRIC ORING 70 DURO	$2.52

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METRIC O-RINGS NITRILE 70 DUROMETER

PNEU-DRAULICS PART #	DESCRIPTION	LIST
81X3MM N70	BUNA METRIC ORING 70 DURO	$2.59
82X1.5MM N70	BUNA METRIC 70 DURO	$2.34
82X2MM N70	BUNA METRIC ORING 70 DURO	$2.36
82X2.5MM N70	BUNA METRIC ORING 70 DURO	$2.52
82X3MM N70	70 DURO METRIC NITRILE	$2.63
82X3.5MM N70	METRIC ORING	$3.07
82X4MM N70	METRIC ORING BUNA 70 DURO	$3.68
83X2MM N70	BUNA METRIC ORING 70 DURO	$2.36
83X2.5MM N70	BUNA METRIC ORING 70 DURO	$2.61
83X3MM N70	BUNA METRIC ORING 70 DURO	$2.64
83.8X2.62MM N70	BUNA METRIC ORING 70 DURO	$2.68
84X1.5MM N70	BUNA METRIC ORING 70 DURO	$2.51
84X2MM N70	BUNA METRIC ORING 70 DURO	$2.36
84X2.5MM N70	BUNA METRIC ORING 70 DURO	$2.61
84X3MM N70	BUNA METRIC ORING 70 DURO	$2.69
84.4X3.1MM N70	NITRILE METRIC G85	$9.01
84.5X2MM N70	70 DURO NITRILE METRIC ORING	$8.75
84.5X3MM N70	BUNA METRIC ORING 70	$2.71
84.6X5.7MM N70	BUNA METRIC ORING P85	$2.51
85X1.5MM N70	BUNA METRIC ORING 70 DURO	$2.53
85X2MM N70	BUNA METRIC ORING 70 DURO	$2.36
85X2.5MM N70	70 DURO METRIC NITRILE	$2.70
85X3MM N70	BUNA METRIC ORING	$2.73
85X3.5MM N70	BUNA METRIC ORING	$3.15
85X4MM N70	70 DURO METRIC NITRILE	$3.76
85.34X1.78MM N70	BUNA METRIC ORING 70 DURO	$2.48
86X2MM N70	BUNA METRIC ORING 70 DURO	$2.52
86X2.5MM N70	BUNA METRIC ORING 70 DURO	$2.70
86X3MM N70	BUNA METRIC ORING 70 DURO	$2.75
86X3.5MM N70	70 DURO NITRILE METRIC ORING	$3.17
87X1.5MM N70	BUNA METRIC ORING 70 DURO	$2.69
87X2MM N70	BUNA METRIC ORING 70 DURO	$2.52
87X2.5MM N70	BUNA METRIC ORING 70 DURO	$2.77
87X3MM N70	70 DURO METRIC NITRILE	$2.77
88X1.5MM N70	BUNA METRIC ORING	$2.77
88X2MM N70	BUNA METRIC ORING 70 DURO	$2.52
88X2.5MM N70	BUNA METRIC ORING 70 DURO	$2.77
88X3MM N70	BUNA METRIC ORING	$2.78
89X1.5MM N70	METRIC ORING 70 DURO	$2.79
89X2MM N70	BUNA METRIC ORING 70 DURO	$2.53

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METRIC O-RINGS NITRILE 70 DUROMETER

PNEU-DRAULICS PART #	DESCRIPTION	LIST
89X2.5MM N70	70 DURO METRIC NITRILE	$2.86
89X3MM N70	70 DURO METRIC NITRILE	$2.84
89.2X5.7MM N70	NITRILE METRIC ORING	$2.60
89.4X3.1MM N70	NITRILE METRIC ORING	$10.06
89.5X3MM N70	BUNA METRIC ORING 70 DURO	$2.89
90X1.5MM N70	BUNA METRIC ORING 70 DURO	$2.84
90X2MM N70	BUNA METRIC 70 DURO	$2.53
90X2.5MM N70	METRIC ORING 70 DURO	$2.86
90X3MM N70	METRIC ORING 70DURO NITRILE	$2.90
90X4MM N70	70A NITRILE METRIC ORING	$3.92
91X1.5MM N70	BUNA METRIC ORING 70 DURO	$2.87
91X2MM N70	BUNA METRIC ORING 70 DURO	$2.79
91X2.5MM N70	BUNA METRIC ORING 70 DURO	$2.94
91X3MM N70	BUNA METRIC ORING 70 DURO	$2.91
91.7X1.78MM N70	BUNA METRIC ORING 70 DURO	$2.63
92X1.5MM N70	BUNA METRIC ORING 70 DURO	$2.89
92X2MM N70	BUNA METRIC ORING 70 DURO	$2.79
92X2.5MM N70	BUNA METRIC ORING 70 DURO	$2.66
92X3MM N70	BUNA METRIC ORING 70 DURO	$1.42
92X4MM N70	BUNA METRIC ORING	$4.02
92.7X2.62MM N70	BUNA METRIC ORING 70 DURO	$3.06
93X1.5MM N70	BUNA METRIC ORING 70 DURO	$2.91
93X2MM N70	BUNA METRIC ORING 70 DURO	$2.89
93X2.0MM N70	NITRILE METRIC ORING	$2.89
93X2.5MM N70	METRIC ORING	$3.02
93X3MM N70	BUNA METRIC 70 DURO	$2.97
93X3.5MM N70	NITRILE 70 DURO ORING	$3.41
94X2MM N70	METRIC ORING	$3.00
94X2.5MM N70	70 DURO METRIC NITRILE	$3.02
94X3MM N70	METRIC ORING	$2.97
94.4X3.1MM N70	70 DURO METRIC NITRILE	$10.58
94.5X3MM N70	BUNA METRIC ORING	$3.03
95X1.5MM N70	BUNA METRIC ORING 70 DURO	$2.97
95X2MM N70	BUNA METRIC ORING 70 DURO	$3.00
95X2.5MM N70	BUNA METRIC ORING 70 DURO	$3.11
95X3MM N70	METRIC ORING	$3.06
96X2MM N70	70 DURO METRIC NITRILE	$3.00
96X2.5MM N70	METRIC ORING 70 DURO	$3.11
96X3MM N70	METRIC ORING BUNA 70 DURO	$3.10
96X4MM N70	BUNA METRIC ORING 70 DURO	$4.24

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METRIC O-RINGS NITRILE 70 DUROMETER

PNEU-DRAULICS PART #	DESCRIPTION	LIST
96.6X1.6MM N70	BUNA METRIC 70 DURO	$5.25
97X1.5MM N70	BUNA METRIC ORING 70 DURO	$3.23
97X2MM N70	BUNA METRIC ORING 70 DURO	$3.00
97X2.5MM N70	BUNA METRIC ORING 70 DURO	$3.19
97X3MM N70	BUNA METRIC ORING	$3.15
98X1.5MM N70	BUNA METRIC ORING 70 DURO	$3.14
98X2MM N70	BUNA METRIC ORING 70 DURO	$3.00
98X2.5MM N70	BUNA METRIC ORING 70 DURO	$3.19
98X3MM N70	BUNA METRIC ORING 70 DURO	$3.19
98.05X1.78MM N70	BUNA METRIC ORING 70 DURO	$2.94
99X1.5MM N70	BUNA METRIC ORING 70 DURO	$3.50
99X2MM N70	BUNA METRIC ORING 70 DURO	$3.00
99X2.5MM N70	BUNA METRIC ORING 70 DURO	$3.28
99X3MM N70	BUNA METRIC ORING 70 DURO	$3.23
99.4X3.1MM N70	BUNA METRIC ORING G100	$11.13
99.5X3MM N70	BUNA METRIC ORING 70 DURO	$3.32
99.6X5.7MM N70	BUNA METRIC ORING P100	$3.03
100X1.5MM N70	BUNA METRIC ORING 70 DURO	$3.71
100X2MM N70	METRIC ORING BUNA ORING	$3.00
100X2.5MM N70	BUNA METRIC ORING 70 DURO	$3.28
100X3MM N70	70 DURO METRIC NITRILE	$3.36
100X3.5MM N70	70 DURO METRIC NITRILE	$3.68
101X2.5MM N70	BUNA METRIC ORING 70 DURO	$3.36
101X3MM N70	BUNA METRIC ORING 70 DURO	$3.41
102X2.5MM N70	BUNA METRIC ORING 70 DURO	$3.36
102X3MM N70	BUNA METRIC ORING 70 DURO	$3.45
102X4MM N70	70 DURO METRIC NITRILE	$4.64
103X2.5MM N70	BUNA METRIC ORING 70 DURO	$3.47
103X3MM N70	70 DURO NITRILE	$3.50
103X3.5MM N70	BUNA METRIC ORING 70 DURO	$3.90
104X2.5MM N70	BUNA METRIC ORING 70 DURO	$3.47
104X3MM N70	BUNA METRIC ORING 70 DURO	$3.58
104.2X5.7MM N70	BUNA METRIC ORING	$3.13
104.4X1.78MM N70	BUNA METRIC ORING 70 DURO	$3.20
104.4X3.1MM N70	METRIC ORING	$11.74
104.5X3MM N70	BUNA METRIC ORING 70 DURO	$3.98
105X2MM N70	METRIC ORING	$14.00
105X2.5MM N70	BUNA METRIC ORING 70 DURO	$3.57
105X3MM N70	NITRILE METRIC ORING	$3.68
106X2.5MM N70	BUNA METRIC ORING 70 DURO	$3.57

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METRIC O-RINGS NITRILE 70 DUROMETER

PNEU-DRAULICS PART #	DESCRIPTION	LIST
106X3MM N70	BUNA METRIC ORING 70 DURO	$3.72
107X2.5MM N70	BUNA METRIC ORING 70 DURO	$3.68
107X3MM N70	BUNA METRIC ORING 70 DURO	$3.7
108X2.5MM N70	BUNA METRIC ORING 70 DURO	$3.68
108X3MM N70	BUNA METRIC ORING	$3.80
109X2MM N70	BUNA METRIC ORING 70 DURO	$14.87
109X3MM N70	BUNA METRIC ORING 70 DURO	$3.84
109.4X3.1MM N70	70 DURO METRIC NITRILE	$12.72
109.5X3MM N70	BUNA METRIC ORING	$3.89
110X2MM N70	METRIC ORING	$15.75
110X2.5MM N70	BUNA METRIC ORING 70 DURO	$3.78
110X3MM N70	METRIC ORING NITRILE 70 DURO	$3.94
110X3.5MM N70	METRIC BUNA ORING	$4.26
110.74X1.78MM N70	BUNA METRIC ORING 70 DURO	$3.20
111X3MM N7	BUNA METRIC ORING 70 DURO	$3.98
112X2.5MM N70	BUNA METRIC ORING 70 DURO	$3.89
112X3MM N70	BUNA ORING 70 DURO	$4.02
112X4MM N70	70 DURO METRIC NITRILE	$5.39
113X2.5MM N70	BUNA METRIC ORING 70 DURO	$3.99
113X3MM N70	BUNA METRIC ORING 70 DURO	$4.04
114X2.5MM N70	BUNA METRIC ORING 70 DURO	$3.99
114X3MM N70	BUNA METRIC ORING 70 DURO	$4.06
114X3.5MM N70	70 DURO METRIC NITRILE	$4.38
114.4X3.1MM N70	G115 METRIC NITRILE	$13.26
114.5X3MM N70	BUNA METRIC ORING 70 DURO	$4.08
115X2MM N70	METRIC NITRILE 70 DURO ORING	$17.49
115X2.5MM N70	BUNA METRIC ORING 70 DURO	$4.10
115X3MM N70	BUNA METRIC ORING	$4.15
115X4MM N70	BUNA METRIC ORING	$5.58
116X2.5MM N70	BUNA METRIC ORING 70 DURO	$4.20
116X3MM N70	70 DUROMETER NITRILE	$4.20
117X2.5MM N70	BUNA METRIC ORING 70 DURO	$4.20
117X3MM N70	BUNA METRIC ORING 70 DURO	$4.24
117X4MM N70	BUNA METRIC ORING	$5.69
117.1X1.78MM N70	BUNA METRIC ORING 70 DURO	$3.73
118X2.5MM N7	BUNA METRIC ORING 70 DURO	$4.29
118X3MM N70	BUNA METRIC 70 DURO	$4.25
118X3.5MM N70	METRIC ORING	$4.52
119X3MM N70	BUNA METRIC ORING 70 DURO	$4.33
119.4X3.1MM N70	G120 BUNA METRIC ORING	$13.28

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METRIC O-RINGS NITRILE 70 DUROMETER

PNEU-DRAULICS PART #	DESCRIPTION	LIST
119.5X3MM N70	BUNA METRIC ORING 70 DURO	$4.38
120X2MM N70	BUNA METRIC ORING 70 DURO	$17.49
120X2.5MM N70	BUNA METRIC ORING 70 DURO	$4.29
120X3MM N70	70 DURO METRIC NITRILE	$4.41
120X3.5MM N70	METRIC ORING	$4.57
120X5MM N70	METRIC ORING 70 DURO BUNA	$0.00
121X3MM N70	BUNA METRIC ORING 70 DURO	$4.46
122X2.5MM N70	BUNA METRIC ORING 70 DURO	$4.46
122X3MM N70	BUNA METRIC ORING 70 DURO	$4.53
123X3MM N70	BUNA METRIC ORING 70 DURO	$4.59
123.44X1.78MM N70	BUNA METRIC ORING 70 DURO	$3.73
124X2.5MM N70	BUNA METRIC ORING 70 DURO	$4.57
124X3MM N70	BUNA METRIC ORING 70 DURO	$4.67
124.4X3.1MM N70	G125 70 DURO METRIC NITRILE	$13.79
124.5X3MM N70	BUNA METRIC ORING 70 DURO	$4.67
125X2MM N70	BUNA METRIC ORING 70 DURO	$19.77
125X2.5MM N70	NITRILE METRIC ORING	$4.67
125X3MM N70	BUNA METRIC ORING 70 DURO	$4.73
126X2.5MM N70	BUNA METRIC 70 DURO	$4.78
126X3MM N70	BUNA METRIC ORING 70 DURO	$4.77
127X2.5MM N70	BUNA METRIC ORING 70 DURO	$4.78
127X3MM N70	BUNA METRIC ORING 70 DURO	$4.81
127X4MM N70	70 DURO METRIC NITRILE	$6.30
128X2.5MM N70	BUNA METRIC ORING 70 DURO	$4.78
128X3MM N70	BUNA METRIC ORING 70 DURO	$4.85
129X3MM N70	BUNA METRIC ORING 70 DURO	$4.89
129.4X1.78MM N70	BUNA METRIC ORING 70 DURO	$3.84
129.4X3.1MM N70	G130 70 DURO METRIC NITRILE	$14.81
130X2MM N70	BUNA METRIC ORING 70 DURO	$20.12
130X2.5MM N70	BUNA METRIC ORING 70 DURO	$4.88
130X3MM N70	BUNA METRIC ORING	$5.04
131X2.5MM N70	METRIC ORING 70 DURO	$0.41
131X3MM N70	BUNA METRIC ORING	$5.11
132X2.5MM N70	BUNA METRIC ORING 70 DURO	$4.99
132X3MM N70	BUNA METRIC ORING	$11.37
133X3MM N70	BUNA METRIC ORING 70 DURO	$5.33
134X3MM N70	BUNA METRIC ORING 70 DURO	$5.42
134.4X3.1MM N70	G135 70 DURO METRIC NITRILE	$15.33
134.5X3MM N70	NITRILE METRIC ORING	$5.51
135X2.5MM N70	BUNA METRIC ORING 70 DURO	$5.12

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METRIC O-RINGS NITRILE 70 DUROMETER

PNEU-DRAULICS PART #	DESCRIPTION	LIST
135X3MM N70	BUNA METRIC ORING 70 DURO	$5.58
135.76X1.78MM N70	BUNA METRIC ORING 70 DURO	$4.04
136X2.5MM N70	BUNA METRIC ORING 70 DURO	$5.12
136X3MM N70	BUNA METRIC ORING 70 DURO	$5.60
137X3MM N70	BUNA METRIC ORING 70 DURO	$5.64
137X4MM N70	METRIC ORING	$7.00
138X3MM N70	BUNA METRIC ORING 70 DURO	$5.68
139X3MM N70	BUNA METRIC ORING 70 DURO	$5.72
139.4X3.1MM N70	G140 70 DURO METRIC NITRILE	$15.83
139.5X3MM N70	BUNA METRIC ORING 70 DURO	$5.78
140X2MM N70	METRIC ORING	$21.00
140X2.5MM N70	BUNA METRIC ORING 70 DURO	$5.23
140X3MM N70	BUNA METRIC ORING 70 DURO	$5.84
140X4MM N70	BUNA METRIC ORING 70 DURO	$7.28
141X3MM N70	BUNA METRIC ORING 70 DURO	$5.86
142X2.5MM N70	BUNA METRIC ORING 70 DURO	$5.28
142X3MM N70	BUNA METRIC ORING 70 DURO	$5.90
142X4MM	3A 6268	$7.43
143X2.5MM N70	BUNA METRIC ORING 70 DURO	$5.33
143X3MM N70	BUNA METRIC ORING 70 DURO	$5.94
144X3MM N70	BUNA METRIC ORING 70 DURO	$6.01
144.4X3.1MM N70	70 DURO METRIC NITRILE	$17.36
144.5X3MM N70	BUNA METRIC ORING 70 DURO	$6.08
145X2.5MM N70	BUNA METRIC ORING 70 DURO	$5.42
145X3MM N70	BUNA METRIC ORING 70 DURO	$6.15
145X4MM N70	BUNA METRIC ORING 70 DURO	$7.70
145.29X1.78MM N70	BUNA METRIC ORING 70 DURO	$4.83
146X3MM N70	BUNA METRIC ORING 70 DURO	$6.17
148X3MM N70	BUNA METRIC ORING 70 DURO	$6.25
148.46X1.78MM N70	BUNA METRIC ORING 70 DURO	$5.03
149X2.5MM N70	BUNA METRIC ORING 70 DURO	$5.58
149X3MM N70	BUNA METRIC ORING 70 DURO	$6.30
149.5X3MM N70	BUNA METRIC ORING 70 DURO	$6.34
150X2.5MM N70	BUNA METRIC ORING 70 DURO	$5.58
150X3MM N70	70A BUNA ORING	$6.42
151.64X1.78MM N70	BUNA METRIC ORING 70 DURO	$5.33
153X3.5MM N70	BUNA METRIC ORING	$6.83
155MMX4MM	70 DURO BUNA ORING	$3.48
156X3MM N70	METRIC BUNA ORING 70 DURO	$6.73
160X4MM N70	70 DUROMETER METRIC NITRILE	$8.93

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METRIC O-RINGS NITRILE 70 DUROMETER

PNEU-DRAULICS PART #	DESCRIPTION	LIST
161.16X1.78MM N70	BUNA METRIC ORING 70 DURO	$6.66
163X3MM N70	BUNA METRIC ORING 70 DURO	$7.52
164.34X1.78MM N70	BUNA METRIC ORING 70 DURO	$6.91
164.5X8.4	P-165 BUNA METRIC	$13.06
165X2MM N70	BUNA METRIC ORING 70 DURO	$26.25
165X3MM N70	BUNA METRIC ORING 70 DURO	$7.89
167.5X1.78MM N70	BUNA METRIC ORING 70 DURO	$6.99
170X3MM N70	BUNA METRIC ORING 70 DURO	$8.04
170X4MM N70	METRIC ORING	$9.66
175X3.5MM N70	METRIC ORING	$8.32
180X2MM N70	BUNA METRIC ORING 70 DURO	$33.51
180X3MM N70	BUNA METRIC	$8.93
183X4MM N70	70 DURO METRIC NITRILE	$11.05
188X3MM N70	NITRILE METRIC ORING	$10.50
194X3MM N70	METRIC ORING	$11.24
199.3X5.7MM N70	BUNA METRIC ORING	$8.04
205X3MM N70	METRIC ORING	$12.08
207X3.5MM N70	METRIC ORING	$12.42
235X4MM N70	METRIC NITRILE ORING	$17.02
240X3MM N70	NITRILE METRIC ORING	$14.30
250X4MM N70	BUNA METRIC ORING	$17.88
252X3.5MM N70	70 DURO METRIC NITRILE	$3.76
252X4MM N70	NITRILE METRIC ORING	$18.03
260X3MM N70	BUNA METRIC ORING 70 DURO	$22.05
270X3MM N70	70 DURO NITRILE METRIC	$23.63
280X3MM N70	70 DURO METRIC NITRILE	$25.37
300X3MM N70	70 DURO NITRILE	$28.88

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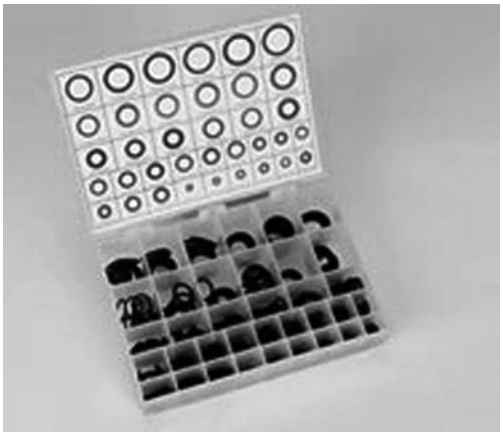
PNEU-DRAULICS



Metric 500X36

METRIC O-RING KIT

A very useful metric O-Ring assortment Containing 36 metric sizes 500 o-rings commonly used in industrial and automotive applications.

Contents card shows dimensions in both millimeters and inches, as well as each O-ring in silhouette.

IDs range from 2.2mm to 20mm; 6 cross-sections up to 3mm.

$94.50 LIST

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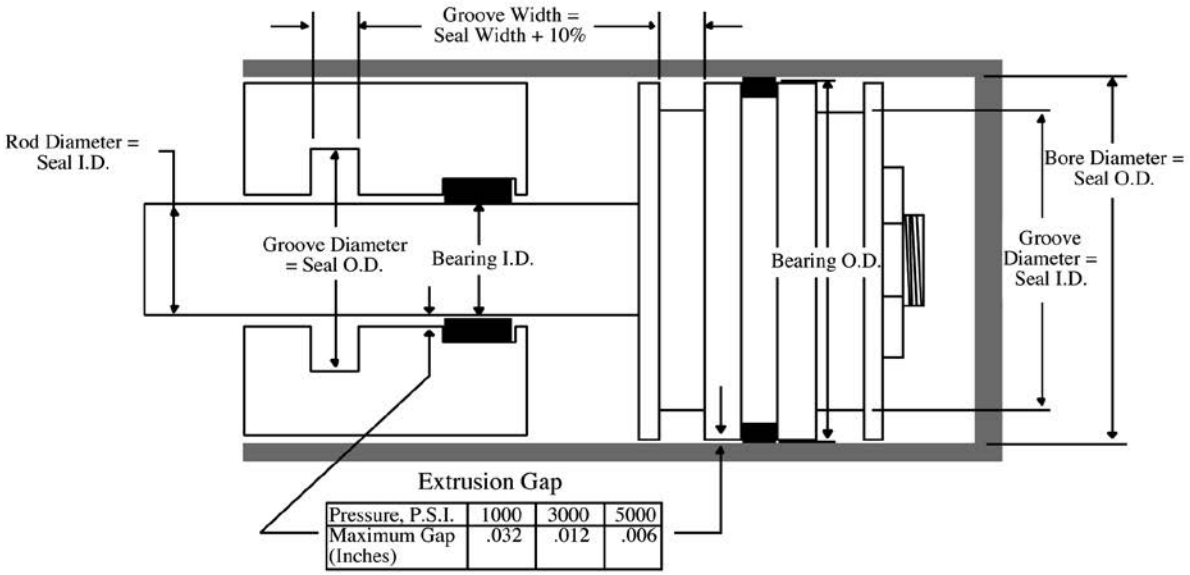
GROOVE DIMENSIONS FOR URETHANE U-SEALS



Pressure, P.S.I.	1000	3000	5000
Maximum Gap (Inches)	.032	.012	.006

ROD AND ROD GROOVE DIAMETERS

ROD DIAM RANGE, IN.	ROD DIAM. TOLERANCE	GROOVE DIAM TOLERANCE	MAX DIAMETRAL CLEARANCE		
			1000 PSI	3000 PSI	5000 PSI
.125 - .687	+ .0 / -.002	+ .004 / -.0	.008	.006	.004
.750 - 2.875	+ .0 / -.003	+ .008 / -.0	.012	.008	.004
3.000 - 7.000	+ .0 / -.004	+ .010 / -.0	.014	.010	-
7.000 - 7.750	+ .0 / -.005	+ .011 / -.0	.016	.010	-
8.000 - 9.500	+ .0 / -.005	+ .012 / -.0	.016	-	-
10.000 - 15.000	+ .0 / -.006	+ .015 / -.0	.016	-	-

BORE AND PISTON GROOVE DIAMETERS

BORE DIAM RANGE, IN.	BORE DIAM. TOLERANCE	GROOVE DIAM TOLERANCE	MAX DIAMETRAL CLEARANCE		
			1000 PSI	3000 PSI	5000 PSI
.750 - 1.062	+ .003 / -.0	+ .0 / -.004	.010	.008	.004
1.125 - 1.625	+ .003 / -.0	+ .0 / -.005	.010	.008	.004
1.750 - 2.500	+ .003 / -.0	+ .0 / -.007	.012	.008	.004
2.625 - 2.875	+ .003 / -.0	+ .0 / -.008	.012	.008	.005
3.000 - 3.500	+ .004 / -.0	+ .0 / -.008	.014	.010	-
3.625 - 5.625	+ .004 / -.0	+ .0 / -.009	.014	.010	-
5.750 - 6.750	+ .004 / -.0	+ .0 / -.010	.014	.010	-
7.000 - 8.500	+ .005 / -.0	+ .0 / -.011	.016	.010	-
9.000 - 11.000	+ .005 / -.0	+ .0 / -.011	.016	-	-
12.000 - 16.000	+ .006 / -.0	+ .0 / -.012	.018	-	-

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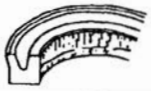
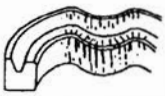
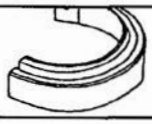
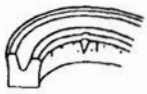
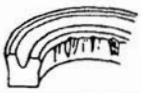
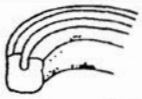
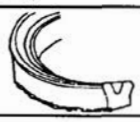
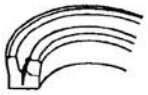
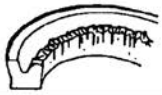
EXAMPLES OF SEAL FAILURES AND THEIR CAUSES

TYPE OF FAILURE	VISIBLE CONDITION	PROBABLE CAUSE	POSSIBLE CURE
HARDENING	Hardening of the dynamic face causing glazing and cracks 	Heat generated by high speed	Slow stroke speed Use alternative seal device
	Hardening of the whole seal. Loss of elasticity. 	High fluid temperature. Deterioration of fluid. Compatibility of seal to fluid	Lower oil temperature. Renew Fluid Change to different seal compound
WEAR	Dynamic face is worn to glossy mirror-like finish 	Insufficient lubrication	Check oil viscosity Use alternative seal device
	Wear on dynamic lip is egg-shaped	Rod or piston bore not concentric	Hone to within seal specs Replace worn rod or cylinder tube
	Abnormal wear on one side of the dynamic lip	Worn bearing or wear ring. Excessive lateral load	Replace bearings Increase bearing area
SCARRING	Cut or dent on the lip 	Storage on a nail or peg. Improper installation tool	Store flat in a plastic bag in a closed cardboard box Installation tools should not have sharp edges
	Scratches on the dynamic side 	Scars on the rod or bore. Foreign material in fluid	Hone, polish, and de-burr metal parts Flush system
SWELLING	Material soft and misshaped 	Absorption of fluid. Fluid and seal are incompatible. Water in system	Change seal compound or system fluid Flush system
DETERIORATION	Cracks and loss of elasticity. Material easily crumbles	High fluid temperature. Exposure to ozone or sunlight	Lower oil temperature Store seals away from sunlight and arc welding area.
GROOVING	Axial cuts on the dynamic side	Metal chips or other foreign material in system. Imploded air bubbles	Flush system Bleed air from system
EXTRUSION	Extruded material on dynamic side of heel	Gap between mating surfaces too wide. Worn bearings. Pressure extreme	Employ back-up ring. Replace bearings. Use alternative seal
	Extruded material on static side of seal 	Uneven support surface. Undersize back-up ring	Machine surface. Correct back-up size

EXAMPLES OF SEAL FAILURES AND THEIR CAUSES

TYPE OF FAILURE	VISIBLE CONDITION	PROBABLE CAUSE	POSSIBLE CURE
FRACTURING	Chunks of material torn from dynamic side	Excessive back pressure	Check relief valves
	Pressure side of seal burned and broken	Explosion of residual air at high pressure. "Dieseling"	Check maximum pressure. Bleed air from system
	Long cracks in the "V" portion of the seal 	Frequent high pressure shocks or spikes. Low temperature start-up	Use alternative style seal. Warm system before applying pressure
	Breaking off of entire dynamic side 	Deterioration of material and/or fluid	Use alternative material or seal. Flush system

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PNEU-DRAULICS

FLUID COMPATIBILITY CHART

COMPATIBILITY RATING:
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3 = Doubtful (Sometimes OK for Static Seal)
4 = Unsatisfactory
X = Insufficient Data

FLUID NAME / MATERIAL	Nitrile	Ethylene Propylene	Fluorocarbon	Neoprene	SBR	Polyacrylate	Polyurethane	Butyl	Butadiene	Isoprene	Natural Rubber	Hypalon	Fluorosilicone	Silicone
1-Butene 2-Ethyl	1	4	1	4	4	1	4	4	4	4	4	4	3	4
1-Chloro 1-Nitro Ethane	4	4	4	4	4	4	4	4	4	4	4	4	4	4
AN-O-3 Grade M	1	4	1	2	4	1	1	4	4	4	4	2	1	2
AN-O-6	1	4	1	2	4	1	1	4	4	4	4	2	1	4
AN-VV-O-366b Hydr. Fluid	1	4	1	2	4	2	2	4	4	4	4	2	1	4
ASTM Oil, No.1	1	4	1	1	4	1	1	4	4	4	4	2	1	1
ASTM Oil, No.2	1	4	1	2	4	1	2	4	4	4	4	4	1	4
ASTM Oil, No.3	1	4	1	4	4	1	2	4	4	4	4	4	1	3
ASTM Oil, No.4	2	4	1	4	4	2	4	4	4	4	4	4	2	4
ASTM Reference Fuel A	1	4	1	2	4	2	1	4	4	4	4	2	1	4
ASTM Reference Fuel B	1	4	1	4	4	4	2	4	4	4	4	4	1	4
ASTM Reference Fuel C	2	4	1	4	4	4	4	4	4	4	4	4	2	4
ATL-857	2	4	1	4	4	2	4	4	4	4	4	4	2	4
Acetaldehyde	3	2	4	3	3	4	4	2	2	2	2	3	4	2
Acetamide	1	1	3	1	4	4	4	2	4	4	4	2	1	2
Acetic Acid, 5%	2	1	1	1	2	4	4	1	2	2	2	1	2	1
Acetic Acid, Glacial	2	2	4	4	2	4	4	2	2	2	2	3	4	2
Acetic Acid, Hot, High Pressure	4	3	4	4	4	4	4	4	4	4	4	3	4	3
Acetic Anhydride	4	2	4	2	2	4	4	2	2	2	2	2	4	2
Acetone	4	1	4	4	4	4	4	1	4	4	4	3	4	4
Acetophenone	4	1	4	4	4	4	4	2	4	4	4	4	4	4
Acetyl Acetone	4	1	4	4	4	4	4	1	4	4	4	4	4	4
Acetyl Chloride	4	4	1	4	4	4	4	4	4	4	4	4	1	3
Acetylene	1	1	1	2	2	4	4	1	2	2	2	2	X	2
Acetylene Tetrabromide	4	1	1	2	4	X	4	1	X	X	X	X	X	X
Acrylonitrile	4	4	3	4	3	4	4	4	X	3	3	3	4	4
Aero Lubriplate	1	4	1	1	2	1	1	4	4	4	4	1	1	2
Aero Shell 17 Grease	1	4	1	2	4	1	1	4	4	4	4	1	1	2
Aero Shell 750	2	4	1	4	4	2	4	4	4	4	4	4	2	4
Aero Shell 7A Grease	2	4	1	2	4	1	1	4	4	4	4	1	1	2
Aero Shell IAC	1	4	1	2	4	1	1	4	4	4	4	1	1	2
Aerosafe 2300	4	1	4	4	4	4	4	2	4	4	4	4	3	3
Aerosafe 2300W	4	1	4	4	4	4	4	2	4	4	4	4	3	3
Aerozene 50 (50% Hydrazine 50% UDMH)	3	1	4	4	4	X	4	1	4	4	4	4	4	4
Air Below 200° F	2	1	1	1	2	1	2	1	2	2	2	1	1	1
Air, 200 - 300° F	3	2	1	2	4	2	3	2	4	4	4	2	1	1
Air, 300 - 400° F	4	4	1	4	4	4	4	4	4	4	4	4	2	1
Air, 400 - 500° F	4	4	3	4	4	4	4	4	4	4	4	4	4	2
Alkazene	4	4	2	4	4	4	4	4	4	4	4	4	2	4
Aluminum Acetate	2	1	4	2	2	4	4	1	4	1	1	4	4	4
Aluminum Bromide	1	1	1	1	1	1	3	1	1	1	1	1	1	1
Aluminum Chloride	1	1	1	1	1	1	3	1	1	1	1	1	1	2
Aluminum Fluoride	1	1	1	1	1	X	3	1	1	1	2	1	1	2
Aluminum Nitrate	1	1	1	1	1	X	3	1	1	1	1	1	X	2
Aluminum Salts	1	1	1	1	1	1	3	1	1	1	1	1	1	1
Aluminum Sulphate	1	1	1	1	2	4	4	1	1	1	1	1	1	1
Alums-NH3 -Cr -K	1	1	4	1	1	4	X	1	1	1	1	1	4	1
Ambrex 33 (Mobil)	1	4	1	2	4	1	2	4	4	4	4	3	3	4
Ambrex 830 (Mobil)	1	3	1	2	4	1	1	3	4	4	4	2	1	2
Amines-Mixed	4	2	4	2	2	4	4	2	2	2	2	4	4	2
Ammonia and Lithium Metal in Solution	2	2	4	X	4	4	4	2	4	4	4	4	4	4
Ammonia, Gas, Cold	1	1	4	1	1	4	X	1	1	1	1	1	4	1
Ammonia, Gas, Hot	4	2	4	2	4	4	X	2	4	4	4	2	4	X
Ammonia, Liquid (Anhydrous)	2	1	4	1	4	4	4	1	4	4	4	2	4	2
Ammonium Carbonate	4	1	1	1	1	4	4	1	X	X	1	1	X	X
Ammonium Chloride, 2N	1	1	1	1	1	X	1	1	X	X	1	1	X	X
Ammonium Hydroxide, 3 Molar	1	1	3	1	2	4	4	1	2	2	2	1	1	1
Ammonium Hydroxide, Concentrated	4	1	4	1	3	4	4	1	3	3	3	1	1	1
Ammonium Nitrate, 2N	1	1	X	1	1	2	X	1	X	X	3	1	X	X
Ammonium Nitrite	1	1	X	1	1	X	X	1	1	1	1	1	X	2
Ammonium Persulfate 10%	4	1	X	1	4	4	4	1	X	1	1	X	X	X
Ammonium Persulfate Solution	4	1	X	X	4	4	4	1	X	1	1	X	X	X

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FLUID NAME / MATERIAL	Nitrile	Ethylene Propylene	Fluorocarbon	Neoprene	SBR	Polyacrylate	Polyurethane	Butyl	Butadiene	Isoprene	Natural Rubber	Hypalon	Fluorosilicone	Silicone
Ammonium Phosphate	1	1	4	1	1	X	X	1	X	1	1	1	X	1
Ammonium Phosphate, Dibasic	1	1	X	1	1	X	X	1	X	1	1	1	X	1
Ammonium Phosphate, Mono-Basic	1	1	X	1	1	X	X	1	X	1	1	1	X	1
Ammonium Phosphate, Tribasic	1	1	X	1	1	X	X	1	X	1	1	1	X	1
Ammonium Salts	1	1	3	1	1	3	X	1	X	1	1	1	3	1
Ammonium Sulfate	1	1	4	1	2	4	X	1	1	1	1	1	X	X
Ammonium Sulfide	1	1	4	1	2	4	X	1	1	1	1	1	X	X
Amyl Acetate	4	3	4	4	4	4	4	3	4	4	4	4	4	4
Amyl Alcohol	2	1	2	2	2	4	4	1	2	2	2	2	1	4
Amyl Borate	1	4	1	1	4	X	X	4	4	4	4	1	X	X
Amyl Chloride	X	4	1	4	4	4	X	4	4	4	4	4	2	4
Amyl Chloronaphthalene	4	4	1	4	4	4	X	4	4	4	4	4	2	4
Amyl Naphthalene	4	4	1	4	4	2	4	4	4	4	4	4	1	4
An-O-366	1	4	1	2	4	1	1	4	4	4	4	2	1	4
Anderol, L- 826 (di-ester)	2	4	1	4	4	2	4	4	4	4	4	4	2	4
Anderol, L- 829 (di-ester)	2	4	1	4	4	2	4	4	4	4	4	4	2	4
Anderol, L-774 (di-ester)	2	4	1	4	4	2	4	4	4	4	4	4	2	4
Ang-25 (Di-ester Base) (TG749)	2	4	1	4	4	2	4	4	4	4	4	4	2	2
Ang-25 (Glyceral Ester)	2	1	1	2	2	4	4	2	2	2	2	2	2	2
Anhydrous Ammonia	2	1	4	1	4	4	4	1	4	4	4	4	4	2
Anhydrous Hydrazine	4	2	4	2	1	4	4	2	4	4	4	2	4	X
Anhydrous Hydrogen Fluoride	4	1	4	X	4	4	X	1	4	4	4	X	4	X
Aniline	4	2	3	4	4	4	4	2	4	4	4	4	3	4
Aniline Dyes	4	2	2	2	2	4	4	2	2	2	2	2	2	3
Aniline Hydrochloride	2	2	2	4	3	4	4	2	4	2	2	4	2	3
Aniline Oil	4	2	3	4	4	4	4	2	4	4	4	4	3	4
Animal Oil (Lard Oil)	1	2	1	2	4	1	2	2	4	4	4	2	1	2
Ansul Ether 161 or 181	3	3	4	4	4	4	2	3	4	4	4	4	3	4
Argon	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Aroclor, 1248	3	2	1	4	4	4	4	2	4	4	4	4	2	2
Aroclor, 1254	4	2	1	4	4	4	4	4	4	4	4	4	2	3
Aroclor, 1260	1	X	1	1	1	4	4	1	1	1	1	1	1	1
Aromatic Fuel -50%	2	4	1	4	4	4	4	4	4	4	4	4	2	4
Arsenic Acid	1	1	1	1	1	3	3	1	1	1	2	1	1	1
Askarel	2	4	1	4	4	4	4	4	4	4	4	4	2	4
Asphalt	2	4	1	2	4	2	2	4	4	4	4	2	2	4
Atlantic Dominion F	1	4	1	2	4	1	2	4	4	4	4	4	1	4
Atlantic Utro Gear-EP Lube.	1	4	1	2	4	1	1	4	4	4	4	4	1	4
Aure 903R (Mobil)	1	4	1	2	4	1	1	4	4	4	2	4	4	4
Automatic Transmission Fluid	1	4	1	2	4	1	2	4	4	4	4	3	X	4
Automotive Brake Fluid	3	1	4	2	1	4	4	2	X	X	X	2	4	3
Bardol B	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Barium Chloride	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Barium Hydroxide	1	1	1	1	1	4	4	1	1	1	1	1	1	1
Barium Salts	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Barium Sulfide	1	1	1	1	2	4	1	1	2	1	1	1	1	1
Bayol 35	1	4	1	2	4	1	2	4	4	4	4	4	1	4
Bayol D	1	4	1	2	4	1	4	4	4	4	4	4	1	4
Beer	1	1	1	1	1	4	2	1	1	1	1	1	1	1
Beet Sugar Liquors	1	1	1	2	1	4	4	1	1	1	1	1	1	1
Benzaldehyde	4	1	4	4	4	4	4	1	4	4	4	1	4	2
Benzene	4	4	1	4	4	4	4	4	4	4	4	4	3	4
Benzenesulfonic Acid 10%	4	4	1	2	4	4	4	4	4	4	4	1	2	4
Benzochloride	4	1	1	4	4	4	X	2	4	4	4	4	1	X
Benzoic Acid	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Benzophenone	X	2	1	X	4	4	4	2	4	4	X	X	1	X
Benzyl Alcohol	4	2	1	2	4	4	4	2	4	4	4	2	2	2
Benzyl Benzoate	4	4	1	4	4	4	4	2	4	4	4	4	1	4
Benzyl Chloride	4	4	1	4	4	4	4	4	4	4	4	4	1	4
Black Point 77	1	1	1	3	3	3	3	1	3	3	3	3	3	3
Blast Furnace Gas	4	4	1	4	4	4	4	4	4	4	4	4	2	1
Bleach Liquor	3	1	1	2	3	4	4	1	2	2	3	1	2	2

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FLUID NAME / MATERIAL	Nitrile	Ethylene Propylene	Fluorocarbon	Neoprene	SBR	Polyacrylate	Polyurethane	Butyl	Butadiene	Isoprene	Natural Rubber	Hypalon	Fluorosilicone	Silicone
Borax	2	1	1	4	2	2	1	1	2	2	2	4	2	2
Bordeaux Mixture	2	1	1	2	2	4	4	1	2	2	2	1	2	2
Boric Acid	1	1	1	1	1	4	1	1	1	1	1	1	1	1
Boron Fluids (HEF)	2	4	1	4	4	4	4	4	4	4	4	4	2	4
Brake Fluid DOT3 (Glycol Type)	3	1	4	2	1	X	4	2	X	X	X	2	4	3
Bray GG-130	2	4	1	4	4	2	4	4	4	4	4	4	2	4
Brayco 719-R (VV-H-910)	3	1	4	2	X	4	4	2	2	2	2	2	2	2
Brayco 885 (MIL-L-6085A)	2	4	1	4	4	2	1	4	4	4	4	4	2	4
Brayco 910	2	1	4	2	2	3	3	1	1	1	1	1	4	4
Bret 710	2	1	4	2	2	3	3	1	1	1	1	1	4	4
Brom - 113	3	4	X	4	4	X	X	4	X	X	X	4	X	4
Brom - 114	2	4	2	2	4	X	X	4	4	4	4	2	X	4
Bromine	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Bromine Pentafluoride	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Bromine Trifluoride	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Bromine Water	4	2	1	4	4	4	4	4	4	4	4	1	2	4
Bromobenzene	4	4	1	4	4	4	4	4	4	4	4	4	1	4
Bromochloro Trifluoroethane	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Bunker Oil	1	4	1	4	4	1	2	4	4	4	4	4	1	2
Butadiene (Monomer)	4	4	1	4	4	4	4	4	4	4	4	4	1	4
Butane	1	4	1	1	3	1	1	4	4	4	4	2	3	4
Butane, 2, 2-Dimethyl	1	4	1	2	3	1	4	4	4	4	4	2	3	4
Butane, 2, 3-Dimethyl	1	4	1	2	3	1	4	4	4	4	4	2	3	4
Butanol (Butyl Alcohol)	1	2	1	1	1	4	4	2	1	1	1	1	1	2
Butter-Animal Fat	1	1	1	2	4	1	1	2	4	4	4	2	1	2
Butyl Acetyl Ricinoleate	2	1	1	2	4	X	4	1	4	4	4	2	2	X
Butyl Acrylate	4	4	4	4	4	4	X	4	4	4	4	4	4	X
Butyl Alcohol	1	2	1	1	1	4	4	2	1	1	1	1	1	2
Butyl Amine or N-Butyl Amine	3	3	4	4	4	4	4	4	4	4	4	4	4	4
Butyl Carbitol	4	1	3	3	4	4	X	1	4	4	4	2	4	4
Butyl Cellosolve	3	2	4	3	4	4	4	2	4	4	4	4	4	X
Butyl Cellosolve Adipate	4	2	2	4	4	4	4	2	4	4	4	4	2	2
Butyl Oleate	4	2	1	4	4	X	X	2	4	X	4	4	2	X
Butyl Stearate	2	4	1	4	4	X	X	4	4	4	4	4	2	X
Butylene	2	4	1	3	4	4	4	4	4	4	4	4	2	4
Butyraldehyde	4	2	4	4	4	4	4	2	4	4	4	4	4	4
Butyric Acid	4	2	2	4	4	4	X	2	4	X	X	4	X	X
Calcine Liquors	1	1	1	X	X	4	4	1	X	X	X	X	1	X
Calcium Acetate	2	1	4	2	4	4	4	1	4	1	1	2	4	4
Calcium Bisulfite	2	1	2	2	2	3	3	1	4	4	4	1	3	3
Calcium Carbonate	1	1	1	1	1	3	3	1	1	1	1	1	1	1
Calcium Chloride	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Calcium Cyanide	1	1	X	1	1	X	X	1	1	1	1	1	X	1
Calcium Hydroxide	1	1	1	1	1	4	2	1	1	1	1	1	1	1
Calcium Hypochlorite	2	1	1	2	2	4	4	1	2	2	2	1	2	2
Calcium Nitrate	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Calcium Phosphate	1	1	1	2	1	1	1	1	1	1	1	1	X	1
Calcium Salts	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Calcium Silicate	1	1	1	1	1	X	X	1	1	1	1	1	X	X
Calcium Sulfide	1	1	1	1	2	4	1	1	2	2	2	1	1	1
Calcium Sulfite	1	1	1	1	2	4	1	1	2	2	2	1	1	1
Calcium Thiosulfate	2	1	1	1	2	4	1	1	2	2	2	1	1	1
Caliche Liquors	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Cane Sugar Liquors	1	1	1	1	1	4	4	1	1	1	1	1	1	1
Caproic Aldehyde	X	2	4	X	X	4	4	2	2	2	2	X	4	2
Carbamate	3	2	1	2	4	4	4	2	4	4	4	2	1	X
Carbitol	2	2	2	2	2	4	4	2	2	2	2	2	2	2
Carbolic Acid Phenol	4	2	1	4	4	4	3	2	4	4	4	4	1	4
Carbon Bisulfide	4	4	1	4	4	3	X	4	4	4	4	4	1	4
Carbon Dioxide	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Carbon Dioxide (Explosive Decompression Use)	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Carbon Disulfide	4	4	1	4	4	3	X	4	4	4	4	4	1	4

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FLUID NAME / MATERIAL	Nitrile	Ethylene Propylene	Fluorocarbon	Neoprene	SBR	Polyacrylate	Polyurethane	Butyl	Butadiene	Isoprene	Natural Rubber	Hypalon	Fluorosilicone	Silicone
Carbon Monoxide	1	1	1	2	2	X	1	1	2	2	2	2	2	1
Carbon Tetrachloride	2	4	1	4	4	4	4	4	4	4	4	4	2	4
Carbonic Acid	2	1	1	1	2	1	1	1	2	1	1	1	1	1
Castor Oil	1	2	1	1	1	1	1	2	1	1	1	1	1	1
Cellosolve	4	2	4	4	4	4	4	2	4	4	4	4	4	4
Cellosolve Butyl	4	2	4	4	4	4	4	2	4	4	4	4	4	4
Cellosolve, Acetate	4	2	4	4	4	4	4	2	4	4	4	4	4	4
Celluguard	1	1	1	1	1	3	4	1	1	1	1	1	1	1
Cellutherm 2505A	2	4	1	4	4	2	4	4	4	4	4	4	2	4
Cetane (Hexadecane)	1	4	1	2	4	1	4	4	4	4	4	2	3	4
China Wood Oil (Tung Oil)	1	4	1	2	4	X	3	3	4	4	4	3	2	4
Chlordane	2	4	1	3	4	X	X	4	4	4	4	3	2	4
Chlorextol	2	4	1	2	4	2	4	4	4	4	4	4	2	4
Chlorinated Solvents, Dry	4	4	1	4	4	4	4	4	4	4	4	4	1	4
Chlorinated Solvents, Wet	4	4	1	4	4	4	4	4	4	4	4	4	1	4
Chlorine Dioxide	4	3	1	4	4	4	4	3	4	4	4	3	2	X
Chlorine Dioxide, 8% Cl as NaClO2 in solution	4	4	1	4	4	4	4	4	4	4	4	4	2	X
Chlorine Trifluoride	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Chlorine, Dry	4	X	2	2	4	4	X	X	4	4	4	2	X	4
Chlorine, Wet	4	X	2	4	4	4	X	X	4	4	4	2	X	4
Chloroacetic Acid	4	2	4	4	4	4	4	2	4	4	4	1	4	X
Chloroacetone	4	1	4	4	4	4	4	2	4	4	4	4	4	4
Chlorobenzene	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Chlorobenzene (Mono)	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Chlorobromo Methane	4	2	1	4	4	4	4	2	4	4	4	4	2	4
Chlorobutadiene	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Chlorododecane	4	4	1	4	4	4	4	4	4	4	4	4	1	4
Chloroform	4	4	1	4	4	4	4	4	4	4	4	4	4	4
Chlorosulphonic Acid	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Chlorotoluene	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Chlorox	2	2	1	2	4	4	4	2	4	4	4	2	1	X
Chrome Alum	1	1	1	1	1	4	X	1	1	1	1	1	X	1
Chrome Plating Solutions	4	2	1	4	4	4	4	2	4	4	4	4	2	2
Circo Light Process Oil	1	4	1	2	4	1	1	4	4	4	4	2	1	4
Citric Acid	1	1	1	1	1	X	1	1	1	1	1	1	1	1
City Service #65 #120 #250	1	4	1	2	4	1	2	4	4	4	4	4	1	4
City Service Koolmoter-AP Gear Oil 140-EP lube	1	4	1	2	4	1	1	4	4	4	4	2	1	4
City Service Pacemaker #2	1	4	1	2	4	1	2	4	4	4	4	4	1	4
Cobalt Chloride	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Cobalt Chloride, 2N	1	1	1	1	1	4	4	1	1	1	1	1	1	1
Cocoanut Oil	1	3	1	3	4	1	3	3	4	4	4	3	1	1
Cod Liver Oil	1	1	1	2	4	1	1	1	4	4	4	2	1	2
Coffee	1	1	1	1	1	4	4	1	1	1	1	1	1	1
Coke Oven Gas	4	4	1	4	4	4	4	4	4	4	4	4	2	2
Coliche Liquors	2	2	X	1	2	X	X	2	1	1	1	X	X	X
Convelex 10	4	X	X	4	4	X	2	4	4	4	4	4	X	4
Coolanol 20 25R 35R 40& 45A (Monsanto)	1	3	1	2	4	4	1	4	4	4	4	2	1	4
Copper Acetate	2	1	4	2	4	4	4	1	4	1	1	2	4	4
Copper Chloride	1	1	1	2	1	1	1	1	1	1	1	2	1	1
Copper Cyanide	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Copper Salts	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Copper Sulfate	1	1	1	1	2	4	1	2	2	2	2	1	1	1
Copper Sulfate 10%	1	1	1	1	2	4	2	2	2	2	2	1	1	1
Copper Sulfate 50%	1	1	1	1	2	4	3	2	2	2	1	1	1	1
Corn Oil	1	3	1	3	4	1	1	3	4	4	4	2	1	1
Cottonseed Oil	1	3	1	3	4	1	1	3	4	4	4	2	2	1
Creosote, Coal Tar	1	4	1	2	4	1	3	4	4	4	4	4	1	4
Creosote, Wood	1	4	1	2	4	1	3	4	4	4	4	4	1	4
Cresols	4	4	2	4	4	4	X	4	4	4	4	4	X	4
Cresylic Acid	4	4	1	4	4	4	4	4	4	4	4	4	X	4
Crude Oil	2	4	1	4	4	1	X	4	4	4	4	4	2	4
Cumene	4	4	1	4	4	4	4	4	4	4	4	4	2	4

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FLUID NAME / MATERIAL	Nitrile	Ethylene Propylene	Fluorocarbon	Neoprene	SBR	Polyacrylate	Polyurethane	Butyl	Butadiene	Isoprene	Natural Rubber	Hypalon	Fluorosilicone	Silicone
Cutting Oil	1	4	1	2	4	1	1	4	4	4	4	2	1	4
Cyclohexane	1	4	1	3	4	2	1	4	4	4	4	4	1	4
Cyclohexanol	1	4	1	2	4	X	X	4	4	4	4	2	1	4
Cyclohexanone	4	2	4	4	4	4	4	2	4	4	4	4	4	4
DTE 20 Series, Mobil	2	4	1	1	X	2	1	4	X	X	2	2	2	4
DTE named series, Mobil, light-heavy	1	4	1	2	4	X	1	4	4	X	3	1	1	3
Decalin	4	4	1	4	4	X	X	4	4	4	4	4	1	4
Decane	1	4	1	3	4	1	2	4	4	4	4	3	1	2
Delco Brake Fluid	3	1	4	2	1	X	X	2	X	X	X	2	4	3
Denatured Alcohol	1	1	1	1	1	4	4	1	1	1	1	1	1	1
Detergent, Water Solution	1	1	1	2	2	4	4	1	2	2	2	2	1	1
Developing Fluids (Photo)	1	2	1	1	2	X	X	2	2	1	1	1	1	1
Dexron	1	4	1	2	4	1	2	4	4	4	4	4	2	4
Di-ester Lubricant MIL-L-7808	2	4	1	4	4	2	4	4	4	4	4	4	2	4
Di-ester Synthetic Lubricants	2	4	1	4	4	2	4	4	4	4	4	4	2	4
Diacetone	4	1	4	4	4	4	4	1	4	4	4	4	4	4
Diacetone Alcohol	4	1	4	2	4	4	4	1	4	4	4	2	4	4
Diazinon	3	4	2	3	4	X	X	4	4	4	4	3	2	4
Dibenzyl Ether	4	2	4	4	4	X	2	2	4	4	4	4	X	X
Dibenzyl Sebacate	4	2	2	4	4	4	2	2	4	4	4	4	3	3
Dibromoethyl Benzene	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Dibutyl Ether	4	3	3	4	4	3	2	3	4	4	4	4	3	4
Dibutyl Phthalate	4	2	3	4	4	4	3	3	4	4	4	4	3	2
Dibutyl Sebacate	4	2	2	4	4	4	4	2	4	4	4	4	2	2
Dibutylamine	4	4	4	3	4	4	4	4	4	4	4	4	4	3
Dichloro-Butane	2	4	1	4	4	4	4	4	4	4	4	4	2	4
Dichloro-Isopropyl Ether	4	3	3	4	4	3	2	4	4	4	4	4	3	4
Dicyclohexylamine	3	4	4	4	4	4	4	4	4	4	4	4	4	X
Diesel Oil	1	4	1	3	4	1	3	4	4	4	4	3	1	4
Diethyl Ether	4	4	4	3	4	3	1	4	4	4	4	4	3	4
Diethyl Sebacate	2	2	2	4	4	4	4	2	4	4	4	4	2	2
Diethylamine	2	2	4	2	2	4	3	2	2	2	2	3	4	2
Diethylene Glycol	1	1	1	1	1	2	4	1	1	1	1	1	1	2
Difluorodibromomethane	4	2	X	4	4	4	4	2	4	4	4	4	X	4
Diisobutyl Ketone	X	1	X	X	X	X	X	1	X	X	X	X	X	X
Diisobutylene	2	4	1	4	4	4	4	4	4	4	4	4	3	4
Diisooctyl Sebacate	3	3	2	4	4	4	4	4	4	4	4	4	3	3
Diisopropyl Ketone	4	1	4	4	4	4	4	1	4	4	4	4	4	4
Dimethyl Formamide (DMF)	2	1	4	3	4	4	4	2	X	X	4	4	4	2
Dimethyl Phthalate	4	2	2	4	4	4	X	2	4	4	4	4	2	X
Dinitro Toluene	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Dioctyl Phthalate	4	2	2	4	4	4	4	2	4	4	4	4	2	3
Dioctyl Sebacate	4	2	2	4	4	4	2	2	4	4	4	4	3	3
Dioxane	4	2	4	4	4	4	4	2	4	4	4	4	4	4
Dioxolane	4	2	4	4	4	4	4	3	4	4	4	4	4	4
Dipentene	2	4	1	4	4	4	4	4	4	4	4	4	3	4
Diphenyl	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Diphenyl Oxides	4	4	1	4	4	4	4	4	4	4	4	4	2	3
Dow Chemical 50-4	X	1	4	2	1	X	X	2	X	X	X	2	4	X
Dow Chemical ET378	4	X	X	4	4	3	2	4	4	4	4	4	X	4
Dow Chemical ET588	3	1	4	2	1	X	X	2	X	X	X	2	4	X
Dow Corning -11	2	1	1	1	1	1	1	1	1	1	1	1	1	2
Dow Corning -1265 Fluorosilicone Fluid	2	1	1	1	1	1	1	1	1	1	1	1	3	1
Dow Corning -200	2	1	1	1	1	1	1	1	1	1	1	1	2	3
Dow Corning -3	2	1	1	1	1	1	1	1	1	1	1	1	1	2
Dow Corning -33	2	1	1	1	1	1	1	1	1	1	1	1	2	3
Dow Corning -4	2	1	1	1	1	1	1	1	1	1	1	1	1	2
Dow Corning -44	2	1	1	1	1	1	1	1	1	1	1	1	2	3
Dow Corning -5	2	1	1	1	1	1	1	1	1	1	1	1	2	3
Dow Corning -510	2	1	1	1	1	1	1	1	1	1	1	1	2	3
Dow Corning -55	2	1	1	1	1	1	1	1	1	1	1	1	2	3
Dow Corning -550	2	1	1	1	1	1	1	1	1	1	1	1	2	3

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Dow Corning -704	2	1	1	1	1	1	1	1	1	1	1	1	2	3
Dow Corning -705	2	1	1	1	1	1	1	1	1	1	1	1	2	3
Dow Corning -710	2	1	1	1	1	1	1	1	1	1	1	1	2	3
Dow Guard	1	1	1	1	1	3	3	1	1	1	1	1	1	1
Dowtherm, 209	3	1	4	2	X	X	X	2	X	X	X	X	3	3
Dowtherm, A	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Dowtherm, E	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Drinking Water	1	1	1	2	1	4	4	1	1	1	1	1	1	1
Dry Cleaning Fluids	3	4	1	4	4	4	4	4	4	4	4	4	2	4
Elco 28-EP lubricant	1	4	1	3	4	1	1	4	4	4	4	4	1	2
Epichlorohydrin	4	2	4	4	4	4	4	2	4	4	4	4	4	4
Epoxy Resins	X	1	4	1	X	X	X	1	X	X	X	X	X	X
Esam-6 Fluid	X	1	4	2	1	X	X	2	X	X	X	2	4	X
Esso Fuel 208	1	4	1	2	4	1	4	4	4	4	4	3	1	4
Esso Golden Gasoline	2	4	1	4	4	4	4	4	4	4	4	4	1	4
Esso Motor Oil	1	4	1	3	4	1	4	4	4	4	4	4	1	4
Esso Transmission fluid (Type A)	1	4	1	2	4	1	3	4	4	4	4	4	1	4
Esso WS2812 (MIL-L-7808A)	1	4	1	4	4	2	4	4	4	4	4	4	1	4
Esso XP90-EP lubricant	1	4	1	2	4	1	1	4	4	4	4	2	1	4
Esstic 42, 43	1	4	1	2	4	1	2	4	4	4	4	4	1	4
Ethane	1	4	1	2	4	1	3	4	4	4	4	2	3	4
Ethanol	3	1	3	1	1	4	4	1	1	1	1	1	1	2
Ethanol Amine	2	2	4	2	2	4	3	2	2	2	2	3	4	2
Ethers	4	3	3	4	4	3	2	4	4	4	4	4	3	4
Ethyl Acetate-Organic ester	4	2	4	4	4	4	4	2	4	4	4	4	4	2
Ethyl Acetoacetate	4	2	4	4	3	4	4	2	3	3	3	4	4	2
Ethyl Acrylate	4	2	4	4	4	4	4	2	4	4	4	4	4	2
Ethyl Alcohol	3	1	3	1	1	4	4	1	1	1	1	1	1	2
Ethyl Benzene	4	4	1	4	4	4	4	4	4	4	4	4	1	4
Ethyl Benzoate	4	4	1	4	4	4	4	4	4	4	4	4	1	4
Ethyl Bromide	2	4	1	4	X	X	X	4	4	4	4	4	1	X
Ethyl Cellosolve	4	2	4	4	4	4	4	2	4	4	4	4	4	4
Ethyl Cellulose	2	2	4	2	2	4	2	2	2	2	2	2	4	2
Ethyl Chloride	1	3	1	4	4	3	2	4	2	1	4	4	1	4
Ethyl Chlorocarbonate	4	2	1	4	4	4	4	4	4	4	4	4	2	4
Ethyl Chloroformate	4	2	4	4	4	4	4	3	4	4	4	4	4	4
Ethyl Ether	3	3	4	4	4	4	2	3	4	4	4	4	3	4
Ethyl Formate	4	2	1	2	4	X	X	2	4	4	4	2	1	X
Ethyl Hexanol	1	1	1	1	1	4	4	1	1	1	1	1	1	2
Ethyl Mercaptan	4	X	2	3	4	X	X	4	4	4	4	3	X	3
Ethyl Oxalate	4	1	2	4	4	4	X	4	4	1	4	4	2	4
Ethyl Pentachlorobenzene	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Ethyl Silicate	1	1	1	1	2	X	X	1	2	2	2	2	1	X
Ethylacrylic Acid	4	2	X	2	4	4	4	2	4	4	4	4	4	4
Ethylcyclopentane	1	4	1	3	4	2	1	4	4	4	4	4	1	4
Ethylene Chloride	4	4	2	4	4	4	4	4	4	4	4	4	2	4
Ethylene Chlorohydrin	4	2	1	2	2	4	4	2	2	2	2	2	2	3
Ethylene Diamine	1	1	4	1	2	4	4	1	2	1	1	2	4	1
Ethylene Dibromide	4	3	1	4	4	4	4	3	4	4	4	4	3	4
Ethylene Dichloride	4	3	1	4	4	4	4	3	4	4	4	4	3	4
Ethylene Glycol	1	1	1	1	1	4	2	1	1	1	1	1	1	1
Ethylene Oxide	4	3	4	4	4	4	4	3	4	4	4	4	4	4
Ethylene Oxide, (12%) and Freon 12 (80%)	3	2	4	4	4	4	4	2	4	4	4	4	4	4
Ethylene Trichloride	4	3	1	4	4	4	4	3	4	4	4	4	3	4
Ethylmorpholene Stannous Octotate (50/50 mixture)	4	2	4	X	4	X	X	2	X	X	X	X	X	X
F-60 Fluid (Dow Corning)	1	1	1	1	1	1	1	1	1	1	1	1	1	4
F-61 Fluid (Dow Corning)	1	1	1	1	1	1	1	1	1	1	1	1	1	4
FC-43 Heptacosofluorotri-butylamine	1	1	1	1	4	X	X	1	X	X	X	1	1	1
FC75 & FC77 (Fluorocarbon)	1	1	2	1	4	X	X	1	X	X	X	1	2	1
Fatty Acids	2	3	1	2	4	X	X	3	4	4	4	2	X	3
Ferric Chloride	1	1	1	2	1	1	1	1	1	1	1	2	1	2
Ferric Nitrate	1	1	1	1	1	1	1	1	1	1	1	1	1	2

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FLUID NAME / MATERIAL	Nitrile	Ethylene Propylene	Fluorocarbon	Neoprene	SBR	Polyacrylate	Polyurethane	Butyl	Butadiene	Isoprene	Natural Rubber	Hypalon	Fluorosilicone	Silicone
Fisher Reagent	X	2	X	X	X	X	X	X	X	X	X	X	X	X
Fluorolube	1	1	2	1	4	X	X	1	X	X	X	1	2	1
Formaldehyde	3	2	4	3	3	4	4	2	2	2	2	2	4	2
Freon, 11	4	4	2	4	4	4	X	4	X	X	4	1	2	4
Freon, 112	2	4	1	2	4	X	X	4	X	X	4	2	X	4
Freon, 113	1	4	2	1	2	X	1	4	X	X	4	1	X	4
Freon, 114	1	1	1	1	1	X	X	1	X	X	1	X	X	4
Freon, 114B2	2	4	2	2	4	X	X	4	X	X	4	1	X	4
Freon, 115, 116	1	1	2	1	1	X	X	1	X	X	1	X	X	X
Freon, 12	2	3	3	1	1	X	1	3	4	4	2	1	3	4
Freon, 12 and ASTM Oil #2 (50/50 Mixture)	2	4	1	3	4	X	X	4	4	4	4	2	2	4
Freon, 12 and Suniso 4G (50/50 Mixture)	2	4	1	3	4	X	X	4	4	4	4	2	2	4
Freon, 13	1	1	1	1	1	X	X	1	X	1	1	1	4	4
Freon, 13B1	1	1	1	1	1	X	X	1	X	X	1	1	2	4
Freon, 14	1	1	1	1	1	X	1	1	X	X	1	1	X	4
Freon, 21	4	4	4	3	4	X	X	4	4	4	4	4	X	4
Freon, 22	4	3	4	1	1	2	4	3	X	X	1	1	4	4
Freon, 22 and ASTM Oil #2 (50/50 Mixture)	4	4	2	2	4	2	X	4	X	X	4	X	2	4
Freon, 31	4	1	4	1	2	X	X	1	X	X	2	2	X	X
Freon, 32	1	1	4	1	1	X	X	1	X	X	1	1	X	X
Freon, 502	2	1	2	1	1	X	X	1	X	X	1	X	X	X
Freon, BF	2	4	1	2	4	X	X	4	X	X	4	2	X	4
Freon, C318	1	1	2	1	1	X	X	1	X	X	1	1	X	X
Freon, K-142b	1	1	4	1	1	X	X	1	X	X	2	1	X	X
Freon, K-152a	1	1	4	1	1	X	X	1	X	X	1	4	X	X
Freon, MF	2	4	2	4	4	X	3	4	X	X	4	1	X	4
Freon, PCA	1	4	2	1	2	X	1	4	X	X	4	1	X	4
Freon, TF	1	4	2	1	2	X	1	4	X	X	4	1	X	4
Fuel Oil, #6	2	4	1	4	4	1	2	4	4	4	4	4	1	1
Fuel Oil, 1, and 2	1	4	1	2	4	1	2	4	4	4	4	3	1	4
Fuel Oil, Acidic	1	4	1	2	4	1	2	4	4	4	4	4	1	1
Fumaric Acid	1	2	1	2	2	4	X	4	2	1	3	2	1	2
Fuming Sulphuric Acid (20/25% Oleum)	4	4	1	4	4	4	4	4	4	4	4	4	X	4
Furan (Furfuran)	4	3	X	4	4	4	X	4	4	4	4	4	X	X
Furfural	4	2	4	4	4	4	3	2	4	4	4	3	X	4
Furfuraldehyde	4	2	4	4	4	4	X	2	4	4	4	4	X	4
Furfuryl Alcohol	4	2	X	4	4	4	4	2	4	4	4	4	4	4
Furyl Carbinol	4	2	X	4	4	4	4	2	4	4	4	4	4	4
Fyrquel 150 220 300 550	4	1	1	4	4	4	4	1	4	4	4	4	2	1
Gallic Acid	2	2	1	2	2	4	4	2	X	1	1	2	1	X
Gasoline	1	4	1	4	4	4	2	4	4	4	4	4	1	4
Gelatin	1	1	1	1	1	4	4	1	1	1	1	1	1	1
Girling Brake Fluid	3	1	4	2	1	X	X	2	X	X	X	2	4	X
Glacial Acetic Acid	2	2	4	4	2	4	4	2	2	2	2	4	4	2
Glauber's Salt	4	2	1	2	4	4	X	2	4	2	2	2	1	X
Glucose	1	1	1	1	1	X	4	1	1	1	1	1	1	1
Glycerine - Glycerol	1	1	1	1	1	4	4	1	1	1	1	1	1	1
Glycols	1	1	1	1	1	4	4	1	1	1	1	1	1	1
Grease Petroleum Base	1	4	1	3	4	1	1	4	4	4	4	4	1	4
Green Sulphate Liquor	2	1	1	2	2	4	4	1	2	2	2	2	2	X
Gulf Endurance Oils	1	4	1	2	4	1	1	4	4	4	4	4	1	4
Gulf FR Fluids (Emulsion)	1	4	1	2	4	1	1	4	4	4	4	4	1	4
Gulf FR G-Fluids	1	1	1	1	1	4	2	1	1	1	1	1	1	1
Gulf FR P-Fluids	4	2	2	4	4	4	4	2	4	4	4	4	2	1
Gulf Harmony Oils	1	4	1	2	4	1	1	4	4	4	4	4	1	4
Gulf High Temperature Grease	1	4	1	2	4	1	1	4	4	4	4	4	1	4
Gulf Legion Oils	1	4	1	2	4	1	1	4	4	4	4	4	1	4
Gulf Paramount Oils	1	4	1	2	4	1	2	4	4	4	4	4	1	4
Gulf Security Oils	1	4	1	2	4	1	2	4	4	4	4	4	1	4
Gulfcrown Grease	1	4	1	2	4	1	1	4	4	4	4	4	1	4
HEF-2 (High Energy Fuel)	2	4	1	4	4	4	4	4	4	4	4	4	2	4
Halothane	4	4	1	4	4	4	4	4	4	4	4	4	2	4

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FLUID NAME / MATERIAL	Nitrile	Ethylene Propylene	Fluorocarbon	Neoprene	SBR	Polyacrylate	Polyurethane	Butyl	Butadiene	Isoprene	Natural Rubber	Hypalon	Fluorosilicone	Silicone
Halowax Oil	4	4	1	4	4	X	X	4	4	4	4	4	1	4
Hannifin Lube A	1	4	1	1	2	1	1	4	4	4	4	1	1	2
Heavy Water	1	1	X	2	1	4	4	1	1	1	1	1	1	1
Helium	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Hexyl Alcohol	1	3	1	2	1	4	4	3	1	1	1	2	2	2
HiLo MS #1	4	1	4	4	4	4	4	2	4	4	4	4	3	3
High Viscosity Lubricant, H2	1	1	1	2	1	4	4	1	2	X	X	X	2	1
High Viscosity Lubricant, U4	1	1	1	2	1	4	4	1	2	X	X	X	2	1
Houghto-Safe 1010 phosphate ester	4	1	1	4	4	4	X	1	4	4	4	4	2	3
Houghto-Safe 1055 phosphate ester	4	1	1	4	4	4	X	1	4	4	4	4	2	3
Houghto-Safe 1120 phosphate ester	4	2	1	4	4	4	4	1	4	4	4	4	2	3
Houghto-Safe 271 (Water & Glycol Base)	1	1	2	2	1	4	4	2	X	X	X	X	2	2
Houghto-Safe 416 & 500 Series	1	1	X	X	X	X	X	X	X	X	X	X	X	X
Houghto-Safe 5040 (Water/Oil emulsion)	1	4	1	2	4	4	4	4	4	4	4	4	2	3
Houghto-Safe 620 Water/Glycol	1	1	2	2	1	4	4	2	X	X	X	X	2	2
Hydraulic Oil, Petroleum Base, Industrial	1	4	1	2	4	1	1	4	4	4	4	2	1	2
Hydrazine	2	1	4	2	2	X	4	1	X	X	1	2	4	2
Hydro-Drive MIH-10 (Petroleum Base)	1	4	1	2	4	1	2	4	4	4	4	4	1	2
Hydro-Drive MIH-50 (Petroleum Base)	1	4	1	2	4	1	2	4	4	4	4	4	1	2
Hydrobromic Acid	4	1	1	4	4	4	4	1	4	1	1	1	3	4
Hydrobromic Acid 40%	4	1	1	2	4	4	4	1	4	1	1	1	3	4
Hydrocarbons, Saturated	1	4	1	2	4	1	2	4	4	4	4	3	1	4
Hydrochloric Acid, 3 Molar to 158°F	2	1	1	2	3	3	4	1	X	X	3	1	3	4
Hydrochloric Acid, Concentrated Room Temp.	2	2	1	X	X	X	X	X	X	X	X	X	X	X
Hydrochloric Acid, Concentrated to 158°F	4	4	4	4	4	4	4	4	X	X	4	X	4	4
Hydrocyanic Acid	2	1	1	2	2	4	X	1	2	1	1	1	2	3
Hydrofluosilicic Acid	2	1	1	2	2	X	X	1	X	1	1	1	4	4
Hydrogen Gas, Cold	1	1	1	1	2	2	1	1	1	1	2	1	3	3
Hydrogen Gas, Hot	1	1	1	1	2	2	1	1	1	1	2	1	3	3
Hydrogen Peroxide	2	1	1	1	2	4	X	1	2	2	2	2	1	1
Hydrogen Peroxide 90%	4	3	1	4	4	4	X	3	4	4	4	3	2	2
Hydrogen Sulfide Dry Cold	1	1	4	1	1	4	X	1	1	1	1	1	3	3
Hydrogen Sulfide Dry Hot	4	1	4	2	4	4	X	1	4	4	4	3	3	3
Hydrogen Sulfide Wet Cold	4	1	4	1	4	4	X	1	4	4	4	2	3	3
Hydrogen Sulfide Wet Hot	4	1	4	2	4	4	X	1	4	4	4	3	3	3
Hydrolube-Water/Ethylene Glycol	1	1	1	2	1	4	4	2	X	X	X	X	2	2
Hydroquinone	3	2	2	4	4	4	X	4	4	2	2	4	2	X
Hydyne	2	1	4	2	2	4	X	2	2	2	2	X	4	4
Hyjet IV and IVA	4	1	4	4	4	4	4	2	4	4	4	4	4	4
Hypochlorous Acid	4	2	1	4	4	4	X	2	4	2	2	1	X	X
Industron FF44	1	4	1	2	4	1	2	4	4	4	4	4	1	4
Industron FF48	1	4	1	2	4	1	2	4	4	4	4	4	1	4
Industron FF53	1	4	1	2	4	1	2	4	4	4	4	4	1	4
Industron FF80	1	4	1	2	4	1	2	4	4	4	4	4	1	4
Iodine	2	2	1	4	2	X	X	2	X	4	X	2	1	X
Iodine Pentafluoride	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Iso Octane	1	4	1	2	4	1	2	4	4	4	4	1	1	4
Iso-Butyl N-Butyrate	4	1	1	4	4	4	X	1	4	4	4	4	1	X
Isobutyl Alcohol	2	1	1	1	2	4	4	1	2	1	1	1	2	1
Isododecane	1	4	1	2	4	4	X	4	4	4	4	2	1	4
Isophorone (Ketone)	4	2	4	4	4	4	4	2	4	4	4	4	4	4
Isopropanol	2	1	1	2	2	4	4	1	2	1	1	1	2	1
Isopropyl Acetate	4	2	4	4	4	4	4	2	4	4	4	4	2	4
Isopropyl Alcohol	2	1	1	2	2	4	4	1	2	1	1	1	2	1
Isopropyl Chloride	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Isopropyl Ether	2	4	4	3	4	3	2	4	4	4	4	3	3	4
JP-10	3	4	1	4	4	4	3	4	X	X	4	X	1	4
JP-4 (MIL-T-5624)	1	4	1	4	4	2	2	4	4	4	4	4	2	4
JP-5 (MIL-T-5624)	1	4	1	4	4	2	2	4	4	4	4	4	2	4
JP-6 (MIL-J-25656)	1	4	1	4	4	2	2	4	4	4	4	4	2	4
JP-8 (MIL-T-83133)	1	4	1	3	4	1	1	4	X	X	4	X	2	4
JP-9 (MIL-F-81912)	3	4	1	4	4	4	3	4	X	X	4	X	2	4

APPENDIX

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JP-9 -11	4	4	1	4	4	4	4	4	X	X	4	X	2	4
Kel F Liquids	1	1	2	X	1	X	X	1	X	X	X	1	2	1
Kerosene (Similar to RP-1 and JP-1)	1	4	1	2	4	1	1	4	4	4	4	4	1	4
Keystone #87HX-Grease	1	4	1	4	4	1	1	4	4	4	4	4	1	4
Lacquer Solvents	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Lacquers	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Lactams-Amino Acids	4	2	4	2	4	X	X	2	4	4	4	2	4	X
Lactic Acid Cold	1	1	1	1	1	4	X	1	1	1	1	1	1	1
Lactic Acid Hot	4	4	1	4	4	4	X	4	4	4	4	3	2	2
Lactones (Cyclic Esters)	4	2	4	4	4	4	4	2	4	4	4	4	4	2
Lard Animal Fat	1	2	1	2	4	1	1	2	4	4	4	4	1	2
Lead Acetate	2	1	4	2	4	4	4	1	4	1	1	4	4	4
Lead Nitrate	1	1	X	1	1	X	X	1	1	1	1	1	1	2
Lead Sulphamate	2	1	1	1	2	4	X	1	2	2	2	1	1	2
Lehigh X1169	1	4	1	2	4	1	1	4	4	4	4	2	1	4
Lehigh X1170	1	4	1	2	4	1	1	4	4	4	4	2	1	4
Ligroin (Petroleum Ether or Benzine)	1	4	1	2	4	1	2	4	4	4	4	3	1	4
Lindol, Hydraulic Fluid (Phosphate ester type)	4	1	2	4	4	4	4	1	4	4	4	4	3	3
Linoleic Acid	2	4	2	2	4	X	X	4	4	4	4	2	X	2
Linseed Oil	1	3	1	3	4	1	2	3	4	4	4	2	1	1
Liquid Oxygen (LOX)	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Liquid Petroleum Gas (LPG)	1	4	1	2	4	3	1	4	4	4	4	4	3	3
Liquimoly	1	4	1	2	4	1	2	4	4	4	4	4	1	4
Lubricating Oils, Di-ester	2	4	1	3	4	2	X	4	4	4	4	X	2	4
Lubricating Oils, SAE 10, 20, 30, 40, 50	1	4	1	2	4	1	2	4	4	4	4	4	1	4
Lubricating Oils, petroleum base	1	4	1	2	4	1	2	4	4	4	4	4	1	4
Lye Solutions	2	1	2	2	2	4	4	1	2	2	1	1	2	2
MCS 312	4	4	1	4	4	4	X	4	4	4	4	X	1	1
MCS 352	4	1	4	4	4	4	4	2	4	4	4	4	3	3
MCS 463	4	1	4	4	4	4	4	2	4	4	4	4	3	3
MIL-A-6091	2	1	1	1	1	4	4	1	1	1	1	1	1	1
MIL-C-4339	1	4	1	4	4	1	1	4	4	4	4	4	1	3
MIL-C-7024	1	4	1	2	4	2	1	4	4	4	4	4	1	4
MIL-C-8188	2	4	2	4	4	3	4	4	4	4	4	4	2	4
MIL-E-9500	1	1	1	1	1	4	4	1	1	1	1	1	1	1
MIL-F-16884	1	4	1	3	4	1	3	4	4	4	4	3	1	4
MIL-F-17111	1	4	1	2	4	1	3	4	4	4	4	2	2	4
MIL-F-25558 (RJ-1)	1	4	1	2	4	1	1	4	4	4	4	2	1	4
MIL-F-25656	1	4	1	4	4	2	2	4	4	4	4	4	2	4
MIL-F-5566	2	1	1	2	2	4	2	1	2	1	1	1	1	1
MIL-F-81912 (JP-9)	3	4	1	4	4	4	3	4	X	X	4	X	2	4
MIL-F-82522 (RJ-4)	2	4	1	4	4	1	1	4	1	1	1	X	1	4
MIL-G-10924	1	4	1	2	4	2	1	4	4	4	4	2	1	4
MIL-G-15793	1	4	1	2	4	1	1	4	4	4	4	2	2	4
MIL-G-21568	1	1	1	1	1	1	1	1	1	1	1	1	1	4
MIL-G-25013	1	1	1	2	1	1	3	1	4	4	2	2	1	4
MIL-G-25537	1	4	1	2	4	2	1	4	4	4	4	2	1	4
MIL-G-25760	2	4	1	2	4	2	2	4	4	4	4	2	2	4
MIL-G-3278	2	4	1	4	4	1	2	4	4	4	4	4	2	4
MIL-G-3545	1	4	1	2	4	1	1	4	4	4	4	2	1	4
MIL-G-4343	2	3	1	2	1	1	1	3	1	1	1	1	1	3
MIL-G-5572	1	4	1	4	4	2	2	4	4	4	4	4	1	4
MIL-G-7118	2	4	1	2	4	3	3	4	4	4	4	2	1	4
MIL-G-7187	1	4	1	4	4	1	1	4	4	4	4	4	1	4
MIL-G-7421	2	4	1	2	4	4	2	4	4	4	4	2	2	4
MIL-G-7711	1	4	1	4	4	2	1	4	4	4	4	4	1	2
MIL-H-13910	1	1	1	1	1	2	4	1	1	1	1	1	2	4
MIL-H-19457	4	2	1	4	4	4	4	1	4	4	4	4	4	3
MIL-H-22251	2	1	X	2	2	X	X	1	X	X	X	2	X	4
MIL-H-27601	1	4	1	2	4	1	3	4	4	4	4	3	2	4
MIL-H-46170 -15°F to +400°F	1	4	1	2	4	2	2	4	4	4	4	2	1	4
MIL-H-46170 -20°F to +275°F	1	4	1	2	4	2	2	4	4	4	4	2	1	4

APPENDIX

PNEU-DRAULICS
111 Brookside Drive • P.O. Box 37
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FLUID NAME / MATERIAL	Nitrile	Ethylene Propylene	Fluorocarbon	Neoprene	SBR	Polyacrylate	Polyurethane	Butyl	Butadiene	Isoprene	Natural Rubber	Hypalon	Fluorosilicone	Silicone
MIL-H-46170 -55°F to +275°F	1	4	1	2	4	2	2	4	4	4	4	2	1	4
MIL-H-46170 -65°F to +275°F	1	4	1	2	4	2	2	4	4	4	4	2	1	4
MIL-H-5606 -65°F to +235°F	1	4	1	2	4	2	2	4	4	4	4	2	1	4
MIL-H-5606 -65°F to +275°F	1	4	1	2	4	2	2	4	4	4	4	2	1	4
MIL-H-6083	1	4	1	1	4	1	1	4	4	4	2	2	1	4
MIL-H-7083	1	1	2	2	2	4	4	1	3	3	2	2	1	1
MIL-H-8446 (MLO-8515)	2	4	1	1	4	3	4	4	4	4	4	X	1	4
MIL-J-5161	2	4	1	4	4	1	2	4	4	4	4	4	1	4
MIL-L-15016	1	4	1	2	4	1	1	4	4	4	4	2	2	4
MIL-L-15017	1	4	1	2	4	1	1	4	4	4	4	2	2	4
MIL-L-17331	1	4	1	X	4	X	X	4	4	4	4	X	X	4
MIL-L-2104	1	4	1	2	4	1	1	4	4	4	4	3	1	4
MIL-L-21260	1	4	1	2	4	1	1	4	4	4	4	2	1	4
MIL-L-23699	2	4	1	3	4	3	3	4	4	4	4	3	2	4
MIL-L-25681	2	1	1	2	2	2	3	1	2	2	2	2	2	4
MIL-L-3150	1	4	1	2	4	2	2	4	4	4	4	2	1	4
MIL-L-6081	1	4	1	2	4	1	1	4	4	4	4	2	1	4
MIL-L-6082	1	4	1	2	4	1	1	4	4	4	4	2	1	3
MIL-L-6085	2	4	1	4	4	2	3	4	4	4	4	4	2	4
MIL-L-6387	2	4	1	4	4	2	1	4	4	4	4	4	2	4
MIL-L-7808	2	4	1	4	4	2	4	4	4	4	4	4	2	4
MIL-L-7870	1	4	1	2	4	1	2	4	4	4	4	4	1	4
MIL-L-9000	1	4	1	2	4	1	3	4	4	4	4	2	2	4
MIL-L-9236	2	4	1	4	4	2	2	4	4	4	4	4	2	4
MIL-O-3503	1	4	1	2	4	2	1	4	4	4	4	2	1	4
MIL-P-27402	2	1	X	2	2	X	X	1	X	X	X	2	X	4
MIL-R-25576 (RP-1)	1	4	1	2	4	1	1	4	4	4	4	2	1	4
MIL-S-3136, Type I Fuel	1	4	1	2	4	1	1	4	4	4	4	2	1	4
MIL-S-3136, Type II Fuel	2	4	1	4	4	3	2	4	4	4	4	4	2	4
MIL-S-3136, Type III Fuel	2	4	1	4	4	3	2	4	4	4	4	4	2	4
MIL-S-3136, Type IV Oil High Swell	1	4	1	4	4	1	1	4	4	4	4	4	1	2
MIL-S-3136, Type IV Oil Low Swell	1	4	1	1	4	1	1	4	4	4	4	1	1	3
MIL-S-3136, Type V Oil Medium Swell	1	4	1	2	4	1	1	4	4	4	4	2	1	2
MIL-S-81087	1	1	1	1	1	1	1	1	1	1	1	1	2	3
MIL-T-5624, JP-4, JP-5	1	4	1	4	4	2	2	4	4	4	4	4	2	4
MIL-T-83133	1	4	1	3	4	1	1	4	X	X	4	X	2	4
MLO-7277 Hydr.	3	4	1	4	4	3	3	4	4	4	4	4	3	4
MLO-7557	3	4	1	4	4	3	3	4	4	4	4	4	3	4
MLO-8200 Hydr.	2	4	1	1	4	X	1	4	4	4	4	4	2	4
MLO-8515	2	4	1	1	4	3	1	4	4	4	4	3	1	4
Magnesium Chloride	1	1	1	1	1	X	1	1	1	1	1	1	1	1
Magnesium Hydroxide	2	1	1	2	2	4	4	1	2	2	2	1	X	X
Magnesium Salts	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Magnesium Sulphite and Sulphate	1	1	1	1	2	4	X	1	2	2	2	1	1	1
Malathion	2	4	1	X	4	X	X	4	4	4	4	X	2	4
Maleic Acid	4	4	1	4	4	4	X	4	4	4	4	4	X	X
Maleic Anhydride	4	2	4	4	4	4	X	2	4	4	4	4	X	X
Malic Acid	1	2	1	2	2	4	X	4	2	1	3	2	1	2
Mercuric Chloride	1	1	1	1	1	X	X	1	1	1	1	1	X	X
Mercury	1	1	1	1	1	X	X	1	1	1	1	1	X	X
Mercury Vapors	1	1	1	1	1	X	X	1	1	1	1	1	X	X
Mesityl Oxide (Ketone)	4	2	4	4	4	4	4	2	4	4	4	4	4	4
Methane	1	4	1	2	4	1	3	4	4	4	4	2	3	4
Methanol	4	1	4	1	1	4	4	1	1	1	1	1	1	1
Methyl Acetate	4	2	4	2	4	4	4	2	4	4	4	4	4	4
Methyl Acetoacetate	4	2	4	4	X	4	4	2	X	X	X	4	4	2
Methyl Acrylate	4	2	4	2	4	4	4	2	4	4	4	4	4	4
Methyl Alcohol	4	1	4	1	1	4	4	1	1	1	1	1	1	1
Methyl Benzoate	4	4	1	4	4	4	4	4	4	4	4	4	1	4
Methyl Bromide	2	4	1	4	4	3	X	4	4	4	4	4	1	X
Methyl Butyl Ketone	4	1	4	4	4	4	4	1	4	4	4	4	4	4
Methyl Carbonate	4	4	1	4	4	4	4	4	4	4	4	4	2	4

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FLUID NAME / MATERIAL	Nitrile	Ethylene Propylene	Fluorocarbon	Neoprene	SBR	Polyacrylate	Polyurethane	Butyl	Butadiene	Isoprene	Natural Rubber	Hypalon	Fluorosilicone	Silicone
Methyl Cellosolve	3	2	4	3	4	4	4	2	4	4	4	2	4	4
Methyl Cellulose	2	2	4	2	2	4	2	2	2	2	2	2	4	2
Methyl Chloride	4	3	1	4	4	4	4	3	4	4	4	4	2	4
Methyl Chloroformate	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Methyl Ether	1	4	1	3	4	4	X	4	1	1	4	4	1	1
Methyl Ethyl Ketone (MEK)	4	1	4	4	4	4	4	1	4	4	4	4	4	4
Methyl Ethyl Ketone Peroxide	4	4	4	4	4	4	4	4	4	4	4	4	4	2
Methyl Formate	4	2	X	2	4	X	X	2	4	4	4	2	X	X
Methyl Isobutyl Ketone (MIBK)	4	3	4	4	4	4	4	3	4	4	4	4	4	4
Methyl Isopropyl Ketone	4	2	4	4	4	4	4	2	4	4	4	4	4	4
Methyl Mercaptan	X	1	X	X	X	X	X	1	X	X	X	X	X	X
Methyl Methacrylate	4	4	4	4	4	4	X	4	4	4	4	4	4	4
Methyl Oleate	4	2	1	4	4	X	X	2	4	X	4	4	2	X
Methyl Salicylate	4	2	X	4	3	X	X	2	X	X	3	4	X	X
Methylacrylic Acid	4	2	3	2	4	4	4	2	4	4	4	4	4	4
Methylcyclopentane	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Methylene Chloride	4	4	2	4	4	4	4	4	4	4	4	4	2	4
Milk	1	1	1	1	1	4	4	1	1	1	1	1	1	1
Mineral Oils	1	3	1	2	4	1	1	3	4	4	4	2	1	2
Mobil SHC 500 Series	3	4	1	2	X	1	2	4	X	X	X	2	2	2
Mobil SHC 600 Series	3	4	1	2	4	1	1	4	X	X	X	2	2	3
Mobilgear 600 Series	3	3	1	1	4	1	2	3	3	4	4	2	1	1
Mobilgear SHC ISO Series	3	3	1	2	4	1	2	3	3	4	4	2	1	1
Mobilgrease HP	2	4	1	2	4	1	1	4	X	4	4	3	1	2
Mobilgrease HTS	2	4	1	2	4	1	1	4	X	4	4	3	1	2
Mobilgrease SM	2	4	1	2	4	1	1	4	X	4	4	3	1	2
Mobilith AW Series	2	4	1	2	4	1	1	4	X	4	4	3	1	2
Mobilith SHC Series	2	4	1	3	4	1	1	4	X	4	4	3	1	2
Mobilmistlube Series	3	3	1	1	4	1	2	3	3	4	4	2	1	1
Mono Bromobenzene	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Mono Ethanolamine	4	2	4	4	2	4	4	2	2	2	2	4	4	2
Monochlorobenzene	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Monoitrotoluene & Dinitrotoluene (40/60 Mixture)	4	4	3	4	4	4	4	4	4	4	4	4	3	4
Monomethyl Hydrazine	2	1	X	2	2	X	X	1	X	X	X	2	X	4
Monomethylaniline	4	2	2	4	4	4	4	2	4	4	4	4	X	X
Monovinyl Acetylene	1	1	1	2	2	X	X	1	2	2	2	2	X	2
Mopar Brake Fluid	3	1	4	2	1	X	X	2	X	X	X	2	4	3
N-Butyl Acetate	4	2	4	4	4	4	4	2	4	4	4	4	4	4
N-Butyl Benzoate	4	1	1	4	2	4	X	1	4	4	4	4	1	X
N-Butyl Butyrate	4	1	1	4	4	4	X	1	4	4	4	4	1	X
N-Butyl Ether	3	3	4	4	4	4	3	3	4	4	4	4	3	4
N-Heptane	1	4	1	2	4	1	2	4	4	4	4	2	3	4
N-Hexaldehyde	4	1	4	1	4	X	2	2	4	4	4	3	4	2
N-Hexane	1	4	1	2	4	1	2	4	4	4	4	2	3	4
N-Hexane-1	2	4	1	2	4	1	2	4	4	4	4	2	4	4
N-Methyl-2-Pyrrolidone	X	2	X	X	X	X	X	X	X	X	X	X	X	X
N-Octane	1	4	1	4	4	4	4	4	4	4	4	4	2	4
N-Pentane	1	4	1	1	3	1	4	4	4	4	4	2	3	4
N-Propyl Acetone	4	1	4	4	4	4	4	1	4	4	4	4	4	4
Naphthalene	4	4	1	4	4	X	2	4	4	4	4	4	1	4
Naphthenic Acid	2	4	1	4	4	X	X	4	4	4	4	4	1	4
Naptha	2	4	1	4	4	2	2	4	4	4	4	4	2	4
Natural Gas	1	4	1	1	2	2	2	4	2	2	2	1	3	4
Neatsfoot Oil	1	2	1	4	4	1	1	2	4	4	4	4	1	2
Neon	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Neville Acid	4	2	1	4	4	4	X	2	4	4	4	4	2	4
Nickel Acetate	2	1	4	2	4	4	4	1	4	1	1	4	4	4
Nickel Chloride	1	1	1	2	1	3	3	1	1	1	1	1	1	1
Nickel Salts	1	1	1	2	1	3	3	1	1	1	1	1	1	1
Nickel Sulfate	1	1	1	1	2	4	3	1	2	2	2	1	1	1
Niter Cake	1	1	1	1	1	4	1	1	1	1	1	1	1	1
Nitric Acid 3 Molar to 158°F	4	2	3	4	3	4	4	2	X	X	X	2	4	4

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Nitric Acid Concentrated Room Temp.	X	4	2	X	X	X	X	X	X	X	X	X	X	X
Nitric Acid Concentrated to 158°F	4	4	4	4	4	4	4	4	X	X	4	X	4	4
Nitrobenzene	4	1	2	4	4	4	4	1	4	4	4	4	4	4
Nitroethane	4	2	4	2	2	4	4	2	2	2	2	2	4	4
Nitrogen	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Nitrogen Tetroxide (N_2O_4)	4	4	4	4	4	4	4	2	4	4	4	4	4	4
Nitromethane	4	2	4	3	3	4	4	2	2	2	2	2	4	4
Nitropropane	4	2	4	4	4	4	4	2	4	4	4	4	4	4
Nitrous Oxide	1	1	1	X	X	X	X	X	X	X	X	X	X	1
Noryl GE Phenolic	1	1	X	X	X	X	X	X	X	X	X	X	X	X
Nyvac FR200 Mobil	1	1	1	2	4	X	X	4	4	X	4	3	X	X
O-Chloronaphthalene	4	4	1	4	4	4	4	4	4	4	4	4	2	4
O-Chlorphenol	4	4	1	4	4	4	4	4	4	4	4	4	2	4
O-Dichlorobenzene	4	4	1	4	4	4	4	4	4	4	4	4	2	4
OS 45 Type III (OS45)	2	4	1	1	4	X	4	4	4	4	4	2	2	4
OS 45 Type IV (OS45-1)	2	4	1	1	4	X	4	4	4	4	4	2	2	4
OS 70	2	4	1	1	4	X	4	4	4	4	4	2	2	4
Octachloro Toluene	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Octadecane	1	4	1	2	4	2	1	4	4	4	4	2	1	4
Octyl Alcohol	2	3	1	2	2	4	4	2	2	2	2	2	2	2
Oleic Acid	3	4	2	4	4	4	2	4	4	4	4	4	X	4
Oleum (Fuming Sulfuric Acid)	4	4	1	4	4	4	4	4	4	4	4	4	X	4
Oleum Spirits	2	4	1	3	4	X	3	4	4	4	4	2	2	4
Olive Oil	1	2	1	2	4	1	1	2	4	4	4	2	1	3
Oronite 8200	2	4	1	1	4	X	1	4	4	4	4	4	1	4
Oronite 8515	2	4	1	1	4	X	1	4	4	4	4	4	1	4
Ortho-Dichlorobenzene	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Orthochloro Ethyl Benzene	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Oxalic Acid	2	1	1	2	2	X	X	1	2	2	2	2	1	2
Oxygen, 200-400°F (Evalute for specific applications)	4	4	2	4	4	4	4	4	4	4	4	4	4	1
Oxygen, Cold (Evalute for specific applications)	2	1	1	1	2	2	1	1	2	2	2	1	1	1
Ozone	4	1	1	2	4	2	1	2	4	4	4	1	1	1
P-Cymene	4	4	1	4	4	4	4	4	4	4	4	4	2	4
P-Dichlorobenzene	4	4	1	4	4	4	4	4	4	4	4	4	2	4
P-Tertiary Butyl Catechol	4	2	1	2	2	4	4	2	2	4	4	2	1	X
PRL-High Temp. Hydr. Oil	2	4	1	2	4	1	2	4	4	4	4	4	1	2
Paint Thinner, Duco	4	4	2	4	4	4	4	4	4	4	4	4	2	4
Palmitic Acid	1	2	1	2	2	X	1	2	2	2	2	3	1	4
Par-al-Ketone	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Para-dichlorobenzene	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Parker O Lube	1	4	1	1	2	1	1	4	4	4	4	1	1	2
Peanut Oil	1	3	1	3	4	1	2	3	4	4	4	2	1	1
Pentane, 2 Methyl	1	4	1	2	4	1	4	4	4	4	4	2	3	4
Pentane, 2-4 dimethyl	1	4	1	2	4	1	4	4	4	4	4	2	3	4
Pentane, 3-Methyl	1	4	1	2	4	1	4	4	4	4	4	2	3	4
Perchloric Acid - 2N	4	2	1	2	4	4	4	2	4	4	4	2	1	4
Perchloroethylene	2	4	1	4	4	4	4	4	4	4	4	4	2	4
Petrolatum	1	4	1	2	4	1	1	4	4	4	4	2	1	4
Petroleum Oil, Above 250°F	4	4	2	4	4	4	4	4	4	4	4	4	4	4
Petroleum Oil, Below 250°F	1	4	1	2	4	2	2	4	4	4	4	2	2	2
Petroleum Oil, Crude	1	4	1	2	4	1	1	4	4	4	4	2	1	4
Phenol	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Phenol, 70%/30% H_2O	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Phenol, 85%/15% H_2O	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Phenyl Ethyl Ether	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Phenylbenzene	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Phenylhydrazine	4	2	1	4	2	4	X	4	2	1	1	4	X	X
Phorone	4	3	4	4	4	4	4	3	4	4	4	4	4	4
Phosphoric Acid 3 Molar to 158°F	1	1	1	2	2	3	4	1	X	X	X	1	2	2
Phosphoric Acid Concentrated Room Temp	2	1	1	2	1	2	4	1	X	X	X	1	3	3
Phosphoric Acid Concentrated to 158°F	4	1	1	3	2	3	4	1	X	X	X	1	3	4
Phosphorous Trichloride	4	1	1	4	4	X	X	1	X	X	4	4	1	X

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Pickling Solution	4	3	2	4	4	4	4	3	4	4	4	2	4	4
Picric Acid H_2O Solution	1	1	1	1	2	X	X	1	2	2	1	1	2	X
Picric Acid Molten	2	2	1	2	2	X	X	2	2	2	2	2	2	4
Pine Oil	1	4	1	4	4	X	X	4	4	4	4	4	1	4
Pinene	2	4	1	3	4	4	2	4	4	4	4	4	1	4
Piperidine	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Plating Solutions Chrome	4	2	1	4	4	4	4	2	4	4	4	4	2	2
Plating Solutions Others	1	1	1	4	4	X	X	1	X	X	4	1	X	4
Pneumatic Service	1	1	1	1	4	4	1	1	4	4	4	1	4	4
Polyvinyl Acetate Emulsion	X	1	X	2	4	X	X	1	X	X	2	2	X	X
Potassium Acetate	2	1	4	2	4	4	4	1	4	1	1	1	4	4
Potassium Chloride	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Potassium Cupro Cyanide	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Potassium Cyanide	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Potassium Dichromate	1	1	1	1	1	1	2	1	1	1	1	1	1	1
Potassium Hydroxide 50%	2	1	4	2	2	4	4	1	2	2	2	1	3	3
Potassium Nitrate	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Potassium Salts	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Potassium Sulfite	1	1	1	1	2	4	1	1	1	2	2	2	1	1
Potassium Sulphate	1	1	1	1	2	4	1	1	1	2	2	2	1	1
Prestone Antifreeze	1	1	1	1	1	4	4	1	1	1	1	1	1	1
Producer Gas	1	4	1	2	4	2	1	4	4	4	4	2	2	2
Propane	1	4	1	2	4	1	3	4	4	4	4	2	2	4
Propyl Acetate	4	2	4	4	4	4	4	2	4	4	4	4	4	4
Propyl Alcohol	1	1	1	1	1	4	4	1	1	1	1	1	1	1
Propyl Nitrate	4	2	4	4	4	4	X	2	4	4	4	4	4	4
Propylene	3	4	1	4	4	4	4	4	4	4	4	4	3	4
Propylene Oxide	4	2	4	4	4	4	4	2	4	4	4	4	4	4
Pydraul, 10E	4	1	4	4	4	4	4	1	4	4	4	4	4	1
Pydraul, 115E	4	1	1	4	4	4	4	1	4	4	4	4	3	4
Pydraul, 230C, 312C, 540C, A200	4	4	1	4	4	4	4	4	4	4	4	4	4	4
Pydraul, 29ELT 30E, 50E, 65E	4	1	1	4	4	4	4	1	4	4	4	4	1	1
Pyranol Transformer Oil	1	4	1	2	4	1	2	4	4	4	4	2	1	4
Pyridine Oil	4	2	4	4	4	4	X	2	4	4	4	4	4	4
Pyrogard 53, Mobil Phosphate Ester	4	1	1	4	4	4	4	1	4	4	4	4	4	4
Pyrogard D, Mobil Water-in-Oil Emulsion	1	4	4	2	4	X	1	4	4	4	4	1	2	3
Pyroligneous Acid	4	2	4	2	4	4	4	2	4	4	4	2	4	X
Pyrolube	4	2	1	4	4	4	4	2	4	4	4	4	2	2
Pyrrole	4	4	4	4	2	4	X	4	2	2	2	2	4	2
RJ-1 (MIL-F-25558)	1	4	1	2	4	1	1	4	4	4	4	2	1	4
RJ-4 (MIL-F-82522)	2	4	1	4	4	2	2	4	X	X	4	X	1	4
RP-1 (MIL-R-25576)	1	4	1	2	4	1	1	4	4	4	4	2	1	4
Radiation (GAMMA, 1.0 E+07 RADS)	3	2	4	X	X	X	4	4	X	X	4	X	4	2
Rapeseed Oil	2	1	1	2	4	2	2	1	4	4	4	2	1	4
Red Line 100 Oil	1	4	1	2	4	1	1	4	4	4	4	2	1	4
Red Oil (MIL-H-5606)	1	4	1	2	4	1	1	4	4	4	4	2	1	4
SF 1154 GE Silicone Fluid	2	1	1	1	1	1	2	1	X	1	1	1	1	4
SF1147 GE Silicone Fluid	2	3	1	X	X	X	X	3	X	X	X	X	X	4
SF96 GE SIlicone Fluid	2	1	1	1	1	1	2	1	1	1	1	1	1	4
SR-10 Fuel	1	4	1	4	4	2	2	4	4	4	4	4	1	4
SR-6 Fuel	2	4	1	4	4	2	2	4	4	4	4	4	1	4
Sal Ammoniac	1	1	1	1	1	1	1	1	1	1	1	1	1	2
Salicylic Acid	2	1	1	X	2	X	X	1	2	1	1	X	1	X
Santo Safe 300	4	3	1	4	4	4	X	3	4	4	4	X	1	1
Sea (Salt) Water	1	1	1	2	1	4	2	1	1	1	1	1	1	1
Sewage	1	1	1	2	1	4	4	1	1	1	1	1	1	1
Shell 3XF Mine Fluid (Fire resist hydr.)	1	4	1	2	4	4	4	4	4	4	4	2	1	X
Shell Alvania Grease #2	1	4	1	2	4	1	1	4	4	4	4	4	1	2
Shell Carnea 19 and 29	1	4	1	4	4	1	2	4	4	4	4	4	1	X
Shell Diala	1	4	1	2	4	1	2	4	4	4	4	4	1	4
Shell Irus 905	1	4	1	2	4	1	1	4	4	4	4	4	1	4
Shell Lo Hydrax 27 and 29	1	4	1	2	4	1	2	4	4	4	4	4	1	4

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FLUID NAME / MATERIAL	Nitrile	Ethylene Propylene	Fluorocarbon	Neoprene	SBR	Polyacrylate	Polyurethane	Butyl	Butadiene	Isoprene	Natural Rubber	Hypalon	Fluorosilicone	Silicone
Shell Macome 72	1	4	1	2	4	1	2	4	4	4	4	4	1	4
Shell Tellus #32 Pet. Base	1	4	1	2	4	1	1	4	4	4	4	4	1	4
Shell Tellus #68	1	4	1	2	4	1	1	4	4	4	4	4	1	4
Shell UMF (5% Aromatic)	1	4	1	2	4	1	1	4	4	4	4	4	1	4
Silicate Esters	2	4	1	1	4	X	1	4	4	4	4	X	1	4
Silicone Greases	1	1	1	1	1	1	1	1	1	1	1	1	2	3
Silicone Oils	1	1	1	1	1	1	1	1	1	1	1	1	3	3
Silver Nitrate	2	1	1	1	1	1	1	1	1	1	1	1	1	1
Sinclair Opaline CX-EP Lube	1	4	1	2	4	1	1	4	4	4	4	2	1	4
Skelly, Solvent B, C, E	1	4	1	4	4	X	X	4	4	4	4	4	1	X
Skydrol 500 B4	4	1	4	4	4	4	4	2	4	4	4	4	3	3
Skydrol LD-4	4	1	4	4	4	4	4	2	4	4	4	4	3	3
Soap Solutions	1	1	1	2	2	4	4	1	1	1	2	1	1	1
Socony Mobile Type A	1	4	1	2	4	1	2	4	4	4	4	4	2	4
Socony Vacuum AMV AC781 (grease)	1	4	1	2	4	1	2	4	4	4	4	4	2	4
Socony Vacuum PD959B	1	4	1	2	4	1	1	4	4	4	4	2	1	4
Soda Ash	1	1	1	1	1	X	X	1	1	1	1	1	1	1
Sodium Acetate	2	1	4	2	4	3	3	1	4	1	1	1	4	4
Sodium Bicarbonate (Baking Soda)	1	1	1	1	1	X	X	1	1	1	1	1	1	1
Sodium Bisulfate or Bisulfite	1	1	1	1	2	4	X	1	2	2	1	1	1	1
Sodium Borate	1	1	1	1	1	X	X	1	1	1	1	1	1	1
Sodium Carbonate (Soda Ash)	1	1	1	1	1	X	X	1	1	1	1	1	1	1
Sodium Chloride	1	1	1	1	1	X	1	1	1	1	1	1	X	1
Sodium Cyanide	1	1	X	1	1	X	X	1	1	1	1	1	X	1
Sodium Hydroxide, 3 Molar	2	1	2	2	2	4	2	1	1	1	1	1	2	1
Sodium Hypochlorite	2	1	1	2	2	4	4	1	2	2	2	1	2	2
Sodium Metaphosphate	1	1	1	2	1	X	X	1	1	1	1	2	1	X
Sodium Nitrate	2	1	X	2	2	X	X	1	1	1	2	1	X	4
Sodium Perborate	2	1	1	2	2	X	X	1	2	2	2	2	1	2
Sodium Peroxide	2	1	1	2	2	4	4	1	2	2	2	2	1	4
Sodium Phosphate (Dibasic)	1	1	1	2	1	1	1	1	1	1	1	1	X	4
Sodium Phosphate (Mono)	1	1	1	2	1	1	1	1	1	1	1	1	X	4
Sodium Phosphate (Tribasic)	1	1	1	2	1	1	1	1	1	1	1	1	X	1
Sodium Salts	1	1	1	2	1	1	1	1	1	1	1	1	1	1
Sodium Silicate	1	1	1	1	1	X	X	1	1	1	1	1	X	X
Sodium Sulphate	1	1	1	1	2	4	1	1	2	2	2	1	1	1
Sodium Sulphide and Sulfite	1	1	1	1	2	4	1	1	2	2	2	1	1	1
Sodium Thiosulfate	2	1	1	1	2	4	1	1	2	2	2	1	1	1
Sour Crude Oil	3	4	1	4	4	4	4	4	4	4	4	X	4	4
Sour Natural Gas	3	4	1	4	4	4	4	4	4	4	4	X	4	4
Sovasol No. 1, 2, and 3	1	4	1	2	4	2	2	4	4	4	4	2	1	4
Sovasol No. 73 and 74	2	4	1	2	4	2	2	4	4	4	4	2	1	4
Soybean Oil	1	3	1	3	4	1	X	3	4	4	4	3	1	1
Spry	1	2	1	2	4	1	1	2	4	4	4	4	1	1
Standard Oil Mobilube GX90-EP Lube	1	4	1	2	4	1	1	4	4	4	4	2	1	4
Stannic Chloride	1	1	1	4	1	X	X	1	1	1	1	4	1	2
Stannic Chloride, 50%	1	1	1	4	1	X	X	1	1	1	1	4	1	2
Stannous Chloride (15%)	1	1	1	1	1	X	X	1	1	1	1	1	1	2
Stauffer 7700	2	4	1	4	4	2	X	4	4	4	4	4	2	4
Steam Below 400°F	4	1	4	4	4	4	4	2	4	4	4	4	4	3
Steam, 400°-500°F	4	3	4	4	4	4	4	4	4	4	4	4	4	4
Steam, Above 500°F														
Stearic Acid	2	2	X	2	2	X	X	2	2	2	2	2	X	2
Stoddard Solvent	1	4	1	2	4	1	1	4	4	4	4	4	1	4
Styrene (Monomer)	4	4	2	4	4	4	X	4	4	4	4	4	3	4
Sucrose Solutions	1	1	1	2	1	4	4	1	1	1	1	2	1	1
Sulfur	4	1	1	1	4	4	X	1	4	4	4	X	1	X
Sulfur Chloride	4	4	1	4	4	4	X	4	4	4	4	4	1	3
Sulfur Dioxide, Dry	4	1	4	4	2	4	X	2	2	2	2	4	2	2
Sulfur Dioxide, Liquidified under pressure	4	1	4	4	4	4	X	2	4	4	4	4	2	2
Sulfur Dioxide, Wet	4	1	4	2	4	4	X	1	4	4	4	3	2	2
Sulfur Liquors	2	2	1	2	2	4	X	2	2	2	2	2	2	4

APPENDIX

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FLUID NAME / MATERIAL	Nitrile	Ethylene Propylene	Fluorocarbon	Neoprene	SBR	Polyacrylate	Polyurethane	Butyl	Butadiene	Isoprene	Natural Rubber	Hypalon	Fluorosilicone	Silicone
Sulfur Molten	4	3	1	3	4	4	4	3	4	4	4	4	3	3
Sulfur Trioxide Dry	4	2	1	4	3	4	X	2	2	2	2	4	2	2
Sulfuric Acid, 3 Molar to 158°F	2	1	1	2	3	2	4	1	X	X	X	1	1	1
Sulfuric Acid, Concentrated Room Temp	X	3	1	X	X	X	3	X	X	X	X	X	X	X
Sulfuric Acid, Concentrated to 158°F	4	4	1	4	4	4	4	4	X	X	X	X	4	4
Sulfurous Acid	2	2	1	2	2	4	3	2	2	2	2	1	X	4
Sunoco #3661	1	4	1	2	4	1	1	4	4	4	4	2	1	4
Sunoco All purpose grease	1	4	1	2	4	1	1	4	4	4	4	2	1	4
Sunoco SAE 10	1	4	1	2	4	1	1	4	4	4	4	2	1	4
Sunsafe (Fire resist. hydr. fluid)	1	4	1	2	4	4	4	4	4	4	4	2	1	X
Super Shell Gas	1	4	1	2	4	2	2	4	4	4	4	4	2	4
Swan Finch EP Lube	1	4	1	4	4	1	1	4	4	4	4	4	1	4
Swan Finch Hypoid-90	1	4	1	2	4	1	1	4	4	4	4	4	1	4
Tannic Acid (10%)	1	1	1	1	2	4	X	1	1	1	1	1	1	2
Tar, bituminous	2	4	1	3	4	4	X	4	4	2	3	4	1	2
Tartaric Acid	1	2	1	2	4	X	1	2	2	1	3	1	1	1
Terpineol	2	3	1	4	4	X	2	3	4	4	4	4	1	X
Tertiary Butyl Alcohol	2	2	1	2	2	4	4	2	2	2	2	2	2	2
Tertiary Butyl Mercaptan	4	4	1	4	4	4	4	4	4	4	4	4	X	4
Tetrabromoethane	4	4	1	4	4	4	X	4	4	4	4	4	2	4
Tetrabutyl Titanate	2	1	1	2	2	X	X	2	2	2	2	4	4	4
Tetrachloroethylene	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Tetrachoroethane	4	4	1	4	4	4	4	4	4	4	4	4	2	X
Tetraethyl Lead	2	4	1	2	4	X	X	4	4	4	4	4	2	X
Tetraethyl Lead Blend	2	4	1	4	4	X	X	4	4	4	4	4	2	X
Tetrahydrofuran	4	2	4	4	4	4	3	2	4	4	4	4	4	4
Tetralin	4	4	1	4	4	X	X	4	4	4	4	4	1	4
Texaco 3450 Gear Oil	1	4	1	4	4	1	1	4	4	4	4	4	1	4
Texaco Capella A and AA	1	4	1	2	4	1	2	4	4	4	4	4	1	4
Texaco Meropa 220 (No Lead)	1	4	1	2	4	1	2	4	4	4	4	4	1	4
Texaco Regal B	1	4	1	4	4	1	1	4	4	4	4	4	1	4
Texaco Uni-Temp Grease	1	4	1	2	4	1	1	4	4	4	4	4	1	2
Texamatic A 1581 Fluid	1	4	1	2	4	1	2	4	4	4	4	4	2	4
Texamatic A 3401 Fluid	1	4	1	2	4	1	2	4	4	4	4	4	2	4
Texamatic A 3525 Fluid	1	4	1	2	4	1	2	4	4	4	4	4	2	4
Texamatic A 3528 Fluid	1	4	1	2	4	1	2	4	4	4	4	4	2	4
Texamatic A Transmission Oil	1	4	1	2	4	1	2	4	4	4	4	4	2	4
Texas 1500 Oil	1	4	1	2	4	1	1	4	4	4	4	4	1	2
Therminol 44	4	4	1	4	X	4	X	4	X	X	X	X	X	4
Therminol 55	2	4	1	4	X	2	X	4	X	X	X	X	X	4
Therminol VP-1, 60, 65	4	4	1	4	X	4	X	4	X	X	X	X	X	2
Thiokol TP-90B	4	1	1	2	4	X	X	1	X	X	X	2	2	X
Thiokol TP-95	4	1	1	2	4	X	X	1	X	X	X	2	2	X
Tidewater Multigear, 140 EP Lube	1	4	1	2	4	1	1	4	4	4	4	2	1	4
Tidewater Oil-Beedol	1	4	1	2	4	1	1	4	4	4	4	4	1	2
Titanium Tetrachloride	2	4	1	4	4	4	4	4	4	4	4	4	2	4
Toluene	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Toluene Diisocyanate	4	2	4	4	4	4	X	2	4	4	4	4	4	4
Transformer Oil	1	4	1	2	4	2	1	4	4	4	4	4	1	2
Transmission Fluid Type A	1	4	1	2	4	1	1	4	4	4	4	2	1	2
Triacetin	2	1	4	2	3	4	4	1	2	2	2	2	4	X
Triaryl Phosphate	4	1	1	4	4	4	4	1	4	4	4	4	2	3
Tributoxyethyl Phosphate	4	1	1	4	2	4	4	1	2	4	2	4	2	X
Tributyl Mercaptan	4	4	1	4	4	4	X	4	4	4	4	4	3	4
Tributyl Phosphate	4	1	4	4	4	4	4	2	4	2	2	4	4	4
Trichloroacetic Acid	2	2	3	4	2	4	4	2	2	2	2	4	4	X
Trichloroethane	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Trichloroethylene	3	4	1	4	4	4	4	4	4	4	4	4	2	4
Tricresyl Phosphate	4	1	2	3	2	4	4	1	4	4	4	4	2	3
Triethanol Amine	3	2	4	2	2	4	4	2	2	2	2	2	4	X
Trifluoroethane	4	4	1	4	4	4	4	4	4	4	4	4	2	4
Trinitrololuene	4	4	2	2	4	4	X	4	4	4	4	2	2	X

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Trioctyl Phosphate	4	1	2	4	4	4	4	1	4	4	4	4	2	3
Tripoly Phosphate	4	1	2	3	4	4	4	1	4	4	4	4	1	3
Tung Oil (China Wood Oil)	1	4	1	2	4	X	3	3	4	4	4	3	2	4
Turbine Oil	1	4	1	4	4	1	1	4	4	4	4	4	1	4
Turbine Oil #15 (MIL-L-7808A)	2	4	1	4	4	2	4	4	4	4	4	4	2	4
Turbo Oil #35	1	4	1	2	4	1	1	4	4	4	4	4	1	4
Turpentine	1	4	1	4	4	2	4	4	4	4	4	4	2	4
Type I Fuel (MIL-S-3136)(ASTM Ref. Fuel A)	1	4	1	2	4	1	1	4	4	4	4	2	1	4
Type II Fuel MIL-S-3136	2	4	1	4	4	3	2	4	4	4	4	4	2	4
Type III Fuel MIL-S-3136 (ASTM Ref. Fuel B)	2	4	1	4	4	3	2	4	4	4	4	4	2	4
Ucon Hydrolube J-4	1	1	1	2	1	4	4	1	2	X	X	X	2	1
Ucon Lubricant 50-HB-100	1	1	1	1	1	X	X	1	1	1	1	1	1	1
Ucon Lubricant 50-HB-260	1	1	1	1	1	X	X	1	1	1	1	1	1	1
Ucon Lubricant 50-HB-5100	1	1	1	1	1	X	X	1	1	1	1	1	1	1
Ucon Lubricant 50-HB-660	1	1	1	1	1	X	X	1	1	1	1	1	1	1
Ucon Lubricant 50-HB55	1	1	1	1	1	X	X	1	1	1	1	1	1	1
Ucon Lubricant LB-1145	1	1	1	1	1	X	X	1	1	1	1	1	1	1
Ucon Lubricant LB-135	1	1	1	1	1	X	X	1	1	1	1	1	1	1
Ucon Lubricant LB-285	1	1	1	1	1	X	X	1	1	1	1	1	1	1
Ucon Lubricant LB-300X	1	1	1	1	1	X	X	1	1	1	1	1	1	1
Ucon Lubricant LB-625	1	1	1	1	1	X	X	1	1	1	1	1	1	1
Ucon Lubricant LB-65	1	1	1	1	2	X	X	1	2	2	2	2	1	1
Ucon Oil Heat Transfer Fluid 500(Polyalkalene Glycol)	1	1	1	1	1	X	X	1	1	1	1	1	1	1
Ucon Oil LB-385	1	1	1	1	1	X	X	1	1	1	1	1	1	1
Ucon Oil LB-400X	1	1	1	1	1	X	X	1	1	1	1	1	1	1
Univis 40 (Hydr. Fluid)	1	4	1	2	4	1	1	4	4	4	4	2	1	4
Univolt #35 (Mineral Oil)	1	4	1	2	4	1	1	4	4	4	4	4	1	4
Unsymmetrical Dimethyl Hydrazine (UDMH)	2	1	4	2	2	X	X	1	1	1	1	1	4	4
Uranium Hexachloride	X	X	1	X	X	X	X	X	X	X	X	X	X	X
VV-H-910	3	1	1	2	1	2	4	2	2	2	2	2	2	2
Varnish	2	4	1	4	4	4	3	4	4	4	4	4	2	4
Vegetable Oil	1	3	1	3	4	1	X	3	4	4	4	X	1	1
Versilube F-50	1	1	1	1	1	1	1	1	1	1	1	1	1	3
Vinegar	2	2	3	2	2	4	4	2	2	2	2	X	3	3
Vinyl Chloride	X	4	X	X	X	X	X	X	X	X	X	X	X	X
Wagner 21B Brake Fluid	3	1	4	2	1	X	X	2	X	X	2	2	4	3
Water	1	1	2	2	1	4	4	1	1	1	1	1	1	1
Wemco C	1	4	1	2	4	1	1	4	4	4	4	4	1	4
Whiskey and Wines	1	1	1	1	1	4	4	1	1	1	1	1	1	1
White Oil	1	4	1	2	4	1	1	4	4	4	4	4	1	4
White Pine Oil	2	4	1	4	4	X	X	4	4	4	4	4	1	4
Wolmar Salt	1	1	1	2	1	2	1	1	1	1	1	1	1	1
Wood Alcohol	1	1	4	1	1	4	4	1	1	1	1	1	1	1
Wood Oil	1	4	1	2	4	1	3	3	4	4	4	3	2	4
Xenon	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Xylene	4	4	1	4	4	4	4	4	4	4	4	4	1	4
Xylidenes-Mixed-Aromatic Amines	3	4	4	4	4	4	4	4	4	4	4	4	4	4
Xylol	4	4	1	4	4	4	4	4	4	4	4	4	1	4
Zeolites	1	1	1	1	1	X	X	1	1	1	1	1	1	X
Zinc Acetate	2	1	4	2	4	4	4	1	4	1	1	4	4	4
Zinc Chloride	1	1	1	1	1	4	X	1	1	1	1	1	1	X
Zinc Salts	1	1	1	1	1	4	1	1	1	1	1	1	1	1
Zinc Sulfate	1	1	1	1	2	4	X	1	2	2	2	1	1	1

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Nicholasville, KY 40340-0037

PNEU-DRAULICS

METRIC / INCH CONVERSION TABLE

FRACTIONS, DECIMALS AND MILLIMETERS

Inches		
Fractions	Decimals	M M
—	.0004	.01
—	.004	.10
—	.01	.25
1/64	.0156	.397
—	.0197	.50
—	.0295	.75
1/32	.03125	.794
—	.0394	1.0
3/64	.0469	1.191
—	.059	1.5
1/16	.062	1.588
5/64	.0781	1.984
—	.0787	2.0
3/32	.094	2.381
—	.0984	2.5
7/64	.109	2.778
—	.1181	3.0
1/8	.125	3.175
—	.1378	3.5
9/64	.141	3.572
5/32	.156	3.969
—	.1575	4.0
11/64	.172	4.366
—	.177	4.5
3/16	.1875	4.763
—	.1969	5.0
13/64	.203	5.159
—	.2165	5.5
7/32	.219	5.556
15/64	.234	5.953
—	.2362	6.0
1/4	.250	6.350
—	.2559	6.5
17/64	.2656	6.747
—	.2756	7.0
9/32	.281	7.144
—	.2953	7.5
19/64	.297	7.541
5/16	.312	7.938
—	.315	8.0
21/64	.328	8.334
—	.335	8.5
11/32	.344	8.731
—	.3543	9.0
23/64	.359	9.128
—	.374	9.5
3/8	.375	9.525
25/64	.391	9.922
—	.3937	10.0
13/32	.406	10.319
—	.413	10.5
27/64	.422	10.716
—	.4331	11.0
7/16	.438	11.113
29/64	.453	11.509
15/32	.469	11.906
—	.4724	12.0
31/64	.484	12.303
—	.492	12.5
1/2	.500	12.700
—	.5118	13.0
33/64	.5156	13.097
17/32	.531	13.494
35/64	.547	13.891
—	.5512	14.0
9/16	.563	14.288
—	.571	14.5
37/64	.578	14.684
—	.5906	15.0
19/32	.594	15.081
39/64	.609	15.478
5/8	.625	15.875
—	.6299	16.0
41/64	.6406	16.272
—	.6496	16.5
21/32	.658	16.669
—	.6693	17.0
43/64	.672	17.066
11/16	.6875	17.463
45/64	.703	17.859
—	.7087	18.0
23/32	.719	18.256
—	.7283	18.5
47/64	.734	18.653
—	.7480	19.0
3/4	.750	19.050
49/64	.7656	19.447

Inches		
Fractions	Decimals	M M
25/32	.781	19.844
—	..7874	20.0
51/64	.797	20.241
13/16	.8125	20.638
—	.8268	21.0
53/64	.828	21.034
27/32	.844	21.431
55/64	.859	21.828
—	.8661	22.0
7/8	.875	22.225
57/64	.8906	22.622
—	.9055	23.0
29/32	.9062	23.019
59/64	.922	23.416
15/16	.9375	23.813
—	.9449	24.0
61/64	.953	24.209
31/32	.969	24.606
—	.9843	25.0
63/64	.9844	25.003
1	1.000	25.400
—	1.0236	26.0
1-1/32	1.0312	26.194
1-1/16	1.062	26.968
—	1.063	27.0
1-3/32	1.094	27.781
—	1.1024	28.0
1-1/8	1.125	28.575
—	1.1417	29.0
1-5/32	1.156	29.369
—	1.1811	30.0
1-3/16	1.1875	30.163
1-7/32	1.219	30.956
—	1.2205	31.0
1-1/4	1.250	31.750
—	1.2598	32.0
1-9/32	1.281	32.544
—	1.2992	33.0
1-5/16	1.312	33.338
—	1.3386	34.0
1-11/32	1.344	34.131
1-3/8	1.375	34.925
—	1.3779	35.0
1-13/32	1.406	35.719
—	1.4173	36.0
1-7/16	1.438	36.513
—	1.4567	37.0
1-15/32	1.469	37.306
—	1.4961	38.0
1-1/2	1.500	38.100
1-17/32	1.531	38.894
—	1.5354	39.0
1-9/16	1.562	39.688
—	1.5748	40.0
1-19/32	1.594	40.481
—	1.6142	41.0
1-5/8	1.625	41.275
—	1.6535	42.0
1-21/32	1.6562	42.069
1-11/16	1.6875	42.863
—	1.6929	43.0
1-23/32	1.719	43.656
—	1.7323	44.0
1-3/4	1.750	44.450
—	1.7717	45.0
1-25/32	1.781	45.244
—	1.8110	46.0
1-13/16	1.8125	46.038
1-27/32	1.844	46.831
—	1.8504	47.0
1-7/8	1.875	47.625
—	1.8898	48.0
1-29/32	1.9062	48.419
—	1.9291	49.0
1-15/16	1.9375	49.213
—	1.9685	50.0
1-31/32	1.969	50.006
2	2.000	50.800
—	2.0079	51.0
2-1/32	2.03125	51.594
—	2.0472	52.0
2-1/6	2.062	52.388
—	2.0866	53.0
2-3/32	2.094	53.181
2-1/8	2.125	53.975
—	2.126	54.0
2-5/32	2.156	54.769

Inches		
Fractions	Decimals	M M
—	2.165	55.0
2-3/16	2.1875	55.563
—	2.2047	56.0
2-7/32	2.219	56.356
—	2.244	57.0
2-1/4	2.250	57.150
2-9/32	2.281	57.944
—	2.2835	58.0
2-5/16	2.312	58.738
—	2.3228	59.0
2-11/32	2.344	59.531
—	2.3622	60.0
2-3/8	2.375	60.325
—	2.4016	61.0
2-13/32	2.406	61.119
2-7/16	2.438	61.913
—	2.4409	62.0
2-15/32	2.469	62.706
—	2.4803	63.0
2-1/2	2.500	63.500
—	2.5197	64.0
2-17/32	2.531	64.294
—	2.559	65.0
2-9/16	2.562	65.088
2-19/32	2.594	65.881
—	2.5984	66.0
2-5/8	2.625	66.675
—	2.638	67.0
2-21/32	2.656	67.469
—	2.6772	68.0
2-11/16	2.6875	68.263
—	2.7165	69.0
2-23/32	2.719	69.056
2-3/4	2.750	69.850
—	2.7559	70.0
2-25/32	2.781	70.6439
—	2.7953	71.0
2-13/16	2.8125	71.4376
—	2.8346	72.0
2-27/32	2.844	72.2314
—	2.8740	73.0
2-7/8	2.875	73.025
2-29/32	2.9062	73.819
—	2.9134	74.0
2-15/16	2.9375	74.613
—	2.9527	75.0
2-31/32	2.969	75.406
—	2.9921	76.0
3	3.000	76.200
3-1/32	3.0312	76.994
—	3.0315	77.0
3-1/16	3.062	77.788
—	3.0709	78.0
3-3/32	3.094	78.581
—	3.1102	79.0
3-1/8	3.125	79.581
—	3.1496	80.0
3-5/32	3.156	80.169
3-3/16	3.1875	80.963
—	3.1890	81.0
3-7/32	3.219	81.756
—	3.2283	82.0
3-1/4	3.250	82.550
—	3.2677	83.0
3-9/32	3.281	83.344
—	3.3071	84.0
3-5/16	3.312	84.1377
3-11/32	3.344	84.9314
—	3.3464	85.0
3-3/8	3.375	85.725
—	3.3858	86.0
3-13/32	3.406	86.519
—	3.4252	87.0
3-7/16	3.438	87.313
—	3.4648	88.0
3-15/32	3.469	88.108
3-1/2	3.500	88.900
—	3.5039	89.0
3-17/32	3.531	89.694
—	3.5433	90.0
3-9/16	3.562	90.4877
—	3.5827	91.0
3-19/32	3.594	91.281
—	3.622	92.0
3-5/8	3.625	92.075
3-21/32	3.656	92.869
—	3.6614	93.0

Inches		
Fractions	Decimals	M M
3-11/16	3.6875	93.663
—	3.7008	94.0
3-23/32	3.719	94.456
—	3.7401	95.0
3-3/4	3.750	95.250
—	3.7795	96.0
3-25/32	3.781	96.044
3-13/16	3.8125	96.838
—	3.8189	97.0
3-27/32	3.844	97.631
—	3.8583	98.0
3-7/8	3.875	98.425
—	3.8976	99.0
3-29/32	3.9062	99.219
—	3.9370	100.0
3-15/16	3.9375	100.013
3-31/32	3.969	100.806
—	3.9764	101.0
4	4.000	101.600
4-1/16	4.062	103.188
4-1/8	4.125	104.775
—	4.1338	105.0
4-3/16	4.1875	106.363
4-1/4	4.250	107.950
4-5/16	4.312	109.538
—	4.3307	110.0
4-3/8	4.375	111.125
4-7/16	4.438	112.713
4-1/2	4.500	114.300
—	4.5275	115.0
4-9/16	4.562	115.888
4-5/8	4.625	117.475
4-11/16	4.6875	119.063
—	4.7244	120.0
4-3/4	4.750	120.650
4-13/16	4.8125	122.238
4-7/8	4.875	123.825
—	4.9212	125.0
4-15/16	4.9375	125.413
5	5.000	127.000
—	5.1181	130.0
5-1/4	5.250	133.350
5-1/2	5.500	139.700
—	5.5118	140.0
5-3/4	5.750	146.050
—	5.9055	150.0
6	6.000	152.400
6-1/4	6.250	158.750
—	6.2992	160.0
6-1/2	6.500	165.100
—	6.6929	170.0
6-3/4	6.750	171.450
7	7.000	177.800
—	7.0866	180.0
—	7.4803	190.0
7-1/2	7.500	190.500
—	7.8740	200.0
8	8.000	203.200
—	8.2677	210.0
8-1/2	8.500	215.900
—	8.6614	220.0
9	9.000	228.600
—	9.0551	230.0
—	9.4488	240.0
9-1/2	9.500	241.300
—	9.8425	250.0
10	10.000	254.001
—	10.2362	260.0
—	10.6299	270.0
11	11.000	279.401
—	11.0236	280.0
—	11.4173	290.0
—	11.8110	300.0
12	12.000	304.801
13	13.000	330.201
—	13.7795	350.0
14	14.000	355.601
15	15.000	381.001
—	15.7480	400.0
16	16.000	406.401
17	17.000	431.801
—	17.7165	450.0
18	18.000	457.201
19	19.000	482.601
—	19.6850	500.0
20	20.000	508.001

APPENDIX

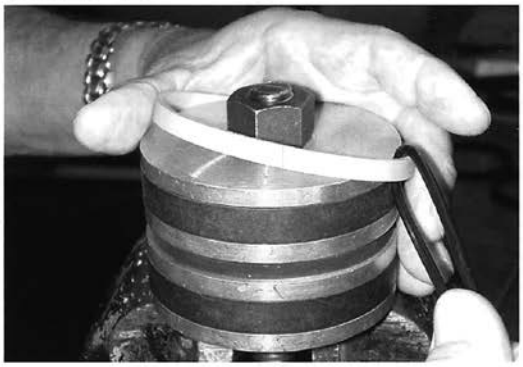
TECH TIP *Installing Piston Seals*

At the request of many customers, here are some tips on how to install PTFE piston seals.

STEP 1

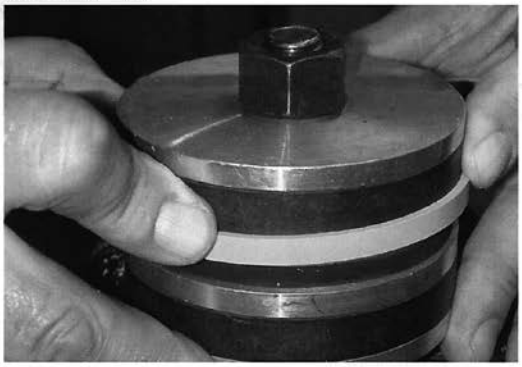
Lubricate and install the rubber expander ring into the groove as shown.

STEP 2



With your hand over the edge of the piston and holding the seal with your palm, cut and loop an o-ring through the seal. With one motion, pull down and around until the seal is on the piston. Now, remove the o-ring.

STEP 3



Next, push the seal over the groove.

STEP 4

Place a nylon wear ring - 1/4" larger diameter than the piston - over the seal.

STEP 5

Re-form the seal by squeezing the wear ring over the seal.

HELPFUL HINTS

It may be necessary to heat the ring before installation. Warming the ring in water or oil at 130° F or 140° F for about 5 minutes will soften the material for easier installation. Always avoid inconsistent stretching or over stretching of the PTFE seal.

To prevent the PTFE ring from snapping into the wrong groove, cover wear ring grooves with plastic tape.

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PNEU-DRAULICS

TYPES OF SEALING MATERIAL

Urethane
Formulated of copolymers of ether or ester based urethanes, this material is used in a wide application of seals, wipers, back-up rings, cushions, bumpers, and a myriad of other uses. Highly resistant to oil swell, ozone, oxidation and abrasion, it also has excellent cut resistance. Highly resilient, urethanes also have high tensile strength and elongation properties. Urethanes remain an excellent choice in hydraulic systems using petroleum based fluids. Most urethane seals remain flexible and efficient in temperatures ranging from -65° F to +200° F with some able to withstand intermittent temperatures up to +300° F.

Nitrile
The most common nitrile copolymer blend is the compound known as Buna-N. Possessing very good resistance to petroleum based hydraulic oils, Buna-N also works well with fuels such as diesel or gasoline. Nitrile seals have a good resistance to compression set, but their flexibility suffers somewhat in the lower temperature range. Seals made from this material have a low resistance to ozone and must be stored carefully in most environments. Working temperatures are -40° to +240° F.

PTFE
Most PTFE seals, in order to retain their toughness and flexibility, are fortified with short glass fiber, bronze flashes, carbon graphite, or a combination of these fillers. Because of a lack of resilience (memory) in PTFE, an energizer is most often employed to obtain the desired fit. Benefits are chemical inertness, high heat resistance, low temperature flexibility, low running friction, and non-adhesive characteristics. Temperatures to +500° F are obtainable but are often reduced by the filler or energizer employed.

Fluorocarbon
Fluorocarbon combines high temperature resistance with excellent chemical resistance. Excellent for use with alcohol and aromatic fuels and highly resistant to ultraviolet light and ozone. This material is not recommended for use in low temperatures or in aircraft hydraulic fluids. Temperature range is -20° to +400° F.

Ethylene-Propylene
Ethylene-Propylene can be used for sealing phosphate ester hydraulic fluids such as Skydrol. Not suitable for petroleum based fluids, Ethylene-Propylene is highly effective for use with steam, acetone, and dilute acids and bases. Specially compounded Ethylene-Propylene can be made suitable for automobile brake systems. Temperature range from -20° to +300° F.

Silicone
Silicone is an elastomer made from silicon, oxygen, hydrogen, and carbon. The key use of this material is in static seals employed in a wide (-75° F to +450° F) range of temperatures. Silicone has a high resistance to dry heat, ultraviolet light and ozone. This material is not recommended for dynamic situations due to poor abrasion resistance and high friction characteristics.

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GLOSSARY OF TERMS

Bearing/Wear Rings: Soft metal or plastic rings placed in grooves on the piston or in the head to prevent contact between hard metal surfaces.

Durometer: A generic term referring to the instrument and the scale used to measure the relative hardness of various elastomers. The lower the durometer reading, the softer the material.

Dynamic Seal: A sealing device used between mating surfaces that have relative motion.

Elastomer: A rubber-like material having the capacity for large deformation and rapid, complete recovery from the deforming force.

Gland: A groove or open area machined into the head or piston that houses the sealing device.

Static Seal: A sealing device used between mating surfaces that have no relative motion.

Wiper/Scraper: A device placed in the head of a cylinder for the purpose of excluding foreign matter from the inside of the cylinder.

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PNEU-DRAULICS

SEAL IDENTICATION FORM

Rod Seals

Rod Seal Profile

a. twin lip _____
b. single lip _____
c. loaded _____
d. unloaded _____

Rod Size

a. id _____
b. od _____
c. height of seal _____

Determined Part # _____
Part # dimensions _____

Wiper

a. id _____
b. od _____
c. shoulder height _____
d. overall height _____

Wiper Profile Type (check all that apply)

a. D (soild bottom) _____
b. MC _____
c. K _____
d. H (u cup on bottom) _____
e. AN (like a D but skinny cross & base height) _____

Determined Part # _____
Part # dimensions _____

Rod Wear Bands

a. OD _____
b. cross section _____
c. width _____

Determined Part # _____
Part # dimensions _____

Customer Signature _____

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SEAL IDENTICATION FORM

Piston Seals

Piston Profile Type

a. 1 pc u cup _____

b. 2 pc tfe or urethane _____

c. 3 pcs or more _____

d. T-seal _____ Base Width _____

f. does piston seal have any thing special like quad ring on od (psq) or looks like a 2 pc but is 1 pc (uniring)
Yes _____ No _____

Piston Dimensions

a. bore size _____

b. groove width _____

c. groove diameter _____

Multi pc determined

id of main seal _____ TOTAL # PCS _____ bearing width _____

Determined Part # _____

Part # dimensions _____

Piston Wear Bands

a. OD _____

b. cross section _____

c. width _____

Determined Part # _____

Part # dimensions _____

Special Order? _____

Customer Assistant _____

Date _____

Customer Signature _____

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PNEU-DRAULICS

Notes

NATIONWIDE
CALL 1-800-333-SEAL
FAX (859) 887-4165
www.pneu-draulics.com

SALES OFFICE HOURS
7:30 A.M. to 5:30 P.M.
EASTERN STANDARD TIME

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7:30 A.M. to 5:30 P.M.
EASTERN STANDARD TIME

For all of your other sealing needs call Pneu-Draulics at 1-800-333-Seal

Common Base Polymer Families

Chemical Name	Abbreviation	Temperature Range	Characteristics
Acrylonitrile-Butadiene (Nitrile, Buna-N)	NBR	-70ºF TO 275ºF (-57ºC TO 135ºC)	Most widely used polymer in the seal industry. Excellent resistance to petroleum-based fluids, good balance of physical properties and wide temperature range.
Isobutylen-Isoprene (Butyl)	IIR	-75ºF to 250ºF (-59ºC to 121ºC)	Low permeability rate and good electrical properties. Often used to seal low temperature vacuum system applications.
Chloroprene Rubber (Neoprene)	CR	-60ºF to 250ºF (-51ºC to 121ºC)	Good general purpose polymer. Exhibits good ozone, aging and chemical resistance–primarily used in refrigerants.
Ethylene Acrylate (Vamac®)	AEM	-40ºF to 350ºF (-40ºC to 177ºC)	Similar to polyacrylate with improved low temperature performance, swells more in oil than polyacrylate.
Ethylene Propylene Rubber	EPDM, EPM EP, EPR	-65ºF to 300ºF (-54ºC to 149ºC)	Widely specified seal material–excellent resistance to alcohols, ketones, steam, brake fluid, Skydrol® and other phosphate ester based hydraulic fluids.
Fluorocarbon	FKM, FPM	-55ºF to 400ºF (-48ºC to 204ºC)	Second most popular seal material after nitrite. Wide-spectrum chemical resistance and broad temperature range. Some specialty FKM compounds have low temperature static sealing to -40ºF (-40ºC). Commonly used in fuels.
Fluorosilicone	FVMQ	-100ºF to 350ºF (-73ºC to 177ºC)	Combines temperature range of silicone with good resistance to petroleum-based fuels and lubricants. Applications with high heat that are combined with potential exposure to petroleum oils and/or hydrocarbon fuels.
Hifluor™	FKM	-15ºF to 400ºF (-26ºC to 204ºC)	Parker's trade name for a group of intermediate technology materials that bridge the gap between flurorocarbon and perfluoroelastomer.
Hydrogenated Nitrile	HNBR, HSN	-40ºF to 300ºF (-40ºC to 149ºC)	Similar to nitrile with improved high temperature capabilities and ozone resistance. Excellent resistance to petroleum-based fluids.
Liquid Silicone Rubber	LSR, LIM	-175ºF to 450º (-115ºC to 232ºC)	LSR is mixed as a two-part liquid and is pumped into an injection tool. The material's low viscosity prior to vulcanizatio requires a lower mold pressure and shorter vulcanization times compared to conventional injection molding.
Polyamide (Nylon 6, Nylon6, 6)	PA 6	-65ºF to 250ºF (-54ºC to 121ºC)	Well known family of plastics used as anti-extrusion devices and retainers. Resistant to a variety of petroleum and phosphate ester hydraulic fluids.
Perflouoroelastomer	FFKM, FFPM	5ºF to 608ºF (-15ºC to 320ºC)	Parker's Parofluor™ and Parofluor ULTRA™ materials combine the chemical resistance of PTFE with the elastic properties of fluorocarbon.
Polyacrylate	ACM	-5ºF to 350ºF (-21ºC to 177ºC)	Outstanding resistance to petroleum-based fuels and oils. Good resistance to oxidation, ozone and sunlight-resists flex cracking.
Polyetheretherketone	PEEK	-80ºF to 450ºF (-62ºC to 232ºC)	High-temperature-resistant plastic used where extrusion resistance, high-temperature capability and a broad resistance to chemical environments is needed. Available in unmodified or glass-filled formulations.
Polytetrafluoroethylene	PTFE	-450ºF to 550ºF (-268ºC to 288ºC)	Stable polymer with extremely good resistance to almost all known chemicals. Parker's proprietary polytetrafluoroethylene material is called Polon®.
Polyurethane	AU, EU	-40ºF to 200ºF (-40ºC to 93ºC)	Tough, abrasion and wear-resistant material, well suited for hydraulic and pneumatic rod or piston applications. Parker's proprietary materials, Moythane®, Resilon® and Ultrathan® deliver the best overall sealing performance of all commercial polyurethane formulations. Ultra clean medical and optical grades are also available.
Silicone	VMQ, PVMQ, PMQ	-175ºF to 450ºF (-115ºC to 232ºC)	Exceptional heat and compression set resistance, good insulating properties, tends to be physiologically neutral and is useful in wide temperature extremes. Relatively poor tensile strength, tear and abrasion resistance.
Tetrafluoroethylene-Propylene (Aflas®)	TFE/P	15ºF to 450ºF (-9ºC to 232ºC)	High-temperature stability, resistance to broad range of chemicals, including bases, amines, sour gas, hydrocarbon blends and brake fluid. Its poor low temperature flexibility and compression set resistance has limited a more widespread use of the materials.

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