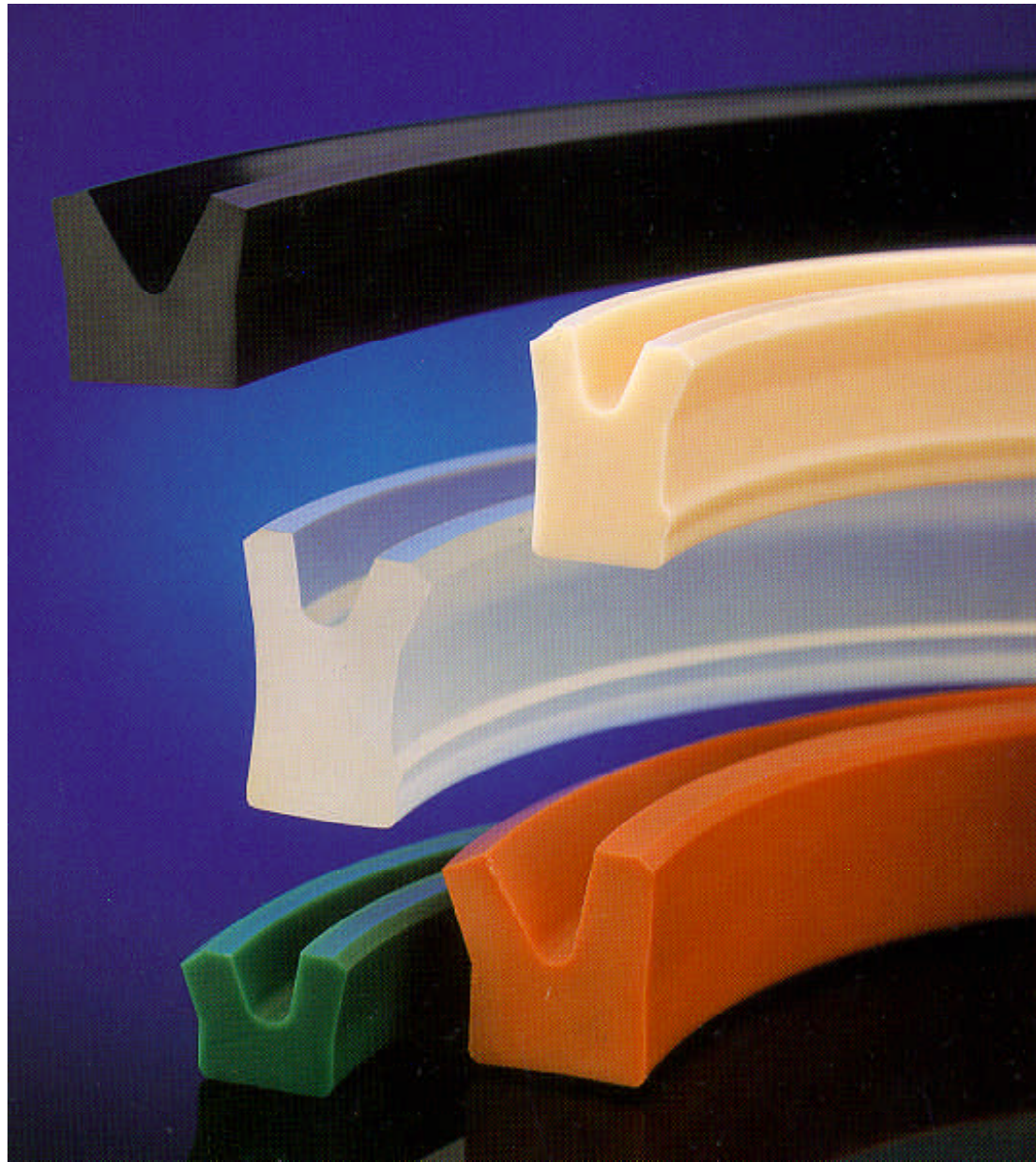




Seals

*Rod and Piston
U-Packing Seals/
Rod Wipers*

Catalog 5225A USA



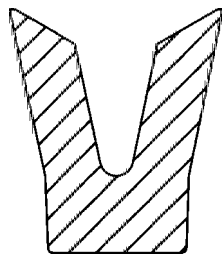
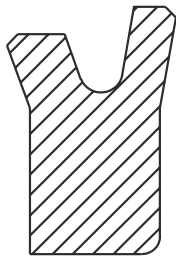
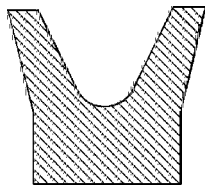
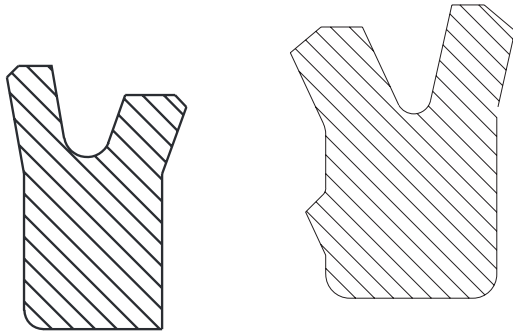
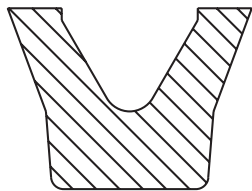
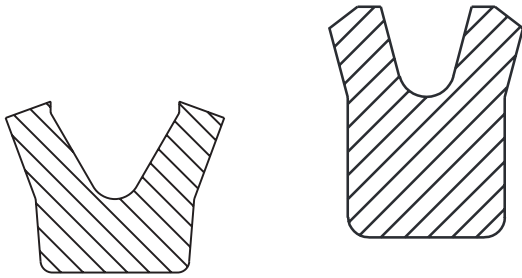


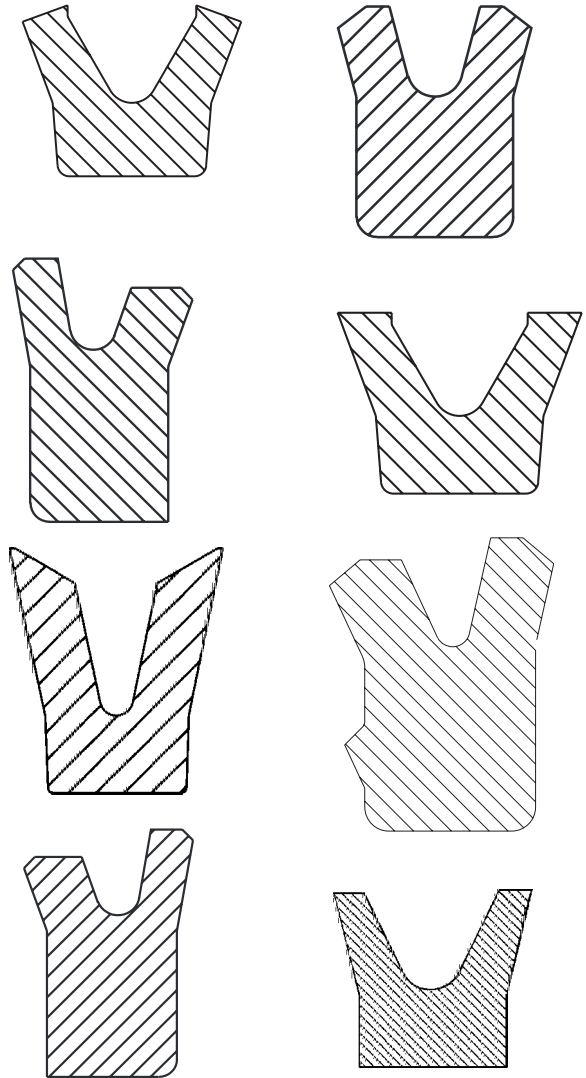
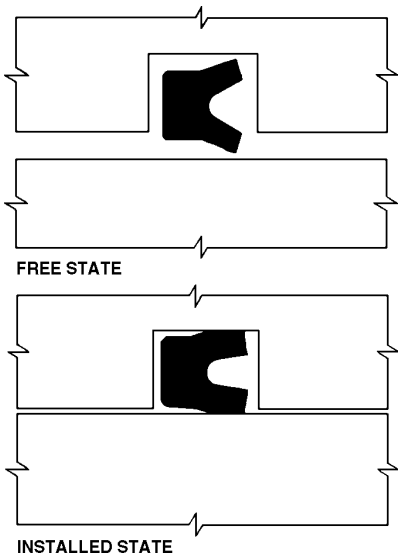
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Introduction

The U-Ring (U-Packing) is the most compact and versatile of the many lip type seals available. In its several configurations, it may be utilized as an ID- Rod seal or an OD - Piston seal. The U-ring with long thin lips has very low dynamic friction and can accommodate out-of-round or eccentric components. Other configurations with short heavy lips provide a more reliable seal at low pressures and are better suited for sealing at high pressures. These variations in design, coupled with the broad range of available Parker materials results in a very versatile line of sealing devices.

HOW THEY SEAL: The seal is obtained by means of the flared, flexible lips coming in contact with the rod or cylinder wall.



You will note that clearance is provided at the heel for minimum friction. Through this design, the packing is pre-loaded when installed. Sealing effectiveness is increased by internal pressure of the air or fluid against the inner surface of the lips.

Figure 1 illustrates an 8400 Series piston seal installed without backup rings. The seal is installed by stretching over the end of the piston and into the groove very similar to an O-Ring. Note that there is very little contact with the walls of the piston or walls of the cylinder except for the areas which actually perform the sealing function. Consequently, the 8400 type seals ride freely with the motion of the piston and generate very little friction (either break-away or operating).

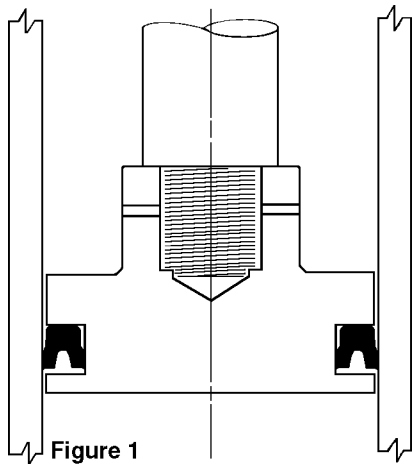


Figure 1

Figure 2 illustrates a double-acting piston seal packing installation.

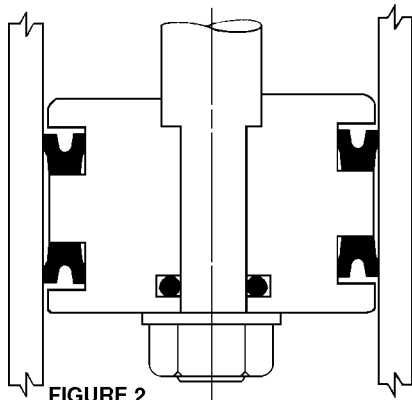


FIGURE 2

Figure 3 illustrates a typical rod packing without wiper.

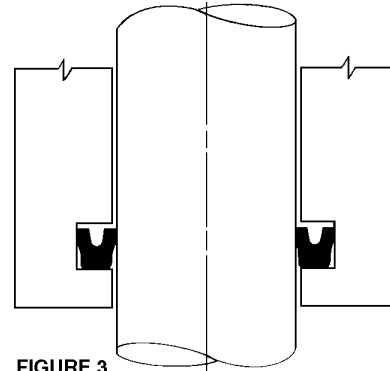


FIGURE 3

Figure 4 illustrates an 8400 Series rod seal with a supporting backup ring and rod wiper/scrapper. Note that the backup ring supports the heel of the U-packing and prevents extrusion when clearances and pressures are excessive.

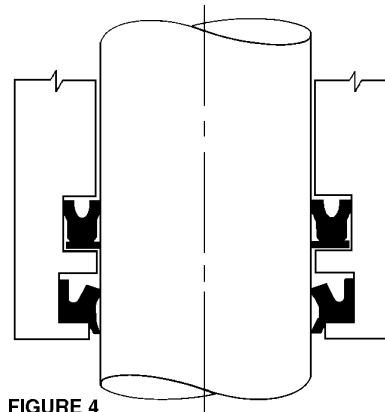
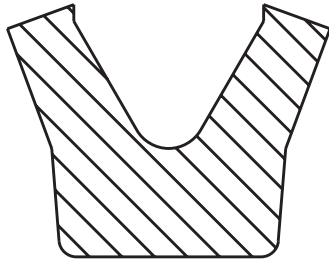


FIGURE 4

NOTE: Surface finish of the working surface of either rods or bores should be a maximum of 16 microinches (14 R_a) for continued sealing effectiveness and long seal life.

ELASTOMERIC COMPOUNDS FOR PARKER U-PACKINGS

COMPOUND IDENTIFICATION AND HARDNESS	TEMPERATURE RANGE (°F)	RECOMMENDED SERVICE
N4180A80 (Nitrile)	-40 to +250	General usage compound for service for 8400/8500 U-Packing. Compatible with most petroleum fluids.
N4181A85 (Nitrile)	-40 to +250	General usage compound for 8600 wipers.
E4183A80 (EPR)	-65 to +275	Phosphate Ester Fluids. (Skydrol)
V4208A90 (Fluorocarbon)	-20 to +400	Applications requiring high temperatures.
N4257A85 (Nitroxile*)	-20 to +250	Low friction applications with little or no lubrication to limit heat generation and wear. Several times the wear and abrasion resistance of Nitriles. Nitroxile is recommended for water based fluids
N4274A85 (ELF) (Internally Lubed Nitroxile*)		ELF - Extreme Low Friction Nitrile (* Parker's trade name for Carboxilated Nitrile)
P4611A90	-40 to +190	Polyurethane elastomer with excellent abrasion, tear, and extrusion resistance. Available in Parkers US, UR, and UP profile U-packings.
P4622A90 (Low Friction Polyurethane)	-65 to +200	Very low friction applications with optimum wear and abrasion resistance over conventional elastomers. Long life material.
P4693A90	-40 to +200	Polyurethane elastomer with excellent abrasion, tear, and extrusion resistance. Available in Parkers BS profile U-packings.
P5008A90	-31 to +230	Polyurethane elastomer with improved compression set and rebound properties. Available in Parkers BS profile U-packings.
SLC4300A90	-40 to +275	Premier Polyurethane with unique temperature range, compression set, and rebound properties. Available in Parker BS and BT profile U-packing.

Rod and Piston Seals and Rod Wipers**8400 Series U-Ring**

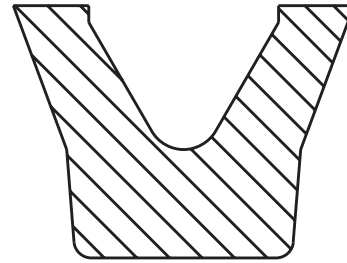
840801000
1 X 1-1/2 X 1/4

PARKER 8400 SERIES U-RINGS with built-in flexibility permit snap-in assembly and increased piston or rod clearance thus providing reduced assembly time and lower cost. The 8400 U-Ring provides an extremely smooth, steady movement with less break-away force required because of their inherent low friction. These characteristics makes the 8400 U-Ring an excellent seal for low speed, low pressure situations.

The 8400 Series U-Ring may be used in any groove design that has "U" type packings of the same cross sectional dimensions. Thus, many existing cylinders as well as new designs can utilize the benefits and advantages of the Parker 8400 Series U-Ring. The compact configuration of the Parker Packing 8400 Series U-Ring provides effective sealing and allow a designer to reduce the total weight of the unit.

The 8400 Series U-Ring is normally supplied in standard Parker Compound 4180, an 80 (A) durometer nitrile material. Compound 4180 performs effectively in the vast majority of applications. Other compounds—nitroxiles, fluorocarbons, ethylene propylene, etc. , are available to fulfill specialized requirements. They may however, require special tooling, and in most cases have greater tolerances than those indicated for the standard compound. If your application requires specialized elastomers, consult a Parker technical representative.

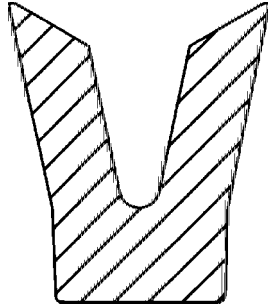
While the 8400 Series U-Packing seals are primarily designed for low and medium pressure applications, the pressure range may be extended by the utilization of supporting backup rings. These backup rings are required where clearances are larger than normal or where pressure exceeds 800 psi.

**8500 Series U-Ring**

850801000
1 X 1-1/2 X 1/4

PARKER 8500 SERIES U-RINGS are the same basic design as 8400 Series but with a flat sealing lip which is better for controlling contamination. The 8400 Series has a chamfered sealing lip which are thicker than the corresponding AN6226 Series. The 8500 Series is similar to the AN6226 Series and is interchangeable where the sizes correspond. Parker Packing 8500 Series are excellent low pressure U-Rings.

The 8500 Series U-Ring is normally supplied in standard Parker Compound 4180, an 80 (A) durometer nitrile material. Compound 4180 performs effectively in the vast majority of applications. Other compounds—nitroxiles, fluorocarbons, ethylene propylene, etc. , are available to fulfill specialized requirements. They may however, require special tooling, and in most cases have greater tolerances than those indicated for the standard compound. If your application requires specialized elastomers, consult a Parker technical representative.



8008/8012 Series U-Ring

800801000

1 X 1-1/2 X 1/4 X 3/8

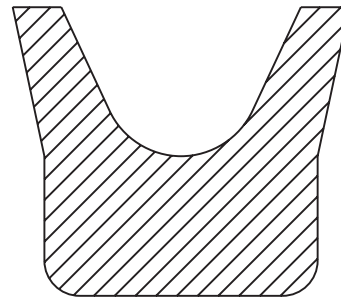
801201000

1 X 1-3/4 X 3/8 X 1/2

PARKER RECTANGULAR 8008/8012 U-RINGS are made in a wide range of cross-sections and diameters from less than 1 inch Inside Diameter to over 24 inches Outside Diameter. Although there are few industry standards on U-Ring configurations, Parker Packing has established two standard cross-sections to provide a uniform series of seals for the most popular cylinder bore sizes. The two cross-sections, 1/4" C.S. X 3/8" HT. and 3/8" C.S. X 1/2" HT. are well accepted by cylinder manufacturers and equipment builders.

As ram packing in hydraulic cylinders, it is common to use a much larger U-Ring design to accommodate the wider clearances and bore eccentricities that may exist.

U-Rings of this type are normally supplied in NEO-FAB (Fabric reinforced Nitrile) material to resist extrusion and high shock loads. For special applications the standard Fabric reinforced packing may be provided with a hard extrusion resistant heel material added to enhance its load carrying capacity. For pneumatic applications this same configuration U-Ring is available in resilient 80 shore "A" durometer nitrile, ethylene pro-



RECTANGULAR (8088 & 8012)

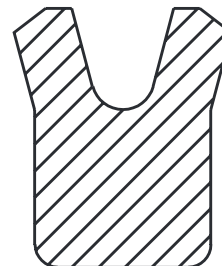
AN6226, US Series Wipers
polyene and nitroxile compounds.

6226 Series U-Ring

000200200W001

1 X 1-1/2 X 1/4

PARKER AN6226 STYLE U-RINGS have a square format where the cross-section = height. Although widely used in industry for low friction pneumatics, these parts were originally designed for early aircraft and ordnance service. Many units still use this type U-Ring. The 6226 U-Ring is available in the most popular sizes and is made of a standard 70 shore "A" Nitrile material.

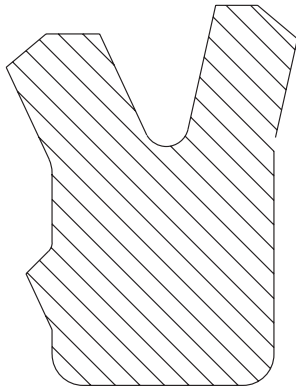


US Series U-Ring

US25001000

1 X 1-1/2 X 1/4

PARKER "US" SERIES U-RINGS are of symmetrical back-beveled lip design. "US" U-Ring seals are designed to solve specific heavy duty hydraulic sealing problems. The symmetrical design allows for interchangeability between rod and piston applications. Parker "US" U-Rings are dimensioned to be interchangeable with many styles and sizes of other Parker products such as PolyPak Seals and non-symmetrical U-Rings. This permits direct substitution in the same grooves when unexpected problems arise.



While the back-beveled lips do provide some sealing in the reverse direction, these seals should be used only for unidirectional applications.

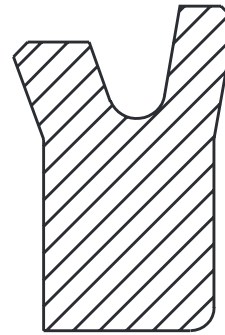
BS Series U-Ring

BS25001000-375
1 X 1-1/2 X 1/4 X 3/8

PARKER BS (Better Sealing) SERIES U-RINGS are hydraulic rod seals ideally suited for heavy-duty mobile and stationary service where leakage must be held to an absolute minimum.

The unique Parker "BS" geometry is highly resistant to side loading and is insensitive to pressure spikes. The BS Profile reduces or eliminates leakage under severe operating conditions. Finite Element Analysis (FEA) engineered geometry provides accurate control of lubricating film thickness on the rod across a wide range of temperature/pressure variations.

The BS Profile reduces wear and "dry run". Rod lubricant is retained in the cavity formed by the secondary lip providing exceptionally low running friction even at low velocities. Sealing performance is outstanding ... even at 0 psi. When installed in tandem with the proper rod wiper, the Parker BS Profile returns excessive lubricant to the system, providing leak free operation, low break-away and running friction, and very quiet operation with reduced slip stick



The unique geometry of the BS profile is extremely resistant to the effects of side loading, resulting in longer seal life and reduced or eliminated leakage.

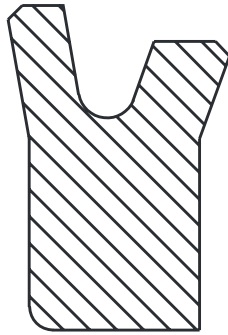
UR Series U-Ring

UR25001000-375
1 X 1-1/2 X 1/4 X 3/8

PARKER UR SERIES U-RINGS are non-symmetrical rod seals, and are designed to solve specific heavy duty hydraulic sealing problems. The back-beveled lip faces the rod where it will provide enhanced low-pressure sealing and wiping action on the rod surface. The non-symmetrical extended lip is used as a stabilizing element on the static sealing surface.

The UR U-Ring is designed to be interchangeable with many styles and sizes of other Parker rod seals, permitting direct substitution in the same grooves when problems arise.

The back-beveled lips do not provide sealing in the reverse directions. These seals should be used only for unidirectional applications.

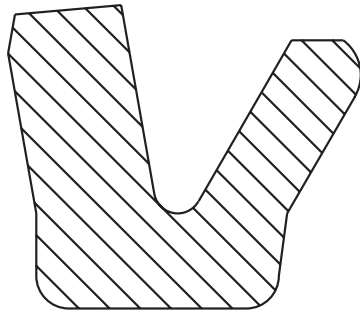


UP Series U-Ring

UP25001000-375
1 X 1-1/2 X 1/4 X 3/8

PARKER UP SERIES U-RINGS are non-symmetrical piston seals, and are designed to solve specific heavy duty hydraulic sealing problems. The back-beveled lip faces the bore where it will provide enhanced low-pressure sealing and wiping action on the bore surface. The non-symmetrical extended lip is used as a stabilizing element on the static sealing surface. The UP U-Ring is designed to be interchangeable with many styles and sizes of other PARKER PACKING piston seals, permitting direct substitution in the same grooves if problems arise.

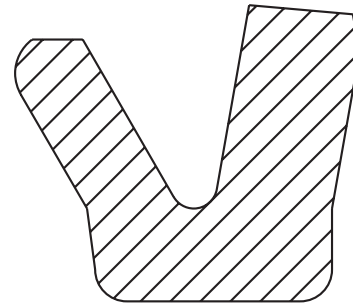
The back-beveled lips do not provide sealing in the reverse directions. These seals should be used only for unidirectional applications.



E4 Series U-Ring

E40801000
1 X 1-1/2 X 1/4

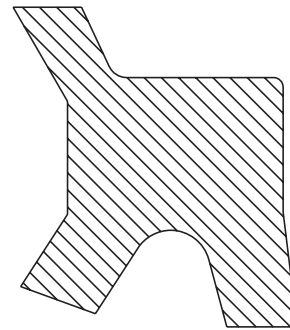
PARKER E4 PROFILE PISTON U-RINGS are specially designed for use in pneumatics applications. The lip design incorporates a rounded dynamic sealing lip for reduced friction and longer seal life. The rounded lip geometry is designed to operate with lubricated air, dry air, and air that is free from oil. When the new rounded lip design is combined with Parkers low friction materials, such as Nitroxile ELF (N4274A85 ELF) even lower frictional characteristics can be achieved.



E5 Series U-Ring

E50801000
1 X 1-1/2 X 1/4

PARKER E5 PROFILE ROD U-RINGS are specially designed for use in pneumatics applications. The lip design incorporates a rounded dynamic sealing lip for reduced friction and longer seal life. The rounded lip geometry is designed to operate with lubricated air, dry air, and air that is free from oil. When the new rounded lip design is combined with Parkers low friction materials, such as Nitroxile ELF (N4274A85 ELF) even lower frictional characteristics can be achieved.



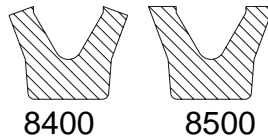
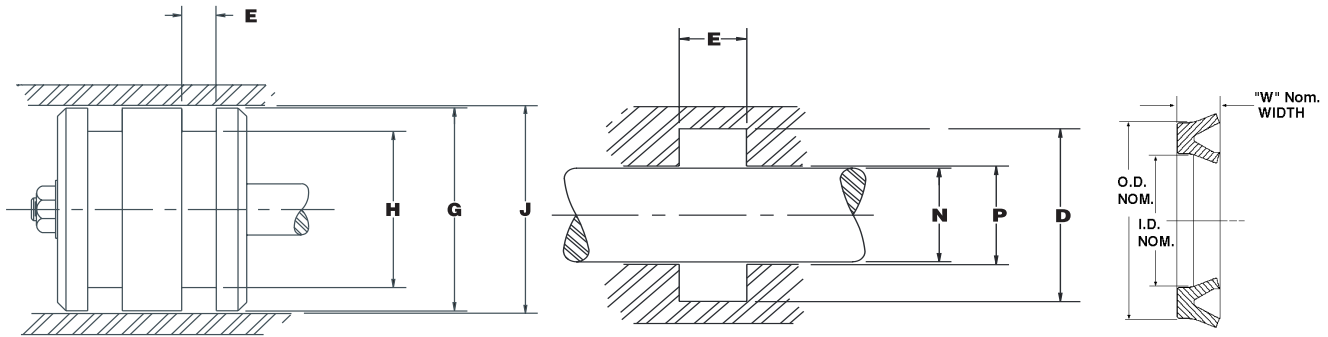
8600 Series Wipers

860001000
FOR 1" ROD

PARKER ROD WIPER: 8600 SERIES This specially designed double lip rod wiper provides the ultimate in wiper action to remove foreign material from the exposed rod while still maintaining an adequate lubricating film. It protects both the rod and the primary seal. 8600 Rod Wipers are available in many compounds.

The standard compound is 4181, an 80 durometer nitrile material. Other compounds are available as noted in information on 8400 Series seals. Not recommended for use with high squeeze seals such as a PolyPak.

Rod and Piston Seals and Rod Wipers



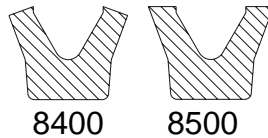
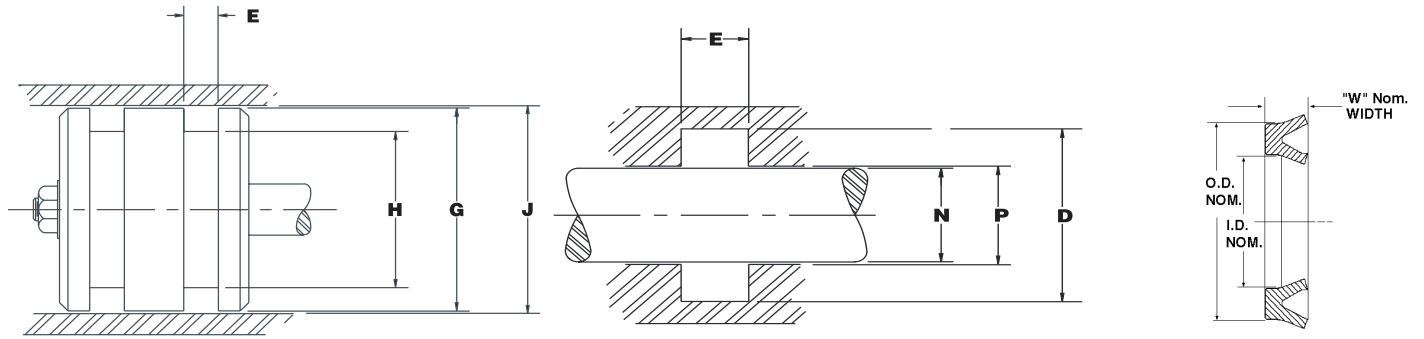
**TYPICAL PART NUMBER
4180840401000 / 4180850401000**

PARKER PART NUMBER (1)	NOMINAL SEAL DIMENSION			PISTON GROOVE OR ROD DIAMETER TOLERANCE			CYLINDER BORE OR GLAND DIAMETER TOLERANCE			THROAT DIAMETER		PISTON DIAMETER		GROOVE WIDTH W/O BACKUP	GROOVE WIDTH WITH BACKUP (2)
	W	I.D.	O.D.	DIM.	GROOVE H	ROD N	DIM.	CYL. BORE J	GLAND D	DIM. P	TOL.	DIM. G	TOL.	+0.01/-0.10 E	+0.01/-0.10 E
840200125	1/16	1/8	1/4	.125	+0.00/-0.001	+0.000/-0.001	.250	+0.002/-0.000	+0.002/-0.000	.126	+0.001/-0.000	.249	+0.000/-0.001	.093	.155
840200187	1/16	3/16	5/16	.187	+0.000/-0.001	+0.000/-0.001	.312	+0.002/-0.000	+0.002/-0.000	.188	+0.001/-0.000	.311	+0.000/-0.001	.093	.155
840300187	3/32	3/16	3/8	.187	+0.000/-0.001	+0.000/-0.001	.375	+0.002/-0.000	+0.002/-0.000	.188	+0.002/-0.000	.374	+0.000/-0.001	.125	.187
840400187	1/8	3/16	7/16	.187	+0.000/-0.002	+0.000/-0.001	.437	+0.002/-0.000	+0.002/-0.000	.188	+0.002/-0.000	.436	+0.000/-0.001	.156	.218
840200250	1/16	1/4	3/8	.250	+0.000/-0.001	+0.000/-0.001	.375	+0.002/-0.000	+0.002/-0.000	.251	+0.001/-0.000	.374	+0.000/-0.001	.093	.155
840300250	3/32	1/4	7/16	.250	+0.000/-0.001	+0.000/-0.001	.437	+0.002/-0.000	+0.002/-0.000	.251	+0.001/-0.000	.436	+0.000/-0.001	.125	.187
840400250	1/8	1/4	1/2	.250	+0.000/-0.002	+0.000/-0.001	.500	+0.002/-0.000	+0.002/-0.000	.251	+0.002/-0.000	.499	+0.000/-0.001	.156	.218
840300312	3/32	5/16	1/2	.312	+0.000/-0.001	+0.000/-0.001	.500	+0.002/-0.000	+0.002/-0.000	.313	+0.001/-0.000	.499	+0.000/-0.001	.125	.187
840400312	1/8	5/16	9/16	.312	+0.000/-0.002	+0.000/-0.001	.562	+0.002/-0.000	+0.002/-0.000	.313	+0.002/-0.000	.561	+0.000/-0.001	.156	.218
840400375	1/8	3/8	5/8	.375	+0.000/-0.002	+0.000/-0.001	.625	+0.002/-0.000	+0.002/-0.000	.376	+0.002/-0.000	.624	+0.000/-0.001	.156	.218
840400390	1/8	25/64	41/64	.390	+0.000/-0.002	+0.000/-0.001	.641	+0.002/-0.000	+0.002/-0.000	.391	+0.002/-0.000	.640	+0.000/-0.001	.156	.218
840400437	1/8	7/16	11/16	.437	+0.000/-0.002	+0.000/-0.001	.687	+0.002/-0.000	+0.002/-0.000	.438	+0.002/-0.000	.686	+0.000/-0.001	.156	.218
840400500	1/8	1/2	3/4	.500	+0.000/-0.002	+0.000/-0.001	.750	+0.002/-0.000	+0.002/-0.000	.501	+0.002/-0.000	.749	+0.000/-0.001	.156	.218
840400562	1/8	9/16	13/16	.562	+0.000/-0.002	+0.000/-0.001	.812	+0.002/-0.000	+0.002/-0.000	.563	+0.002/-0.000	.811	+0.000/-0.001	.156	.218
840300625	3/32	5/8	13/16	.625	+0.000/-0.001	+0.000/-0.001	.812	+0.002/-0.000	+0.002/-0.000	.626	+0.001/-0.000	.811	+0.000/-0.001	.125	.187
840400625	1/8	5/8	7/8	.625	+0.000/-0.002	+0.000/-0.001	.875	+0.002/-0.000	+0.002/-0.000	.626	+0.002/-0.000	.874	+0.000/-0.001	.156	.218
840800625	1/4	5/8	1-1/8	.625	+0.000/-0.003	+0.000/-0.002	1.125	+0.003/-0.000	+0.003/-0.000	.626	+0.003/-0.000	1.124	+0.000/-0.002	.281	.343
840400687	1/8	11/16	15/16	.687	+0.000/-0.002	+0.000/-0.001	.937	+0.002/-0.000	+0.002/-0.000	.688	+0.002/-0.000	.936	+0.000/-0.001	.156	.218
840400750	1/8	3/4	1	.750	+0.000/-0.002	+0.000/-0.001	1.000	+0.002/-0.000	+0.002/-0.000	.751	+0.002/-0.000	.999	+0.000/-0.001	.156	.218
840600750	3/16	3/4	1-1/8	.750	+0.000/-0.001	+0.000/-0.002	1.125	+0.002/-0.000	+0.002/-0.000	.751	+0.002/-0.000	1.124	+0.000/-0.002	.218	.280

NOTES: ¹ Rubber Compounds: 4180 (Nitrile, 80 Durometer standard compound) for 8400 and 8500 Series U-Packings. Other compounds available on request. Special tooling required for Fluorocarbon and other special compounds.
² DESIGN CONSIDERATIONS: Pressures to 2500 psi, surface finish 8-16 micro inches RMS and an 8600 Wiper can be used with an 8400 series U-packing or similiar seal. See PPD-3870F for Polymyte Backup Rings. Consult Factory for tooling availability and groove dimensions not listed.

8400/8500 Series
Installation Dimensions

Rod and Piston Seals and Rod Wipers



8400 8500
TYPICAL PART NUMBER
4180840401000 / 4180850401000

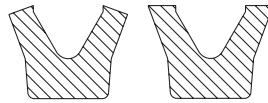
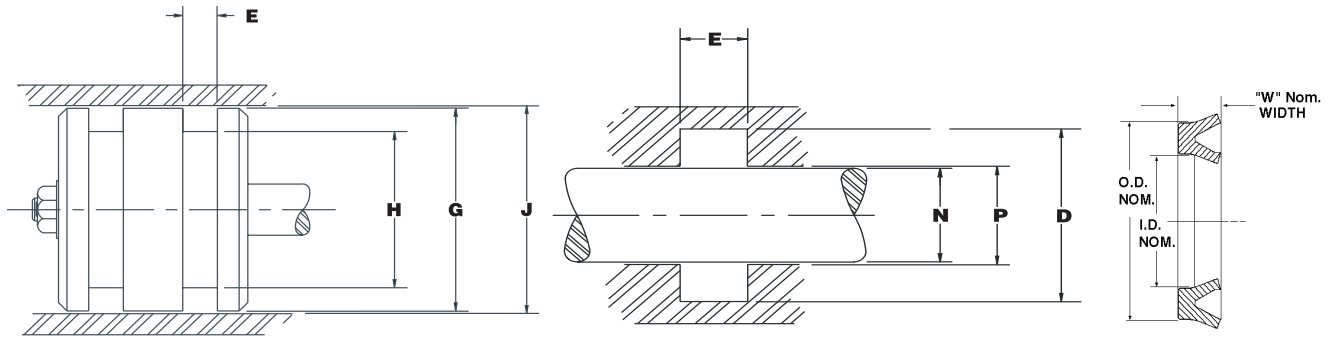
PARKER PART NUMBER (1)	NOMINAL SEAL DIMENSION			PISTON GROOVE OR ROD DIAMETER TOLERANCE			CYLINDER BORE OR GLAND DIAMETER TOLERANCE				THROAT DIAMETER		PISTON DIAMETER		GROOVE WIDTH W/O BACKUP	GROOVE WIDTH WITH BACKUP (2)
	W	I.D.	O.D.	DIM.	GROOVE H	ROD N	DIM.	CYL. BORE J	GLAND D	DIM. P	TOL.	DIM. G	TOL.	+0.01/-0.01 E	+0.01/-0.01 E	
840400812	1/8	13/16	1-1/16	.812	+0.00/-0.002	+0.000/-0.001	1.062	+0.002/-0.000	+0.002/-0.000	.813	+0.002/-0.000	1.061	+0.000/-0.001	.156	.218	
840400875	1/8	7/8	1-1/8	.875	+0.000/-0.002	+0.000/-0.001	1.125	+0.002/-0.000	+0.002/-0.000	.876	+0.002/-0.000	1.124	+0.000/-0.001	.156	.218	
840600875	3/16	7/8	1-1/4	.875	+0.000/-0.002	+0.000/-0.002	1.250	+0.002/-0.000	+0.002/-0.000	.876	+0.002/-0.000	1.249	+0.000/-0.002	.218	.280	
840400937	1/8	15/16	1-3/16	.937	+0.000/-0.002	+0.000/-0.001	1.187	+0.002/-0.000	+0.002/-0.000	.938	+0.002/-0.000	1.186	+0.000/-0.001	.156	.218	
840401000	1/8	1	1-1/4	1.000	+0.000/-0.002	+0.000/-0.001	1.250	+0.002/-0.000	+0.002/-0.000	1.001	+0.002/-0.000	1.249	+0.000/-0.001	.156	.218	
840501000	5/32	1	1-5/16	1.000	+0.000/-0.002	+0.000/-0.001	1.312	+0.002/-0.000	+0.002/-0.000	1.001	+0.002/-0.000	1.311	+0.000/-0.001	.188	.250	
840801000	1/4	1	1-1/2	1.000	+0.000/-0.003	+0.000/-0.002	1.500	+0.003/-0.000	+0.003/-0.000	1.001	+0.003/-0.000	1.499	+0.000/-0.002	.281	.343	
840501062	5/32	1-1/16	1-3/8	1.062	+0.000/-0.002	+0.000/-0.001	1.375	+0.002/-0.000	+0.002/-0.000	1.063	+0.002/-0.000	1.374	+0.000/-0.001	.188	.250	
840401125	1/8	1-1/8	1-3/8	1.125	+0.000/-0.002	+0.000/-0.001	1.375	+0.002/-0.000	+0.002/-0.000	1.126	+0.002/-0.000	1.374	+0.000/-0.001	.156	.218	
840501125	5/32	1-1/8	1-7/16	1.125	+0.000/-0.002	+0.000/-0.001	1.437	+0.002/-0.000	+0.002/-0.000	1.126	+0.002/-0.000	1.436	+0.000/-0.001	.188	.250	
840501187	5/32	1-3/16	1-1/2	1.187	+0.000/-0.002	+0.000/-0.001	1.500	+0.002/-0.000	+0.002/-0.000	1.188	+0.002/-0.000	1.499	+0.000/-0.001	.188	.250	
840501250	5/32	1-1/4	1-9/16	1.250	+0.000/-0.002	+0.000/-0.001	1.562	+0.002/-0.000	+0.002/-0.000	1.251	+0.002/-0.000	1.561	+0.000/-0.001	.188	.250	
840501312	5/32	1-5/16	1-5/8	1.312	+0.000/-0.002	+0.000/-0.001	1.625	+0.002/-0.000	+0.002/-0.000	1.313	+0.002/-0.000	1.624	+0.000/-0.001	.188	.250	
840501375	5/32	1-3/8	1-11/16	1.375	+0.000/-0.002	+0.000/-0.001	1.687	+0.002/-0.000	+0.002/-0.000	1.376	+0.002/-0.000	1.686	+0.000/-0.001	.188	.250	
840601375	3/16	1-3/8	1-3/4	1.375	+0.000/-0.002	+0.000/-0.002	1.750	+0.002/-0.000	+0.002/-0.000	1.376	+0.002/-0.000	1.749	+0.000/-0.002	.218	.280	
840501437	5/32	1-7/16	1-3/4	1.437	+0.000/-0.002	+0.000/-0.001	1.750	+0.002/-0.000	+0.002/-0.000	1.438	+0.002/-0.000	1.749	+0.000/-0.001	.188	.250	
840501500	5/32	1-1/2	1-13/16	1.500	+0.000/-0.002	+0.000/-0.001	1.812	+0.002/-0.000	+0.002/-0.000	1.501	+0.002/-0.000	1.811	+0.000/-0.001	.188	.250	
840601500	3/16	1-1/2	1-7/8	1.500	+0.000/-0.002	+0.000/-0.002	1.875	+0.002/-0.000	+0.002/-0.000	1.501	+0.002/-0.000	1.874	+0.000/-0.002	.218	.280	
840601625	3/16	1-5/8	2	1.625	+0.000/-0.002	+0.000/-0.002	2.000	+0.002/-0.000	+0.002/-0.000	1.626	+0.002/-0.000	1.999	+0.000/-0.002	.218	.280	
840601750	3/16	1-3/4	2-1/8	1.750	+0.000/-0.002	+0.000/-0.002	2.125	+0.002/-0.000	+0.002/-0.000	1.751	+0.002/-0.000	2.124	+0.000/-0.002	.218	.280	

NOTES: ¹ Rubber Compounds: 4180 (Nitrile, 80 Durometer standard compound) for 8400 and 8500 Series U-Packings. Other compounds available on request. Special tooling required for Fluorocarbon and other special compounds.

² DESIGN CONSIDERATIONS: Pressures to 2500 psi, surface finish 8-16 micro inches RMS and an 8600 Wiper can be used with an 8400 series U-packing or similar seal. See PPD-3870F for Polymyte Backup Rings. Consult Factory for tooling availability and groove dimensions not listed.

8400/8500 Series
Installation Dimensions

Rod and Piston Seals and Rod Wipers



8400 8500

TYPICAL PART NUMBER

4180840401000 / 4180850401000

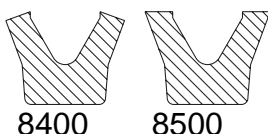
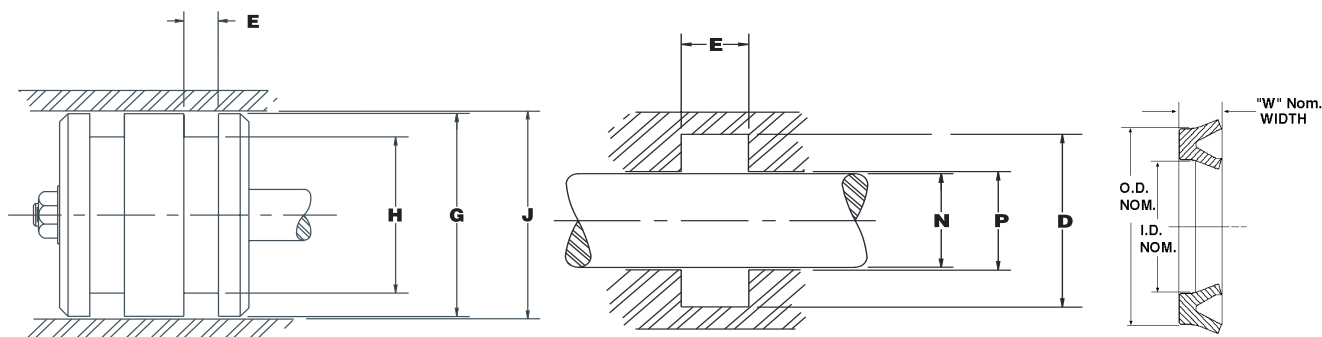
PARKER PART NUMBER (1)	NOMINAL SEAL DIMENSION			PISTON GROOVE OR ROD DIAMETER TOLERANCE			CYLINDER BORE OR GLAND DIAMETER TOLERANCE			THROAT DIAMETER		PISTON DIAMETER		GROOVE WIDTH W/O BACKUP	GROOVE WIDTH WITH BACKUP (2)
	W	I.D.	O.D.	DIM.	GROOVE H	ROD N	DIM.	CYL. BORE J	GLAND D	DIM. P	TOL.	DIM. G	TOL.	+010/-010 E	+010/-010 E
840601875	3/16	1-7/8	2-1/4	1.875	+0.00/-0.002	+0.00/-0.002	2.250	+0.02/-0.000	+0.02/-0.000	1.876	+0.02/-0.000	2.249	+0.00/-0.002	.218	.280
840701937	7/32	1-15/16	2-3/8	1.937	+0.00/-0.002	+0.00/-0.002	2.375	+0.02/-0.000	+0.02/-0.000	1.938	+0.02/-0.000	2.374	+0.00/-0.002	.250	.312
840602000	3/16	2	2-3/8	2.000	+0.00/-0.002	+0.00/-0.002	2.375	+0.02/-0.000	+0.02/-0.000	2.001	+0.02/-0.000	2.374	+0.00/-0.002	.218	.280
840602125	3/16	2-1/8	2-1/2	2.125	+0.00/-0.002	+0.00/-0.002	2.500	+0.02/-0.000	+0.02/-0.000	2.126	+0.02/-0.000	2.499	+0.00/-0.002	.218	.280
840602250	3/16	2-1/4	2-5/8	2.250	+0.00/-0.002	+0.00/-0.002	2.625	+0.02/-0.000	+0.02/-0.000	2.251	+0.02/-0.000	2.624	+0.00/-0.002	.218	.280
841202250	3/8	2-1/4	3	2.250	+0.00/-0.005	+0.00/-0.002	3.000	+0.03/-0.000	+0.04/-0.000	2.252	+0.04/-0.000	2.998	+0.00/-0.002	.406	.468
840602375	3/16	2-3/8	2-3/4	2.375	+0.00/-0.002	+0.00/-0.002	2.750	+0.02/-0.000	+0.02/-0.000	2.376	+0.02/-0.000	2.749	+0.00/-0.002	.218	.280
841002375	5/16	2-3/8	3	2.375	+0.00/-0.004	+0.00/-0.002	3.000	+0.02/-0.000	+0.02/-0.000	2.377	+0.03/-0.000	2.998	+0.00/-0.002	.344	.406
840602500	3/16	2-1/2	2-7/8	2.500	+0.00/-0.002	+0.00/-0.002	2.875	+0.02/-0.000	+0.02/-0.000	2.501	+0.02/-0.000	2.874	+0.00/-0.002	.218	.280
840702500	7/32	2-1/2	2-15/16	2.500	+0.00/-0.002	+0.00/-0.002	2.937	+0.02/-0.000	+0.02/-0.000	2.501	+0.02/-0.000	2.936	+0.00/-0.002	.250	.312
840802500	1/4	2-1/2	3	2.500	+0.00/-0.003	+0.00/-0.002	3.000	+0.03/-0.000	+0.03/-0.000	2.501	+0.03/-0.000	2.499	+0.00/-0.002	.281	.343
840702562	7/32	2-9/16	3	2.562	+0.00/-0.002	+0.00/-0.002	3.000	+0.02/-0.000	+0.02/-0.000	2.563	+0.02/-0.000	2.999	+0.00/-0.002	.250	.312
840602625	3/16	2-5/8	3	2.625	+0.00/-0.002	+0.00/-0.002	3.000	+0.02/-0.000	+0.02/-0.000	2.626	+0.02/-0.000	2.999	+0.00/-0.002	.218	.280
840702687	7/32	2-11/16	3-1/8	2.687	+0.00/-0.002	+0.00/-0.002	3.125	+0.02/-0.000	+0.02/-0.000	2.688	+0.02/-0.000	3.124	+0.00/-0.002	.250	.312
840602750	3/16	2-3/4	3-1/8	2.750	+0.00/-0.002	+0.00/-0.002	3.125	+0.02/-0.000	+0.02/-0.000	2.751	+0.02/-0.000	3.124	+0.00/-0.002	.218	.280
840702750	7/32	2-3/4	3-3/16	2.750	+0.00/-0.002	+0.00/-0.002	3.187	+0.02/-0.000	+0.02/-0.000	2.751	+0.02/-0.000	3.186	+0.00/-0.002	.250	.312
840802750	1/4	2-3/4	3-1/4	2.750	+0.00/-0.003	+0.00/-0.002	3.250	+0.03/-0.000	+0.02/-0.000	2.751	+0.03/-0.000	3.249	+0.00/-0.002	.281	.343
840702812	7/32	2-13/16	3-1/4	2.812	+0.00/-0.002	+0.00/-0.002	3.250	+0.02/-0.000	+0.02/-0.000	2.813	+0.02/-0.000	3.249	+0.00/-0.002	.250	.312
840603000	3/16	3	3-3/8	3.000	+0.00/-0.002	+0.00/-0.002	3.375	+0.02/-0.000	+0.02/-0.000	3.001	+0.02/-0.000	3.374	+0.00/-0.002	.218	.280
840703000	7/32	3	3-7/16	3.000	+0.00/-0.002	+0.00/-0.002	3.437	+0.02/-0.000	+0.02/-0.000	3.001	+0.02/-0.000	3.436	+0.00/-0.002	.250	.312

NOTES: ¹ Rubber Compounds: 4180 (Nitrile, 80 Durometer standard compound) for 8400 and 8500 Series U-Packings. Other compounds available on request. Special tooling required for Fluorocarbon and other special compounds.

² DESIGN CONSIDERATIONS: Pressures to 2500 psi, surface finish 8-16 micro inches RMS and an 8600 Wiper can be used with an 8400 series U-packing or similar seal. See PPD-3870F for Polymyte Backup Rings. Consult Factory for tooling availability and groove dimensions not listed.

Rod and Piston Seals and Rod Wipers

8400/8500 Series Installation Dimensions



TYPICAL PART NUMBER 4180840401000 / 4180850401000

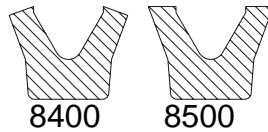
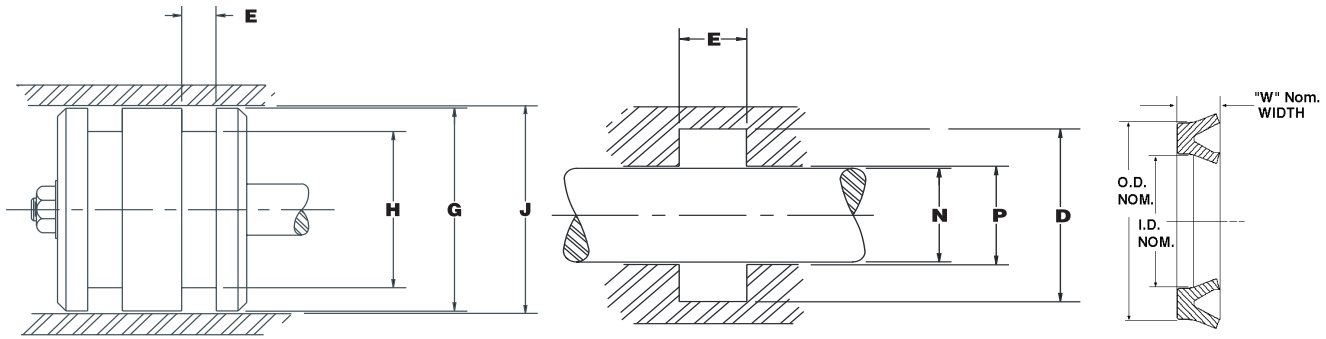
PARKER PART NUMBER (1)	NOMINAL SEAL DIMENSION			PISTON GROOVE OR ROD DIAMETER TOLERANCE			CYLINDER BORE OR GLAND DIAMETER TOLERANCE			THROAT DIAMETER		PISTON DIAMETER		GROOVE WIDTH W/O BACKUP	GROOVE WIDTH WITH BACKUP (2)
	W	I.D.	O.D.	DIM.	GROOVE H	ROD N	DIM.	CYL. BORE J	GLAND D	DIM. P	TOL.	DIM. G	TOL.	+0.01/-0.01 E	+0.01/-0.01 E
840703062	7/32	3-1/16	3-1/2	3.062	+0.00/-0.002	+0.00/-0.002	3.500	+0.002/-0.000	+0.003/-0.000	3.063	+0.002/-0.000	3.499	+0.00/-0.002	.250	.312
840803375	1/4	3-3/8	3-7/8	3.375	+0.00/-0.003	+0.00/-0.002	3.875	+0.003/-0.000	+0.003/-0.000	3.376	+0.003/-0.000	3.874	+0.00/-0.002	.281	.343
840803500	1/4	3-1/2	4	3.500	+0.00/-0.003	+0.00/-0.002	4.000	+0.003/-0.000	+0.003/-0.000	3.501	+0.003/-0.000	3.999	+0.00/-0.002	.281	.343
840803750	1/4	3-3/4	4-1/4	3.750	+0.00/-0.003	+0.00/-0.002	4.250	+0.003/-0.000	+0.003/-0.000	3.751	+0.003/-0.000	4.249	+0.00/-0.002	.281	.343
840404000	1/8	4	4-1/4	4.000	+0.00/-0.002	+0.00/-0.001	4.250	+0.002/-0.000	+0.002/-0.000	4.001	+0.002/-0.000	4.249	+0.00/-0.001	.156	.218
840804000	1/4	4	4-1/2	4.000	+0.00/-0.003	+0.00/-0.002	4.500	+0.003/-0.000	+0.003/-0.000	4.001	+0.003/-0.000	4.499	+0.00/-0.002	.281	.343
840804250	1/4	4-1/4	4-3/4	4.250	+0.00/-0.003	+0.00/-0.002	4.750	+0.003/-0.000	+0.003/-0.000	4.251	+0.003/-0.000	4.749	+0.00/-0.002	.281	.343
840904437	9/32	4-7/16	5	4.437	+0.00/-0.003	+0.00/-0.002	5.000	+0.003/-0.000	+0.003/-0.000	4.438	+0.003/-0.000	4.999	+0.00/-0.002	.312	.374
840404500	1/8	4-1/2	4-3/4	4.500	+0.00/-0.002	+0.00/-0.001	4.750	+0.002/-0.000	+0.002/-0.000	4.501	+0.002/-0.000	4.749	+0.00/-0.001	.156	.218
840804500	1/4	4-1/2	5	4.500	+0.00/-0.003	+0.00/-0.002	5.000	+0.003/-0.000	+0.003/-0.000	4.501	+0.003/-0.000	4.999	+0.00/-0.002	.281	.343
840804750	1/4	4-3/4	5-1/4	4.750	+0.00/-0.003	+0.00/-0.002	5.250	+0.003/-0.000	+0.003/-0.000	4.751	+0.003/-0.000	5.249	+0.00/-0.002	.281	.343
840905000	9/32	5	5-9/16	5.000	+0.00/-0.003	+0.00/-0.002	5.562	+0.003/-0.000	+0.003/-0.000	5.001	+0.003/-0.000	5.561	+0.00/-0.002	.312	.374
841005125	5/16	5-1/8	5-3/4	5.125	+0.00/-0.004	+0.00/-0.002	5.750	+0.003/-0.000	+0.004/-0.000	5.127	+0.003/-0.000	5.748	+0.00/-0.002	.344	.406
841005375	5/16	5-3/8	6	5.375	+0.00/-0.004	+0.00/-0.002	6.000	+0.003/-0.000	+0.004/-0.000	5.377	+0.003/-0.000	5.998	+0.00/-0.002	.344	.406
840905437	9/32	5-7/16	6	5.437	+0.00/-0.003	+0.00/-0.002	6.000	+0.003/-0.000	+0.003/-0.000	5.438	+0.003/-0.000	5.999	+0.00/-0.002	.312	.374
841005500	5/16	5-1/2	6-1/8	5.500	+0.00/-0.004	+0.00/-0.002	6.125	+0.003/-0.000	+0.004/-0.000	5.502	+0.003/-0.000	6.123	+0.00/-0.002	.344	.406
840905937	9/32	5-15/16	6-1/2	5.937	+0.00/-0.003	+0.00/-0.002	6.500	+0.003/-0.000	+0.003/-0.000	5.938	+0.003/-0.000	6.499	+0.00/-0.002	.312	.374
841006000	5/16	6	6-5/8	6.000	+0.00/-0.004	+0.00/-0.002	6.625	+0.003/-0.000	+0.004/-0.000	6.002	+0.003/-0.000	6.623	+0.00/-0.002	.344	.406
841006375	5/16	6-3/8	7	6.375	+0.00/-0.004	+0.00/-0.002	7.000	+0.003/-0.000	+0.004/-0.000	6.377	+0.003/-0.000	6.998	+0.00/-0.002	.344	.406
840906437	9/32	6-7/16	7	6.437	+0.00/-0.003	+0.00/-0.002	7.000	+0.003/-0.000	+0.003/-0.000	6.438	+0.003/-0.000	6.999	+0.00/-0.002	.312	.374

NOTES: ¹ Rubber Compounds: 4180 (Nitrile, 80 Durometer standard compound) for 8400 and 8500 Series U-Packings. Other compounds available on request. Special tooling required for Fluorocarbon and other special compounds.

² DESIGN CONSIDERATIONS: Pressures to 2500 psi, surface finish 8-16 micro inches RMS and an 8600 Wiper can be used with an 8400 series U-packing or similiar seal. See PPD-3870F for Polymyte Backup Rings. Consult Factory for tooling availability and groove dimensions not listed.

8400/8500 Series
Installation Dimensions

Rod and Piston Seals and Rod Wipers



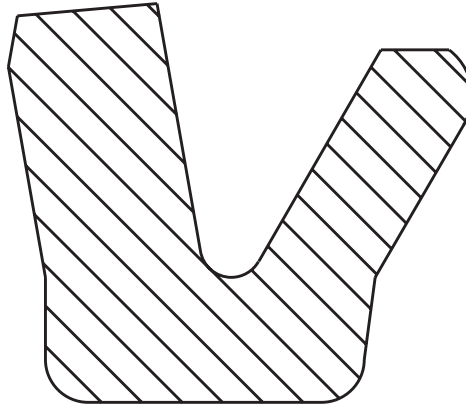
TYPICAL PART NUMBER

4180840401000 / 4180850401000

PARKER PART NUMBER (1)	NOMINAL SEAL DIMENSION			PISTON GROOVE OR ROD DIAMETER TOLERANCE			CYLINDER BORE OR GLAND DIAMETER TOLERANCE			THROAT DIAMETER		PISTON DIAMETER		GROOVE WIDTH W/O BACKUP	GROOVE WIDTH WITH BACKUP (2)
	W	I.D.	O.D.	DIM.	GROOVE H	ROD N	DIM.	CYL. BORE J	GLAND D	DIM. P	TOL.	DIM. G	TOL.	+0.010/-0.010 E	+0.010/-0.010 E
841006969	5/16	6-31/32	7-19/32	6.969	+0.000/-0.004	+0.000/-0.002	7.594	+0.003/-0.000	+0.004/-0.000	6.971	+0.003/-0.000	7.592	+0.000/-0.002	.344	.406
841007000	5/16	7	7-5/8	7.000	+0.000/-0.004	+0.000/-0.002	7.625	+0.003/-0.000	+0.004/-0.000	7.002	+0.003/-0.000	7.623	+0.000/-0.002	.344	.406
841007375	5/16	7-3/8	8	7.375	+0.000/-0.004	+0.000/-0.002	8.000	+0.003/-0.000	+0.004/-0.000	7.377	+0.003/-0.000	7.998	+0.000/-0.002	.344	.406
841008500	5/16	8-1/2	9-1/8	8.500	+0.000/-0.004	+0.000/-0.002	9.125	+0.003/-0.000	+0.004/-0.000	8.502	+0.003/-0.000	9.123	+0.000/-0.002	.344	.406
841109312	11/32	9-5/16	10	9.312	+0.000/-0.004	+0.000/-0.002	10.000	+0.003/-0.000	+0.004/-0.000	9.314	+0.003/-0.000	9.998	+0.000/-0.002	.375	.437
841611000	1/2	11	12	11.000	+0.000/-0.007	+0.000/-0.003	12.000	+0.005/-0.000	+0.007/-0.000	11.002	+0.005/-0.000	11.998	+0.000/-0.003	.531	.593
841211250	3/8	11-1/4	12	11.250	+0.000/-0.005	+0.000/-0.002	12.000	+0.004/-0.000	+0.005/-0.000	11.252	+0.004/-0.000	11.998	+0.000/-0.002	.406	.468
841613000	1/2	13	14	13.000	+0.000/-0.007	+0.000/-0.003	14.000	+0.005/-0.000	+0.007/-0.000	13.002	+0.005/-0.000	13.998	+0.000/-0.003	.531	.593
841313187	13/32	13-3/16	14	13.187	+0.000/-0.005	+0.000/-0.002	14.000	+0.004/-0.000	+0.005/-0.000	13.189	+0.004/-0.000	13.998	+0.000/-0.002	.437	.499
841417125	7/16	17-1/8	18	17.125	+0.000/-0.006	+0.000/-0.003	18.000	+0.005/-0.000	+0.006/-0.000	17.127	+0.004/-0.000	17.998	+0.000/-0.002	.469	.531

NOTES: ¹ Rubber Compounds: 4180 (Nitrile, 80 Durometer standard compound) for 8400 and 8500 Series U-Packings. Other compounds available on request. Special tooling required for Fluorocarbon and other special compounds.

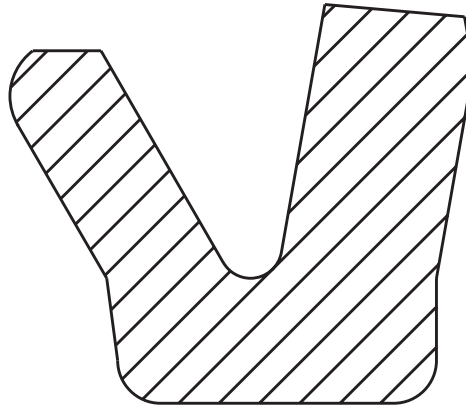
² DESIGN CONSIDERATIONS: Pressures to 2500 psi, surface finish 8-16 micro inches RMS and an 8600 Wiper can be used with an 8400 series U-packing or similar seal. See PPD-3870F for Polymyte Backup Rings. Consult Factory for tooling availability and groove dimensions not listed.

Rod and Piston Seals and Rod Wipers**E4 Series U-Ring**

E40801000

1 X 1-1/2 X 1/4

PARKER E4 PROFILE PISTON U-RINGS are specially designed for use in pneumatics applications. The lip design incorporates a rounded dynamic sealing lip for reduced friction and longer seal life. The rounded lip geometry is designed to operate with lubricated air, dry air, and air that is free from oil. When the new rounded lip design is combined with Parkers low friction materials, such as Nitroxile ELF (N4274A85 ELF) even lower frictional characteristics can be achieved.

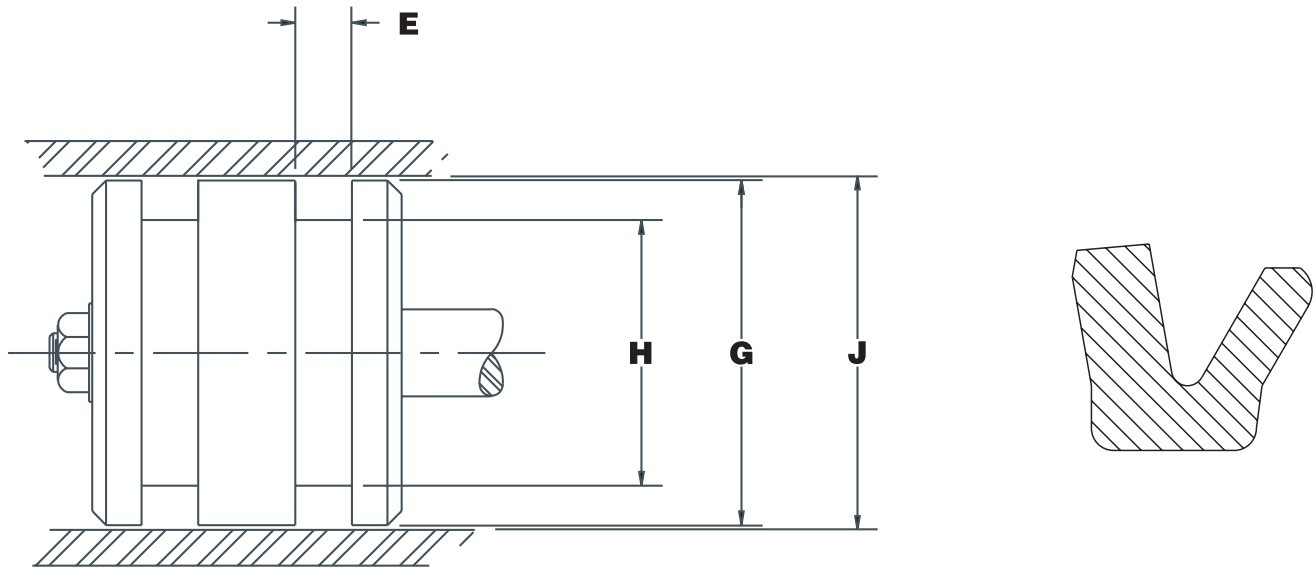
**E5 Series U-Ring**

E50801000

1 X 1-1/2 X 1/4

PARKER E5 PROFILE ROD U-RINGS are specially designed for use in pneumatics applications. The lip design incorporates a rounded dynamic sealing lip for reduced friction and longer seal life. The rounded lip geometry is designed to operate with lubricated air, dry air, and air that is free from oil. When the new rounded lip design is combined with Parkers low friction materials, such as Nitroxile ELF (N4274A85 ELF) even lower frictional characteristics can be achieved.

Rod and Piston Seals and Rod Wipers

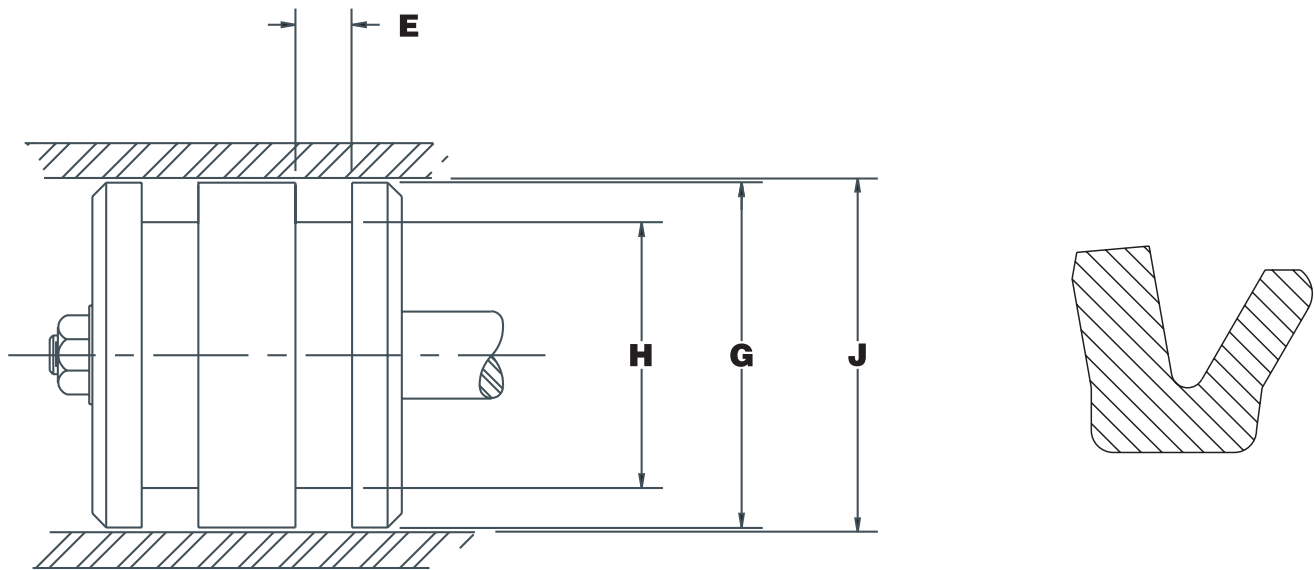


**TYPICAL PART NUMBER
4274E40401000**

PARKER PART NUMBER (1)	NOMINAL SEAL DIMENSION			"H"		"J"			"G"		"E"	"E"
				PISTON GROOVE		CYLINDER BORE			PISTON DIAMETER		GROOVE WIDTH W/O BACKUP	GROOVE WIDTH WITH BACKUP (2)
				TOLERANCE	TOLERANCE	TOLERANCE	TOLERANCE	TOLERANCE	TOLERANCE	TOLERANCE	TOLERANCE	TOLERANCE
W	I.D.	O.D.	DIM.	GROOVE	DIM.	CYL.	BORE	DIM.	TOL.	+ .010 / - .010	+ .010 / - .010	
E40300437	3/32	7/16	5/8	.437	+ .000 / - .001	.625	+ .003 / - .000	.623	+ .000 / - .001	.125	.188	
E40400375	1/8	3/8	5/8	.375	+ .000 / - .001	.625	+ .003 / - .000	.623	+ .000 / - .001	.156	.219	
E40400500	1/8	1/2	3/4	.500	+ .000 / - .001	.750	+ .003 / - .000	.748	+ .000 / - .001	.156	.219	
E40400625	1/8	5/8	7/8	.625	+ .000 / - .001	.875	+ .003 / - .000	.873	+ .000 / - .001	.156	.219	
E40400750	1/8	3/4	1	.750	+ .000 / - .001	1.000	+ .003 / - .000	.998	+ .000 / - .001	.156	.219	
E40400875	1/8	7/8	1-1/8	.875	+ .000 / - .001	1.125	+ .003 / - .000	1.123	+ .000 / - .001	.156	.219	
E40501187	5/32	1-3/16	1-1/2	1.188	+ .000 / - .001	1.500	+ .003 / - .000	1.498	+ .000 / - .001	.188	.250	
E40501312	5/32	1-5/16	1-5/8	1.312	+ .000 / - .001	1.625	+ .003 / - .000	1.313	+ .000 / - .001	.188	.250	
E40501500	5/32	1-1/2	1-13/16	1.500	+ .000 / - .001	1.812	+ .003 / - .000	1.810	+ .000 / - .001	.188	.250	
E40600687	3/16	11/16	1-1/16	.688	+ .000 / - .001	1.062	+ .003 / - .000	1.060	+ .000 / - .002	.219	.281	
E40601375	3/16	1-3/8	1-3/4	1.375	+ .000 / - .001	1.750	+ .003 / - .000	1.748	+ .000 / - .002	.219	.281	
E40601625	3/16	1-5/8	2	1.625	+ .000 / - .002	2.000	+ .003 / - .000	1.998	+ .000 / - .002	.219	.281	
E40601750	3/16	1-3/4	2-1/8	1.750	+ .000 / - .002	2.125	+ .003 / - .000	2.123	+ .000 / - .002	.219	.281	
E40602125	3/16	2-1/8	2-1/2	2.125	+ .000 / - .002	2.500	+ .004 / - .000	2.498	+ .000 / - .003	.219	.281	
E40602144	3/16	2.144	2.519	2.144	+ .000 / - .002	2.519	+ .004 / - .000	2.517	+ .000 / - .003	.219	.281	

- NOTES:** ¹ Rubber Compounds: 4274 ELF (Internally Lubed Nitroxile), 85 Durometer standard compound for E4 and E5 Series U-Packings. Other compounds available on request. Special tooling required for Fluorocarbon and other special compounds.
- ² DESIGN CONSIDERATIONS: Surface finish 8-16 micro inches RMS. See PPD 3870F for Polymyte Backup Rings. Consult Factory for tooling availability and groove dimensions not listed.

Rod and Piston Seals and Rod Wipers



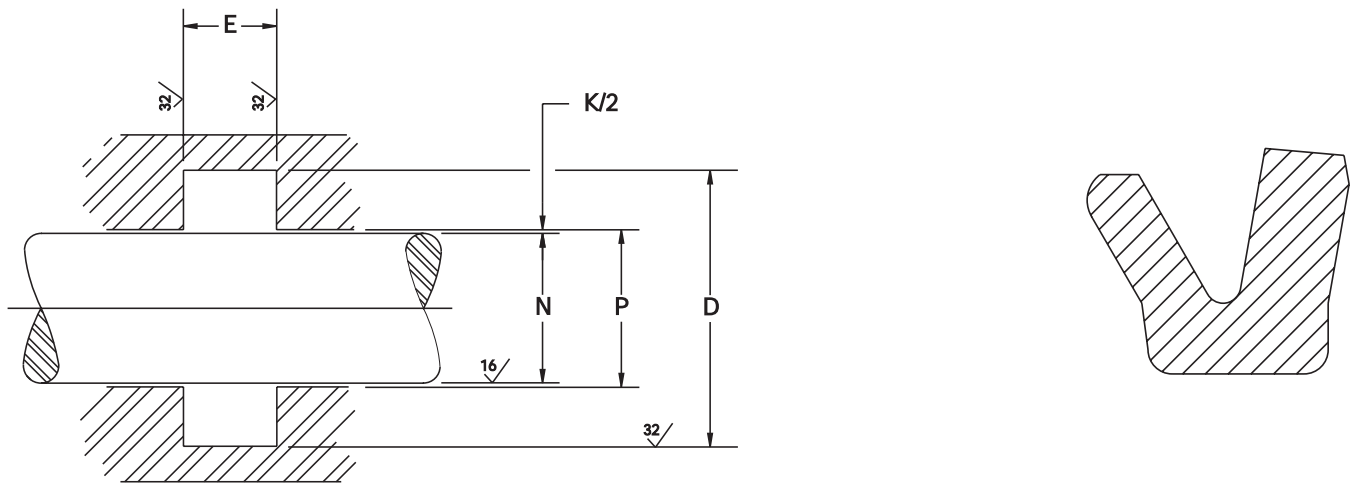
**TYPICAL PART NUMBER
4274E40401000**

PARKER PART NUMBER (1)	NOMINAL SEAL DIMENSION			"H"		"J"		"G"		"E"	
				PISTON GROOVE		CYLINDER BORE		PISTON DIAMETER		GROOVE WIDTH W/O BACKUP	GROOVE WIDTH WITH BACKUP (2)
				TOLERANCE DIM.	GROOVE	TOLERANCE DIM.	CYL. BORE	DIM.	TOL.	+ .010/- .010	+ .010/- .010
W	I.D.	O.D.	DIM.	GROOVE	DIM.	CYL. BORE	DIM.	TOL.	+ .010/- .010	+ .010/- .010	
E40702562	7/32	2-9/16	3	2.562	+ .000/- .003	3.000	+ .004/- .000	2.998	+ .000/- .003	.250	.312
E40702812	7/32	2-13/16	3-1/4	2.812	+ .000/- .003	3.250	+ .004/- .000	3.248	+ .000/- .003	.250	.312
E40801000	1/4	1	1-1/2	1.000	+ .000/- .003	1.500	+ .004/- .000	.998	+ .000/- .003	.281	.344
E40803500	1/4	3-1/2	4	3.500	+ .000/- .003	4.000	+ .004/- .000	3.998	+ .000/- .003	.281	.344
E40804500	1/4	4-1/2	5	4.500	+ .000/- .003	5.000	+ .004/- .000	4.997	+ .000/- .003	.281	.344
E40805500	1/4	5-1/2	6	5.500	+ .000/- .003	5.500	+ .004/- .000	5.997	+ .000/- .003	.281	.344
E40904437	9/32	4-7/16	5	4.437	+ .000/- .003	5.000	+ .004/- .000	4.997	+ .000/- .003	.312	.375
E41001375	5/16	1-3/8	2	1.375	+ .000/- .003	2.000	+ .004/- .000	1.998	+ .000/- .003	.344	.406
E41005375	5/16	5-3/8	6	5.375	+ .000/- .003	6.000	+ .004/- .000	5.997	+ .000/- .003	.344	.406
E41006375	5/16	6-3/8	7	6.375	+ .000/- .003	7.000	+ .004/- .000	6.997	+ .000/- .003	.344	.406
E41007375	5/16	7-3/8	8	7.375	+ .000/- .003	8.000	+ .005/- .000	7.997	+ .000/- .004	.344	.466
E41109312	11/32	9-5/16	10	9.312	+ .000/- .004	9.312	+ .005/- .000	9.997	+ .000/- .004	.375	.438

NOTES: ¹ Rubber Compounds: 4274 [ELF (Internally Lubed Nitroxile), 85 Durometer standard compound] for E4 and E5 Series U-Packings. Other compounds available on request. Special tooling required for Fluorocarbon and other special compounds.

² DESIGN CONSIDERATIONS: Surface finish 8-16 micro inches RMS. See PPD 3870F for Polymyte Backup Rings. Consult Factory for tooling availability and groove dimensions not listed.

Rod and Piston Seals and Rod Wipers

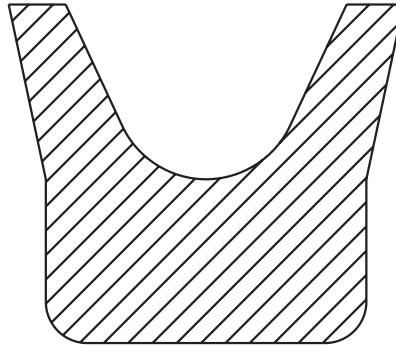


**TYPICAL PART NUMBER
4274E50401000**

PARKER PART NUMBER (1)	NOMINAL SEAL DIMENSION			"N"		"D"		"P"		"E"	"E"
				ROD DIAMETER		GLAND DIAMETER		THROAT DIAMETER		GROOVE WIDTH W/O BACKUP	GROOVE WIDTH WITH BACKUP (2)
				TOLERANCE DIM.	ROD	TOLERANCE DIM.	GLAND	TOLERANCE DIM.	TOL.	+ .010/- .010	+ .010/- .010
E50300187	3/32	3/16	3/8	.187	+ .000/- .001	.375	+ .002/- .000	.188	+ .002/- .000	.125	.188
E50400250	1/8	1/4	1/2	.250	+ .000/- .001	.500	+ .002/- .000	.251	+ .002/- .000	.156	.219
E50400375	1/8	3/8	5/8	.375	+ .000/- .001	.625	+ .002/- .000	.376	+ .002/- .000	.156	.219
E50400500	1/8	1/2	3/4	.500	+ .000/- .001	.750	+ .002/- .000	.501	+ .002/- .000	.156	.219
E50400625	1/8	5/8	7/8	.625	+ .000/- .001	.875	+ .002/- .000	.626	+ .002/- .000	.156	.219
E50400750	1/8	3/4	1	.750	+ .000/- .001	1.000	+ .002/- .000	.751	+ .002/- .000	.156	.219
E50400875	1/8	7/8	1-1/8	.875	+ .000/- .001	1.125	+ .002/- .000	.876	+ .002/- .000	.156	.219
E50401000	1/8	1	1-1/4	1.000	+ .000/- .001	1.250	+ .002/- .000	1.001	+ .002/- .000	.156	.219
E50401250	1/8	1-1/4	1-1/2	1.250	+ .000/- .001	1.500	+ .002/- .000	1.251	+ .002/- .000	.156	.219
E50501000	5/32	1	1-5/16	1.000	+ .000/- .001	1.312	+ .002/- .000	1.001	+ .002/- .000	.188	.250
E50501250	5/32	1-1/4	1-9/16	1.250	+ .000/- .001	1.562	+ .002/- .000	1.251	+ .002/- .000	.188	.250
E50501375	5/32	1-3/8	1-11/16	1.375	+ .000/- .001	1.688	+ .002/- .000	1.376	+ .002/- .000	.188	.250
E50601375	3/16	1-3/8	1-3/4	1.375	+ .000/- .001	1.750	+ .002/- .000	1.376	+ .002/- .000	.219	.281
E50601500	3/16	1-1/2	1-7/8	1.500	+ .000/- .001	1.875	+ .002/- .000	1.501	+ .002/- .000	.219	.281
E50601625	3/16	1-5/8	2	1.625	+ .000/- .002	2.000	+ .002/- .000	1.626	+ .002/- .000	.219	.281
E50601750	3/16	1-3/4	2-1/8	1.750	+ .000/- .002	2.125	+ .002/- .000	1.751	+ .002/- .000	.219	.281
E50602000	3/16	2	2-3/8	2.000	+ .000/- .002	2.375	+ .002/- .000	2.001	+ .002/- .000	.219	.281
E50702562	7/32	2-9/16	3	2.562	+ .000/- .002	3.000	+ .003/- .000	2.563	+ .002/- .000	.250	.312
E50800625	1/4	5/8	1-1/8	.625	+ .000/- .002	1.125	+ .003/- .000	.626	+ .002/- .000	.281	.344

NOTES: ¹ Rubber Compounds: 4274 ELF (Internally Lubed Nitroxile), 85 Durometer standard compound for E4 and E5 Series U-Packings. Other compounds available on request. Special tooling required for Fluorocarbon and other special compounds.

² DESIGN CONSIDERATIONS: Surface finish 8-16 micro inches RMS. See PPD 3870F for Polymyte Backup Rings. Consult Factory for tooling availability and groove dimensions not listed.

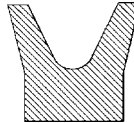
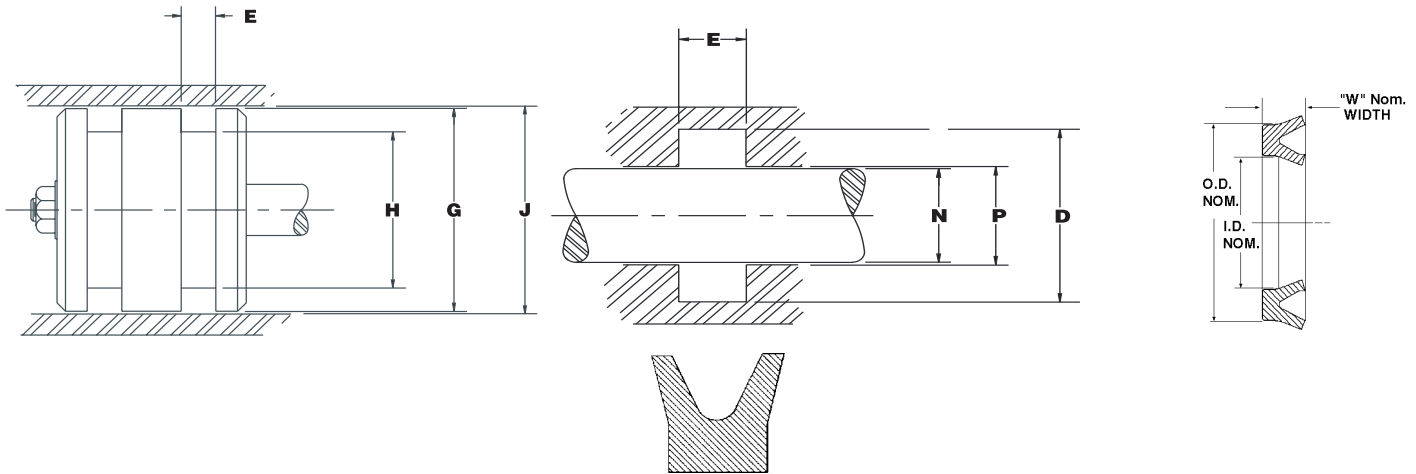
**6226 Series U-Rings**

000200200W001

1 X 1-1/2 X 1/4

PARKER AN6226 STYLE U-RINGS have a square format where the cross-section = height. Although widely used in industry for low friction pneumatics, these parts were originally designed for early aircraft and ordnance service. Many units still use this type U-Ring. The 6226 U-Ring is available in the most popular sizes and is made of a standard 70 shore "A" Nitrile material.

Rod and Piston Seals and Rod Wipers

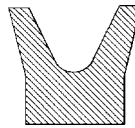
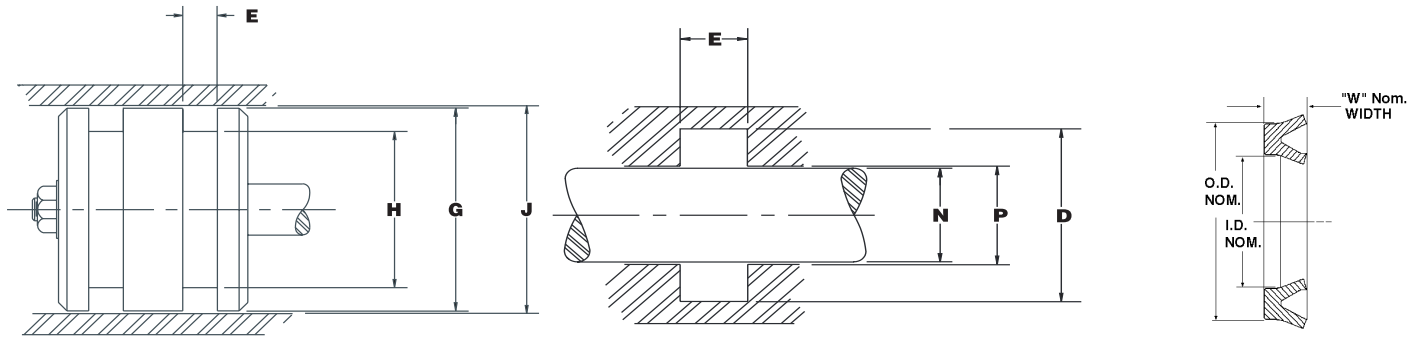


AN6226
TYPICAL PART NUMBER
6226-12

PARKER PART NUMBER	NOMINAL SEAL DIMENSION			PISTON GROOVE OR ROD DIAMETER TOLERANCE			CYLINDER BORE OR GLAND DIAMETER TOLERANCE			THROAT DIAMETER		PISTON DIAMETER		GROOVE WIDTH W/O BACKUP	GROOVE WIDTH WITH BACKUP (2)
	W	I.D.	O.D.	DIM. H	GROOVE N	ROD N	DIM. J	CYL. BORE D	GLAND D	DIM. P	TOL.	DIM. G	TOL.	+.010/-010 E	+.010/-010 E
6226-01	3/16	1/8	1/2	.125	+.000/-002	+.000/-001	.500	+.003/-000	+.002/-000	.126	+.002/-000	.498	+.000/-001	.218	.280
6226-02	3/16	3/16	9/16	.187	+.000/-002	+.000/-001	.562	+.003/-000	+.002/-000	.188	+.002/-000	.560	+.000/-001	.218	.280
6226-03	3/16	1/4	5/8	.250	+.000/-002	+.000/-001	.625	+.003/-000	+.002/-000	.251	+.002/-000	.623	+.000/-001	.218	.280
6226-04	3/16	5/16	11/16	.312	+.000/-002	+.000/-001	.687	+.003/-000	+.002/-000	.313	+.002/-000	.685	+.000/-001	.218	.280
6226-05	3/16	3/8	3/4	.375	+.000/-002	+.000/-001	.750	+.003/-000	+.002/-000	.376	+.002/-000	.748	+.000/-001	.218	.280
6226-06	3/16	7/16	13/16	.437	+.000/-002	+.000/-001	.812	+.003/-000	+.002/-000	.438	+.002/-000	.810	+.000/-001	.218	.280
6226-07	3/16	1/2	7/8	.500	+.000/-002	+.000/-001	.875	+.003/-000	+.002/-000	.501	+.002/-000	.873	+.000/-001	.218	.280
6226-08	1/4	1/4	3/4	.250	+.000/-003	+.000/-002	.750	+.003/-000	+.003/-000	.251	+.003/-000	.748	+.000/-001	.281	.343
6226-09	1/4	5/16	13/16	.312	+.000/-003	+.000/-002	.812	+.003/-000	+.003/-000	.313	+.003/-000	.810	+.000/-001	.281	.343
6226-10	1/4	3/8	7/8	.375	+.000/-003	+.000/-002	.875	+.003/-000	+.003/-000	.376	+.003/-000	.873	+.000/-001	.281	.343
6226-11	1/4	7/16	15/16	.437	+.000/-003	+.000/-002	.937	+.003/-000	+.003/-000	.438	+.003/-000	.935	+.000/-001	.281	.343
6226-12	1/4	1/2	1	.500	+.000/-003	+.000/-002	1.000	+.003/-000	+.003/-000	.501	+.003/-000	.998	+.000/-001	.281	.343
6226-13	1/4	9/16	1-1/16	.562	+.000/-003	+.000/-002	1.062	+.003/-000	+.003/-000	.563	+.003/-000	1.060	+.000/-001	.281	.343
6226-14	1/4	5/8	1-1/8	.625	+.000/-003	+.000/-002	1.125	+.003/-000	+.003/-000	.626	+.003/-000	1.123	+.000/-001	.281	.343
6226-15	1/4	11/16	1-3/16	.687	+.000/-003	+.000/-002	1.187	+.003/-000	+.003/-000	.688	+.003/-000	1.185	+.000/-001	.281	.343
6226-16	1/4	3/4	1-1/4	.750	+.000/-003	+.000/-002	1.250	+.003/-000	+.003/-000	.751	+.003/-000	1.248	+.000/-001	.281	.343
6226-17	1/4	13/16	1-5/16	.812	+.000/-003	+.000/-002	1.312	+.003/-000	+.003/-000	.813	+.003/-000	1.310	+.000/-001	.281	.343
6226-18	1/4	7/8	1-3/8	.875	+.000/-003	+.000/-002	1.375	+.003/-000	+.003/-000	.876	+.003/-000	1.373	+.000/-001	.281	.343
6226-19	1/4	15/16	1-7/16	.937	+.000/-003	+.000/-002	1.437	+.003/-000	+.003/-000	.938	+.003/-000	1.435	+.000/-001	.281	.343
6226-20	1/4	1	1-1/2	1.000	+.000/-003	+.000/-002	1.500	+.003/-000	+.003/-000	1.001	+.003/-000	1.498	+.000/-001	.281	.343

- NOTES:** 1 Rubber Compounds: Nitrile 70 Shore "A" Durometer standard compound.
Special tooling required for Fluorocarbon and other special compounds.
2 DESIGN CONSIDERATIONS: Pressures to 2500 psi, surface finish 8-16 micro inches RMS and an 8600 Wiper can be used. See PPD-3870F for Polymyte Backup Rings. Consult Factory for tooling availability and groove dimensions not listed.

Rod and Piston Seals and Rod Wipers

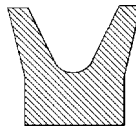
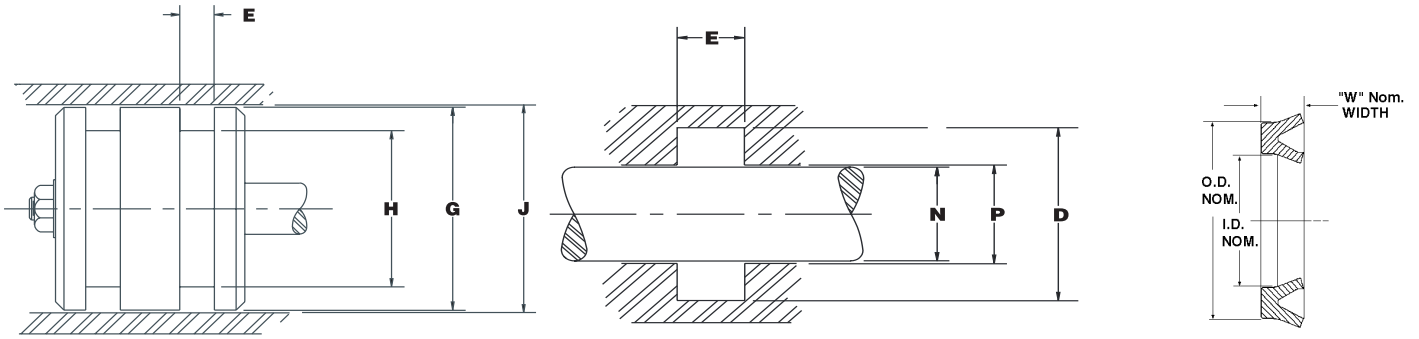


**AN6226
TYPICAL PART NUMBER
6226-12**

PARKER PART NUMBER	NOMINAL SEAL DIMENSION			PISTON GROOVE OR ROD DIAMETER TOLERANCE			CYLINDER BORE OR GLAND DIAMETER TOLERANCE			THROAT DIAMETER		PISTON DIAMETER		GROOVE WIDTH W/O BACKUP	GROOVE WIDTH WITH BACKUP (2)
	W	I.D.	O.D.	DIM.	GROOVE H	ROD N	DIM.	CYL. BORE J	GLAND D	DIM. P	TOL.	DIM. G	TOL.	+.010/-0.010 E	+.010/-0.010 E
6226-21	1/4	1-1/16	1-9/16	1.062	+0.00/-0.003	+0.000/-0.002	1.562	+0.003/-0.000	+0.003/-0.000	1.063	+0.003/-0.000	1.560	+0.000/-0.001	.281	.343
6226-22	1/4	1-1/8	1-5/8	1.125	+0.000/-0.003	+0.000/-0.002	1.625	+0.003/-0.000	+0.003/-0.000	1.126	+0.003/-0.000	1.623	+0.000/-0.001	.281	.343
6226-23	1/4	1-3/16	1-11/16	1.187	+0.000/-0.003	+0.000/-0.002	1.687	+0.003/-0.000	+0.003/-0.000	1.188	+0.003/-0.000	1.685	+0.000/-0.001	.281	.343
6226-24	1/4	1-1/4	1-3/4	1.250	+0.000/-0.003	+0.000/-0.002	1.750	+0.003/-0.000	+0.003/-0.000	1.251	+0.003/-0.000	1.748	+0.000/-0.001	.281	.343
6226-25	5/16	1-1/4	1-7/8	1.250	+0.000/-0.004	+0.000/-0.001	1.875	+0.003/-0.000	+0.004/-0.000	1.252	+0.003/-0.000	1.873	+0.000/-0.002	.344	.406
6226-26	5/16	1-3/8	2	1.375	+0.000/-0.004	+0.000/-0.002	2.000	+0.003/-0.000	+0.004/-0.000	1.377	+0.003/-0.000	1.998	+0.000/-0.002	.344	.406
6226-27	5/16	1-1/2	2-1/8	1.500	+0.000/-0.004	+0.000/-0.002	2.125	+0.003/-0.000	+0.004/-0.000	1.502	+0.003/-0.000	2.123	+0.000/-0.002	.344	.406
6226-28	5/16	1-5/8	2-1/4	1.625	+0.000/-0.004	+0.000/-0.002	2.250	+0.003/-0.000	+0.004/-0.000	1.627	+0.003/-0.000	2.248	+0.000/-0.002	.344	.406
6226-29	5/16	1-3/4	2-3/8	1.750	+0.000/-0.004	+0.000/-0.002	2.375	+0.003/-0.000	+0.004/-0.000	1.752	+0.003/-0.000	2.373	+0.000/-0.002	.344	.406
6226-30	5/16	1-7/8	2-1/2	1.875	+0.000/-0.004	+0.000/-0.002	2.500	+0.003/-0.000	+0.004/-0.000	1.877	+0.003/-0.000	2.498	+0.000/-0.002	.344	.406
6226-31	5/16	2	2-5/8	2.000	+0.000/-0.004	+0.000/-0.002	2.625	+0.003/-0.000	+0.004/-0.000	2.002	+0.003/-0.000	2.623	+0.000/-0.002	.344	.406
6226-32	5/16	2-1/8	2-3/4	2.125	+0.000/-0.004	+0.000/-0.002	2.750	+0.003/-0.000	+0.004/-0.000	2.127	+0.003/-0.000	2.748	+0.000/-0.002	.344	.406
6226-33	5/16	2-1/4	2-7/8	2.250	+0.000/-0.004	+0.000/-0.002	2.875	+0.003/-0.000	+0.004/-0.000	2.252	+0.003/-0.000	2.873	+0.000/-0.002	.344	.406
6226-34	5/16	2-3/8	3	2.375	+0.000/-0.004	+0.000/-0.002	3.000	+0.003/-0.000	+0.004/-0.000	2.377	+0.003/-0.000	2.998	+0.000/-0.002	.344	.406
6226-35	5/16	2-1/2	3-1/8	2.500	+0.000/-0.004	+0.000/-0.002	3.125	+0.003/-0.000	+0.004/-0.000	2.502	+0.003/-0.000	3.123	+0.000/-0.002	.344	.406
6226-36	3/8	2-1/2	3-1/4	2.500	+0.000/-0.005	+0.000/-0.002	3.250	+0.004/-0.000	+0.005/-0.000	2.502	+0.004/-0.000	3.248	+0.000/-0.002	.406	.468
6226-37	3/8	2-5/8	3-3/8	2.625	+0.000/-0.005	+0.000/-0.002	3.375	+0.004/-0.000	+0.005/-0.000	2.627	+0.004/-0.000	3.373	+0.000/-0.002	.406	.468
6226-38	3/8	2-3/4	3-1/2	2.750	+0.000/-0.005	+0.000/-0.002	3.500	+0.004/-0.000	+0.005/-0.000	2.752	+0.004/-0.000	3.498	+0.000/-0.002	.406	.468
6226-39	3/8	2-7/8	3-5/8	2.875	+0.000/-0.005	+0.000/-0.002	3.625	+0.004/-0.000	+0.005/-0.000	2.877	+0.004/-0.000	3.623	+0.000/-0.002	.406	.468
6226-40	3/8	3	3-3/4	3.000	+0.000/-0.005	+0.000/-0.002	3.750	+0.004/-0.000	+0.005/-0.000	3.002	+0.004/-0.000	3.748	+0.000/-0.002	.406	.468

- NOTES:** ¹ Rubber Compounds: Nitrile 70 Shore "A" Durometer standard compound.
Special tooling required for Fluorocarbon and other special compounds.
² DESIGN CONSIDERATIONS: Pressures to 2500 psi, surface finish 8-16 micro inches RMS and an 8600 Wiper can be used. See PPD-3870F for Polymyte Backup Rings. Consult Factory for tooling availability and groove dimensions not listed.

Rod and Piston Seals and Rod Wipers



AN6226
TYPICAL PART NUMBER
6226-12

PARKER PART NUMBER	NOMINAL SEAL DIMENSION			PISTON GROOVE OR ROD DIAMETER TOLERANCE			CYLINDER BORE OR GLAND DIAMETER TOLERANCE			THROAT DIAMETER		PISTON DIAMETER		GROOVE WIDTH W/O BACKUP	GROOVE WIDTH WITH BACKUP (2)
	W	I.D.	O.D.	DIM.	GROOVE H	ROD N	DIM.	CYL. BORE J	GLAND D	DIM. P	TOL.	DIM. G	TOL.	+0.01/-0.01 E	+0.01/-0.01 E
6226-41	1/8	1/8	3/8	.125	+0.00/-0.001	+0.00/-0.001	.375	+0.003/-0.000	+0.002/-0.000	.126	+0.002/-0.000	.373	+0.000/-0.001	.156	.218
6226-42	1/8	3/16	7/16	.187	+0.000/-0.001	+0.000/-0.001	.437	+0.003/-0.000	+0.002/-0.000	.188	+0.002/-0.000	.435	+0.000/-0.001	.156	.218
6226-43	1/8	1/4	1/2	.250	+0.000/-0.001	+0.000/-0.001	.500	+0.003/-0.000	+0.002/-0.000	.251	+0.002/-0.000	.498	+0.000/-0.001	.156	.218
6226-44	1/8	5/16	9/16	.312	+0.000/-0.001	+0.000/-0.001	.562	+0.003/-0.000	+0.002/-0.000	.313	+0.002/-0.000	.560	+0.000/-0.001	.156	.218
6226-45	1/8	3/8	5/8	.375	+0.000/-0.001	+0.000/-0.001	.625	+0.003/-0.000	+0.002/-0.000	.376	+0.002/-0.000	.623	+0.000/-0.001	.156	.218
6226-46	1/8	7/16	11/16	.437	+0.000/-0.001	+0.000/-0.001	.687	+0.003/-0.000	+0.002/-0.000	.438	+0.002/-0.000	.685	+0.000/-0.001	.156	.218
6226-47	1/8	1/2	3/4	.500	+0.000/-0.001	+0.000/-0.001	.750	+0.003/-0.000	+0.002/-0.000	.501	+0.002/-0.000	.748	+0.000/-0.001	.156	.218
6226-48	3/16	5/8	1	.625	+0.000/-0.001	+0.000/-0.002	1.000	+0.003/-0.000	+0.002/-0.000	.626	+0.002/-0.000	.998	+0.000/-0.001	.218	.280
6226-49	3/16	3/4	1-1/8	.750	+0.000/-0.001	+0.000/-0.002	1.125	+0.003/-0.000	+0.002/-0.000	.751	+0.002/-0.000	1.123	+0.000/-0.001	.218	.280
6226-50	3/16	7/8	1-1/4	.875	+0.000/-0.001	+0.000/-0.002	1.250	+0.003/-0.000	+0.002/-0.000	.876	+0.002/-0.000	1.248	+0.000/-0.001	.218	.280
6226-51	3/16	1	1-3/8	1.000	+0.000/-0.002	+0.000/-0.001	1.375	+0.004/-0.000	+0.002/-0.000	1.001	+0.002/-0.000	1.374	+0.000/-0.002	.218	.280
6226-52	3/16	1-1/8	1-1/2	1.125	+0.000/-0.002	+0.000/-0.001	1.500	+0.004/-0.000	+0.002/-0.000	1.126	+0.002/-0.000	1.449	+0.000/-0.002	.218	.280
6226-53	3/16	1-1/4	1-5/8	1.250	+0.000/-0.002	+0.000/-0.001	1.625	+0.004/-0.000	+0.002/-0.000	1.251	+0.002/-0.000	1.624	+0.000/-0.002	.218	.280

NOTES: ¹ Rubber Compounds: Nitrile 70 Shore "A" Durometer standard compound.
Special tooling required for Fluorocarbon and other special compounds.
² DESIGN CONSIDERATIONS: Pressures to 2500 psi, surface finish 8-16 micro inches RMS and an 8600 Wiper can be used. See PPD-3870F for Polymyte Backup Rings. Consult Factory for tooling availability and groove dimensions not listed.

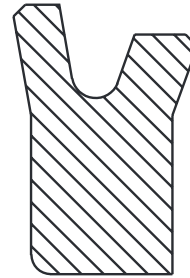
Design Charts for Piston-Seal Applications

Low Pressure to 5000 PSI

U-Packing seals are available in more than one cross-section per seal diameter. The larger the cross-section the longer the life and reliability of the seal, and the less critical the equipment design considerations, such as tolerance, and clearances. Always select the largest cross-section compatible with installation and equipment design limitations. Friction normally increases with cross-section and installation becomes increasingly difficult.

NOTE: Not all U-Packing sizes listed are tooled in all materials.

Consult the 3701 price list or contact Parker Customer Service (801) 972-3000 for exact part availability.



UP Series U-Ring

UP25001000-375
1 X 1-1/2 X 1/4 X 3/8

PARKER UP SERIES U-RINGS are non-symmetrical piston seals, and are designed to solve specific heavy duty hydraulic sealing problems. The back-beveled lip faces the bore where it will provide enhanced low-pressure sealing and wiping action on the bore surface. The non-symmetrical extended lip is used as a stabilizing element on the static sealing surface. The UP U-Ring is designed to be interchangeable with many styles and sizes of other PARKER PACKING piston seals, permitting direct substitution in the same grooves if problems arise.

The back-beveled lips do not provide sealing in the reverse directions. These seals should be used only for unidirectional applications.



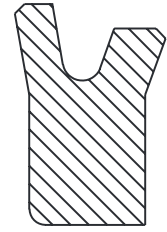
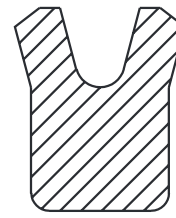
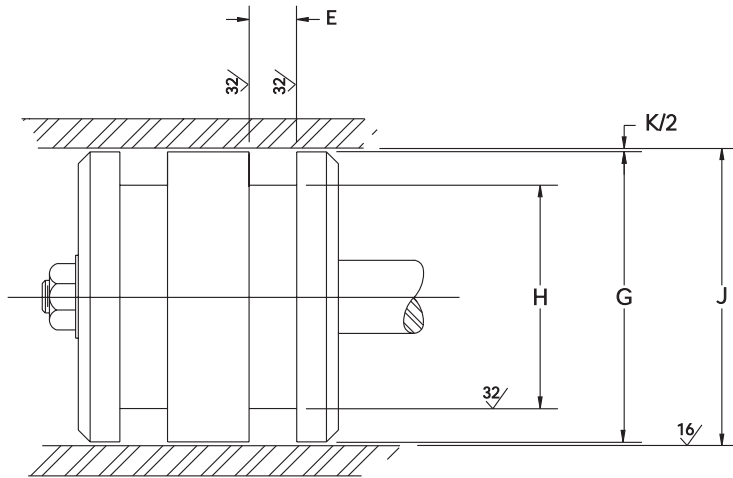
US Series U-Ring

US25001000
1 X 1-1/2 X 1/4

PARKER "US" SERIES U-RINGS are of symmetrical back-beveled lip design. "US" U-Ring seals are designed to solve specific heavy duty hydraulic sealing problems. The symmetrical design allows for interchangeability between rod and piston applications. Parker "US" U-Rings are dimensioned to be interchangeable with many styles and sizes of other Parker products such as PolyPak Seals and non-symmetrical U-Rings. This permits direct substitution in the same grooves when unexpected problems arise.

While the back-beveled lips do provide some sealing in the reverse direction, these seals should be used only for unidirectional applications.

Rod and Piston Seals and Rod Wipers



US U-CUP

UP U-CUP

TYPICAL PART NUMBERS

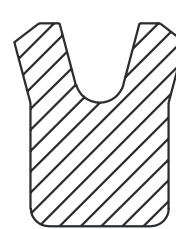
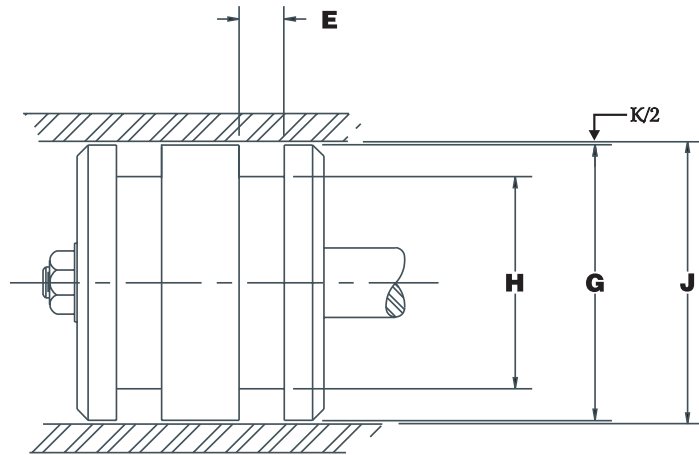
4611US25002000-375 -- 4611UP25002000-375

Parker Part Number (1)	Nominal Seal Dimension				Cylinder Bore Diameter (Inches)			Piston Outside Diameter (Inches)		Groove (Piston) Diameter (Inches)		Groove Depth (Inches) ±.015	Dia-metral Clearance (Range) K
					Nominal	Dim. J	Tol.	Dim. G.	Tol.	Dim. H	Tol.		
	I.D.	O.D.	C/S	DEPTH									
12500250-250	1/4	1/2	1/8	1/4	1/2	0.500	+0.002/-0.000	0.499	+0.000/-0.001	0.250	+0.000/-0.002	0.275	.001-.004
12500312-250	5/16	9/16	1/8	1/4	9/16	0.562	+0.002/-0.000	0.561	+0.000/-0.001	0.312	+0.000/-0.002	0.275	.001-.004
12500375-250	3/8	5/8	1/8	1/4	5/8	0.625	+0.002/-0.000	0.624	+0.000/-0.001	0.375	+0.000/-0.002	0.275	.001-.004
18700250-312	1/4	5/8	3/16	5/16	5/8	0.625	+0.002/-0.000	0.624	+0.000/-0.002	0.250	+0.000/-0.002	0.344	.001-.005
12500437-187	7/16	11/16	1/8	3/16	11/16	0.687	+0.002/-0.000	0.686	+0.000/-0.001	0.437	+0.000/-0.002	0.206	.001-.004
12500500-250	1/2	3/4	1/8	1/4	3/4	0.750	+0.002/-0.000	0.749	+0.000/-0.001	0.500	+0.000/-0.002	0.275	.001-.004
18700375-312	3/8	3/4	3/16	5/16	3/4	0.750	+0.002/-0.000	0.749	+0.000/-0.002	0.375	+0.000/-0.002	0.344	.001-.005
25000250-312	1/4	3/4	1/4	5/16	3/4	0.750	+0.003/-0.000	0.749	+0.000/-0.002	0.250	+0.000/-0.003	0.344	.001-.006
25000312-375	5/16	13/16	1/4	3/8	13/16	0.812	+0.003/-0.000	0.811	+0.000/-0.002	0.312	+0.000/-0.003	0.413	.001-.006
12500625-250	5/8	7/8	1/8	1/4	7/8	0.875	+0.002/-0.000	0.874	+0.000/-0.001	0.625	+0.000/-0.002	0.275	.001-.004
18700500-312	1/2	7/8	3/16	5/16	7/8	0.875	+0.002/-0.000	0.874	+0.000/-0.002	0.500	+0.000/-0.002	0.344	.001-.005
25000375-312	3/8	7/8	1/4	5/16	7/8	0.875	+0.003/-0.000	0.874	+0.000/-0.002	0.375	+0.000/-0.003	0.344	.001-.006
18700562-250	9/16	15/16	3/16	1/4	15/16	0.937	+0.002/-0.000	0.936	+0.000/-0.002	0.562	+0.000/-0.002	0.275	.001-.005
12500750-187	3/4	1	1/8	3/16	1	1.000	+0.002/-0.000	0.999	+0.000/-0.001	0.750	+0.000/-0.002	0.206	.001-.004
18700625-312	5/8	1	3/16	5/16	1	1.000	+0.002/-0.000	0.999	+0.000/-0.002	0.625	+0.000/-0.002	0.344	.001-.005
25000500-250	1/2	1	1/4	1/4	1	1.000	+0.003/-0.000	0.999	+0.000/-0.002	0.500	+0.000/-0.003	0.275	.001-.006
12500812-250	13/16	1-1/16	1/8	1/4	1-1/16	1.062	+0.002/-0.000	1.061	+0.000/-0.001	0.812	+0.000/-0.002	0.275	.001-.004
25000562-250	9/16	1-1/16	1/4	1/4	1-1/16	1.062	+0.003/-0.000	1.061	+0.000/-0.002	0.562	+0.000/-0.003	0.275	.001-.006
12500875-250	7/8	1-1/8	1/8	1/4	1-1/8	1.125	+0.002/-0.000	1.124	+0.000/-0.001	0.875	+0.000/-0.002	0.275	.001-.004
18700750-312	3/4	1-1/8	3/16	5/16	1-1/8	1.125	+0.002/-0.000	1.124	+0.000/-0.002	0.750	+0.000/-0.002	0.344	.001-.005

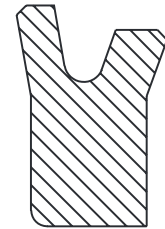
NOTE: Not all U-Packing sizes listed are tooled in all compounds.

Consult the PPD3701 Price List or contact Parker Packing Customer Service at (801) 972-3000 for compound availability and additional sizes.

Rod and Piston Seals and Rod Wipers



US U-CUP



UP U-CUP

TYPICAL PART NUMBERS

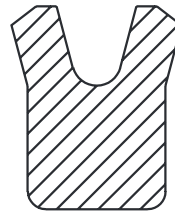
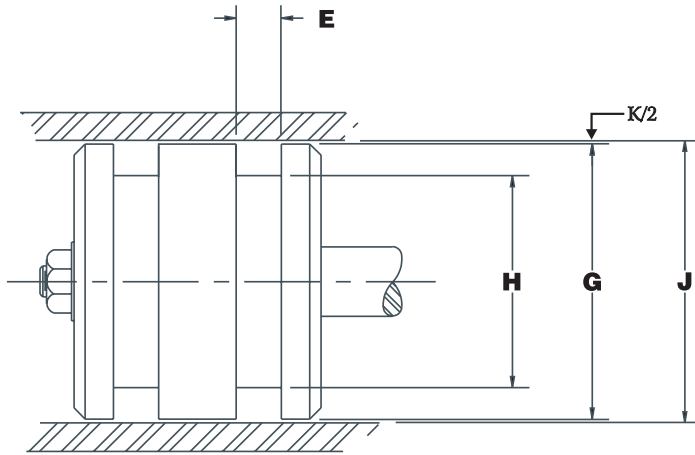
4611US25002000-375 -- 4611UP25002000-375

Parker Part Number (1)	Nominal Seal Dimension				Cylinder Bore Diameter (Inches)			Piston Outside Diameter (Inches)		Groove (Piston) Diameter (Inches)		Groove Depth (Inches) ±.015 E	Dia-metral Clearance (Range) K
					Nominal	Dim. J	Tol.	Dim. G	Tol.	Dim. H	Tol.		
	I.D.	O.D.	C/S	DEPTH									
25000625-375	5/8	1-1/8	1/4	3/8	1-1/8	1.125	+.003/-0.000	1.124	+.000/-0.002	0.625	+.000/-0.003	0.413	.001-.006
18700812-312	13/16	1-3/16	3/16	5/16	1-3/16	1.187	+.002/-0.000	1.186	+.000/-0.002	0.812	+.000/-0.002	0.344	.001-.005
12501000-250	1	1-1/4	1/8	1/4	1-1/4	1.250	+.002/-0.000	1.249	+.000/-0.001	1.000	+.000/-0.002	0.275	.001-.004
18700875-312	7/8	1-1/4	3/16	5/16	1-1/4	1.250	+.002/-0.000	1.249	+.000/-0.002	0.875	+.000/-0.002	0.344	.001-.005
25000750-375	3/4	1-1/4	1/4	3/8	1-1/4	1.250	+.003/-0.000	1.249	+.000/-0.002	0.750	+.000/-0.003	0.413	.001-.006
12501125-187	1-1/8	1-3/8	1/8	3/16	1-3/8	1.375	+.002/-0.000	1.374	+.000/-0.001	1.125	+.000/-0.002	0.206	.001-.004
18701000-312	1	1-3/8	3/16	5/16	1-3/8	1.375	+.002/-0.000	1.374	+.000/-0.002	1.000	+.000/-0.002	0.344	.001-.005
25000875-250	7/8	1-3/8	1/4	1/4	1-3/8	1.375	+.003/-0.000	1.374	+.000/-0.002	0.875	+.000/-0.003	0.275	.001-.006
25000937-250	15/16	1-7/16	1/4	1/4	1-7/16	1.437	+.003/-0.000	1.436	+.000/-0.002	0.937	+.000/-0.003	0.275	.001-.006
12501250-250	1-1/4	1-1/2	1/8	1/4	1-1/2	1.500	+.002/-0.000	1.499	+.000/-0.001	1.250	+.000/-0.002	0.275	.001-.004
18701125-250	1-1/8	1-1/2	3/16	1/4	1-1/2	1.500	+.002/-0.000	1.499	+.000/-0.002	1.125	+.000/-0.002	0.275	.001-.005
25001000-375	1	1-1/2	1/4	3/8	1-1/2	1.500	+.003/-0.000	1.499	+.000/-0.002	1.000	+.000/-0.003	0.413	.001-.006
12501375-187	1-3/8	1-5/8	1/8	3/16	1-5/8	1.625	+.002/-0.000	1.624	+.000/-0.001	1.375	+.000/-0.002	0.206	.001-.004
18701250-312	1-1/4	1-5/8	3/16	5/16	1-5/8	1.625	+.002/-0.000	1.624	+.000/-0.002	1.250	+.000/-0.002	0.344	.001-.005
25001125-250	1-1/8	1-5/8	1/4	1/4	1-5/8	1.625	+.003/-0.000	1.624	+.000/-0.002	1.125	+.000/-0.003	0.275	.001-.006
18701312-312	1-5/16	1-11/16	3/16	5/16	1-11/16	1.687	+.002/-0.000	1.686	+.000/-0.001	1.312	+.000/-0.002	0.344	.001-.005
25001187-250	1-3/16	1-11/16	1/4	1/4	1-11/16	1.687	+.003/-0.000	1.686	+.000/-0.002	1.187	+.000/-0.003	0.275	.001-.006
12501500-250	1-1/2	1-3/4	1/8	1/4	1-3/4	1.750	+.002/-0.000	1.749	+.000/-0.001	1.500	+.000/-0.002	0.275	.001-.004
18701375-312	1-3/8	1-3/4	3/16	5/16	1-3/4	1.750	+.002/-0.000	1.749	+.000/-0.002	1.375	+.000/-0.002	0.344	.001-.005
25001250-375	1-1/4	1-3/4	1/4	3/8	1-3/4	1.750	+.003/-0.000	1.749	+.000/-0.002	1.250	+.000/-0.003	0.413	.001-.006

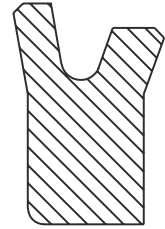
NOTE: Not all U-Packing sizes listed are tooled in all compounds.

Consult the PPD3701 Price List or contact Parker Packing Customer Service at (801) 972-3000 for compound availability and additional sizes.

Rod and Piston Seals and Rod Wipers



US U-CUP



UP U-CUP

TYPICAL PART NUMBERS

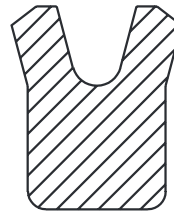
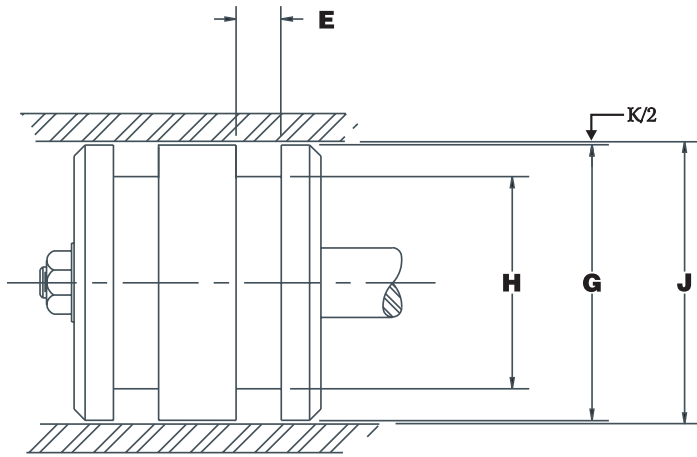
4611US25002000-375 -- 4611UP25002000-375

Parker Part Number (1)	Nominal Seal Dimension				Cylinder Bore Diameter (Inches)			Piston Outside Diameter (Inches)		Groove (Piston) Diameter (Inches)		Groove Depth (Inches)	Dia-metral Clearance (Range)
	I.D.	O.D.	C/S	DEPTH	Nominal	Dim. J	Tol.	Dim. G.	Tol.	Dim. H	Tol.	±.015 E	
18701500-375	1-1/2	1-7/8	3/16	3/8	1-7/8	1.875	+.002/-.000	1.874	+.000/-.002	1.500	+.000/-.002	0.413	.001-.005
25001375-375	1-3/8	1-7/8	1/4	3/8	1-7/8	1.875	+.003/-.000	1.874	+.000/-.002	1.375	+.000/-.003	0.413	.001-.006
31201250-375	1-1/4	1-7/8	5/16	3/8	1-7/8	1.875	+.003/-.000	1.873	+.000/-.002	1.250	+.000/-.004	0.413	.002-.007
18701325-375	1-5/8	2	3/16	3/8	2	2.000	+.002/-.000	1.999	+.000/-.002	1.625	+.000/-.002	0.413	.001-.005
25001500-375	1-1/2	2	1/4	3/8	2	2.000	+.003/-.000	1.999	+.000/-.002	1.500	+.000/-.003	0.413	.001-.006
31201375-500	1-3/8	2	5/16	1/2	2	2.000	+.003/-.000	1.998	+.000/-.002	1.375	+.000/-.004	0.550	.002-.007
18701750-375	1-3/4	2-1/8	3/16	3/8	2-1/8	2.125	+.002/-.000	2.124	+.000/-.002	1.750	+.000/-.002	0.413	.001-.005
31201500-312	1-1/2	2-1/8	5/16	5/16	2-1/8	2.125	+.003/-.000	2.123	+.000/-.002	1.500	+.000/-.004	0.344	.002-.007
18701875-280	1-7/8	2-1/4	3/16	0.280	2-1/4	2.250	+.002/-.000	2.249	+.000/-.002	1.875	+.000/-.002	0.308	.001-.005
25001750-375	1-3/4	2-1/4	1/4	3/8	2-1/4	2.250	+.003/-.000	2.249	+.000/-.002	1.750	+.000/-.003	0.413	.001-.006
18702000-375	2	2-3/8	3/16	3/8	2-3/8	2.375	+.002/-.000	2.374	+.000/-.002	2.000	+.000/-.002	0.413	.001-.005
31201750-312	1-3/4	2-3/8	5/16	5/16	2-3/8	2.375	+.003/-.000	2.373	+.000/-.002	1.750	+.000/-.004	0.344	.002-.007
18702125-375	2-1/8	2-1/2	3/16	3/8	2-1/2	2.500	+.002/-.000	2.499	+.000/-.002	2.125	+.000/-.002	0.413	.001-.005
25002000-375	2	2-1/2	1/4	3/8	2-1/2	2.500	+.003/-.000	2.499	+.000/-.002	2.000	+.000/-.003	0.413	.001-.006
31201875-500	1-7/8	2-1/2	5/16	1/2	2-1/2	2.500	+.003/-.000	2.498	+.000/-.002	1.875	+.000/-.004	0.550	.002-.007
37501750-625	1-3/4	2-1/2	3/8	5/8	2-1/2	2.500	+.004/-.000	2.498	+.000/-.002	1.750	+.000/-.005	0.688	.002-.008
18702250-312	2-1/4	2-5/8	3/16	5/16	2-5/8	2.625	+.002/-.000	2.624	+.000/-.002	2.250	+.000/-.002	0.344	.001-.005
25002125-375	2-1/8	2-5/8	1/4	3/8	2-5/8	2.625	+.003/-.000	2.624	+.000/-.002	2.125	+.000/-.003	0.413	.001-.006
31202000-375	2	2-5/8	5/16	3/8	2-5/8	2.625	+.003/-.000	2.623	+.000/-.002	2.000	+.000/-.004	0.413	.002-.007
25002250-375	2-1/4	2-3/4	1/4	3/8	2-3/4	2.750	+.003/-.000	2.749	+.000/-.002	2.250	+.000/-.003	0.413	.001-.006

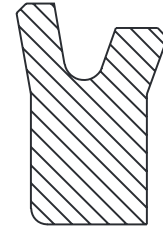
NOTE: Not all U-Packing sizes listed are tooled in all compounds.

Consult the PPD3701 Price List or contact Parker Packing Customer Service at (801) 972-3000 for compound availability and additional sizes.

Rod and Piston Seals and Rod Wipers



US U-CUP



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TYPICAL PART NUMBERS

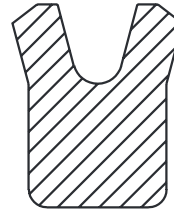
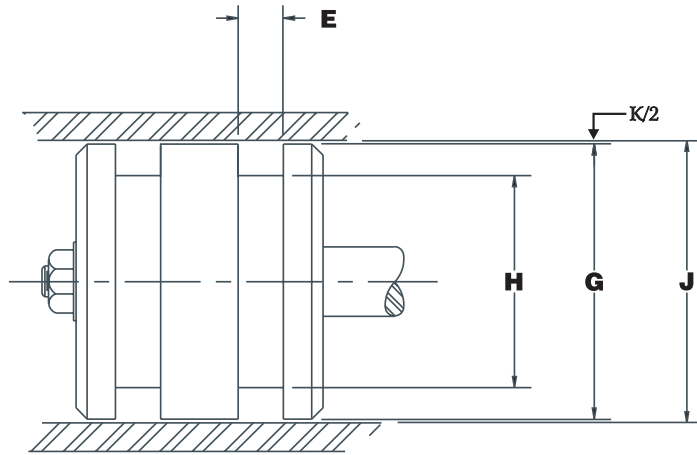
4611US25002000-375 -- 4611UP25002000-375

Parker Part Number (1)	Nominal Seal Dimension				Cylinder Bore Diameter (Inches)			Piston Outside Diameter (Inches)		Groove (Piston) Diameter (Inches)		Groove Depth (Inches) ±.015 E	Dia-metral Clearance (Range) K
					Nominal	Dim.	Tol.	Dim.	Tol.	Dim.	Tol.		
	I.D.	O.D.	C/S	DEPTH		J		G.		H			
18700250-375	2 1/2	2 7/8	3/16	3/8	2 7/8	2.875	+.002/-0.000	2.874	+.000/-0.002	2.500	+.000/-0.002	0.413	.001-.005
25002375-375	2 3/8	2 7/8	1/4	3/8	2 7/8	2.875	+.003/-0.000	2.874	+.000/-0.002	2.375	+.000/-0.003	0.413	.001-.006
31202250-500	2 1/4	2 7/8	5/16	1/2	2 7/8	2.875	+.003/-0.000	2.873	+.000/-0.002	2.250	+.000/-0.004	0.550	.002-.007
18702625-375	2 5/8	3	3/16	3/8	3	3.000	+.002/-0.000	2.999	+.000/-0.002	2.625	+.000/-0.002	0.413	.001-.005
25002500-375	2 1/2	3	1/4	3/8	3	3.000	+.003/-0.000	2.999	+.000/-0.002	2.500	+.000/-0.003	0.413	.001-.006
31202375-500	2 3/8	3	5/16	1/2	3	3.000	+.003/-0.000	2.998	+.000/-0.002	2.375	+.000/-0.004	0.550	.002-.007
37502250-625	2 1/4	3	3/8	5/8	3	3.000	+.004/-0.000	2.998	+.000/-0.002	2.250	+.000/-0.005	0.688	.002-.008
31202500-375	2 1/2	3 1/8	5/16	3/8	3 1/8	3.125	+.003/-0.000	3.123	+.000/-0.002	2.500	+.000/-0.004	0.413	.002-.007
18702875-375	2 7/8	3 1/4	3/16	3/8	3 1/4	3.250	+.002/-0.000	3.249	+.000/-0.002	2.875	+.000/-0.002	0.413	.001-.005
25002750-375	2 3/4	3 1/4	1/4	3/8	3 1/4	3.250	+.003/-0.000	3.249	+.000/-0.002	2.750	+.000/-0.003	0.413	.001-.006
31202625-500	2 5/8	3 1/4	5/16	1/2	3 1/4	3.250	+.003/-0.000	3.248	+.000/-0.002	2.625	+.000/-0.004	0.550	.002-.007
37502500-500	2 1/2	3 1/4	3/8	1/2	3 1/4	3.250	+.004/-0.000	3.248	+.000/-0.002	2.500	+.000/-0.005	0.550	.002-.008
18703000-375	3	3 3/8	3/16	3/8	3 3/8	3.375	+.002/-0.000	3.374	+.000/-0.002	3.000	+.000/-0.002	0.413	.001-.005
18703125-375	3 1/8	3 1/2	3/16	3/8	3 1/2	3.500	+.002/-0.000	3.499	+.000/-0.002	3.125	+.000/-0.002	0.413	.001-.005
25003000-375	3	3 1/2	1/4	3/8	3 1/2	3.500	+.003/-0.000	3.499	+.000/-0.002	3.000	+.000/-0.003	0.413	.001-.006
31202875-500	2 7/8	3 1/2	5/16	1/2	3 1/2	3.500	+.003/-0.000	3.498	+.000/-0.002	2.875	+.000/-0.004	0.550	.002-.007
37502750-625	2 3/7	3 1/2	3/8	5/8	3 1/2	3.500	+.004/-0.000	3.498	+.000/-0.002	2.750	+.000/-0.005	0.688	.002-.008
25003250-375	3 1/4	3 3/4	1/4	3/8	3 3/4	3.750	+.003/-0.000	3.749	+.000/-0.002	3.250	+.000/-0.003	0.413	.001-.006
31203125-500	3 1/8	3 3/4	5/16	1/2	3 3/4	3.750	+.003/-0.000	3.748	+.000/-0.002	3.125	+.000/-0.004	0.550	.002-.007
37503000-625	3	3 3/4	3/8	5/8	3 3/4	3.750	+.004/-0.000	3.748	+.000/-0.002	3.000	+.000/-0.004	0.688	.002-.008

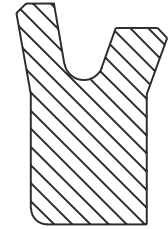
NOTE: Not all U-Packing sizes listed are tooled in all compounds.

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Rod and Piston Seals and Rod Wipers



US U-CUP



UP U-CUP

TYPICAL PART NUMBERS

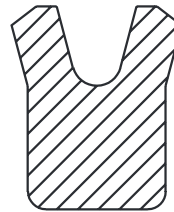
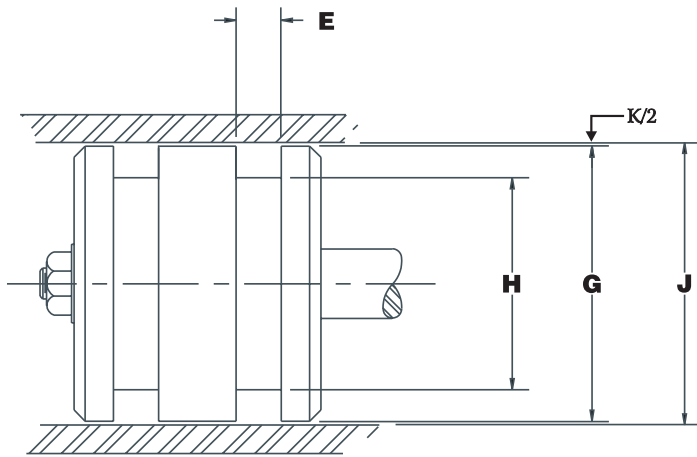
4611US25002000-375 -- 4611UP25002000-375

Parker Part Number (1)	Nominal Seal Dimension				Cylinder Bore Diameter (Inches)			Piston Outside Diameter (Inches)		Groove (Piston) Diameter (Inches)		Groove Depth (Inches) ±.015 E	Dia-metral Clearance (Range) K
					Nominal	Dim.	Tol.	Dim.	Tol.	Dim.	Tol.		
	I.D.	O.D.	C/S	DEPTH		J		G.		H			
18703500-375	3 1/2	3 7/8	3/16	3/8	3 7/8	3.875	+0.002/-0.000	3.874	+0.000/-0.002	3.500	+0.000/-0.002	0.413	.001-.005
18703625-375	3 5/8	4	3/16	3/8	4	4.000	+0.002/-0.000	3.999	+0.000/-0.002	3.625	+0.000/-0.002	0.413	.001-.005
25003500-375	3 1/2	4	1/4	3/8	4	4.000	+0.003/-0.000	3.999	+0.000/-0.002	3.500	+0.000/-0.003	0.413	.001-.006
31203375-500	3 3/8	4	5/16	1/2	4	4.000	+0.003/-0.000	3.998	+0.000/-0.002	3.375	+0.000/-0.004	0.550	.002-.007
37503250-625	3 1/4	4	3/8	5/8	4	4.000	+0.004/-0.000	3.998	+0.000/-0.002	3.250	+0.000/-0.005	0.688	.002-.008
18703875-375	3 7/8	4 1/4	3/16	3/8	4 1/4	4.250	+0.002/-0.000	4.249	+0.000/-0.002	3.875	+0.000/-0.002	0.413	.001-.005
25003750-375	3 3/4	4 1/4	1/4	3/8	4 1/4	4.250	+0.003/-0.000	4.249	+0.000/-0.002	3.750	+0.000/-0.003	0.413	.001-.006
37503500-500	3 1/2	4 1/4	3/8	1/2	4 1/4	4.250	+0.004/-0.000	4.248	+0.000/-0.002	3.500	+0.000/-0.005	0.550	.002-.008
18704000-375	4	4 3/8	3/16	3/8	4 3/8	4.375	+0.002/-0.000	4.374	+0.000/-0.002	4.000	+0.000/-0.002	0.413	.001-.005
25004000-375	4	4 1/2	1/4	3/8	4 1/2	4.500	+0.003/-0.000	4.499	+0.000/-0.002	4.000	+0.000/-0.003	0.413	.001-.006
31203875-500	3 7/8	4 1/2	5/16	1/2	4 1/2	4.500	+0.003/-0.000	4.498	+0.000/-0.002	3.875	+0.000/-0.004	0.550	.002-.007
37503750-625	3 3/4	4 1/2	3/8	5/8	4 1/2	4.500	+0.004/-0.000	4.498	+0.000/-0.002	3.750	+0.000/-0.005	0.688	.002-.008
25004125-562	4 1/8	4 5/8	1/4	9/16	4 5/8	4.625	+0.003/-0.000	4.624	+0.000/-0.002	4.125	+0.000/-0.003	0.619	.001-.006
25004250-562	4 1/4	4 3/4	1/4	9/16	4 3/4	4.750	+0.003/-0.000	4.749	+0.000/-0.002	4.250	+0.000/-0.003	0.619	.001-.006
37504000-625	4	4 3/4	3/8	5/8	4 3/4	4.750	+0.004/-0.000	4.748	+0.000/-0.002	4.000	+0.000/-0.005	0.688	.002-.008
25004375-562	4 3/8	4 7/8	1/4	9/16	4 7/8	4.875	+0.003/-0.000	4.874	+0.000/-0.002	4.375	+0.000/-0.003	0.619	.001-.006
25004500-562	4 1/2	5	1/4	9/16	5	5.000	+0.003/-0.000	4.999	+0.000/-0.002	4.500	+0.000/-0.003	0.619	.001-.006
31204375-562	4 3/8	5	5/16	9/16	5	5.000	+0.003/-0.000	4.998	+0.000/-0.002	4.375	+0.000/-0.004	0.619	.002-.007
37504250-625	4 1/4	5	3/8	5/8	5	5.000	+0.004/-0.000	4.998	+0.000/-0.002	4.250	+0.000/-0.005	0.688	.002-.008
50004000-625	4	5	1/2	5/8	5	5.000	+0.005/-0.000	4.998	+0.000/-0.003	4.000	+0.000/-0.007	0.688	.002-.010

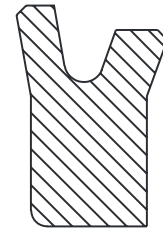
NOTE: Not all U-Packing sizes listed are tooled in all compounds.

Consult the PPD3701 Price List or contact Parker Packing Customer Service at (801) 972-3000 for compound availability and additional sizes.

Rod and Piston Seals and Rod Wipers



US U-CUP



UP U-CUP

TYPICAL PART NUMBERS

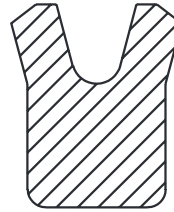
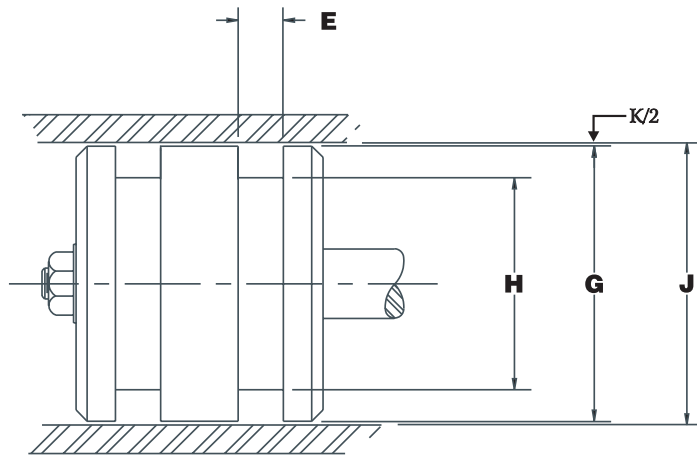
4611US25002000-375 -- 4611UP25002000-375

Parker Part Number (1)	Nominal Seal Dimension				Cylinder Bore Diameter (Inches)			Piston Outside Diameter (Inches)		Groove (Piston) Diameter (Inches)		Groove Depth (Inches)	Dia-metral Clearance (Range)
	I.D.	O.D.	C/S	DEPTH	Nominal	Dim. J	Tol.	Dim. G.	Tol.	Dim. H	Tol.	±.015 E	
25004750-375	4 3/4	5 1/4	1/4	3/8	5 1/4	5.250	+.003/-0.000	5.249	+.000/-0.002	4.750	+.000/-0.003	0.413	.001-.006
37504500-500	4 1/2	5 1/4	3/8	1/2	5 1/4	5.250	+.004/-0.000	5.248	+.000/-0.002	4.500	+.000/-0.005	0.550	.002-.008
25005000-562	5	5 1/2	1/4	9/16	5 1/2	5.500	+.003/-0.000	5.499	+.000/-0.002	5.000	+.000/-0.003	0.619	.001-.006
37504750-625	4 3/4	5 1/2	3/8	5/8	5 1/2	5.500	+.004/-0.000	5.498	+.000/-0.002	4.750	+.000/-0.005	0.688	.002-.008
62504250-750	4 1/4	5 1/2	5/8	3/4	5 1/2	5.500	+.006/-0.000	5.497	+.000/-0.003	4.250	+.000/-0.009	0.825	.003-.012
37505000-500	5	5 3/4	3/8	1/2	5 3/4	5.750	+.004/-0.000	5.748	+.000/-0.002	5.000	+.000/-0.005	0.550	.002-.008
31205250-500	5 1/4	5 7/8	5/16	1/2	5 7/8	5.875	+.003/-0.000	5.873	+.000/-0.002	5.250	+.000/-0.004	0.550	.002-.007
25005500-562	5 1/2	6	1/4	9/16	6	6.000	+.003/-0.000	5.999	+.000/-0.002	5.500	+.000/-0.003	0.619	.001-.006
31205375-625	5 3/8	6	5/16	5/8	6	6.000	+.003/-0.000	5.998	+.000/-0.002	5.375	+.000/-0.004	0.688	.002-.007
37505250-625	5 1/4	6	3/8	5/8	6	6.000	+.004/-0.000	5.998	+.000/-0.002	5.250	+.000/-0.005	0.688	.002-.008
50005000-625	5	6	1/2	5/8	6	6.000	+.005/-0.000	5.998	+.000/-0.003	5.000	+.000/-0.007	0.688	.002-.010
25005750-562	5 3/4	6 1/4	1/4	9/16	6 1/4	6.250	+.003/-0.000	6.249	+.000/-0.002	5.750	+.000/-0.003	0.619	.001-.006
31205625-625	5 5/8	6 1/4	5/16	5/8	6 1/4	6.250	+.003/-0.000	6.248	+.000/-0.002	5.625	+.000/-0.004	0.688	.002-.007
37505500-500	5 1/2	6 1/4	3/8	1/2	6 1/4	6.250	+.004/-0.000	6.248	+.000/-0.002	5.500	+.000/-0.005	0.550	.002-.008
25006000-562	6	6 1/2	1/4	9/16	6 1/2	6.500	+.003/-0.000	6.499	+.000/-0.002	6.000	+.000/-0.003	0.619	.001-.006
37505750-625	5 3/4	6 1/2	3/8	5/8	6 1/2	6.500	+.004/-0.000	6.498	+.000/-0.002	5.750	+.000/-0.005	0.688	.002-.008
62505250-750	5 1/4	6 1/2	5/8	3/4	6 1/2	6.500	+.006/-0.000	6.497	+.000/-0.003	5.250	+.000/-0.009	0.825	.003-.012
25006500-562	6 1/2	7	1/4	9/16	7	7.000	+.003/-0.000	6.999	+.000/-0.002	6.500	+.000/-0.003	0.619	.001-.006
37506250-625	6 1/4	7	3/8	5/8	7	7.000	+.005/-0.000	6.998	+.000/-0.002	6.250	+.000/-0.005	0.688	.002-.008
37506750-625	6 3/4	7 1/2	3/8	5/8	7 1/2	7.500	+.004/-0.000	7.498	+.000/-0.002	6.750	+.000/-0.005	0.688	.002-.008

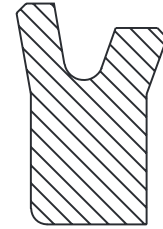
NOTE: Not all U-Packing sizes listed are tooled in all compounds.

Consult the PPD3701 Price List or contact Parker Packing Customer Service at (801) 972-3000 for compound availability and additional sizes.

Rod and Piston Seals and Rod Wipers



US U-CUP



UP U-CUP

TYPICAL PART NUMBERS

4611US25002000-375 -- 4611UP25002000-375

Parker Part Number (1)	Nominal Seal Dimension				Cylinder Bore Diameter (Inches)			Piston Outside Diameter (Inches)		Groove (Piston) Diameter (Inches)		Groove Depth (Inches)	Dia-metral Clearance (Range)
					Nominal	Dim.	Tol.	Dim.	Tol.	Dim.	Tol.	±.015	
	I.D.	O.D.	C/S	DEPTH	J	G.	H	E	K				
25007500-562	7 1/2	8	1/4	9/16	8	8.000	+0.003/-0.000	7.999	+0.000/-0.002	7.500	+0.000/-0.003	0.619	.001-.006
31207375-312	7 3/8	8	5/16	5/16	8	8.000	+0.003/-0.000	7.998	+0.000/-0.002	7.375	+0.000/-0.004	0.344	.002-.007
37507250-625	7 1/4	8	3/8	5/8	8	8.000	+0.004/-0.000	7.998	+0.000/-0.002	7.250	+0.000/-0.005	0.688	.002-.008
50007000-750	7	8	1/2	3/4	8	8.000	+0.005/-0.000	7.998	+0.000/-0.003	7.000	+0.000/-0.007	0.825	.002-.010
37507500-500	7 1/2	8 1/4	3/8	1/2	8 1/4	8.250	+0.004/-0.000	8.248	+0.000/-0.002	7.500	+0.000/-0.005	0.550	.002-.008
62507250-625	7 1/4	8 1/2	5/8	5/8	8 1/2	8.500	+0.006/-0.000	8.497	+0.000/-0.003	7.250	+0.000/-0.009	0.688	.003-.012
37508250-625	8 1/4	9	3/8	5/8	9	9.000	+0.004/-0.000	8.998	+0.000/-0.002	8.250	+0.000/-0.005	0.688	.002-.008
25009500-250	9 1/2	10	1/4	1/4	10	10.000	+0.003/-0.000	9.999	+0.000/-0.002	9.500	+0.000/-0.003	0.275	.001-.006
37509250-375	9 1/4	10	3/8	3/8	10	10.000	+0.004/-0.000	9.998	+0.000/-0.002	9.250	+0.000/-0.005	0.413	.002-.008
50009000-750	9	10	1/2	3/4	10	10.000	+0.005/-0.000	9.998	+0.000/-0.003	9.000	+0.000/-0.007	0.825	.002-.010

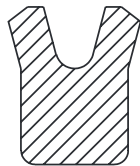
NOTE: Not all U-Packing sizes listed are tooled in all compounds.

Consult the PPD3701 Price List or contact Parker Packing Customer Service at (801) 972-3000 for compound availability and additional sizes.

Design Charts for Rod-Seal Applications Low Pressure to 5000 PSI

U-Packing seals are available in more than one cross-section per seal diameter. The larger the cross-section the longer the life and reliability of the seal, and the less critical the equipment design considerations, such as tolerance, and clearances. Always select the largest cross-section compatible with installation and equipment design limitations. Friction normally increases with cross-section and installation becomes increasingly difficult.

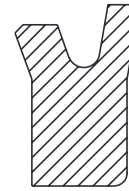
NOTE: Not all U-Packing sizes listed are tooled in all materials.
Consult the 3701 price list or contact Parker Customer Service (801) 972-3000 for exact part availability.



US Series U-Ring
US25001000
1 X 1-1/2 X 1/4

PARKER "US" SERIES U-RINGS are of symmetrical back-beveled lip design. "US" U-Ring seals are designed to solve specific heavy duty hydraulic sealing problems. The symmetrical design allows for interchangeability between rod and piston applications. Parker "US" U-Rings are dimensioned to be interchangeable with many styles and sizes of other Parker products such as PolyPak Seals and non-symmetrical U-Rings. This permits direct substitution in the same grooves when unexpected problems arise.

While the back-beveled lips do provide some sealing in the reverse direction, these seals should be used only for unidirectional applications.



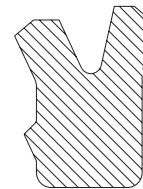
UR Series U-Ring

UR25001000-375
1 X 1-1/2 X 1/4 X 3/8

PARKER UR SERIES U-RINGS are non-symmetrical rod seals, and are designed to solve specific heavy duty hydraulic sealing problems. The back-beveled lip faces the rod where it will provide enhanced low-pressure sealing and wiping action on the rod surface. The non-symmetrical extended lip is used as a stabilizing element on the static sealing surface.

The UR U-Ring is designed to be interchangeable with many styles and sizes of other Parker rod seals, permitting direct substitution in the same grooves when problems arise.

The back-beveled lips do not provide sealing in the reverse directions. These seals should be used only for unidirectional applications.



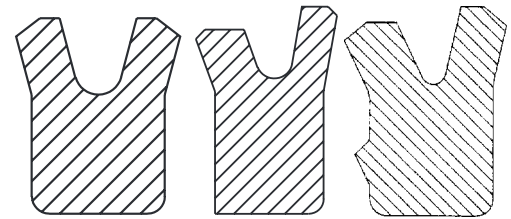
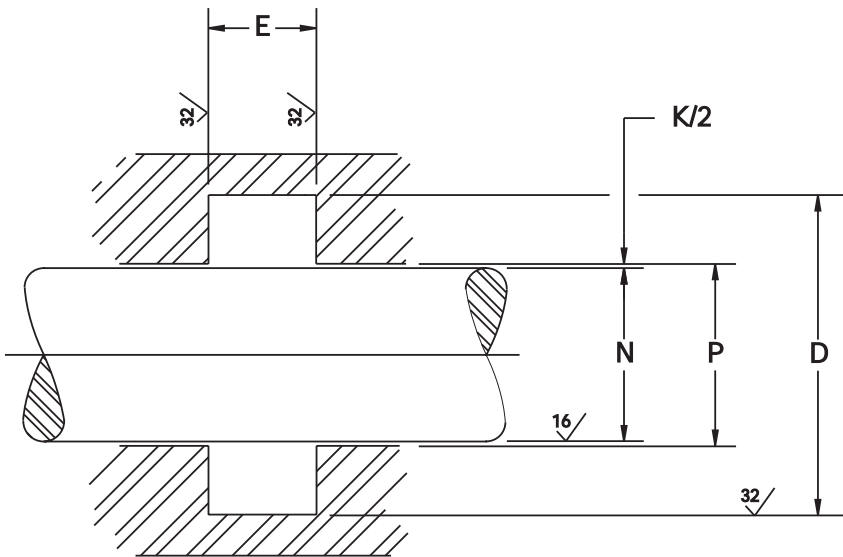
BS Series U-Ring

BS25001000-375
1 X 1-1/2 X 1/4 X 3/8

PARKER BS (Better Sealing) SERIES U-RINGS are hydraulic rod seals ideally suited for heavy-duty mobile and stationary service where leakage must be held to an absolute minimum.

The unique Parker "BS" geometry is highly resistant to side loading and is insensitive to pressure spikes. The BS Profile reduces or eliminates leakage under severe operating conditions. Finite Element Analysis (FEA) engineered geometry provides accurate control of lubricating film thickness on the rod across a wide range of temperature/pressure variations.

Rod and Piston Seals and Rod Wipers

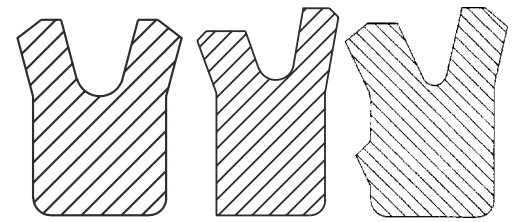
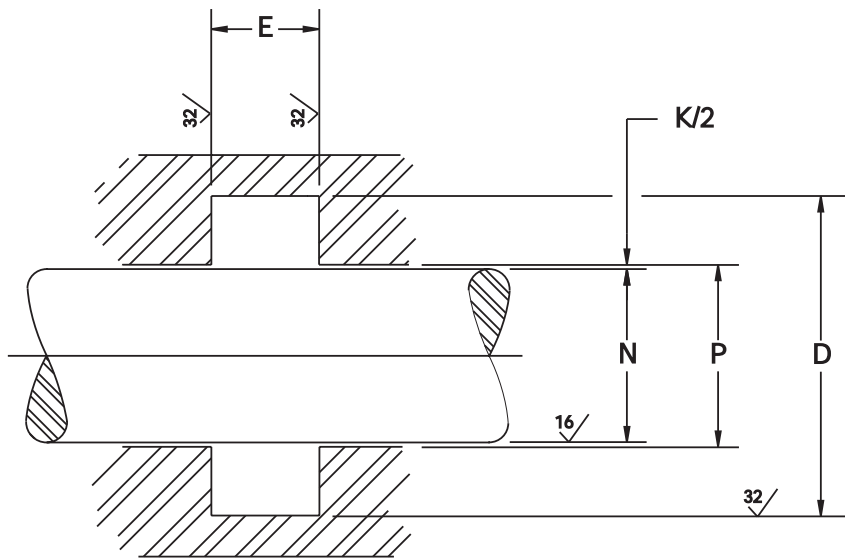


US U-CUP UR U-CUP BS U-CUP
TYPICAL PART NUMBER
4611US25002000-375 -- 4611UR25002000-
375
4700BS25002000-375

Parker Part Number (1)	Nominal Seal Dimension				Rod Diameter (Inches)			Throat Diameter (Inches)		Groove Diameter (Inches)		Groove Depth (Inches) ±.015 E	Dia-metral Clearance (Range) K
					Nominal	Dim.	Tol.	Dim.	Tol.	Dim.	Tol.		
	I.D.	O.D.	C/S	DEPTH	N	P	D						
18700187-312	3/16	9/16	3/16	5/16	3/16	0.188	+0.000/-0.002	0.188	+0.002/-0.000	0.562	+0.002/-0.000	0.344	.001-.005
12500250-250	1/4	1/2	1/8	1/4	1/4	0.250	+0.000/-0.001	0.251	+0.002/-0.000	0.500	+0.002/-0.000	0.275	.001-.004
18700250-312	1/4	5/8	3/16	5/16	1/4	0.250	+0.000/-0.002	0.251	+0.002/-0.000	0.625	+0.002/-0.000	0.344	.001-.005
25000250-312	1/4	3/4	1/4	5/16	1/4	0.250	+0.000/-0.002	0.251	+0.003/-0.000	0.750	+0.003/-0.000	0.344	.001-.006
25000312-375	5/16	13/16	1/4	3/8	5/16	0.312	+0.000/-0.002	0.313	+0.003/-0.000	0.812	+0.003/-0.000	0.413	.001-.006
12500375-250	3/8	5/8	1/8	1/4	3/8	0.375	+0.000/-0.001	0.376	+0.002/-0.000	0.625	+0.002/-0.000	0.275	.001-.004
18700375-312	3/8	3/4	3/16	5/16	3/8	0.375	+0.000/-0.002	0.376	+0.002/-0.000	0.750	+0.002/-0.000	0.344	.001-.005
25000375-312	3/8	7/8	1/4	5/16	3/8	0.375	+0.000/-0.002	0.376	+0.003/-0.000	0.875	+0.003/-0.000	0.344	.001-.006
12500437-187	7/16	11/16	1/8	3/16	7/16	0.438	+0.000/-0.001	0.438	+0.002/-0.000	0.687	+0.002/-0.000	0.206	.001-.004
12500500-250	1/2	3/4	1/8	1/4	1/2	0.500	+0.000/-0.001	0.501	+0.002/-0.000	0.750	+0.002/-0.000	0.275	.001-.004
18700500-312	1/2	7/8	3/16	5/16	1/2	0.500	+0.000/-0.002	0.501	+0.002/-0.000	0.875	+0.002/-0.000	0.344	.001-.005
25000500-375	1/2	1	1/4	3/8	1/2	0.500	+0.000/-0.002	0.501	+0.003/-0.000	1.000	+0.003/-0.000	0.413	.001-.006
12500562-250	9/16	13/16	1/8	1/4	9/16	0.563	+0.000/-0.001	0.563	+0.002/-0.000	0.812	+0.002/-0.000	0.275	.001-.004
18700562-250	9/16	15/16	3/16	1/4	9/16	0.563	+0.000/-0.002	0.563	+0.002/-0.000	0.937	+0.002/-0.000	0.275	.001-.005
25000532-250	9/16	1 1/16	1/4	1/4	9/16	0.563	+0.000/-0.002	0.563	+0.003/-0.000	1.062	+0.003/-0.000	0.275	.001-.006
12500625-250	5/8	7/8	1/8	1/4	5/8	0.625	+0.000/-0.001	0.626	+0.002/-0.000	0.875	+0.002/-0.000	0.275	.001-.004
18700625-312	5/8	1	3/16	5/16	5/8	0.625	+0.000/-0.002	0.626	+0.002/-0.000	1.000	+0.002/-0.000	0.344	.001-.005
25000625-375	5/8	1 1/8	1/4	3/8	5/8	0.625	+0.000/-0.002	0.626	+0.003/-0.000	1.125	+0.003/-0.000	0.413	.001-.006
18700687-187	11/16	1 1/16	3/16	3/16	11/16	0.688	+0.000/-0.002	0.688	+0.002/-0.000	1.062	+0.002/-0.000	0.206	.001-.005
12500750-250	3/4	1	1/8	1/4	3/4	0.750	+0.000/-0.001	0.751	+0.002/-0.000	1.000	+0.002/-0.000	0.275	.001-.004

NOTE: Not all U-Packing sizes listed are tooled in all compounds.
 Consult the PPD3701 Price List or contact Parker Packing Customer Service at (801) 972-3000 for compound availability and additional sizes.

Rod and Piston Seals and Rod Wipers



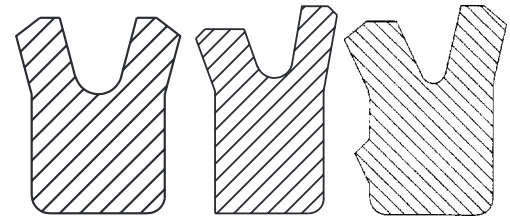
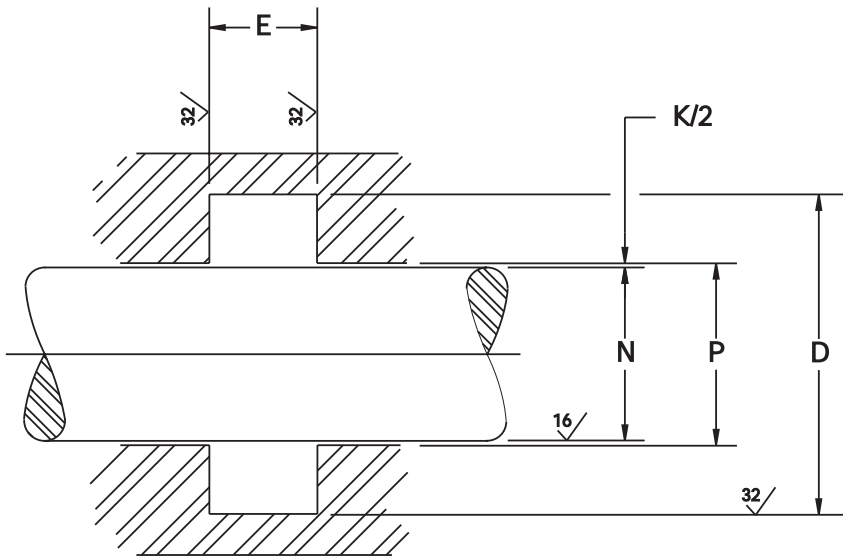
US U-CUP UR U-CUP BS U-CUP
TYPICAL PART NUMBER
4611US25002000-375 -- 4611UR25002000-
375
4700BS25002000-375

Parker Part Number (1)	Nominal Seal Dimension				Rod Diameter (Inches)			Throat Diameter (Inches)		Groove Diameter (Inches)		Groove Depth (Inches)	Dia-metral Clearance (Range)
	I.D.	O.D.	C/S	DEPTH	Nominal	Dim. N	Tol.	Dim. P	Tol.	Dim. D	Tol.	±.015 E	
18700750-312	3/4	1 1/8	3/16	5/16	3/4	0.750	+0.000/-0.002	0.751	+0.002/-0.000	1.125	+0.002/-0.000	0.344	.001-.005
25000750-375	3/4	1 1/4	1/4	3/8	3/4	0.750	+0.000/-0.002	0.751	+0.003/-0.000	1.250	+0.003/-0.000	0.413	.001-.006
12500812-250	13/16	1 1/16	1/8	1/4	13/16	0.813	+0.000/-0.001	0.813	+0.002/-0.000	1.062	+0.002/-0.000	0.275	.001-.004
18700812-312	13/16	1 3/16	3/16	5/16	13/16	0.813	+0.000/-0.002	0.813	+0.002/-0.000	1.187	+0.002/-0.000	0.344	.001-.005
12500875-250	7/8	1 1/8	1/8	1/4	7/8	0.875	+0.000/-0.001	0.876	+0.002/-0.000	1.125	+0.002/-0.000	0.275	.001-.004
18700875-312	7/8	1 1/4	3/16	5/16	7/8	0.875	+0.000/-0.002	0.876	+0.002/-0.000	1.250	+0.002/-0.000	0.344	.001-.005
18700937-312	15/16	1 5/16	3/16	5/16	15/16	0.938	+0.000/-0.002	0.938	+0.002/-0.000	1.312	+0.002/-0.000	0.344	.001-.005
12501000-250	1	1 1/4	1/8	1/4	1	1.000	+0.000/-0.001	1.001	+0.002/-0.000	1.250	+0.002/-0.000	0.275	.001-.004
18701000-312	1	1 3/8	3/16	5/16	1	1.000	+0.000/-0.001	1.001	+0.002/-0.000	1.375	+0.002/-0.000	0.344	.001-.005
25001000-375	1	1 1/2	1/4	3/8	1	1.000	+0.000/-0.001	1.001	+0.003/-0.000	1.500	+0.003/-0.000	0.413	.001-.006
12501125-250	1 1/8	1 3/8	1/8	1/4	1 1/8	1.125	+0.000/-0.001	1.126	+0.002/-0.000	1.375	+0.002/-0.000	0.275	.001-.004
18701125-312	1 1/8	1 1/2	3/16	5/16	1 1/8	1.125	+0.000/-0.002	1.126	+0.002/-0.000	1.500	+0.002/-0.000	0.344	.001-.005
25001125-250	1 1/8	1 5/8	1/4	1/4	1 1/8	1.125	+0.000/-0.002	1.126	+0.003/-0.000	1.625	+0.003/-0.000	0.275	.001-.006
18701187-312	1 3/16	1 9/16	3/16	5/16	1 3/16	1.188	+0.000/-0.002	1.188	+0.002/-0.000	1.562	+0.002/-0.000	0.344	.001-.005
25001187-250	1 3/16	1 11/16	1/4	1/4	1 3/16	1.188	+0.000/-0.002	1.188	+0.003/-0.000	1.687	+0.003/-0.000	0.275	.001-.006
12501250-250	1 1/4	1 1/2	1/8	1/4	1 1/4	1.250	+0.000/-0.001	1.251	+0.002/-0.000	1.500	+0.002/-0.000	0.275	.001-.004
18701250-312	1 1/4	1 5/8	3/16	5/16	1 1/4	1.250	+0.000/-0.002	1.251	+0.002/-0.000	1.625	+0.002/-0.000	0.344	.001-.005
25001250-375	1 1/4	1 3/4	1/4	3/8	1 1/4	1.250	+0.000/-0.002	1.251	+0.003/-0.000	1.750	+0.003/-0.000	0.413	.001-.006
31201250-375	1 1/4	1 7/8	5/16	3/8	1 1/4	1.250	+0.000/-0.002	1.252	+0.003/-0.000	1.875	+0.004/-0.000	0.413	.002-.007
18701312-312	1 5/16	1 11/16	3/16	5/16	1 5/16	1.312	+0.000/-0.002	1.313	+0.002/-0.000	1.687	+0.002/-0.000	0.344	.001-.005

NOTE: Not all U-Packing sizes listed are tooled in all compounds.

Consult the PPD3701 Price List or contact Parker Packing Customer Service at (801) 972-3000 for compound availability and additional sizes.

Rod and Piston Seals and Rod Wipers



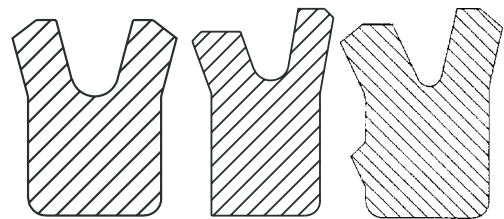
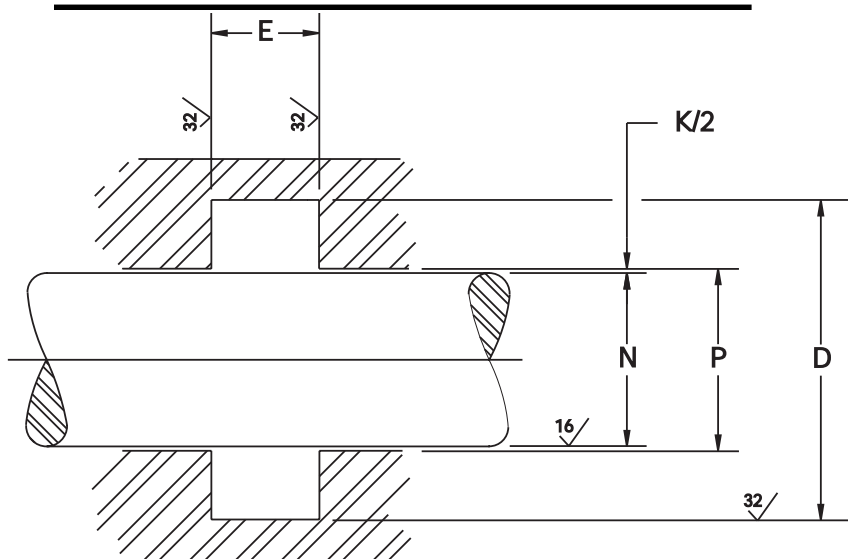
US U-CUP UR U-CUP BS U-CUP
TYPICAL PART NUMBER
4611US25002000-375 -- 4611UR25002000-375
4700BS25002000-375

Parker Part Number (1)	Nominal Seal Dimension				Rod Diameter (Inches)			Throat Diameter (Inches)		Groove Diameter (Inches)		Groove Depth (Inches)	Dia-metral Clearance (Range)
	I.D.	O.D.	C/S	DEPTH	Nominal	Dim. N	Tol.	Dim. P	Tol.	Dim. D	Tol.	±.015 E	
12501375-250	1 3/8	1 5/8	1/8	1/4	1 3/8	1.375	+0.00/-0.001	1.376	+0.002/-0.000	1.625	+0.002/-0.000	0.275	.001-.004
18701375-312	1 3/8	1 3/4	3/16	5/16	1 3/8	1.375	+0.000/-0.002	1.376	+0.002/-0.000	1.750	+0.002/-0.000	0.344	.001-.005
25001375-375	1 3/8	1 7/8	1/4	3/8	1 3/8	1.375	+0.000/-0.002	1.376	+0.003/-0.000	1.875	+0.003/-0.000	0.413	.001-.006
31201375-312	1 3/8	2	5/16	5/16	1 3/8	1.375	+0.000//0.002	1.377	+0.003/-0.000	2.000	+0.004/-0.000	0.344	.002-.007
12501500-250	1 1/2	1 3/4	1/8	1/4	1 1/2	1.500	+0.000/-0.001	1.501	+0.002/-0.000	1.750	+0.002/-0.000	0.275	.001-.004
18701500-375	1 1/2	1 7/8	3/16	3/8	1 1/2	1.500	+0.000/-0.002	1.501	+0.002/-0.000	1.875	+0.002/-0.000	0.413	.001-.005
25001500-375	1 1/2	2	1/4	3/8	1 1/2	1.500	+0.000/-0.002	1.501	+0.003/-0.000	2.000	+0.003/-0.000	0.413	.001-.006
31201500-312	1 1/2	2 1/8	5/16	5/16	1 1/2	1.500	+0.000/-0.002	1.502	+0.003/-0.000	2.125	+0.004/-0.000	0.344	.002-.007
18701625-375	1 5/8	2	3/16	3/8	1 5/8	1.625	+0.000/-0.002	1.626	+0.002/-0.000	2.000	+0.002/-0.000	0.413	.001-.005
25001625-375	1 5/8	2 1/8	1/4	3/8	1 5/8	1.625	+0.000/-0.002	1.626	+0.003/-0.000	2.125	+0.003/-0.000	0.413	.001-.006
31201625-500	1 5/8	2 1/4	5/16	1/2	1 5/8	1.625	+0.000/-0.002	1.627	+0.003/-0.000	2.250	+0.004/-0.000	0.550	.002-.007
18701750-375	1 3/4	2 1/8	3/16	3/8	1 3/4	1.750	+0.000/-0.002	1.751	+0.002/-0.000	2.125	+0.002/-0.000	0.413	.001-.005
25001750-375	1 3/4	2 1/4	1/4	3/8	1 3/4	1.750	+0.000/-0.002	1.751	+0.003/-0.000	2.250	+0.003/-0.000	0.413	.001-.006
31201750-312	1 3/4	2 3/8	5/16	5/16	1 3/4	1.750	+0.000/-0.002	1.752	+0.003/-0.000	2.375	+0.004/-0.000	0.344	.002-.007
18701875-375	1 7/8	2 1/4	3/16	3/8	1 7/8	1.875	+0.000/-0.002	1.876	+0.002/-0.000	2.250	+0.002/-0.000	0.413	.001-.005
31201875-500	1 7/8	2 1/2	5/16	1/2	1 7/8	1.875	+0.000/-0.002	1.877	+0.003/-0.000	2.500	+0.004/-0.000	0.550	.002-.007
18702000-375	2	2 3/8	3/16	3/8	2	2.000	+0.000/-0.002	2.001	+0.002/-0.000	2.375	+0.002/-0.000	0.413	.001-.005
25002000-375	2	2 1/2	1/4	3/8	2	2.000	+0.000/-0.002	2.001	+0.003/-0.000	2.500	+0.003/-0.000	0.413	.001-.006
31202000-500	2	2 5/8	5/16	1/2	2	2.000	+0.000/-0.002	2.002	+0.003/-0.000	2.625	+0.004/-0.000	0.550	.002-.007
18702125-375	2 1/8	2 1/2	3/16	3/8	2 1/8	2.125	+0.000/-0.002	2.126	+0.002/-0.000	2.500	+0.002/-0.000	0.413	.001-.005

NOTE: Not all U-Packing sizes listed are tooled in all compounds.

Consult the PPD3701 Price List or contact Parker Packing Customer Service at (801) 972-3000 for compound availability and additional sizes.

Rod and Piston Seals and Rod Wipers



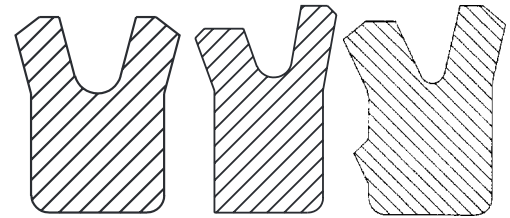
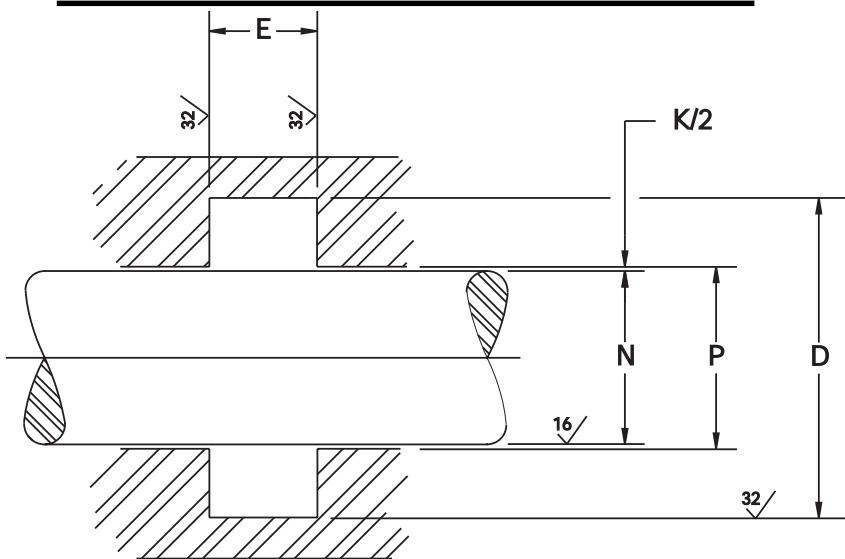
US U-CUP UR U-CUP BS U-CUP
TYPICAL PART NUMBER
4611US25002000-375 -- 4611UR25002000-
375
4700BS25002000-375

Parker Part Number (1)	Nominal Seal Dimension				Rod Diameter (Inches)			Throat Diameter (Inches)		Groove Diameter (Inches)		Groove Depth (Inches)	Dia-metral Clearance (Range)
	I.D.	O.D.	C/S	DEPTH	Nominal	Dim. N	Tol.	Dim. P	Tol.	Dim. D	Tol.	±.015 E	
25002125-375	2 1/8	2 5/8	1/4	3/8	2 1/8	2.125	+0.00/-0.002	2.126	+0.003/-0.000	2.625	+0.003/-0.000	0.413	.001-.006
18702250-375	2 1/4	2 5/8	3/16	3/8	2 1/4	2.250	+0.00/-0.002	2.251	+0.002/-0.000	2.625	+0.002/-0.000	0.413	.001-.005
25002250-375	2 1/4	2 3/4	1/4	3/8	2 1/4	2.250	+0.00/-0.002	2.251	+0.003/-0.000	2.750	+0.003/-0.000	0.413	.001-.006
31202250-500	2 1/4	2 7/8	5/16	1/2	2 1/4	2.250	+0.00/-0.002	2.252	+0.003/-0.000	2.875	+0.004/-0.000	0.550	.002-.007
37502250-625	2 1/4	3	3/8	5/8	2 1/4	2.250	+0.00/-0.002	2.252	+0.004/-0.000	3.000	+0.005/-0.000	0.688	.002-.008
25002375-375	2 3/8	2 7/8	1/4	3/8	2 3/8	2.375	+0.00/-0.002	2.376	+0.003/-0.000	2.875	+0.003/-0.000	0.413	.001-.006
18702500-375	2 1/2	2 7/8	3/16	3/8	2 1/2	2.500	+0.00/-0.002	2.501	+0.002/-0.000	2.875	+0.002/-0.000	0.413	.001-.005
25002500-375	2 1/2	3	1/4	3/8	2 1/2	2.500	+0.00/-0.002	2.501	+0.003/-0.000	3.000	+0.003/-0.000	0.413	.001-.006
31202500-500	2 1/2	3 1/8	5/16	1/2	2 1/2	2.500	+0.00/-0.002	2.502	+0.003/-0.000	3.125	+0.004/-0.000	0.550	.002-.007
37502500-437	2 1/2	3 1/4	3/8	7/16	2 1/2	2.500	+0.00/-0.002	2.502	+0.004/-0.000	3.250	+0.005/-0.000	0.482	.002-.008
18702625-375	2 5/8	3	3/16	3/8	2 5/8	2.625	+0.00/-0.002	2.626	+0.002/-0.000	3.000	+0.002/-0.000	0.413	.001-.005
25002625-375	2 5/8	3 1/8	1/4	3/8	2 5/8	2.625	+0.00/-0.002	2.626	+0.003/-0.000	3.125	+0.003/-0.000	0.413	.001-.006
31202625-500	2 5/8	3 1/4	5/16	1/2	2 5/8	2.625	+0.00/-0.002	2.627	+0.003/-0.000	3.250	+0.004/-0.000	0.550	.002-.007
37502625-625	2 5/8	3 3/8	3/8	5/8	2 5/8	2.625	+0.00/-0.002	2.627	+0.004/-0.000	3.375	+0.005/-0.000	0.688	.002-.008
25002750-375	2 3/4	3 1/4	1/4	3/8	2 3/4	2.750	+0.00/-0.001	2.751	+0.003/-0.000	3.250	+0.003/-0.000	0.413	.001-.006
31202750-500	2 3/4	3 3/8	5/16	1/2	2 3/4	2.750	+0.00/-0.002	2.752	+0.003/-0.000	3.375	+0.004/-0.000	0.550	.002-.007
37502750-625	2 3/4	3 1/2	3/8	5/8	2 3/4	2.750	+0.00/-0.002	2.752	+0.004/-0.000	3.500	+0.005/-0.000	0.688	.002-.008
18703000-375	3	3 3/8	3/16	3/8	3	3.000	+0.00/-0.002	3.001	+0.002/-0.000	3.375	+0.002/-0.000	0.413	.001-.005
25003000-375	3	3 1/2	1/4	3/8	3	3.000	+0.00/-0.002	3.001	+0.003/-0.000	3.500	+0.003/-0.000	0.413	.001-.006
31203000-500	3	3 5/8	5/16	1/2	3	3.000	+0.00/-0.002	3.002	+0.003/-0.000	3.625	+0.004/-0.000	0.550	.002-.007

NOTE: Not all U-Packing sizes listed are tooled in all compounds.

Consult the PPD3701 Price List or contact Parker Packing Customer Service at (801) 972-3000 for compound availability and additional sizes.

Rod and Piston Seals and Rod Wipers



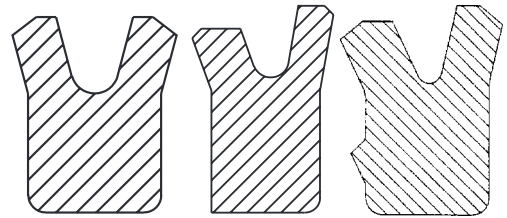
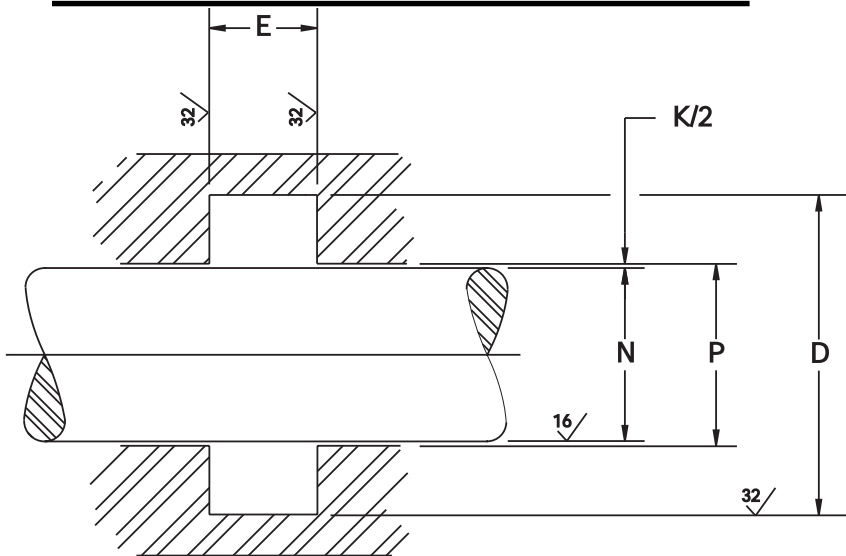
US U-CUP UR U-CUP BS U-CUP
TYPICAL PART NUMBER
4611US25002000-375 -- 4611UR25002000-
375
4700BS25002000-375

Parker Part Number (1)	Nominal Seal Dimension				Rod Diameter (Inches)			Throat Diameter (Inches)		Groove Diameter (Inches)		Groove Depth (Inches)	Dia-metral Clearance (Range)
	I.D.	O.D.	C/S	DEPTH	Nominal	Dim. N	Tol.	Dim. P	Tol.	Dim. D	Tol.	±.015 E	
37503000-625	3	3 3/4	3/8	5/8	3	3.000	+ .000/- .002	3.002	+ .004/- .000	3.750	+ .005/- .000	0.688	.002-.008
18703125-375	3 1/8	3 1/2	3/16	3/8	3 1/8	3.125	+ .000/- .002	3.126	+ .002/- .000	3.500	+ .002/- .000	0.413	.001-.005
31203125-500	3 1/8	3 3/4	5/16	1/2	3 1/8	3.125	+ .000/- .002	3.126	+ .003/- .000	3.750	+ .004/- .000	0.550	.002-.007
18703250-375	3 1/4	3 5/8	3/16	3/8	3 1/4	3.250	+ .000/- .002	3.251	+ .002/- .000	3.625	+ .002/- .000	0.413	.001-.005
25003250-375	3 1/4	3 3/4	1/4	3/8	3 1/4	3.250	+ .000/- .002	3.251	+ .003/- .000	3.750	+ .003/- .000	0.413	.001-.006
37503250-625	3 1/4	4	3/8	5/8	3 1/4	3.250	+ .000/- .002	3.252	+ .004/- .000	4.000	+ .005/- .000	0.688	.002-.008
18703375-375	3 3/8	3 3/4	3/16	3/8	3 3/8	3.375	+ .000/- .002	3.376	+ .002/- .000	3.750	+ .002/- .000	0.413	.001-.005
25003375-375	3 3/8	3 7/8	1/4	3/8	3 3/8	3.375	+ .000/- .002	3.376	+ .003/- .000	3.875	+ .003/- .000	0.413	.001-.006
31203375-375	3 3/8	4	5/16	3/8	3 3/8	3.375	+ .000/- .002	3.377	+ .003/- .000	4.000	+ .004/- .000	0.413	.002-.007
18703500-375	3 1/2	3 7/8	3/16	3/8	3 1/2	3.500	+ .000/- .002	3.501	+ .002/- .000	3.875	+ .002/- .000	0.413	.001-.005
25003500-375	3 1/2	4	1/4	3/8	3 1/2	3.500	+ .000/- .002	3.501	+ .003/- .000	4.000	+ .003/- .000	0.413	.001-.006
31203500-500	3 1/2	4 1/8	5/16	1/2	3 1/2	3.500	+ .000/- .002	3.502	+ .003/- .000	4.125	+ .004/- .000	0.550	.002-.007
37503500-625	3 1/2	4 1/4	3/8	5/8	3 1/2	3.500	+ .000/- .002	3.502	+ .004/- .000	4.250	+ .005/- .000	0.688	.002-.008
18703625-375	3 5/8	4	3/16	3/8	3 5/8	3.625	+ .000/- .002	3.626	+ .002/- .000	4.000	+ .002/- .000	0.413	.001-.005
25003750-375	3 3/4	4 1/4	1/4	3/8	3 3/4	3.750	+ .000/- .002	3.751	+ .003/- .000	4.250	+ .003/- .000	0.413	.001-.006
37503750-500	3 3/4	4 1/2	3/8	1/2	3 3/4	3.750	+ .000/- .002	3.752	+ .004/- .000	4.500	+ .005/- .000	0.550	.002-.008
18703875-375	3 7/8	4 1/4	3/16	3/8	3 7/8	3.875	+ .000/- .002	3.876	+ .002/- .000	4.250	+ .002/- .000	0.413	.001-.005
31203875-500	3 7/8	4 1/2	5/16	1/2	3 7/8	3.875	+ .000/- .002	3.877	+ .003/- .000	4.500	+ .004/- .000	0.550	.002-.007
18704000-375	4	4 3/8	3/16	3/8	4	4.000	+ .000/- .002	4.001	+ .002/- .000	4.375	+ .002/- .000	0.413	.001-.005
25004000-562	4	4 1/2	1/4	9/16	4	4.000	+ .000/- .002	4.001	+ .003/- .000	4.500	+ .003/- .000	0.619	.001-.006

NOTE: Not all U-Packing sizes listed are tooled in all compounds.

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Rod and Piston Seals and Rod Wipers



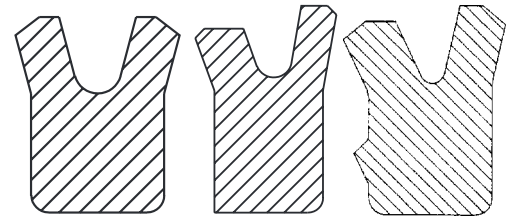
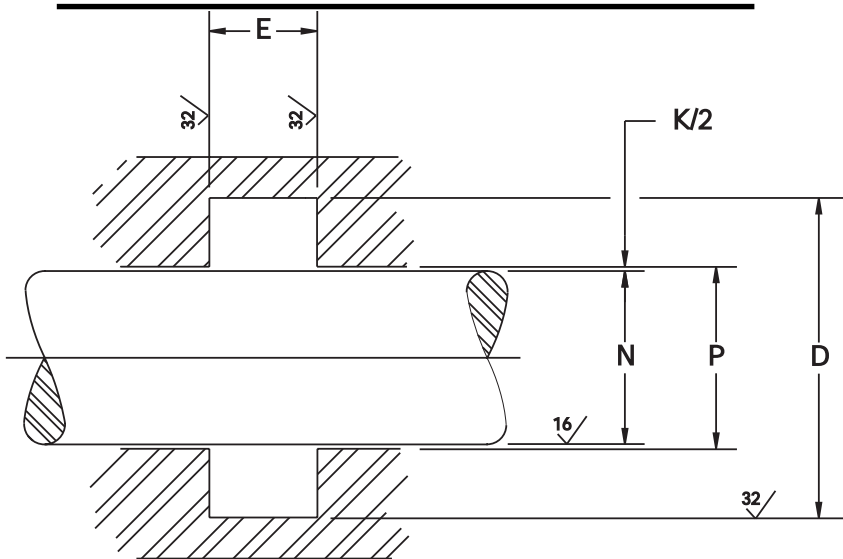
US U-CUP UR U-CUP BS U-CUP
TYPICAL PART NUMBER
4611US25002000-375 -- 4611UR25002000-
375
4700BS25002000-375

Parker Part Number (1)	Nominal Seal Dimension				Rod Diameter (Inches)			Throat Diameter (Inches)		Groove Diameter (Inches)		Groove Depth (Inches)	Dia-metral Clearance (Range)
	I.D.	O.D.	C/S	DEPTH	Nominal	Dim. N	Tol.	Dim. P	Tol.	Dim. D	Tol.	±.015 E	
37504000-625	4	4 3/4	3/8	5/8	4	4.000	+.000/-0.002	4.002	+.004/-0.000	4.750	+.005/-0.000	0.688	.002-.008
50004000-625	4	5	1/2	5/8	4	4.000	+.000/-0.003	4.002	+.005/-0.000	5.000	+.007/-0.000	0.688	.002-.010
25004125-562	4 1/8	4 5/8	1/4	9/16	4 1/8	4.125	+.000/-0.002	4.126	+.003/-0.000	4.625	+.003/-0.000	0.619	.001-.006
25004250-562	4 1/4	4 3/4	1/4	9/16	4 1/4	4.250	+.000/-0.002	4.251	+.003/-0.000	4.750	+.003/-0.000	0.619	.001-.006
37504250-625	4 1/4	5	3/8	5/8	4 1/4	4.250	+.000/-0.002	4.252	+.004/-0.000	5.000	+.005/-0.000	0.688	.002-.008
62504250-750	4 1/4	5 1/2	5/8	3/4	4 1/4	4.250	+.000/-0.003	4.253	+.006/-0.000	5.500	+.009/-0.000	0.825	.003-.012
31204375-562	4 3/8	5	5/16	9/16	4 3/8	4.375	+.000/-0.002	4.377	+.003/-0.000	5.000	+.004/-0.000	0.619	.002-.007
37504375-375	4 3/8	5 1/8	3/8	3/8	4 3/8	4.375	+.000/-0.002	4.377	+.004/-0.000	5.125	+.005/-0.000	0.413	.002-.008
25004500-562	4 1/2	5	1/4	9/16	4 1/2	4.500	+.000/-0.002	4.501	+.003/-0.000	5.000	+.003/-0.000	0.619	.001-.006
31204500-500	4 1/2	5 1/8	5/16	1/2	4 1/2	4.500	+.000/-0.002	4.502	+.003/-0.000	5.125	+.004/-0.000	0.550	.002-.007
37504500-625	4 1/2	5 1/4	3/8	5/8	4 1/2	4.500	+.000/-0.002	4.502	+.004/-0.000	5.250	+.005/-0.000	0.688	.002-.008
31204625-625	4 5/8	5 1/4	5/16	5/8	4 5/8	4.625	+.000/-0.002	4.627	+.003/-0.000	5.250	+.004/-0.000	0.688	.002-.007
25004750-562	4 3/4	5 1/4	1/4	9/16	4 3/4	4.750	+.000/-0.002	4.751	+.003/-0.000	5.250	+.003/-0.000	0.619	.001-.006
37504750-625	4 3/4	5 1/2	3/8	5/8	4 3/4	4.750	+.000/-0.002	4.752	+.004/-0.000	5.500	+.005/-0.000	0.688	.002-.008
25005000-562	5	5 1/2	1/4	9/16	5	5.000	+.000/-0.002	5.001	+.003/-0.000	5.500	+.003/-0.000	0.619	.001-.006
37505000-625	5	5 3/4	3/8	5/8	5	5.000	+.000/-0.002	5.002	+.004/-0.000	5.750	+.005/-0.000	0.688	.002-.008
31205250-500	5 1/4	5 7/8	5/16	1/2	5 1/4	5.250	+.000/-0.002	5.252	+.003/-0.000	5.875	+.004/-0.000	0.550	.002-.007
37505250-625	5 1/4	6	3/8	5/8	5 1/4	5.250	+.000/-0.002	5.252	+.004/-0.000	6.000	+.005/-0.000	0.688	.002-.008
62505250-750	5 1/4	6 1/2	5/8	3/4	5 1/4	5.250	+.000/-0.003	5.253	+.006/-0.000	6.500	+.009/-0.000	0.825	.003-.012
31205375-375	5 3/8	6	5/16	3/8	5 3/8	5.375	+.000/-0.002	5.377	+.003/-0.000	6.000	+.004/-0.000	0.413	.002-.007

NOTE: Not all U-Packing sizes listed are tooled in all compounds.

Consult the PPD3701 Price List or contact Parker Packing Customer Service at (801) 972-3000 for compound availability and additional sizes.

Rod and Piston Seals and Rod Wipers



US U-CUP UR U-CUP BS U-CUP
TYPICAL PART NUMBER
4611US25002000-375 -- 4611UR25002000-
375
4700BS25002000-375

Parker Part Number (1)	Nominal Seal Dimension				Rod Diameter (Inches)			Throat Diameter (Inches)		Groove Diameter (Inches)		Groove Depth (Inches)	Dia-metral Clearance (Range)
	I.D.	O.D.	C/S	DEPTH	Nominal	Dim. N	Tol.	Dim. P	Tol.	Dim. D	Tol.	±.015 E	
25005500-375	5 1/2	6	1/4	3/8	5 1/2	5.500	+0.00/-0.02	5.501	+0.003/-0.000	6.000	+0.003/-0.000	0.413	.001-.006
31205625-625	5 5/8	6 1/4	5/16	5/8	5 5/8	5.625	+0.00/-0.002	5.627	+0.003/-0.000	6.250	+0.004/-0.000	0.688	.002-.007
25005750-562	5 3/4	6 1/4	1/4	9/16	5 3/4	5.750	+0.00/-0.002	5.751	+0.003/-0.000	6.250	+0.003/-0.000	0.619	.001-.006
37505750-500	5 3/4	6 1/2	3/8	1/2	5 3/4	5.750	+0.00/-0.002	5.752	+0.004/-0.000	6.500	+0.005/-0.000	0.550	.002-.008
25006000-562	6	6 1/2	1/4	9/16	6	6.000	+0.00/-0.002	6.001	+0.003/-0.000	6.500	+0.003/-0.000	0.619	.001-.006
37506000-625	6	6 3/4	3/8	5/8	6	6.000	+0.00/-0.002	6.002	+0.004/-0.000	6.750	+0.005/-0.000	0.688	.002-.008
37506250-625	6 1/4	7	3/8	5/8	6 1/4	6.250	+0.00/-0.002	6.252	+0.004/-0.000	7.000	+0.005/-0.000	0.688	.002-.008
25006500-562	6 1/2	7	1/4	9/16	6 1/2	6.500	+0.00/-0.002	6.501	+0.003/-0.000	7.000	+0.003/-0.000	0.619	.001-.006
31206500-625	6 1/2	7 1/8	5/16	5/8	6 1/2	6.500	+0.00/-0.002	6.502	+0.003/-0.000	7.125	+0.004/-0.000	0.688	.002-.007
37506750-500	6 3/4	7 1/2	3/8	1/2	6 3/4	6.750	+0.00/-0.002	6.752	+0.005/-0.000	7.500	+0.005/-0.000	0.550	.002-.008
25007000-562	7	7 1/2	1/4	9/16	7	7.000	+0.00/-0.002	7.001	+0.003/-0.000	7.500	+0.003/-0.000	0.619	.001-.006
50007000-750	7	8	1/2	3/4	7	7.000	+0.00/-0.003	7.002	+0.005/-0.000	8.000	+0.007/-0.000	0.825	.002-.010
37507250-625	7 1/4	8	3/8	5/8	7 1/4	7.250	+0.00/-0.002	7.252	+0.005/-0.000	8.000	+0.005/-0.000	0.688	.002-.008
25007500-562	7 1/2	8	1/4	9/16	7 1/2	7.500	+0.00/-0.002	7.501	+0.003/-0.000	8.000	+0.003/-0.000	0.619	.001-.006
37507500-625	7 1/2	8 1/4	3/8	5/8	7 1/2	7.500	+0.00/-0.002	7.502	+0.004/-0.000	8.250	+0.005/-0.000	0.688	.002-.008
50009000-750	9	10	1/2	3/4	9	9.000	+0.00/-0.003	9.002	+0.005/-0.000	10.000	+0.007/-0.000	0.825	.002-.010
25009500-250	9 1/2	10	1/4	1/4	9 1/2	9.500	+0.00/-0.002	9.501	+0.003/-0.000	10.000	+0.003/-0.000	0.275	.001-.006
37510000-625	10	10 3/4	3/8	5/8	10	10.000	+0.00/-0.002	10.002	+0.004/-0.000	10.750	+0.005/-0.000	0.688	.002-.008
50010500-750	10 1/2	11 1/2	1/2	3/4	10 1/2	10.500	+0.00/-0.003	10.502	+0.005/-0.000	11.500	+0.007/-0.000	0.825	.002-.010

NOTE: Not all U-Packing sizes listed are tooled in all compounds.

Consult the PPD3701 Price List or contact Parker Packing Customer Service at (801) 972-3000 for compound availability and additional sizes.

Rod and Piston Seals and Rod Wipers

BT U-CUP ROD SEAL

The BT Profile U-Cup is an improved seal design for cylinder rods. The BT is an improvement of the existing BS U-Cup seal with enhancements in lip design, and in the Polyurethane compound used.

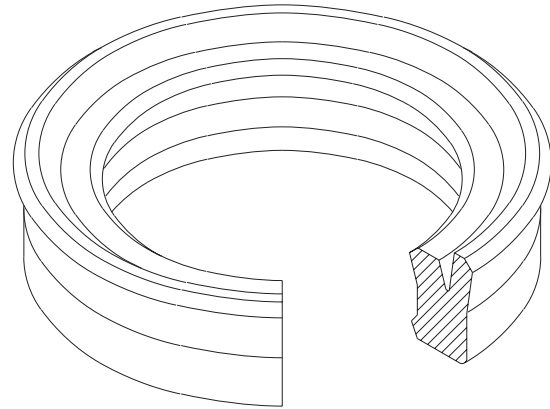
The new BT design has thicker lips than its BS predecessor which produces greater compressive forces in the installed condition. The key benefit is an increased conformity of the elastomer to the metal which improves sealing characteristics.

The secondary lip of the BT U-Cup has been moved down the profile and is now closer to the base to improve stability of the seal in the gland itself. This stability helps limit the rocking motion of the seal as the rod cycles, and in turn can dramatically reduce fluid seepage.

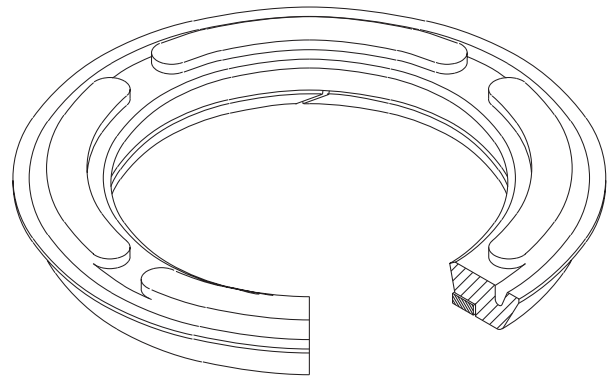
ADVANCED SEALING SYSTEM

When the BT U-Cup is used in combination with the BR Buffer Ring the resulting sealing system provides very long life with an exceptionally dry rod. The buffer ring acts as a primary seal and pressure spike suppressor and at the same time allows trapped fluid, sealed by the BT U-Cup, to be pumped back into the system with a check valve effect.

Using Parker's P4300, low compression set material, also improves seal performance. The advantage of a seal with lower compression set material is that it has a better "memory" for pushing against the rod and gland surfaces. Again the advantage is better conformity of the seal to the metal.

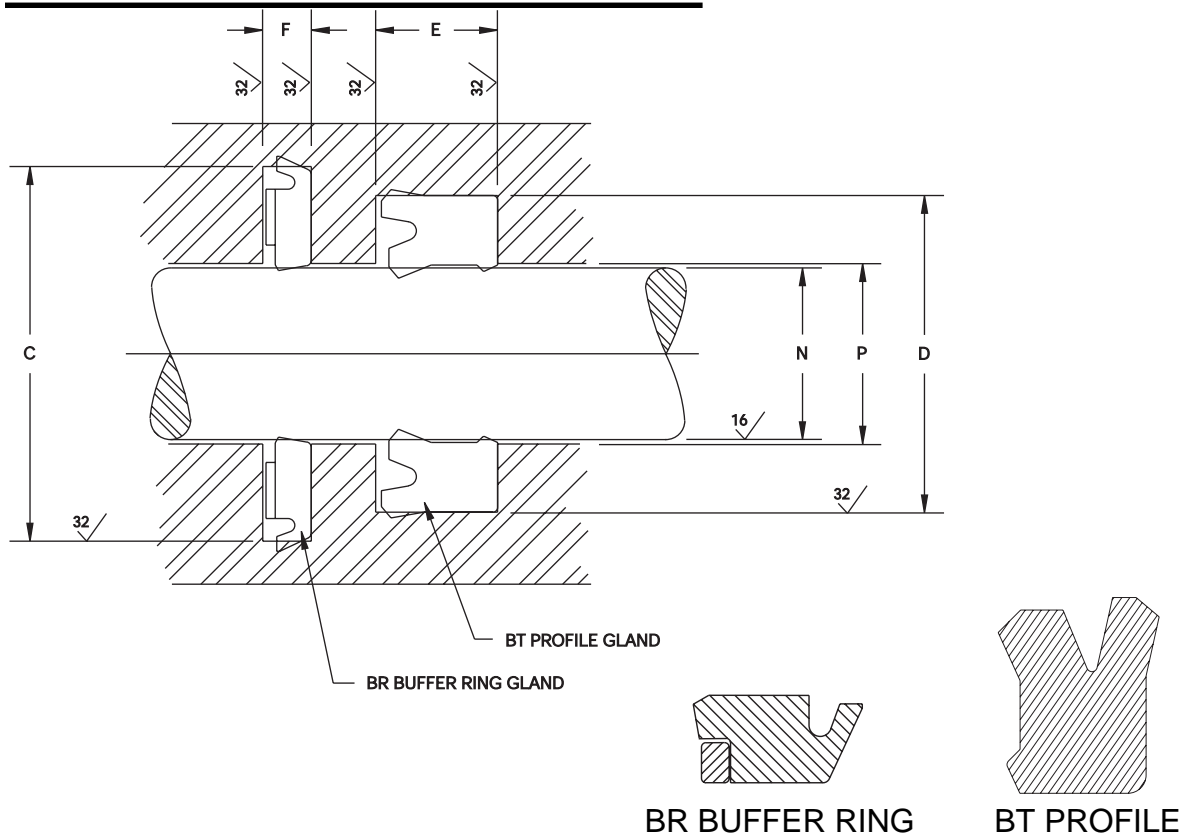


**BT Profile
Advanced U-Cup**



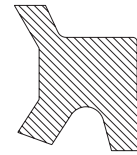
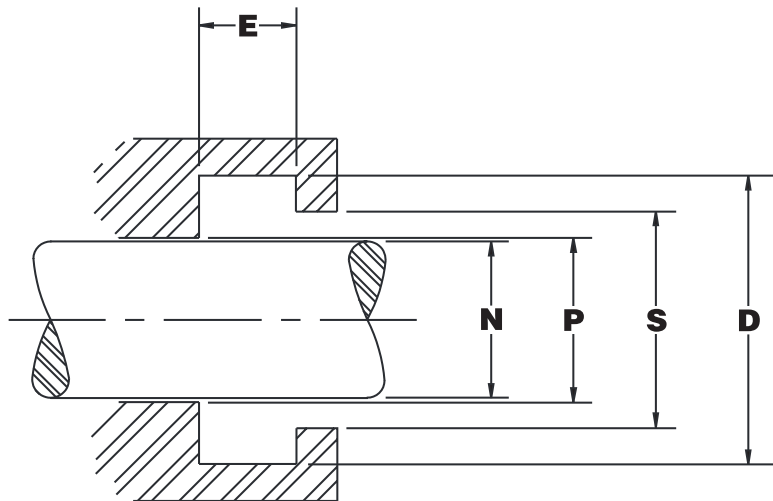
**BR Profile
Buffer Ring**

Rod and Piston Seals and Rod Wipers



NOMINAL ROD	N	P	C	D	E	F	BUFFER RING PART NUMBER	BT PROFILE PART NUMBER
	Rod Dia.	Throat Dia.	Groove Dia	Groove Dia	Groove Width	Groove Width		
1-1/4	1.251 ^{+0.000} / _{-0.002}	1.263 ^{+0.004} / _{-0.000}	1.815 ^{+0.008} / _{-0.000}	1.750 ^{+0.005} / _{-0.000}	0.406 ^{+0.015} / _{-0.000}	0.135 ^{+0.010} / _{-0.000}	4300C5397	4300BT25001250-375
1-1/2	1.501 ^{+0.000} / _{-0.002}	1.513 ^{+0.004} / _{-0.000}	2.063 ^{+0.008} / _{-0.000}	2.000 ^{+0.005} / _{-0.000}	0.406 ^{+0.015} / _{-0.000}	0.135 ^{+0.010} / _{-0.000}	4300C5314	4300BT25001500-375
1-3/4	1.751 ^{+0.000} / _{-0.002}	1.763 ^{+0.004} / _{-0.000}	2.315 ^{+0.008} / _{-0.000}	2.250 ^{+0.005} / _{-0.000}	0.406 ^{+0.015} / _{-0.000}	0.135 ^{+0.010} / _{-0.000}	4300C4964	4300BT25001750-375
2	2.001 ^{+0.000} / _{-0.002}	2.013 ^{+0.004} / _{-0.000}	2.563 ^{+0.008} / _{-0.000}	2.500 ^{+0.005} / _{-0.000}	0.406 ^{+0.015} / _{-0.000}	0.135 ^{+0.010} / _{-0.000}	4300C5651	4300B525002000-375
2-1/4	2.250 ^{+0.000} / _{-0.002}	2.262 ^{+0.004} / _{-0.000}	2.925 ^{+0.008} / _{-0.000}	2.747 ^{+0.005} / _{-0.000}	0.406 ^{+0.015} / _{-0.000}	0.229 ^{+0.010} / _{-0.000}	4300C5848A	4300BT25002250-375
2-1/2	2.500 ^{+0.000} / _{-0.002}	2.512 ^{+0.004} / _{-0.000}	3.173 ^{+0.008} / _{-0.000}	2.997 ^{+0.005} / _{-0.000}	0.406 ^{+0.015} / _{-0.000}	0.229 ^{+0.010} / _{-0.000}	4300C5949A	4300BT25002500-375
2-3/4	2.750 ^{+0.000} / _{-0.002}	2.762 ^{+0.004} / _{-0.000}	3.398 ^{+0.008} / _{-0.000}	3.245 ^{+0.005} / _{-0.000}	0.406 ^{+0.015} / _{-0.000}	0.229 ^{+0.010} / _{-0.000}	4300C5951A	4300BT25002750-375
3	3.000 ^{+0.000} / _{-0.002}	3.012 ^{+0.004} / _{-0.000}	3.646 ^{+0.008} / _{-0.000}	3.497 ^{+0.005} / _{-0.000}	0.406 ^{+0.015} / _{-0.000}	0.229 ^{+0.010} / _{-0.000}	4300C5913A	4300BT25003000-375
3-1/2	3.500 ^{+0.000} / _{-0.002}	3.512 ^{+0.004} / _{-0.000}	4.165 ^{+0.008} / _{-0.000}	4.000 ^{+0.005} / _{-0.000}	0.406 ^{+0.015} / _{-0.000}	0.229 ^{+0.010} / _{-0.000}	4300C5953A	4300BT25003500-375
4	4.000 ^{+0.000} / _{-0.002}	4.022 ^{+0.008} / _{-0.000}	4.665 ^{+0.008} / _{-0.000}	4.750 ^{+0.005} / _{-0.000}	0.688 ^{+0.015} / _{-0.000}	0.229 ^{+0.010} / _{-0.000}	4300C5955A	4300BT37504000-625

Rod and Piston Seals and Rod Wipers



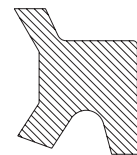
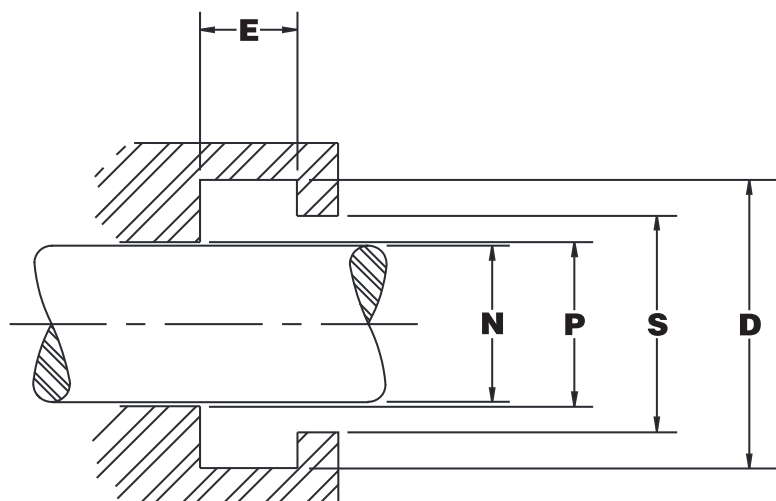
**8600 WIPER
TYPICAL PART NUMBER
4181860001000**

8600 WIPER PART NUMBER	NOMINAL PART SIZE	"N"		"P"		"S"		"D"		"E"	
		ROD		THROAT		DIAMETER		GROOVE		GROOVE	
		DIAMETER	TOLERANCE	DIAMETER	TOLERANCE	DIAMETER	TOLERANCE	DIAMETER	TOLERANCE	WIDTH	TOLERANCE
860000250	1/4	.250	+0.00/-0.001	.251	+0.02/-0.000	.370	+0.02/-0.000	.552	+0.02/-0.000	.203	+0.05/-0.000
860000312	5/16	.312	+0.00/-0.001	.313	+0.02/-0.000	.432	+0.02/-0.000	.614	+0.02/-0.000	.203	+0.05/-0.000
860000375	3/8	.375	+0.00/-0.001	.376	+0.02/-0.000	.495	+0.02/-0.000	.677	+0.02/-0.000	.203	+0.05/-0.000
860000437	7/16	.437	+0.00/-0.001	.438	+0.02/-0.000	.557	+0.02/-0.000	.739	+0.02/-0.000	.203	+0.05/-0.000
860000500	1/2	.500	+0.00/-0.001	.501	+0.02/-0.000	.620	+0.02/-0.000	.802	+0.02/-0.000	.203	+0.05/-0.000
860000562	9/16	.562	+0.00/-0.001	.563	+0.02/-0.000	.682	+0.02/-0.000	.864	+0.02/-0.000	.203	+0.05/-0.000
860000625	5/8	.625	+0.00/-0.001	.626	+0.02/-0.000	.745	+0.02/-0.000	.927	+0.02/-0.000	.203	+0.05/-0.000
860000687	11/16	.688	+0.00/-0.001	.689	+0.02/-0.000	.808	+0.02/-0.000	.990	+0.02/-0.000	.203	+0.05/-0.000
860000750	3/4	.750	+0.00/-0.001	.751	+0.02/-0.000	.870	+0.02/-0.000	1.052	+0.02/-0.000	.203	+0.05/-0.000
860000875	7/8	.875	+0.00/-0.001	.876	+0.02/-0.000	1.010	+0.02/-0.000	1.240	+0.02/-0.000	.218	+0.05/-0.000
860001000	1	1.000	+0.00/-0.001	1.001	+0.02/-0.000	1.135	+0.03/-0.000	1.365	+0.03/-0.000	.218	+0.05/-0.000
860001062	1-1/16	1.062	+0.00/-0.001	1.063	+0.02/-0.000	1.197	+0.03/-0.000	1.427	+0.03/-0.000	.218	+0.05/-0.000
860001125	1-1/8	1.125	+0.00/-0.001	1.126	+0.02/-0.000	1.260	+0.03/-0.000	1.490	+0.03/-0.000	.218	+0.05/-0.000
860001250	1-1/4	1.250	+0.00/-0.001	1.251	+0.02/-0.000	1.385	+0.03/-0.000	1.615	+0.03/-0.000	.218	+0.05/-0.000
860001312	1-5/16	1.312	+0.00/-0.001	1.313	+0.02/-0.000	1.447	+0.03/-0.000	1.667	+0.03/-0.000	.218	+0.05/-0.000
860001375	1-3/8	1.375	+0.00/-0.001	1.376	+0.02/-0.000	1.510	+0.03/-0.000	1.740	+0.03/-0.000	.218	+0.05/-0.000
860001500	1-1/2	1.500	+0.00/-0.001	1.501	+0.02/-0.000	1.635	+0.03/-0.000	1.865	+0.03/-0.000	.218	+0.05/-0.000
860001625	1-5/8	1.625	+0.00/-0.001	1.626	+0.02/-0.000	1.760	+0.03/-0.000	1.990	+0.03/-0.000	.218	+0.05/-0.000
860001750	1-3/4	1.750	+0.00/-0.001	1.751	+0.02/-0.000	1.885	+0.03/-0.000	2.115	+0.03/-0.000	.218	+0.05/-0.000
860001875	1-7/8	1.875	+0.00/-0.001	1.876	+0.02/-0.000	2.010	+0.03/-0.000	2.240	+0.03/-0.000	.218	+0.05/-0.000

NOTE: Not all Wiper sizes listed are tooled in all compounds. Compound 4181 (80 Durometer Nitrile) is the standard material. Other compounds available upon request. Special tooling may be required for other compounds. Nominal Rod Diameter to nearest fraction. Rod Diameter can vary from the dimension shown by +.005/-0.005. However, more effective wiping action and optimum life will result if close tolerances are held.

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Rod and Piston Seals and Rod Wipers



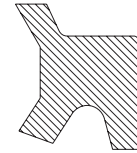
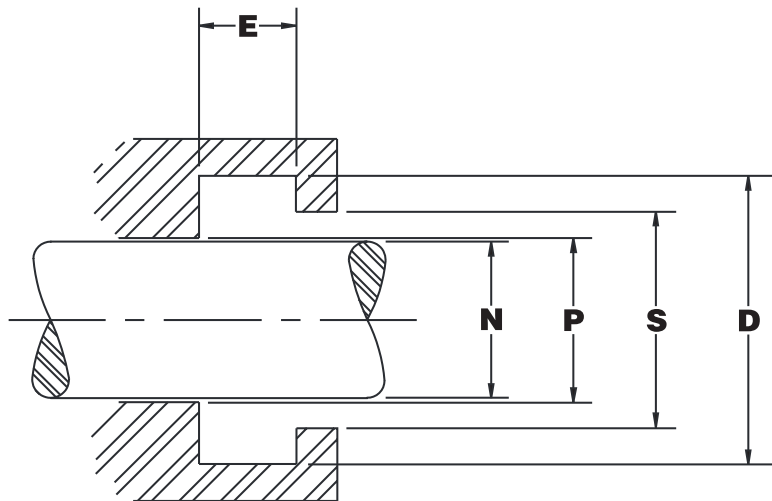
**8600 WIPER
TYPICAL PART NUMBER
4181860001000**

8600 WIPER PART NUMBER	NOMINAL PART SIZE	"N"		"P"		"S"		"D"		"E"	
		ROD DIAMETER	TOLERANCE	THROAT DIAMETER	TOLERANCE	DIAMETER	TOLERANCE	GROOVE DIAMETER	TOLERANCE	GROOVE WIDTH	TOLERANCE
860002000	2	2.000	+0.000/-0.001	2.001	+0.002/-0.000	2.135	+0.003/-0.000	2.365	+0.003/-0.000	.218	+0.005/-0.000
860002125	2-1/8	2.125	+0.000/-0.001	2.126	+0.002/-0.000	2.260	+0.003/-0.000	2.490	+0.003/-0.000	.218	+0.005/-0.000
860002187	2-3/16	2.188	+0.000/-0.001	2.189	+0.002/-0.000	2.323	+0.003/-0.000	2.683	+0.003/-0.000	.281	+0.005/-0.000
860002250	2-1/4	2.250	+0.000/-0.001	2.251	+0.002/-0.000	2.385	+0.003/-0.000	2.745	+0.003/-0.000	.281	+0.005/-0.000
860002437	2-7/16	2.437	+0.000/-0.001	2.438	+0.002/-0.000	2.572	+0.003/-0.000	2.932	+0.003/-0.000	.281	+0.005/-0.000
860002500	2-1/2	2.500	+0.000/-0.001	2.501	+0.002/-0.000	2.635	+0.003/-0.000	2.995	+0.003/-0.000	.281	+0.005/-0.000
860002687	2-11/16	2.688	+0.000/-0.001	2.689	+0.002/-0.000	2.823	+0.003/-0.000	3.183	+0.003/-0.000	.281	+0.005/-0.000
860002750	2-3/4	2.750	+0.000/-0.001	2.751	+0.002/-0.000	2.885	+0.003/-0.000	3.245	+0.003/-0.000	.281	+0.005/-0.000
860002875	2-7/8	2.875	+0.000/-0.001	2.876	+0.002/-0.000	3.010	+0.003/-0.000	3.370	+0.003/-0.000	.281	+0.005/-0.000
860002937	2-15/16	2.937	+0.000/-0.001	2.939	+0.002/-0.000	3.073	+0.003/-0.000	3.433	+0.003/-0.000	.281	+0.005/-0.000
860003000	3	3.000	+0.000/-0.002	3.001	+0.003/-0.000	3.135	+0.003/-0.000	3.495	+0.003/-0.000	.281	+0.005/-0.000
860003250	3-1/4	3.250	+0.000/-0.002	3.251	+0.003/-0.000	3.385	+0.003/-0.000	3.745	+0.003/-0.000	.281	+0.005/-0.000
860003437	3-7/16	3.437	+0.000/-0.002	3.439	+0.003/-0.000	3.573	+0.003/-0.000	3.933	+0.003/-0.000	.281	+0.005/-0.000
860003500	3-1/2	3.500	+0.000/-0.002	3.501	+0.003/-0.000	3.635	+0.003/-0.000	3.995	+0.003/-0.000	.281	+0.005/-0.000
860003687	3-11/16	3.688	+0.000/-0.002	3.689	+0.003/-0.000	3.823	+0.003/-0.000	4.183	+0.003/-0.000	.281	+0.005/-0.000
860003750	3-3/4	3.750	+0.000/-0.002	3.751	+0.003/-0.000	3.885	+0.003/-0.000	4.245	+0.003/-0.000	.281	+0.005/-0.000
860004000	4	4.000	+0.000/-0.002	4.001	+0.003/-0.000	4.135	+0.003/-0.000	4.495	+0.003/-0.000	.281	+0.005/-0.000
860004250	4-1/4	4.250	+0.000/-0.002	4.251	+0.003/-0.000	4.385	+0.003/-0.000	4.745	+0.003/-0.000	.281	+0.005/-0.000
860004437	4-7/16	4.437	+0.000/-0.002	4.439	+0.003/-0.000	4.573	+0.003/-0.000	4.933	+0.003/-0.000	.281	+0.005/-0.000
860004500	4-1/2	4.500	+0.000/-0.002	4.501	+0.003/-0.000	4.635	+0.003/-0.000	4.995	+0.003/-0.000	.281	+0.005/-0.000

NOTE: Not all Wiper sizes listed are tooled in all compounds. Compound 4181 (80 Durometer Nitrile) is the standard material. Other compounds available upon request. Special tooling may be required for other compounds. Nominal Rod Diameter to nearest fraction. Rod Diameter can vary from the dimension shown by +.005/-0.005. However, more effective wiping action and optimum life will result if close tolerances are held.

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Rod and Piston Seals and Rod Wipers



**8600 WIPER
TYPICAL PART NUMBER
4181860001000**

8600 WIPER PART NUMBER	NOMINAL PART SIZE	"N"		"P"		"S"		"D"		"E"	
		ROD		THROAT		DIAMETER		GROOVE		GROOVE	
		DIAMETER	TOLERANCE	DIAMETER	TOLERANCE	DIAMETER	TOLERANCE	DIAMETER	TOLERANCE	WIDTH	TOLERANCE
860005000	5	5.000	+0.000/-0.002	5.001	+0.003/-0.000	5.135	+0.003/-0.000	5.495	+0.003/-0.000	.281	+0.005/-0.000
860005187	5-3/16	5.187	+0.000/-0.002	5.189	+0.003/-0.000	5.323	+0.003/-0.000	5.683	+0.003/-0.000	.281	+0.005/-0.000
860005500	5-1/2	5.500	+0.000/-0.002	5.501	+0.003/-0.000	5.635	+0.003/-0.000	5.995	+0.003/-0.000	.281	+0.005/-0.000
860005625	5-5/8	5.625	+0.000/-0.002	5.626	+0.003/-0.000	5.760	+0.003/-0.000	6.120	+0.003/-0.000	.281	+0.005/-0.000
860006000	6	6.000	+0.000/-0.002	6.002	+0.003/-0.000	6.135	+0.003/-0.000	6.495	+0.003/-0.000	.281	+0.005/-0.000
860006375	6-3/8	6.375	+0.000/-0.002	6.377	+0.003/-0.000	6.510	+0.003/-0.000	6.870	+0.003/-0.000	.281	+0.005/-0.000
860006750	6-3/4	6.750	+0.000/-0.002	6.752	+0.003/-0.000	6.885	+0.003/-0.000	7.245	+0.003/-0.000	.281	+0.005/-0.000
860007000	7	7.000	+0.000/-0.002	7.002	+0.003/-0.000	7.135	+0.003/-0.000	7.495	+0.003/-0.000	.281	+0.005/-0.000
860007250	7-1/4	7.250	+0.000/-0.002	7.252	+0.003/-0.000	7.385	+0.003/-0.000	7.745	+0.003/-0.000	.281	+0.005/-0.000
860007750	7-3/4	7.750	+0.000/-0.002	7.752	+0.003/-0.000	7.885	+0.003/-0.000	8.245	+0.003/-0.000	.281	+0.005/-0.000
860008000	8	8.000	+0.000/-0.002	8.002	+0.003/-0.000	8.135	+0.003/-0.000	8.495	+0.003/-0.000	.281	+0.005/-0.000
860009000	9	9.000	+0.000/-0.002	9.002	+0.003/-0.000	9.135	+0.003/-0.000	9.495	+0.003/-0.000	.281	+0.005/-0.000
860010000	10	10.000	+0.000/-0.002	10.002	+0.003/-0.000	9.885	+0.003/-0.000	10.245	+0.003/-0.000	.281	+0.005/-0.000

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