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Parker offers a complete line of wear rings and bearing products to fit any application. Expertise in both engineered hard plastics and in PTFE makes Parker the global leader for reciprocating bearing materials. By incorporating premium material blends with precision machining tolerances (down to  $\pm 0.001$ "), Parker meets the full spectrum of needs, from heavy-duty hydraulic cylinders operating under the highest temperatures and pressures to pneumatic applications requiring low friction, long life and self-lubrication. Parker wear rings are the best way to combine high performance with economical value.

## Quality Assurance

All Parker wear ring product lines are available from ISO 9000 registered operations in Salt Lake City, Utah and Elgin, Illinois. As such, wear ring production is governed by rigorous quality standards and procedures through a highly trained and qualified workforce. With the assistance of precise, accurate measurement systems and detailed workmanship criteria, Parker delivers first class quality and consistency in every shipment.

## Manufacturing Excellence

Parker wear rings utilize a precision manufacturing process that achieves precise flatness on the bearing surfaces, whereas conventional net-molded bearings can form "dog bone" cross-sections. The result is optimal bearing contact area and compressive strength. The cross-sections shown at left illustrate the differences between these manufacturing methods.

Additionally, available sizing is not limited to existing tooling. Our processes allow for virtually any width to be produced without assessing a setup charge.

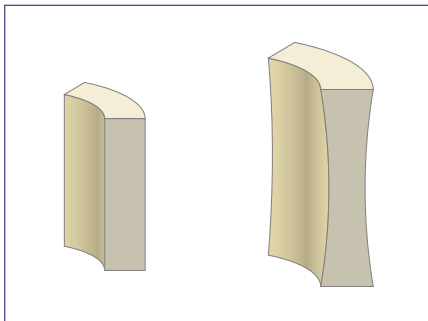


Figure 9-1. Parker's Precision-Manufactured Cross-Section (left) vs. Conventional Net-Molded Cross-Section (right).

## Features, Advantages and Benefits

Table 9-1.

Feature	Advantage	Benefit
Dynamic bearing surface contact	Eliminates metal-to-metal contact between components	Prevents rod, piston and seal damage due to scoring and reduces warranty costs
Precision-manufactured cross-section	Enables tighter hardware clearances than conventional wear rings	Increases seal life by reducing extrusion gaps associated with conventional wear rings
Low-friction, premium materials	Reduces frictional heat build-up	Lowers operating temperature and increases seal life
Precise flatness on bearing surface	Maximizes bearing contact area and compressive strength, eliminating the "dog bone" effect of conventional wear rings	Prolongs cylinder life through uniform sideload resistance
Advanced, high performance, polymeric materials	Metal particulates and other contaminants can be imbedded in the wear ring material	Increases cylinder life by helping to protect seals from contamination

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## FAQs

There are many factors to consider when designing a system. Following are the frequently asked questions regarding bearing design and choosing the right wear ring.

### What is the performance difference between standard-tolerance and tight-tolerance wear rings?

Standard-tolerance wear rings have a radial wall tolerance that is held to  $\pm 0.0025$ ", while tight-tolerance wear rings are held to  $\pm 0.001$ " (under 6"). Tight-tolerance wear rings allow for a more precise fit of components, resulting in less dimensional "play." This allows the extrusion gap to be smaller for tight-tolerance wear rings, thus increasing the seal's pressure rating beyond that of standard-tolerance wear rings. This becomes very important at high temperatures, where pressure ratings of materials can further be reduced. Although it is critical to consider every aspect of each application, a general guideline for product selection can be found in Table 9-2 on page 9-5.

### Wear ring grooves call for larger extrusion gaps. How does this affect the seals' pressure rating?

Since wear rings are used to eliminate metal-to-metal contact between moving parts, there must be a larger gap between them, thus causing a wider extrusion gap. As a result, the seal's pressure ratings will decrease. Pre-established gland dimensions outlined in this catalog always result in a minimum 0.005" clearance for metal components. As such, standard-tolerance wear rings can reduce a seal's pressure capability by up to 50%. Using tight-tolerance wear rings enables the extrusion gaps to be held closer, and the seal's pressure ratings are only reduced by up to 30%. In either case, it is important to select proper seal and back-up materials to accommodate the increased extrusion gaps. Alternatively, Parker Integrated Pistons™ boost performance by providing all of the benefits of wear rings without any increase in extrusion gap whatsoever.

For applications where the seals will be stressed toward their maximum capabilities, gland dimensions can be developed using the equations that accompany each profile. Use these equations to apply desired machining tolerances and clearances. It is critical when determining metal-to-metal clearances to consider the material's compressive properties, which can be found on page 9-5. It is equally important to evaluate how the applied tolerances will affect the seals' extrusion gap. Please contact Parker or your authorized distributor for assistance in developing alternate gland dimensions.

### How is a proper bearing width selected?

When selecting a bearing width, it is crucial to evaluate the side loads that the bearings will have to withstand. Figure 9-2 shows the total pressure area,  $A_p$ , that a radial force from a side load will affect. Area,  $A_p$ , is calculated as follows:

$$A_p = \text{Ø}D \times W$$

where  $D$  is the bearing O.D. for pistons or the bearing I.D. for rods, and  $W$  is the bearing width.

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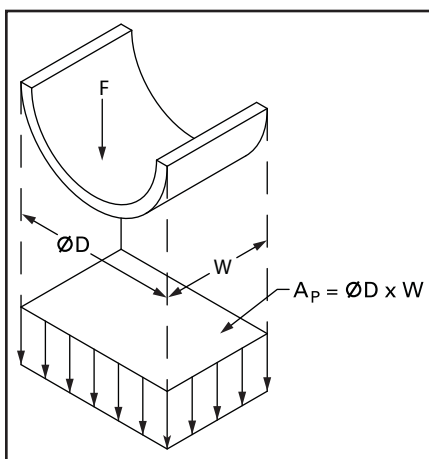


Figure 9-2: Total affected pressure area,  $A_p$

It is important to note that the pressure distribution will not be equally dispersed across this area. Instead, the pressure profile takes the form shown in Figure 9-3. The assumed load-bearing area,  $A_L$ , can be calculated as follows:

$$A_L = \frac{A_p}{5} = \frac{\text{Ø}D \times W}{5}$$

To calculate the allowable radial force,  $F$ , simply multiply the load-bearing area,  $A_L$ , by the permissible compressive load (compressive strength) of the material,  $q$ , and divide by the desired factor of safety,  $FS$ .

To calculate the proper bearing width,  $W$ , based on a known radial force:

$$W = \frac{5 \times F}{\text{Ø}D \times q} \times FS$$

Once  $W$  is calculated, round up to the next nominal width (1/8" increments).

To calculate the allowable radial force,  $F$ , based on a known bearing width:

$$F = \frac{A_L \times q}{FS} = \frac{\text{Ø}D \times W \times q}{5 \times FS}$$

Compressive Strength,  $q$ , can be found in the material properties tables on page 9-5. This value is based upon known material deflection at 73°F and at a specified load. Parker recommends a factor of safety,  $FS$ , of at least 3 to account for changes in physical properties due to increases in system temperature.

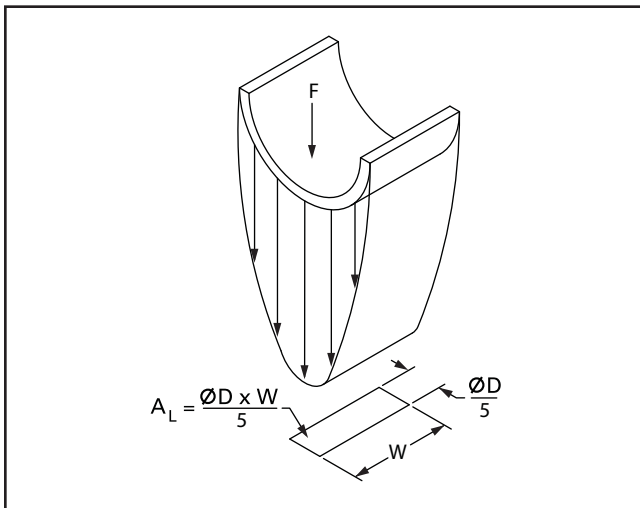


Figure 9-3: Load distribution of radial force,  $F$ , and effective load area,  $A_L$ .

If additional assistance is required, please contact Parker or your authorized distributor.

### What fluids are wear rings typically compatible with?

MolyGard® and WearGard™ compounds are compatible with petroleum-based hydraulic fluids, transmission fluids, phosphate esters, and many other fluids. PTFE compounds 0401, 0307, and others have outstanding chemical compatibility with a wide range of fluids. Please contact Parker for specific inquiries.

### How does moisture affect wear rings?

Due to nylon's inherent swelling in water, it is recommended that WearGard and MolyGard not be used in applications where water or moisture is present. Filled PTFE compounds or other alternative materials such as polyacetal and composite resins are recommended in such scenarios and are available from Parker.

### Where should the wear ring be installed relative to the seals?

Wear rings should always be installed on the lubrication (wet) side of the seal for best performance. For rod glands, the wear ring should be on the pressure side of the rod seal. For pistons, if only one bearing is to be used, it should be on the side of the piston opposite the rod. This arrangement keeps the piston wear ring further away from the rod wear ring. This becomes critical when the rod is at full extension and provides better leveraging of the two bearing surfaces.

### Which end cut should be used?

There are three types of end cuts available: butt cut, angle cut and step cut. The butt cut is the most common and most economical cut. Angle cuts and step cuts provide added performance by ensuring bearing area overlap at the wear ring's gap. In certain applications, step cut wear rings can be used as buffer seals, protecting the seal from pressure spikes. Figure 9-4 illustrates these three options.

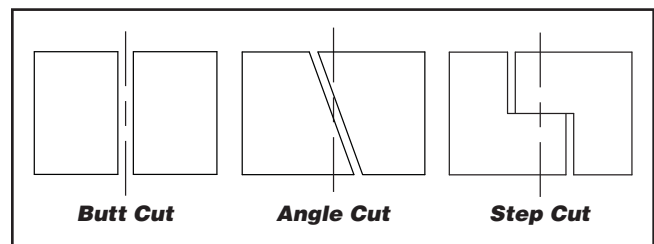
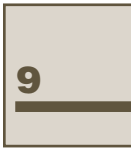


Figure 9-4: End Cuts



# Wear Rings / Bearings Materials

Catalog EPS 5370/USA

## Parker Bearing Materials

Parker bearing materials are backed by over 30 years of manufacturing expertise both in engineered hard plastics and PTFE. Our WearGard™ and MolyGard® strength characteristics meet or exceed most metals traditionally used in wear rings. While many compounds are available, the most commonly used bearing materials are WearGard, MolyGard and filled PTFE (featured at right).



Parker also offers other engineered bearing materials for specialized applications demanding higher temperatures and sideloads. Parker's UltraComp™ CGT (PEEK) provides high temperature bearing performance up to 500°F. Composite, fabric-reinforced resins are also available to accommodate sideloads far more severe than glass-loaded nylon compounds can withstand. Composite resins also resist moisture swell in water-glycol emulsions and other water-based fluids. Polyacetal, Molybdenum Disulfide, Nylatron® and many different PTFE filler combinations are also available for specialized applications. Please contact Parker or your authorized distributor for assistance in selecting alternative bearing materials.

### W4733 — WearGard™

Heat stabilized, internally lubricated, 35% glass-reinforced nylon for tight-tolerance wear rings. WearGard is the premium material for the most severe applications due to its dimensional stability, high compressive strength and Parker's proprietary internal lubrication for reduced friction. WearGard is an extremely high endurance compound, retaining its physical properties without degradation. WearGard also features Parker's distinctive green coloring and is available in the WPT and WRT profiles.

### W4650 — MolyGard®

Heat stabilized, internally lubricated, 30% glass-reinforced nylon for standard-tolerance wear rings. Very similar physical properties to WearGard, but with an economical advantage. MolyGard is for use in light to medium duty hydraulic applications. Available in the WN profile.

### 0401 — 40% Bronze-Filled PTFE

Primarily used in light duty hydraulic applications, this self-lubricated, long-wearing material offers superior frictional characteristics and high temperature capabilities. Not recommended for use with aluminum bores and soft metal rods or in applications involving moderate to heavy sideloads. Available in the PDT and PDW profiles.

### 0307 — 23% Carbon, 2% Graphite-Filled PTFE

The most popular material for pneumatic applications, this self-lubricated compound ensures long life, low friction and high temperature capabilities. The carbon-graphite fillers allow for outstanding performance without the risk of scratching or scoring soft metal surfaces. Available in the PDT and PDW profiles.

Nylatron® is a registered trademark of  
The Polymer Corporation, Reading, PA.

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Table 9-2. Physical and Mechanical Properties of Engineered Plastics

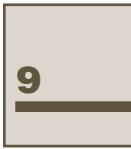
Property	Unit	W4733	W4650	W4738	Test Method
		WearGard™ 35% Glass-Reinforced Nylon	MolyGard® 30% Glass-Reinforced Nylon	UltraCOMP™ CGT PEEK 10% Carbon-, 10% Graphite-, 10% PTFE-filled	
Compressive Strength, $q$	psi	21500	21000	21700	ASTM D695, 73°F
Tensile Strength	psi	18300	17500	20400	ASTM D638, 73°F
Tensile Modulus	Kpsi	899	952	—	ASTM D638, 73°F
Shear Strength	psi	9820	9390	—	ASTM D732, 73°F
Flexural Strength	psi	25500	22600	33400	ASTM D790, 73°F
Flexural Modulus	Kpsi	1100	860	1175	ASTM D790, 73°F
Notched IZOD Impact Strength	Ft-Lbs/in	1.15	1.37	1.69	ASTM D256, 73°F
Deformation Under Load	%	0.4	0.6	—	ASTM D621, 24 hrs @ 4000 psi, 73°F
Water Absorption	%	0.5	0.8	0.06	24 hour immersion, ASTM D570, 73°F
Temperature Range	°F	-65 to +275	-65 to +275	-65 to +500	—
Rockwell Hardness	M Scale	87	77	100	ASTM D785
	R Scale	117	114	—	ASTM D785

Table 9-3. Physical and Mechanical Properties of PTFE Compounds

Property	Unit	0401	0307	Test Method
		40% Bronze-Filled PTFE	23% Carbon-, 2% Graphite-Filled PTFE	
Compressive Strength, $q$	psi	9400	3600	ASTM D695, 73°F
Tensile Strength	psi	3200	2250	ASTM D1457-81A
Elongation	%	250	100	ASTM D4894
Deformation Under Load	%	3.1	2.5	ASTM D621, 24 hrs @ 2000 psi, 70°F
<b>Coefficient of Friction</b>	—	0.23	0.24	ASTM D3702
Temperature Range	°F	-200 to +575	-360 to +575	—
Shore D Hardness	—	65	64	ASTM D2240-75

Table 9-4. Physical and Mechanical Properties of Composite Fabric-Reinforced Resins

Property	Unit	0810	0811	0812	0813	Test Method
		Standard Polyester Based with PTFE	Graphite Filled Polyester Based	MOS <sub>2</sub> Filled Polyester Based	PTFE Filled Polyester Based	
Compressive Strength, $q$	psi	50000	50000	50000	50000	ASTM D695, 73°F
Tensile Strength	psi	11000	11000	11000	11000	ASTM D638, 73°F
Tensile Modulus	Kpsi	500	500	500	500	ASTM D638, 73°F
<b>Coefficient of Friction</b>	—	0.13 - 0.20	0.15 - 0.20	0.15 - 0.20	0.13 - 0.20	ASTM D790, 73°F
Water Absorption	%	0.1	0.1	0.1	0.1	24 hour immersion, ASTM D570, 73°F
Temperature Range	°F	-40 to +200	-40 to +200	-40 to +400	-40 to +400	—
Rockwell M Hardness	—	100	100	100	100	ASTM D785



# Wear Rings / Bearings Product Offering

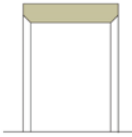



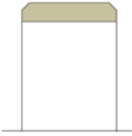



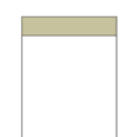


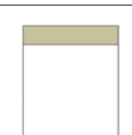


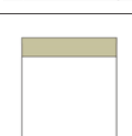


Catalog EPS 5370/USA

## Product Line

No matter what the application demands, Parker's diverse bearing product line ensures that performance requirements are met with maximized value. When pressure and temperature reach their extremes, WPT and WRT profiles help reduce the seal extrusion gap, assuring the utmost seal performance and leakage control. Conversely, in high volume, light-duty hydraulic cylinders, where pressure and temperature are not excessive, Parker's WN profile stands out as the most economical choice for long-lasting piston and rod bearings. When frictional forces must be kept to a minimum in pneumatic applications, PTFE bearing profiles PDT and PDW provide precision fitting and minimal frictional losses.

## Profiles

**Table 9-4: Product Profiles**

Series	Description	Application (Duty)				Page
		Light	Medium	Heavy	Pneumatic	
WPT 	Tight-Tolerance Piston Wear Rings					9-7
WRT 	Tight-Tolerance Rod Wear Rings					9-11
WN 	Commercial Wear Rings for Rod and Piston					9-14
PDT 	PTFE Wear Strip for Rod and Piston					9-18
PDW 	PTFE Machined Wear Rings for Rod and Piston					9-27

# Wear Ring / Bearing

## WPT Profile

Catalog EPS 5370/USA



### WPT Profile, Tight-Tolerance Piston Wear Ring

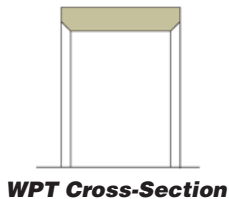
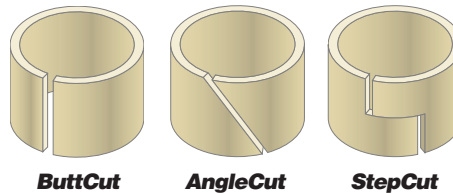
WPT tight-tolerance piston wear rings are the premier bearings for light- to heavy-duty hydraulic applications. WPTs are available in standard sizes from 1" up to 12" bore diameters (larger sizes upon request). WPT wear rings feature chamfered corners on the I.D. and are designed to snap closed during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

### Technical Data

Standard Material  
W4733 WearGard™

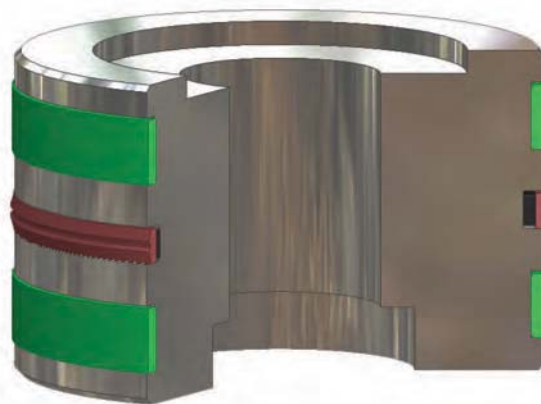
Radial Tolerance  
+.000"/-.002" (up to 6" O.D.); +.000/-.003" (6" to 12" O.D.)

End Cuts  
Butt Cut, Angle Cut, Step Cut



### Options

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

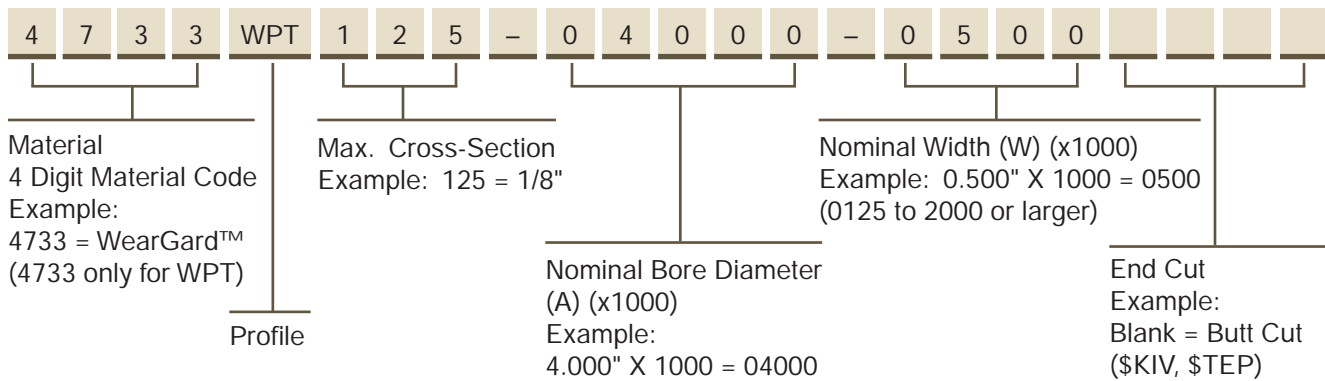


**Piston sealing system  
comprised of WPT wear rings and  
BP bi-directional piston seal**

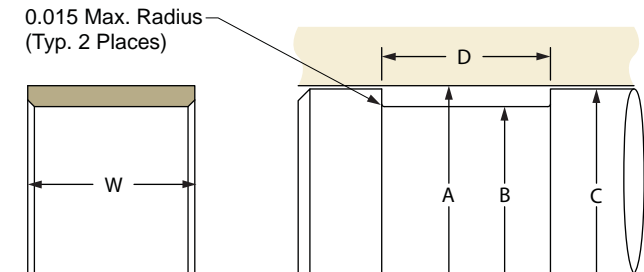
## WPT Profile

### Part Number Nomenclature — WPT Profile

Table 9-5. WPT Profile



### Gland Dimensions — WPT Profile



Please refer to Engineering Section 2, page 2-8 for **surface finish and additional hardware considerations.**

Table 9-6. WPT Gland Dimensions — Inch

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

For custom groove calculations, see Appendix C.

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Table 9-6. WPT Gland Dimensions — Inch (Continued)

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

For custom groove calculations, see Appendix C.

**WPT Profile**

Table 9-6. WPT Gland Dimensions Inch (Continued)

A Bore Diameter	B Groove Diameter	C Piston Diameter	D Groove Width	Part Number
+ .006/- .000	+ .000/- .004	+ .000/- .004	+ .010/- .000	
8.000	7.749	7.979	D = W + 0.010"	4733WPT125-08000-XXXX
8.500	8.249	8.479	D = W + 0.010"	4733WPT125-08500-XXXX
+ .006/- .000	+ .000/- .004	+ .000/- .004	+ .010/- .000	
9.000	8.749	8.979	D = W + 0.010"	4733WPT125-09000-XXXX
9.500	9.249	9.479	D = W + 0.010"	4733WPT125-09500-XXXX
10.000	9.749	9.979	D = W + 0.010"	4733WPT125-10000-XXXX
10.500	10.249	10.479	D = W + 0.010"	4733WPT125-10500-XXXX
+ .006/- .000	+ .000/- .004	+ .000/- .004	+ .010/- .000	
11.000	10.749	10.979	D = W + 0.010"	4733WPT125-11000-XXXX
11.500	11.249	11.479	D = W + 0.010"	4733WPT125-11500-XXXX
12.000	11.749	11.979	D = W + 0.010"	4733WPT125-12000-XXXX

For custom groove calculations, see Appendix C.

NOTE: For sizes larger than those shown in the table, please contact your local Parker Seal representative.

**WPT Groove Calculation**

See Piston Wear Ring Groove Calculation in Appendix C.

# Wear Ring / Bearing

## WRT Profile

Catalog EPS 5370/USA



### WRT Profile, Tight-Tolerance Rod Wear Ring

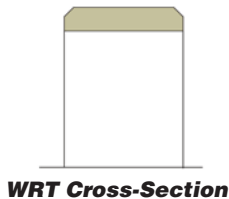
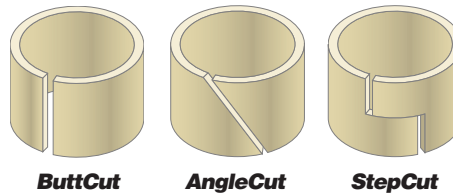
WRT tight-tolerance rod wear rings, when combined with the WPT profile, complete the premier cylinder bearing system. Recommended for light- to heavy-duty hydraulic applications, they are available in standard sizes from 7/8" up to 7" rod diameters (larger sizes upon request). WRTs feature chamfered corners on the O.D. and are designed to snap open during assembly to hold tight against the head gland, eliminating rod interference and simplifying installation.

### Technical Data

Standard Material  
W4733 WearGard™

Radial Tolerance  
+.000"/-.002" (up to 5-3/4" I.D.); +.000"/-.003" (5-3/4" to 7" I.D.)

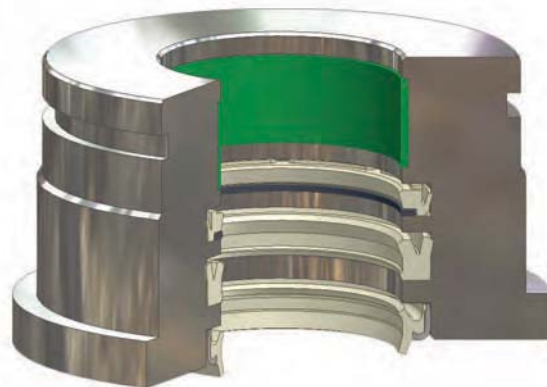
End Cuts  
Butt Cut, Angle Cut, Step Cut



**WRT Cross-Section**

### Options

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



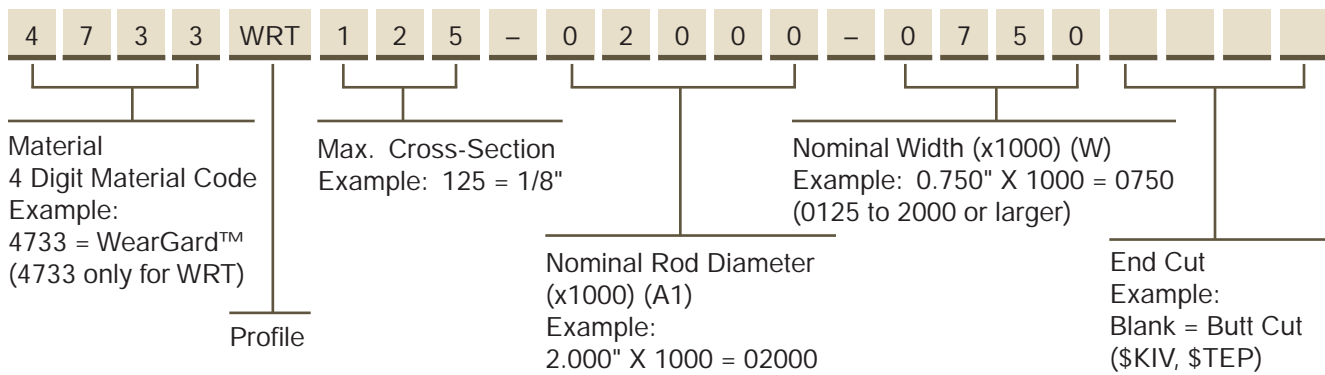
**Rod sealing system comprised of  
WRT wearing, BR buffering assembly,  
BT u-cup and AH canned wiper**

09/01/07

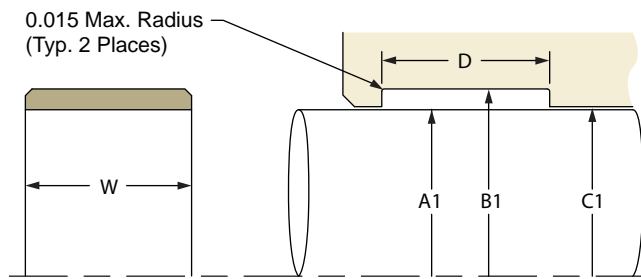
# WRT Profile

## Part Number Nomenclature — WRT Profile

Table 9-7. WRT Profile



## Gland Dimensions — WRT Profile



Please refer to Engineering Section 2, page 2-8 for **surface finish and additional hardware considerations.**

Table 9-8. WRT Gland Dimensions — Inch

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

For custom groove calculations, see Appendix C.

04/01/12



Table 9-8. WRT Gland Dimensions — Inch (Continued)

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

For custom groove calculations, see Appendix C.

NOTE: For sizes larger than those shown in the table, please contact your local Parker representative.

## WRT Groove Calculation

See Rod Wear-Ring Groove Calculation in Appendix C.

# Wear Ring / Bearing WN Profile

Catalog EPS 5370/USA

## WN Profile, Commercial Wear Ring



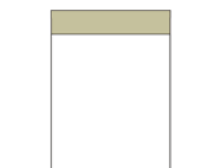
WN commercial wear rings can be used for either pistons or rods and are the most economical bearing solution for light- to medium-duty hydraulic applications. MolyGard® bearing material offers the combination of long life and high strength. WNs are available in standard sizes (1/8" cross-section) from 3/4" up to 11-3/4" rod diameters and 1" to 12" bore diameters (larger sizes upon request).

### Technical Data

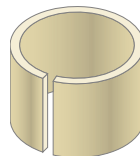
Standard Material  
W4650 MolyGard

Radial Tolerance  
+.000"/-.005"

End Cuts  
Butt Cut only



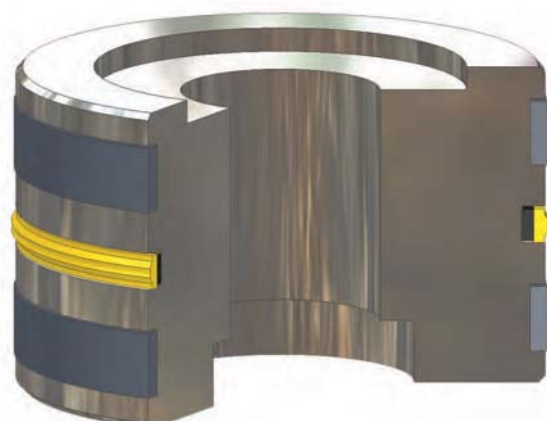
**WN Cross-Section**



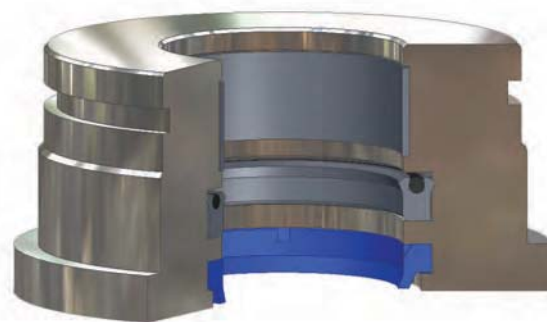
**ButtCut**

### Options

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



**Piston sealing system comprised of WN wear rings and PSP bi-directional piston seal**

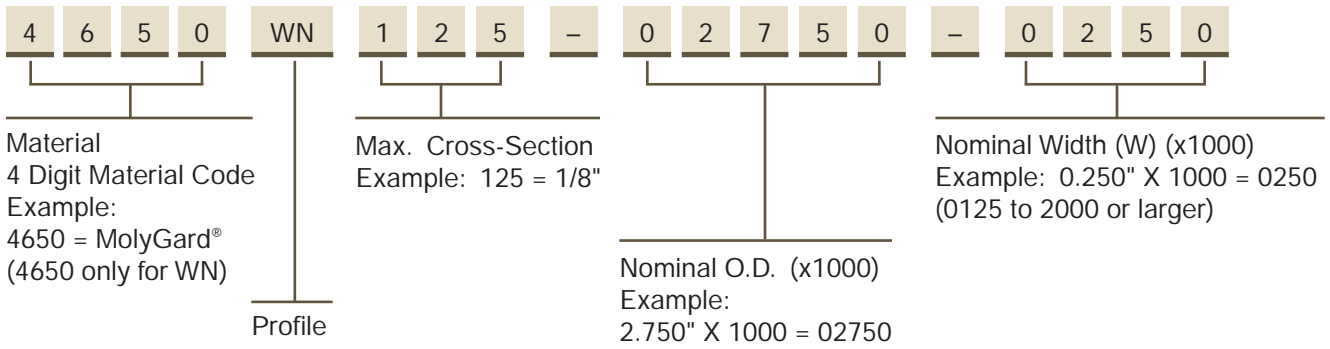


**Rod sealing system comprised of WN wear ring, Type B PolyPak and SHD wiper**

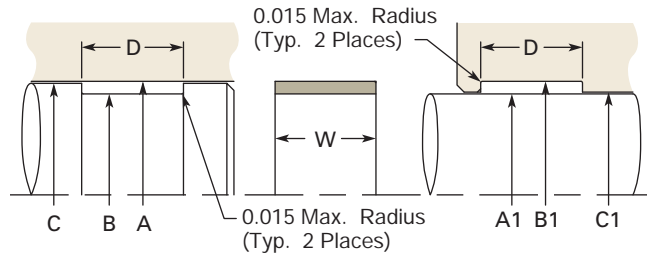
09/01/07

**Part Number Nomenclature — WN Profile**

**Table 9-9. WN Profile**



**Gland Dimensions — WN Profile**



Please refer to Engineering Section 2, page 2-8 for **surface finish and additional hardware considerations.**

**Table 9-10. WN Gland Dimensions — Inch**

Piston			Rod			D Groove Width	Part Number
A Bore Diameter	B Groove Diameter	C Piston Diameter	A1 Rod Diameter	B1 Groove Diameter	C1 Throat Diameter		
+ .002/- .000	+ .000/- .002	+ .000/- .002	+ .000/- .002	+ .002/- .000	+ .002/- .000	+ .010/- .000	
1.000	0.875	0.977	0.875	1.000	0.898	D = W + 0.010"	<b>4650WN062-01000-XXXX</b>
1.125	1.000	1.102	1.000	1.125	1.023	D = W + 0.010"	<b>4650WN062-01125-XXXX</b>
1.250	1.125	1.227	1.125	1.250	1.148	D = W + 0.010"	<b>4650WN062-01250-XXXX</b>
1.375	1.250	1.352	1.250	1.375	1.273	D = W + 0.010"	<b>4650WN062-01375-XXXX</b>
1.500	1.375	1.477	1.375	1.500	1.398	D = W + 0.010"	<b>4650WN062-01500-XXXX</b>
1.625	1.500	1.602	1.500	1.625	1.523	D = W + 0.010"	<b>4650WN062-01625-XXXX</b>
1.750	1.625	1.727	1.625	1.750	1.648	D = W + 0.010"	<b>4650WN062-01750-XXXX</b>
1.875	1.750	1.852	1.750	1.875	1.773	D = W + 0.010"	<b>4650WN062-01875-XXXX</b>
2.375	2.250	2.352	2.250	2.375	2.273	D = W + 0.010"	4650WN062-02375-XXXX
2.625	2.500	2.602	2.500	2.625	2.523	D = W + 0.010"	<b>4650WN062-02625-XXXX</b>
+ .002/- .000	+ .000/- .002	+ .000/- .002	+ .000/- .002	+ .002/- .000	+ .002/- .000	+ .010/- .000	
1.000	0.749	0.977	0.750	1.001	0.773	D = W + 0.010"	<b>4650WN125-01000-XXXX</b>
1.125	0.874	1.102	0.875	1.126	0.898	D = W + 0.010"	4650WN125-01125-XXXX
1.250	0.999	1.227	1.000	1.251	1.023	D = W + 0.010"	<b>4650WN125-01250-XXXX</b>
1.375	1.124	1.352	1.125	1.376	1.148	D = W + 0.010"	<b>4650WN125-01375-XXXX</b>
1.500	1.249	1.477	1.250	1.501	1.273	D = W + 0.010"	<b>4650WN125-01500-XXXX</b>
1.625	1.374	1.602	1.375	1.626	1.398	D = W + 0.010"	<b>4650WN125-01625-XXXX</b>
1.750	1.499	1.727	1.500	1.751	1.523	D = W + 0.010"	<b>4650WN125-01750-XXXX</b>
1.875	1.624	1.852	1.625	1.876	1.648	D = W + 0.010"	<b>4650WN125-01875-XXXX</b>

For custom groove calculations, see Appendix C.

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**WN Profile**

Table 9-10. WN Gland Dimensions — Inch (Continued)

Piston			Rod			D Groove Width	Part Number
A Bore Diameter	B Groove Diameter	C Piston Diameter	A1 Rod Diameter	B1 Groove Diameter	C1 Throat Diameter		
+ .002/- .000	+ .000/- .002	+ .000/- .002	+ .000/- .002	+ .002/- .000	+ .002/- .000	+ .010/- .000	
2.000	1.749	1.977	1.750	2.001	1.773	D = W + 0.010"	4650WN125-02000-XXXX
2.125	1.874	2.102	1.875	2.126	1.898	D = W + 0.010"	4650WN125-02125-XXXX
2.250	1.999	2.227	2.000	2.251	2.023	D = W + 0.010"	4650WN125-02250-XXXX
2.375	2.124	2.352	2.125	2.376	2.148	D = W + 0.010"	4650WN125-02375-XXXX
2.500	2.249	2.477	2.250	2.501	2.273	D = W + 0.010"	4650WN125-02500-XXXX
2.625	2.374	2.602	2.375	2.626	2.398	D = W + 0.010"	4650WN125-02625-XXXX
2.750	2.499	2.727	2.500	2.751	2.523	D = W + 0.010"	4650WN125-02750-XXXX
2.875	2.624	2.852	2.625	2.876	2.648	D = W + 0.010"	4650WN125-02875-XXXX
3.000	2.749	2.977	2.750	3.001	2.773	D = W + 0.010"	4650WN125-03000-XXXX
3.125	2.874	3.102	2.875	3.126	2.898	D = W + 0.010"	4650WN125-03125-XXXX
3.250	2.999	3.227	3.000	3.251	3.023	D = W + 0.010"	4650WN125-03250-XXXX
3.375	3.124	3.352	3.125	3.376	3.148	D = W + 0.010"	4650WN125-03375-XXXX
3.500	3.249	3.477	3.250	3.501	3.273	D = W + 0.010"	4650WN125-03500-XXXX
3.625	3.374	3.602	3.375	3.626	3.398	D = W + 0.010"	4650WN125-03625-XXXX
3.750	3.499	3.727	3.500	3.751	3.523	D = W + 0.010"	4650WN125-03750-XXXX
3.875	3.624	3.852	3.625	3.876	3.648	D = W + 0.010"	4650WN125-03875-XXXX
3.937	3.687	3.914	3.687	3.939	3.711	D = W + 0.010"	4650WN125-03937-XXXX
4.000	3.749	3.977	3.750	4.001	3.773	D = W + 0.010"	4650WN125-04000-XXXX
4.125	3.874	4.102	3.875	4.126	3.898	D = W + 0.010"	4650WN125-04125-XXXX
4.250	3.999	4.227	4.000	4.251	4.023	D = W + 0.010"	4650WN125-04250-XXXX
4.375	4.124	4.352	4.125	4.376	4.148	D = W + 0.010"	4650WN125-04375-XXXX
4.500	4.249	4.477	4.250	4.501	4.273	D = W + 0.010"	4650WN125-04500-XXXX
4.625	4.374	4.602	4.375	4.626	4.398	D = W + 0.010"	4650WN125-04625-XXXX
4.750	4.499	4.727	4.500	4.751	4.523	D = W + 0.010"	4650WN125-04750-XXXX
4.875	4.624	4.852	4.625	4.876	4.648	D = W + 0.010"	4650WN125-04875-XXXX
+ .004/- .000	+ .000/- .003	+ .000/- .003	+ .000/- .004	+ .003/- .000	+ .003/- .000	+ .010/- .000	
5.000	4.749	4.976	4.750	5.001	4.774	D = W + 0.010"	4650WN125-05000-XXXX
5.125	4.874	5.101	4.875	5.126	4.899	D = W + 0.010"	4650WN125-05125-XXXX
5.250	4.999	5.226	5.000	5.251	5.024	D = W + 0.010"	4650WN125-05250-XXXX
5.375	5.124	5.351	5.125	5.376	5.149	D = W + 0.010"	4650WN125-05375-XXXX
5.500	5.249	5.476	5.250	5.501	5.274	D = W + 0.010"	4650WN125-05500-XXXX
5.625	5.374	5.601	5.375	5.626	5.399	D = W + 0.010"	4650WN125-05625-XXXX
5.750	5.499	5.726	5.500	5.751	5.524	D = W + 0.010"	4650WN125-05750-XXXX
6.000	5.749	5.976	5.750	6.001	5.774	D = W + 0.010"	4650WN125-06000-XXXX
6.250	5.999	6.226	6.000	6.251	6.024	D = W + 0.010"	4650WN125-06250-XXXX
6.375	6.124	6.351	6.125	6.376	6.149	D = W + 0.010"	4650WN125-06375-XXXX
6.500	6.249	6.476	6.250	6.501	6.274	D = W + 0.010"	4650WN125-06500-XXXX
6.750	6.499	6.726	6.500	6.751	6.524	D = W + 0.010"	4650WN125-06750-XXXX
6.875	6.624	6.851	6.625	6.876	6.649	D = W + 0.010"	4650WN125-06875-XXXX
7.000	6.749	6.976	6.750	7.001	6.774	D = W + 0.010"	4650WN125-07000-XXXX
7.250	6.999	7.226	7.000	7.251	7.024	D = W + 0.010"	4650WN125-07250-XXXX

For custom groove calculations, see Appendix C.





Table 9-10. WN Gland Dimensions — Inch (Continued)

Piston			Rod			D Groove Width	Part Number
A Bore Diameter	B Groove Diameter	C Piston Diameter	A1 Rod Diameter	B1 Groove Diameter	C1 Throat Diameter		
+ .004/- .000	+ .000/- .003	+ .000/- .003	+ .000/- .004	+ .003/- .000	+ .003/- .000	+ .010/- .000	
7.313	7.062	7.289	7.063	7.314	7.087	D = W + 0.010"	<b>4650WN125-07312-XXXX</b>
7.500	7.249	7.476	7.250	7.501	7.274	D = W + 0.010"	<b>4650WN125-07500-XXXX</b>
7.750	7.499	7.726	7.500	7.751	7.524	D = W + 0.010"	<b>4650WN125-07750-XXXX</b>
+ .006/- .000	+ .000/- .004	+ .000/- .004	+ .000/- .006	+ .004/- .000	+ .004/- .000	+ .010/- .000	
8.000	7.749	7.975	7.750	8.001	7.775	D = W + 0.010"	<b>4650WN125-08000-XXXX</b>
8.250	7.999	8.225	8.000	8.251	8.025	D = W + 0.010"	<b>4650WN125-08250-XXXX</b>
8.500	8.249	8.475	8.250	8.501	8.275	D = W + 0.010"	<b>4650WN125-08500-XXXX</b>
8.750	8.499	8.725	8.500	8.751	8.525	D = W + 0.010"	<b>4650WN125-08750-XXXX</b>
9.000	8.749	8.975	8.750	9.001	8.775	D = W + 0.010"	<b>4650WN125-09000-XXXX</b>
9.250	8.999	9.225	9.000	9.251	9.025	D = W + 0.010"	<b>4650WN125-09250-XXXX</b>
9.500	9.249	9.475	9.250	9.501	9.275	D = W + 0.010"	<b>4650WN125-09500-XXXX</b>
10.000	9.749	9.975	9.750	10.001	9.775	D = W + 0.010"	<b>4650WN125-10000-XXXX</b>
10.500	10.249	10.475	10.250	10.501	10.275	D = W + 0.010"	4650WN125-10500-XXXX
10.625	10.374	10.600	10.375	10.626	10.400	D = W + 0.010"	<b>4650WN125-10625-XXXX</b>
11.000	10.749	10.975	10.750	11.001	10.775	D = W + 0.010"	<b>4650WN125-11000-XXXX</b>
11.500	11.249	11.475	11.250	11.501	11.275	D = W + 0.010"	<b>4650WN125-11500-XXXX</b>
12.000	11.749	11.975	11.750	12.001	11.775	D = W + 0.010"	<b>4650WN125-12000-XXXX</b>

For custom groove calculations, see Appendix C.

NOTE: For sizes larger than those shown in the table, please contact your local Parker Seal representative.

## WN Groove Calculation

See Piston and Rod Wear Ring Groove Calculations in Appendix C.

# Wear Ring / Bearing PDT Profile

Catalog EPS 5370/USA

## PDT Profile, PTFE Wear Strip for Rod and Piston



PDT wear strip is available in a variety of PTFE blends and provides excellent low-friction performance in pneumatics and light-duty hydraulics. PDTs are available in cut-to-length versions as well as bulk strip. Cut-to-length part numbers reduce prep time by providing precision end cuts and ready-to-install diameters. Bulk strip PDTs offer versatility and reduce part number inventory by providing universal sizing in one part number.

## Technical Data

### Standard Material

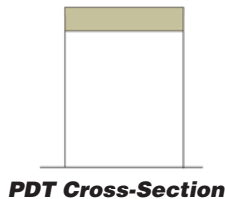
- 0401 – 40% Bronze-Filled PTFE
- 0307 – 23% Carbon, 2% Graphite-Filled PTFE
- Others available upon request

### Radial Tolerance

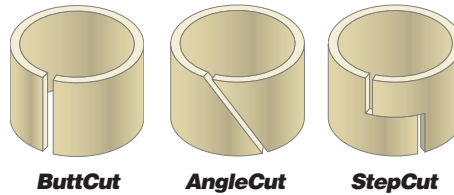
+.000"/-.004"

### End Cuts

Butt Cut, Angle Cut, Step Cut



**PDT Cross-Section**



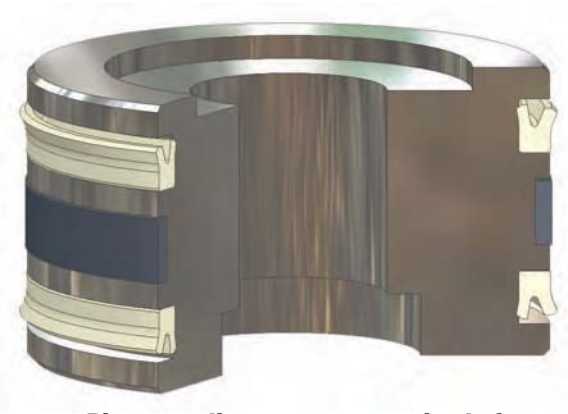
**ButtCut**

**AngleCut**

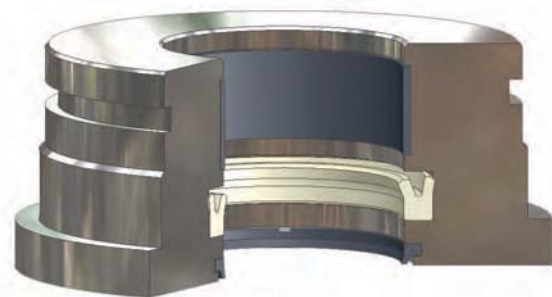
**StepCut**

### Options

Virtually any width, diameter and cross-section can be produced without assessing a setup charge.



**Piston sealing system comprised of PDT wear strip and B7 piston u-cups**

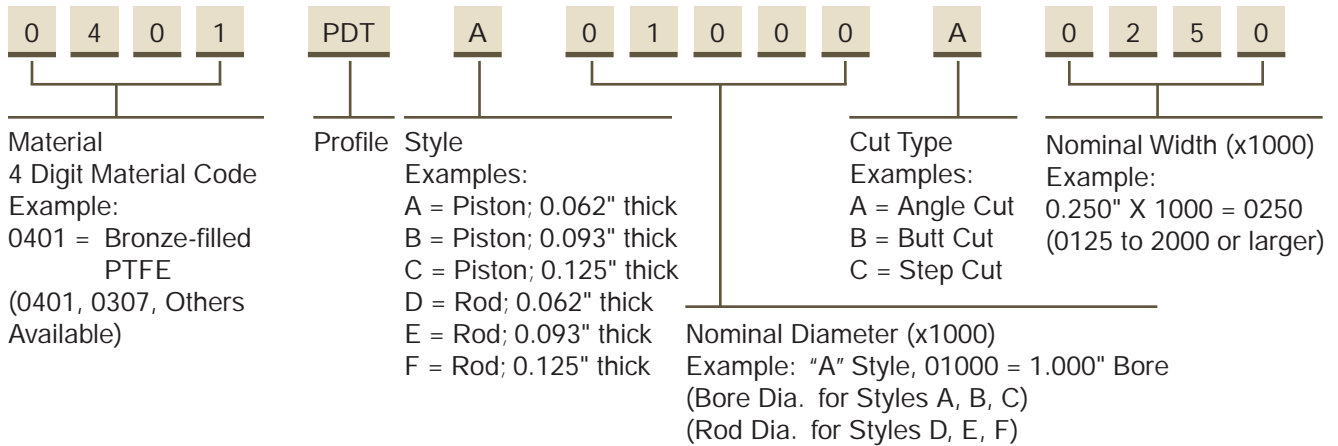


**Rod sealing system comprised of PDT wear strip, B3 rod u-cup and SH959 wiper**

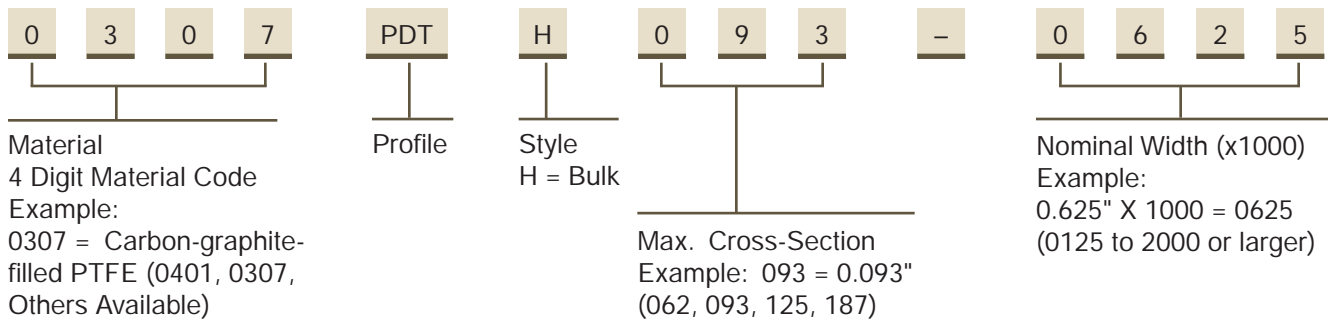
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**Part Number Nomenclature — PDT Profile**

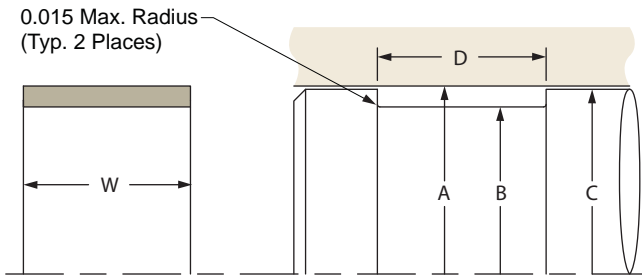
**Table 9-11. PDT Profile — Cut-to-Length**



**Table 9-12. PDT Profile — Bulk Strip**



**Gland Dimensions — PDT Profile, Piston (Cut-To-Length)**



Please refer to Engineering Section 2, page 2-8 for **surface finish and additional** hardware considerations.

**Table 9-13. PDT Gland Dimensions (Piston, Cut-To-Length) — Inch**

A Bore Diameter	B Groove Diameter	C Piston Diameter	D Groove Width	Part Number
+ .002/- .000	+ .000/- .002	+ .000/- .002	+ .010/- .000	PDTA
1.000	0.875	0.979	D = W + 0.010"	XXXX PDTA 01000 X XXXX
1.062	0.937	1.041	D = W + 0.010"	XXXX PDTA 01062 X XXXX
1.125	1.000	1.104	D = W + 0.010"	XXXX PDTA 01125 X XXXX
1.187	1.062	1.166	D = W + 0.010"	XXXX PDTA 01187 X XXXX
1.250	1.125	1.229	D = W + 0.010"	XXXX PDTA 01250 X XXXX

For custom groove calculations, see Appendix C.



**PDT Profile**

Table 9-13. PDT Gland Dimensions (Piston, Cut-To-Length) — Inch (Continued)

A Bore Diameter	B Groove Diameter	C Piston Diameter	D Groove Width	Part Number
+ .002/- .000	+ .000/- .002	+ .000/- .002	+ .010/- .000	PDTA
1.312	1.187	1.291	D = W + 0.010"	XXXX PDTA 01312 X XXXX
1.375	1.250	1.354	D = W + 0.010"	XXXX PDTA 01375 X XXXX
1.437	1.312	1.416	D = W + 0.010"	XXXX PDTA 01437 X XXXX
1.500	1.375	1.479	D = W + 0.010"	XXXX PDTA 01500 X XXXX
1.562	1.437	1.541	D = W + 0.010"	XXXX PDTA 01562 X XXXX
1.625	1.500	1.604	D = W + 0.010"	XXXX PDTA 01625 X XXXX
1.687	1.562	1.666	D = W + 0.010"	XXXX PDTA 01687 X XXXX
1.750	1.625	1.729	D = W + 0.010"	XXXX PDTA 01750 X XXXX
1.875	1.750	1.854	D = W + 0.010"	XXXX PDTA 01875 X XXXX
2.000	1.875	1.979	D = W + 0.010"	XXXX PDTA 02000 X XXXX
+ .002/- .000	+ .000/- .002	+ .000/- .002	+ .010/- .000	PDTB
1.500	1.313	1.479	D = W + 0.010"	XXXX PDTB 01500 X XXXX
1.562	1.375	1.541	D = W + 0.010"	XXXX PDTB 01562 X XXXX
1.625	1.438	1.604	D = W + 0.010"	XXXX PDTB 01625 X XXXX
1.687	1.500	1.666	D = W + 0.010"	XXXX PDTB 01687 X XXXX
1.750	1.563	1.729	D = W + 0.010"	XXXX PDTB 01750 X XXXX
1.875	1.688	1.854	D = W + 0.010"	XXXX PDTB 01875 X XXXX
2.000	1.813	1.979	D = W + 0.010"	XXXX PDTB 02000 X XXXX
2.125	1.938	2.104	D = W + 0.010"	XXXX PDTB 02125 X XXXX
2.250	2.063	2.229	D = W + 0.010"	XXXX PDTB 02250 X XXXX
2.375	2.188	2.354	D = W + 0.010"	XXXX PDTB 02375 X XXXX
2.500	2.313	2.479	D = W + 0.010"	XXXX PDTB 02500 X XXXX
2.625	2.438	2.604	D = W + 0.010"	XXXX PDTB 02625 X XXXX
2.750	2.563	2.729	D = W + 0.010"	XXXX PDTB 02750 X XXXX
2.875	2.688	2.854	D = W + 0.010"	XXXX PDTB 02875 X XXXX
3.000	2.813	2.979	D = W + 0.010"	XXXX PDTB 03000 X XXXX
3.125	2.938	3.104	D = W + 0.010"	XXXX PDTB 03125 X XXXX
3.250	3.063	3.229	D = W + 0.010"	XXXX PDTB 03250 X XXXX
3.375	3.188	3.354	D = W + 0.010"	XXXX PDTB 03375 X XXXX
3.500	3.313	3.479	D = W + 0.010"	XXXX PDTB 03500 X XXXX
3.625	3.438	3.604	D = W + 0.010"	XXXX PDTB 03625 X XXXX
3.750	3.563	3.729	D = W + 0.010"	XXXX PDTB 03750 X XXXX
3.875	3.688	3.854	D = W + 0.010"	XXXX PDTB 03875 X XXXX
4.000	3.813	3.979	D = W + 0.010"	XXXX PDTB 04000 X XXXX
4.125	3.938	4.104	D = W + 0.010"	XXXX PDTB 04125 X XXXX
4.250	4.063	4.229	D = W + 0.010"	XXXX PDTB 04250 X XXXX
4.375	4.188	4.354	D = W + 0.010"	XXXX PDTB 04375 X XXXX
4.500	4.313	4.479	D = W + 0.010"	XXXX PDTB 04500 X XXXX
4.625	4.438	4.604	D = W + 0.010"	XXXX PDTB 04625 X XXXX
4.750	4.563	4.729	D = W + 0.010"	XXXX PDTB 04750 X XXXX
4.875	4.688	4.854	D = W + 0.010"	XXXX PDTB 04875 X XXXX
+ .004/- .000	+ .000/- .003	+ .000/- .003	+ .010/- .000	PDTB
5.000	4.813	4.978	D = W + 0.010"	XXXX PDTB 05000 X XXXX
5.125	4.938	5.103	D = W + 0.010"	XXXX PDTB 05125 X XXXX

For custom groove calculations, see Appendix C.

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Table 9-13. PDT Gland Dimensions (Piston, Cut-To-Length) — Inch (Continued)

A Bore Diameter	B Groove Diameter	C Piston Diameter	D Groove Width	Part Number
+ .004/- .000	+ .000/- .003	+ .000/- .003	+ .010/- .000	PDTB
5.250	5.063	5.228	D = W + 0.010"	XXXX PDTB 05250 X XXXX
5.375	5.188	5.353	D = W + 0.010"	XXXX PDTB 05375 X XXXX
5.500	5.313	5.478	D = W + 0.010"	XXXX PDTB 05500 X XXXX
5.625	5.438	5.603	D = W + 0.010"	XXXX PDTB 05625 X XXXX
5.750	5.563	5.728	D = W + 0.010"	XXXX PDTB 05750 X XXXX
5.875	5.688	5.853	D = W + 0.010"	XXXX PDTB 05875 X XXXX
6.000	5.813	5.978	D = W + 0.010"	XXXX PDTB 06000 X XXXX
6.125	5.938	6.103	D = W + 0.010"	XXXX PDTB 06125 X XXXX
6.250	6.063	6.228	D = W + 0.010"	XXXX PDTB 06250 X XXXX
6.375	6.188	6.353	D = W + 0.010"	XXXX PDTB 06375 X XXXX
6.500	6.313	6.478	D = W + 0.010"	XXXX PDTB 06500 X XXXX
6.750	6.563	6.728	D = W + 0.010"	XXXX PDTB 06750 X XXXX
7.000	6.813	6.978	D = W + 0.010"	XXXX PDTB 07000 X XXXX
7.250	7.063	7.228	D = W + 0.010"	XXXX PDTB 07250 X XXXX
7.500	7.313	7.478	D = W + 0.010"	XXXX PDTB 07500 X XXXX
7.750	7.563	7.728	D = W + 0.010"	XXXX PDTB 07750 X XXXX
+ .006/- .000	+ .000/- .004	+ .000/- .004	+ .010/- .000	PDTB
8.000	7.813	7.977	D = W + 0.010"	XXXX PDTB 08000 X XXXX
8.250	8.063	8.227	D = W + 0.010"	XXXX PDTB 08250 X XXXX
8.500	8.313	8.477	D = W + 0.010"	XXXX PDTB 08500 X XXXX
9.000	8.813	8.977	D = W + 0.010"	XXXX PDTB 09000 X XXXX
9.500	9.313	9.477	D = W + 0.010"	XXXX PDTB 09500 X XXXX
10.000	9.813	9.977	D = W + 0.010"	XXXX PDTB 10000 X XXXX
+ .002/- .000	+ .000/- .002	+ .000/- .002	+ .010/- .000	PDTC
2.000	1.749	1.979	D = W + 0.010"	XXXX PDTC 02000 X XXXX
2.125	1.874	2.104	D = W + 0.010"	XXXX PDTC 02125 X XXXX
2.250	1.999	2.229	D = W + 0.010"	XXXX PDTC 02250 X XXXX
2.375	2.124	2.354	D = W + 0.010"	XXXX PDTC 02375 X XXXX
2.500	2.249	2.479	D = W + 0.010"	XXXX PDTC 02500 X XXXX
2.625	2.374	2.604	D = W + 0.010"	XXXX PDTC 02625 X XXXX
2.750	2.499	2.729	D = W + 0.010"	XXXX PDTC 02750 X XXXX
2.875	2.624	2.854	D = W + 0.010"	XXXX PDTC 02875 X XXXX
3.000	2.749	2.979	D = W + 0.010"	XXXX PDTC 03000 X XXXX
3.125	2.874	3.104	D = W + 0.010"	XXXX PDTC 03125 X XXXX
3.250	2.999	3.229	D = W + 0.010"	XXXX PDTC 03250 X XXXX
3.375	3.124	3.354	D = W + 0.010"	XXXX PDTC 03375 X XXXX
3.500	3.249	3.479	D = W + 0.010"	XXXX PDTC 03500 X XXXX
3.625	3.374	3.604	D = W + 0.010"	XXXX PDTC 03625 X XXXX
3.750	3.499	3.729	D = W + 0.010"	XXXX PDTC 03750 X XXXX
3.875	3.624	3.854	D = W + 0.010"	XXXX PDTC 03875 X XXXX
4.000	3.749	3.979	D = W + 0.010"	XXXX PDTC 04000 X XXXX
4.125	3.874	4.104	D = W + 0.010"	XXXX PDTC 04125 X XXXX
4.250	3.999	4.229	D = W + 0.010"	XXXX PDTC 04250 X XXXX
4.375	4.124	4.354	D = W + 0.010"	XXXX PDTC 04375 X XXXX

For custom groove calculations, see Appendix C.

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**PDT Profile**

Table 9-13. PDT Gland Dimensions (Piston, Cut-To-Length) — Inch (Continued)

A Bore Diameter	B Groove Diameter	C Piston Diameter	D Groove Width	Part Number
+ .002/- .000	+ .000/- .002	+ .000/- .002	+ .010/- .000	PDTC
4.500	4.249	4.479	D = W + 0.010"	XXXX PDTC 04500 X XXXX
4.625	4.374	4.604	D = W + 0.010"	XXXX PDTC 04625 X XXXX
4.750	4.499	4.729	D = W + 0.010"	XXXX PDTC 04750 X XXXX
4.875	4.624	4.854	D = W + 0.010"	XXXX PDTC 04875 X XXXX
+ .004/- .000	+ .000/- .003	+ .000/- .003	+ .010/- .000	PDTC
5.000	4.749	4.978	D = W + 0.010"	XXXX PDTC 05000 X XXXX
5.125	4.874	5.103	D = W + 0.010"	XXXX PDTC 05125 X XXXX
5.250	4.999	5.228	D = W + 0.010"	XXXX PDTC 05250 X XXXX
5.375	5.124	5.353	D = W + 0.010"	XXXX PDTC 05375 X XXXX
5.500	5.249	5.478	D = W + 0.010"	XXXX PDTC 05500 X XXXX
5.625	5.374	5.603	D = W + 0.010"	XXXX PDTC 05625 X XXXX
5.750	5.499	5.728	D = W + 0.010"	XXXX PDTC 05750 X XXXX
5.875	5.624	5.853	D = W + 0.010"	XXXX PDTC 05875 X XXXX
6.000	5.749	5.978	D = W + 0.010"	XXXX PDTC 06000 X XXXX
6.125	5.874	6.103	D = W + 0.010"	XXXX PDTC 06125 X XXXX
6.250	5.999	6.228	D = W + 0.010"	XXXX PDTC 06250 X XXXX
6.375	6.124	6.353	D = W + 0.010"	XXXX PDTC 06375 X XXXX
6.500	6.249	6.478	D = W + 0.010"	XXXX PDTC 06500 X XXXX
6.750	6.499	6.728	D = W + 0.010"	XXXX PDTC 06750 X XXXX
7.000	6.749	6.978	D = W + 0.010"	XXXX PDTC 07000 X XXXX
7.250	6.999	7.228	D = W + 0.010"	XXXX PDTC 07250 X XXXX
7.500	7.249	7.478	D = W + 0.010"	XXXX PDTC 07500 X XXXX
7.750	7.499	7.728	D = W + 0.010"	XXXX PDTC 07750 X XXXX
+ .006/- .000	+ .000/- .004	+ .000/- .004	+ .010/- .000	PDTC
8.000	7.749	7.977	D = W + 0.010"	XXXX PDTC 08000 X XXXX
8.250	7.999	8.227	D = W + 0.010"	XXXX PDTC 08250 X XXXX
8.500	8.249	8.477	D = W + 0.010"	XXXX PDTC 08500 X XXXX
9.000	8.749	8.977	D = W + 0.010"	XXXX PDTC 09000 X XXXX
9.500	9.249	9.477	D = W + 0.010"	XXXX PDTC 09500 X XXXX
10.000	9.749	9.977	D = W + 0.010"	XXXX PDTC 10000 X XXXX
10.500	10.249	10.477	D = W + 0.010"	XXXX PDTC 10500 X XXXX
11.000	10.749	10.977	D = W + 0.010"	XXXX PDTC 11000 X XXXX
11.500	11.249	11.477	D = W + 0.010"	XXXX PDTC 11500 X XXXX
12.000	11.749	11.977	D = W + 0.010"	XXXX PDTC 12000 X XXXX
12.500	12.249	12.477	D = W + 0.010"	XXXX PDTC 12500 X XXXX
13.000	12.749	12.977	D = W + 0.010"	XXXX PDTC 13000 X XXXX
13.500	13.249	13.477	D = W + 0.010"	XXXX PDTC 13500 X XXXX
14.000	13.749	13.977	D = W + 0.010"	XXXX PDTC 14000 X XXXX
14.500	14.249	14.477	D = W + 0.010"	XXXX PDTC 14500 X XXXX
15.000	14.749	14.977	D = W + 0.010"	XXXX PDTC 15000 X XXXX
15.500	15.249	15.477	D = W + 0.010"	XXXX PDTC 15500 X XXXX
16.000	15.749	15.977	D = W + 0.010"	XXXX PDTC 16000 X XXXX

For custom groove calculations, see Appendix C.

NOTE: For sizes larger than those shown in the table, please contact your local Parker Seal representative.

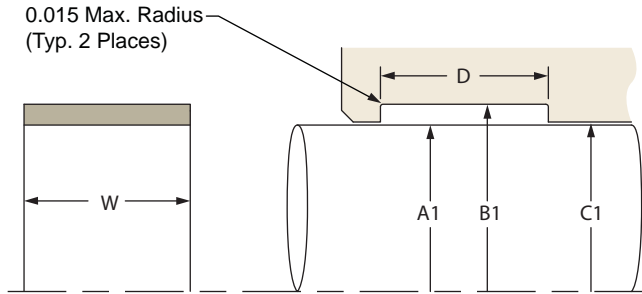
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## PDT Groove Calculation

See Piston and Rod Wear Ring Groove Calculations in Appendix C.

### Gland Dimensions — PDT Profile, Rod (Cut-To-Length)



Please refer to Engineering Section 2, page 2-8 for **surface finish and additional hardware considerations.**

Table 9-14. PDT Gland Dimensions (Rod, Cut-To-Length) — Inch

A1 Rod Diameter	B1 Groove Diameter	C1 Piston Diameter	D Groove Width	Part Number
+ .000/- .002	+ .002/- .000	+ .002/- .000	+ .010/- .000	PDTD
0.875	1.000	0.896	$D = W + 0.010''$	XXXX PDTD 00875 X XXXX
0.937	1.062	0.958	$D = W + 0.010''$	XXXX PDTD 00937 X XXXX
1.000	1.125	1.021	$D = W + 0.010''$	XXXX PDTD 01000 X XXXX
1.062	1.187	1.083	$D = W + 0.010''$	XXXX PDTD 01062 X XXXX
1.125	1.250	1.146	$D = W + 0.010''$	XXXX PDTD 01125 X XXXX
1.187	1.312	1.208	$D = W + 0.010''$	XXXX PDTD 01187 X XXXX
1.250	1.375	1.271	$D = W + 0.010''$	XXXX PDTD 01250 X XXXX
1.312	1.437	1.333	$D = W + 0.010''$	XXXX PDTD 01312 X XXXX
1.375	1.500	1.396	$D = W + 0.010''$	XXXX PDTD 01375 X XXXX
1.437	1.562	1.458	$D = W + 0.010''$	XXXX PDTD 01437 X XXXX
1.500	1.625	1.521	$D = W + 0.010''$	XXXX PDTD 01500 X XXXX
1.625	1.750	1.646	$D = W + 0.010''$	XXXX PDTD 01625 X XXXX
1.750	1.875	1.771	$D = W + 0.010''$	XXXX PDTD 01750 X XXXX
1.875	2.000	1.896	$D = W + 0.010''$	XXXX PDTD 01875 X XXXX
2.000	2.125	2.021	$D = W + 0.010''$	XXXX PDTD 02000 X XXXX
+ .000/- .002	+ .002/- .000	+ .002/- .000	+ .010/- .000	PDTE
1.500	1.687	1.521	$D = W + 0.010''$	XXXX PDTE 01500 X XXXX
1.625	1.812	1.646	$D = W + 0.010''$	XXXX PDTE 01625 X XXXX
1.750	1.937	1.771	$D = W + 0.010''$	XXXX PDTE 01750 X XXXX
1.875	2.062	1.896	$D = W + 0.010''$	XXXX PDTE 01875 X XXXX
2.000	2.187	2.021	$D = W + 0.010''$	XXXX PDTE 02000 X XXXX
2.125	2.312	2.146	$D = W + 0.010''$	XXXX PDTE 02125 X XXXX
2.250	2.437	2.271	$D = W + 0.010''$	XXXX PDTE 02250 X XXXX
2.375	2.562	2.396	$D = W + 0.010''$	XXXX PDTE 02375 X XXXX
2.500	2.687	2.521	$D = W + 0.010''$	XXXX PDTE 02500 X XXXX
2.625	2.812	2.646	$D = W + 0.010''$	XXXX PDTE 02625 X XXXX
2.750	2.937	2.771	$D = W + 0.010''$	XXXX PDTE 02750 X XXXX
2.875	3.062	2.896	$D = W + 0.010''$	XXXX PDTE 02875 X XXXX
3.000	3.187	3.021	$D = W + 0.010''$	XXXX PDTE 03000 X XXXX

For custom groove calculations, see Appendix C.

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**PDT Profile**

Table 9-14. PDT Gland Dimensions (Rod, Cut-To-Length) — Inch (Continued)

A1 Rod Diameter	B1 Groove Diameter	C1 Piston Diameter	D Groove Width	Part Number
+ .000/- .002	+ .002/- .000	+ .002/- .000	+ .010/- .000	PDTE
3.125	3.312	3.146	D = W + 0.010"	XXXX PDTE 03125 X XXXX
3.250	3.437	3.271	D = W + 0.010"	XXXX PDTE 03250 X XXXX
3.375	3.562	3.396	D = W + 0.010"	XXXX PDTE 03375 X XXXX
3.500	3.687	3.521	D = W + 0.010"	XXXX PDTE 03500 X XXXX
3.625	3.812	3.646	D = W + 0.010"	XXXX PDTE 03625 X XXXX
3.750	3.937	3.771	D = W + 0.010"	XXXX PDTE 03750 X XXXX
3.875	4.062	3.896	D = W + 0.010"	XXXX PDTE 03875 X XXXX
4.000	4.187	4.021	D = W + 0.010"	XXXX PDTE 04000 X XXXX
4.125	4.312	4.146	D = W + 0.010"	XXXX PDTE 04125 X XXXX
4.250	4.437	4.271	D = W + 0.010"	XXXX PDTE 04250 X XXXX
4.375	4.562	4.396	D = W + 0.010"	XXXX PDTE 04375 X XXXX
4.500	4.687	4.521	D = W + 0.010"	XXXX PDTE 04500 X XXXX
4.625	4.812	4.646	D = W + 0.010"	XXXX PDTE 04625 X XXXX
4.750	4.937	4.771	D = W + 0.010"	XXXX PDTE 04750 X XXXX
4.875	5.062	4.896	D = W + 0.010"	XXXX PDTE 04875 X XXXX
5.000	5.187	5.021	D = W + 0.010"	XXXX PDTE 05000 X XXXX
+ .000/- .002	+ .002/- .000	+ .002/- .000	+ .010/- .000	PDTF
1.500	1.751	1.521	D = W + 0.010"	XXXX PDTF 01500 X XXXX
1.625	1.876	1.646	D = W + 0.010"	XXXX PDTF 01625 X XXXX
1.750	2.001	1.771	D = W + 0.010"	XXXX PDTF 01750 X XXXX
1.875	2.126	1.896	D = W + 0.010"	XXXX PDTF 01875 X XXXX
2.000	2.251	2.021	D = W + 0.010"	XXXX PDTF 02000 X XXXX
2.125	2.376	2.146	D = W + 0.010"	XXXX PDTF 02125 X XXXX
2.250	2.501	2.271	D = W + 0.010"	XXXX PDTF 02250 X XXXX
2.375	2.626	2.396	D = W + 0.010"	XXXX PDTF 02375 X XXXX
2.500	2.751	2.521	D = W + 0.010"	XXXX PDTF 02500 X XXXX
2.625	2.876	2.646	D = W + 0.010"	XXXX PDTF 02625 X XXXX
2.750	3.001	2.771	D = W + 0.010"	XXXX PDTF 02750 X XXXX
2.875	3.126	2.896	D = W + 0.010"	XXXX PDTF 02875 X XXXX
3.000	3.251	3.021	D = W + 0.010"	XXXX PDTF 03000 X XXXX
3.125	3.376	3.146	D = W + 0.010"	XXXX PDTF 03125 X XXXX
+ .000/- .002	+ .002/- .000	+ .002/- .000	+ .010/- .000	PDTF
3.250	3.501	3.271	D = W + 0.010"	XXXX PDTF 03250 X XXXX
3.375	3.626	3.396	D = W + 0.010"	XXXX PDTF 03375 X XXXX
3.500	3.751	3.521	D = W + 0.010"	XXXX PDTF 03500 X XXXX
3.625	3.876	3.646	D = W + 0.010"	XXXX PDTF 03625 X XXXX
3.750	4.001	3.771	D = W + 0.010"	XXXX PDTF 03750 X XXXX
3.875	4.126	3.896	D = W + 0.010"	XXXX PDTF 03875 X XXXX
4.000	4.251	4.021	D = W + 0.010"	XXXX PDTF 04000 X XXXX
4.125	4.376	4.146	D = W + 0.010"	XXXX PDTF 04125 X XXXX
4.250	4.501	4.271	D = W + 0.010"	XXXX PDTF 04250 X XXXX
4.375	4.626	4.396	D = W + 0.010"	XXXX PDTF 04375 X XXXX
4.500	4.751	4.521	D = W + 0.010"	XXXX PDTF 04500 X XXXX
4.625	4.876	4.646	D = W + 0.010"	XXXX PDTF 04625 X XXXX

For custom groove calculations, see Appendix C.

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Table 9-14. PDT Gland Dimensions (Rod, Cut-To-Length) — Inch (Continued)

A1 Rod Diameter	B1 Groove Diameter	C1 Piston Diameter	D Groove Width	Part Number
+ .000/- .004	+ .003/- .000	+ .003/- .000	+ .010/- .000	PDTF
4.750	5.001	4.772	D = W + 0.010"	XXXX PDTF 04750 X XXXX
4.875	5.126	4.897	D = W + 0.010"	XXXX PDTF 04875 X XXXX
5.000	5.251	5.022	D = W + 0.010"	XXXX PDTF 05000 X XXXX
5.125	5.376	5.147	D = W + 0.010"	XXXX PDTF 05125 X XXXX
5.250	5.501	5.272	D = W + 0.010"	XXXX PDTF 05250 X XXXX
5.375	5.626	5.397	D = W + 0.010"	XXXX PDTF 05375 X XXXX
5.500	5.751	5.522	D = W + 0.010"	XXXX PDTF 05500 X XXXX
5.625	5.876	5.647	D = W + 0.010"	XXXX PDTF 05625 X XXXX
5.750	6.001	5.772	D = W + 0.010"	XXXX PDTF 05750 X XXXX
5.875	6.126	5.897	D = W + 0.010"	XXXX PDTF 05875 X XXXX
6.000	6.251	6.022	D = W + 0.010"	XXXX PDTF 06000 X XXXX
6.250	6.501	6.272	D = W + 0.010"	XXXX PDTF 06250 X XXXX
6.500	6.751	6.522	D = W + 0.010"	XXXX PDTF 06500 X XXXX
6.750	7.001	6.772	D = W + 0.010"	XXXX PDTF 06750 X XXXX
7.000	7.251	7.022	D = W + 0.010"	XXXX PDTF 07000 X XXXX
7.250	7.501	7.272	D = W + 0.010"	XXXX PDTF 07250 X XXXX
7.500	7.751	7.522	D = W + 0.010"	XXXX PDTF 07500 X XXXX
+ .000/- .006	+ .004/- .000	+ .004/- .000	+ .010/- .000	PDTF
7.750	8.001	7.773	D = W + 0.010"	XXXX PDTF 07750 X XXXX
8.000	8.251	8.023	D = W + 0.010"	XXXX PDTF 08000 X XXXX
8.500	8.751	8.523	D = W + 0.010"	XXXX PDTF 08500 X XXXX
9.000	9.251	9.023	D = W + 0.010"	XXXX PDTF 09000 X XXXX
9.500	9.751	9.523	D = W + 0.010"	XXXX PDTF 09500 X XXXX
10.000	10.251	10.023	D = W + 0.010"	XXXX PDTF 10000 X XXXX

For custom groove calculations, see Appendix C.

NOTE: For sizes larger than those shown in the table, please contact your local Parker Seal representative.

## PDT Rod Groove Calculation

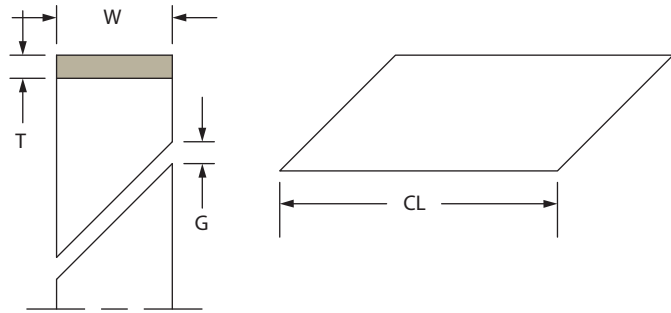
See Rod Wear Ring Groove Calculation in Appendix C.

# PDT Profile

## PDT Bulk Strip

Table 9-15. PDT Bulk Strip Standard Sizes

T Radial Cross-Section	W Width	Part Number
062		
0.062	0.250	XXXX PDTH 062-0250
0.062	0.375	XXXX PDTH 062-0375
0.062	0.500	XXXX PDTH 062-0500
0.062	0.625	XXXX PDTH 062-0625
093		
0.093	0.250	XXXX PDTH 093-0250
0.093	0.375	XXXX PDTH 093-0375
0.093	0.500	XXXX PDTH 093-0500
0.093	0.625	XXXX PDTH 093-0625
125		
0.125	0.250	XXXX PDTH 125-0250
0.125	0.375	XXXX PDTH 125-0375
0.125	0.500	XXXX PDTH 125-0500
0.125	0.625	XXXX PDTH 125-0625
0.125	0.750	XXXX PDTH 125-0750
0.125	1.000	XXXX PDTH 125-1000



NOTE: For sizes larger than those shown in the table, please contact your local Parker Seal representative.

## Cutting Instructions

Table 9-16. Recommended Cutting Instructions

Rod or Bore Diameter	G Minimum Gap	CL ± Tolerance for Cut Length
0.500" - 1.750"	0.075	± .010
1.751" - 3.125"	0.140	± .016
3.126" - 4.000"	0.175	± .024
4.001" - 5.000"	0.230	± .032
5.001" - 6.000"	0.260	± .040
6.001" - 7.000"	0.320	± .047
7.001" - 8.500"	0.380	± .055
8.501" - 10.500"	0.480	± .063
10.501" - 13.000"	0.620	± .071
13.001" - 16.000"	0.750	± .079

NOTE: For sizes larger than those shown in the table, please contact your local Parker Seal representative.

## Formula for Calculating Cut Length, CL

For Pistons:

$$CL = [(Bore Diameter - T) \times \pi] - G$$

For Rods:

$$CL = [(Rod Diameter + T) \times \pi] - G$$

To calculate groove dimensions, use either the pre-established values or the formulas for cut-to-length PDT strip found on Pages 9-23 and 9-26.



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# Wear Ring / Bearing PDW Profile

Catalog EPS 5370/USA

## PDW Profile, Machined Wear Ring for Rod and Piston

PDW wear rings are precision machined PTFE bearings, lathe cut to exact size and shape. PDWs offer precise fitting and easy installation. The wide range of available PTFE blends gives these machined wear rings versatility to accommodate any pneumatic or light-duty hydraulic application requiring low friction and high temperature capabilities.



### Technical Data

#### Standard Material

0401 – 40% Bronze-Filled PTFE

0307 – 23% Carbon, 2% Graphite-Filled PTFE

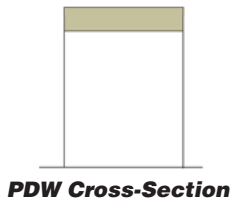
Others available upon request

#### Radial Tolerance

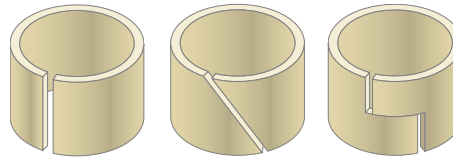
+.000"/-.004"

#### End Cuts

Butt Cut, Angle Cut, Step Cut



**PDW Cross-Section**



**ButtCut**

**AngleCut**

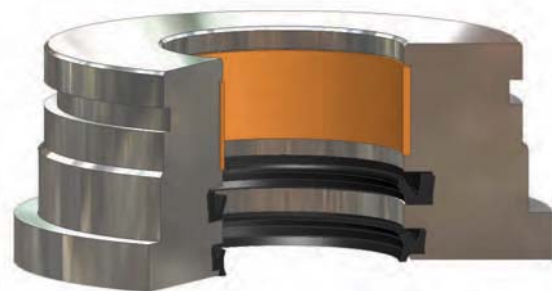
**StepCut**

#### Options

Virtually any width, diameter and cross-section can be produced without assessing a setup charge.



**Piston sealing system comprised of PDW machined wear rings and E4 piston u-cups**



**Rod sealing system comprised of PDW machined wear ring, E5 u-cup and 8600 wiper**

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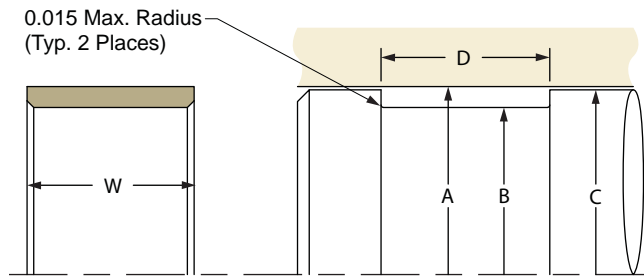
## PDW Profile

### Part Number Nomenclature — PDW Profile

Table 9-17. PDW Profile

0 4 0 1	PDW	C	0 4 5 0 0	B	0 5 0 0
Material 4 Digit Material Code Example: 0401 = Bronze-filled PTFE (0401, 0307, Others Available)	Profile	Style Examples: A = Piston; 0.062" thick B = Piston; 0.093" thick C = Piston; 0.125" thick D = Rod; 0.062" thick E = Rod; 0.093" thick F = Rod; 0.125" thick	Nominal Diameter (x1000) Example: "C" Style, 04500 = 4.500" Bore (Bore Dia. for Styles A, B, C) (Rod Dia. for Styles D, E, F)	Cut Type Examples: A = Angle Cut B = Butt Cut C = Step Cut	Nominal Width (W) (x1000) Example: 0.500" X 1000 = 0500 (0125 to 2000 or larger)

### Gland Dimensions — PDW Profile, Piston



Please refer to Engineering Section 2, page 2-8 for **surface finish and additional hardware considerations.**

Table 9-18. PDW Gland Dimensions (Piston) — Inch

A Bore Diameter	B Groove Diameter	C Piston Diameter	D Groove Width	Part Number
+ .002/- .000	+ .000/- .002	+ .000/- .002	+ .010/- .000	PDWA
0.687	0.562	0.666	D = W + 0.010"	XXXX PDWA 00687 X XXXX
0.750	0.625	0.729	D = W + 0.010"	XXXX PDWA 00750 X XXXX
0.812	0.687	0.791	D = W + 0.010"	XXXX PDWA 00812 X XXXX
0.875	0.750	0.854	D = W + 0.010"	XXXX PDWA 00875 X XXXX
0.937	0.812	0.916	D = W + 0.010"	XXXX PDWA 00937 X XXXX
1.000	0.875	0.979	D = W + 0.010"	XXXX PDWA 01000 X XXXX
1.062	0.937	1.041	D = W + 0.010"	XXXX PDWA 01062 X XXXX
1.125	1.000	1.104	D = W + 0.010"	XXXX PDWA 01125 X XXXX
1.187	1.062	1.166	D = W + 0.010"	XXXX PDWA 01187 X XXXX
1.250	1.125	1.229	D = W + 0.010"	XXXX PDWA 01250 X XXXX
1.312	1.187	1.291	D = W + 0.010"	XXXX PDWA 01312 X XXXX
1.375	1.250	1.354	D = W + 0.010"	XXXX PDWA 01375 X XXXX
1.437	1.312	1.416	D = W + 0.010"	XXXX PDWA 01437 X XXXX
1.500	1.375	1.479	D = W + 0.010"	XXXX PDWA 01500 X XXXX
1.562	1.437	1.541	D = W + 0.010"	XXXX PDWA 01562 X XXXX
1.625	1.500	1.604	D = W + 0.010"	XXXX PDWA 01625 X XXXX
1.687	1.562	1.666	D = W + 0.010"	XXXX PDWA 01687 X XXXX

For custom groove calculations, see Appendix C.

Table 9-18. PDW Gland Dimensions (Piston) — Inch (Continued)

A Bore Diameter	B Groove Diameter	C Piston Diameter	D Groove Width	Part Number
+ .002/- .000	+ .000/- .002	+ .000/- .002	+ .010/- .000	PDWA
1.750	1.625	1.729	D = W + 0.010"	XXXX PDWA 01750 X XXXX
1.875	1.750	1.854	D = W + 0.010"	XXXX PDWA 01875 X XXXX
2.000	1.875	1.979	D = W + 0.010"	XXXX PDWA 02000 X XXXX
+ .002/- .000	+ .000/- .002	+ .000/- .002	+ .010/- .000	PDWB
1.500	1.313	1.479	D = W + 0.010"	XXXX PDWB 01500 X XXXX
1.562	1.375	1.541	D = W + 0.010"	XXXX PDWB 01562 X XXXX
1.625	1.438	1.604	D = W + 0.010"	XXXX PDWB 01625 X XXXX
1.687	1.500	1.666	D = W + 0.010"	XXXX PDWB 01687 X XXXX
1.750	1.563	1.729	D = W + 0.010"	XXXX PDWB 01750 X XXXX
1.875	1.688	1.854	D = W + 0.010"	XXXX PDWB 01875 X XXXX
2.000	1.813	1.979	D = W + 0.010"	XXXX PDWB 02000 X XXXX
2.125	1.938	2.104	D = W + 0.010"	XXXX PDWB 02125 X XXXX
2.250	2.063	2.229	D = W + 0.010"	XXXX PDWB 02250 X XXXX
2.375	2.188	2.354	D = W + 0.010"	XXXX PDWB 02375 X XXXX
2.500	2.313	2.479	D = W + 0.010"	XXXX PDWB 02500 X XXXX
2.625	2.438	2.604	D = W + 0.010"	XXXX PDWB 02625 X XXXX
2.750	2.563	2.729	D = W + 0.010"	XXXX PDWB 02750 X XXXX
2.875	2.688	2.854	D = W + 0.010"	XXXX PDWB 02875 X XXXX
3.000	2.813	2.979	D = W + 0.010"	XXXX PDWB 03000 X XXXX
3.125	2.938	3.104	D = W + 0.010"	XXXX PDWB 03125 X XXXX
3.250	3.063	3.229	D = W + 0.010"	XXXX PDWB 03250 X XXXX
3.375	3.188	3.354	D = W + 0.010"	XXXX PDWB 03375 X XXXX
3.500	3.313	3.479	D = W + 0.010"	XXXX PDWB 03500 X XXXX
3.625	3.438	3.604	D = W + 0.010"	XXXX PDWB 03625 X XXXX
3.750	3.563	3.729	D = W + 0.010"	XXXX PDWB 03750 X XXXX
3.875	3.688	3.854	D = W + 0.010"	XXXX PDWB 03875 X XXXX
4.000	3.813	3.979	D = W + 0.010"	XXXX PDWB 04000 X XXXX
4.125	3.938	4.104	D = W + 0.010"	XXXX PDWB 04125 X XXXX
4.250	4.063	4.229	D = W + 0.010"	XXXX PDWB 04250 X XXXX
4.375	4.188	4.354	D = W + 0.010"	XXXX PDWB 04375 X XXXX
4.500	4.313	4.479	D = W + 0.010"	XXXX PDWB 04500 X XXXX
4.625	4.438	4.604	D = W + 0.010"	XXXX PDWB 04625 X XXXX
4.750	4.563	4.729	D = W + 0.010"	XXXX PDWB 04750 X XXXX
4.875	4.688	4.854	D = W + 0.010"	XXXX PDWB 04875 X XXXX
5.000	4.813	4.978	D = W + 0.010"	XXXX PDWB 05000 X XXXX
5.125	4.938	5.103	D = W + 0.010"	XXXX PDWB 05125 X XXXX
5.250	5.063	5.228	D = W + 0.010"	XXXX PDWB 05250 X XXXX
5.375	5.188	5.353	D = W + 0.010"	XXXX PDWB 05375 X XXXX
5.500	5.313	5.478	D = W + 0.010"	XXXX PDWB 05500 X XXXX
5.625	5.438	5.603	D = W + 0.010"	XXXX PDWB 05625 X XXXX
5.750	5.563	5.728	D = W + 0.010"	XXXX PDWB 05750 X XXXX
5.875	5.688	5.853	D = W + 0.010"	XXXX PDWB 05875 X XXXX
6.000	5.813	5.978	D = W + 0.010"	XXXX PDWB 06000 X XXXX

For custom groove calculations, see Appendix C.

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**PDW Profile**

Table 9-18. PDW Gland Dimensions (Piston) — Inch (Continued)

A Bore Diameter	B Groove Diameter	C Piston Diameter	D Groove Width	Part Number
+ .002/- .000	+ .000/- .002	+ .000/- .002	+ .010/- .000	PDWB
6.125	5.938	6.103	D = W + 0.010"	XXXX PDWB 06125 X XXXX
6.250	6.063	6.228	D = W + 0.010"	XXXX PDWB 06250 X XXXX
6.375	6.188	6.353	D = W + 0.010"	XXXX PDWB 06375 X XXXX
6.500	6.313	6.478	D = W + 0.010"	XXXX PDWB 06500 X XXXX
6.750	6.563	6.728	D = W + 0.010"	XXXX PDWB 06750 X XXXX
7.000	6.813	6.978	D = W + 0.010"	XXXX PDWB 07000 X XXXX
7.250	7.063	7.228	D = W + 0.010"	XXXX PDWB 07250 X XXXX
7.500	7.313	7.478	D = W + 0.010"	XXXX PDWB 07500 X XXXX
7.750	7.563	7.728	D = W + 0.010"	XXXX PDWB 07750 X XXXX
+ .006/- .000	+ .000/- .004	+ .000/- .004	+ .010/- .000	PDWB
8.000	7.813	7.977	D = W + 0.010"	XXXX PDWB 08000 X XXXX
8.250	8.063	8.227	D = W + 0.010"	XXXX PDWB 08250 X XXXX
8.500	8.313	8.477	D = W + 0.010"	XXXX PDWB 08500 X XXXX
9.000	8.813	8.977	D = W + 0.010"	XXXX PDWB 09000 X XXXX
9.500	9.313	9.477	D = W + 0.010"	XXXX PDWB 09500 X XXXX
10.000	9.813	9.977	D = W + 0.010"	XXXX PDWB 10000 X XXXX
+ .002/- .000	+ .000/- .002	+ .000/- .002	+ .010/- .000	PDWC
2.000	1.749	1.979	D = W + 0.010"	XXXX PDWC 02000 X XXXX
2.125	1.874	2.104	D = W + 0.010"	XXXX PDWC 02125 X XXXX
2.250	1.999	2.229	D = W + 0.010"	XXXX PDWC 02250 X XXXX
2.375	2.124	2.354	D = W + 0.010"	XXXX PDWC 02375 X XXXX
2.500	2.249	2.479	D = W + 0.010"	XXXX PDWC 02500 X XXXX
2.625	2.374	2.604	D = W + 0.010"	XXXX PDWC 02625 X XXXX
2.750	2.499	2.729	D = W + 0.010"	XXXX PDWC 02750 X XXXX
2.875	2.624	2.854	D = W + 0.010"	XXXX PDWC 02875 X XXXX
3.000	2.749	2.979	D = W + 0.010"	XXXX PDWC 03000 X XXXX
3.125	2.874	3.104	D = W + 0.010"	XXXX PDWC 03125 X XXXX
3.250	2.999	3.229	D = W + 0.010"	XXXX PDWC 03250 X XXXX
3.375	3.124	3.354	D = W + 0.010"	XXXX PDWC 03375 X XXXX
3.500	3.249	3.479	D = W + 0.010"	XXXX PDWC 03500 X XXXX
3.625	3.374	3.604	D = W + 0.010"	XXXX PDWC 03625 X XXXX
3.750	3.499	3.729	D = W + 0.010"	XXXX PDWC 03750 X XXXX
3.875	3.624	3.854	D = W + 0.010"	XXXX PDWC 03875 X XXXX
4.000	3.749	3.979	D = W + 0.010"	XXXX PDWC 04000 X XXXX
4.125	3.874	4.104	D = W + 0.010"	XXXX PDWC 04125 X XXXX
4.250	3.999	4.229	D = W + 0.010"	XXXX PDWC 04250 X XXXX
4.375	4.124	4.354	D = W + 0.010"	XXXX PDWC 04375 X XXXX
4.500	4.249	4.479	D = W + 0.010"	XXXX PDWC 04500 X XXXX
4.625	4.374	4.604	D = W + 0.010"	XXXX PDWC 04625 X XXXX
4.750	4.499	4.729	D = W + 0.010"	XXXX PDWC 04750 X XXXX
4.875	4.624	4.854	D = W + 0.010"	XXXX PDWC 04875 X XXXX
5.000	4.749	4.978	D = W + 0.010"	XXXX PDWC 05000 X XXXX
5.125	4.874	5.103	D = W + 0.010"	XXXX PDWC 05125 X XXXX

For custom groove calculations, see Appendix C.

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Table 9-18. PDW Gland Dimensions (Piston) — Inch (Continued)

A Bore Diameter	B Groove Diameter	C Piston Diameter	D Groove Width	Part Number
+ .004/- .000	+ .000/- .003	+ .000/- .003	+ .010/- .000	PDWC
5.250	4.999	5.228	D = W + 0.010"	XXXX PDWC 05250 X XXXX
5.375	5.124	5.353	D = W + 0.010"	XXXX PDWC 05375 X XXXX
5.500	5.249	5.478	D = W + 0.010"	XXXX PDWC 05500 X XXXX
5.625	5.374	5.603	D = W + 0.010"	XXXX PDWC 05625 X XXXX
5.750	5.499	5.728	D = W + 0.010"	XXXX PDWC 05750 X XXXX
5.875	5.624	5.853	D = W + 0.010"	XXXX PDWC 05875 X XXXX
6.000	5.749	5.978	D = W + 0.010"	XXXX PDWC 06000 X XXXX
6.125	5.874	6.103	D = W + 0.010"	XXXX PDWC 06125 X XXXX
6.250	5.999	6.228	D = W + 0.010"	XXXX PDWC 06250 X XXXX
6.375	6.124	6.353	D = W + 0.010"	XXXX PDWC 06375 X XXXX
6.500	6.249	6.478	D = W + 0.010"	XXXX PDWC 06500 X XXXX
6.750	6.499	6.728	D = W + 0.010"	XXXX PDWC 06750 X XXXX
7.000	6.749	6.978	D = W + 0.010"	XXXX PDWC 07000 X XXXX
7.250	6.999	7.228	D = W + 0.010"	XXXX PDWC 07250 X XXXX
7.500	7.249	7.478	D = W + 0.010"	XXXX PDWC 07500 X XXXX
7.750	7.499	7.728	D = W + 0.010"	XXXX PDWC 07750 X XXXX
8.000	7.749	7.977	D = W + 0.010"	XXXX PDWC 08000 X XXXX
8.250	7.999	8.227	D = W + 0.010"	XXXX PDWC 08250 X XXXX
8.500	8.249	8.477	D = W + 0.010"	XXXX PDWC 08500 X XXXX
9.000	8.749	8.977	D = W + 0.010"	XXXX PDWC 09000 X XXXX
9.500	9.249	9.477	D = W + 0.010"	XXXX PDWC 09500 X XXXX
10.000	9.749	9.977	D = W + 0.010"	XXXX PDWC 10000 X XXXX
10.500	10.249	10.477	D = W + 0.010"	XXXX PDWC 10500 X XXXX
11.000	10.749	10.977	D = W + 0.010"	XXXX PDWC 11000 X XXXX
11.500	11.249	11.477	D = W + 0.010"	XXXX PDWC 11500 X XXXX
12.000	11.749	11.977	D = W + 0.010"	XXXX PDWC 12000 X XXXX
12.500	12.249	12.477	D = W + 0.010"	XXXX PDWC 12500 X XXXX
13.000	12.749	12.977	D = W + 0.010"	XXXX PDWC 13000 X XXXX
13.500	13.249	13.477	D = W + 0.010"	XXXX PDWC 13500 X XXXX
14.000	13.749	13.977	D = W + 0.010"	XXXX PDWC 14000 X XXXX
14.500	14.249	14.477	D = W + 0.010"	XXXX PDWC 14500 X XXXX
15.000	14.749	14.977	D = W + 0.010"	XXXX PDWC 15000 X XXXX
15.500	15.249	15.477	D = W + 0.010"	XXXX PDWC 15500 X XXXX
16.000	15.749	15.977	D = W + 0.010"	XXXX PDWC 16000 X XXXX

For custom groove calculations, see Appendix C.

NOTE: For sizes larger than those shown in the table, please contact your local Parker Seal representative.

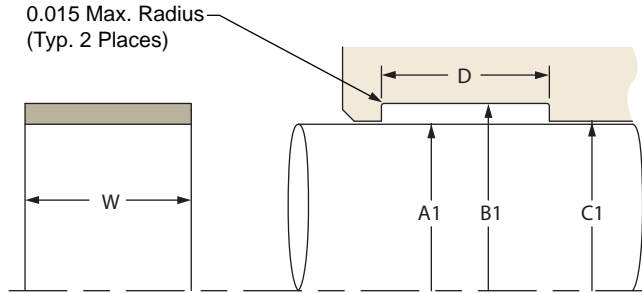
## PDW Piston Groove Calculation

See Piston Wear Ring Groove Calculation in Appendix C.

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**PDW Profile**

**Gland Dimensions — PDW Profile, Rod**



Please refer to Engineering Section 2, page 2-8 for **surface finish and additional hardware considerations.**

Table 9-19. PDW Gland Dimensions (Rod) — Inch

A1 Rod Diameter	B1 Groove Diameter	C1 Throat Diameter	D Groove Width	Part Number
+ .000/- .002	+ .002/- .000	+ .002/- .000	+ .010/- .000	PDWD
0.312	0.437	0.333	D = W + 0.010"	XXXX PDWD 00875 X XXXX
0.375	0.500	0.396	D = W + 0.010"	XXXX PDWD 00375 X XXXX
0.437	0.562	0.458	D = W + 0.010"	XXXX PDWD 00437 X XXXX
0.500	0.625	0.521	D = W + 0.010"	XXXX PDWD 00500 X XXXX
0.562	0.687	0.583	D = W + 0.010"	XXXX PDWD 00562 X XXXX
0.625	0.750	0.646	D = W + 0.010"	XXXX PDWD 00625 X XXXX
0.687	0.812	0.708	D = W + 0.010"	XXXX PDWD 00687 X XXXX
0.750	0.875	0.771	D = W + 0.010"	XXXX PDWD 00750 X XXXX
0.812	0.937	0.833	D = W + 0.010"	XXXX PDWD 00812 X XXXX
0.875	1.000	0.896	D = W + 0.010"	XXXX PDWD 00875 X XXXX
0.937	1.062	0.958	D = W + 0.010"	XXXX PDWD 00937 X XXXX
1.000	1.125	1.021	D = W + 0.010"	XXXX PDWD 01000 X XXXX
1.062	1.187	1.083	D = W + 0.010"	XXXX PDWD 01062 X XXXX
1.125	1.250	1.146	D = W + 0.010"	XXXX PDWD 01125 X XXXX
1.187	1.312	1.208	D = W + 0.010"	XXXX PDWD 01187 X XXXX
1.250	1.375	1.271	D = W + 0.010"	XXXX PDWD 01250 X XXXX
1.312	1.437	1.333	D = W + 0.010"	XXXX PDWD 01312 X XXXX
1.375	1.500	1.396	D = W + 0.010"	XXXX PDWD 01375 X XXXX
1.437	1.562	1.458	D = W + 0.010"	XXXX PDWD 01437 X XXXX
1.500	1.625	1.521	D = W + 0.010"	XXXX PDWD 01500 X XXXX
1.625	1.750	1.646	D = W + 0.010"	XXXX PDWD 01625 X XXXX
1.750	1.875	1.771	D = W + 0.010"	XXXX PDWD 01750 X XXXX
1.875	2.000	1.896	D = W + 0.010"	XXXX PDWD 01875 X XXXX
2.000	2.125	2.021	D = W + 0.010"	XXXX PDWD 02000 X XXXX
+ .000/- .002	+ .002/- .000	+ .002/- .000	+ .010/- .000	PDWE
1.500	1.687	1.521	D = W + 0.010"	XXXX PDWE 01500 X XXXX
1.625	1.812	1.646	D = W + 0.010"	XXXX PDWE 01625 X XXXX
1.750	1.937	1.771	D = W + 0.010"	XXXX PDWE 01750 X XXXX
1.875	2.062	1.896	D = W + 0.010"	XXXX PDWE 01875 X XXXX
2.000	2.187	2.021	D = W + 0.010"	XXXX PDWE 02000 X XXXX
2.125	2.312	2.146	D = W + 0.010"	XXXX PDWE 02125 X XXXX
2.250	2.437	2.271	D = W + 0.010"	XXXX PDWE 02250 X XXXX
2.375	2.562	2.396	D = W + 0.010"	XXXX PDWE 02375 X XXXX

For custom groove calculations, see Appendix C.



Table 9-19. PDW Gland Dimensions (Rod) — Inch (Continued)

A1 Rod Diameter	B1 Groove Diameter	C1 Throat Diameter	D Groove Width	Part Number
+ .000/- .002	+ .002/- .000	+ .002/- .000	+ .010/- .000	PDWE
2.500	2.687	2.521	D = W + 0.010"	XXXX PDWE 02500 X XXXX
2.625	2.812	2.646	D = W + 0.010"	XXXX PDWE 02625 X XXXX
2.750	2.937	2.771	D = W + 0.010"	XXXX PDWE 02750 X XXXX
2.875	3.062	2.896	D = W + 0.010"	XXXX PDWE 02875 X XXXX
3.000	3.187	3.021	D = W + 0.010"	XXXX PDWE 03000 X XXXX
3.125	3.312	3.146	D = W + 0.010"	XXXX PDWE 03125 X XXXX
3.250	3.437	3.271	D = W + 0.010"	XXXX PDWE 03250 X XXXX
3.375	3.562	3.396	D = W + 0.010"	XXXX PDWE 03375 X XXXX
3.500	3.687	3.521	D = W + 0.010"	XXXX PDWE 03500 X XXXX
3.625	3.812	3.646	D = W + 0.010"	XXXX PDWE 03625 X XXXX
3.750	3.937	3.771	D = W + 0.010"	XXXX PDWE 03750 X XXXX
3.875	4.062	3.896	D = W + 0.010"	XXXX PDWE 03875 X XXXX
4.000	4.187	4.021	D = W + 0.010"	XXXX PDWE 04000 X XXXX
4.125	4.312	4.146	D = W + 0.010"	XXXX PDWE 04125 X XXXX
4.250	4.437	4.271	D = W + 0.010"	XXXX PDWE 04250 X XXXX
4.375	4.562	4.396	D = W + 0.010"	XXXX PDWE 04375 X XXXX
4.500	4.687	4.521	D = W + 0.010"	XXXX PDWE 04500 X XXXX
4.625	4.812	4.646	D = W + 0.010"	XXXX PDWE 04625 X XXXX
4.750	4.937	4.771	D = W + 0.010"	XXXX PDWE 04750 X XXXX
4.875	5.062	4.896	D = W + 0.010"	XXXX PDWE 04875 X XXXX
5.000	5.187	5.021	D = W + 0.010"	XXXX PDWE 05000 X XXXX
+ .000/- .002	+ .002/- .000	+ .002/- .000	+ .010/- .000	PDWF
1.500	1.751	1.521	D = W + 0.010"	XXXX PDWF 01500 X XXXX
1.625	1.876	1.646	D = W + 0.010"	XXXX PDWF 01625 X XXXX
1.750	2.001	1.771	D = W + 0.010"	XXXX PDWF 01750 X XXXX
1.875	2.126	1.896	D = W + 0.010"	XXXX PDWF 01875 X XXXX
2.000	2.251	2.021	D = W + 0.010"	XXXX PDWF 02000 X XXXX
2.125	2.376	2.146	D = W + 0.010"	XXXX PDWF 02125 X XXXX
2.250	2.501	2.271	D = W + 0.010"	XXXX PDWF 02250 X XXXX
2.375	2.626	2.396	D = W + 0.010"	XXXX PDWF 02375 X XXXX
2.500	2.751	2.521	D = W + 0.010"	XXXX PDWF 02500 X XXXX
2.625	2.876	2.646	D = W + 0.010"	XXXX PDWF 02625 X XXXX
2.750	3.001	2.771	D = W + 0.010"	XXXX PDWF 02750 X XXXX
2.875	3.126	2.896	D = W + 0.010"	XXXX PDWF 02875 X XXXX
3.000	3.251	3.021	D = W + 0.010"	XXXX PDWF 03000 X XXXX
3.125	3.376	3.146	D = W + 0.010"	XXXX PDWF 03125 X XXXX
3.250	3.501	3.271	D = W + 0.010"	XXXX PDWF 03250 X XXXX
3.375	3.626	3.396	D = W + 0.010"	XXXX PDWF 03375 X XXXX
3.500	3.751	3.521	D = W + 0.010"	XXXX PDWF 03500 X XXXX
3.625	3.876	3.646	D = W + 0.010"	XXXX PDWF 03625 X XXXX
3.750	4.001	3.771	D = W + 0.010"	XXXX PDWF 03750 X XXXX
3.875	4.126	3.896	D = W + 0.010"	XXXX PDWF 03875 X XXXX
4.000	4.251	4.021	D = W + 0.010"	XXXX PDWF 04000 X XXXX

For custom groove calculations, see Appendix C.

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**PDW Profile**

Table 9-19. PDW Gland Dimensions (Rod) — Inch (Continued)

A1 Rod Diameter	B1 Groove Diameter	C1 Throat Diameter	D Groove Width	Part Number
4.125	4.376	4.146	D = W + 0.010"	XXXX PDWF 04125 X XXXX
4.250	4.501	4.271	D = W + 0.010"	XXXX PDWF 04250 X XXXX
4.375	4.626	4.396	D = W + 0.010"	XXXX PDWF 04375 X XXXX
4.500	4.751	4.521	D = W + 0.010"	XXXX PDWF 04500 X XXXX
4.625	4.876	4.646	D = W + 0.010"	XXXX PDWF 04625 X XXXX
+ .000/- .004	+ .003/- .000	+ .003/- .000	+ .010/- .000	PDWF
4.750	5.001	4.772	D = W + 0.010"	XXXX PDWF 04750 X XXXX
4.875	5.126	4.897	D = W + 0.010"	XXXX PDWF 04875 X XXXX
5.000	5.251	5.022	D = W + 0.010"	XXXX PDWF 05000 X XXXX
5.125	5.376	5.147	D = W + 0.010"	XXXX PDWF 05125 X XXXX
5.250	5.501	5.272	D = W + 0.010"	XXXX PDWF 05250 X XXXX
5.375	5.626	5.397	D = W + 0.010"	XXXX PDWF 05375 X XXXX
5.500	5.751	5.522	D = W + 0.010"	XXXX PDWF 05500 X XXXX
5.625	5.876	5.647	D = W + 0.010"	XXXX PDWF 05625 X XXXX
5.750	6.001	5.772	D = W + 0.010"	XXXX PDWF 05750 X XXXX
5.875	6.126	5.897	D = W + 0.010"	XXXX PDWF 05875 X XXXX
6.000	6.251	6.022	D = W + 0.010"	XXXX PDWF 06000 X XXXX
6.250	6.501	6.272	D = W + 0.010"	XXXX PDWF 06250 X XXXX
6.500	6.751	6.522	D = W + 0.010"	XXXX PDWF 06500 X XXXX
6.750	7.001	6.772	D = W + 0.010"	XXXX PDWF 06750 X XXXX
7.000	7.251	7.022	D = W + 0.010"	XXXX PDWF 07000 X XXXX
7.250	7.501	7.272	D = W + 0.010"	XXXX PDWF 07250 X XXXX
7.500	7.751	7.522	D = W + 0.010"	XXXX PDWF 07500 X XXXX

For custom groove calculations, see Appendix C.

NOTE: For sizes larger than those shown in the table, please contact your local Parker Seal representative.

**PDW Rod Groove Calculation**

See Rod Wear Ring Groove Calculations in Appendix C.