












































































































































**Introduction**











































Rod Seals							
Profile		Description	Application (Duty)				Page
			Hydraulic			Pneumatic	
			Light	Medium	Heavy		
BD		Premium non-symmetrical o-ring energized rod seal with a knife trimmed primary lip and molded secondary lip. Standard materials are 4300, 4700, 5065. Available with positively actuated back-up.					
BT		Premium non-symmetrical u-cup rod seal with a knife trimmed primary lip and molded secondary lip. Standard material is 4300 family.					
BS		Non-symmetrical u-cup rod seal with knife trimmed primary lip and molded secondary lip. Standard materials are 4300 family, 4700, 5065.					
B3		Non-symmetrical u-cup with knife trimmed lip. Standard materials include 4300, 4700, 5065.					
UR		Standard non-symmetrical u-cup with trimmed lip. Standard material is 4615.					
E5		Non-symmetrical low friction rounded lip pneumatic rod seal. Standard materials include 4274, 4180, 4208, 5065.					
TR		Bi-directional rod "T-seal" available in no back-up, single back-up, and two back-up groove sizes. Standard energizer materials include 4115, 4274, 4205, 4259. Back-ups available in PTFE, Nylon, PEEK.					
ON		Bi-directional, rubber energized PTFE rod cap seal. Full range of energizer and PTFE materials available.					
CR		Bi-directional, low profile, rubber energized PTFE cap rod seal designed to fit standard o-ring glands. Full range of energizer and PTFE materials available.					
OC		Standard bi-directional rubber energized PTFE rectangular cap rod seal. Full range of energizer and PTFE materials available.					
BR		Premium knife trimmed buffer or secondary seal designed to work with a primary rod seal for heavy duty or zero-leak systems. Standard material is 4300.					
OD		Uni-directional rubber energized PTFE rod seal, typically used as a buffer or secondary rod seal. Full range of energizer and PTFE materials available.					
V6		Pneumatic cushion or check valve rod seal used to cushion the piston using internal pressure. Standard materials include 4622, 4180, 4181, 4208.					
OR		Bi-directional rubber energized PTFE rod seal used in rotary or oscillating applications. Full range of energizer and PTFE materials available.					

Symmetrical Seals for Rod or Piston Applications						
Profile	Description	Application (Duty)				Page
		Hydraulic			Pneumatic	
		Light	Medium	Heavy		
SPP		Standard PolyPak. A square shaped symmetrical squeeze seal with a knife trimmed scraper lip. Standard materials include 4615, 4622, 4651, 4263, 4207, 4266.				
DPP		Deep PolyPak. A rectangular shaped symmetrical squeeze seal with a knife trimmed scraper lip. Standard materials include 4615, 4622, 4651, 4263, 4207, 4266.				
BPP		Type B PolyPak. A rectangular shaped symmetrical squeeze seal with a knife trimmed beveled lip. Standard materials include 4615, 4622, 4651, 4263, 4207, 4266.				
SL		A dual lip seal created by the combination of a standard PolyPak square shell and a rubber lip seal/energizer. Standard materials are a 4615 shell and 4180 lip seal/energizer. Also known as SCL-Pak.				
US		Standard symmetrical u-cup with trimmed beveled lips. Standard material is 4615.				
8400 8500		Symmetrical rubber u-cups used primarily in pneumatic applications. 8400 series feature knife trimmed with a beveled lip. 8500 series feature a scraper lip. Standard materials include 4180, 4274, 4208.				
AN 6226		Industry standard symmetrical u-cups per the old Army Navy (AN) specification. Standard material is 4295.				
SPI- RAL VEE		Spiral v-packing rings typically sold in sets, also known as chevron packing. Made from a wide range of materials, v-packing may be cut to size, machined, or net molded. Most dynamic v-packing has been replaced with PolyPak seals or u-cups.				
Piston Seals						
BP		Premium bi-directional rubber energized urethane piston cap seal. Standard material is 4304.				
PSP		Standard bi-directional rubber energized urethane piston cap seal. Standard materials include 4300, 4622.				
CC		ChemCast is a heavy duty bi-directional rubber energized hard plastic, step-cut piston cap seal.				
OK		Bi-directional rubber energized nylon step-cut piston cap seal.				
PIP		Bi-directional piston seal created by the combination of a Pressure Inverting Pedestal (PIP) back-up ring and Type B PolyPak. Standard material is a 4615 PolyPak with a 4617 PIP ring.				










































**Introduction**

Profile		Description	Application (Duty)				Page
			Hydraulic			Pneumatic	
			Light	Medium	Heavy		
B7		Premium non-symmetrical u-cup with knife trimmed lip piston seal. Standard materials include 4300, 4700, 5065.					
UP		Standard non-symmetrical u-cup with trimmed beveled lip piston seal. Standard material is 4615.					
E4		Non-symmetrical low friction rounded lip pneumatic piston seal. Standard materials include 4274, 4180, 4208, 5065.					
BMP		Low friction bumper and round lip seal profile for use in pneumatic applications. Standard materials include 4274 and 4208.					
TP		Bi-directional piston "T-seal" available in no back-up, single back-up, and two back-up grooves. Standard energizer materials include 4115, 4274, 4205, 4259. Back-ups available in PTFE, Nylon, PEEK.					
S5		Economical medium duty bi-directional o-ring energized PTFE piston seal. Standard material is 15% fiberglass-filled PTFE with nitrile energizer. Split option available.					
R5		Medium to heavy duty bi-directional lathe cut energized PTFE piston seal. Full range of energizer and PTFE materials available. Split option available.					
CT		Four piece capped "T-seal" piston seal made from molded rubber energizer, PTFE cap, and Nylatron back-ups.					
CQ		Bi-directional three piece lathe cut energized PTFE cap piston seal with an integrated quad seal for zero drift. Also available with dual o-ring energizer.					
OE		Bi-directional, rubber energized PTFE piston cap seal. Full range of energizer and PTFE materials available.					
CP		Bi-directional low profile, rubber energized PTFE cap piston seal designed to fit standard o-ring glands. Full range of energizer and PTFE materials available.					
OA		Standard bi-directional rubber energized PTFE rectangular cap piston seal. Full range of energizer and PTFE materials available.					
OQ		Bi-directional rubber energized PTFE piston seal used in rotary or oscillating applications. Full range of energizer and PTFE materials available.					



Wipers							
Profile	Description	Application (Duty)				Page	
		Hydraulic			Pneumatic		
		Light	Medium	Heavy			
YD		Premium snap-in wiper with OD exclusion lip and a knife trimmed wiping lip. Standard material is 4300.					
SHD		Slotted heel snap-in wiper for pneumatics and light to medium duty hydraulics. Standard materials are 4615, 5065, 4263, 4208, 4207.					
SHX		Slotted heel snap-in wiper with OD exclusion feature. Designed to upgrade SHD wipers without changing the groove. Standard materials are 4615, 5065.					
SH959		An industry standard slotted heel Army Navy (AN) wiper designed to fit MS-28776 (MS-33675) grooves. Standard materials are 4615, 5065, 4263, 4208, 4207.					
SX959		An industry standard slotted heel Army Navy (AN) wiper with an OD exclusion feature designed to fit MS-28776 (MS-33675) grooves. Designed to upgrade SH959 wipers without changing the groove. Standard materials are 4615, 5065, 4263, 4208, 4207.					
AH		Double-lip, press in place, metal canned wiper with knife trimmed sealing lip for heavy duty hydraulics. Standard materials are 4300, 4700, 4615.					
J		Standard single-lip, press in place, metal canned wiper with a knife trimmed lip for medium and heavy duty hydraulics. Standard materials are 4300, 4700, 4615.					
AY		Premium snap-in place double-lip wiper for hydraulic applications. Standard materials are 4300, 4301, 4700.					
H / 8600		Standard snap-in place double-lip wiper. Standard materials for H wiper are 4615, 5065. Standard material for 8600 wiper is 4181.					
K		Light load snap-in wiper with double-lip designed for low friction, light load applications. Standard material is 4615.					
AD		Double acting, double-lip, rubber energized PTFE wiper. Full range of energizer and PTFE materials available.					
SG		Metal scraper with rubber energizer for excluding abrasive contaminants.					

## Introduction

Profile		Description	Application (Duty)				Page
			Hydraulic			Pneumatic	
			Light	Medium	Heavy		
<b>WPT</b>		Tight tolerance piston wear ring with chamfered corners. Standard material is 4733 WearGard™.					
<b>WRT</b>		Tight tolerance rod wear ring with chamfered corners. Standard material is 4733 WearGard.					
<b>WN</b>		Standard commercial wear ring for rod and piston applications. Standard material is 4650 MolyGard™.					
<b>PDT</b>		PTFE wear strip/bearing available cut to length or in bulk rolls. A variety of PTFE compounds are available.					
<b>PDW</b>		Precision cut wear ring/bearing machined from PTFE billet material. Rod and piston chamfer may apply.					
Back-ups							
<b>MB</b>		Heavy cross-section modular back-up for PolyPak seals. Standard materials are 4617, 4652.					
<b>8700</b>		Light cross-section back-up for PolyPak and u-cup seals. Standard materials are 4651, 4729.					
<b>5100</b>		Back-up rings designed for o-ring grooves. Standard materials are 4651, 4729.					
<b>PAB</b>		Positively actuated back-up ring incorporated into common seal profiles to extend a seal's pressure range. Sold as an assembly with the seal.					
<b>PDB</b>		Anti-extrusion PTFE ring offered in solid and split configurations. Full PTFE material range applies.					
Urethane O-Rings & Head Seals							
<b>568</b>		High performance urethane o-ring made from the Resilon™ family of high temperature, low compression set urethanes.					
<b>HS</b>		Static head seals designed to replace o-rings and back-up in static applications. Standard material is 4700.	