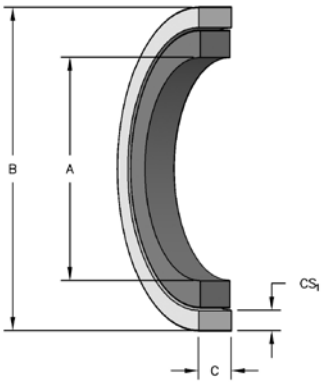
# STYLE PS1800 GLASS FILLED PTFE PISTON SEALS

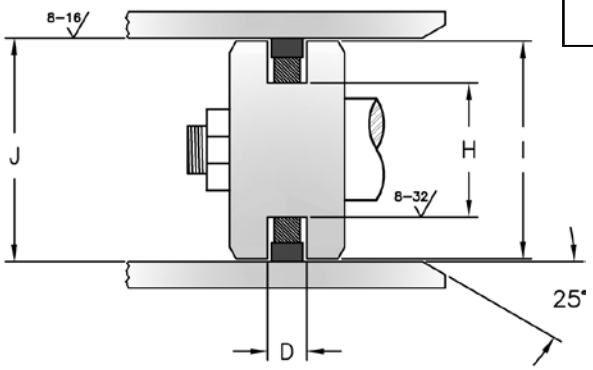
The PS1800 provides low friction, high strength piston sealing. The PS1800 also provides double-acting piston sealing in a compact design that meets the requirements of ANSI/B93-32-1973. **NOTE:** Piston diameter "I" dimensions are given for pistons without wear rings.




**PART NUMBERS**

**PS 1800 - 16**

Piston Seal | Type of Seal | Size




| SEAL INFORMATION | |
|---|---|
| MATERIAL | 15% GLASS FILLED PTFE SEAL RUBBER ENERGIZER |
| TEMPERATURE RANGE | -40° TO +220° F |
| PRESSURE RANGE | 0 TO 5,000 PSI |
| SPEED | 12 FT/SEC |

| Part Number | A Nom. ID | B Nom. OD | C Nom. Ht | D GROOVE WIDTH | H GROOVE DIAMETER | I PISTON DIAMETER | J BORE DIAMETER | C HEIGHT | $CS_1$ RING CROSS SECTION | |
|---|---|---|---|---|---|---|---|---|---|---|
| PS1800-16 | 11/16 | 1 | .121 | .129 ±.002 | .690 ±.002 | .999 +.000 -.005 | 1.000 +.002 +.000 | .121 +.000 -.005 | .073 +.000 -.006 | |
| PS1800-20 | 15/16 | 1-1/4 | .121 | .129 ±.002 | .940 ±.002 | 1.249 +.000 -.005 | 1.250 +.002 +.000 | .121 +.000 -.005 | .073 +.000 -.006 | |
| PS1800-24 | 1-3/16 | 1-1/2 | .121 | .129 ±.002 | 1.190 ±.002 | 1.499 +.000 -.005 | 1.500 +.002 +.000 | .121 +.000 -.005 | .073 +.000 -.006 | |
| PS1800-28 | 1-7/16 | 1-3/4 | .121 | .129 ±.002 | 1.440 ±.002 | 1.749 +.000 -.005 | 1.750 +.002 +.000 | .121 +.000 -.005 | .073 +.000 -.006 | |
| PS1800-32 | 1-11/16 | 2 | .121 | .129 ±.002 | 1.690 ±.002 | 1.999 +.000 -.005 | 2.000 +.002 +.000 | .121 +.000 -.005 | .073 +.000 -.006 | |
| PS1800-36 | 1-15/16 | 2-1/4 | .121 | .129 ±.002 | 1.940 ±.002 | 2.249 +.000 -.005 | 2.250 +.002 +.000 | .121 +.000 -.005 | .073 +.000 -.006 | |
| PS1800-40 | 2-3/16 | 2-1/2 | .121 | .129 ±.002 | 2.190 ±.002 | 2.499 +.000 -.005 | 2.500 +.002 +.000 | .121 +.000 -.005 | .073 +.000 -.006 | |
| PS1800-44A | 2-3/16 | 2-3/4 | .274 | .284 ±.002 | 2.190 ±.002 | 2.749 +.000 -.005 | 2.750 +.002 +.000 | .274 +.000 -.005 | .093 +.000 -.006 | |
| PS1800-44 | 2-7/16 | 2-3/4 | .121 | .129 ±.002 | 2.440 ±.002 | 2.749 +.000 -.005 | 2.750 +.002 +.000 | .121 +.000 -.005 | .073 +.000 -.006 | |
| PS1800-48 | 2-7/16 | 3 | .274 | .284 ±.002 | 2.440 ±.002 | 2.999 +.000 -.006 | 3.000 +.002 +.000 | .274 +.000 -.005 | .093 +.000 -.006 | |
| PS1800-52 | 2-11/16 | 3-1/4 | .274 | .284 ±.002 | 2.690 ±.002 | 3.249 +.000 -.006 | 3.250 +.002 +.000 | .274 +.000 -.005 | .093 +.000 -.006 | |
| PS1800-56 | 2-15/16 | 3-1/2 | .274 | .284 ±.002 | 2.940 ±.002 | 3.499 +.000 -.006 | 3.500 +.002 +.000 | .274 +.000 -.005 | .093 +.000 -.006 | |
| PS1800-60 | 3-3/16 | 3-3/4 | .274 | .284 ±.002 | 3.190 ±.002 | 3.749 +.000 -.006 | 3.750 +.002 +.000 | .274 +.000 -.005 | .093 +.000 -.006 | |
| PS1800-64 | 3-7/16 | 4 | .274 | .284 ±.002 | 3.440 ±.002 | 3.999 +.000 -.006 | 4.000 +.002 +.000 | .274 +.000 -.005 | .093 +.000 -.006 | |
| PS1800-68 | 3-11/16 | 4-1/4 | .274 | .284 ±.002 | 3.690 ±.002 | 4.249 +.000 -.006 | 4.250 +.002 +.000 | .274 +.000 -.005 | .093 +.000 -.006 | |

## PISTON SEAL ASSEMBLIES

# STYLE PS1800 GLASS FILLED PTFE PISTON SEALS

| Part Number | A Nom. ID | B Nom. OD | C Nom. Ht | D GROOVE WIDTH | H GROOVE DIAMETER | I PISTON DIAMETER | J BORE DIAMETER | C HEIGHT | $CS_1$ RING CROSS SECTION | |
|---|---|---|---|---|---|---|---|---|---|---|
| PS1800-72 | 3-15/16 | 4-1/2 | .274 | .284 ±.002 | 3.940 ±.002 | 4.499 +.000 -.006 | 4.500 +.002 +.000 | .274 +.000 -.005 | .093 +.000 -.006 | |
| PS1800-74 | 4-5/64 | 4-5/8 | .274 | .284 ±.002 | 4.078 ±.002 | 4.624 +.000 -.007 | 4.625 +.002 +.000 | .274 +.000 -.005 | .093 +.000 -.006 | |
| PS1800-76 | 4-3/16 | 4-3/4 | .274 | .284 ±.002 | 4.190 ±.002 | 4.749 +.000 -.006 | 4.750 +.002 +.000 | .274 +.000 -.005 | .093 +.000 -.006 | |
| PS1800-80 | 4-7/16 | 5 | .274 | .284 ±.002 | 4.440 ±.002 | 4.999 +.000 -.006 | 5.000 +.002 +.000 | .274 +.000 -.005 | .093 +.000 -.006 | |
| PS1800-84 | 4-1/2 | 5-1/4 | .367 | .379 ±.002 | 4.488 ±.002 | 5.249 +.000 -.007 | 5.250 +.002 +.000 | .367 +.000 -.005 | .147 +.000 -.010 | |
| PS1800-88 | 4-3/4 | 5-1/2 | .367 | .379 ±.002 | 4.738 ±.002 | 5.499 +.000 -.007 | 5.500 +.002 +.000 | .367 +.000 -.005 | .147 +.000 -.010 | |
| PS1800-90 | 4-7/8 | 5-5/8 | .367 | .379 ±.002 | 4.863 ±.002 | 5.624 +.000 -.007 | 5.625 +.002 +.000 | .367 +.000 -.005 | .147 +.000 -.010 | |
| PS1800-92 | 5 | 5-3/4 | .367 | .379 ±.002 | 4.988 ±.002 | 5.749 +.000 -.007 | 5.750 +.002 +.000 | .367 +.000 -.005 | .147 +.000 -.010 | |
| PS1800-96 | 5-1/4 | 6 | .367 | .379 ±.002 | 5.238 ±.002 | 5.999 +.000 -.007 | 6.000 +.002 +.000 | .367 +.000 -.005 | .147 +.000 -.010 | |
| PS1800-100 | 5-1/2 | 6-1/4 | .367 | .379 ±.002 | 5.488 ±.002 | 6.249 +.000 -.007 | 6.250 +.002 +.000 | .367 +.000 -.005 | .147 +.000 -.010 | |
| PS1800-104 | 5-3/4 | 6-1/2 | .367 | .379 ±.002 | 5.738 ±.002 | 6.499 +.000 -.007 | 6.500 +.002 +.000 | .367 +.000 -.005 | .147 +.000 -.010 | |
| PS1800-112 | 6-1/4 | 7 | .367 | .379 ±.002 | 6.238 ±.002 | 6.999 +.000 -.007 | 7.000 +.002 +.000 | .367 +.000 -.005 | .147 +.000 -.010 | |
| PS1800-116 | 6-1/2 | 7-1/4 | .367 | .379 ±.002 | 6.488 ±.002 | 7.249 +.000 -.007 | 7.250 +.002 +.000 | .367 +.000 -.005 | .147 +.000 -.010 | |
| PS1800-120 | 6-3/4 | 7-1/2 | .367 | .379 ±.002 | 6.738 ±.002 | 7.499 +.000 -.007 | 7.500 +.002 +.000 | .367 +.000 -.005 | .147 +.000 -.010 | |
| PS1800-128 | 7-1/4 | 8 | .367 | .379 ±.002 | 7.238 ±.002 | 7.999 +.000 -.007 | 8.000 +.002 +.000 | .367 +.000 -.005 | .147 +.000 -.010 | |
| PS1800-132 | 7-1/2 | 8-1/4 | .367 | .379 ±.002 | 7.488 ±.002 | 8.249 +.000 -.007 | 8.250 +.002 +.000 | .367 +.000 -.005 | .147 +.000 -.010 | |
| PS1800-136 | 7-3/4 | 8-1/2 | .367 | .379 ±.002 | 7.738 ±.002 | 8.499 +.000 -.007 | 8.500 +.002 +.000 | .367 +.000 -.005 | .147 +.000 -.010 | |
| PS1800-144 | 8-1/8 | 9 | .367 | .379 ±.002 | 8.122 ±.002 | 8.999 +.000 -.008 | 9.000 +.002 +.000 | .367 +.000 -.005 | .210 +.000 -.015 | |
| PS1800-152 | 8-5/8 | 9-1/2 | .367 | .379 ±.002 | 8.622 ±.002 | 9.499 +.000 -.008 | 9.500 +.002 +.000 | .367 +.000 -.005 | .210 +.000 -.015 | |
| PS1800-160 | 9-1/8 | 10 | .367 | .379 ±.002 | 9.122 ±.002 | 9.999 +.000 -.008 | 10.000 +.002 +.000 | .367 +.000 -.005 | .210 +.000 -.015 | |
| PS1800-168 | 9-5/8 | 10-1/2 | .367 | .379 ±.002 | 9.622 ±.002 | 10.499 +.000 -.008 | 10.500 +.002 +.000 | .367 +.000 -.005 | .210 +.000 -.015 | |
| PS1800-176 | 10-1/8 | 11 | .367 | .379 ±.002 | 10.122 ±.002 | 10.999 +.000 -.008 | 11.000 +.002 +.000 | .367 +.000 -.005 | .210 +.000 -.015 | |
| PS1800-192 | 11-1/8 | 12 | .367 | .379 ±.002 | 11.122 ±.002 | 11.999 +.000 -.008 | 12.000 +.002 +.000 | .367 +.000 -.005 | .210 +.000 -.015 | |
| PS1800-208 | 12-1/8 | 13 | .367 | .379 ±.002 | 12.122 ±.002 | 12.999 +.000 -.008 | 13.000 +.002 +.000 | .367 +.000 -.005 | .210 +.000 -.015 | |
| PS1800-224 | 13-1/8 | 14 | .367 | .379 ±.002 | 13.122 ±.002 | 13.999 +.000 -.008 | 14.000 +.002 +.000 | .367 +.000 -.005 | .210 +.000 -.015 | |

***Note - PS1800-208 and PS1800-224 use round energizer.**

## INSTALLATION OF PTFE PISTON SEALS

Installing PTFE piston seals is not always an easy task. The use of installation tools is recommended but often not convenient when working with a wide variety of sizes and applications. Finger installations are practical with rings of smaller cross-sections. Using fingers or a rounded plastic stick, knead the ring over the piston into the groove. With rings of larger cross-sections it may be necessary to heat the ring. Warming the ring in water or oil at 130° F or 140° F for about 5 minutes will soften the material for easier installation. Always avoid inconsistent stretching or overstretching of the PTFE seal. To prevent the PTFE ring from snapping into the wrong groove, cover wear ring grooves with plastic tape. After seal installation, assembly of the cylinder may be difficult if the piston seal is loose on the piston or the cylinder has an inadequate leading edge chamfer. In such cases, compress the piston seal with belting or a suitable hose clamp. If the piston seal must pass threads or any other sharp edges during the cylinder assembly, cover the edges with plastic tape or wrap.

## PISTON SEAL ASSEMBLIES

POWER SUPPLY COMPONENTS