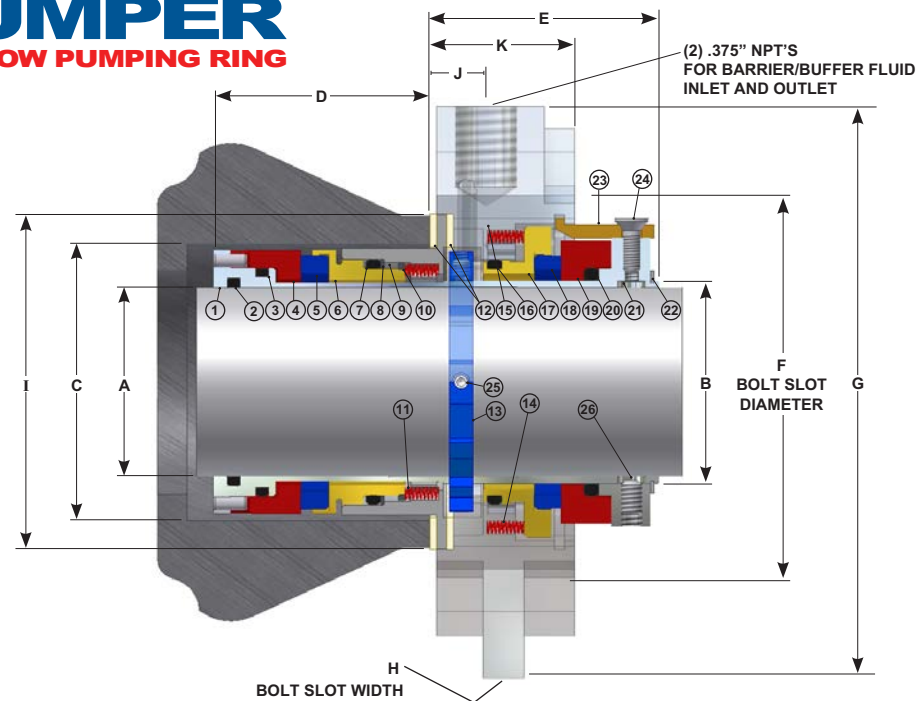


# POWERPUMPER

WITH EXCLUSIVE POWER FLOW PUMPING RING

| ITEM | DESCRIPTION         |
|------|---------------------|
| 1    | SLEEVE              |
| 2    | O-RING              |
| 3    | O-RING              |
| 4    | INBOARD ROTARY      |
| 5    | INBOARD STATIONARY  |
| 6    | INSERT HOLDER       |
| 7    | O-RING              |
| 8    | BACK UP RING        |
| 9    | GLAND ADAPTER       |
| 10   | SPRING DISC         |
| 11   | SPRING              |
| 12   | GASKET              |
| 13   | PUMPING RING        |
| 14   | SPRING              |
| 15   | GLAND               |
| 16   | O-RING              |
| 17   | INSERT HOLDER       |
| 18   | OUTBOARD STATIONARY |
| 19   | OUTBOARD ROTARY     |
| 20   | O-RING              |
| 21   | COLLAR              |
| 22   | RETAINING RING      |
| 23   | SETTING SPACER      |
| 24   | FLAT HEAD SCREW     |
| 25   | SET SCREW           |
| 26   | SET SCREW           |



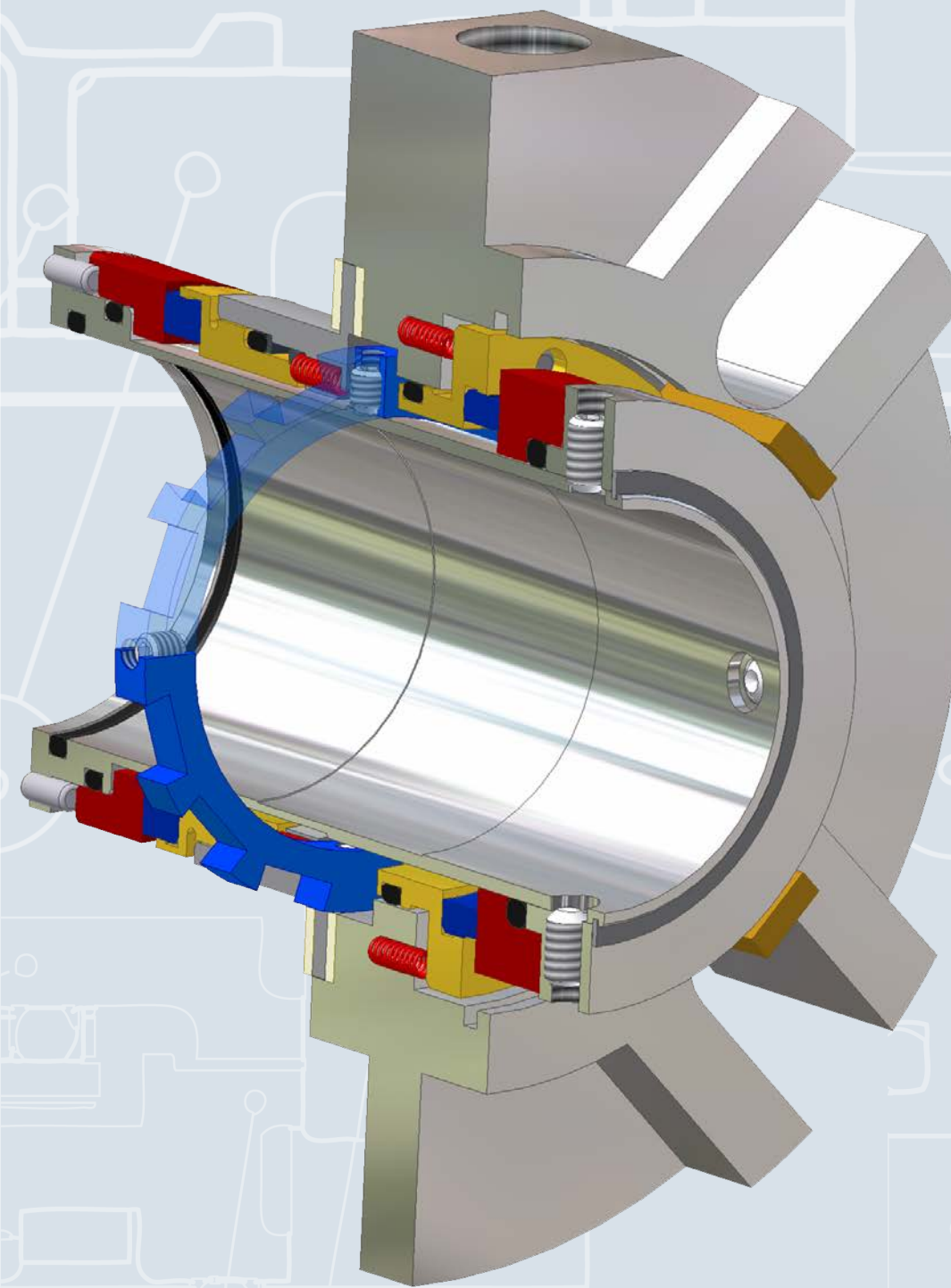
**DUAL CARTRIDGE SEAL**

| A   | B     | C MIN | C MAX | D    | E    | F           | G     | H   | I     | J                 | K    |
|---|-------|-------|-------|------|------|-------------|-------|-----|-------|-------------------|------|
| 1.000   | 1.125 | 1.750 | 1.812 | 2.00 | 2.00 | 2.375       | 4.110 | .44 | 2.078 | .53               | 1.25 |
| 1.125 SPEC                                    | 1.125 | 1.750 | 1.812 | 2.06 | 2.00 | 2.875 HOLES | 3.750 | .44 | 2.078 | .80 ANGLED NPT'S  | 1.25 |
| 1.125   | 1.250 | 1.875 | 1.937 | 2.00 | 2.00 | 2.468       | 4.130 | .44 | 2.187 | .84 ANGLED NPT'S  | 1.25 |
| 1.250   | 1.375 | 2.000 | 2.062 | 2.00 | 2.00 | 2.625       | 4.109 | .56 | 2.312 | .53               | 1.25 |
| 1.375 SPEC                                    | 1.375 | 2.000 | 2.062 | 2.03 | 2.00 | 3.250       | 4.000 | .44 | 2.312 | .84 ANGLED NPT'S  | 1.25 |
| 1.375   | 1.500 | 2.125 | 2.312 | 2.00 | 2.12 | 2.750       | 4.360 | .44 | 2.562 | .53               | 1.31 |
| 1.500   | 1.625 | 2.250 | 2.437 | 2.00 | 2.12 | 2.875       | 4.480 | .44 | 2.688 | .53               | 1.31 |
| 1.625   | 1.750 | 2.375 | 2.562 | 2.00 | 2.12 | 3.015       | 4.980 | .56 | 2.812 | .53               | 1.31 |
| 1.750   | 1.875 | 2.500 | 2.812 | 2.00 | 2.12 | 3.170       | 5.480 | .56 | 3.062 | .53               | 1.31 |
| 1.875   | 2.000 | 2.625 | 2.937 | 2.00 | 2.12 | 3.312       | 5.480 | .56 | 3.187 | .53               | 1.31 |
| 2.000   | 2.125 | 2.750 | 3.187 | 2.00 | 2.12 | 3.531       | 5.480 | .56 | 3.437 | .53               | 1.31 |
| 2.125   | 2.250 | 2.875 | 3.437 | 2.00 | 2.12 | 3.781       | 5.980 | .69 | 3.688 | .53               | 1.31 |
| 2.250   | 2.375 | 3.000 | 3.562 | 2.00 | 2.12 | 3.920       | 5.980 | .69 | 3.812 | .53               | 1.31 |
| 2.375   | 2.500 | 3.125 | 3.593 | 2.00 | 2.12 | 3.937       | 5.980 | .69 | 3.843 | .53               | 1.31 |
| 2.500   | 2.625 | 3.250 | 3.812 | 2.00 | 2.12 | 4.141       | 6.480 | .69 | 4.062 | .53               | 1.31 |
| 2.625   | 2.750 | 3.375 | 3.937 | 2.00 | 2.12 | 4.312       | 6.480 | .69 | 4.187 | .53               | 1.31 |
| 2.750   | 3.000 | 3.750 | 4.437 | 2.44 | 2.38 | 4.781       | 7.730 | .69 | 4.688 | .59               | 1.56 |
| 2.875   | 3.125 | 3.875 | 4.562 | 2.44 | 2.38 | 4.937       | 7.860 | .69 | 4.812 | .59               | 1.56 |
| 3.000   | 3.250 | 4.000 | 4.687 | 2.44 | 2.38 | 5.062       | 7.980 | .69 | 4.937 | .59               | 1.56 |
| 3.125   | 3.375 | 4.125 | 4.812 | 2.44 | 2.38 | 5.187       | 8.110 | .69 | 5.062 | .59               | 1.56 |
| 3.250   | 3.500 | 4.250 | 4.937 | 2.44 | 2.38 | 5.312       | 8.230 | .69 | 5.187 | .59               | 1.56 |
| 3.375   | 3.625 | 4.375 | 5.062 | 2.44 | 2.38 | 5.437       | 8.360 | .81 | 5.312 | .59               | 1.56 |
| 3.500   | 3.750 | 4.500 | 5.187 | 2.44 | 2.38 | 5.593       | 8.485 | .81 | 5.437 | .59               | 1.56 |
| 3.625   | 3.875 | 4.625 | 5.312 | 2.44 | 2.38 | 5.718       | 8.610 | .81 | 5.562 | .59               | 1.56 |
| 3.750   | 4.000 | 4.750 | 5.437 | 2.44 | 2.38 | 5.843       | 8.730 | .81 | 5.688 | .59               | 1.56 |
| 4.000   | 4.250 | 5.000 | 5.688 | 2.44 | 2.38 | 6.090       | 8.980 | .81 | 5.937 | .59               | 1.56 |
| 4.125   | 4.375 | 5.125 | 5.812 | 2.44 | 2.38 | 6.220       | 9.110 | .81 | 6.062 | .59               | 1.56 |
| 4.250   | 4.500 | 5.250 | 5.938 | 2.44 | 2.38 | 6.340       | 9.230 | .81 | 6.187 | .59               | 1.56 |
| 4.500   | 4.750 | 5.500 | 6.187 | 2.44 | 2.38 | 6.590       | 9.480 | .81 | 6.437 | .59               | 1.56 |
| 4.750   | 5.000 | 5.750 | 6.437 | 2.44 | 2.38 | 6.812       | 8.980 | .81 | 6.688 | .59               | 1.56 |
| <b>POWERPUMPER+ FOR OVERSIZE STUFFING BOX</b> |       |       |       |      |      |             |       |     |       |                   |      |
| 1.125 SPEC                                    | 1.250 | 2.625 | 2.875 | 2.00 | 2.00 | 3.310       | 4.500 | .44 | 3.125 | .88 ANGLED NPT'S  | 1.25 |
| 1.375   | 1.500 | 2.875 | 3.250 | 2.03 | 2.09 | 3.562       | 5.125 | .44 | 3.500 | 1.00 ANGLED NPT'S | 1.31 |
| 1.375 SPEC                                    | 1.500 | 2.875 | 3.250 | 2.03 | 2.00 | 3.562       | 5.125 | .44 | 3.500 | 1.00 ANGLED NPT'S | 1.31 |
| 1.375 SPEC                                    | 1.500 | 2.875 | 3.250 | 1.97 | 2.15 | 3.562       | 5.125 | .44 | 3.500 | 1.06 ANGLED NPT'S | 1.37 |
| 1.750   | 2.000 | 3.500 | 4.031 | 1.75 | 2.38 | 4.406       | 6.250 | .56 | 4.281 | .78               | 1.56 |
| 1.875   | 2.000 | 3.500 | 4.031 | 1.75 | 2.38 | 4.406       | 6.250 | .56 | 4.281 | .78               | 1.56 |
| 2.125   | 2.250 | 3.875 | 4.437 | 2.00 | 2.12 | 4.810       | 7.125 | .69 | 4.687 | .53               | 1.31 |
| 2.500   | 2.625 | 4.500 | 5.125 | 2.00 | 2.12 | 5.437       | 7.875 | .69 | 5.375 | .53               | 1.31 |
| 2.625   | 2.750 | 4.625 | 4.875 | 1.87 | 2.25 | 5.437       | 7.500 | .56 | 5.125 | .66               | 1.44 |



# POWERPUMPER

WITH EXCLUSIVE POWER FLOW PUMPING RING



*The Industry's  
Premier  
DUAL  
CARTRIDGE  
SEAL*

**RUNS  
COOLER,  
LONGER**  
than any comparable  
seal...

**CARTRIDGE DESIGN, FAST INSTALLATION.**

**RUNS AS A DOUBLE OR TANDEM SEAL.**

Special double balance on the inboard seal allows the Power Pumper to handle pressure reversals.

**HYDRAULICALLY BALANCED REDUCING FRICTION AND WEAR.**

Hydraulically balanced inboard and outboard seals are naturally cooler running, longer lasting.

**DRAMATICALLY INCREASED SEAL LIFE.**

Balanced seal faces coupled with the exclusive pumping ring's optimum barrier fluid flow results in the coolest, most reliable seal on the market.

**SELF-ALIGNING STATIONARY FACES.**

Compensate for any misalignment of the pump shaft to stuffing box.

**UNIVERSAL APPLICATION.**

Fits virtually any pump without modification to the stuffing box.

**HANDLES TEMPERATURES UP TO 450° F, PRESSURES UP TO 300 P.S.I.\***

\*For specific applications or those outside listed parameters, contact your local PPC representative.

**WARRANTY**

PPC seals and seal parts are guaranteed to be free from defects in material and workmanship. Guaranteed to render satisfactory service when used for the purpose for which they are designed.

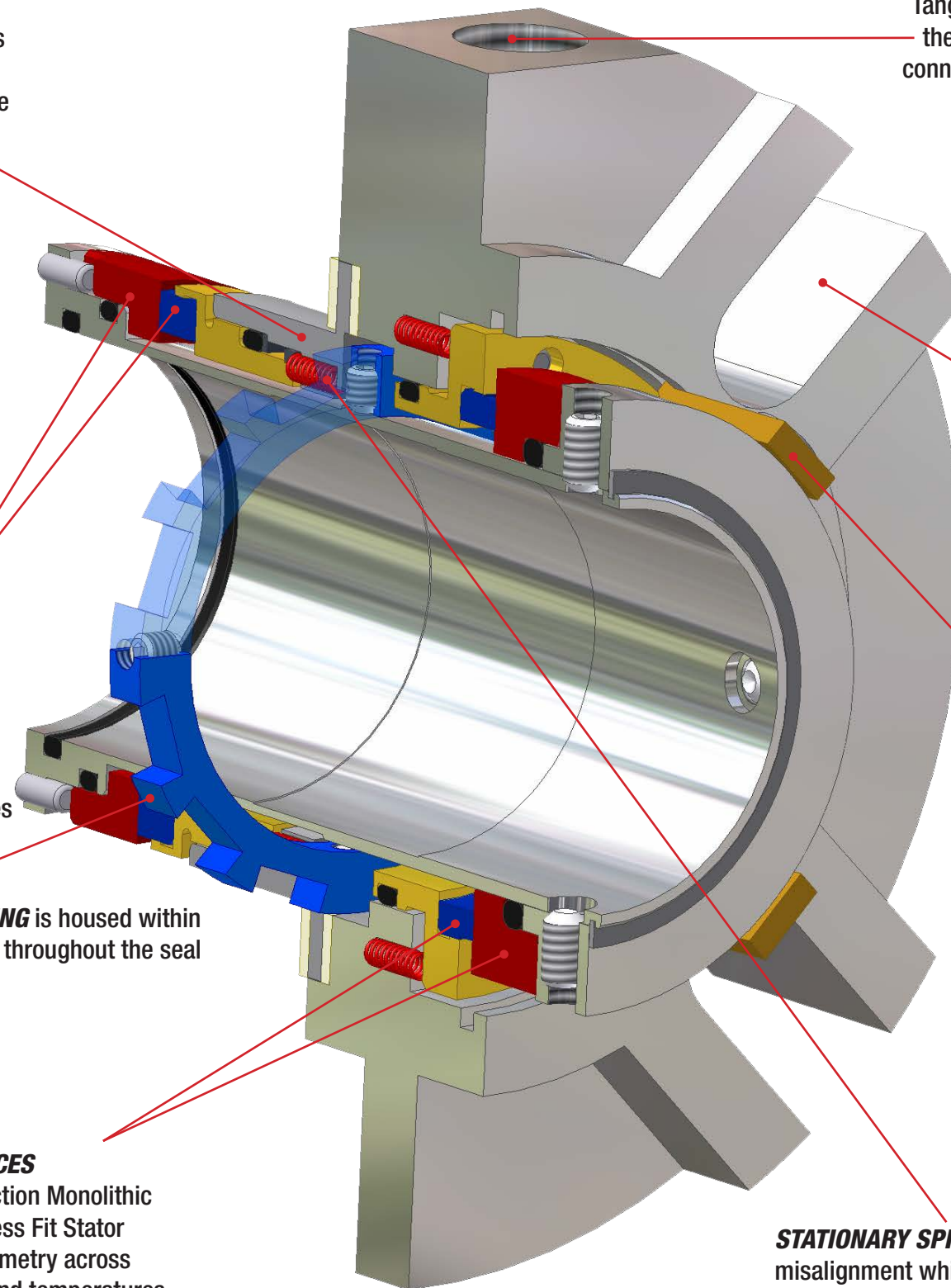
**DUAL CARTRIDGE SEAL**

**GLAND ADAPTER** isolates gland from the product, and allows for inexpensive upgrade to exotic metals.

**INBOARD SEAL FACES** with a large cross section Monolithic Rotary Face and a Press Fit Stator for optimum face Geometry across changing pressures and temperature.

**EXCLUSIVE PUMPING RING** is housed within the gland, circulates fluid throughout the seal and barrier system.

**OUTBOARD SEAL FACES** with a large cross section Monolithic Rotary Face and a Press Fit Stator for optimum face Geometry across changing pressures and temperatures.



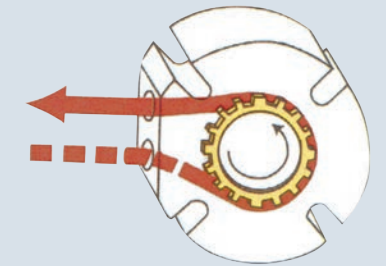
**TANGENTIAL PORTS**  
Tangential entry improves flow within the seal. Inlet and outlet barrier fluid connections are together for fast, easy installation.

**SLOTTED UNIVERSAL GLAND** to fit a variety of bolt circles and sizes.

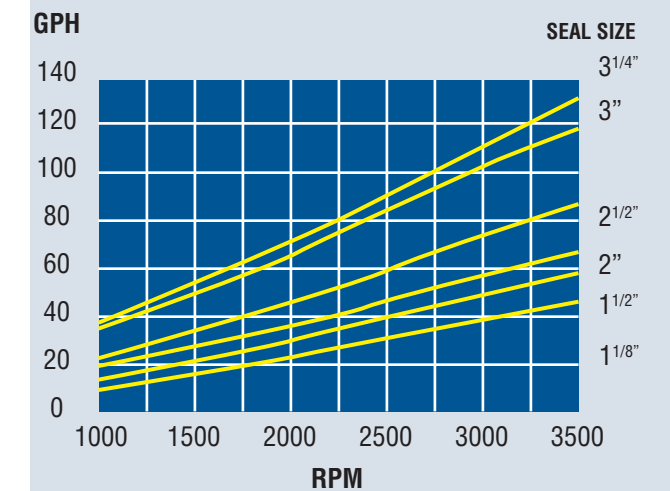
**PRECISION SPACER CLIPS** serve to center and preset seal for easy installation.

**STATIONARY SPRINGS** Flexible stator corrects misalignment while eliminating oscillation.

**POWER FLOW PUMPING RING**



Forced circulation from PowerPumper's EXCLUSIVE POWER FLOW PUMPING RING allows a wide variety of barrier fluids to be used. Forced circulation results in greatly reduced temperatures and MARKEDLY GREATER SEAL LIFE.



**Materials of Construction**

| METAL PARTS   | ELASTOMERS   | SEAL FACES  |
|---|--|---|
| <ul style="list-style-type: none"> <li>Major Metal Parts: 316 Stainless Steel,</li> <li>Springs: Alloy C276</li> <li>Also, Alloy 20, Titanium, Alloy 276</li> </ul> | <ul style="list-style-type: none"> <li>EPDM</li> <li>AFLAS*</li> <li>FKM</li> <li>Perfluoroelastomer (FFKM)</li> </ul> | <ul style="list-style-type: none"> <li>Carbon</li> <li>Tungsten Carbide</li> <li>Silicon Carbide</li> </ul> |

\*Registered trademark of Asahi Glass