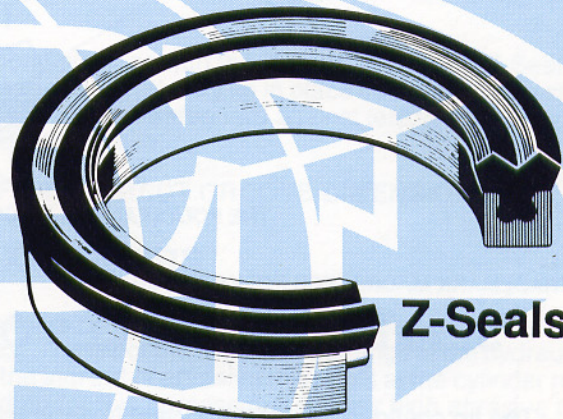


The EXTENDED RANGE

HYDRAULIC SEAL LINE



Polyseals



Z-Seals

FLUIDS

All Hydraulic Fluids including All Fire Retardant Hydraulic Fluids.

TEMPERATURE

-65°F to +550°F

PRESSURE

Vacuum to over 10,000 psi.

EXTREME ENVIRONMENT

Abrasive, wet, chemical.

SIZES

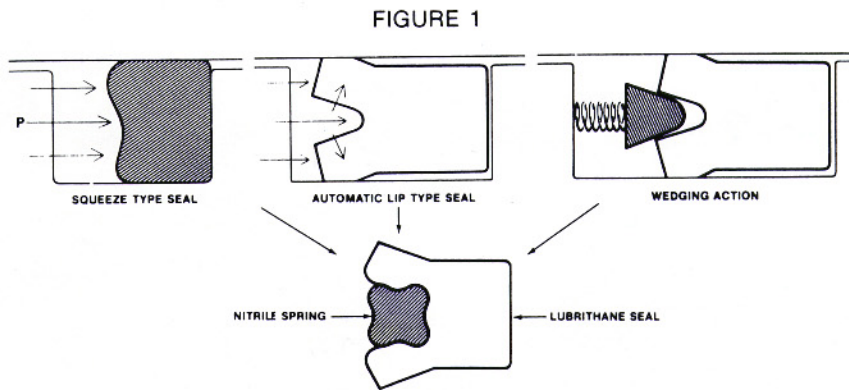
1/32" I.D. to over 45" I.D.



MACROTECH POLYSEAL, INC.

SEALING PRINCIPLES OF THE LUBRITHANE POLYSEAL

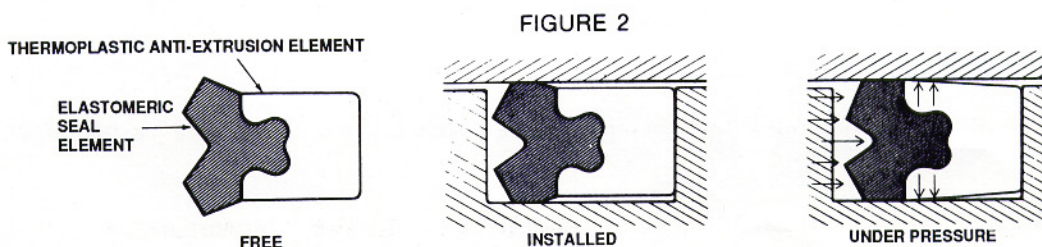
1. The Polyseal pre-loaded elastomeric spring, along with the mechanical advantage of its wedging action, give positive lip contact at low pressure and vacuum conditions.
2. The hydrostatic transfer of pressure through the elastomeric spring to the sealing lips gives a positive seal at high pressure.
3. The wedging action of the elastomeric spring in the Polyseal prevents the sealing lips from collapsing away from the sealing surface under severe load changes or high cycle rates.
4. The elastomeric Nitrile rubber spring adds additional sealing life to the Polyseal due to the fact that Nitrile rubber has a lower compression set characteristic above 150 °F than does Urethane.
5. As a summary, the Polyseal combines the best of three sealing forces (see Figure 1).



*TRADEMARK MACROTECH POLYSEAL, INC.

SEALING PRINCIPLES OF THE Z-SEAL/DEEP Z SEAL

1. The lip configuration of the Z-Seal is designed to give both squeeze sealing force (as does an O-ring) and automatic lip sealing force (as does a U-cup). The Deep Z Seal offers redundant sealing lips for additional lip contact.
2. Due to the very low compression set characteristics of an elastomeric lip material such as Nitrile or Poly Vi*, there are no additional pre-loading devices required to insure the seal.
3. The base of the seal is made of either Fluorotrel* or Lubrithane*, relatively hard anti-extrusion materials. It has a lip-like configuration that spreads under pressure in order to close the extrusion gap behind the sealing lips, giving the seal a high pressure capability. Elastomeric seals gain extended life when properly backed up with a hard anti-extrusion device (see Figure 2).
4. Both Poly-Vi and Fluorotrel are specifically compounded to give a higher temperature and chemical resistance than that of other elastomeric sealing materials.



STYLE SELECTION



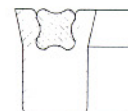
STANDARD POLYSEAL

Use where low friction is required and where a light lubricating film of oil is desired.



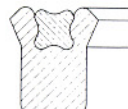
SQUARE B POLYSEAL

Use where space is a premium but a dry seal is required. The beveled lip design increases the scraping action of the seal.



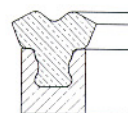
DEEP POLYSEAL

Use where low friction is required. As with the Standard Polyseal, a light lubricating film of oil will be left on the metal sealing surface. The rectangular shape of the seal adds to its stability. This seal is an excellent choice for contaminated environments.



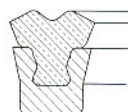
TYPE B POLYSEAL

Use this seal whenever a dry seal is required. As with the Square B Polyseal, the beveled lip design increases its scraping action. When this seal is used, the bearing should be positioned on the wet side of the seal.



Z-SEAL

Use this seal in extreme environmental conditions. The variety of seal materials offered gives this seal the widest range of both temperature and chemical resistance.



DEEP Z SEAL

Use this seal in extreme conditions, as with the Z-Seal. The Deep Z Seal features a second lip on the base that keeps the primary lip in place during pressure spikes. This dual-lip configuration also serves as a safeguard against leakage past the primary lip and provides low pressure start-up sealing.

REFER TO MPS-2500 ENGINEERING GUIDE FOR CORRECT GROOVE DIMENSIONS.

EXCLUDERS

The ultimate safeguard of a hydraulic cylinder and hydraulic system rests with the quality and performance of its anti-contamination devices. The life of the seals and bearings of the hydraulic cylinder can be substantially increased by excluding the ingress of abrasive materials at the cylinder rod. Wiper/scrapers made of polyurethane are outstanding for this purpose due to their high abrasive resistance.



Standard Polyseal

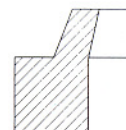
The Standard Polyseal can serve as a positively excluding wiper/scrapper. The loaded lip design of the Polyseal ensures a positive seal and wiping action at both the I.D. of the gland groove as well as the O.D. of the hydraulic cylinder rod.

Use seal gland groove dimensions as shown for a Standard Polyseal. When ordering, use the Standard Polyseal part number.



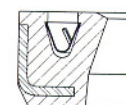
AN959 Wiper

This is a light-duty, snap-in wiper which will retrofit into glands as prescribed in MS-33675 for corresponding dash numbers of MS-28776.



D Wiper

This heavy section snap-in wiper/scrapper is recommended for moderately contaminated environments as well as large diameter applications.



Metal Clad (MC) Wiper

This snap-in wiper/scrapper offers superior performance to the D and 959 style wipers, featuring a metal can for excellent stability. Also, lower machining costs for a less complex groove are attained from the MC's square shape. Also available as MCS with steel spring energizer (pictured).

REFER TO EX-1000 BROCHURE FOR CORRECT GROOVE DIMENSIONS.

