The 2016 Seal and Kit Catalogs are Here!

It is with great excitement that we announce the release of the 2016 Seal and Kit Catalogs. For the second consecutive year, you will find no price increase to our list price in 2016. Additionally, efforts to expand our product offerings to meet your growing repair needs has resulted in the addition of the new product lines listed below.

**SEAL PRODUCTS**

- DRU-BHT Heavy Duty Rod Urethane U-Seals
- DRTU-BHT Heavy Duty Rod Second Lip Urethane U-Seals
- DPU-BHT Heavy Duty Piston Urethane U-Seals
- DSU-BHT Heavy Duty Symmetrical Urethane U-Seals
- DYR-BHT Rod Buffer Seals, Urethane Seal with Polycetal Ring
- PS1704 – Piston Seals, Glass Filled Polyester with Rubber Energizer
- PS1708 – Piston Seals, Glass Filled Polyester with Rubber Energizer
- PSA-83 – Piston Seals, Nitrile Piston Seals, with Polycetal Anti-Extrusion Ring and Bearings
- PSM-DPAC – Two Piece Piston Seals, Urethane Seal with NBR Energizer
- ST-XL-PM – 55D Polyester Wiper Rings
- ST-XLFT – Urethane Wiper Rings
- MRUBL – Super-Duty Rod U-Seals, Urethane U-Seal with Rubber Energizer and Polycetal Back-up
- MYR-HT – Buffer Seals, Urethane Buffer with Nylon Back-up
- MAPA – Pneumatic DA Piston Seals, 80 NBR
- MPSO5 – Four Piece Piston Seals, Bronze Filled PTFE with NBR Energizers and NBR Quad-Ring
- MPSA-750 Three Piece Piston Seals, TPE Cap w/Nitrile Energizer and Polycetal Anti-Extrusion Rings
- MTPS – Four Piece Piston Seals, TPE Cap with Nitrile Energizer and Polycetal Anti-Extrusion Rings
- MWRPEG – Wear Rings, Graphite Filled Fabric Reinforced Polyester
- MW38 – 55D Polyester Snap-In Wipers
- MSWE-XLF – Snap-In Wipers, 93A Urethane and 55D Urethane
- MSWSHN – 90A Nitrile Snap-In Wipers
- MCWIN – Metal Clad Wipers with Nitrile Lip and Steel Case
- MHS8 – 93A Urethane Head Seals
- MHSNB - Head Seals, Nitrile O-ring with Urethane Back-up
- MUHS – Polyester Elastomer Head Seals

**KIT PRODUCTS**

- Case Crawler Dozers/Loaders - Models 1150G, 1150H
- Caterpillar Crawler Dozers - Model D11T
- Caterpillar Forestry Excavators - Model 568 FM LL
- Caterpillar Forestry Forwarders - Models 554, 564, 574, 574B
- Caterpillar Forestry Industrial Tractors - Models TK371, TK381
- Caterpillar Forestry Knuckle Boom Loaders - Model 539

**WINTER SPECIAL**

568 O-Ring Face Kit

$4.15 Net

The kit contains a total of 155, 90 Durometer O-rings in 8 different sizes.

One per order. While supplies last.

Offer expires January 31, 2016

Use part number 568 FACE KIT PROMO when placing your order.

Order this Special Today by Phone, Fax, Email or Online at www.HerculesUS.com!

(continued on inside)
WHEN IS A LITTLE BIT TOO MUCH? And what to do about it.

A commonly used piston sealing arrangement on most double action mobile cylinder pistons manufactured today involves some combination of wear rings and PTFE (Teflon) seal ring with a nitrile rubber energizer. Generally, this is acceptable for most mobile applications. An example of this type of seal is the Hercules PS1800 style piston seal. This type of seal is very durable and performs very satisfactorily when the machine is in operation. However, this seal allows for a slight bit of leakage over the sealing face of the seal at low pressures and, when the machine is not in motion, can allow for some cylinder ‘drift’.

In most applications a slight bit of internal leakage and drift of a cylinder is not a problem. However, in some applications a ‘little leakage’ and drift is just not acceptable. An example of this situation would be with personnel lifts or aerial devices which must hold people working in an elevated position with no drift up or down.

This type of application generally calls for a ‘positive’ sealing piston seal; a seal that allows no by-pass whatsoever.

A seal frequently used in such applications is a seal which involves the use of a PTFE seal ring, nitrile energizer (like the PS1800) but with the addition of an elastomeric element to the OD of the PTFE seal ring – typically a quad-ring. The Hercules PSQ product is one such seal which provides a positive seal on the piston as the nitrile energizer and PTFE ring provide excellent ‘high’ pressure sealing while the ‘quad-ring’ eliminates the ‘little bit’ of leakage over the piston while the machine is not in motion and the seal may see ‘lower’ pressures. For applications which require no cylinder drift, the PSQ type of seal provides excellent performance.

Another application where the PSQ type of seal works well is piston type accumulators. This application also requires a ‘positive’ piston seal as the seal must seal ‘dissimilar’ fluids - typically nitrogen on one side of the piston and petroleum hydraulic fluid on the other – and can allow no leakage across the face of the seal. The PSQ seal works well in this type of application also.

For Technical Assistance Call 727.796.1300
ST-XLFT - Wiper
The ST-XLFT was developed for hard environments, particularly longwall mining. These wipers include a dust lip to prevent contaminants from entering through the groove. They also have a ribbed inside diameter for low friction operation and to prevent pressure traps between the wiper and rod seal.

MRUBL - Rod U-Seal
Designed for longwall mining applications, the MRUBL style consists of a urethane seal, nitrile o-ring energizer, and polyacetal anti-extrusion ring. The energizer ensures sealing under low pressure and cushions the seal against shock loads. The anti-extrusion ring resists extrusion under side load and extreme pressure peaks.

MTPS - Piston Seal Assembly
This four piece double acting piston seal contains a nitrile energizer behind a tough, wear-resistant 55D thermoplastic polyester elastomer (TPE) cap ring. It also includes two split rectangular polyacetal anti-extrusion rings. The MTPS design has high shock load and high pressure capabilities and is suitable for both roller-burnished and honed tubing. Sealing materials are suitable for mineral oils and HFA (High Water Content) fluids as used in longwall mining equipment.

MW38 - Wiper Ring
The style MW38 wiper is made from tough abrasion resistant polyester based material for difficult conditions found in mining and earth moving applications. It incorporates a sealing lip on the outside diameter to prevent moisture entering the groove.

MUHS - Head Seal
The MUHS U-ring profile head seal was developed for high water content fluids (HFA) applications, it can also be used with standard mineral oil fluids. Each nominal diameter seal can be used in a range of bores.

MHSNB - Head Seal
This head seal design, comprised of a nitrile seal and hard urethane back-up ring, is used in some mining applications.

MSWE-XLF - Wiper Ring
This wiper style was developed for harsh environments, particularly longwall mining. These wipers include a dust lip to prevent contaminants from entering through the groove. They also have a ribbed inside diameter for low friction option and to prevent pressure traps between the wiper and rod seal.

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Over the years, we’ve heard many customers comment that they would like to use the Hercules website to place large orders, but it’s just not compatible with their in-house PO program. We have the solution! The new Hercules PO Export feature allows you to view inventory, pricing, parts substitutions and the final order prior to entering the order into your PO program. This new feature even provides an Excel and QuickBooks™ Export that can be entered directly into your PO program. This will allow you to only key the order in one time and receive accurate, real-time data prior to completing the PO.

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2. Now leave your program and switch to the Hercules US website
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4. View available inventory and make part substitutions
5. Confirm your price and discounts
6. Enter your PO Number and release the order
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