

The Hydraulic

# CONNECTION

Winter / Spring 2015 - Volume 2 / Number 1

## BULLDOG PRODUCTS NOW AVAILABLE ONLINE - [www.HerculesCA.ca](http://www.HerculesCA.ca)



Hercules Canada is pleased to announce the addition of Bulldog Products to the Hercules website at [www.HerculesCA.ca](http://www.HerculesCA.ca). To make your search fast and easy, two search options have been added to the top menu; one for gaskets, the other for hydraulic kits. Simply choose your manufacturer and machine type to view and order Bulldog products for your specific repair needs.

## 2015 Price and Catalog Announcement

At Hercules Sealing Products, we are constantly looking for new ways to improve our customer's experience and satisfaction. This year we are excited to announce there will be no list price increase and prices will be held at 2014 list prices through the end of 2015.

Additionally, efforts to expand our product offerings to meet your growing repair needs has resulted in the new and expanded product lines listed below. These products are reflected in the 2015 New Products Catalog.

### New Seal Products

- Inch Products: DRU-BHT and DRTU-BHT Rod U-Seals, DPU-BHT Pistons U-Seals, DSU-BHT U-Seals, DYR-BHT Rod Buffer Seals, PS1704 and PS1708 Piston Seals
- Metric Lines: MYR-HT Buffer Seals, MPSQ5 Piston Seal Assemblies, MSWSHN Wiper Rings, MHS8 O-Rings
- Repair Accessories: Silicone tape, Bolted Split Flange Protectors, Steel Plugs / Vents, Split Tension, Hardened Spring Steel Bushings, and Caliper Repair Parts
- Kits and Tools – Grease Fitting Kit and Various O-Ring Kits, Hone Coupler and Portable Hone

### New Kit Products

- Case - Backhoe Loaders, Excavators, Forklifts, Skid Steer Loaders and Wheel Loaders
- Caterpillar - Backhoe Loaders, Crawler Dozers, Articulated Dump Trucks, Excavators, Wheel Loaders and Telehandlers
- Hiab - Cranes
- Hitachi, JCB and John Deere - Excavators
- Komatsu - Crawler Dozers, Articulated Dump Trucks, Excavators and Compact Excavators
- Kubota - Compact Excavators
- Volvo - Articulated Dump Trucks and Wheel Loaders
- Additional New Kits for JLG Telehandlers, Kobelco Compact Excavators, Terex Backhoe Loaders and New Holland Backhoe Loaders



Please retain your copies of the 2014 Seal and Kit Catalogs for the coming year. However, if you should need to order additional copies of the 2014 Catalogs or the 2015 New Products Catalog, please visit the Company Literature section of the Hercules website. Complete copies of the 2015 Seal and Kit Catalogs are available in PDF format at [www.HerculesCA.ca](http://www.HerculesCA.ca).

## WEB SPECIALS AND NEW PRODUCT ANNOUNCEMENTS



Stay up-to-date with the Hercules specials and new products announcements by joining the Hercules E-Newsletter group. Joining is easy! Simply add your e-mail address to the space provided on the Hercules website homepage (lower right corner). You'll receive bi-monthly notices of new products, literature and web specials. Opt-out at any time, with a single click.

## WEB SPECIAL

### 6" Hercules Caliper

**\$22.00** net

This quality caliper is able to measure up to 6 inch (150mm). A push of a button changes from inches to metric. This caliper comes in a sturdy, padded plastic case with instructions and a spare battery.

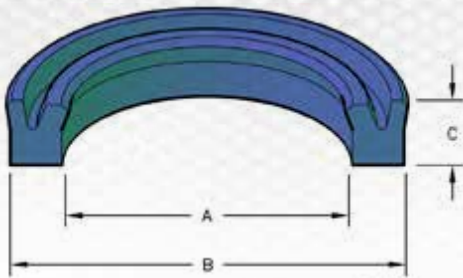
**When ordering online use Part # HH-CALIPER-6-PROMO**

**NOW AVAILABLE**

# New High Strength BHT Seals

Hercules now offers a groundbreaking new generation of polyurethane for extreme fluid power applications. The new High Strength polyurethane delivers improved extrusion resistance and rebound under higher temperature conditions and is now available in a line of Rod, Piston, Symmetrical and Buffer Seals to meet your high pressure needs. To view dimensional information and place your order online, go to the New Products section of the Hercules website - [www.HerculesCA.ca](http://www.HerculesCA.ca). These new products are also featured on pages 12-21 of the 2015 New Products Catalog.

**Style DRU-BHT** rod seals are molded in Freudenberg® AU 30000 urethane. These seals are specifically designed to seal on their inside diameter and engineered to attain maximum life and reliability in dynamic rod sealing. This high tear-resistant urethane demonstrates stability throughout a wide range of temperatures. In addition, this material is well suited to mineral and biodegradable hydraulic fluids as well as being resistant to hydrolysis.



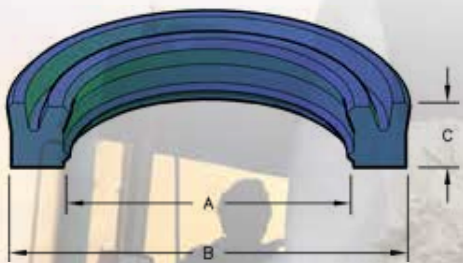
SEAL INFORMATION	
MATERIAL	94A URETHANE
TEMPERATURE RANGE	-31°F TO 250°F
PRESSURE RANGE	0 TO 7250 PSI
SPEED	1.5 FT/SEC

**HERCULES PART NUMBERS**  
**DRU 12 - 0.62 - 18 - BHT**  
 Type of Seal    Cross Section    Inside Diameter    Height

Part Number	List Price
<b>1/8" C/S</b>	
DRU12-0.62-18-BHT	\$ 10.18
DRU12-0.75-12-BHT	10.18
DRU12-0.75-25-BHT	10.18
DRU12-0.87-12-BHT	10.73
DRU12-1.00-12-BHT	10.73
DRU12-1.00-18-BHT	10.73
<b>3/16" C/S</b>	
DRU18-1.75-26-BHT	\$ 15.91
DRU18-1.87-31-BHT	17.39
<b>1/4" C/S</b>	
DRU25-1.00-25-BHT	\$ 12.58
DRU25-1.25-25-BHT	13.05
DRU25-1.87-37-BHT	17.39

Part Number	List Price
<b>1/4" C/S</b>	
DRU25-2.00-31-BHT	\$ 18.32
DRU25-2.12-37-BHT	19.25
DRU25-2.50-32-BHT	20.36
DRU25-2.62-37-BHT	21.72
DRU25-3.00-37-BHT	24.24
DRU25-3.50-37-BHT	28.67
<b>5/16" C/S</b>	
DRU31-2.25-37-BHT	\$ 20.36
<b>3/8" C/S</b>	
DRU37-2.00-37-BHT	\$ 19.25
DRU37-3.00-37-BHT	26.14

**Style DRTU-BHT** rod seals are molded in Freudenberg® AU 30000 urethane. These seals are specifically designed with a second lip on their inside diameter and engineered to attain maximum life and reliability in dynamic rod sealing. This feature results in reduced leakage, less friction, increased stability, and prevents air and contaminants from entering the cylinder. This high tear-resistant urethane demonstrates stability throughout a wide range of temperatures. In addition, this material is well suited to mineral and biodegradable hydraulic fluids as well as being resistant to hydrolysis.



SEAL INFORMATION	
MATERIAL	94A URETHANE
TEMPERATURE RANGE	-31°F TO 250°F
PRESSURE RANGE	0 TO 7250 PSI
SPEED	1.5 FT/SEC

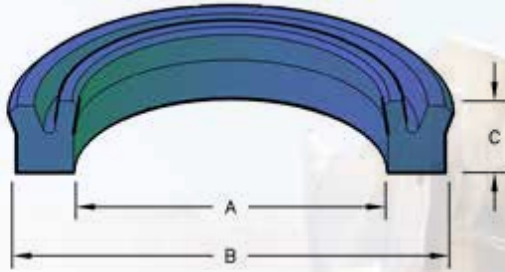
**HERCULES PART NUMBERS**  
**DRTU 12 - 0.75 - 25 - BHT**  
 Type of Seal    Cross Section    Inside Diameter    Height

Part Number	List Price
<b>1/8 C/S</b>	
DRTU12-0.75-25-BHT	\$ 10.56
DRTU12-1.00-25-BHT	11.13
<b>3/16 C/S</b>	
DRTU18-1.00-31-BHT	\$ 12.47
DRTU18-1.12-25-BHT	13.05
DRTU18-1.12-31-BHT	13.05
DRTU18-1.25-31-BHT	13.53
DRTU18-1.37-31-BHT	13.53
DRTU18-1.50-25-BHT	14.20
DRTU18-1.50-31-BHT	14.20
DRTU18-1.50-37-BHT	14.20
DRTU18-1.62-37-BHT	14.20
DRTU18-1.75-25-BHT	18.04
DRTU18-1.75-31-BHT	16.50
DRTU18-1.75-37-BHT	16.50
DRTU18-2.00-31-BHT	18.04
DRTU18-2.00-37-BHT	18.04
DRTU18-2.25-37-BHT	19.96
DRTU18-2.50-37-BHT	21.11

Part Number	List Price
<b>1/4 C/S</b>	
DRTU25-1.25-37-BHT	\$ 13.53
DRTU25-1.50-25-BHT	14.20
DRTU25-1.75-37-BHT	18.04
DRTU25-2.00-37-BHT	19.00
DRTU25-2.25-37-BHT	19.96
DRTU25-2.37-37-BHT	21.11
DRTU25-2.50-37-BHT	21.11
DRTU25-2.75-37-BHT	25.34
DRTU25-3.00-37-BHT	26.93
DRTU25-3.25-37-BHT	29.04
DRTU25-3.50-37-BHT	31.86
DRTU25-4.00-37-BHT	39.78
<b>5/16 C/S</b>	
DRTU31-1.75-37-BHT	\$ 18.04
DRTU31-2.50-50-BHT	22.53
DRTU31-2.75-50-BHT	25.34
DRTU31-3.00-50-BHT	29.04
DRTU37-3.00-50-BHT	29.04
DRTU37-3.50-62-BHT	37.49

**Call to place your order today - Barrie: 800-665-7325 or Dorval: 800-565-6534**  
**Place your order online - [www.HerculesCA.ca](http://www.HerculesCA.ca)**

**Style DPU-BHT** piston seals are molded in Freudenberg® AU 30000 urethane. Specifically designed as piston seals, these u-seals are engineered to seal on their outside diameter. They offer extended service life and maximum reliability in piston sealing. This high tear-resistant urethane demonstrates stability throughout a wide range of temperatures. In addition, this material is well suited to mineral and biodegradable hydraulic fluids as well as being resistant to hydrolysis.



SEAL INFORMATION	
MATERIAL	94A URETHANE
TEMPERATURE RANGE	-31°F TO 250°F
PRESSURE RANGE	0 TO 7250 PSI
SPEED	1.5 FT/SEC

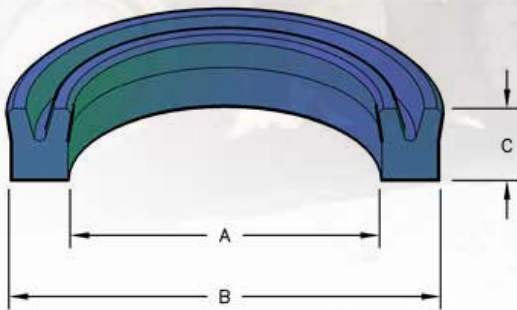
**HERCULES PART NUMBERS**

**DPU 18 - 2.12 - 18 - BHT**  
Type of Seal    Cross Section    Inside Diameter    Height    Suffix

Part Number	List Price
<b>3/16 C/S</b>	
DPU18-2.12-18-BHT	\$ 20.34
DPU18-2.12-31-BHT	20.34
DPU18-2.12-37-BHT	20.34
<b>1/4 C/S</b>	
DPU25-1.50-37-BHT	\$ 15.20
DPU25-2.00-37-BHT	20.34
DPU25-2.50-37-BHT	22.60
DPU25-3.00-37-BHT	24.99
DPU25-3.50-37-BHT	29.56
<b>1/4 C/S</b>	
DPU25-4.00-37-BHT	\$ 36.91
DPU25-4.50-37-BHT	41.97

Part Number	List Price
<b>3/8 C/S</b>	
DPU37-3.25-37-BHT	\$ 29.56
DPU37-3.75-62-BHT	36.91
DPU37-4.25-37-BHT	41.97
DPU37-4.25-50-BHT	41.97
DPU37-5.25-37-BHT	55.03
DPU37-5.25-50-BHT	55.03

**Style DSU-BHT** symmetrical seals are molded in Freudenberg® AU 30000 urethane. Used interchangeably for piston or rod sealing. This high tear-resistant urethane demonstrates stability throughout a wide range of temperatures. In addition, this material is well suited to mineral and biodegradable hydraulic fluids as well as being resistant to hydrolysis.



SEAL INFORMATION	
MATERIAL	94A URETHANE
TEMPERATURE RANGE	-31°F TO 250°F
PRESSURE RANGE	0 TO 5000 PSI
SPEED	1.5 FT/SEC

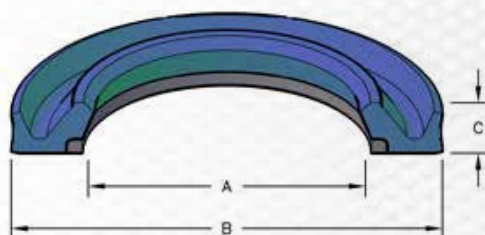
**HERCULES PART NUMBERS**

**DSU 12 - 0.50 - 12 - BHT**  
Type of Seal    Cross Section    Inside Diameter    Height

Part Number	List Price
<b>1/8" C/S</b>	
DSU12-0.50-12-BHT	\$ 10.16
DSU12-0.62-12-BHT	10.35
DSU12-0.75-12-BHT	10.35
DSU12-0.75-18-BHT	10.35
DSU12-0.75-25-BHT	10.35
DSU12-1.00-12-BHT	10.92
DSU12-1.00-18-BHT	10.92
DSU12-1.25-18-BHT	12.80
DSU12-1.25-25-BHT	12.80
<b>3/16" C/S</b>	
DSU18-1.25-31-BHT	\$ 13.27
DSU18-1.37-31-BHT	13.27
DSU18-1.50-25-BHT	13.93
DSU18-1.50-37-BHT	13.93
DSU18-1.62-25-BHT	13.93
DSU18-1.75-37-BHT	16.19
DSU18-2.00-37-BHT	17.69
DSU18-2.62-37-BHT	20.70

Part Number	List Price
<b>1/4" C/S</b>	
DSU25-1.00-37-BHT	\$ 12.80
DSU25-1.25-37-BHT	13.27
DSU25-1.50-25-BHT	13.93
DSU25-1.50-37-BHT	13.93
DSU25-2.00-25-BHT	18.63
DSU25-2.00-37-BHT	18.63
DSU25-2.12-37-BHT	19.57
DSU25-2.25-37-BHT	19.57
DSU25-2.50-25-BHT	20.70
DSU25-2.50-37-BHT	20.70
DSU25-3.00-37-BHT	22.89
DSU25-3.50-37-BHT	27.08
<b>1/2" C/S</b>	
DSU50-1.87-62-BHT	\$ 20.70

**Style DYR-BHT** buffer seals are molded in Freudenberg® AU 30000 urethane. This U-cup style buffer ring offers an asymmetric sealing lip profile, chamfered sealing edges, and pressure relieving capabilities to prevent inner pressure entrapment when employed in a tandem sealing system. This rod buffer seal is designed to absorb impact pressure fluctuations under high-load conditions thus increasing the life of the primary seal. This high tear-resistant urethane demonstrates stability throughout a wide range of temperatures. In addition, this material is well suited to mineral and biodegradable hydraulic fluids as well as being resistant to hydrolysis.



**HERCULES PART NUMBERS**

**DYR 28 - 1.60 - 12 - BHT**  
Type of Seal    Cross Section    Inside Diameter    Nominal Seal Height

SEAL INFORMATION	
MATERIAL	94A URETHANE "BU" INCLUDES POLYACETAL BACK-UP
TEMPERATURE RANGE	-31°F TO 250°F
PRESSURE RANGE	0 TO 8000 PSI
SPEED	1.5 FT/SEC

Part Number	List Price
DYR28-1.50-12-BHT	\$ 16.63
DYR28-1.75-12-BHT	18.18
DYR28-2.00-12-BHT	20.11
DYR31-4.00-22BU-BHT	44.20

**HERCULES**<sup>®</sup>  
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## TECH TIP - Improved ST Wiper Ring Design

Seal manufacturers are constantly trying to improve their product performance and find ways to differentiate their products from their competitors. On occasion the touted changes are more marketing hype than actual performance. But sometimes, there are real advantages to be gained from these improvements.

Such would be the case with the Hercules part number “ST-XLF” wiper ring now being supplied by Hercules Sealing Products in their 2014 Seal Catalog on page 303.

During research and development of ways to improve the exclusion of dirt from cylinders, seal manufacturers determined that more contaminants entered a cylinder around the OD of the wiper ring through the space between the wiper ring groove in the gland and the OD of the wiper than under the wiper lip on the rod. Consequently, they have spent considerable time and effort to redesign the wiper ring base to create a closer fit between the wiper ring base and the gland groove while still minimizing the possibility of pressure trap which results in wiper extrusion.

The new “XLF” style wiper ring goes the additional step of utilizing a ‘dust lip’ or flap molded onto the wiper lip at the outer edge. This extra lip is designed to prevent most contaminants from building up in the area where the wiper lip joins the base and snaps into the wiper groove. This prevents contaminants from building up in this ‘canyon’, where the wiper lip, wiper base, and gland meet. This keeps more contamination, dust especially, from working its way into the gland wiper groove and eventually beyond into the cylinder.

Some cylinder manufacturers are already utilizing this new design of ST / D wiper ring. However the problem with this design in repair work is that the gland must be designed and machined to fit the dimension between the wiper base and the flap. If the gland was not designed for this wiper originally it may need to be ‘faced off’ if that area of the gland is too thick. If the outer flange of the wiper is too narrow to totally fill the space on the wiper it would necessitate a new gland to be manufactured to enjoy the benefits of this wiper design.

