SystemSeals

HEAVY DUTY LOADED ROD U-CUP SEAL WITH ACTIVE BACKUP RING

151 series

Features:

Symmetricaldesign for optimal sealing performance

Internal O-Ring works more efficiently at varying pressures

Double-lip design increases efficiency and performance

Highly extrusion resistant in large gap conditions

Easy to install

DESCRIPTION

The 151 Series is a heavy duty polyurethane seal with multiple features that include a double-lipped U-cup design, an internal O-ring energizer and a reinforced backup ring on the heel. This seal is ideal for pressure spikes and large extrusion gaps common in mining applications.

PRODUCT BENEFITS

- Highpressure capabilityand wide temperature range
- Excellent fluid compatibility including water-based fluids (H-PU)
- Exceptional abrasion resistance

MATERIAL

The151 Seriesrod seal features high-grade polyurethane. Standard materials are P03 H-PU, NBR O-ring and polyacetal backup ring. To suit a variety of applications, the series is also available in NBR, H-NBR, EPDM and high temperature-resistant FPM.

Material	Code
Polyurethane (H-PU) / NBR / POM	MP62
Polyurethane (H-PU) / NBR / Nylon	MP63

APPLICATIONS

The151 Seriesrodsealis typically used in heavy-duty applications, where pressure spikes and large extrusion gaps exist.

Typical applications include:

- Mining
- Mobile Hydraulics
- Hydraulic Cylinder Rebuild
- Agricultural Hydraulics
- Construction Equipment

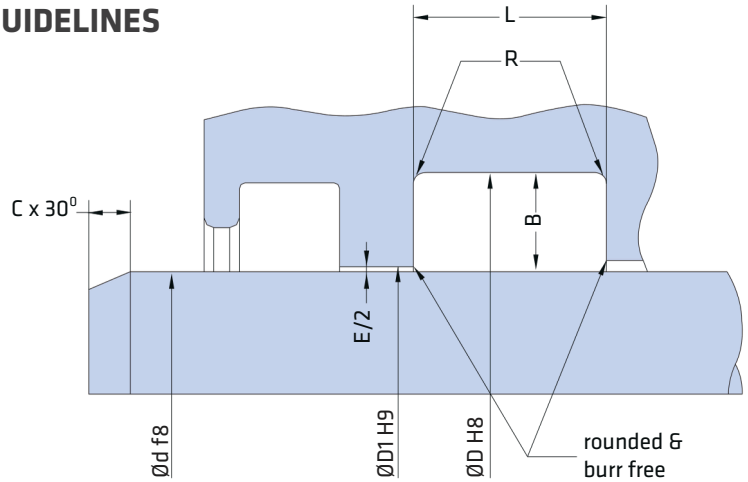
OPERATING PARAMETERS

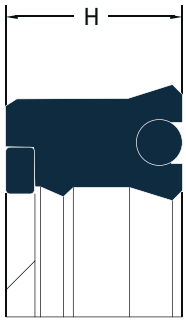
Temperature	°C	°F
hydraulic oil	-20...+115	-5...+240
water oil emulsions (HFA)	+5...+55	+40...+130
water-glycol fluids (HFC)	-20...+55	-5....+130
polyol esters (HFD)	-	-
water	+5...+55	+40...+130
speed	0.5 m/s (1.6 ft/sec)	
pressure	≤690 bar (10,000psi)	

Note: for other materials or fluids please contact our engineering department.

Above: Installation Drawing

DESIGN GUIDELINES





METRIC SERIES

	B	L +0.2	H	ØD	ØD1	R	C
Series 1	6.00 mm	9.60	8.80	d + 12.00	d + E	0.40	5.0
Series 2	7.50 mm	12.50	11.40	d + 15.00	d + E	0.40	5.0
Series 3	10.00 mm	16.00	14.60	d + 20.00	d + E	0.40	7.50
Series 4	12.50 mm	20.00	18.20	d + 25.00	d + E	0.40	7.50
Series 5	15.00 mm	22.00	20.00	d + 30.00	d + E	0.40	7.50
Series 6	20.00 mm	32.00	30.00	d + 40.00	d + E	0.40	10.0

Pressure	E
≤100 bar	1.00
≤250 bar	0.85
≤400 bar	0.70

Extrusion Gaps

INCH SERIES

	B	L +0.008	H	ØD	ØD1	R	C
Series 1	0.250 in	0.413	0.375	d + 0.500	d + E	0.016	0.195
Series 2	0.375 in	0.619	0.563	d + 0.750	d + E	0.016	0.195
Series 3	0.500 in	0.825	0.750	d + 1.000	d + E	0.016	0.250
Series 4	0.563 in	0.928	0.844	d + 1.125	d + E	0.016	0.295
Series 5	0.625 in	1.031	0.938	d + 1.250	d + E	0.016	0.295
Series 6	0.750 in	1.238	1.125	d + 1.500	d + E	0.016	0.400
Series 7	1.000 in	1.650	1.500	d + 2.000	d + E	0.016	0.500

Pressure	E
≤1450 psi	0.040
≤3625 psi	0.035
≤6000 psi	0.030

Extrusion Gaps

Note: for higher pressures or temperatures, please consult our engineering department for guidance. For a complete list of available sizes please refer to the System Seals online product catalogue at www.systemseals.com.

SURFACE FINISH

Surface roughness	Ra	Rt	RMS
Sliding surface	≤0.3 µm	≤3 µm	8 RMS
Surface of groove I.D.	≤1.8 µm	≤10 µm	64 RMS
Sides of groove	≤3 µm	≤16 µm	125 RMS