

Features:

Robust design

Profiled energizer ring that maintains seal force throughout service life

Integrated backup ring for maximum extrusion resistance

Optimized seal-lip position

Easy to install

No twisting during installation



MATERIAL

The 188 Series is a custom blended PTFE filled compound that provides ultra-low friction and high-speed performance with minimal wear. The standard compounds are PTFE filled with Bronze filler, or PTFE filled with Glass-Moly. The backup ring can be made from polyamides, Delrin or POM. The temperature range of the seal can be increased by selecting a FPM energizer in place of the standard NBR energizer.

Material	Code
PTFE-Bronze, NBR, POM	MT24
PTFE-Glass-Moly	MT84

OPERATING PARAMETERS

Temperature	MT24		MT84	
	°C	°F	°C	°F
hydraulic oil	-30... +100	-22... + 212	-30... +100	-22... +212
water oil emulsions (HFA)	-	-	+5... +60	+40... +140
water-glycol fluids (HFC)	-	-	-30... +60	-22... +140
polyol esters (HFD)	-	-	-	-
water	-	-	-5... +100	+40... +212
speed	5 m/s (16.5 ft/sec)			
pressure	400 bar (6,000psi)			

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

DESCRIPTION

The 188 Series rod seal is a heavy-duty, low-friction design, consisting of a PTFE filled seal, a profiled energizer and an integrated backup ring. It is designed for large diameter and challenging applications, where high pressure and large extrusion gaps exist. The seal is ideal for short-stroke, dithering applications.

PRODUCT BENEFITS

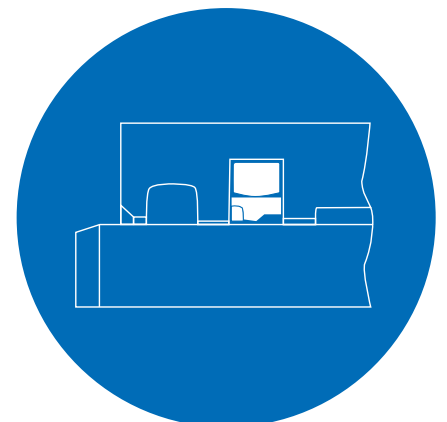
- Low friction
- Short-stroke applications
- High-temperature resistance
- Low wear
- Extrusion resistant
- Compatible with a wide range of media
- Available in diameters up to 2100 millimeters

APPLICATIONS

The 188 Series heavy-duty rod seal is ideal for high-pressure sealing applications, offering low-friction performance and short-stroke capability.

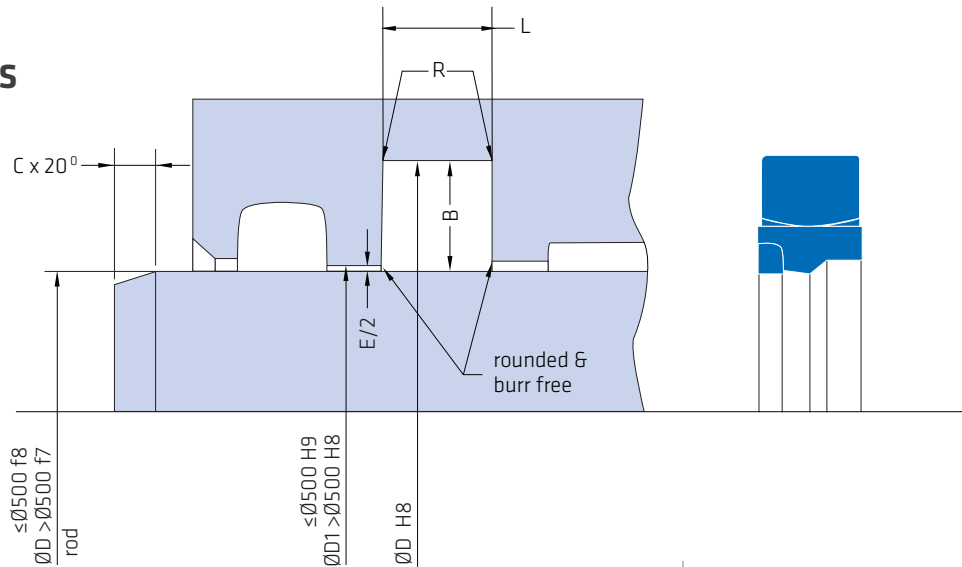
Typical applications include:

- Forging presses
- Extrusion Presses
- Stamping presses
- Rolling Mills
- Injection Molding Machines
- Hydraulic Presses



Above: Installation Drawing

DESIGN GUIDELINES



METRIC SERIES

	Rod Diameter Ød	B	ØD	ØD1	L ^{+0.20}	C	R
Series 1	<200 mm	10.00	d + 20.00	d + E	8.10	7.50	0.40
Series 2	<300 mm	12.50	d + 25.00	d + E	10.00	10.00	0.40
Series 3	<450 mm	15.00	d + 30.00	d + E	12.50	12.00	0.80
Series 4	<685 mm	17.50	d + 35.00	d + E	15.00	12.00	1.20
Series 5	<1270 mm	20.00	d + 40.00	d + E	17.50	12.00	1.20

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

INCH SERIES

	Rod Diameter Ød	B	ØD	ØD1	L ^{+0.008}	C	R
Series 1	<8.000 in	0.394	d + 0.787	d + E	0.319	0.300	0.016
Series 2	<12.000 in	0.492	d + 0.984	d + E	0.394	0.390	0.016
Series 3	<18.000 in	0.591	d + 1.181	d + E	0.492	0.470	0.032
Series 4	<27.000 in	0.689	d + 1.378	d + E	0.591	0.470	0.050
Series 5	<50.000 in	0.787	d + 1.575	d + E	0.689	0.470	0.050

Pressure	E
<1,450 psi	0.040
<3,625 psi	0.035
<6,000 psi	0.030

Note: The extrusion gap "E" is suitable for pressure up to 400bar (6,000 psi) and temperatures up to 80° C (176° F). 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