systemseals

SINGLE ACTING
HEAVY-DUTY
PISTON SEAL

282 *series*

Features:

Robust, single-acting design

Profiled energizer ring that maintains seal force throughout service life

Easy to install

No twisting during installation

DESCRIPTION

The 282 Series heavy-duty piston seal is a low-friction design, consisting of a PTFE filled seal and a profiled energizer. It is designed for large-diameter, single-acting cylinders in challenging applications, where high pressure and large extrusion gaps exist.

PRODUCT BENEFITS

- Low friction
- Single acting applications
- High-temperature resistance
- Low wear
- Extrusion resistant
- Compatible with a wide range of media
- Available in diameters up to 2100 mm

MATERIAL

System Seals' custom blended PTFE-filled compounds provide ultra-low friction and high-speed performance with minimal wear. The standard compounds are PTFE with Bronze filler, or PTFE-filled with Glass-Moly. 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 compound + NBR energizer (shown in photo)	MT23
PTFE-Bronze compound + FPM energizer	MT26
PTFE-Glass/MoS2 compound + NBR energizer	MT83
PTFE-Glass/MoS2 compound + FPM energizer	MT86

APPLICATIONS

The 282 Series heavy-duty piston seal is ideal for high-pressure sealing applications, offering low-friction performance and single-acting operation.

Typical applications include:

- Rolling Mills
- Injection Molding Machines
- Hydraulic Presses
- Forging Presses

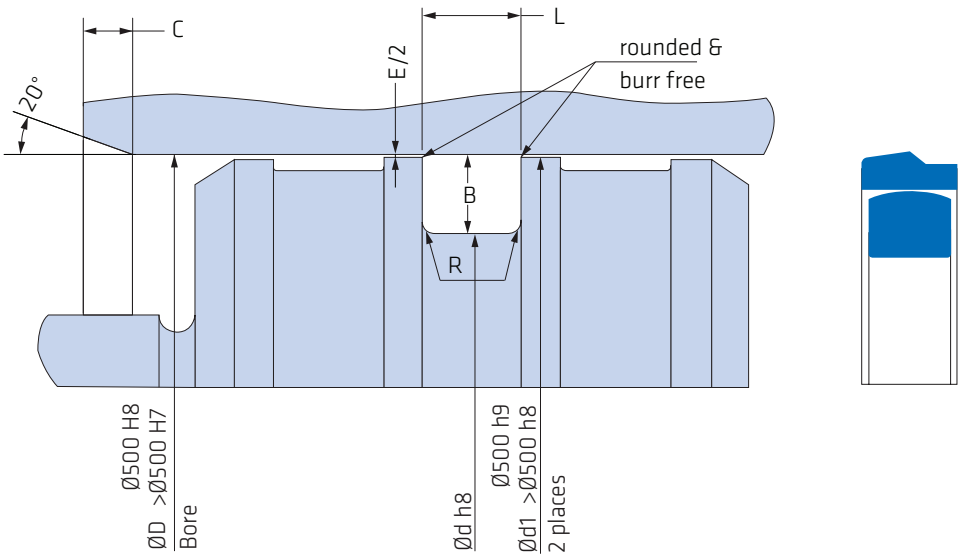
OPERATING PARAMETERS

	MT23		MT83	
Temperature	**°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 (6,000 psi)			

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

Above: *Installation Drawing*

DESIGN GUIDELINES



METRIC SERIES

	Piston Bore Diameter ØD	B	Ød	Ød1	$L^{+0.20}$	E	C	R
Series 1	Up to 200.00 mm	10.01	D - 20.00	D - 0.50	10.00	0.50	7.50	0.40
Series 2	Up to 300.00 mm	12.50	D - 25.00	D - 0.60	12.50	0.60	10.00	0.40
Series 3	Up to 450.00 mm	15.01	D - 30.00	D - 0.60	15.00	0.60	12.00	0.80
Series 4	Up to 685.00 mm	17.50	D - 35.00	D - 0.60	17.50	0.60	12.00	1.20
Series 5	Up to 1,270.00 mm	19.99	D - 40.00	D - 0.60	20.00	0.60	12.00	1.20

INCH SERIES

	Piston Bore Diameter ØD	B	Ød	Ød1	$L^{+0.008}$	E	C	R
Series 1	Up to 8.000 in	0.394	D - 0.787	D - 0.020	0.394	0.020	0.300	0.016
Series 2	Up to 12.000 in	0.492	D - 0.984	D - 0.024	0.492	0.024	0.390	0.016
Series 3	Up to 18.000 in	0.591	D - 1.181	D - 0.024	0.591	0.024	0.470	0.032
Series 4	Up to 27.000 in	0.689	D - 1.378	D - 0.024	0.689	0.024	0.470	0.050
Series 5	Up to 50.000 in	0.787	D - 1.575	D - 0.024	0.787	0.024	0.470	0.050

Note: *tehe extrusion gap "E" is suitable for pressure up to 400 bar (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