systemseals

ACCUMULATOR
PISTON SEAL

271 *series*

Features:

O-Ring Energizer that maintains seal force throughout service life

Double-acting design

Side notches ensure pressure exposure to the energizer during rapid pressure changes

Easy to install

MATERIAL

System Seals' custom blended PTFE-filled compounds provide 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 temperature range of the seal can be increased by selecting an FPM energizer in place of the standard NBR energizer.

Material	Code
PTFE-Bronze compound + NBR o-ring (shown in photo)	MT23
PTFE-Bronze compound + FPM o-ring	MT26
PTFE-Glass/MoS2 compound + NBR o-ring	MT83
PTFE-Glass/MoS2 compound + FPM o-ring	MT86

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	2 m/s (6.5 ft/sec)			
pressure	400 bar (6,000 psi)			

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

DESCRIPTION

The 271 Series accumulator piston seal is a low-friction design, consisting of a PTFE-filled seal and an O-ring energizer. It is designed for double-acting cylinders in challenging applications, where low friction and high wear resistance are needed.

PRODUCT BENEFITS

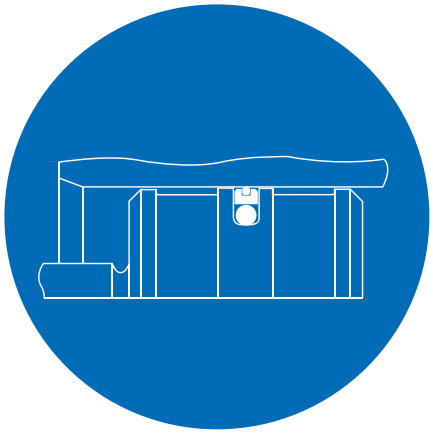
- Low friction
- Double-acting applications
- High-temperature resistance
- Low wear
- Extrusion resistant
- Compatible with a wide range of media
- Available in diameters up to 2100 mm

APPLICATIONS

The 271 Series accumulator piston seal is ideal for high-pressure sealing applications, offering low-friction performance and double-acting operation.

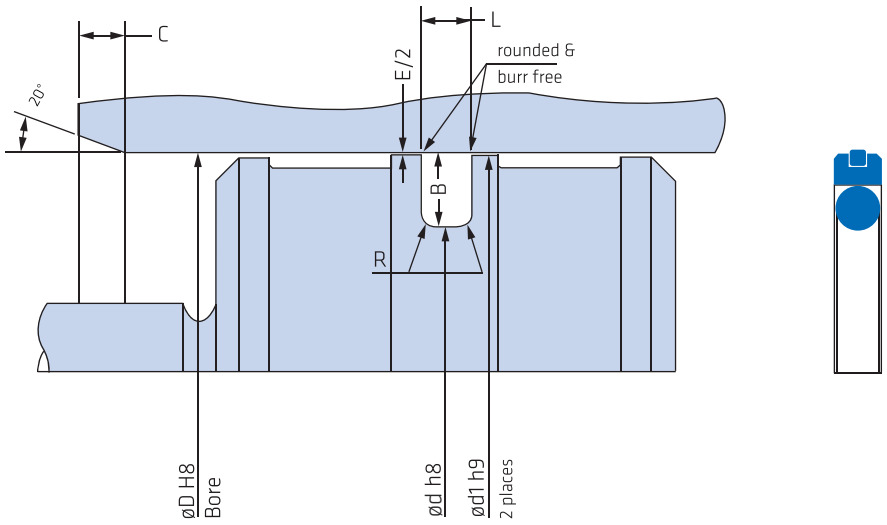
Typical applications include:

- Rolling Mills
- Injection Molding Machines
- Hydraulic Presses
- Agricultural Hydraulics
- Mobile Hydraulics



Above: *Installation Drawing*

DESIGN GUIDELINES



METRIC SERIES

	B	ød	L$^{+0.20}$	Ød1 <200bar	Ød1 <400bar	R
Series 1	5.50 mm	D - 11.00	4.20	D - 0.30	D - 0.20	0.80
Series 2	7.75 mm	D - 15.50	6.30	D - 0.40	D - 0.30	1.20
Series 3	10.50 mm	D - 21.00	8.10	D - 0.40	D - 0.30	2.00
Series 4	12.25 mm	D - 24.50	8.10	D - 0.40	D - 0.30	2.00
Series 5	14.00 mm	D - 28.00	9.50	D - 0.60	D - 0.50	2.00

INCH SERIES

	B	ød	L$^{+0.008}$	Ød1 <3,000 psi	Ød1 <6,000 psi	R
Series 1	0.216 in	D - 0.432	0.165	D - 0.012	D - 0.008	0.032
Series 2	0.305 in	D - 0.610	0.248	D - 0.016	D - 0.012	0.050
Series 3	0.413 in	D - 0.826	0.319	D - 0.016	D - 0.012	0.080
Series 4	0.482 in	D - 0.964	0.319	D - 0.016	D - 0.012	0.080
Series 5	0.551 in	D - 1.102	0.374	D - 0.024	D - 0.020	0.080

Note: *The 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

LEAD-IN CHAMFERS

Ød	C
≤40.00 mm	4.00
40 mm < 80 mm	6.00
80 mm < 133 mm	8.00
133 mm < 330 mm	10.00
330 mm < 670 mm	12.00
670 mm < 950 mm	14.00

Ød	C
<1.5 in	0.160
1.5 in < 3.0 in	0.240
3.0 in < 5.25 in	0.320
5.25 in < 13.0 in	0.400
13.0 in < 26.0 in	0.500
26.0 in < 37.5 in	0.550