

Features:

Buffer seal used in a Zero Leak Technology sealing system

Abrasion resistant polyurethane with backup ring support

Low Friction design

Optimized seal-lip position

A unique rotating hinge design of the seal lip ensures pump-back capability

Easy to install



DESCRIPTION

The 124 Series rod seal is a buffer seal used in the Zero Leak Technology sealing systems and is ideal for high-performance applications. It offers a low-friction design, consisting of a polyurethane seal and a POM backup ring. The sealing lip design is optimized to ensure maximum sealing performance at both low and high pressures. The lip design features a "pumpback" capability, which eliminates pressure trapping.

PRODUCT BENEFITS

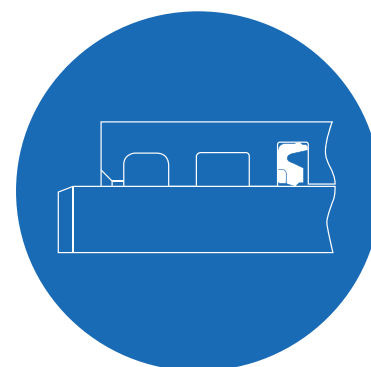
- High-speed applications
- High-temperature resistance
- Low wear
- Extrusion resistant
- Compatible with a wide range of media
- Available in diameters up to 2100 mm

APPLICATIONS

The 124 Series Rod Seal is a buffer seal used in the Zero Leak Technology sealing systems and ideal for high-performance applications. It offers low-friction performance and high-speed capability.

Typical applications include:

- Mobile Hydraulics
- Injection Molding
- Hydraulic Presses



Above: Installation Drawing

MATERIAL

The 124 Series rod seal features high-grade polyurethane. Standard materials are MP03 machined H-PU, available up to 2100 millimeters in diameter, and MP50 injection-molded TPU. To suit a variety of applications the series is also available in NBR, H-NBR, EPDM and high temperature-resistant FPM. The backup ring materials include POM, Polyamides and PEEK.

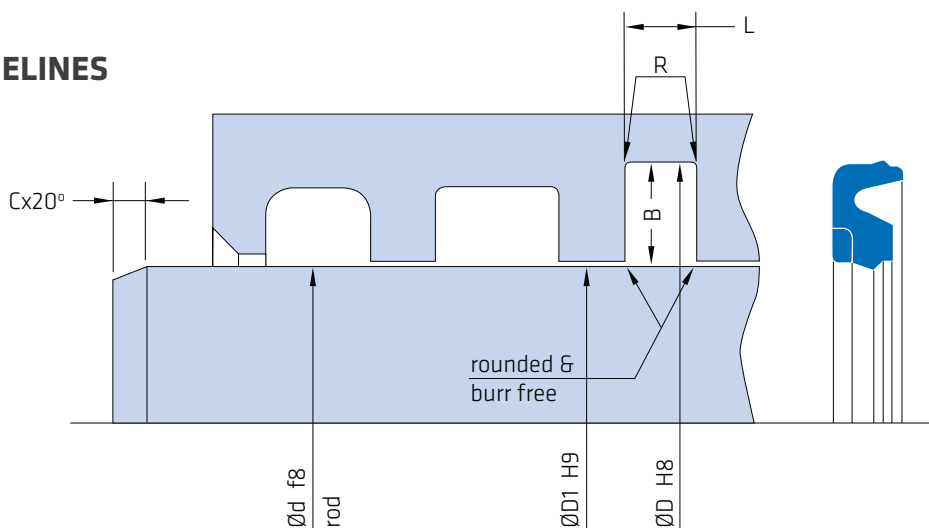
Material	Code
Polyurethane H-PU	MP03
Polyurethane TPU	MP50

OPERATING PARAMETERS

Temperature	MP03		MP50	
	°C	°F	°C	°F
hydraulic oil	-20...+115	-5...+240	-30... +110	-20...+230
water oil emulsions (HFA)	+5...+55	+40...+130	+5... +50	+40... +120
water-glycol fluids (HFC)	-20...+55	-5...+130	-30...+40	-20...+100
polyol esters (HFD)	-	-	-	-
water	+5...+55	+40...+130	+5...+50	+40...+120
speed	0.5 m/s (1.6 ft/sec)			
pressure	400 bar (6,000 psi)			

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

DESIGN GUIDELINES



METRIC SERIES

	B	ØD	L	ØD1<200 bar	ØD1<400 bar	R
Series 1	7.55 mm	d+(15.10)	6.30	d + 0.50	d + 0.40	1.20
Series 2	10.25 mm	d+(20.50)	8.10	d + 0.60	d + 0.50	2.00
Series 3	12.00 mm	d+(24.00)	8.10	d + 0.60	d + 0.50	2.00
Series 4	13.65 mm	d+(27.30)	9.50	d + 0.70	d + 0.50	2.00

INCH SERIES

	B	ØD	L	ØD1<3000 bar	ØD1<6000 bar	R
Series 1	0.297 in	d+(0.594)	0.248	d + 0.020	d + 0.016	0.047
Series 2	0.404 in	d+(0.808)	0.319	d + 0.024	d + 0.020	0.080
Series 3	0.472 in	d+(0.944)	0.319	d + 0.024	d + 0.020	0.080
Series 4	0.537 in	d+(1.074)	0.374	d + 0.028	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

L	C
6.30	6.00
8.10	7.50
9.50	11.00

L	C
0.248	0.235
0.319	0.300
0.374	0.435