SystemSeals

ID DYNAMIC SEAL

409 series

Features:

Defined seal lip

High performance polyurethane

Stable design

Resists rolling

MATERIAL

The 409 series dynamic seal features high-grade polyurethane. Standard materials are MP03 machined H-PU, available up to 3000 mm in diameter. 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	MP03
Hydrogenated NBR	MN03
Fluoroelastomer FPM	MF01
Nitrile NBR	MN01

OPERATING PARAMETERS

	MP03	
Temperature	°C	°F
hydraulic oil	-20…+115	-38…+240
water oil emulsions (HFA)	+5…+55	+40…+130
water -gycol fluids (HFC)	-20…+55	-5…+130
water	+5…+55	+40…+130
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.

DESCRIPTION

The 409 series seal is a robust profile, designed to work in both rotary and reciprocating applications. For high pressure use, the 409 series can be combined with a back-up ring.

PRODUCT BENEFITS

- Replaces standard O-rings
- Long life due to robust design
- Will not roll during installation
- Available in inch or metric sizes
- Higher seal force due to seal design
- Easy installation
- Can retrofit existing O-ring grooves

APPLICATIONS

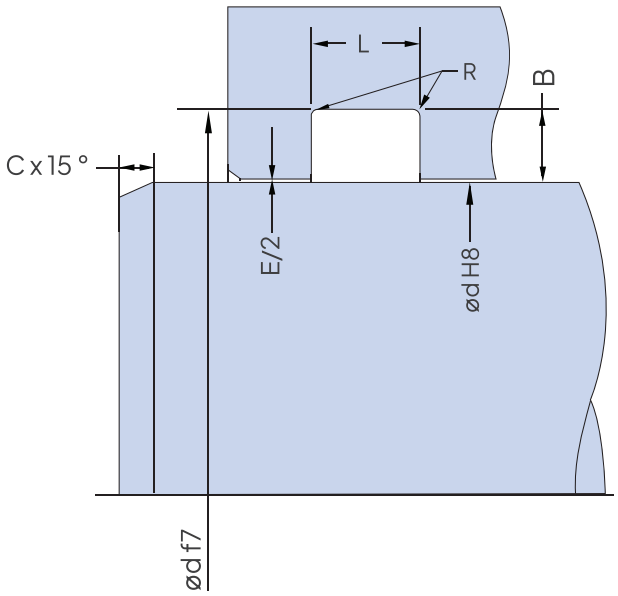
The 409 series is suitable for rotary and reciprocating motion.

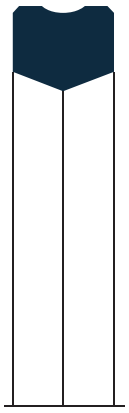
Typical applications include:

- Steel Aluminum Processing
- Hydraulic Cylinders
- Marine
- Injection Molding Machinery
- Oil and Gas
- Machine Tool

Above: Installation Drawing

DESIGN GUIDELINES





METRIC SERIES

	B	$L^{+0.25}$	OD	OD1	R	C
Series 1	2.30	3.00	d + 4.60	d + E	0.30	1.80
Series 2	3.10	4.00	d + 6.20	d + E	0.60	2.30
Series 3	4.70	6.00	d + 9.40	d + E	1.00	3.40
Series 4	6.20	7.80	d + 12.40	d + E	1.00	4.10

Pressure	E
≤ 100 bar	0.50
≤ 250 bar	0.35
≤ 400 bar	0.25

INCH SERIES

	B	$L^{+0.010}$	OD	OD1	R	C
Series 1	0.090	0.188	d + 0.180	d + E	0.011	0.070
Series 2	0.122	0.157	d + 0.244	d + E	0.024	0.090
Series 3	0.185	0.236	d + 0.370	d + E	0.040	0.134
Series 4	0.244	0.307	d + 0.488	d + E	0.040	0.161

Pressure	E
≤ 1,450 psi	0.020
≤ 3,625 psi	0.015
≤ 6,000 psi	0.010

Note: The extrusion gap "E" is suitable for pressure up to 400 bar (6,000 psi) and temperatures ip to 80°C (176°F). For higher pressures or temperatures, please consult our engineering department for guidance.