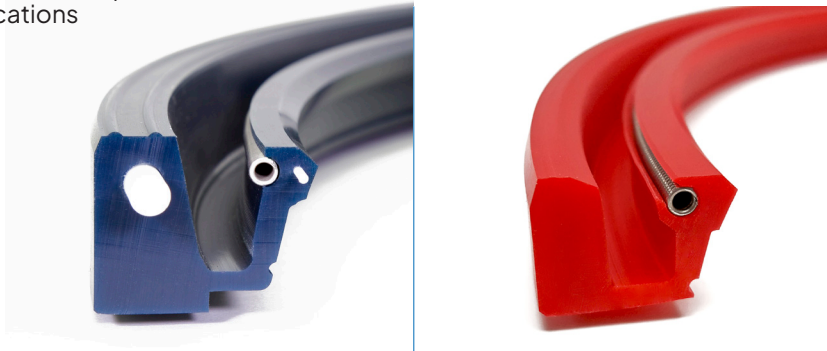


Features:

- | | |
|--|----------------------------------|
| Available split design | Easy to install |
| Premium wear resistance | Large diameter applications |
| Low friction | Fully encapsulated spring option |
| Recommended for low-to-moderate-speed applications | |


MATERIAL

The 441 Series Heavy Duty Rotary Seal features high-grade polyurethane.

Material	Code
Polyurethane / garter spring	MP94

OPERATING PARAMETERS

Temperature	MP85 (seal only)	
	°C	°F
hydraulic oil	-30...+100	-22...+212
water oil emulsions (HFA)	+5...+60	+41...+140
water-glycol fluids (HFC)	-30...+60	-22...+140
polyol esters (HFD)	-30...+80	-22...+176
water	0...+50	+41...+212
speed	10 m/sec	
pressure	0.05 MPa (7.25 psi)	

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

DESCRIPTION

The 441 Series Rotary Seal is a popular seal used in low to moderate speed applications that require maximum reliability and long service life. The unique encapsulated spring ensures that the spring remains in place during a blind installation. The main body is strong yet flexible for ease of installation and stability within the groove. The lip force is optimized for the full range of sizes by varying designs of the internal spring, allowing low friction and minimal wear.

PRODUCT BENEFITS

- Lip force is optimized for a range of sizes by varying designs of the internal spring
- Works in a wide range of temperatures
- Excellent fluid compatibility
- Exceptional abrasion resistance
- Available in diameters up to 2100 mm

APPLICATIONS

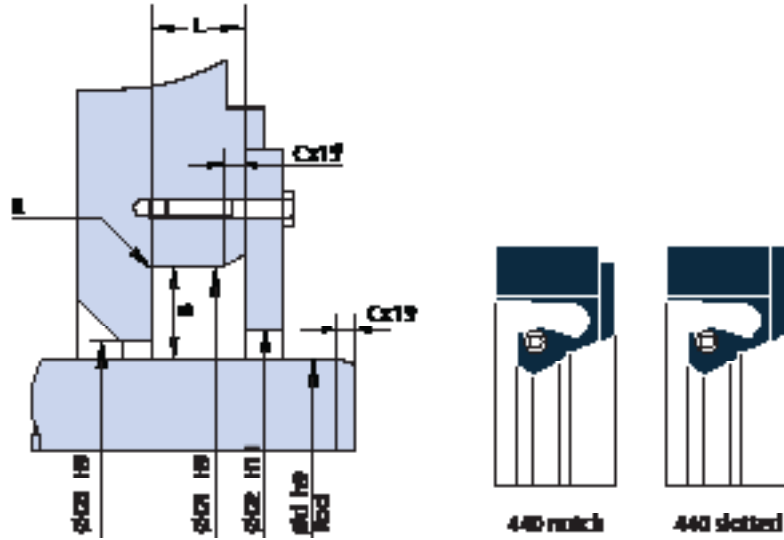
The 441 Series Rotary Seal is used in industrial rotary applications that require minimum wear and long service life.

Typical applications include:

- Wind Energy
- Large Diameter Bearing Manufacturers



Above: Installation Drawing

DESIGN GUIDELINES

METRIC SERIES

Rod Diameter Ød	B	ØD1	ØD2	L + 0.25	R	C	C1
>200.00 mm	20.00	d + 40.00	d + 7.00	16.00	0.40	10.00	4.00
>250.00 mm	22.00	d + 44.00	d + 7.00	20.00	0.40	12.00	5.00
>450.00 mm	25.00	d + 50.00	d + 8.00	22.00	0.40	15.00	6.00
>750.00 mm	32.00	d + 64.00	d + 10.00	25.00	0.40	18.00	6.00

INCH SERIES

Rod Diameter Ød	B	ØD1	ØD2	L + 0.010	R	C	C1
>7.875 in	0.787	d + 1.575	d + 0.276	0.630	0.016	0.394	0.157
>9.875 in	0.866	d + 1.732	d + 0.276	0.787	0.016	0.472	0.197
>17.725 in	0.984	d + 1.967	d + 0.315	0.866	0.016	0.591	0.236
>29.500 in	1.260	d + 2.520	d + 0.394	0.984	0.016	0.709	0.236

Note: available in NBR / FKM and HNBR compounds. On request the garter spring can include PVC cover or other materials to avoid dust being inclosed by the spring.

SURFACE FINISH

Surface roughness	Ra	Rt	RMS
Sliding surface	≤0.6 µm	≤4 µm	24 RMS
Sides of groove	≤4 µm	≤16 µm	160 RMS