

# Advanced Motor Seal

Motor Seals for enhanced protection to extend system run life

## Applications

Premium motor protection for reliable operation for most demanding applications, including

- Vertical, deviated and horizontal profiles
- Unconventional and conventional wells
- Gassy wells
- Abrasive wells
- Corrosive wells

## Features and Benefits

### Sand handling technology in head

- Enables effective operation in abrasive wells

### High load bi-directional thrust bearing

- Allows for deep-set application

### Standard and high strength configurations

- Fit-for-purpose design solution

### Configurable design (available in 2 or 3 chambers) to best fit well conditions

- Allows for greater oil volume & expansion capacity

Levare advanced motor seals are specially designed to withstand harsh downhole conditions and provide an appropriate solution for sandy, abrasive, corrosive, and high-temperature environments and in any well profile.

Advanced Motor Seals feature a fully configurable design with either elastomeric bags and/or labyrinth sections that are available in 2 or 3 chamber configurations.

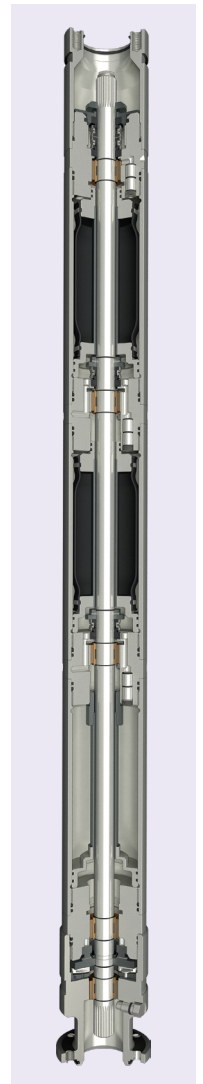
This flexible design allows the operator to select the option to best fit your well conditions.

A key feature of the seal is that it allows for greater oil volume and expansion capacity than traditional motor seals.

This additional area also enables the use of Tungsten Carbide bearing sets along the shaft for added stability and a larger diameter shaft for higher strength.

All Levare motor seals have a specially-designed, high-load bi-directional thrust bearing that facilitates high horsepower and deep-set applications.

Sand handling technology in head of motor seal flushes sand and abrasives collected around the mechanical seal. This feature enhances the run life and integrity of the system.



Operating Environment	Values
Reservoir fluid	mixture of oil, associated water and gas
Max. fluid temperature	150°C
Max. solids content	1.0 g/l
Max. H <sub>2</sub> S content	1.25 g/l
Max. hydrostatic head at pump setting depth	40 MPa (400 kgf/cm <sup>2</sup> )

	<b>338 Series</b>		<b>400 Series</b>		<b>538 Series</b>		<b>675 Series</b>	
Housing diameter, in. (mm)	3.38 (85.85)		4.00 (101.6)		5.38 (136.7)		6.75 (171.45)	
Shaft diameter, in. (mm)	0.984 (25.0) splines 0.875 (22.2)		0.984 (25.0)		1.378 (35.0)		1.378 (35.0)	
Shaft cross-sectional area, in. <sup>2</sup> (mm <sup>2</sup> )	0.761 (490.87) splines 0.601 (387.74)		0.761 (490.87)		1.491 (962.11)		1.491 (962.11)	
Rubber max. operating temperature, °F (°C)								
HNBR	392 (200)		392 (200)		392 (200)		392 (200)	
AFLAS	446 (230)		446 (230)		446 (230)		446 (230)	
Shaft BHP limit, hp (kW)	<b>60 Hz</b>	<b>50 Hz</b>	<b>60 Hz</b>	<b>50 Hz</b>	<b>60 Hz</b>	<b>50 Hz</b>	<b>60 Hz</b>	<b>50 Hz</b>
MONEL K-500	255 (190)	213 (159)	354 (264)	295 (220)	803 (600)	670 (500)	803 (600)	670 (500)
INCONEL 718	450 (336)	375 (280)	775 (578)	646 (482)	1,500 (1,119)	1,250 (932)	1,500 (1,119)	1,250 (932)
Max. hi-load thrust bearing capacity, lbf (kgf)	2,500 (1,136)	2,083 (945)	9,500 (4,318)	7,917 (3,600)	16,000 (7,273)	13,333 (6,045)	16,000 (7,273)	13,333 (6,045)