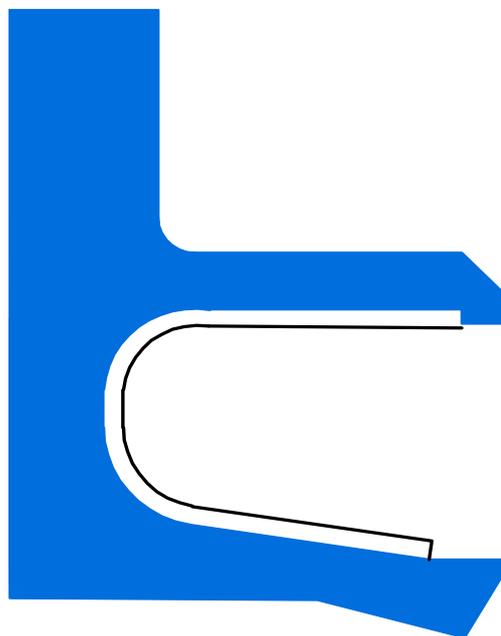




O.L. Seals A/S

# Rotary Seals

MupuSeal® Roto Type 3031-



Spring energized rod seal for rotating applications

### MupuSeal® Roto Type 3031-

MupuSeal® Roto is a single acting spring energized rod seal for rotating applications. MupuSeal® Roto consists of a jacket of Kefloy® energized by a V-shaped corrosion resistant steel spring. The jacket is at the heel furnished with a flange. To prevent the seal from rotating with the rod the flange is clamped into the groove.



The steel spring is available in three different chemical resistant alloys.

- |                    |                                       |
|--------------------|---------------------------------------|
| • Stainless steel  | AISI 301; DIN 1.4310                  |
| • Hastelloy® C-276 | EN ISO 15156; NACE MR-01-75           |
| • Elgiloy®         | ASTM F1058; ISO 5832-7; NACE MR-01-75 |

Hastelloy® is a trademark of Haynes International  
Elgiloy® is a registered trademark of Elgiloy Specialty Metals

MupuSeal® Roto has asymmetric design of the sealing lips. The thick and strong dynamic inner lip is designed for the rotation against the rod. The outer lip is designed to give maximum sealing efficiency against the groove.

MupuSeal® can be used with virtually all fluids.

MupuSeal® is pressure responsive.

### Working Range

#### Pressure

Up to 25 MPa in standard execution. For pressures exceeding 25 MPa, please contact your O.L. Seals distributor.

#### Temperature

-100°C to + 260°C. For temperatures exceeding this temperature range, please contact your O.L. Seals distributor.

#### Velocity

Rotating speed up to 2 m/sec.

#### Fluids

Kefloy® is compatible with virtually all fluids – liquids as well as gases. By selecting the right Alloy for the spring energizer, it is possible to cover almost all fluids.

### Applications

Due to its unique properties MupuSeal is used in a great variety of applications

- |                           |                 |
|---------------------------|-----------------|
| - Extreme temperatures    | - Refrigeration |
| - Aggressive environments | - Energy        |
| - Food and drug           | - Electronic    |
| - Offshore                | - Machine tools |
| - Chemical processes      | - Aviation      |
|                           | - Defence       |

#### Application limits

Pressurised rotary seals generate heat. The amount of generated heat depends of pressure, speed and friction. The success of a rotary seal depends of the cooling possibilities. In general a shaft with a big diameter transfers the heat better than a shaft with a small diameter. Therefore it is not possible to make guidelines for acceptable P-V values. It is recommended always to test the seal at the actual application.



### Advantages

- Very good sealing efficiency
- Compatible with virtually all fluids
- Covers a very big thermal range
- No contamination of fluids
- Can be sterilised
- No ageing
- No vulcanisation to mating surface
- Unlimited shelf life
- Good wear resistance
- No stick-slip
- NACE compatible spring alloys available
- Available for all diameters up to 2.500 mm

### Material Selection Guide

Fluid	Mating surface	MupuSeal® compound
Water	Steel	Kefloy® 25
Water hydraulic	Chrome plated steel	Kefloy® 28
Steam	Cast iron	Kefloy® 40
Non lubricating fluids	Aluminium	Kefloy® 90
Air, dry or lubricated	Stainless steel	
	Bronze	
	Soft metals	
Hydraulic oil	Steel	Kefloy® 32
Motor oil	Chrome plated steel	Kefloy® 40
Grease	Cast iron	
Other mineral oils	Aluminium	Kefloy® 25
	Stainless steel	Kefloy® 28
	Bronze	Kefloy® 32
	Soft metals	Kefloy® 40
		Kefloy® 90

*For other fluids or sealing surfaces, please consult your O.L. Seals distributor.*

### Seal Selection Guide

#### Standard Series

For most applications the Standard Series is the best choice.

#### Light Duty Series

Where very low friction is required, Light Duty Series is recommended.

Where space limitations make it necessary the light Duty Series should be chosen.

#### Heavy Duty Series

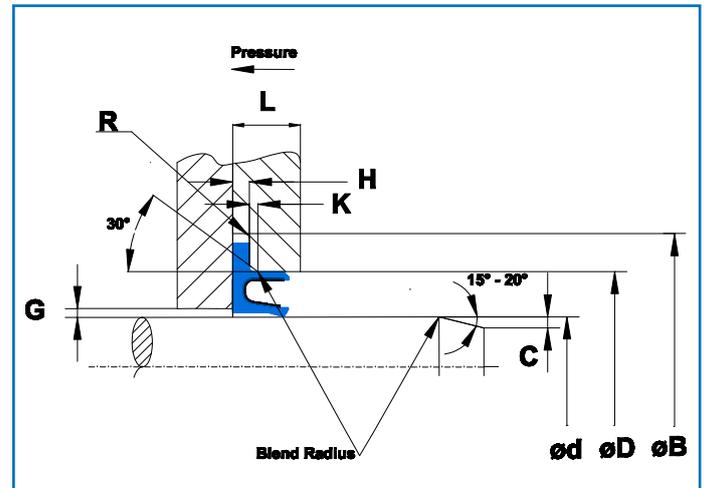
Where a very long service life is required the Heavy Duty Series should be chosen.

#### Ordering Example

Rod diameter: 455.0 mm

Part no 30314-4550-25-E-(D)  
 MupuSeal® type \_\_\_\_\_  
 Series \_\_\_\_\_  
 Rod dia. x 10 \_\_\_\_\_  
 Jacket compound no \_\_\_\_\_  
 Spring material \_\_\_\_\_  
 Sil-Clean \* (Option) \_\_\_\_\_

\* As an option the spring groove can be filled with silicone. This will make the MupuSeal® easier to clean. The silicone is FDA approved.



### Installation dimensions

MupuSeal Rotary Cross section		Ød Rod	øD Groove	ØB	L	H	R	K	G	Recomm. dia/cross
Part no.	Series	Min. dia. f8/h9	Dia. H9	Dia. H10	Min.		Max.		Max.	
30311	100	8.0	ød+5.0	ød+9.0	3.6	0.85	0.3	0.8	0.13	8.0 - 19.9
30312	200	12.0	ød+7.0	ød+12.5	4.8	1.35	0.4	1.1	0.15	20 - 39.99
30313	300	20.0	ød+10.5	ød+17.5	7.1	1.8	0.5	1.4	0.17	40 - 119.99
30314	400	35.0	ød+14.0	ød+22.0	9.5	2.8	0.5	1.6	0.25	120 -

#### Important Note

The limits of pressure, temperature and velocity are individual maximum values. Heat generated by the friction may cause local increase of temperature. The cooling possibilities for the system determines the combinations of maximum values.