

# 50K Rotary Face Seal

*The 50K rotary face seals are designed to protect against ingress of solid particles, dust and fluids while sealing the lubricants in rotary applications. The special design and high performance allows the 50K face seals to be used in a broad range of equipment across the heavy industries.*



## No Leakage

- High performance elastomer materials
- High resistance to compression setting
- High resistance to wear
- Improved fitting

## Longer Service Life

- Excellent chemical resistance
- Outstanding resistance to high and low temperature conditions
- Long elastic memory
- Good resistance to aging
- Optimized lip interference with low friction

## Easy Assembly

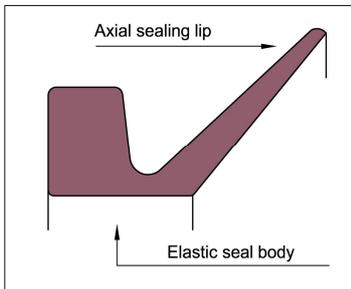
- Direct retrofit, no equipment modifications required
- Mounted and stretched directly on the shaft
- Can be used as secondary seals to protect primary seals components

| Available Designs |   |  |
|-------------------|---|--|
| Series            |   | Usage  |
| 50KA              |  | with cross section profile that varies according to shaft diameter |
| 50KAX             |  | with longer lip for heavy duty applications                        |
| 50KL              |  | with narrow axial cross section fit to compact arrangements        |
| 50KE              |  | with special lip design for high performance sealing               |
| 50KRME            |  | with built-in housing for a radial retention metal clamp           |

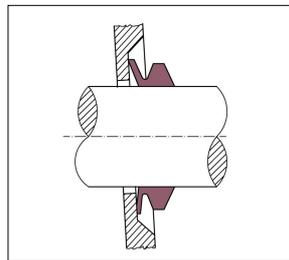
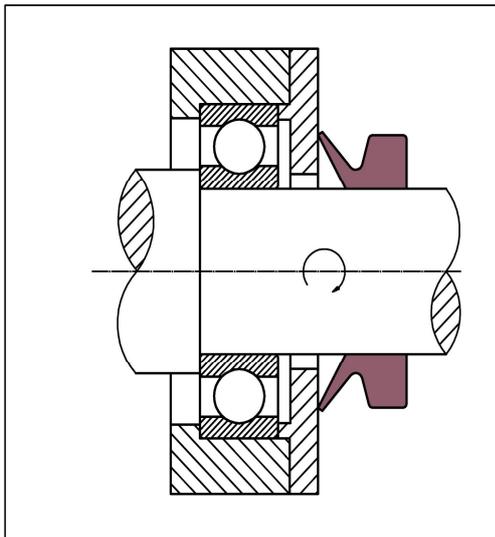
## Typical Applications

- ✓ Back-up Rolls of hot and cold rolling mills
- ✓ Work Rolls of hot and cold rolling mills
- ✓ Wind mill applications
- ✓ Cement plants
- ✓ Power plants
- ✓ Rotary presses
- ✓ Calander lines

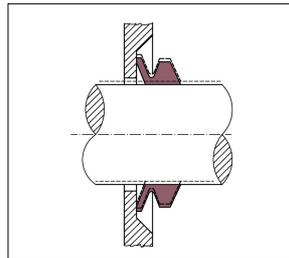
## Seal construction and installation



- The Face Seal is stretched on the shaft, so there is interference between the shaft diameter and seal inner diameter creating radial sealing and clamping force.
- The axial deformation of the conical shaped lip creates axial sealing on the counter-face.
- The recommended lip preload values are indicated in the Dimensional Items List of the 50Ks.



Improved lip design to compensate shaft misalignments



Improved lip designed to compensate shaft run-out

### Operational conditions

| Material                   | NBR70*             | FKM 70*            |
|----------------------------|--------------------|--------------------|
| Lubricating greases        | - 20 °C / + 100 °C | - 20 °C / + 150 °C |
| Water                      | + 5 °C / + 100 °C  | + 5 °C / + 80 °C   |
| Surface speed ( m/sec )    | 12 m/sec **        | 20 m/sec **        |
| Technical pressure ( Mpa ) | 0,03               | 0,03               |

\* Notice : other materials are available upon request.

\*\* Notice : over 8 m/sec the seal has to be supported in axial direction while over 12 m/sec radial retention is needed

### Recommended surface quality

| Hardness    | Ra           | Rmax     |
|-------------|--------------|----------|
| min. 125 HB | 0,4 - 0,8 µm | 1 - 4 µm |

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