



## TECHNICAL INFORMATION

# Mechanical Face seals

### Description

Mechanical Face Seals are a special form of mechanical seals. They are also known under other designations, such as lifetime seals, floating seals, duo cone seals, toric seals and heavy duty seals.

The type DO Mechanical Face Seal is characterized by the use of an O-Ring as the secondary sealing element. Further it consists of two identical metal seal rings which seal against each other on a lapped seal face.

Mechanical Face Seals are predominantly used for sealing the bearings in construction machinery or production plants operating under extreme arduous conditions and subject to severe wear.

These include:

- Tracked vehicles, such as excavators and bulldozers
- Conveyor systems
- Heavy trucks
- Axles
- Tunnel boring machines
- Agriculture machines
- Mining machines

Mechanical Face Seals are proven in general machine engineering for gearboxes, mixers, stirrers, wind-driven power stations and other applications with similar conditions or where maintenance-free lifetime time sealing is expected.

### Advantages

- Simple, reliable design
- High sealing effect against dirt, dust, water and abrasive media from the outside and against oil and grease from the inside
- Cost-effective
- Long service life
- Self-centering to compensate for shaft eccentricity or misalignment
- Maintenance-free
- Easy to assemble



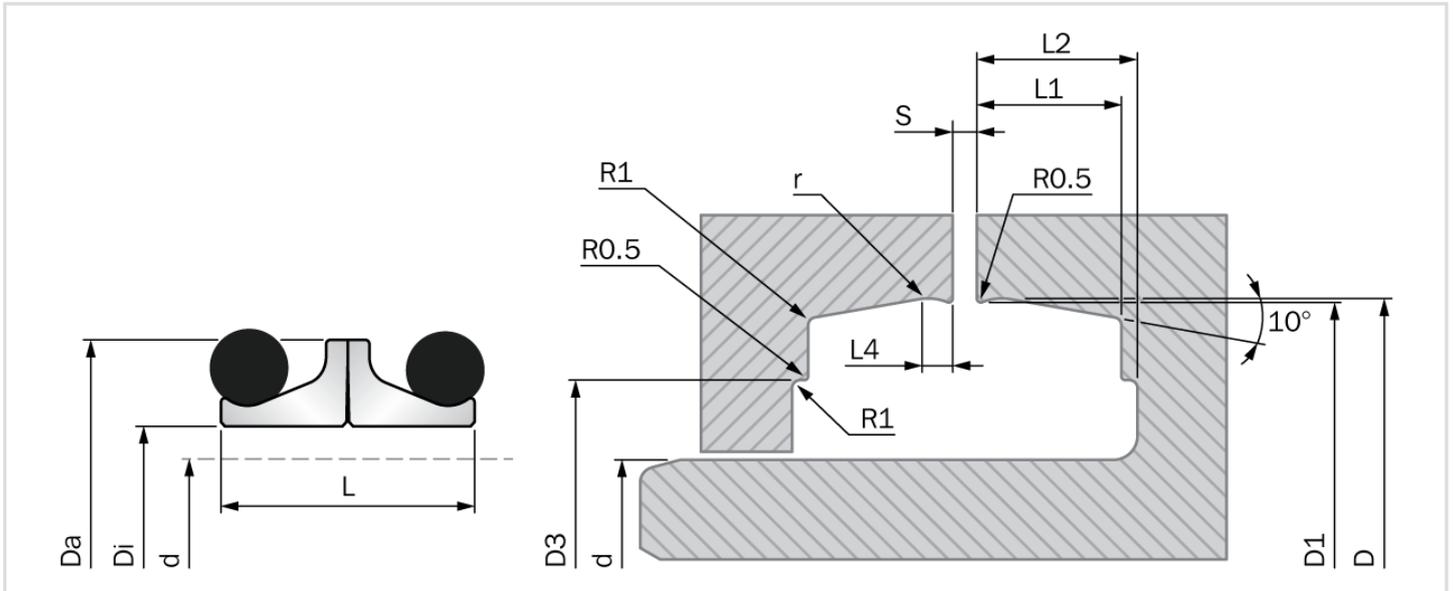
### Technical Data

- Operating Pressure : The shaft seal is pressure-free under normal operating conditions. Pressure loading up to max. 0.3 MPa (3 bar) for shell mold Cast Iron. A higher static load up to 0.5 MPa (5 bar) is possible. Internal pressure can lead to misalignment either of the seal or of the O-Ring.
- Speed : 3 m/s with oil lubrication
- Temperature : -40 °C to +200 °C (depending on the elastomer material)
- Lubrication, Media : The lubrication serves two important functions, therefore it is needed in all cases. It reduces the friction between the seal face and the mating faces, and it acts as a cooling agent for the complete shaft and housing. The best results with regard to wear and service life are achieved with oil lubrication. Grease lubrication is possible but needs special attention. It can only be used for slower motion.



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### Important Note

Installation suggestions, material recommendations, parameters and further data provided are always subject to the particular field of use and the application in which the seal is intended to be used, in particular the interaction of the seal with other components of the application. Therefore they neither constitute an agreement on the legal and factual nature nor a guarantee of quality. Technical changes and errors remain reserved.