



Radial shaft seal WAO

DESCRIPTION

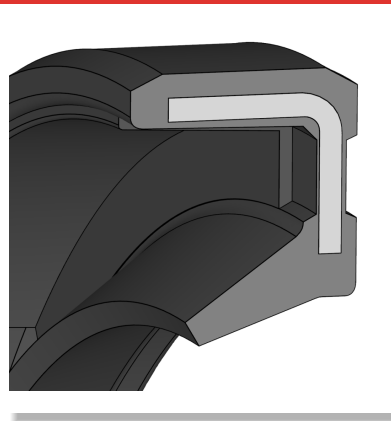
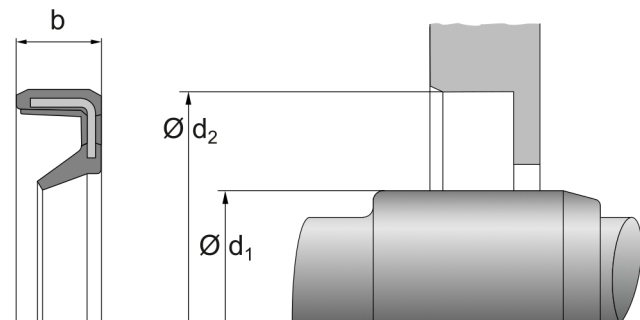
- Without tension spring
- Without protective lip
- Rubberized outer jacket
- Sealing material: NBR, FKM
- Material stiffening plate: Unalloyed steel DIN EN 10139 (DIN 1624)

FUNCTION

- Dynamic sealing of rotating shafts, independent of direction of rotation
- Rubberized outer jacket ensures tight fit and seal to housing bore
- Only limited static sealing between sealing lip and shaft at standstill

PRODUCT ADVANTAGES

- Good static sealing effect with low-viscosity or gaseous media
- Low friction
- Compensates for thermal expansion, e.g. in light metal housings, good sealing effect with greater roughness and with split housings
- Long service life
- Reliable design with broad application spectrum for moderately demanding applications in general industry



- Good price/performance ratio
- Manufactured by certified external suppliers

APPLICATIONS

- Sealing against grease
- Subordinate seals, e.g. as dust, dirt or splash protection seals for electric motors

APPLICATION LIMITS

- Pressure [Mpa]: max. 0
- Peripheral speed [m/s]: max. 6
- The values given here are maximum values and may not all be reached at the same time.

NBR

- Temperature [°C]: -40 to 80, short-term up to 100

FKM

- Temperature [°C]: -25 to 150

MEDIA RESISTANCE

NBR

- Good chemical resistance to various mineral oils and greases (H, HL, HLP)
- Flame-retardant hydraulic fluids HFA and HFB, HFC up to appr. +50°C
- Water up to max. +60°C
- Low resistance to ozone, weathering and ageing

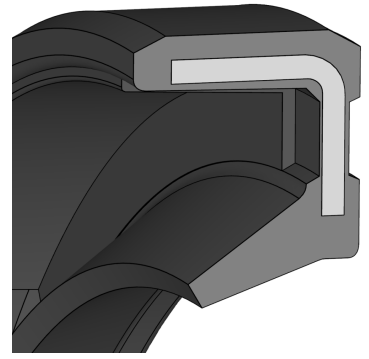
FKM

- Good chemical resistance to mineral oils and greases, synthetic oils and greases, engine, gearbox and ATF oils up to approx. +150 °C
- Fuels, flame-retardant pressure fluids HFD, aliphatic, aromatic and chlorinated hydrocarbons
- Water up to max. +60°C
- Very good resistance to ozone, weathering and ageing





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CONFORMITY AND CERTIFICATES

- Please consult the material data sheet valid for the respective material for current information on approvals and certificates, as this information depends on the compound and cannot be listed exhaustively here.

DESIGN GUIDELINE

- Design of the installation space is recommended in accordance with DIN 3760.
- Roundness of shaft - tolerance class IT8 - free of twists, burrs and damage of any kind
- Shaft surface roughness $R_z = 1.0$ to $4.0 \mu\text{m}$
- Hardness of shaft surface min. 45 HRC
- Housing surface roughness $R_z = 10$ to $20 \mu\text{m}$
- Shaft tolerance zone: ISO h11
- Housing tolerance zone: ISO H8

INSTALLATION GUIDELINE

- Clean the installation space carefully before installation, remove dust, dirt, metal chips, etc.
- Do not pull the seal over sharp edges, threaded tips or cavities (feather key grooves) during installation, cover with a mounting sleeve if necessary
- Do not grease the seal or installation space for assembly
- Careful installation on the shaft, tilting is not permitted

STORAGE ADVISE

- Storage temperature $< 25^\circ\text{C}$
- No direct heat sources
- No direct sunlight
- No condensation in the storage room
- No exposure to ozone or ionizing radiation
- Recommendations based on the revision of ISO 2230 dated 16.09.1992

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