



Piston seal KPOR31

DESCRIPTION

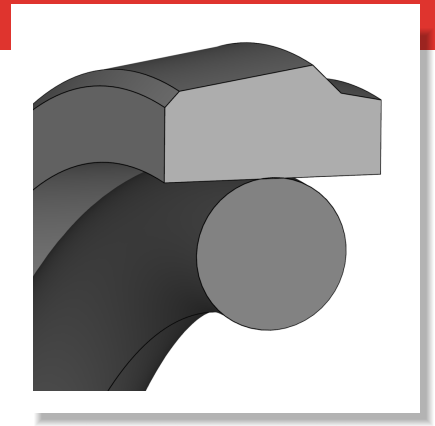
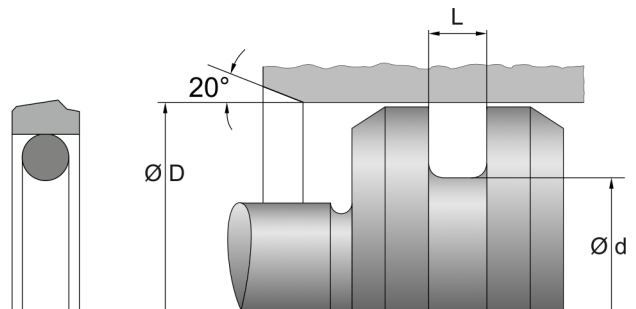
- Asymmetrical
- Single acting
- O-ring as sealing and preloading element
- Tight fit on inner diameter
- Material base element: PTFE bronze
- O-ring material: NBR

FUNCTION

- Sealing of pistons
- Use with one-sided pressure load

PRODUCT ADVANTAGES

- Tolerance of higher surface roughness in the groove base
- Low friction even at low speed
- High wear resistance
- Suitable for dry running and deficient lubrication
- Reverse flow of fluid film (adapted sealing edge geometry)
- Suitable for high-temperature applications
- No stick-slip effect
- High extrusion reliability
- Optimum force flow to the sealing edge via profile ring



- Reliable design with broad application spectrum for moderately demanding applications in general industry
- Good price/performance ratio
- Manufactured by certified external suppliers

APPLICATIONS

- Mobile hydraulics
- Stationary hydraulics

APPLICATION LIMITS

- Temperature [°C]: -30 to 100
- Gliding speed [m/s]: max. 15
- Pressure [Mpa]: max. 40
- The values given here are maximum values and may not all be reached at the same time.

MEDIA RESISTANCE

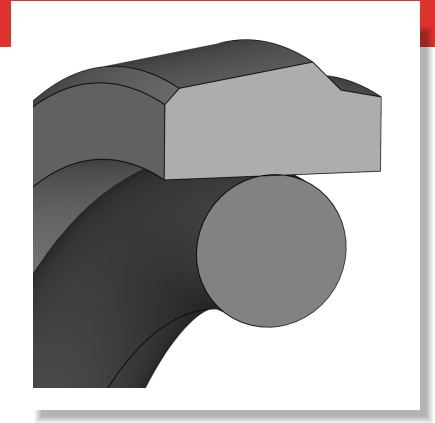
- Hydraulic oils according to DIN 51524 part 1-3
- Lubricating oils
- Lubricating greases based on minor oils
- Flame-retardant hydraulic fluids HFA, HFB, HFC according to VCMA 24317

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.



Piston seal KPOR31



DESIGN GUIDELINE

- Cylinder housing and piston rod/piston must be chamfered to prevent damage
- Length and angle of the installation chamfers must be in accordance with installation space drawing
- Surface roughness of groove flanks $R_a \leq 3 \mu\text{m}$
- Surface roughness of groove base $R_a \leq 1,8 \mu\text{m}$
- Surface roughness of mating surface $R_a \leq 0,3 \mu\text{m}$

INSTALLATION GUIDELINE

- Semi-open or closed installation spaces possible for a limited dimensional range
- Axially accessible installation space required for small diameters
- Deburr sharp edges, provide with seamless chamfers and radii
- 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
- When installing in closed installation spaces, heat the PTFE part in advance so that the seal can be installed quickly and easily by forming it into a kidney shape
- Grease the piston seal before fitting the cylinder
- Do not roll the O-ring over the mounting surfaces, do not twist it when snapping into the groove
- The seal must not be kinked during installation
- Calibrate after assembly

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

The information contained herein is believed to be reliable, but no representations, warranties or guarantees of any kind are made as to its accuracy or suitability for any purpose. The information reproduced herein is based on laboratory testing and is not necessarily indicative of end product performance. Complete testing and performance of the end product is the responsibility of the user.

© Freudenberg FST GmbH | dichtomatik.fst.com