



O-ring

DESCRIPTION

- According to DIN ISO 3601
- Endless, circular ring with circular cross-section
- Material: EPDM, FKM, HNBR, NBR, PTFE, VMQ

FUNCTION

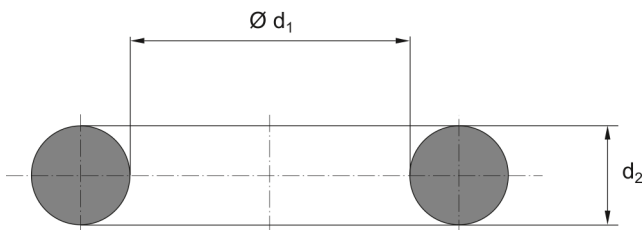
- Sealing effect due to cross-sectional deformation after installation and axial or radial compression in the installation space
- In the operating state, media pressure reinforces the sealing function

PRODUCT ADVANTAGES

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

APPLICATIONS

- Dynamic sealing of reciprocal, rotating and superimposed screw movements
- Static sealing of stationary machine and system parts against liquid and gaseous media (flange and cover seals, pipe fittings, cylinder head and base for hydraulic cylinders)
- Sealing of pressures up to 1000 bar, use of support rings may be necessary



APPLICATION LIMITS

- The values given here are maximum values and may not all be reached at the same time.

NBR

- Temperature [°C]: -30 to 100

FKM

- Temperature [°C]: -20 to 200

EPDM (sulf.)

- Temperature [°C]: -45 to 130

EPDM (perox.)

- Temperature [°C]: -50 to 150

HNBR

- Temperature [°C]: -30 to 140

VMQ

- Temperature [°C]: -55 to 200

PTFE

- Temperature [°C]: -200 to 260

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



O-ring

EPDM

- Good resistance in superheated steam and water vapor
- Detergent, caustic soda and potassium hydroxide solutions
- Silicone oils and greases
- Many polar solvents and diluted acids
- Good ozone resistance

HNBR

- Heat, ozone and ageing resistance significantly better than NBR

VMQ

- Water up to max. +100°C
- Aliphatic engine and gear oils, animal and vegetable oils and greases

PTFE

- Good chemical resistance to aggressive acids, bases, alcohols or oils
- Very good resistance in a wide range of media

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

- Dimensions of installation spaces depend on cord thickness used and respective applications
- Depending on ring thickness and application, groove dimensions result in an average compression of 15 to 13%
- With pulsating pressures, hardness of the o-ring should not be less than 80 Shore A

INSTALLATION GUIDELINE

- 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
- Heating the seal in oil at 80°C makes the sealing material more elastic and the seal is easier to install
- Grease mounting surfaces and seal
- Grease the elastomer sealing element before assembly to improve the dynamic coefficient of friction and thus ensure a longer service life
- Do not roll the O-ring over the mounting surfaces, do not twist it when snapping into the groove
- Do not expand the seal to the expansion limit

STORAGE ADVISE

- Storage temperature <25°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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