



X-Ring XR

DESCRIPTION

- Endless, circular ring with x-shaped cross-section

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

APPLICATIONS

- Sealing of pressures up to 1000 bar, use of support rings may be necessary
- 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)
- Comparable in handling and application to o-rings

PRODUCT ADVANTAGES

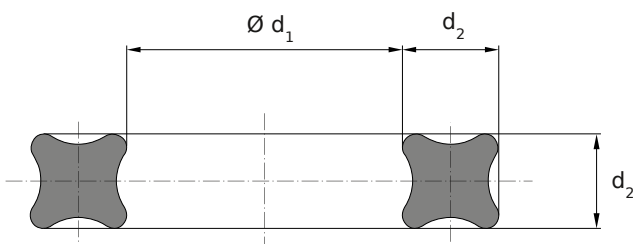
- Optimized sealing effect (good pressure distribution over square cross-section)
- Reliable design with broad application spectrum for moderately demanding applications in general industry
- Low friction due to lower contact forces
- Good price/performance ratio
- Lubricant depot possible between the sealing lips
- High stability in dynamic applications due to almost square cross-section
- Manufactured by certified external suppliers
- Lower radial preload required
- No interference by separation rate

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

- Cylinder housing and piston rod/piston must be
- Surface roughness of groove flanks $Ra \leq 4 \mu\text{m}$
- Surface roughness of groove base $Ra \leq 2,5 \mu\text{m}$
- Surface roughness of mating surface $Ra \leq 0,3 \mu\text{m}$





 DICHTOMATIK

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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, threads, or keyways during installation; cover with an installation sleeve if necessary
- Heating the seal in oil at 80°C to 100°C makes the seal material more elastic and easier to install
- Grease mounting surfaces and seal
- 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

Temperature [°C]

NBR	FKM
-30...100	-20...200

The values given are based on a limited number of tests on standard test specimens (2 mm sample plates) from laboratory production. The data determined from finished parts may deviate from the above values depending on the manufacturing process and the part geometry.



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The information provided herein is based on laboratory tests and on data sources deemed reliable. It constitutes general, non-binding guideline values and does not represent any guarantee of specific properties or suitability for a particular purpose. The suitability of a product for a specific application depends on the actual operating conditions and a variety of factors. Full testing and performance evaluation of the final product are the responsibility of the user. Freudenberg FST GmbH | www.fst.com