

OR NBR 90

Description

Product group: OR O-rings

Materials:

NBR, NB 90 0120

Colour:

NBR 90, black

Tolerances: as per DIN 3771 / ISO 3601

Materials with approvals and/or conformity tests for special applications (gas, drinking water, foodstuffs) are available, as required.



Operational application limits

Temperature NBR: -30 °C to +100 °C

Function

O-rings are closed circular rings of circular cross-section. They are made through vulcanisation from form tools as a complete ring. The sealing function of the O-ring is achieved by the deformation of the cross-section when installed and compressed in its housing. The O-ring can be compressed either radially or axially in its installation housing. In operating conditions the pressure exerted by the media reinforces the sealing function, as under pressure the elastomer material functions as a non-compressible fluid.

Suitability for specific media NBR:

Good chemical resistance to mineral oils and greases, hydraulic oils H, HL, HLP, non-inflammable hydraulic pressure fluids HFA, HFB, HFC to approx. +50°C and water to max. +80°C

Applications

O-rings are used predominantly for sealing non-moving machine and system components (static application) and media in liquid and gas form, e.g. flange and cover seals, threaded tube connections and the cylinder head and cylinder bottom for hydraulic cylinders. Under certain conditions it is also possible to use O-rings with reciprocating, rotating and helical movements (dynamic application). If the installation housing is finished properly, the construction design is right and the proper materials are selected, it is possible for pressures of up to 1000 bar to be sealed, with the use of back-up rings, where required. O-rings are used in many sectors, such as the fields of hydraulics, pneumatics, vacuum applications, the fittings industry, the automotive industry and in plant and mechanical engineering.

Selection and design

To ensure sound sealing effect, O-rings should be selected to offer the largest possible cross-section. The hardness of the O-ring material selected depends on the pressure, gap widths, type of sealing (static/dynamic) and the surface quality of the machine parts. For standard applications we recommend a material hardness of 70 Shore A. Careful consideration should also be given to the correct compression, elongation or compaction and the degree to which the groove in the installation housing is filled.