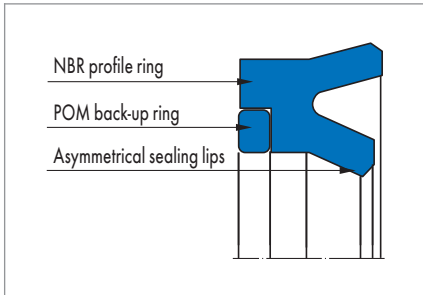


Merkel U-Ring NI 250



Product description

Merkel U-ring with asymmetrical profile of the sealing lips and back-up ring as a gap sealing component.

Product advantages

Single-acting rod seal for medium loads, predominantly for spare parts requirements.

Application

- Excavators
- Earth moving equipment
- Forestry equipment
- Special cylinders

Material

Sealing component

| Material | Code | Hardness |
|--------------------|------------|------------|
| Nitrile rubber NBR | 80 NBR 878 | 80 Shore A |

Back-up ring

| Material | Code | Hardness |
|------------|------------|----------|
| Polyacetal | POM 992020 | - |

Operating conditions

| | |
|------------|--------|
| Pressure p | 25 MPa |
|------------|--------|

| | |
|-----------------|---------|
| Running speed v | 0,5 m/s |
|-----------------|---------|

| Medium/ Temperature | 80 NBR 878/POM |
|------------------------|--------------------|
| Hydraulic oils HL, HLP | -30 °C ... +100 °C |
| HFA fluids | +5 °C ... +60 °C |
| HFB fluids | +5 °C ... +60 °C |
| HFC fluids | -30 °C ... +60 °C |
| HFD fluids | - |
| Water | +5 °C ... +90 °C |
| HETG (rapeseed oil) | -30 °C ... +80 °C |
| HEES (synthetic ester) | - |
| HEPG (glycol) | -30 °C ... +60 °C |
| Mineral greases | -30 °C ... +100 °C |

Design notes

Please observe our general design notes in → Technical Manual.

Surface quality

| Peak-to-valley heights | R _a | R _{max} |
|------------------------|-----------------|------------------|
| Sliding surface | 0,05 ... 0,3 µm | ≤2,5 µm |
| Groove base | ≤1,6 µm | ≤6,3 µm |
| Groove flanks | ≤3,0 µm | ≤15,0 µm |

Percentage contact area M_r >50% to max. 90% at cutting depth c = Rz/2 and reference line C ref = 0%.

Admissible gap dimension

The decisive factor for the function of the seal is the largest gap dimension occurring during operation on the non-pressurised side of the seal. → Technical Manual.

| d (D) | 7,5 MPa | 10 MPa | 25 MPa |
|--------|---------|---------|---------|
| ≤80 mm | 0,95 mm | 0,80 mm | 0,60 mm |
| >80 mm | 1,00 mm | 0,85 mm | 0,65 mm |

Tolerances

The admissible gap width, tolerances, guide play and deflection of the guide under load are to be taken into account when designing D2. → Technical Manual.

| Nominal Ø d | D | d |
|-------------|-----|----|
| ≤120 mm | H11 | f8 |