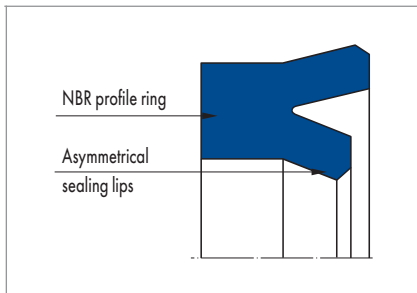


MERKEL U-RING NI 150



PRODUCT DESCRIPTION

Merkel U-ring with asymmetrical profile of the sealing lips.

PRODUCT ADVANTAGES

Single-acting rod seal, for applications such as standardised housings according to ISO 5597; preferably for spare parts requirements.

APPLICATION

- Earth moving equipment
- Agricultural machinery
- Mobile hydraulics

MATERIAL

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

OPERATING CONDITIONS

| | |
|------------|--------|
| Pressure p | 10 MPa |
|------------|--------|

Max. pressure depends on the profile.

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

| Medium/ Temperature | 80 NBR 878 |
|------------------------|--------------------|
| 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 | $\leq 2,5 \mu\text{m}$ |
| Groove base | $\leq 1,6 \mu\text{m}$ | $\leq 6,3 \mu\text{m}$ |
| Groove flanks | $\leq 3,0 \mu\text{m}$ | $\leq 15,0 \mu\text{m}$ |

Percentage contact area $M_p > 50\%$ up to max. 90% at cutting depth $c = R_z/2$ 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.

| Profile dimension | 2,5 MPa | 5 MPa | 7,5 MPa | 10 MPa |
|-----------------------|---------|---------|---------|---------|
| $\leq 5,0 \text{ mm}$ | 0,45 mm | 0,30 mm | 0,25 mm | 0,20 mm |
| $> 5,0 \text{ mm}$ | 0,50 mm | 0,35 mm | 0,30 mm | 0,25 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 $\varnothing d$ | D | d |
|-------------------------|-----|----|
| $\leq 180 \text{ mm}$ | H11 | f8 |

FITTING & INSTALLATION

Careful fitting is a prerequisite for the correct function of the seal. → Technical Manual.