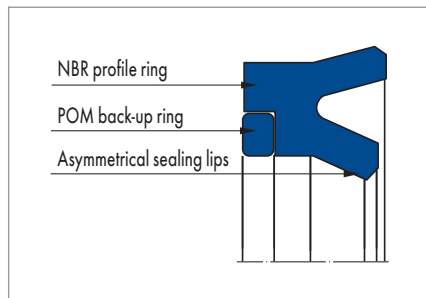


MERKEL U-RING NI 250



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	$\leq 2,5 \mu\text{m}$
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_r >50% 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.

d (D)	7,5 MPa	10 MPa	25 MPa
$\leq 80 \text{ mm}$	0,95 mm	0,80 mm	0,60 mm
$> 80 \text{ mm}$	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 $\varnothing d$	D	d
$\leq 120 \text{ mm}$	H11	f8