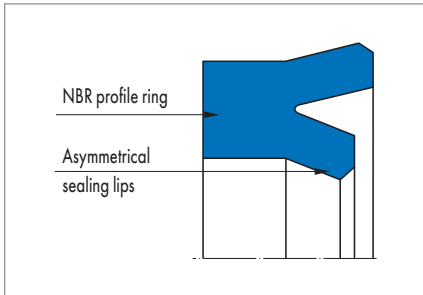


Merkel U-Ring NI 150



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
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Max. pressure depends on the profile.

Running speed v	0,5 m/s
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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.