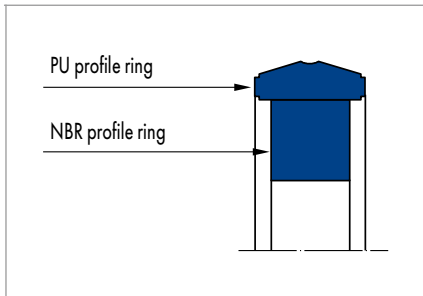


# MERKEL COMPACT SEAL SIMKO 300



## PRODUCT DESCRIPTION

Two-piece Merkel Compact Seal Simko 300 comprising one profile ring with pronounced sealing edge and one contact pressure element for producing the pre-load.

## PRODUCT ADVANTAGES

Double-acting Merkel piston seal

- Good static and dynamic tightness
- Low friction, smooth movement even at low running speeds
- Contact pressure element with rectangular cross-section, prevents twisting in the housing
- Standardised housings according to ISO 7425
- Low axial housing heights

## APPLICATION

- Earth moving equipment
- Industrial vehicles
- Loading platforms
- Agricultural machinery
- Cranes
- Injection moulding machines

## MATERIAL

### Profile ring

Material	Code	Hardness
Polyurethane	98 AU 928	98 Shore A

### Contact pressure element

≤63 mm

Material	Code	Hardness
Nitrile rubber NBR	72 NBR 872	72 Shore A

### Contact pressure element

>63 mm

Material	Code	Hardness
Nitrile rubber NBR	80 NBR 709	80 Shore A

## OPERATING CONDITIONS

Pressure p	40 MPa
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Running speed v	0,5 m/s
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Medium/ Temperature	98 AU 928/72 NBR 872	98 AU 928/80 NBR 709
Hydraulic oils HL, HLP	-30 °C ... +100 °C	-30 °C ... +100 °C
HFA fluids	+5 °C ... +50 °C	+5 °C ... +50 °C
HFB fluids	+5 °C ... +50 °C	+5 °C ... +50 °C
HFC fluids	-30 °C ... +40 °C	-30 °C ... +40 °C
HFD fluids	-	-
Water	+5 °C ... +40 °C	+5 °C ... +40 °C
HETG (rapeseed oil)	-30 °C ... +60 °C	-30 °C ... +60 °C
HEES (synthetic ester)	-30 °C ... +60 °C	-30 °C ... +60 °C
HEPG (glycol)	-30 °C ... +40 °C	-30 °C ... +40 °C
Mineral greases	-30 °C ... +100 °C	-30 °C ... +100 °C

## DESIGN NOTES

Please observe our general design notes in → Technical Manual.

### Surface quality

Peak-to-valley heights	R <sub>a</sub>	R <sub>max</sub>
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<sub>r</sub> >50% to max. 90% at cutting depth c = Rz/2 and reference line C<sub>ref</sub> = 0%.

### Admissible gap dimension

The largest gap dimension occurring on the non-pressurised side of the seal in operation is of vital importance for the function of the seal. → Technical Manual.

Dimension	max. admissible gap dimension			
	16 MPa	26 MPa	32 MPa	40 MPa
3,20 mm	0,30 mm	0,20 mm	–	–
4,20 mm	0,40 mm	0,30 mm	0,20 mm	–
6,30 mm	0,50 mm	0,40 mm	0,30 mm	0,25 mm
8,10 mm	0,60 mm	0,50 mm	0,40 mm	0,35 mm
10,5 mm	0,65 mm	0,55 mm	0,45 mm	0,40 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
≤200 mm	H9	h9

## FITTING & INSTALLATION

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