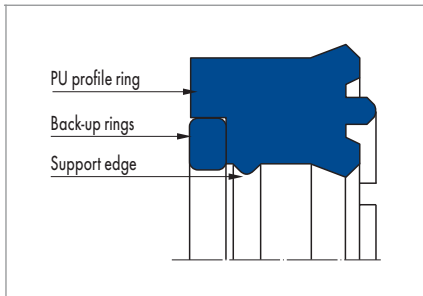


MERKEL COMPACT SEAL KI 320



PRODUCT DESCRIPTION

Merkel compact seal with integrated back-up ring, additional support edge and sealing edge, components for axial fixing in the housing and press fit at the outside diameter.

PRODUCT ADVANTAGES

Single-acting rod seal for heavy duty applications, dimensions for standardised housings, amongst others, according to ISO 5597.

- Very good static and dynamic tightness
- High pressures and larger gap widths permissible
- Compact compression, higher surface roughness in the groove base possible
- Additional sealing edge prevents ingress of dirt to a large degree
- Low deformation value, use in combination with single-acting wipers recommended

APPLICATION

- Earth moving equipment
- Cranes
- Presses
- Support cylinders
- Telescopic cylinders

MATERIAL

Sealing ring

Material	Code	Hardness
Polyurethane	94 AU 925	94 Shore A

Back-up ring

Material	Code	Hardness
Polyacetal	POM 992020	–

OPERATING CONDITIONS

Pressure p	50 MPa
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Running speed v	0,5 m/s
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Medium/ Temperature	94 AU 925
Hydraulic oils HL, HLP	–30 °C ... +110 °C
HFA fluids	+5 °C ... +50 °C
HFB fluids	+5 °C ... +50 °C
HFC fluids	–30 °C ... +40 °C
HFD fluids	–
Water	+5 °C ... +40 °C
HETG (rapeseed oil)	–30 °C ... +60 °C
HEES (synthetic ester)	–30 °C ... +60 °C
HEPG (glycol)	–30 °C ... +40 °C
Mineral greases	–30 °C ... +110 °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	≤2 µm	≤10,0 µm
Groove flanks	≤3 µm	≤15,0 µm

Percentage contact area M_r >50% up 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)	26 MPa	32 MPa	40 MPa	50 MPa
≤80 mm	0,60 mm	0,55 mm	0,45 mm	0,35 mm
>80 mm	0,65 mm	0,60 mm	0,60 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
40 ... 140 mm	H11	f8

FITTING & INSTALLATION

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