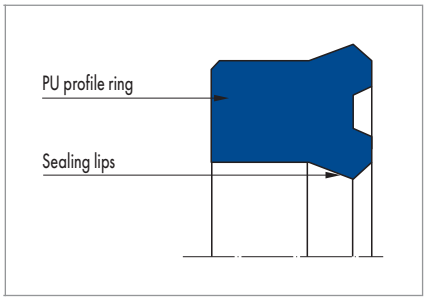
MERKEL COMPACT SEAL KI 310



PRODUCT DESCRIPTION

Merkel compact seal with asymmetrical profile.

PRODUCT ADVANTAGES

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

- Very good static and dynamic tightness
- Compact compression, higher surface roughness in the groove base is permitted
- Designed for radially restricted housings

APPLICATION

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

MATERIAL

Material	Code	Hardness
Polyurethane	94 AU 925	94 Shore A

OPERATING CONDITIONS

Pressure p	25 MPa
Running speed v	0,5 m/s

Medium/ Temperature	70 NBR B209
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 ... +100 °C
HETG (rapeseed oil)	–30 °C ... +80 °C
HEES (synthetic ester)	–30 °C ... +80 °C
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	≤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.

Profile dimension	16 MPa	26 MPa	32 MPa	40 MPa
≤4,0 mm	0,45 mm	0,35 mm	0,30 mm	0,25 mm
>4,0 mm ... ≤6,0 mm	0,50 mm	0,40 mm	0,35 mm	0,30 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
≤145 mm	H11	f8

FITTING & INSTALLATION

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