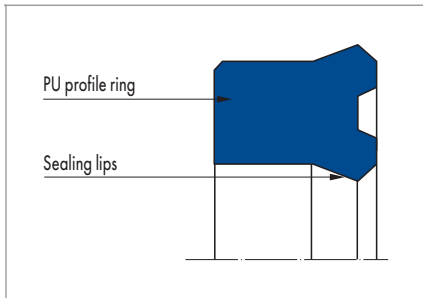


MERKEL COMPACT SEAL KI 310



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	$\leq 2,5 \mu\text{m}$
Groove base	$\leq 2 \mu\text{m}$	$\leq 10,0 \mu\text{m}$
Groove flanks	$\leq 3 \mu\text{m}$	$\leq 15,0 \mu\text{m}$

Percentage contact area M_r >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	16 MPa	26 MPa	32 MPa	40 MPa
$\leq 4,0 \text{ mm}$	0,45 mm	0,35 mm	0,30 mm	0,25 mm
$> 4,0 \text{ mm} \dots \leq 6,0 \text{ mm}$	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 $\varnothing d$	D	d
$\leq 145 \text{ mm}$	H11	f8

FITTING & INSTALLATION

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