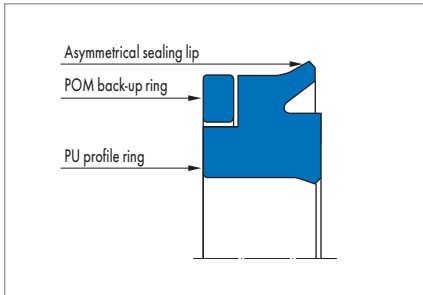


Merkel U-Ring T 18



Product description

Merkel U-ring with integrated back-up ring, asymmetrical profile with pressure-relieving grooves, outer lip set back and press fit at the inside diameter.

Product advantages

Single-acting piston seal also for standardised housings according to ISO 5597.

- Very good static and dynamic tightness
- High extrusion resistance (back-up ring)
- "back-to-back" arrangement for pistons with pressure on both sides
- High reliability
- Relief grooves against dynamic drag pressure

Application

- Earth moving equipment
- Scrap presses
- Heavy duty earth moving equipment

Material

Profile ring

Material	Code	Hardness
Polyurethane	95 AU V142	95 Shore A

Back-up ring

Material	Code	Hardness
Polyacetal	POM PO202	-

Other materials are available on request.

Operating conditions

Pressure p	40 MPa
Running speed v	0,5 m/s

Medium/ Temperature	95 AU V142/POM PO202
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 ... +50 °C
HETG (rapeseed oil)	-30 °C ... +60 °C
HEES (synthetic ester)	-30 °C ... +80 °C
HEPG (glycol)	-30 °C ... +50 °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	≤1,6 µm	≤6,3 µm
Groove flanks	≤3,0 µm	≤15,0 µm

Percentage contact area M_r >50% to max. 90% at cutting depth c = Rz/2 and reference line C_{ref} = 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. Regard must be paid to the dimensions d₁ and d_f in relation with the guide element used.

Profile dimension	16 MPa	26 MPa	32 MPa	40 MPa
7,5 mm	0,80 mm	0,70 mm	0,50 mm	0,40 mm
>7,5 mm	1,05 mm	0,90 mm	0,85 mm	0,80 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
≤400 mm	H8	h11

Fitting & installation

We recommend the use of a fitting tool for the fitting. Careful fitting is a prerequisite for the correct function of the seal. → Technical Manual.