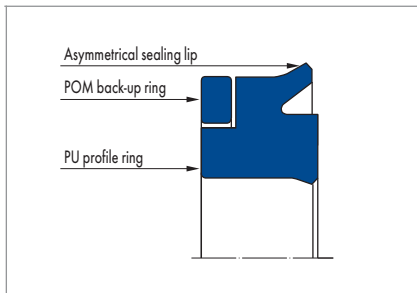


MERKEL U-RING T 18



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

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SEALING TECHNOLOGIES

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_p >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 df 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.

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