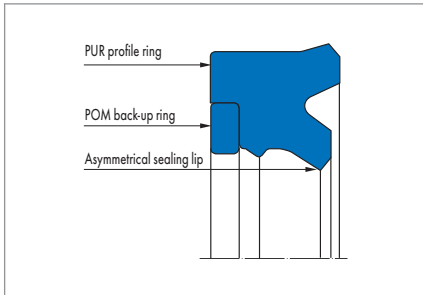


Merkel U-Ring T 23



Product description

Two-piece Merkel seal set with shortened inner lip and active back-up ring with press fit at the outside diameter.

Product advantages

The Merkel U-Ring T 23 is mainly used with high pressures and is designed for housings according to ISO 5597.

- Bridges large gaps even with high pressures
- Wide operating temperature range
- Very good static and dynamic tightness
- High resistance to wear

Application

- Earth moving equipment
- Marine hydraulics
- Scrap cutters
- Steel hydraulics engineering
- Support cylinders
- Heavy-duty mobile hydraulics

Material

Material	Code	Hardness	Colour
Polyurethane	95 AU V142	95 Shore A	Blue
Polyacetal	POM PO202	–	Red

Operating conditions

Pressure p	50 MPa
Running speed v	0,1 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	$\leq 2,5 \mu\text{m}$
Groove base	$\leq 1,6 \mu\text{m}$	$\leq 6,3 \mu\text{m}$
Groove flanks	$\leq 3,0 \mu\text{m}$	$\leq 15,0 \mu\text{m}$

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 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.

BR	16 MPa	26 MPa	32 MPa	40 MPa
3,5 mm	0,80 mm	0,70 mm	0,50 mm	0,40 mm
5,0 mm	1,20 mm	1,00 mm	0,65 mm	0,50 mm
7,5 mm	1,80 mm	1,40 mm	0,90 mm	0,70 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. Dimensions D1 and DF must be considered in connection with the guide element used.

Nominal $\varnothing d$	D	d
$\leq 400 \text{ mm}$	H10	f8

Fitting & installation

Careful fitting is a prerequisite for the correct function of the seal. → Technical Manual. Dimensions listed in the table of dimensions with "h" can be fitted by hand into plunge-cut grooves. Articles identified with "w" can be easily fitted into plunge-cut grooves with a fitting tool. We will be pleased to supply a design drawing for this on enquiry.