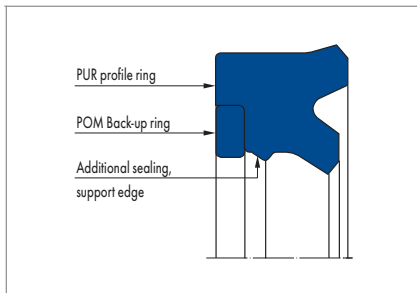


MERKEL U-RING TM 23



PRODUCT DESCRIPTION

The Merkel U-Ring TM 23 is specially designed for sealing the piston rods of plungers, pushers and subsidiary cylinders in self-advancing support systems.

PRODUCT ADVANTAGES

To meet the requirements of a higher radial deflection and larger gap bridging, the Merkel U-Ring TM 23 has been fitted with an increased pre-load and active back-up ring. The second sealing edge provides extra protection against the ingress of dirt particles.

- Good media resistance
- Very good static and dynamic tightness
- Large range of dimensions
- Bridges large gaps
- Highly wear-resistant

APPLICATION

- Mining

MATERIAL

Sealing component

Material	Code	Hardness
Polyurethane	95 AU V157/93 AU V167	95/93 Shore A

Back-up ring

Material	Code	Hardness
Polyacetal	POM PO202	-

OPERATING CONDITIONS

Pressure p	50 MPa
Running speed v	<0,1 m/s

Medium/ Temperature	95 AU V157 / 93 AU V167
Hydraulic oils HL, HLP	-
HFA fluids	+5 °C ... +60 °C
HFB fluids	-
HFC fluids	-
HFD fluids	-
Water	+5 °C ... +60 °C
HETG (rapeseed oil)	-
HEES (synthetic ester)	-
HEPG (glycol)	-
Mineral greases	-

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% 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	50 MPa
7,5 mm	0,80 mm	0,70 mm	0,50 mm	0,40 mm
>7,5 mm ... ≤10,0 mm	1,20 mm	1,00 mm	0,65 mm	0,50 mm
>10,0 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.

Nominal Ø d	D	d
≤350 mm	H10	f7

FITTING & INSTALLATION

The U-rings can be fitted into plunge-cut grooves by hand or with a fitting tool. We will be pleased to send you a design drawing for this on enquiry.

SPECIALITIES

Profile recommendation

d	S	L
<60 mm	6,0 mm	9,6 mm
60 ... 120 mm	7,5 mm	12,5 mm
120 ... 200 mm	10,0 mm	16,0 mm
200 ... 300 mm	12,5 mm	20,0 mm
>300 mm	15,0 mm	22,0 mm

Other dimensions are possible. Please ask.