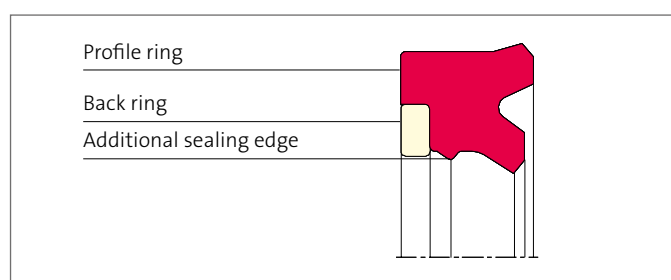


MERKEL U-RING TM 23



Merkel U-ring TM 23 is a two-piece sealing set comprising of one U-ring made of polyurethane and a back ring made of POM.



VALUE TO THE CUSTOMER

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

Application

Merkel U-ring TM 23 is mainly used in mining equipment. The seal is specially designed for sealing the piston rods of plungers, pushers, stamping and ancillary cylinders in self-advancing support systems.

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 an active back ring. The second sealing edge provides extra protection against the ingress of dirt particles.

Material

Profile ring

Material	Designation	Color
Polyurethan	93 AU V167	red

Back ring

Material	Designation
Polyacetal	POM PO202



FEATURES AND BENEFITS

Operating conditions

Material	93 AU V167
HFA fluids/water	+5 ... +60 °C
Pressure	40 MPa
Sliding speed	> 0,1 m/s

Surface finish

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 sides	$\leq 3,0 \mu\text{m}$	$\leq 15,0 \mu\text{m}$

Material content M_r > 50 % to max. 90 %, with cut depth $c = R_z/2$ and reference line $C_{ref} = 0 \%$.

Recommended profile

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

Design notes

Please observe the general design notes in our Technical Manual.

Gap dimension

The decisive factor for the function of the seal is the largest gap dimension occurring during operation at the non-pressurized side of the seal. Please also consult our Technical Manual.

Profile [mm]		Max. permissible gap dimension [mm]			
L	Profile	16 MPa	26 MPa	32 MPa	50 MPa
12,5	7,5	0,8	0,7	0,5	0,4
>12,5 ... 16,0	>7,5 ... 10,0	1,2	1	0,65	0,5
>16,0	>10,0	1,8	1,4	0,9	0,7

Tolerance recommendation and dimension D_2

The admissible gap width, tolerances, guide play and deflection of the guide under load are to be taken into account when designing D_2 . Please also consult our Technical Manual.

Nominal $\varnothing d$ [mm]	d	D
≤ 350	f7	H10

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.



FEATURES AND BENEFITS

Installation diagram

