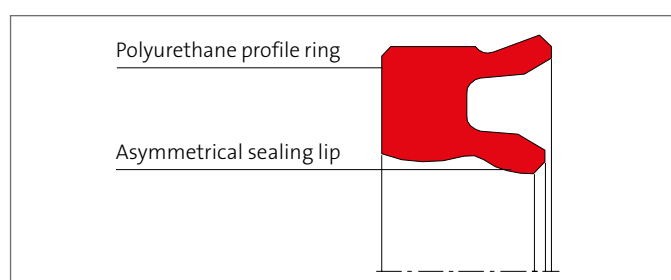


# MERKEL U-RING TMP 20



Merkel U-ring TMP 20 is a single-acting rod seal made of abrasion-resistant polyurethane.



## VALUE TO THE CUSTOMER

- High tightness
- Suitable for dry air
- Large range of dimensions
- No mold cost

### Applications

Rod seal for heavy pneumatic loads and high operating requirements. The U-rings are designed to cope with pressure from one side.

### Operating conditions

Material	93 AU V167/93 AU V168
HFA-fluids/water	-10 ... +80 °C
Pressure	2 MPa
Sliding speed	1,5 m/s

### Material

Material	Designation	Color
Polyurethane	93 AU V167	red
Polyurethane	93 AU V168	red

The material is determined by the nominal diameter.



## FEATURES AND BENEFITS

### Surface finish

Peak-to-valley heights	$R_a$	$R_{max}$
Sliding surface	0,05 ... 0,3 $\mu\text{m}$	$\leq 2,5 \mu\text{m}$
Groove base	$\leq 1,6 \mu\text{m}$	$\leq 6,3 \mu\text{m}$
Groove sides	$\leq 3,0 \mu\text{m}$	$\leq 15,0 \mu\text{m}$

Percentage contact area  $M_v$  >50% up to max. 90% at cutting depth  $c = R_z/2$  and reference line  $C_{ref} = 0\%$ . Abrasive surfaces, scores, scratches and blowholes are to be avoided.

### Design notes

Please note the general design remarks in our Technical Manual.

### Housing recommendations for new design

d [mm]	D [mm]	L [mm]	C [mm]
>50 ... 200	d + 20	16	8,5
>100 ... 320	d + 25	20	10
>150 ... 630	d + 30	24	11,5
>400 ... 800	d + 40	32	12,5
>800 ... 1.200	d + 50	40	16
>1.000 ... 2.000	d + 60	48	18

### Tolerances

Diameter D [mm]	Tolerance
<250	H10
>250	H11

### Installation & assembly

The rod seals can be snapped into plunge-cut grooves by hand or with a fitting tool. Please contact our application consultants about different housings, e. g. in old plants. To achieve optimum running-in and operation behaviour, the U-rings should be oiled or greased slightly prior to use (initial lubrication).

### Installation diagram

