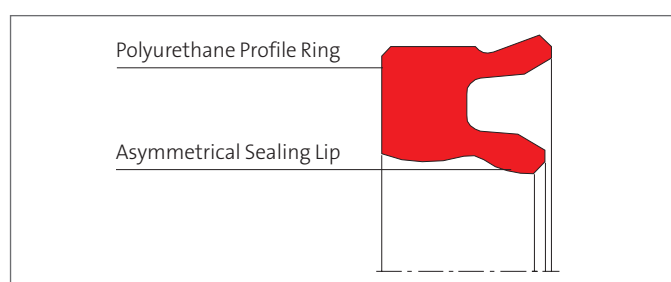


MERKEL® U-RING TMP20



Merkel® U-ring TMP20 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
Pneumatic – Dry or Oiled Air	–10 ... +80 °C
Pressure	2 MPa
Sliding Speed	1,5 m/s

Material

Material	Designation	Color
Polyurethane	93 AU V167	red



TECHNICAL PROPERTIES

Surface Finish

Peak-to-valley Heights	R_a	R_{max}
Sliding Surface	0,05 ... 0,3 μm	$\leq 2,5 \mu\text{m}$
Groove	$\leq 1,6 \mu\text{m}$	$\leq 6,3 \mu\text{m}$
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.

Housing Recommendations For New Designs

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

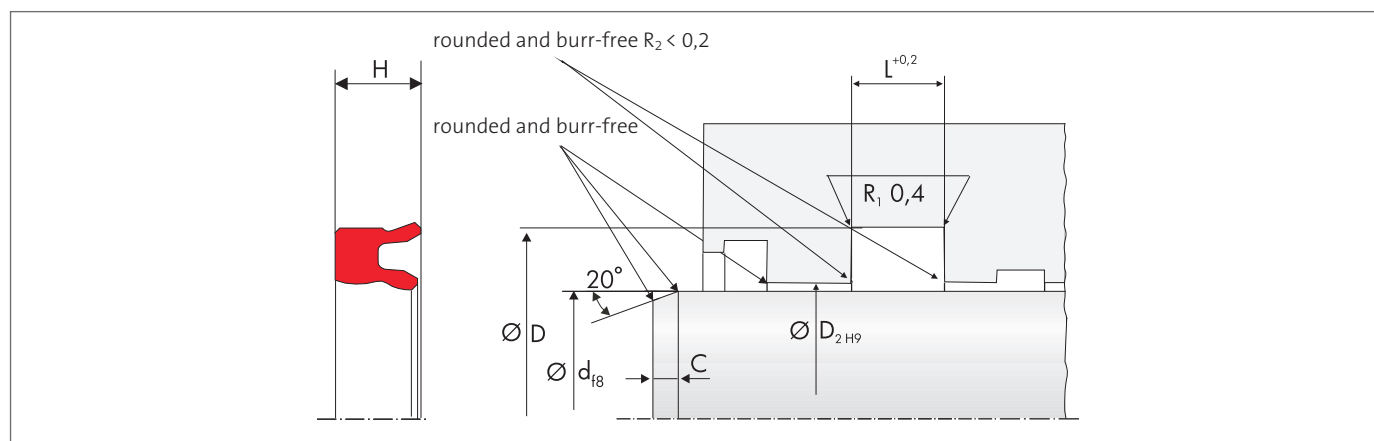
Installation

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).

Design Notes

Please note the general design remarks in our Technical Manual.

Installation Diagram



The information contained herein is believed to be reliable, but no representation, guarantees or warranties of any kind are made to its accuracy or suitability for any purpose. The information presented herein is based on laboratory testing and does not necessarily indicate end product performance. Full scale testing and end product performance are the responsibility of the user.