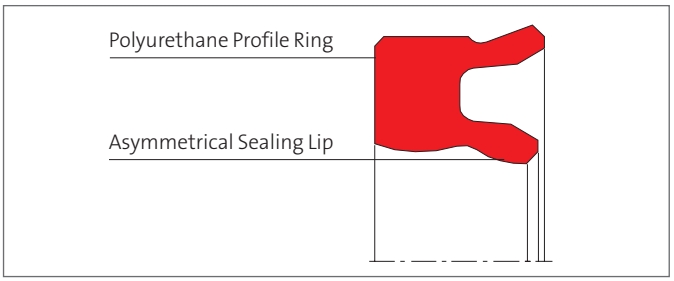
MERKEL® U-RING TMP20

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 form 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	≤2,5 µm
Groove	≤1,6 µm	≤6,3 µm
Groove Sides	≤3,0 µm	≤15,0 µm

Percentage contact area M_r >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