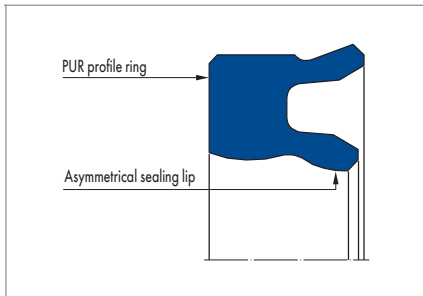


MERKEL U-RING TMP 20



PRODUCT DESCRIPTION

Single-acting rod seal made of abrasion-resistant polyurethane.

PRODUCT ADVANTAGES

Rod seal for heavy-duty pneumatic stresses and strains and high operating requirements. New production technology allows special sizes to be manufactured quickly and flexibly. The Merkel U-rings are designed for pressure on one side.

- High tightness
- Suitable for dry air
- Large range of dimensions
- No mould tools required

APPLICATION

- Large cylinders
- Presses

MATERIAL

<500 mm

Material	Code	Hardness	Colour
Polyurethane	93 AU V167	93 Shore A	Red

>500 mm

Material	Code	Hardness	Colour
Polyurethane	93 AU V168	93 Shore A	Red

OPERATING CONDITIONS

Pressure p	2,0* MPa
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* Short version <1,2 MPa

Running speed v	1,5 m/s
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Medium/ Temperature	93 AU V167	93 AU V168
HFA fluids	+5 °C ... +60 °C	+5 °C ... +80 °C

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	$\leq 2,5 \mu\text{m}$
Groove base	$\leq 1,6 \mu\text{m}$	$\leq 6,3 \mu\text{m}$
Groove flanks	$\leq 3,0 \mu\text{m}$	$\leq 15,0 \mu\text{m}$

Percentage contact area M_r >50% to max. 90% at cutting depth $c = R_z/2$ and reference line $C_{ref} = 0\%$. Abrasive surfaces, ridges, scratches and blow-holes must be avoided.

Tolerances

Nominal $\varnothing d$	D	d
$\leq 250 \text{ mm}$	H11	f8
$> 250 \text{ mm}$	H10	f8

FITTING & INSTALLATION

The rod seals can be inserted into plunge-cut grooves by hand or with a fitting tool. In the case of different housings, such as in old plant, please ask our advisory service. For optimum running-in and operation behaviour the U-rings should be lightly oiled or greased prior to use (initial lubrication).

HOUSING RECOMMENDATIONS FOR NEW DESIGNS

d	D	L	C
>50 ... 200 mm	d + 20 mm	16 mm	8,5 mm
>100 ... 320 mm	d + 25 mm	20 mm	10,0 mm
>150 ... 630 mm	d + 30 mm	24 mm	11,5 mm
>400 ... 800 mm	d + 40 mm	32 mm	12,5 mm
>800 ... 1200 mm	d + 50 mm	40 mm	16,0 mm
>1000 ... 2000 mm	d + 60 mm	48 mm	18,0 mm