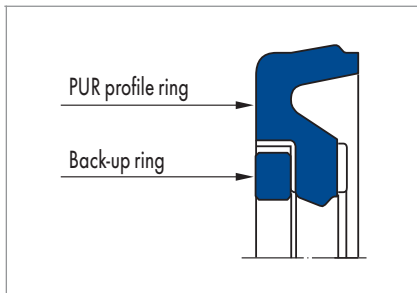


MERKEL U-RING SYPRIM SM



PRODUCT DESCRIPTION

Two-piece Merkel seal set for use as a primary rod seal. The Merkel Syprim SM seal set is always used in a sealing system in combination with U-ring (e.g. Merkel U-Ring T 20).

PRODUCT ADVANTAGES

The Merkel U-Ring Syprim SM is designed especially for use as a system seal.

- Short primary seal
- No pressure enclosed between primary and secondary seal
- Low friction
- Highly wear-resistant
- Protection against extrusion through activated back-up ring

APPLICATION

- Earth moving equipment
- Industrial vehicles
- Agricultural machinery
- Cranes
- Injection moulding machines
- Standard cylinders

MATERIAL

PUR profile ring

Material	Code	Hardness
Polyurethane	95 AU V142	95 Shore A

Back-up ring

Material	Code	Hardness
Polyacetal	POM PO202	-

OPERATING CONDITIONS

Pressure p	40 MPa
Running speed v	0,5 m/s

FREUDENBERG
SEALING TECHNOLOGIES

Medium/ Temperature	95 AU V142/POM PO202
Hydraulic oils HL, HLP	-30 °C ... +110 °C
HFA fluids	+5 °C ... +50 °C
HFB fluids	+5 °C ... +50 °C
HFC fluids	-30 °C ... +40 °C
HFD fluids	-
Water	+5 °C ... +50 °C
HETG (rapeseed oil)	-30 °C ... +60 °C
HEES (synthetic ester)	-30 °C ... +80 °C
HEPG (glycol)	-30 °C ... +50 °C
Mineral greases	-30 °C ... +110 °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_v >50% up to max. 90% at cutting depth $c = Rz/2$ and reference line $C_{ref} = 0\%$.

Admissible gap dimension

The decisive factor for the function of the seal is the largest gap dimension occurring during operation on the non-pressurised side of the seal. → Technical Manual.

Profile dimension	16 MPa	26 MPa	32 MPa	40 MPa
7,5 mm	0,60 mm	0,50 mm	0,40 mm	0,40 mm
10,25 mm	0,70 mm	0,60 mm	0,50 mm	0,50 mm

Tolerances

The admissible gap width, tolerances, guide play and deflection of the guide under load are to be taken into account when designing D2. → Technical Manual.

Nominal $\varnothing d$	D	d
45 ... 80 mm	H9	f8
>80 ... 200 mm	H8	f8

FITTING & INSTALLATION

Careful fitting is a prerequisite for the correct function of the seal. → Technical Manual.