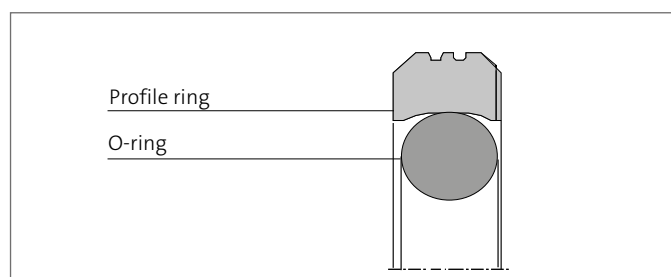


MERKEL ROTOMATIC M 16



Merkel Rotomatic M 16 is a two-piece seal set for sealing pistons, consisting of a PTFE profile ring and an O-ring as a pre-stress element.



Applications

Double-action piston seal for pivoting motion in hydraulic plant, preferably for use in hydraulic joints and rotary transmissions.

Material

Profile ring

Material	Designation	Color
PTFE-Glas-MoS ₂ -Compound	GM 201	light gray

O-ring

Material	Designation	Color
Nitrile rubber	NBR	black

Other material combinations available on request.

VALUES FOR THE CUSTOMER

- Quick assembly
- Highly resistant to hydraulic fluids
- Low friction, stick-slip free



FEATURES AND BENEFITS

Operating conditions

Material	PTFE GM201/NBR
Hydraulic oils, HL, HLP	−30 ... +100 °C
HFA fluids	+5 ... +60 °C
HFB fluids	+5 ... +60 °C
HFC fluids	−30 ... +60 °C
HFD fluids	–
Water	+5 ... +100 °C
HETG (rape-seed oil)	−30 ... +80 °C
HEES (synth. ester)	−30 ... +80 °C
HEPG (glycol)	−30 ... +60 °C
Mineral greases	−30 ... +100 °C
Pressure	40 MPa
Sliding speed	5 m/s

The figures given are maximum values and must not be applied simultaneously.

Surface finish

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 sides	$\leq 3,0 \mu\text{m}$	$\leq 15,0 \mu\text{m}$

Material content $M_r > 50\%$ to max. 90 %, with cut depth $c = R_z/2$ and reference line $C_{ref} = 0\%$

The long term behavior of a sealing element and its dependability against early failures are crucially influenced by the quality of the counter surface. Therefore a precise description and assessment of the surface is critical.

Based on recent findings, we recommend supplementing the above definition of surface finish for the sliding surface by the characteristics detailed in the table below. With these new characteristics derived from the material content, previous more general descriptions of the material content are significantly improved, especially in regard to surface roughness.

Please also consult our Technical Manual.

Tolerance recommendation

Diameter d	Borehole	Shaft	Groove base
<500	H9	f8	h9
>500	H8	f7	h8

Design notes

Please note the general design remarks in our Technical Manual.

Installation & assembly

Please note the general remarks on hydraulic seal assembly in our Technical Manual.



FEATURES AND BENEFITS

Installation diagram

