

Merkel Rotomatic M 19

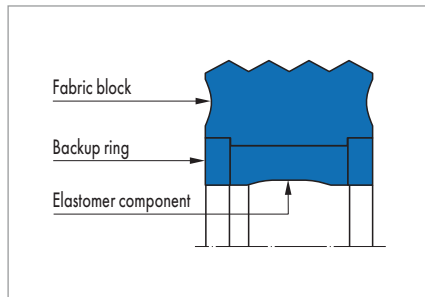


Fig. 1 Merkel Rotomatic M 19

Product description

Three-part Merkel seal set, consisting of an elastomer part with fabric reinforcement on the contact area which is formed so that two sealing edges form an oil groove, as well as two activated back-up rings.

Product advantages

Double-acting rod seal for pivoting motions in hydraulic systems, preferably for usage in hydraulic joints and rotary joints

- Extrusion-secured through activated back-up ring
- Wear-resistant.

Application

Excavators, grippers, rotary joints.

Material

Material	Code
Nitrile rubber NBR/POM	80 NBR B246/BI-NBR B4 B285/POM PO202

Operating conditions

Material	80 NBR B246/BI-NBR B4 B285/POM PO202
Temperature range in °C	
Hydraulic oils HL, HLP	-30 ... +80
HFA fluids	+5 ... +60
HFB fluids	+5 ... +60
HFC fluids	-30 ... +60
HFD fluids	-
Water	+5 ... +80
HETG (rapeseed oil)	-30 ... +80
HEES (synthetic ester)	-30 ... +80
HEPG (glycol)	-30 ... +60
Mineral greases	-30 ... +80
Pressure p in MPa	40
Running speed v in m/s	0,2

If the seal set is to be used for permanent rotational movement, please consult us first.

Surface quality

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

The surface hardness must be approx. 45 to 60 HRC (depth of hardening min. 0,5 mm). Percentage contact area $M_c > 50\%$ to max 90% at cutting depth $c = Rz/2$ and reference line $C_{ref} = 0\%$. Abrasive surfaces, ridges, scratches and blow-holes are to be avoided.

Design notes

Please observe our general design notes in → Technical Manual.

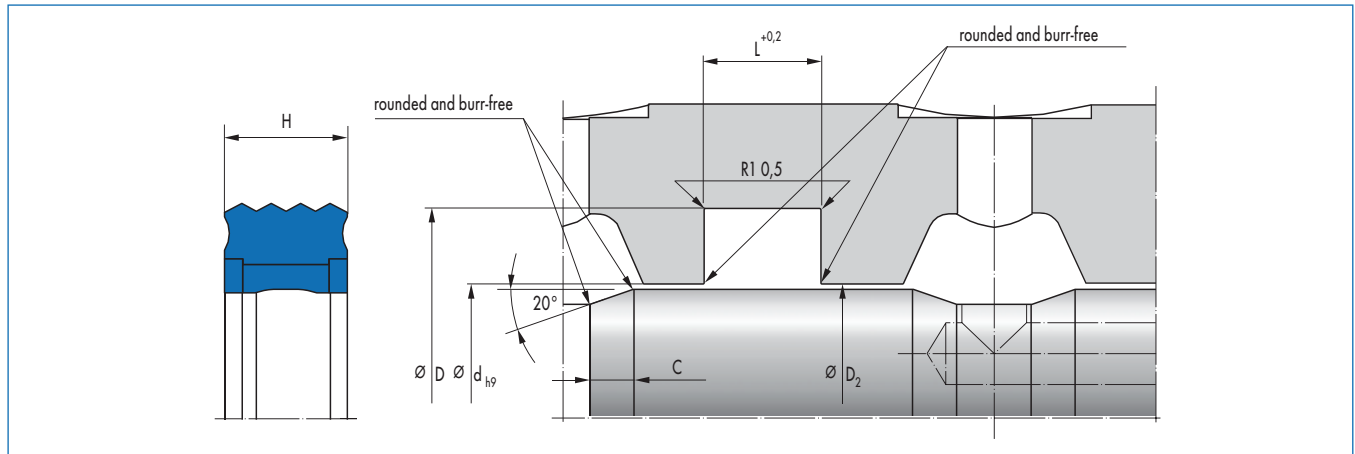
Tolerance recommendation and dimension d2

Recommended fit for pressures up to 40 MPa

Profile	D2	Tolerance level D2	Shaft	Groove base
7,5	d +0,2* d +0,3	H8	f8	H9
10,0	d +0,3* d +0,5	H8	f8	H9
12,5	d +0,5* d +0,7	H8	f8	H9

* In dependence on the H dimension of the back-up ring.

Article list



d	D	L	C	Profile	Material	Article No.	
60	72	10	5,5	6	80 NBR B246	24069210	○
70	85	11	5,5	7,5	80 NBR B246	24067432	○
80	95	11	5,5	7,5	80 NBR B246	24235577	●
90	110	13	7,5	10	80 NBR B246	24103500	○
95	112	10,8	7	8,5	80 NBR B246	24308835	○
95	112	11	7	8,5	80 NBR B246	24065060	●
100	120	13	7,5	10	80 NBR B246	24103501	○
110	130	13	7,5	10	80 NBR B246	24103502	●
125	145	13	7,5	10	80 NBR B246	24103504	●
130	150	11	7,5	10	80 NBR B246	24091083	●
140	160	13	7,5	10	80 NBR B246	24103505	○
150	170	13	7,5	10	80 NBR B246	24139281	○
160	185	16	8	12,5	80 NBR B219	24080888	○
180	205	16	8	12,5	80 NBR B246	24068319	○
200	225	16	8	12,5	80 NBR B219	24103506	○
290	320	19	8	15	80 NBR B246	24195361	○
365	390	16	8	12,5	80 NBR B246	24362038	○

● Available from stock ○ On request: Tool is available, delivery at short notice