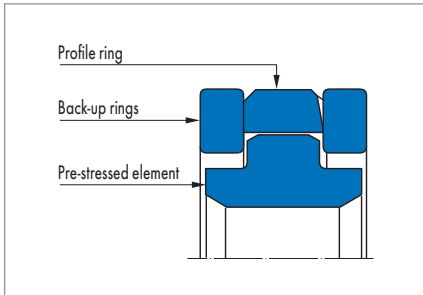


Merkel Compact Seal L 27



Product description

Four-piece Merkel Compact Seal L 27 comprising one pre-load component (NBR), two active back-up rings (POM) and one PTFE bronze profile ring.

Product advantages

The Merkel Piston Seal L 27 is used where a piston has pressure on both sides. The activated back-up rings offer good protection against extrusion even with gaps for breathing.

- Bridges large radial gaps
- Very good protection against extrusion even with pressure peaks
- High resistance to abrasion
- Low friction, free of stick-slip
- High contact pressure due to elastomer profile ring

Application

- Excavators
- Earth moving equipment
- Presses
- Injection moulding machines

Material

PTFE profile ring

Material	Code	Hardness
PTFE bronze compound	PTFE B602	–

Pre-load component

Material	Code	Hardness
Nitrile rubber NBR	85 NBR B247/85 NBR B203	85 Shore A

Back-up ring

Material	Code	Hardness
Polyacetal	POM PO202	–

Operating conditions

Pressure p	50 MPa
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Running speed v	1,5 m/s
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Medium/ Temperature	PTFE B602/85 NBR B203/POM PO202	PTFE B602/85 NBR B247/POM PO202
Hydraulic oils HL, HLP	–30 °C ... +100 °C	–30 °C ... +100 °C
HFA fluids	–	–
HFB fluids	–	–
HFC fluids	–	–
HFD fluids	–	–
Water	–	–
HETG (rapeseed oil)	–30 °C ... +80 °C	–30 °C ... +80 °C
HEES (synthetic ester)	–30 °C ... +80 °C	–30 °C ... +80 °C
HEPG (glycol)	–30 °C ... +50 °C	–30 °C ... +50 °C
Mineral greases	–30 °C ... +100 °C	–30 °C ... +100 °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	≤2,5 µm
Groove base	≤1,6 µm	≤6,3 µm
Groove flanks	≤3,0 µm	≤15,0 µm

Percentage contact area M_r >50% to max. 90% at cutting depth c = Rz/2 and reference line C ref = 0%.

Admissible gap dimension

Profile dimension	16 MPa	26 MPa	32 MPa	40 MPa
6,0 mm	0,80 mm	0,70 mm	0,50 mm	0,40 mm
8,5 mm	1,20 mm	1,00 mm	0,65 mm	0,50 mm
10,0 mm	1,20 mm	1,00 mm	0,65 mm	0,50 mm
12,5 mm	1,80 mm	1,40 mm	0,90 mm	0,70 mm

Tolerances

Nominal Ø D	D	d	D ₂	D _F
50 ... 320 mm	H8	h9	h9	h8

Fitting & installation

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