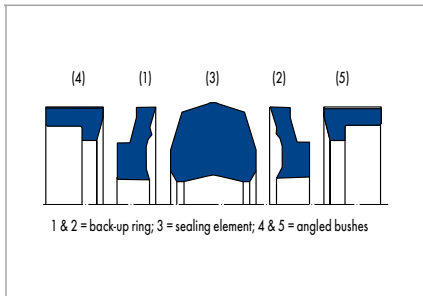


MERKEL COMPACT SEAL L 43



PRODUCT DESCRIPTION

Five-piece Merkel compact seal L 43 comprising one profile ring, two back-up rings and two angled bushes.

PRODUCT ADVANTAGES

The Merkel Piston Seal L 43 is used for sealing pistons with pressure on both sides. The angled rings guide the piston on the cylinder bore.

- No extrusion into the radial sealing gap
- Suitable for rapid pressure change
- Sealing component protected against twisting

APPLICATION

- Earth moving equipment
- Agricultural machinery
- Cranes
- Standard cylinders

MATERIAL

Sealing component

Material	Code	Hardness
Nitrile rubber	80 NBR B281	80 Shore A

Back-up ring

Material	Code	Hardness
Polyester elastomer	97 TPE 113TP	97 Shore A

Angled bush

Material	Code	Hardness
Polyamide with special filling	PA 6501	—

OPERATING CONDITIONS

Pressure p	40 MPa
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Running speed v	0,5 m/s
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Medium/ Temperature	80 NBR B281 / 97 TPE TP113 / PA 6.501
Hydraulic oils HL, HLP	-30 °C ... +100 °C
HFA fluids	+5 °C ... +60 °C
HFB fluids	+5 °C ... +60 °C
HFC fluids	+5 °C ... +50 °C
HFD fluids	—
Water	—
HETG (rapeseed oil)	-30 °C ... +60 °C
HEES (synthetic ester)	-30 °C ... +80 °C
HEPG (glycol)	-30 °C ... +50 °C
Mineral greases	-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	$\leq 2,5 \mu\text{m}$
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 $C_{ref} = 0\%$.

Admissible gap dimension

The largest gap dimension occurring on the non-pressurised side of the seal in operation is of vital importance for the function of the seal. → Technical Manual.

Tolerances

Nominal $\varnothing D$	D	d	d ₂	d ₃
40 ... 200 mm	H8	h9	h11	h8

FITTING & INSTALLATION

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