

Merkel Compact Seal L 27

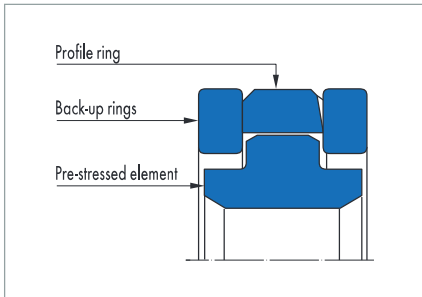


Fig. 1 Merkel Compact Seal L 27

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

Earth moving equipment, injection moulding machines, presses, excavators.

Material

PTFE profile ring

Material	Code
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
Polyacetal	POM PO202

Operating conditions

Material	PTFE B602/ 85 NBR B247/ POM PO202	PTFE B602/ 85 NBR B203/ POM PO202
	Temperature range in °C	
Hydraulic oils HL, HLP	-30 ... +100	-30 ... +100
HFA fluids	-	-
HFB fluids	-	-
HFC fluids	-	-
HFD fluids	-	-
Water	-	-
HETG (rapeseed oil)	-30 ... +80	-30 ... +80
HEES (synthetic esters)	-30 ... +80	-30 ... +80
HEPG (glycol)	-30 ... +50	-30 ... +50
Mineral greases	-30 ... +100	-30 ... +100
Pressure p in MPa	50	
Running speed v in m/s	1,5	

Surface quality

Surface roughness	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%.

Design notes

Please observe our general design notes in → Technical Manual.

Tolerance recommendation

		16 MPa					26 MPa				
Nominal Ø D	Pro- file	D	d	D2	DF	X2	D	d	D2	DF	X2
... 70	6,0	H8	h9	h9	h8	0,8	H8	h9	h9	h8	0,7
>70 ... 110	8,5	H8	h9	h9	h8	1,2	H8	h9	h9	h8	1,0
>110 ... 200	10,0	H8	h9	h9	h8	1,2	H8	h9	h9	h8	1,0
>200 ... 350	12,5	H8	h9	h9	h8	1,8	H8	h9	h9	h8	1,4

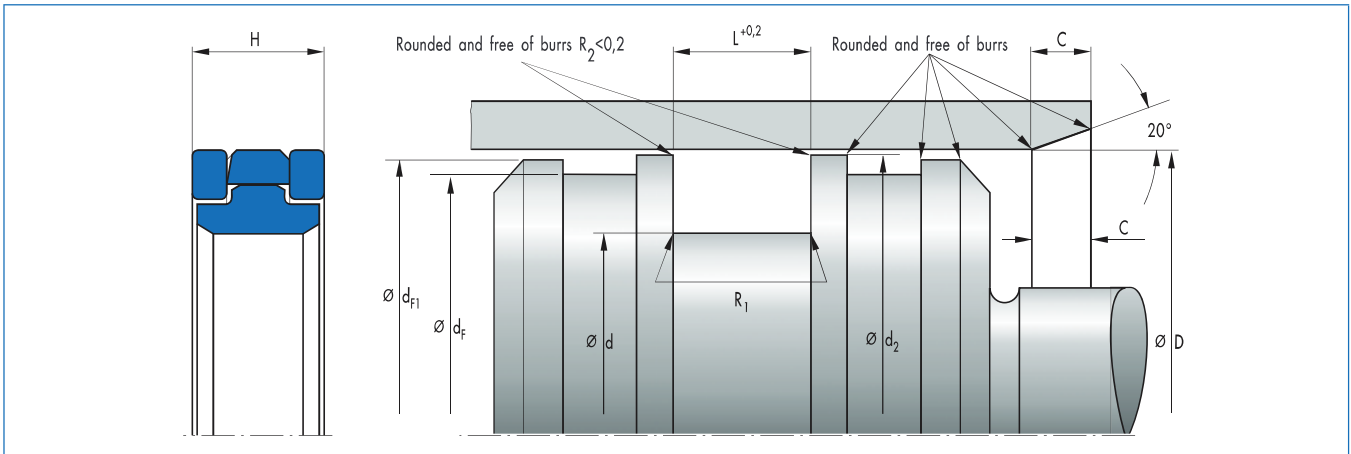
		32 MPa					40 MPa				
Nominal Ø D	Pro- file	D	d	D2	DF	X2	D	d	D2	DF	X2
... 70	6,0	H8	h9	h9	h8	0,50	H8	h9	h9	h8	0,4
>70 ... 110	8,5	H8	h9	h9	h8	0,65	H8	h9	h9	h8	0,5
>110 ... 200	10,0	H8	h9	h9	h8	0,65	H8	h9	h9	h8	0,5
>200 ... 350	12,5	H8	h9	h9	h8	0,90	H8	h9	h9	h8	0,7

Fitting & installation

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

→ Technical Manual.

Article list



D	d	H	L	Profile	C	R ₁	Material	Article No.	
50	38	9	10	6	6	0,5	PTFE B602	24361313	B
63	51	9	10	6	6	0,5	PTFE B602	24361314	D
70	53	13,4	14	8,5	8	0,5	PTFE B602	24375726	B
80	63	13,4	14	8,5	8	0,5	PTFE B602	24361315	B
90	73	13,4	14	8,5	8	0,5	PTFE B602	24351815	B
100	83	13,4	14	8,5	8	0,5	PTFE B602	24359198	B
105	88	13,4	14	8,5	8	0,5	PTFE B602	24346227	B
110	93	13,4	14	8,5	8	0,5	PTFE B602	24360184	B
115	98	13,4	14	8,5	8	0,5	PTFE B602	24355371	D
120	103	13,4	14	8,5	8	0,5	PTFE B602	24360185	D
125	108	13,4	14	8,5	8	0,5	PTFE B602	24355372	B
130	105	18,4	19	12,5	8	0,5	PTFE B602	24360186	D
140	115	18,4	19	12,5	10,5	0,5	PTFE B602	24360788	D
150	125	18,4	19	12,5	10,5	0,5	PTFE B602	24361316	D
150	130	16,8	17,5	10	10,5	0,5	PTFE B602	24181687	D
160	135	18,4	19	12,5	10,5	0,5	PTFE B602	24361317	D
165	140	18,4	19	12,5	10,5	0,5	PTFE B602	24361318	D
180	155	18,4	19	12,5	10,5	0,5	PTFE B602	24361319	D
200	175	18,4	19	12,5	10,5	0,5	PTFE B602	24361320	D
250	225	18,4	19	12,5	10,5	0,5	PTFE B602	24370692	D
280	255	18,4	19	12,5	10,5	0,5	PTFE B602	24370693	D
300	275	18,4	19	12,5	10,5	0,5	PTFE B602	24370694	D
320	295	18,4	19	12,5	10,5	0,5	PTFE B602	24370695	D

B Available from stock D On request: Tool is available, delivery at short notice

