

Merkel Cover Seal PU 82

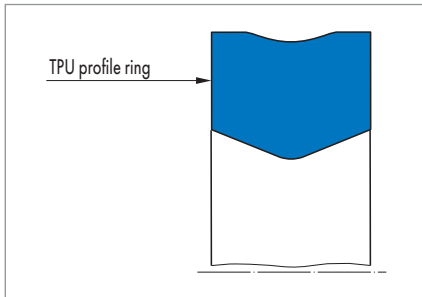


Fig. 1 Merkel Cover Seal PU 82

Product description

Single-piece, double-acting compact seal made from TPU for static sealing, inner sealing.

Product advantages

- Interchangeable for O-ring housings and O-ring with back-up ring
- High reliability
- Simple and secure installation
- Simplified stockkeeping
- Gas proofness.

Application

- Higher operating pressure (up to 60 MPa)
 - Gap for breathing (pipe expansion)
 - Short rate of increase of the pressure (end position damping)
 - Alternating in situ operating pressure
 - Nominal diameter up to 2000 mm.
- Cranes, construction machinery, industrial vehicles, forestry equipment, injection moulding machines, presses, wind power plants.

Material

Material	Code
Polyurethane	95 AU V142/94 AU 925

Operating conditions

Material	95 V142/94 AU 925
	Temperature range in °C
Hydraulic oils HL, HLP	-30 ... +110
HFA fluids	+5 ... +50
HFB fluids	+5 ... +50
HFC fluids	-30 ... +40
HFD fluids	-
Water	+5 ... +40
HETG (rapeseed oil)	-30 ... +60
HEES (synthetic ester)	-30 ... +80
HEPG (glycol)	-30 ... +50
Mineral greases	-30 ... +110
Pressure p in MPa	60

The specified values are maximum values and must not be applied simultaneously.

Surface quality

Surface roughness	R _a	R _{max}
Sliding surface	0,8 µm	3,2 µm
Groove base	1,6 µm	6,3 µm
Groove flanks	6,3 µm	20 µm
Lead-in chamfer*	0,8 µm	3,2 µm

* burr-free transition

Design notes

Please observe our general design notes in → Technical Manual.

Tolerance recommendation

For pressures up to 60 MPa

Nominal Ø d	Borehole	Shaft
≤800	H7	f7
>800	+0,0 +0,1	-0,05 -0,15

Fitting & installation

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

Mode of operation

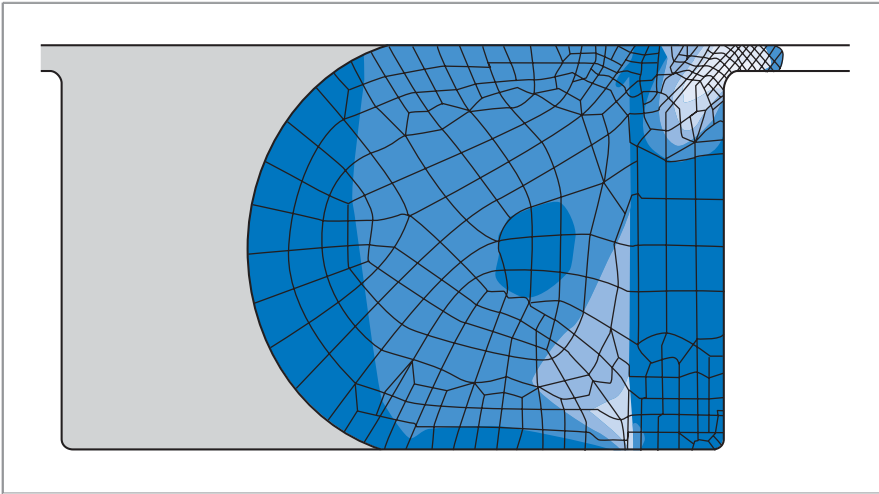


Fig. 2 O-ring with PTFE back-up ring at 40 MPa operating pressure

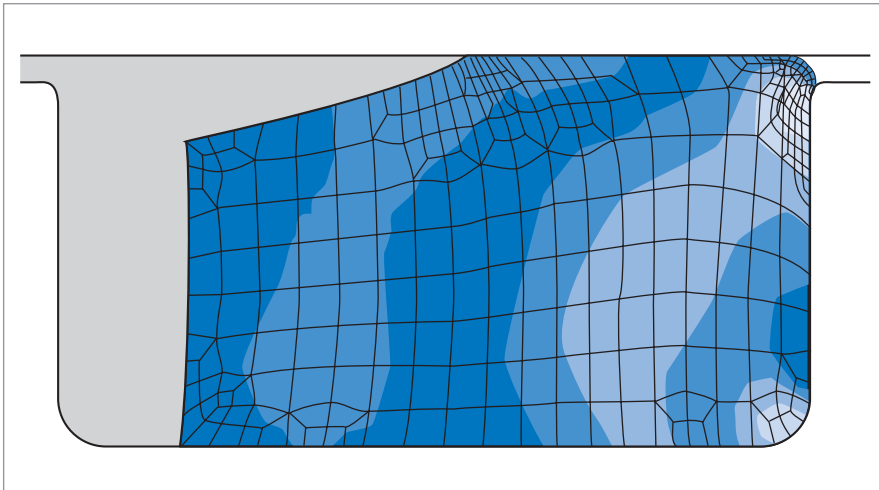
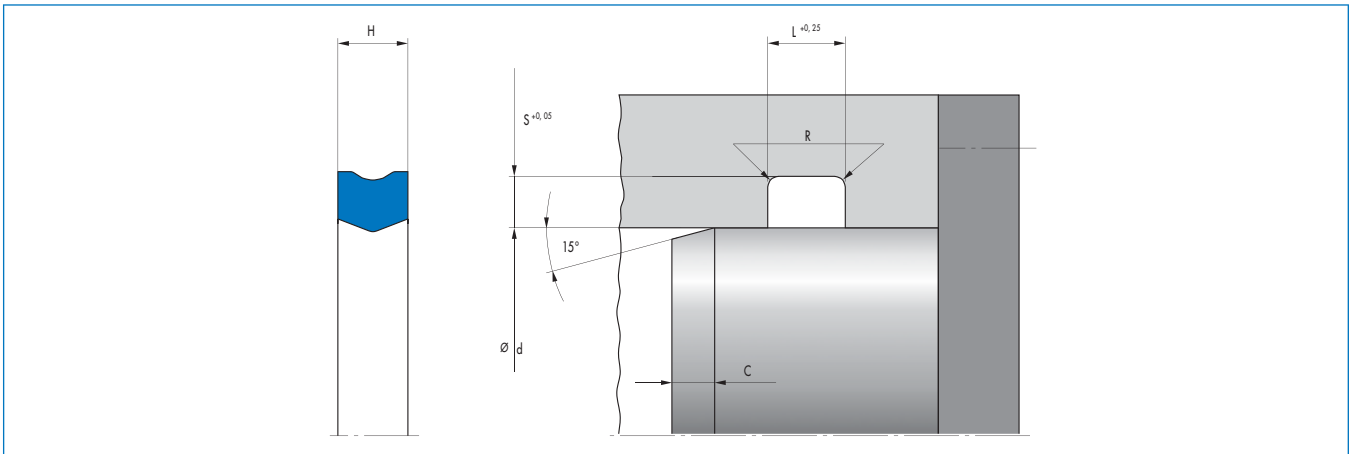


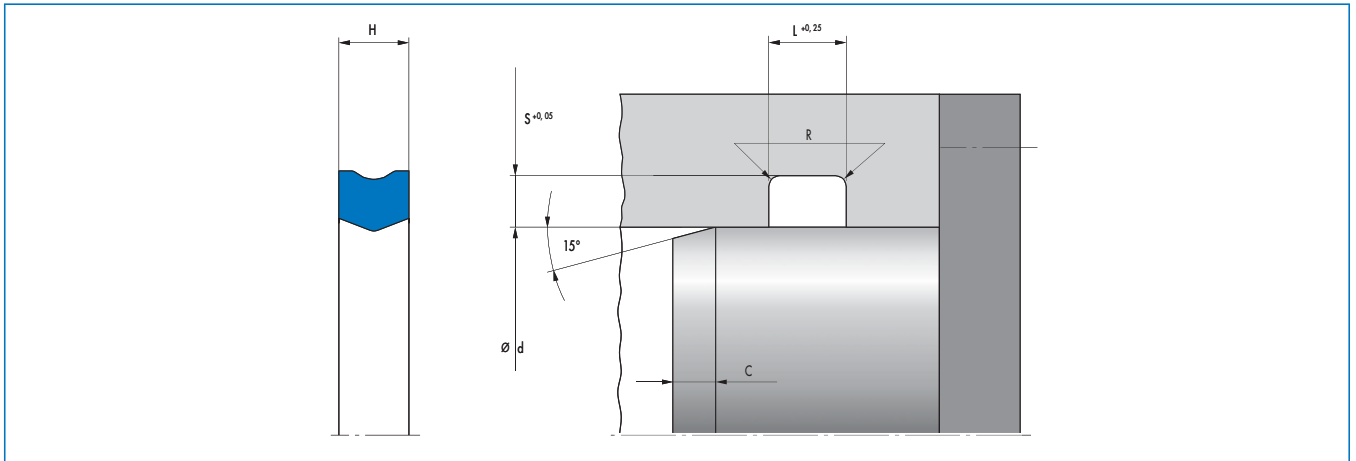
Fig. 3 Cover Seal at 40 MPa operating pressure

Article list



d	D	Profile	H	L	C	ISC O-Ring	Material	Article No.	
16	21	2,5	4,2	5	3	3	95 AU V142	24359080	●
16	22	3	4,3	5	3		95 AU V142	24287685	○
20	24	2	4,1	4,8	2,5	2,5	95 AU V142	49000714	○
25	29,2	2,1	4,1	5	3	2,62	95 AU V142	49014546	○
25	33	4	5,7	6,5	3,5		95 AU V142	24377325	○
30	34	2	4,1	4,8	2,5	2,5	95 AU V142	49000656	○
35	39,5	2,25	3,8	4,5	3	2,62	95 AU V142	24361201	○
40	46	3	2,4	3	3		95 AU V142	24354007	○
50	58	4	5,6	6,4	3,5		95 AU V142	24362417	○
55	60,4	2,7	5,3	6,2	3		95 AU V142	49000660	○
60	65,5	2,8	4,5	5,2	3		95 AU V142	24368756	●
70	75,6	2,8	5,3	6,2	3	3,53	95 AU V142	49004012	○
80	90	5	9,2	10,5	4,5		95 AU V142	49000500	○
90	110	10	10,8	12,3	8		95 AU V142	49018307	○
105	112,8	3,9	5	5,8	3,5		95 AU V142	24354748	○
110	117	3,5	4	4,7	3		95 AU V142	24367583	○
117	123,1	3,05	4,9	5,8	3,5		93 AU V142	24245387	○
120	140	10	10,8	12,3	8		95 AU V142	49018308	○
136	141,9	2,95	4,9	5,8	3,5		95 AU V142	24250882	○
140	145,9	2,95	4,9	5,8	3,5		95 AU V142	49009024	○
149,7	165,5	7,9	11,1	12,7	6,5		95 AU V142	49006190	○
160	168,6	4,3	7,8	9	4	5,33	95 AU V142	24370625	○
170	176,3	3,15	4,9	5,8	3,5		95 AU V142	24250879	○
180	188,6	4,3	7,8	9	4	5,33	95 AU V142	49002910	○
190	201,6	5,8	10,7	12,3	5		94 AU 925	49003461	○
200	208,6	4,3	7,8	9	4		95 AU V142	533208	○
210	221,6	5,8	10,7	12,3	5	6,99	94 AU 925	24379224	○
250	258,6	4,3	7,8	9	4		95 AU V142	49004491	○
270	278,6	4,3	7,8	9	4		94 AU 925	49016834	○
275	286,6	5,8	10,7	12,3	5		94 AU 925	529839	○
280	320	20	17,9	20	15		94 AU 925	49009097	○
300	311,6	5,8	10,7	12,3	5		95 AU V142	49006854	○
320	333,4	6,7	8,6	10	6		95 AU V142	24369684	○
330	341,6	5,8	10,7	12,3	5		94 AU 925	532554	○
360	371,6	5,8	10,7	12,3	5		94 AU 925	49005757	○

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



d	D	Profile	H	L	C	ISC O-Ring	Material	Article No.	
400	411,6	5,8	10,7	12,3	5		94 AU 925	49014554	○
440	451,6	5,8	10,7	12,3	5		94 AU 925	531798	○
540	553,4	6,7	9,3	10,8	6		94 AU 925	49001311	○
790	803,6	6,8	9,2	10,7	6		94 AU 925	527748	○
840	853,6	6,8	9,2	10,7	6		94 AU 925	527749	○
1120	1137	8,5	14,4	16,3	7		94 AU 925	533599	○
1155	1177,4	11,2	12,4	14	9		94 AU 925	24371571	○
1320	1337	8,5	14,4	16,3	7	10	94 AU 925	49001112	○

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The catalog details are based on the experience of many years of research in the development and production of seals in the Freudenberg Group and correspond to our current level of know-how.

The sealing action of many catalog products is, however, not only created by the component itself. In many cases – depending on the specific application – it depends significantly on the other parameters, such as installation point, counter surface, pressure, operating temperature, media to be sealed, lubrication, effects of vibration and any ingress of dirt from outside. These and other unknown factors in

practical use may noticeably influence the functioning of the seals. Against this background generalised statements on the function of the catalog products are not possible. Details in this catalog merely represent general and non-binding reference values which make no claim to be valid for every application. We therefore recommend you to always discuss specific applications with our consultancy service. In the event of very high and special loads, for example due to aggressive media, the seal should be selected in co-operation with us; trials to check the functional reliability are often indispensable.



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