

# Merkel Cover Seal PU 83

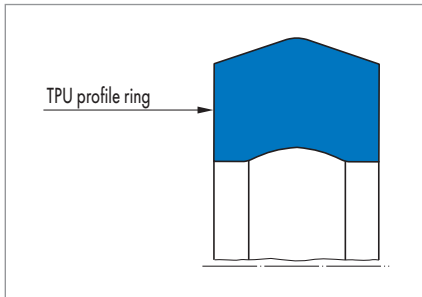


Fig. 1 Merkel Cover Seal PU 83

## Product description

Single-piece, double-acting Merkel compact seal made from low temperature polyurethane for static sealing, outer sealing.

## Product advantages

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

## 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.
- Presses, steel industry, wind power plants, cranes, construction machinery, industrial vehicles, forestry equipment, injection moulding machines.

## 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 esters)	-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 <sub>a</sub>	R <sub>max</sub>
Sliding surface	0,8 µm	3,2 µm
Groove base	1,6 µm	6,3 µm
Groove flanks	6,3 µm	20,0 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

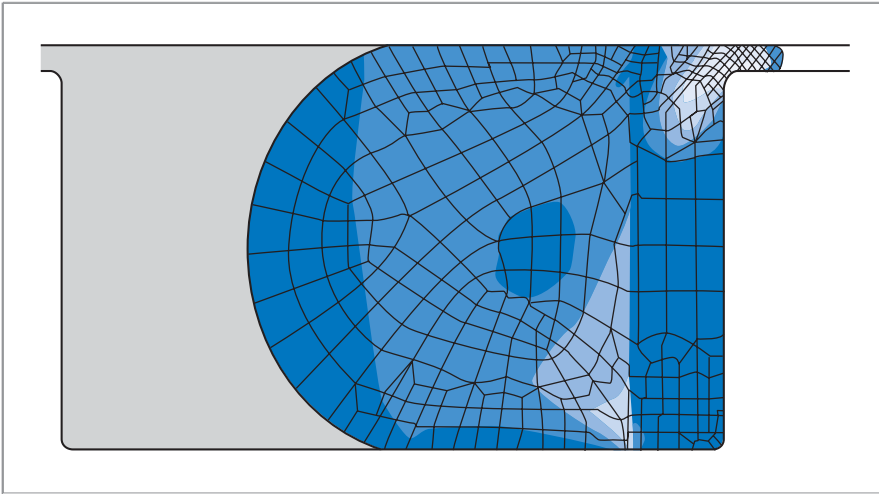


Fig. 2 O-ring with PTFE back-up ring at 40 MPa operating pressure

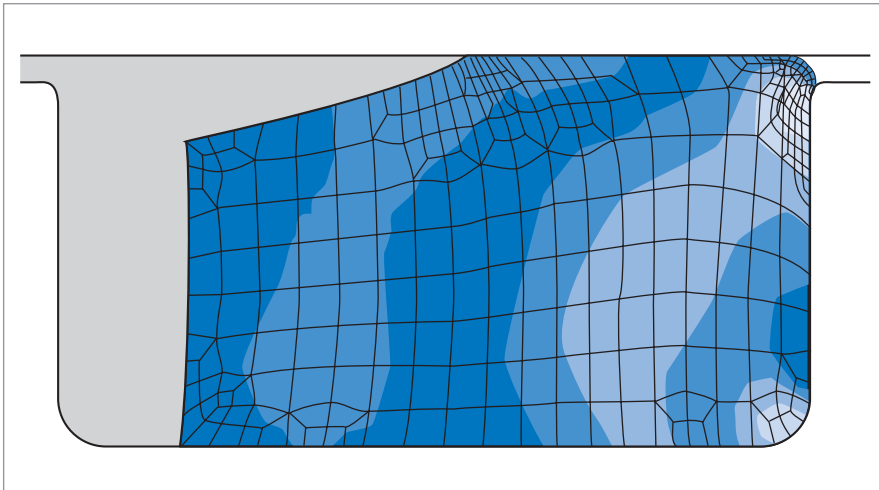
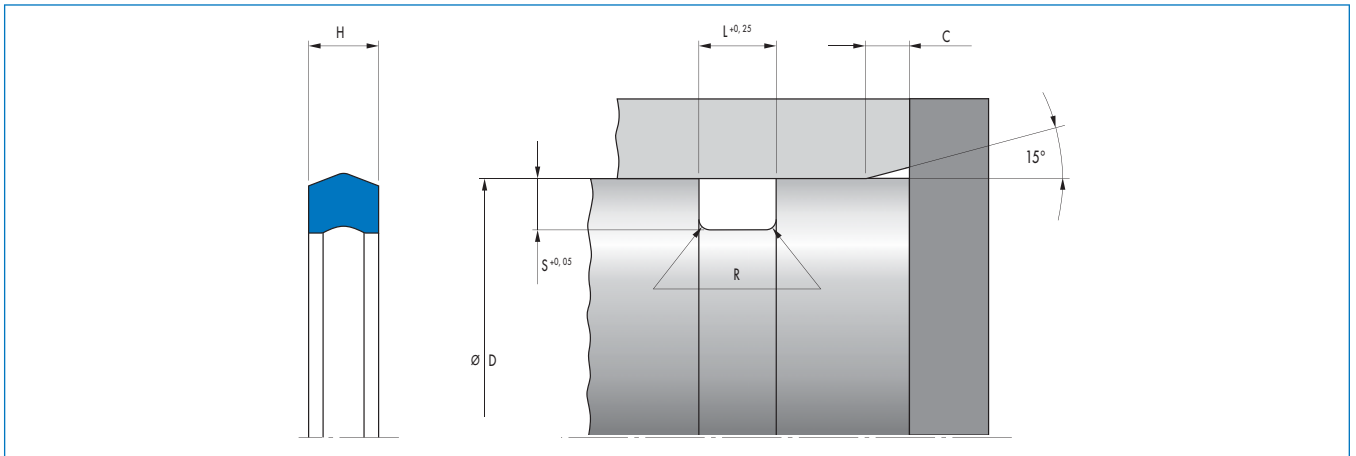


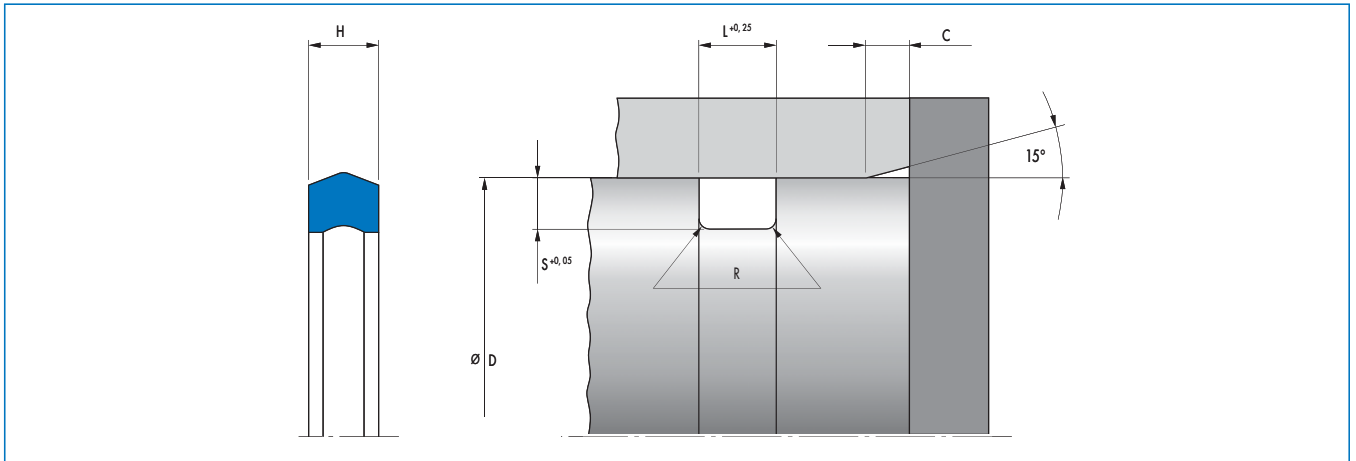
Fig. 3 Cover Seal at 40 MPa operating pressure

Article list



d	D	Profile	H	L	C	ISC O-Ring	Material	Article No.	
32,8	40	3,6	2,8	3,4	3		95 AU V142	24367566	●
42,2	50	3,9	5	5,8	3,5		95 AU V142	24334142	●
44,4	50	2,8	5,3	6,2	3,5	3,53	95 AU V142	532203	○
52,2	60	3,9	5	5,8	3,5		95 AU V142	24327617	●
54	60	3	5,3	6,2	3,5		95 AU V142	49001027	○
54,6	60	2,7	5,5	6,5	3,5		95 AU V142	24380802	●
57,2	65	3,9	5	5,8	3,5		95 AU V142	24327636	●
64,4	70	2,8	5,2	6,2	3,5	3,53	95 AU V142	532201	○
69,6	75	2,7	5,5	6,5	3,5		95 AU V142	24380803	●
73,2	81	3,9	5	5,8	3,5		95 AU V142	24295885	●
80,8	85	2,1	4,2	5	2,5	2,62	95 AU V142	24269861	○
80,1	90	5	6,7	7,8	4		95 AU V142	24362668	●
86,4	95	4,3	7,8	9	4	5,33	94 AU 925	49018330	○
87,7	95,5	3,9	5	5,8	3,5		95 AU V142	24293063	○
90	100	5	7,3	7,8	4		95 AU V142	24362292	●
91,4	100	4,3	7,8	9	4	5,33	95 AU V142	24379356	○
94,4	100	2,8	5,2	6,2	3,5	3,53	95 AU V142	532202	○
95,1	105	5	6,7	7,8	4		95 AU V142	24359847	●
101,4	110	4,3	7,8	9	4	5,33	95 AU V142	24380871	○
105,1	115	5	6,7	7,8	4		95 AU V142	24355287	●
115,6	122	3,2	5,7	6,8	4	4	95 AU V142	49001025	○
115,1	125	5	6,7	7,8	4		95 AU V142	24355288	●
116,4	125	4,3	7,8	9	4	5,33	95 AU V142	24379551	○
120,8	130	4,6	4,2	5	4		95 AU V142	24311962	○
121,4	130	4,3	7,8	9	4	5,33	95 AU V142	528353	○
130,4	140	4,8	6,6	7,7	4		95 AU V142	24362518	○
134,1	140	3	4,9	5,9	3,5		95 AU V142	24245392	●
135	145	5	7,3	8,4	4,5	5,7	95 AU V142	24359031	○
140,4	150	4,8	6,6	7,7	4		95 AU V142	24367348	●
141,9	150	4,1	8	9,2	3,5		95 AU V142	24348854	○
159,2	165	2,9	4,9	5,9	3,5		95 AU V142	24250883	○
170	180	5	7,3	8,4	4,5	5,7	95 AU V142	24378895	○
174,4	180	2,8	5,2	6,2	3,5	3,53	95 AU V142	49001429	○
185,9	192	3,1	4,9	5,9	4		95 AU V142	24250878	○
191,4	200	4,3	7,8	9	4	5,33	95 AU V142	49004492	○
193,9	200	3,1	4,9	5,9	4		95 AU V142	24250880	○

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



d	D	Profile	H	L	C	ISC O-Ring	Material	Article No.	
216,4	225	4,3	7,8	9	4	5,33	95 AU V142	531563	○
228,4	240	5,8	10,7	12,3	5	6,99	95 AU V142	24375294	○
231,4	240	4,3	7,8	9	4	5,33	95 AU V142	24360083	○
236	242	3	4,9	5,9	3,5		95 AU V142	24245390	○
253,4	265	5,8	10,7	12,3	5,5	6,99	95 AU V142	49000175	○
282	288	3	4,9	5,9	4		95 AU V142	24250877	○
463	480	8,5	14,4	16,3	7	10	94 AU 925	49004706	○
643	660	8,5	14,4	16,3	7	10	94 AU 925	49012006	○
715	730	7,5	10,7	12,2	6	8,4	94 AU 925	24360742	○
793	810	8,5	14,4	16,3	7	10	94 AU 925	49015798	○
830	813	8,5	15,6	16,3	7	10	94 AU 925	24361263	○
843	860	8,5	14,4	16,3	7	10	94 AU 925	49015799	○
943	960	8,5	14,4	16,3	7	10	94 AU 925	49012180	○

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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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