

Merkel U-Ring NA 300

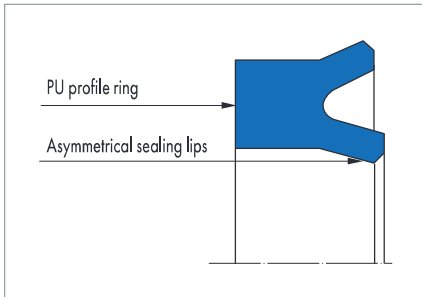


Fig. 1 Merkel U-Ring NA 300

Product description

Merkel U-ring with asymmetrical profile, outer lip set back and press fit at the inside diameter.

Product advantages

Single-acting piston seal for standardised housings, amongst others, according to ISO 5597

- Very good static and dynamic tightness.

Application

Earth moving equipment, support cylinders, presses.

Material

Material	Code	Hardness
Polyurethane	94 AU 925	94 Shore A

Operating conditions

Material	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 ... +40
Mineral greases	-30 ... +110
Pressure p in MPa	40
Running speed v in m/s	0,5

Surface quality

Surface roughness	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_v >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.

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.

Profile	Max. permissible gap dimension			
	16 MPa	26 MPa	32 MPa	40 MPa
4,0 ... 5,0	0,50	0,40	0,35	0,30
>5,0 ... 7,5	0,55	0,45	0,40	0,35
>7,5 ... 11,0	0,66	0,50	0,45	0,40

Tolerance recommendation and dimension d2

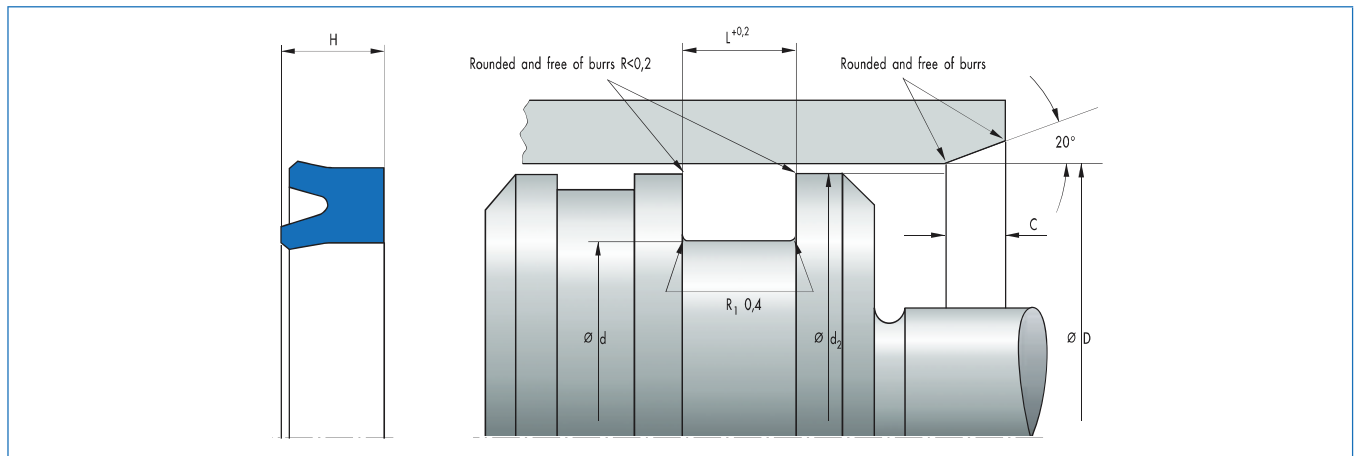
The admissible gap width, tolerances, guide play and deflection of the guide under load are to be taken into account when designing d2. → Technical Manual.

Nominal Ø D	D	d
≤400	H9	h11

Fitting & installation

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

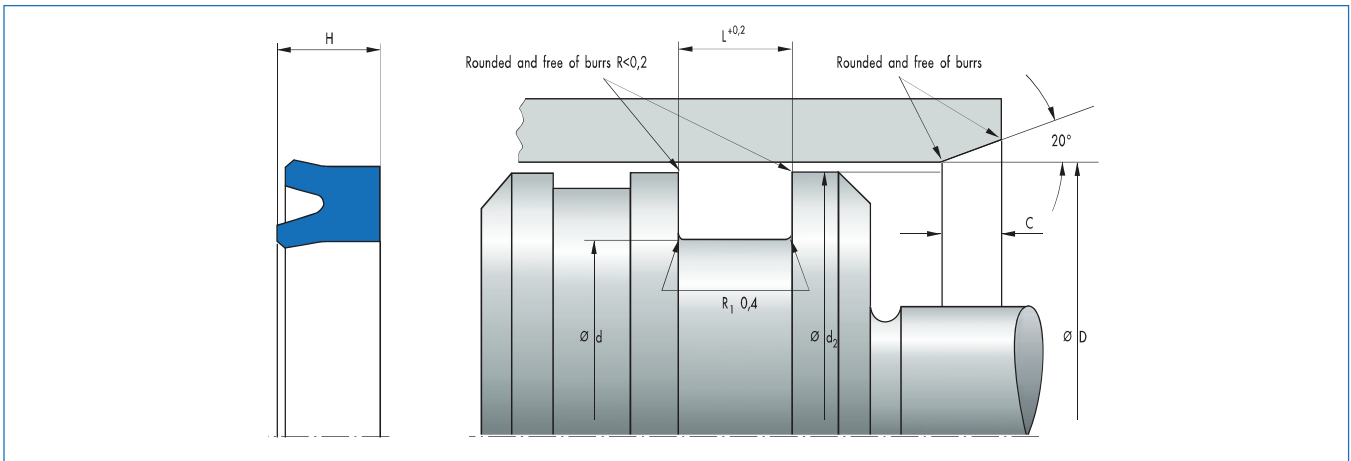
Article list



D	d	H	L	Profile	C	Fitting	Housing	Material	Article No.	
16	6	8	9	5	4			94 AU P00925	21658	B
20	10	8	9	5	4			94 AU P00925	21663	B
22	12	8	9	5	4			94 AU P00925	21668	B
23,5	15	8	9	4,25	4,5			94 AU P00925	322037	D
25	15	8	9	5	4			94 AU P00925	21675	B
30	20	8	9	5	4,5			94 AU P00925	21679	B
32	17	10	11	7,5	5,5			94 AU P00925	21681	B
32	22	10	11	5	4,5			94 AU P00925	21682	B
32	24	5,7	6,7	4	4		ISO	94 AU P00925	401144	B
35	25	7,3	8,3	5	4,5			94 AU P00925	401159	B
38	25	10	11	6,5	5,5			94 AU P00925	401189	D
40	25	10	11	7,5	5,5			94 AU P00925	21691	B
40	30	10	11	5	4,5			94 AU P00925	21692	B
45	30	10	11	7,5	5,5			94 AU P00925	362912	B
48	28	12	13	10	6			94 AU P00925	401210	D
48	35	10	11	6,5	5,5			94 AU P00925	401230	D
50	30	12	13	10	6			94 AU P00925	21701	B
50	35	10	11	7,5	5,5			94 AU P00925	21705	B
50	40	10	11	5	4,5			94 AU P00925	21710	B
55	35	12	13	10	6			94 AU P00925	401253	D
60	40	12	13	10	6			94 AU P00925	21712	B
60	45	10	11	7,5	5,5			94 AU P00925	21713	B
60	50	10	11	5	4,5			94 AU P00925	21718	B
63	43	12	13	10	6			94 AU P00925	21719	D
63	45	12	13	9	6			94 AU P00925	401256	D
63	48	12	13	7,5	5,5		ISO	94 AU P00925	21727	B
63	53	12	13	5	4,5	H		94 AU P00925	21730	B
65	50	10	11	7,5	5,5			94 AU P00925	401260	D
70	50	12	13	10	6			94 AU P00925	21733	B
70	55	12	13	7,5	5,5			94 AU P00925	21735	B
70	60	12	13	5	4,5	H		94 AU P00925	21737	B
75	55	12	13	10	6			94 AU P00925	401254	D
75	60	12	13	7,5	5,5			94 AU P00925	401262	D
80	60	12	13	10	6		ISO	94 AU P00925	21740	B
80	65	12	13	7,5	5,5			94 AU P00925	21763	B

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

Fitting: H = by hand; W = with fitting tool; blank = axially accessible housing



D	d	H	L	Profile	C	Fitting	Housing	Material	Article No.	
80	70	12	13	5	4,5	H		94 AU P00925	21765	B
85	70	12	13	7,5	5,5			94 AU P00925	81715	D
90	65	12	13	12,5	6,5			94 AU P00925	339345	B
90	70	12	13	10	6			94 AU P00925	400522	B
90	75	12	13	7,5	5,5			94 AU P00925	373006	B
95	80	12	13	7,5	5,5			94 AU P00925	401303	B
100	80	12	13	10	6		ISO	94 AU P00925	21771	B
100	85	12	13	7,5	5,5	H	ISO	94 AU P00925	21775	B
110	90	12	13	10	6			94 AU P00925	363173	D
110	95	12	13	7,5	5,5			94 AU P00925	401317	B
115	90	15	16	12,5	6,5			94 AU P00925	389161	D
115	95	15	16	10	6			94 AU P00925	401318	D
120	100	12	13	10	6			94 AU P00925	367812	B
125	95	18	19	15	7,5			94 AU P00925	21778	D
125	100	15	16	12,5	6,5		ISO	94 AU P00925	401339	B
125	105	15	16	10	6		ISO	94 AU P00925	21784	B
130	110	15	16	10	6			94 AU P00925	314121	D
140	120	12	13	10	6			94 AU P00925	401345	D
140	125	15	16	7,5	5,5			94 AU P00925	401346	D
150	120	18	19	15	7,5			94 AU P00925	21788	D
150	130	15	16	10	6	H		94 AU P00925	21790	B
160	130	18	19	15	7,5			94 AU P00925	21793	D
160	140	15	16	10	6	H	ISO	94 AU P00925	21794	B
170	150	15	16	10	6	H		94 AU P00925	21796	B
180	160	15	16	10	6			94 AU P00925	3980	D
200	180	15	16	10	6	H		94 AU P00925	21811	B
220	190	18	19	15	7,5			94 AU P00925	21816	D
360	320	28	29	20	11			94 AU P00925	21843	D
360	330	20	21	15	7,5			94 AU P00925	21845	D
400	360	28	29	20	11		ISO	94 AU P00925	21846	D
400	370	20	21	15	7,5			94 AU P00925	21847	D

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

Fitting: H = by hand; W = with fitting tool; blank = axially accessible housing

