

Merkel U-Ring N 1, AUN 1

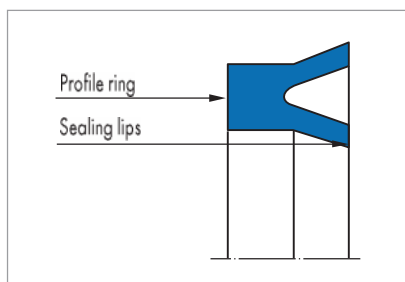


Fig. 1 Merkel U-Ring N 1, AUN 1

Product description

Merkel U-ring with symmetrical profile for rods/pistons.

Product advantages

Single-acting piston or rod seal, preferably for spare parts requirements.

Application

Special cylinders, agricultural machinery, cranes, injection moulding machines, loading platforms, standard cylinders.

Material

N 1

Nitrile rubber	90 NBR 109	94 AU 925

AUN 1

Polyurethane	94 AU 925	94 Shore A

Operating conditions

Hydraulic oils HL, HLP	-30 ... +100	-30 ... +110
HFA fluids	+5 ... +60	+5 ... +50
HFB fluids	+5 ... +60	+5 ... +50
HFC fluids	-30 ... +60	-30 ... +40
HFD fluids	-	-
Water	+5 ... +90	+5 ... +40
HETG (rapeseed oil)	-30 ... +80	-30 ... +60
HEES (synthetic ester)	-	-30 ... +80
HEPG (glycol)	-30 ... +60	-30 ... +40
Mineral greases	-30 ... +100	-30 ... +110
Pressure p in MPa	10 MPa	20 MPa
Running speed v in m/s	0,5	

Surface quality

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 $M_v > 50\%$ to max. 90% at cutting depth $c = R_z/2$ and reference line C ref = 0%.

Design notes

Please observe our general design notes in → Technical Manual.

Gap dimension

The decisive factor for the function of the seal is the largest gap dimension occurring during operation on the non-pressurised side of the seal. → Technical Manual.

N 1 (material 90 NBR 109)

≤5,0	0,45	0,35	0,30	0,25
>5,0	0,50	0,40	0,35	0,30

AUN 1 (material 94 AU 925)

≤5,0	0,55	0,40	0,35	0,25
>5,0	0,66	0,45	0,40	0,30

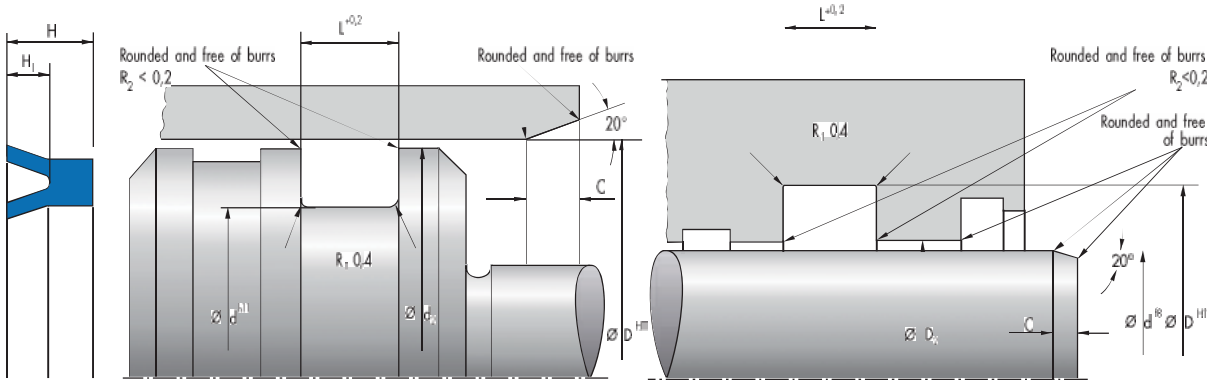
Tolerance recommendation and dimension D2/d2

The admissible gap width, tolerances, guide play and deflection of the guide under load are to be taken into account when designing D2 (rod seal) or d2 (piston seal). → Technical Manual.

Fitting & installation

Careful fitting is a prerequisite for the correct function of the seal. → Technical Manual. Note: the use of male adaptors increases the reliability. Further information is available on enquiry.

Article list



2	10	3,8	1,8	4,5	3,5	N2-1	90 NBR M00109	N 1	15946	●
3	7	5	3,5	6	2	N3-2	90 NBR M00109	N 1	15949	●
3	8,5	4	2	4,7	2	N3-1	90 NBR M00109	N 1	15948	●
4	10	4	2	4,7	2,5	AUN4-11	94 AU P00925	AUN 1	13916	●
4	10	4	2	4,7	2,5	N4-1	90 NBR M00109	N 1	15956	●
4	12	4	2	4,7	3,5	N4-2	90 NBR M00109	N 1	15957	●
5	11	5	2,8	6	2,5	N5-8	90 NBR M00109	N 1	15980	●
5	12	5	2,2	6	3	N5-2	90 NBR M00109	N 1	15974	●
5	12	5	3	6	3	AUN5-12	94 AU P00925	AUN 1	14307	●
5	14	4,5	2,3	5,2	4,5	N5-3	90 NBR M00109	N 1	11657	●
5	15	5	2,5	6	4	N5-6	90 NBR M00109	N 1	15977	●
6	12	4	2	4,7	2,5	N6-9	90 NBR M00109	N 1	15999	●
6	12	6	3,5	7	2,5	AUN6-23	94 AU P00925	AUN 1	14401	●
6	12	6	3,5	7	2,5	N6-15	90 NBR M00109	N 1	16007	●
6	15	5	2,5	6	4,5	N6-11	90 NBR M00109	N 1	16001	●
6	15	8	4	9	4,5	AUN6-17	94 AU P00925	AUN 1	11760	●
6	16	5	2,5	6	4	N6-7	90 NBR M00109	N 1	15996	●
6	18	8	4	9	5	N6-2	90 NBR M00109	N 1	15992	●
6	20	8	4	9	5,5	N6-1	90 NBR M00108	N 1	15991	○
6	22	8	3,5	9	6	N6-10	90 NBR M00109	N 1	16000	○
7	14	3,5	1,75	4	3	N7-2	90 NBR M00109	N 1	16020	●
7	15	5	2,5	6	3,5	N7-1	90 NBR M00109	N 1	16019	●
7	15	7	4,5	8	4	AUN7-4	94 AU P00925	AUN 1	13626	●
8	14	4	2	4,7	2,5	N8-12	90 NBR M00109	N 1	16039	●
8	14	6	3	7	2,5	AUN8-31	94 AU P00925	AUN 1	11768	●
8	14	6	3	7	2,5	N8-6	90 NBR M00109	N 1	16033	●
8	15	6	3,8	7	3	N8-2	90 NBR M00109	N 1	16030	●
8	16	4	2	4,7	3,5	N8-13	90 NBR M00109	N 1	16040	●
8	16	6	3	7	3,5	N8-1	90 NBR M00109	N 1	16029	●
8	16	6	3,5	7	4	AUN8-21	94 AU P00925	AUN 1	11766	●
8	17	6	3	7	4,5	N8-17	90 NBR M00109	N 1	16044	●
8	18	8	4,5	9	4,5	N8-15	90 NBR M00109	N 1	16042	●
8	22	8	4	9	5,5	AUN8-20	94 AU P00925	AUN 1	14041	○
8	22	8	4	9	5,5	N8-11	90 NBR M00109	N 1	16037	○
8	25	6	2,5	7	6	AUN8-25	94 AU P00925	AUN 1	13630	○

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