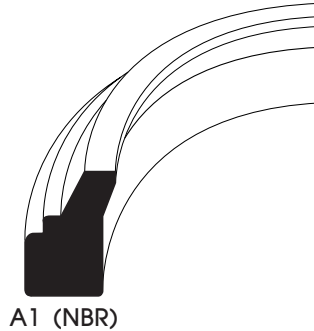


Wipers

A1

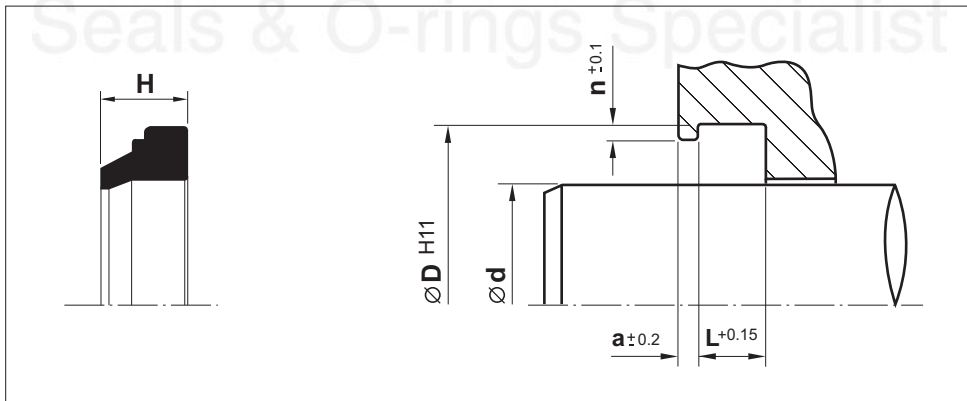
(Metric Size)



Material	Temp. (°c)	Speed (m/s)
NBR	-35 +100	2

- Simple groove design.
- Very good scraping effect.
- Simple installation.
- Oversized diameters ensure a tight fit in the groove.

Installation Recommendation



Surface roughness	Ra	Rt
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Sliding surface	≤ 0.3 µm	≤ 4 µm
Surface of housing	≤ 1.8 µm	≤ 10 µm
Sides of housing	≤ 3.0 µm	≤ 16 µm

Wiper - A1

(Metric Size)

Rod Dia.	Groove Dia.	Groove Width.	Seal Height	Distance		Prefix No.	Reference (For order processing)
				a	n		
4.0	12.0	4.0	7.0	1.0	1.0	0015	A1 004-012-4/7
5.0	8.0	2.2	4.0	1.0	0.5	0025	A1 005-008-2.2/4
6.0	10.0	2.2	4.0	1.0	0.5	0035	A1 006-010-2.2/4
8.0	14.0	2.6	5.0	1.0	1.0	0042	A1 008-014-2.6/5
8.0	16.0	4.0	7.0	1.0	1.0	0045	A1 008-016-4/7
10.0	16.0	2.6	5.0	1.0	1.0	1002	A1 010-016-2.6/5
10.0	18.0	4.0	7.0	1.0	1.0	1005	A1 010-018-4/7
12.0	18.0	2.6	5.0	1.0	1.0	1009	A1 012-018-2.6/5
12.0	20.0	4.0	7.0	1.0	1.0	1010	A1 012-020-4/7
14.0	20.0	3.1	5.0	1.0	1.0	1014	A1 014-020-3.1/5
14.0	22.0	4.0	7.0	1.0	1.0	1015	A1 014-022-4/7
15.0	23.0	4.0	7.0	1.0	1.0	1020	A1 015-023-4/7
16.0	22.0	3.1	5.0	1.0	1.0	1016	A1 016-022-3.1/5
16.0	24.0	4.0	7.0	1.0	1.0	1025	A1 016-024-4/7
17.0	25.0	4.0	7.0	1.0	1.0	1030	A1 017-025-4/7
18.0	24.0	3.1	5.0	1.0	1.0	1034	A1 018-024-3.1/5
18.0	26.0	4.0	7.0	1.0	1.0	1035	A1 018-026-4/7
20.0	26.0	3.1	5.0	1.0	1.0	2026	A1 020-026-3.1/5
20.0	28.0	4.0	7.0	1.0	1.0	2005	A1 020-028-4/7
22.0	30.0	4.0	7.0	1.0	1.0	2010	A1 022-030-4/7
23.0	31.0	4.0	7.0	1.0	1.0	2015	A1 023-031-4/7
24.0	32.0	4.0	7.0	1.0	1.0	2020	A1 024-032-4/7
25.0	33.0	4.0	7.0	1.0	1.0	2025	A1 025-033-4/7
26.0	34.0	4.0	7.0	1.0	1.0	2030	A1 026-034-4/7
28.0	36.0	4.0	7.0	1.0	1.0	2035	A1 028-036-4/7
30.0	38.0	4.0	7.0	1.0	1.0	3005	A1 030-038-4/7
32.0	40.0	4.0	7.0	1.0	1.0	3010	A1 032-040-4/7
33.0	41.0	4.0	7.0	1.0	1.0	3015	A1 033-041-4/7
34.0	42.0	4.0	7.0	1.0	1.0	3020	A1 034-042-4/7
35.0	43.0	4.0	7.0	1.0	1.0	3025	A1 035-043-4/7
36.0	44.0	4.0	7.0	1.0	1.0	3030	A1 036-044-4/7
38.0	46.0	4.0	7.0	1.0	1.0	3035	A1 038-046-4/7
40.0	48.0	4.0	7.0	1.0	1.0	4005	A1 040-048-4/7
41.0	49.0	4.0	7.0	1.0	1.0	4010	A1 041-049-4/7
42.0	50.0	4.0	7.0	1.0	1.0	4015	A1 042-050-4/7
44.0	52.0	4.0	7.0	1.0	1.0	4025	A1 044-052-4/7
45.0	53.0	4.0	7.0	1.0	1.0	4030	A1 045-053-4/7
45.0	57.0	5.5	10.0	1.5	1.5	4035	A1 045-057-5.5/10
46.0	54.0	4.0	7.0	1.0	1.0	4040	A1 046-054-4/7
47.0	55.0	4.0	7.0	1.0	1.0	4045	A1 047-055-4/7
48.0	56.0	4.0	7.0	1.0	1.0	4050	A1 048-056-4/7
50.0	58.0	4.0	7.0	1.0	1.0	5005	A1 050-058-4/7
50.0	62.0	5.5	10.0	1.5	1.5	5010	A1 050-062-5.5/10
51.0	59.0	4.0	7.0	1.0	1.0	5015	A1 051-059-4/7
52.0	60.0	4.0	7.0	1.0	1.0	5020	A1 052-060-4/7

Wiper - A1

(Metric Size)

Rod Dia.	Groove Dia.	Groove Width.	Seal Height	Distance		Prefix No.	Reference (For order processing)
				a	n		
54.0	62.0	4.0	7.0	1.0	1.0	5030	A1 054-062-4/7
55.0	63.0	4.0	7.0	1.0	1.0	5035	A1 055-063-4/7
56.0	64.0	4.0	7.0	1.0	1.0	5040	A1 056-064-4/7
57.0	65.0	4.0	7.0	1.0	1.0	5042	A1 057-065-4/7
58.0	66.0	4.0	7.0	1.0	1.0	5045	A1 058-066-4/7
60.0	68.0	4.0	7.0	1.0	1.0	6005	A1 060-068-4/7
60.0	72.0	5.5	10.0	1.5	1.5	6010	A1 060-072-5.5/10
62.0	70.0	4.0	7.0	1.0	1.0	6015	A1 062-070-4/7
63.0	71.0	4.0	7.0	1.0	1.0	6020	A1 063-071-4/7
64.0	72.0	4.0	7.0	1.0	1.0	6025	A1 064-072-4/7
65.0	73.0	4.0	7.0	1.0	1.0	6030	A1 065-073-4/7
66.0	74.0	4.0	7.0	1.0	1.0	6035	A1 066-074-4/7
67.0	75.0	4.0	7.0	1.0	1.0	6040	A1 067-075-4/7
68.0	76.0	4.0	7.0	1.0	1.0	6045	A1 068-076-4/7
70.0	78.0	4.0	7.0	1.0	1.0	7005	A1 070-078-4/7
70.0	82.0	5.5	10.0	1.5	1.5	7008	A1 070-082-5.5/10
72.0	80.0	4.0	7.0	1.0	1.0	7015	A1 072-080-4/7
73.0	81.0	4.0	7.0	1.0	1.0	7018	A1 073-081-4/7
75.0	83.0	4.0	7.0	1.0	1.0	7025	A1 075-083-4/7
78.0	86.0	4.0	7.0	1.0	1.0	7040	A1 078-086-4/7
80.0	88.0	4.0	7.0	1.0	1.0	8002	A1 080-088-4/7
80.0	92.0	5.5	10.0	1.5	1.5	8003	A1 080-092-5.5/10
82.0	90.0	4.0	7.0	1.0	1.0	8010	A1 082-090-4/7
83.0	91.0	4.0	7.0	1.0	1.0	8015	A1 083-091-4/7
85.0	93.0	4.0	7.0	1.0	1.0	8025	A1 085-093-4/7
86.0	94.0	4.0	7.0	1.0	1.0	8030	A1 086-094-4/7
88.0	96.0	4.0	7.0	1.0	1.0	8040	A1 088-096-4/7
90.0	98.0	4.0	7.0	1.0	1.0	9005	A1 090-098-4/7
92.0	100.0	4.0	7.0	1.0	1.0	9015	A1 092-100-4/7
93.0	101.0	4.0	7.0	1.0	1.0	9020	A1 093-101-4/7
95.0	103.0	4.0	7.0	1.0	1.0	9030	A1 095-103-4/7
97.0	105.0	4.0	7.0	1.0	1.0	9045	A1 097-105-4/7
100.0	108.0	4.0	7.0	1.0	1.0	A010	A1 100-108-4/7
102.0	114.0	5.5	10.0	1.5	1.5	A020	A1 102-114-5.5/10
105.0	117.0	5.5	10.0	1.5	1.5	A035	A1 105-117-5.5/10
106.0	118.0	5.5	10.0	1.5	1.5	A040	A1 106-118-5.5/10
110.0	118.0	4.0	7.0	1.0	1.0	B005	A1 110-118-4/7
110.0	122.0	5.5	10.0	1.5	1.5	B010	A1 110-122-5.5/10
112.0	124.0	5.5	10.0	1.5	1.5	B020	A1 112-124-5.5/10
113.0	121.0	4.0	7.0	1.0	1.0	B024	A1 113-121-4/7
114.0	122.0	4.0	7.0	1.0	1.0	B028	A1 114-122-4/7
115.0	127.0	5.5	10.0	1.5	1.5	B035	A1 115-127-5.5/10
118.0	130.0	5.5	10.0	1.5	1.5	B050	A1 118-130-5.5/10
120.0	132.0	5.5	10.0	1.5	1.5	C010	A1 120-132-5.5/10
125.0	137.0	5.5	10.0	1.5	1.5	C020	A1 125-137-5.5/10

Wiper - A1

(Metric Size)

Rod Dia.	Groove Dia.	Groove Width.	Seal Height	Distance		Prefix No.	Reference (For order processing)
				a	n		
128.0	140.0	5.5	10.0	1.5	1.5	C035	A1 128-140-5.5/10
130.0	142.0	5.5	10.0	1.5	1.5	D010	A1 130-142-5.5/10
131.0	139.0	4.0	7.0	1.0	1.0	D015	A1 131-139-4/7
135.0	147.0	5.5	10.0	1.5	1.5	D025	A1 135-147-5.5/10
140.0	152.0	5.5	10.0	1.5	1.5	E010	A1 140-152-5.5/10
142.0	154.0	5.5	10.0	1.5	1.5	E020	A1 142-154-5.5/10
145.0	157.0	5.5	10.0	1.5	1.5	E035	A1 145-157-5.5/10
149.0	157.0	4.0	7.0	1.0	1.0	E090	A1 149-157-4/7
150.0	162.0	5.5	10.0	1.5	1.5	F005	A1 150-162-5.5/10
152.0	164.0	5.5	10.0	1.5	1.5	F015	A1 152-164-5.5/10
155.0	167.0	5.5	10.0	1.5	1.5	F030	A1 155-167-5.5/10
160.0	172.0	5.5	10.0	1.5	1.5	G010	A1 160-172-5.5/10
165.0	177.0	5.5	10.0	1.5	1.5	G025	A1 165-177-5.5/10
166.0	178.0	5.5	10.0	1.5	1.5	G030	A1 166-178-5.5/10
168.0	176.0	4.0	7.0	1.0	1.0	G060	A1 168-176-4/7
170.0	182.0	5.5	10.0	1.5	1.5	H010	A1 170-182-5.5/10
175.0	187.0	5.5	10.0	1.5	1.5	H025	A1 175-187-5.5/10
180.0	192.0	5.5	10.0	1.5	1.5	J010	A1 180-192-5.5/10
185.0	197.0	5.5	10.0	1.5	1.5	J050	A1 185-197-5.5/10
190.0	202.0	5.5	10.0	1.5	1.5	K015	A1 190-202-5.5/10
195.0	207.0	5.5	10.0	1.5	1.5	K030	A1 195-207-5.5/10
200.0	212.0	5.5	10.0	1.5	1.5	L003	A1 200-212-5.5/10
210.0	218.0	4.0	7.0	1.0	1.0	L009	A1 210-218-4/7
210.0	225.0	6.5	13.0	2.0	2.0	L010	A1 210-225-6.5/13
220.0	235.0	6.5	13.0	2.0	2.0	M010	A1 220-235-6.5/13
230.0	245.0	6.5	13.0	2.0	2.0	M016	A1 230-245-6.5/13
235.0	250.0	6.5	13.0	2.0	2.0	M020	A1 235-250-6.5/13
240.0	255.0	6.5	13.0	2.0	2.0	N015	A1 240-255-6.5/13
250.0	265.0	6.5	13.0	2.0	2.0	N040	A1 250-265-6.5/13
260.0	275.0	6.5	13.0	2.0	2.0	O005	A1 260-275-6.5/13
265.0	280.0	6.5	13.0	2.0	2.0	O030	A1 265-280-6.5/13
275.0	290.0	6.5	13.0	2.0	2.0	O075	A1 275-290-6.5/13
300.0	315.0	6.5	13.0	2.0	2.0	Q010	A1 300-315-6.5/13
305.0	320.0	6.5	13.0	2.0	2.0	Q015	A1 305-320-6.5/13
310.0	325.0	6.5	13.0	2.0	2.0	Q020	A1 310-325-6.5/13
315.0	330.0	6.5	13.0	2.0	2.0	Q025	A1 315-330-6.5/13
320.0	335.0	6.5	13.0	2.0	2.0	Q030	A1 320-335-6.5/13
325.0	340.0	6.5	13.0	2.0	2.0	Q032	A1 325-340-6.5/13
340.0	355.0	6.5	13.0	2.0	2.0	Q035	A1 340-355-6.5/13
365.0	380.0	6.5	13.0	2.0	2.0	Q050	A1 365-380-6.5/13
400.0	415.0	6.5	13.0	2.0	2.0	R020	A1 400-415-6.5/13
450.0	465.0	6.5	13.0	2.0	2.0	R015	A1 450-465-6.5/13
500.0	515.0	6.5	13.0	2.0	2.0	S015	A1 500-515-6.5/13