

Simmerring BABSL to DIN 3760 AS (Classical Pressure Seal)

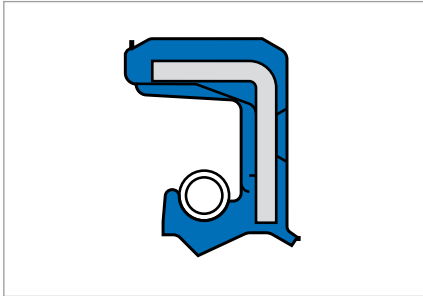


Fig. 1 Simmerring BABSL NBR/FKM

Material

Acrylonitrile-butadiene rubber

Code	72 NBR 902
Colour	Blue
Hardness	75 Shore A

Fluoro elastomer

Code	75 FKM 595
Colour	Red brown
Hardness	75 Shore A

Metal insert	Unalloyed steel DIN EN 10027-1
Spring	Spring steel DIN EN 10270-1

Product description

- Outer casing: elastomer
- Short, flexible, spring-loaded sealing lip
- Additional dust lip.

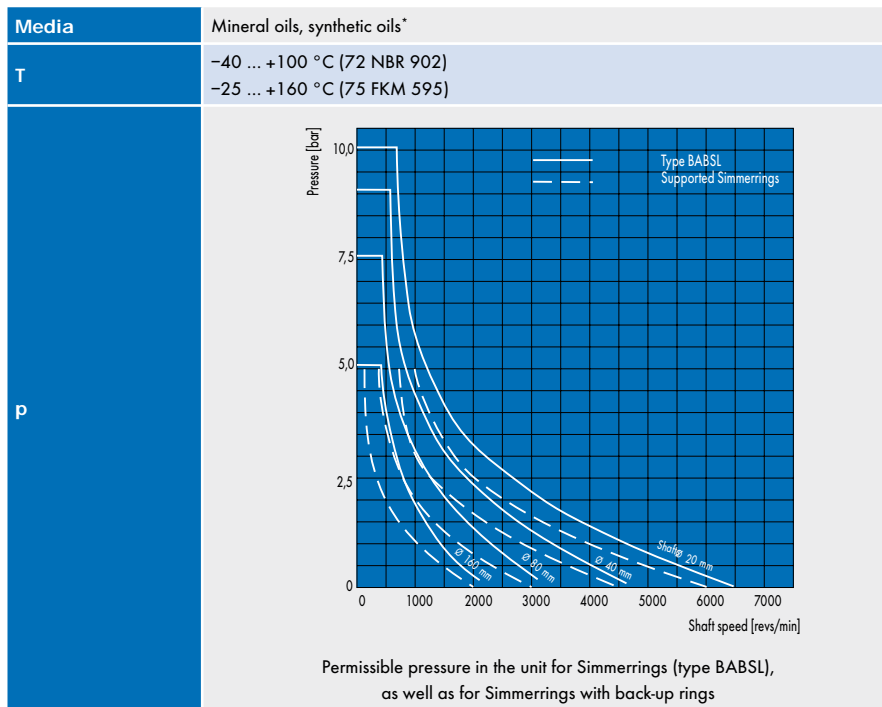
Product advantages

- Used preferably in pressurised units
- Reliable sealing of the housing bore, even with increased roughness of the bore, thermal expansion and split housings
- Advantages when sealing low viscosity and gaseous media
- Increased thermal stability and chemical resistance when 75 FKM 595 is used
- Additional dust lip as additional seal against moderate to medium dust and dirt ingress from outside
- Small axial dimensions (Note: can lead to temperature increase from frictional heat).

Application

- Hydrostatic drives (pumps, engines of all kinds)
- 2-stroke engines.

Operating conditions



* With synthetic oils (polyalkylene glycols/polyalphaolefins, → Technical Manual synthetic lubricants) it is to be noted that the maximum operating temperature of 80 °C must not be exceeded (only for use of NBR).

Max. permissible values depend on the other operating conditions.

Fitting & installation

Shaft

Tolerance	ISO h 11
Runout	IT 8
Roughness	$R_a = 0,2 \dots 0,4 \mu\text{m}$
	$R_z = 1,0 \dots 3,0 \mu\text{m}$
	$R_{max} = <6,3 \mu\text{m}$
Hardness	45 ... 60 HRC
Finish	No lead; preferably plunge ground

Housing bore

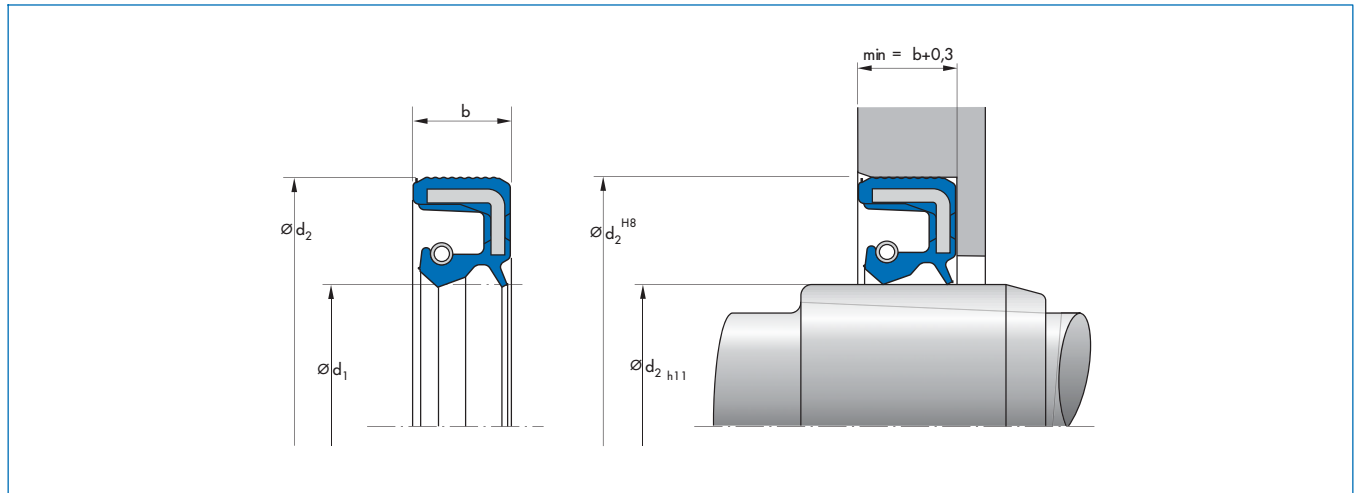
Tolerance	ISO H8
Roughness	$R_z = 10 \dots 25 \mu\text{m}$

Careful fitting according to DIN 3760 is a prerequisite for the correct function of the seal → Technical Manual.

Range of dimensions for shafts-Ø d₁

Simmerring BABSLS (NBR)	8 ... 340 mm
Simmerring BABSLS (FKMZ)	8 ... 170 mm

Article list

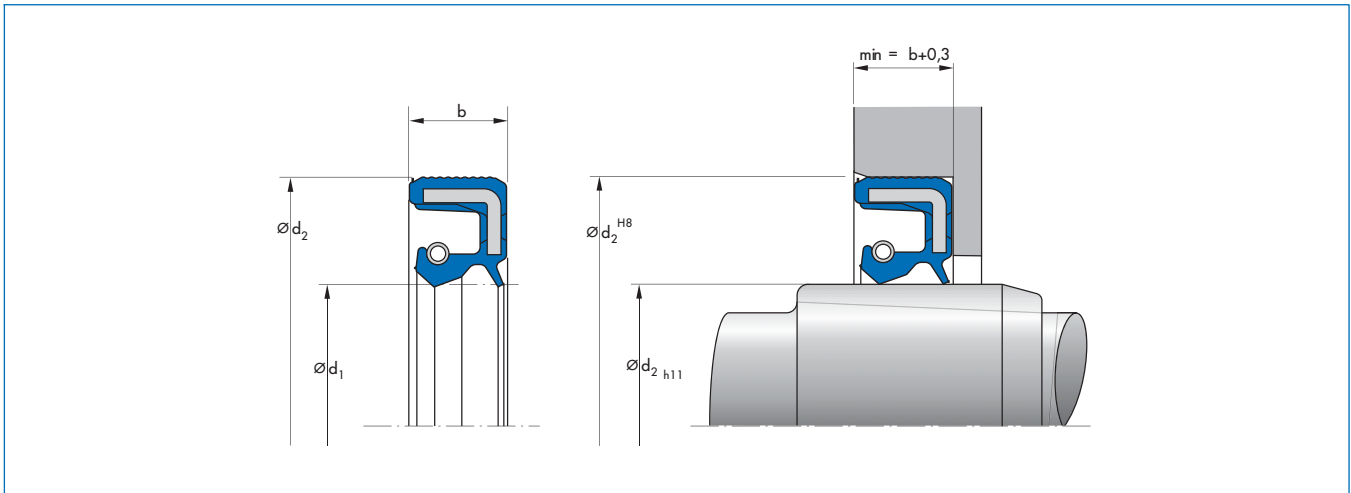


d_1	d_2	b	DIN 3761	Outer surface	Pressure	Material	Article No.	
8	22	6	AS	smooth	→ Diagram	72 NBR 902	462581	●
8	22	6	AS	smooth	→ Diagram	75 FKM 595	12019990	●
9	20	6	AS	smooth	→ Diagram	72 NBR 902	80489	●
10	22	6	AS	smooth	→ Diagram	72 NBR 902	2891	●
10	22	6	AS	smooth	→ Diagram	75 FKM 595	418583	●
11	22	7	AS	smooth	→ Diagram	72 NBR 902	12011513	●
12	22	6	AS	smooth	→ Diagram	75 FKM 595	418598	●
12	22	6	AS	smooth	→ Diagram	72 NBR 902	531222	●
12	24	6	AS	smooth	→ Diagram	75 FKM 595	325246	●
12	24	6	AS	smooth	→ Diagram	72 NBR 902	7100620	●
12	24	7	AS	smooth	→ Diagram	72 NBR 902	12011515	●
12	32	7	AS	smooth	→ Diagram	72 NBR 902	62027	●
14	24	7	AS	smooth	→ Diagram	72 NBR 902	12011516	●
14	24	7	AS	smooth	→ Diagram	75 FKM 595	12013186	●
15	25	6	AS	smooth	→ Diagram	72 NBR 902	326153	●
15	25	6	AS	smooth	→ Diagram	75 FKM 595	433218	●
15	30	7	AS	smooth	→ Diagram	72 NBR 902	141150	●
15	30	7	AS	smooth	→ Diagram	75 FKM 595	523036	●
15	32	7	AS	smooth	→ Diagram	72 NBR 902	322185	●
15	35	6	AS	smooth	→ Diagram	72 NBR 902	2953	●
15	35	6	AS	smooth	→ Diagram	75 FKM 595	346627	●
16	26	7	AS	smooth	→ Diagram	72 NBR 902	462890	●
16	40	10	AS	smooth	→ Diagram	75 FKM 595	423803	●
17	30	6	AS	smooth	→ Diagram	75 FKM 595	12013032	●
17	30	6	AS	smooth	→ Diagram	72 NBR 902	12015495	●
17	35	7	AS	smooth	→ Diagram	72 NBR 902	12011728	●
18	30	6	AS	smooth	→ Diagram	75 FKM 595	116021	●
18	30	6	AS	smooth	→ Diagram	72 NBR 902	478785	●
18	30	7	AS	smooth	→ Diagram	72 NBR 902	12011517	●
18	32	6	AS	smooth	→ Diagram	72 NBR 902	12001667	●
18	35	6	AS	smooth	→ Diagram	72 NBR 902	2957	●
18	35	6	AS	smooth	→ Diagram	75 FKM 595	49009018	●
19	35	6	AS	smooth	→ Diagram	75 FKM 595	466758	●
19,05	31,75	6,35	AS	smooth	→ Diagram	72 NBR 902	311089	●
20	30	7	AS	smooth	→ Diagram	72 NBR 902	12020180	●

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d ₁	d ₂	b	DIN 3761	Outer surface	Pressure	Material	Article No.	
20	32	6	AS	smooth	→ Diagram	75 FKM 595	520073	●
20	32	7	AS	smooth	→ Diagram	72 NBR 902	49017151	●
20	35	6	AS	smooth	→ Diagram	72 NBR 902	2959	●
20	35	6	AS	smooth	→ Diagram	75 FKM 595	468087	○
20	35	6	AS	smooth	→ Diagram	75 FKM 595	49030261	●
20	40	7	AS	smooth	→ Diagram	75 FKM 595	432903	●
20	40	7	AS	smooth	→ Diagram	72 NBR 902	49001289	●
22	32	6	AS	smooth	→ Diagram	72 NBR 902	2966	●
22	32	6	AS	smooth	→ Diagram	75 FKM 595	418603	●
22	35	6	AS	smooth	→ Diagram	72 NBR 902	2968	●
22	35	6	AS	smooth	→ Diagram	75 FKM 595	348896	●
22	40	7	AS	smooth	→ Diagram	75 FKM 595	49028556	○
24	40	7	AS	smooth	→ Diagram	72 NBR 902	432530	●
25	35	6	AS	smooth	→ Diagram	72 NBR 902	2990	●
25	35	6	AS	smooth	→ Diagram	75 FKM 595	342369	●
25	36	6	AS	smooth	→ Diagram	72 NBR 902	527283	●
25	37	6	AS	smooth	→ Diagram	75 FKM 595	520074	●
25	37	6	AS	smooth	→ Diagram	72 NBR 902	49009338	●
25	40	7	AS	smooth	→ Diagram	72 NBR 902	307424	●
25	40	7	AS	smooth	→ Diagram	75 FKM 595	366923	●
25	42	6	AS	smooth	→ Diagram	75 FKM 595	523934	●
25	42	6	AS	smooth	→ Diagram	72 NBR 902	12001675	●
25	47	6	AS	smooth	→ Diagram	72 NBR 902	2991	●
25	47	6	AS	smooth	→ Diagram	75 FKM 595	418622	●
25,4	38,1	6,35	AS	smooth	→ Diagram	72 NBR 902	427899	○
26	40	6	AS	smooth	→ Diagram	75 FKM 595	426478	●
26	42	7	AS	smooth	→ Diagram	75 FKM 595	49021064	●
27	39	6	AS	smooth	→ Diagram	75 FKM 595	49012698	○
28	40	6	AS	smooth	→ Diagram	72 NBR 902	338223	●
28	40	6	AS	smooth	→ Diagram	75 FKM 595	339414	●
28	40	7	AS	smooth	→ Diagram	72 NBR 902	523549	●
28	40	8	AS	smooth	→ Diagram	75 FKM 595	404676	●
28	40	8	AS	smooth	→ Diagram	72 NBR 902	432619	●
28	40	9	AS	smooth	→ Diagram	72 NBR 902	68078	●
30	42	6	AS	smooth	→ Diagram	72 NBR 902	3003	●
30	42	6	AS	smooth	→ Diagram	75 FKM 595	418629	●
30	42	7	AS	smooth	→ Diagram	72 NBR 902	12001682	●
30	50	7	AS	smooth	→ Diagram	72 NBR 902	49019367	●
30	52	7	AS	smooth	→ Diagram	72 NBR 902	396855	●
31,75	44,45	6,35	AS	smooth	→ Diagram	72 NBR 902	81721	●
32	44	8	AS	smooth	→ Diagram	72 NBR 902	69442	●
32	47	6	AS	smooth	→ Diagram	72 NBR 902	910	●
32	47	6	AS	smooth	→ Diagram	75 FKM 595	418674	●
32	47	6	AS	smooth	→ Diagram	75 FKM 595	49033017	●
32	52	6	AS	smooth	→ Diagram	72 NBR 902	345348	●
35	47	6	AS	smooth	→ Diagram	75 FKM 595	418676	●
35	47	6	AS	smooth	→ Diagram	72 NBR 902	12001688	●
35	50	7	AS	smooth	→ Diagram	72 NBR 902	12011521	●
35	52	6	AS	smooth	→ Diagram	72 NBR 902	3004	●
35	52	6	AS	smooth	→ Diagram	75 FKM 595	418688	●

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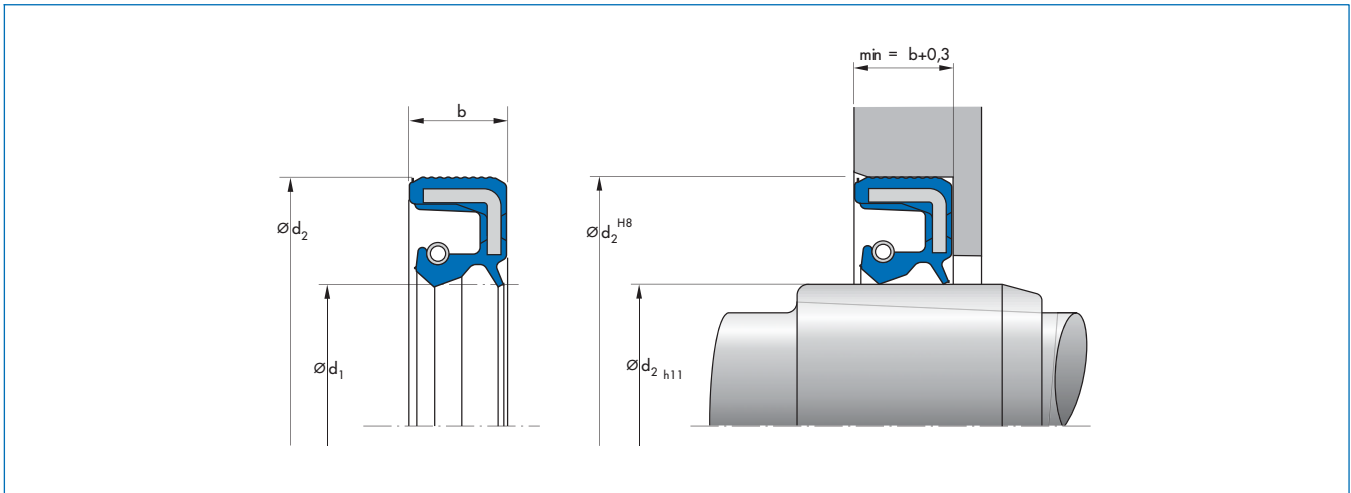


d_1	d_2	b	DIN 3761	Outer surface	Pressure	Material	Article No.	
35	52	6	AS	smooth	→ Diagram	72 NBR 902	436315	○
38	50	6	AS	smooth	→ Diagram	72 NBR 902	523552	●
38,1	57,15	7,93	AS	smooth	→ Diagram	72 NBR 902	64843	●
40	52	7	AS	smooth	→ Diagram	72 NBR 902	328911	●
40	55	6	AS	smooth	→ Diagram	75 FKM 595	329337	○
40	55	6	AS	smooth	→ Diagram	72 NBR 902	383444	●
40	55	6	AS	smooth	→ Diagram	75 FKM 595	479064	●
40	55	6	AS	smooth	→ Diagram	72 NBR 902	49034624	●
40	55	6	AS	smooth	→ Diagram	75 FKM 595	49035486	●
40	56	6	AS	smooth	→ Diagram	72 NBR 902	12001693	●
40	58	8	AS	smooth	→ Diagram	72 NBR 902	411826	●
40	62	6	AS	smooth	→ Diagram	72 NBR 902	3018	●
40	62	6	AS	smooth	→ Diagram	75 FKM 595	528295	●
40	62	6	AS	smooth	→ Diagram	72 NBR 902	49001831	○
40	67	7	AS	smooth	→ Diagram	75 FKM 595	526418	○
42	62	7	AS	smooth	→ Diagram	75 FKM 585	348515	●
42	62	7	AS	smooth	→ Diagram	72 NBR 902	383616	●
45	58	7	AS	smooth	→ Diagram	72 NBR 902	366368	●
45	62	7	AS	smooth	→ Diagram	72 NBR 902	348882	●
45	62	7	AS	smooth	→ Diagram	75 FKM 595	418708	●
45	65	7	AS	smooth	→ Diagram	75 FKM 595	125117	●
45	65	7	AS	smooth	→ Diagram	72 NBR 902	526240	●
45	65	7	AS	smooth	→ Diagram	75 FKM 595	49035662	●
45	65	8	AS	smooth	→ Diagram	72 NBR 902	12011524	●
47	62	7	AS	smooth	→ Diagram	72 NBR 902	379252	●
50	65	7	AS	smooth	→ Diagram	75 FKM 595	340127	●
50	65	7	AS	smooth	→ Diagram	72 NBR 902	49009273	●
50	65	8	AS	smooth	→ Diagram	72 NBR 902	12001704	●
50	68	7	AS	smooth	→ Diagram	72 NBR 902	327026	●
50	68	7	AS	smooth	→ Diagram	75 FKM 595	360204	●
50	68	8	AS	smooth	→ Diagram	72 NBR 902	12011526	●
50	70	10	AS	smooth	→ Diagram	72 NBR 902	49023852	●
50	72	7	AS	smooth	→ Diagram	72 NBR 902	3036	●
50	72	7	AS	smooth	→ Diagram	75 FKM 595	418718	●
52	68	10	AS	smooth	→ Diagram	72 NBR 902	341297	●
52	68	10	AS	smooth	→ Diagram	75 FKM 595	49021367	●

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d ₁	d ₂	b	DIN 3761	Outer surface	Pressure	Material	Article No.	
55	70	7	AS	smooth	→ Diagram	72 NBR 902	457349	●
55	70	8	AS	smooth	→ Diagram	72 NBR 902	12001706	●
55	72	7	AS	smooth	→ Diagram	72 NBR 902	13984	●
55	72	7	AS	smooth	→ Diagram	75 FKM 595	479065	●
55	72	7	AS	smooth	→ Diagram	75 FKM 595	49008285	●
55	72	8	AS	smooth	→ Diagram	72 NBR 902	12011530	●
55	75	7	AS	smooth	→ Diagram	75 FKM 595	418724	●
55	75	7	AS	smooth	→ Diagram	72 NBR 902	423894	●
60	72	7	AS	smooth	→ Diagram	72 NBR 902	377869	●
60	72	7	AS	smooth	→ Diagram	72 NBR 902	49001732	●
60	75	8	AS	smooth	→ Diagram	72 NBR 902	12001708	●
60	75	10	AS	smooth	→ Diagram	75 FKM 595	430573	●
60	80	7	AS	smooth	→ Diagram	72 NBR 902	335195	●
60	80	7	AS	smooth	→ Diagram	75 FKM 595	341551	○
60	80	7	AS	smooth	→ Diagram	75 FKM 595	418727	●
60	80	7	AS	smooth	→ Diagram	75 FKM 595	463704	○
60	80	7	AS	smooth	→ Diagram	75 FKM 595	529503	●
60	85	8	AS	smooth	→ Diagram	72 NBR 902	146437	●
62	85	7	AS	smooth	→ Diagram	72 NBR 902	106214	●
62	85	7	AS	smooth	→ Diagram	75 FKM 595	363452	●
65	80	7	AS	smooth	→ Diagram	72 NBR 902	12001711	●
65	85	10	AS	smooth	→ Diagram	75 FKM 595	49017957	○
65	90	7	AS	smooth	→ Diagram	72 NBR 902	146271	●
65	90	7	AS	smooth	→ Diagram	75 FKM 595	418822	●
68	80	7	AS	smooth	→ Diagram	72 NBR 902	323546	○
68	90	10	AS	smooth	→ Diagram	72 NBR 902	12011532	●
70	88	6,5	AS	smooth	→ Diagram	72 NBR 902	355823	○
70	90	7	AS	smooth	→ Diagram	72 NBR 902	3059	●
70	90	7	AS	smooth	→ Diagram	75 FKM 595	49008932	●
75	90	10	AS	smooth	→ Diagram	72 NBR 902	12001716	●
75	95	7	AS	smooth	→ Diagram	72 NBR 902	122853	●
75	95	7	AS	smooth	→ Diagram	75 FKM 595	354069	●
75	95	10	AS	smooth	→ Diagram	75 FKM 595	372629	●
75	100	11	AS	smooth	→ Diagram	72 NBR 902	477396	●
75	100	11	AS	smooth	→ Diagram	75 FKM 595	523594	●
80	100	7	AS	smooth	→ Diagram	75 FKM 595	390171	●
80	100	7	AS	smooth	→ Diagram	72 NBR 902	49001653	●
80	105	7,5	AS	smooth	→ Diagram	75 FKM 595	418858	●
80	110	10	AS	smooth	→ Diagram	72 NBR 902	49043290	●
80	125	12	AS	smooth	→ Diagram	72 NBR 902	49043291	●
85	105	7,5	AS	smooth	→ Diagram	72 NBR 902	63228	●
85	110	8	AS	smooth	→ Diagram	72 NBR 902	523616	●
85	110	8	AS	smooth	→ Diagram	75 FKM 595	529504	●
85	120	8	AS	smooth	→ Diagram	72 NBR 902	143355	●
85	120	8	AS	smooth	→ Diagram	75 FKM 595	418860	●
90	110	7,5	AS	smooth	→ Diagram	72 NBR 902	307006	●
90	110	7,5	AS	smooth	→ Diagram	75 FKM 595	360218	●
90	110	7,5	AS	smooth	→ Diagram	72 NBR 902	49035762	●
90	110	12	AS	smooth	→ Diagram	72 NBR 902	12011534	●
90	115	10	AS	smooth	→ Diagram	75 FKM 595	418863	●

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d_1	d_2	b	DIN 3761	Outer surface	Pressure	Material	Article No.	
90	120	10	AS	smooth	→ Diagram	72 NBR 902	455768	●
90	125	12	AS	smooth	→ Diagram	72 NBR 902	12001720	○
95	120	12	AS	smooth	→ Diagram	72 NBR 902	2315	●
95	120	12	AS	smooth	→ Diagram	75 FKM 595	378129	●
95	120	12	AS	smooth	→ Diagram	72 NBR 902	477399	○
100	120	7,5	AS	smooth	→ Diagram	72 NBR 902	63432	●
100	120	7,5	AS	smooth	→ Diagram	75 FKM 595	315389	●
100	125	13	AS	smooth	→ Diagram	72 NBR 902	420803	●
105	130	7,5	AS	smooth	→ Diagram	72 NBR 902	27134	●
105	130	7,5	AS	smooth	→ Diagram	75 FKM 595	377412	●
105	130	7,5	AS	smooth	→ Diagram	75 FKM 595	471702	○
105	130	7,5	AS	smooth	→ Diagram	72 NBR 902	49031450	●
110	125	7	AS	smooth	→ Diagram	75 FKM 595	473522	●
110	130	12	AS	smooth	→ Diagram	75 FKM 595	529507	●
110	130	12	AS	smooth	→ Diagram	72 NBR 902	12011535	●
110	140	12	AS	smooth	→ Diagram	75 FKM 595	49005104	○
110	140	13	AS	smooth	→ Diagram	72 NBR 902	420804	●
110	150	8	AS	smooth	→ Diagram	72 NBR 902	929	●
120	140	7,5	AS	smooth	→ Diagram	72 NBR 902	85746	●
120	140	7,5	AS	smooth	→ Diagram	75 FKM 595	360177	●
120	140	10	AS	smooth	→ Diagram	72 NBR 902	82439	●
120	150	10	AS	smooth	→ Diagram	75 FKM 595	324576	●
120	150	10	AS	smooth	→ Diagram	72 NBR 902	427822	●
120	150	10	AS	smooth	→ Diagram	75 FKM 595	523775	○
120	150	12	AS	smooth	→ Diagram	72 NBR 902	12011536	●
125	150	12	AS	smooth	→ Diagram	75 FKM 585	455694	○
130	150	7,5	AS	smooth	→ Diagram	72 NBR 902	369321	●
130	160	7,5	AS	smooth	→ Diagram	75 FKM 595	529820	●
130	160	12	AS	smooth	→ Diagram	75 FKM 595	529506	●
130	160	12	AS	smooth	→ Diagram	72 NBR 902	12011537	●
140	160	10	AS	smooth	→ Diagram	72 NBR 902	329169	●
140	160	10	AS	smooth	→ Diagram	75 FKM 595	476112	○
140	170	15	AS	smooth	→ Diagram	72 NBR 902	142668	●
140	170	15	AS	smooth	→ Diagram	75 FKM 595	372626	●
140	170	15	AS	smooth	→ Diagram	72 NBR 902	12011538	●
140	180	12	AS	smooth	→ Diagram	75 FKM 595	476731	●

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d ₁	d ₂	b	DIN 3761	Outer surface	Pressure	Material	Article No.	
140	180	12	AS	smooth	→ Diagram	72 NBR 902	520212	●
146	193,7	10	AS	smooth	→ Diagram	72 NBR 902	454312	○
150	180	8,5	AS	smooth	→ Diagram	72 NBR 902	146597	●
150	180	8,5	AS	smooth	→ Diagram	75 FKM 585	366770	●
150	180	8,5	AS	smooth	→ Diagram	72 NBR 902	49031083	●
160	185	8,5	AS	smooth	→ Diagram	72 NBR 902	3790	●
160	190	8,5	AS	smooth	→ Diagram	75 FKM 595	464827	○
160	200	10	AS	smooth	→ Diagram	72 NBR 902	523618	●
160	200	10	AS	smooth	→ Diagram	75 FKM 595	523619	●
170	200	12	AS	smooth	→ Diagram	75 FKM 595	476560	○
170	200	12	AS	smooth	→ Diagram	72 NBR 902	520211	●
170	200	14	AS	smooth	→ Diagram	72 NBR 902	146585	●
170	200	14	AS	smooth	→ Diagram	75 FKM 595	397048	●
172	190	8,5	AS	smooth	→ Diagram	75 FKM 595	469004	●
180	210	8,5	AS	smooth	→ Diagram	72 NBR 902	367484	●
180	210	8,5	AS	smooth	→ Diagram	75 FKM 595	520626	●
185	205	11	AS	smooth	→ Diagram	75 FKM 595	531100	●
185	205	11	AS	smooth	→ Diagram	72 NBR 902	531108	●
190	220	15	AS	smooth	→ Diagram	75 FKM 595	363446	●
190	220	15	AS	smooth	→ Diagram	72 NBR 902	427821	●
200	230	13	AS	smooth	→ Diagram	72 NBR 902	360342	●
200	230	13	AS	smooth	→ Diagram	75 FKM 595	529444	●
240	270	8,5	AS	smooth	→ Diagram	72 NBR 902	412661	●
240	270	8,5	AS	smooth	→ Diagram	75 FKM 595	430275	●
260	280	10	AS	smooth	→ Diagram	72 NBR 902	407571	●
260	280	10	AS	smooth	→ Diagram	75 FKM 595	520246	●
300	340	20	AS	smooth	→ Diagram	72 NBR 902	421276	●

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