

Simmerring BABSL to DIN 3760 AS (Classical Pressure Seal)

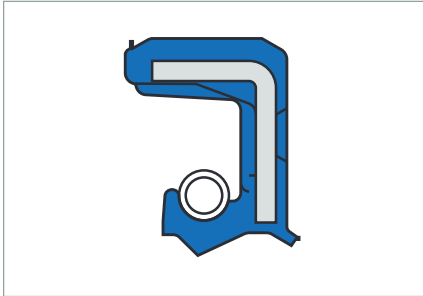


Fig. 1 Simmerring BABSL NBR/FKM

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.

Material

Acrylonitrile-butadiene rubber

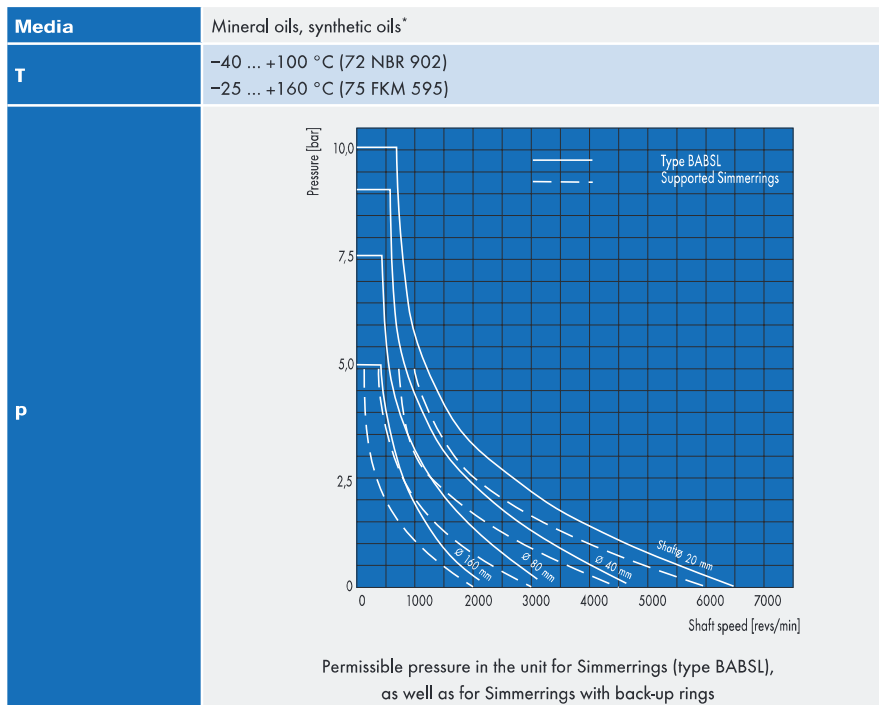
Code	72 NBR 902
Colour	Blue
Hardness	75 Shore A

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

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

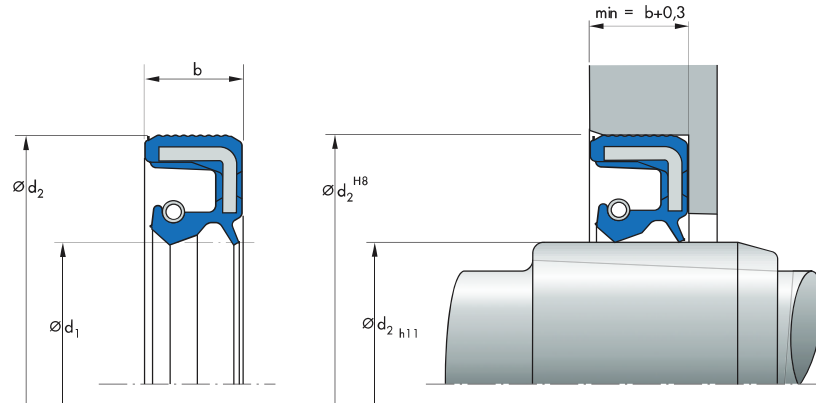
Tolerance	ISO H8
Roughness	$R_z = 10 \dots 25 \mu\text{m}$

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

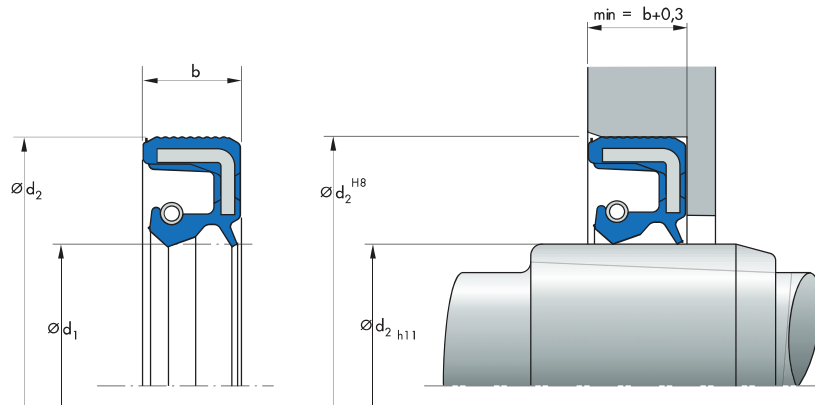


d_1	d_2	b	DIN 3761	Outer surface	Pressure	Material	Article No.	
8	22	6	AS	smooth	→ Diagram	72 NBR 902	462581	B
8	22	6	AS	smooth	→ Diagram	75 FKM 595	12019990	B
9	20	6	AS	smooth	→ Diagram	72 NBR 902	80489	B
10	22	6	AS	smooth	→ Diagram	72 NBR 902	2891	B
10	22	6	AS	smooth	→ Diagram	75 FKM 595	418583	B
11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

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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	B
20	32	7	AS	smooth	→ Diagram	72 NBR 902	49017151	B
20	35	6	AS	smooth	→ Diagram	72 NBR 902	2959	B
20	35	6	AS	smooth	→ Diagram	75 FKM 595	468087	D
20	35	6	AS	smooth	→ Diagram	75 FKM 595	49030261	B
20	40	7	AS	smooth	→ Diagram	75 FKM 595	432903	B
20	40	7	AS	smooth	→ Diagram	72 NBR 902	49001289	B
22	32	6	AS	smooth	→ Diagram	72 NBR 902	2966	B
22	32	6	AS	smooth	→ Diagram	75 FKM 595	418603	B
22	35	6	AS	smooth	→ Diagram	72 NBR 902	2968	B
22	35	6	AS	smooth	→ Diagram	75 FKM 595	348896	B
22	40	7	AS	smooth	→ Diagram	75 FKM 595	49028556	D
24	40	7	AS	smooth	→ Diagram	72 NBR 902	432530	B
25	35	6	AS	smooth	→ Diagram	72 NBR 902	2990	B
25	35	6	AS	smooth	→ Diagram	75 FKM 595	342369	B
25	36	6	AS	smooth	→ Diagram	72 NBR 902	527283	B
25	37	6	AS	smooth	→ Diagram	75 FKM 595	520074	B
25	37	6	AS	smooth	→ Diagram	72 NBR 902	49009338	B
25	40	7	AS	smooth	→ Diagram	72 NBR 902	307424	B
25	40	7	AS	smooth	→ Diagram	75 FKM 595	366923	B
25	42	6	AS	smooth	→ Diagram	75 FKM 595	523934	B
25	42	6	AS	smooth	→ Diagram	72 NBR 902	12001675	B
25	47	6	AS	smooth	→ Diagram	72 NBR 902	2991	B
25	47	6	AS	smooth	→ Diagram	75 FKM 595	418622	B
25,4	38,1	6,35	AS	smooth	→ Diagram	72 NBR 902	427899	D
26	40	6	AS	smooth	→ Diagram	75 FKM 595	426478	B
26	42	7	AS	smooth	→ Diagram	75 FKM 595	49021064	B
27	39	6	AS	smooth	→ Diagram	75 FKM 595	49012698	D
28	40	6	AS	smooth	→ Diagram	72 NBR 902	338223	B
28	40	6	AS	smooth	→ Diagram	75 FKM 595	339414	B
28	40	7	AS	smooth	→ Diagram	72 NBR 902	523549	B
28	40	8	AS	smooth	→ Diagram	75 FKM 595	404676	B
28	40	8	AS	smooth	→ Diagram	72 NBR 902	432619	B
28	40	9	AS	smooth	→ Diagram	72 NBR 902	68078	B
30	42	6	AS	smooth	→ Diagram	72 NBR 902	3003	B
30	42	6	AS	smooth	→ Diagram	75 FKM 595	418629	B
30	42	7	AS	smooth	→ Diagram	72 NBR 902	12001682	B
30	50	7	AS	smooth	→ Diagram	72 NBR 902	49019367	B
30	52	7	AS	smooth	→ Diagram	72 NBR 902	396855	B
31,75	44,45	6,35	AS	smooth	→ Diagram	72 NBR 902	81721	B
32	44	8	AS	smooth	→ Diagram	72 NBR 902	69442	B
32	47	6	AS	smooth	→ Diagram	72 NBR 902	910	B
32	47	6	AS	smooth	→ Diagram	75 FKM 595	418674	B
32	47	6	AS	smooth	→ Diagram	75 FKM 595	49033017	B
32	52	6	AS	smooth	→ Diagram	72 NBR 902	345348	B
35	47	6	AS	smooth	→ Diagram	75 FKM 595	418676	B
35	47	6	AS	smooth	→ Diagram	72 NBR 902	12001688	B
35	50	7	AS	smooth	→ Diagram	72 NBR 902	12011521	B
35	52	6	AS	smooth	→ Diagram	72 NBR 902	3004	B
35	52	6	AS	smooth	→ Diagram	75 FKM 595	418688	B

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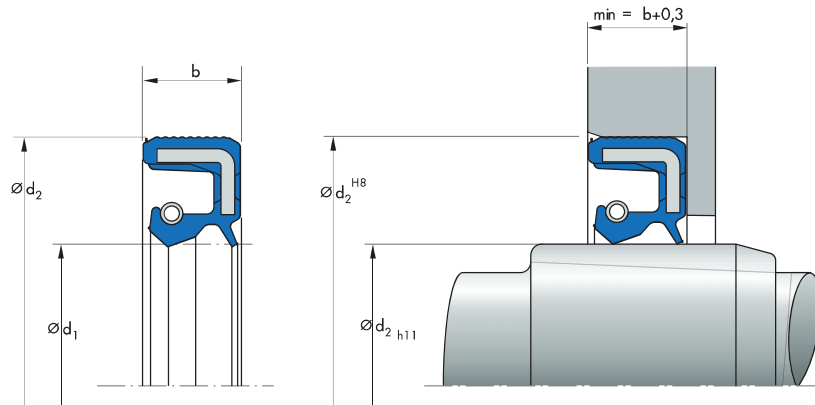


d_1	d_2	b	DIN 3761	Outer surface	Pressure	Material	Article No.	
35	52	6	AS	smooth	→ Diagram	72 NBR 902	436315	D
38	50	6	AS	smooth	→ Diagram	72 NBR 902	523552	B
38,1	57,15	7,93	AS	smooth	→ Diagram	72 NBR 902	64843	B
40	52	7	AS	smooth	→ Diagram	72 NBR 902	328911	B
40	55	6	AS	smooth	→ Diagram	75 FKM 595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

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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	B
55	70	8	AS	smooth	→ Diagram	72 NBR 902	12001706	B
55	72	7	AS	smooth	→ Diagram	72 NBR 902	13984	B
55	72	7	AS	smooth	→ Diagram	75 FKM 595	479065	B
55	72	7	AS	smooth	→ Diagram	75 FKM 595	49008285	B
55	72	8	AS	smooth	→ Diagram	72 NBR 902	12011530	B
55	75	7	AS	smooth	→ Diagram	75 FKM 595	418724	B
55	75	7	AS	smooth	→ Diagram	72 NBR 902	423894	B
60	72	7	AS	smooth	→ Diagram	72 NBR 902	377869	B
60	72	7	AS	smooth	→ Diagram	72 NBR 902	49001732	B
60	75	8	AS	smooth	→ Diagram	72 NBR 902	12001708	B
60	75	10	AS	smooth	→ Diagram	75 FKM 595	430573	B
60	80	7	AS	smooth	→ Diagram	72 NBR 902	335195	B
60	80	7	AS	smooth	→ Diagram	75 FKM 595	341551	D
60	80	7	AS	smooth	→ Diagram	75 FKM 595	418727	B
60	80	7	AS	smooth	→ Diagram	75 FKM 595	463704	D
60	80	7	AS	smooth	→ Diagram	75 FKM 595	529503	B
60	85	8	AS	smooth	→ Diagram	72 NBR 902	146437	B
62	85	7	AS	smooth	→ Diagram	72 NBR 902	106214	B
62	85	7	AS	smooth	→ Diagram	75 FKM 595	363452	B
65	80	7	AS	smooth	→ Diagram	72 NBR 902	12001711	B
65	85	10	AS	smooth	→ Diagram	75 FKM 595	49017957	D
65	90	7	AS	smooth	→ Diagram	72 NBR 902	146271	B
65	90	7	AS	smooth	→ Diagram	75 FKM 595	418822	B
68	80	7	AS	smooth	→ Diagram	72 NBR 902	323546	D
68	90	10	AS	smooth	→ Diagram	72 NBR 902	12011532	B
70	88	6,5	AS	smooth	→ Diagram	72 NBR 902	355823	D
70	90	7	AS	smooth	→ Diagram	72 NBR 902	3059	B
70	90	7	AS	smooth	→ Diagram	75 FKM 595	49008932	B
75	90	10	AS	smooth	→ Diagram	72 NBR 902	12001716	B
75	95	7	AS	smooth	→ Diagram	72 NBR 902	122853	B
75	95	7	AS	smooth	→ Diagram	75 FKM 595	354069	B
75	95	10	AS	smooth	→ Diagram	75 FKM 595	372629	B
75	100	11	AS	smooth	→ Diagram	72 NBR 902	477396	B
75	100	11	AS	smooth	→ Diagram	75 FKM 595	523594	B
80	100	7	AS	smooth	→ Diagram	75 FKM 595	390171	B
80	100	7	AS	smooth	→ Diagram	72 NBR 902	49001653	B
80	105	7,5	AS	smooth	→ Diagram	75 FKM 595	418858	B
80	110	10	AS	smooth	→ Diagram	72 NBR 902	49043290	B
80	125	12	AS	smooth	→ Diagram	72 NBR 902	49043291	B
85	105	7,5	AS	smooth	→ Diagram	72 NBR 902	63228	B
85	110	8	AS	smooth	→ Diagram	72 NBR 902	523616	B
85	110	8	AS	smooth	→ Diagram	75 FKM 595	529504	B
85	120	8	AS	smooth	→ Diagram	72 NBR 902	143355	B
85	120	8	AS	smooth	→ Diagram	75 FKM 595	418860	B
90	110	7,5	AS	smooth	→ Diagram	72 NBR 902	307006	B
90	110	7,5	AS	smooth	→ Diagram	75 FKM 595	360218	B
90	110	7,5	AS	smooth	→ Diagram	72 NBR 902	49035762	B
90	110	12	AS	smooth	→ Diagram	72 NBR 902	12011534	B
90	115	10	AS	smooth	→ Diagram	75 FKM 595	418863	B

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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	B
90	125	12	AS	smooth	→ Diagram	72 NBR 902	12001720	D
95	120	12	AS	smooth	→ Diagram	72 NBR 902	2315	B
95	120	12	AS	smooth	→ Diagram	75 FKM 595	378129	B
95	120	12	AS	smooth	→ Diagram	72 NBR 902	477399	D
100	120	7,5	AS	smooth	→ Diagram	72 NBR 902	63432	B
100	120	7,5	AS	smooth	→ Diagram	75 FKM 595	315389	B
100	125	13	AS	smooth	→ Diagram	72 NBR 902	420803	B
105	130	7,5	AS	smooth	→ Diagram	72 NBR 902	27134	B
105	130	7,5	AS	smooth	→ Diagram	75 FKM 595	377412	B
105	130	7,5	AS	smooth	→ Diagram	75 FKM 595	471702	D
105	130	7,5	AS	smooth	→ Diagram	72 NBR 902	49031450	B
110	125	7	AS	smooth	→ Diagram	75 FKM 595	473522	B
110	130	12	AS	smooth	→ Diagram	75 FKM 595	529507	B
110	130	12	AS	smooth	→ Diagram	72 NBR 902	12011535	B
110	140	12	AS	smooth	→ Diagram	75 FKM 595	49005104	D
110	140	13	AS	smooth	→ Diagram	72 NBR 902	420804	B
110	150	8	AS	smooth	→ Diagram	72 NBR 902	929	B
120	140	7,5	AS	smooth	→ Diagram	72 NBR 902	85746	B
120	140	7,5	AS	smooth	→ Diagram	75 FKM 595	360177	B
120	140	10	AS	smooth	→ Diagram	72 NBR 902	82439	B
120	150	10	AS	smooth	→ Diagram	75 FKM 595	324576	B
120	150	10	AS	smooth	→ Diagram	72 NBR 902	427822	B
120	150	10	AS	smooth	→ Diagram	75 FKM 595	523775	D
120	150	12	AS	smooth	→ Diagram	72 NBR 902	12011536	B
125	150	12	AS	smooth	→ Diagram	75 FKM 585	455694	D
130	150	7,5	AS	smooth	→ Diagram	72 NBR 902	369321	B
130	160	7,5	AS	smooth	→ Diagram	75 FKM 595	529820	B
130	160	12	AS	smooth	→ Diagram	75 FKM 595	529506	B
130	160	12	AS	smooth	→ Diagram	72 NBR 902	12011537	B
140	160	10	AS	smooth	→ Diagram	72 NBR 902	329169	B
140	160	10	AS	smooth	→ Diagram	75 FKM 595	476112	D
140	170	15	AS	smooth	→ Diagram	72 NBR 902	142668	B
140	170	15	AS	smooth	→ Diagram	75 FKM 595	372626	B
140	170	15	AS	smooth	→ Diagram	72 NBR 902	12011538	B
140	180	12	AS	smooth	→ Diagram	75 FKM 595	476731	B

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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	B
146	193,7	10	AS	smooth	→ Diagram	72 NBR 902	454312	D
150	180	8,5	AS	smooth	→ Diagram	72 NBR 902	146597	B
150	180	8,5	AS	smooth	→ Diagram	75 FKM 585	366770	B
150	180	8,5	AS	smooth	→ Diagram	72 NBR 902	49031083	B
160	185	8,5	AS	smooth	→ Diagram	72 NBR 902	3790	B
160	190	8,5	AS	smooth	→ Diagram	75 FKM 595	464827	D
160	200	10	AS	smooth	→ Diagram	72 NBR 902	523618	B
160	200	10	AS	smooth	→ Diagram	75 FKM 595	523619	B
170	200	12	AS	smooth	→ Diagram	75 FKM 595	476560	D
170	200	12	AS	smooth	→ Diagram	72 NBR 902	520211	B
170	200	14	AS	smooth	→ Diagram	72 NBR 902	146585	B
170	200	14	AS	smooth	→ Diagram	75 FKM 595	397048	B
172	190	8,5	AS	smooth	→ Diagram	75 FKM 595	469004	B
180	210	8,5	AS	smooth	→ Diagram	72 NBR 902	367484	B
180	210	8,5	AS	smooth	→ Diagram	75 FKM 595	520626	B
185	205	11	AS	smooth	→ Diagram	75 FKM 595	531100	B
185	205	11	AS	smooth	→ Diagram	72 NBR 902	531108	B
190	220	15	AS	smooth	→ Diagram	75 FKM 595	363446	B
190	220	15	AS	smooth	→ Diagram	72 NBR 902	427821	B
200	230	13	AS	smooth	→ Diagram	72 NBR 902	360342	B
200	230	13	AS	smooth	→ Diagram	75 FKM 595	529444	B
240	270	8,5	AS	smooth	→ Diagram	72 NBR 902	412661	B
240	270	8,5	AS	smooth	→ Diagram	75 FKM 595	430275	B
260	280	10	AS	smooth	→ Diagram	72 NBR 902	407571	B
260	280	10	AS	smooth	→ Diagram	75 FKM 595	520246	B
300	340	20	AS	smooth	→ Diagram	72 NBR 902	421276	B

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