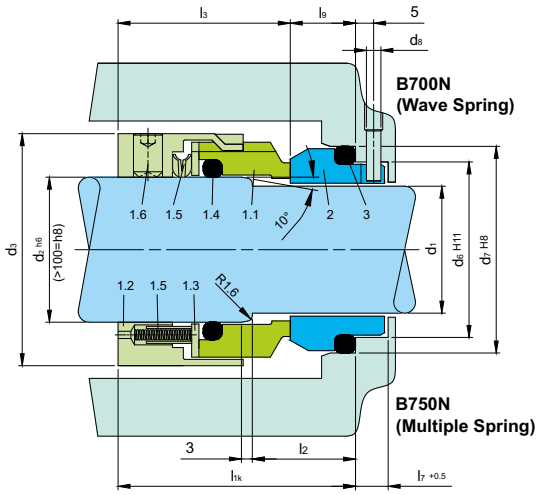
Product Description

1. Single seal configuration
2. Balanced design
3. Independent of direction of rotation
4. For stepped shafts
5. Multiple or wave springs rotary construction
6. Pumping device available for increased efficiency in circulation (B700F, B750F)
7. High temperature application with cooled stationary seats available

Technical Features

1. Versatile torque transmission available
2. Capable of self cleaning
3. Short installation length available on request
4. Multifaceted application usage



Note: The item numbers as depicted above are based on our technical experience and knowledge and are placed in the chronological order of their assembly procedure.

Item	Part no.	Description
1.1	472	Seal face
1.2	485	Drive collar
1.3	474	Thrust ring
1.4	412.1	O-ring
1.5	477	Spring
1.6	904	Set screw
2	475	Seat (G9)
3	412.2	O-ring
DIN 24250		

Typical Industrial Applications

API & ISO Pumps	hydrocarbons
Acids (some)	Low abrasive media
Aqueous solutions	Low solids media
Boiler feed pumps	Oil & gas
Chemical	Petrochemical
Fertiliser	Poor lubrication media
Highly viscous hydrocarbons	Power plant technology
Hot water applications	Refining technology
Light volatile	Toxic & hazardous media

Standards

EN 12756

Performance Capabilities

Sizes	d_1 = Upto 100 mm (Upto 4.000")
Single spring	d_1 = max. 100 mm (Upto 4.000")
Pressure	p_1 = 80 bar (1160 PSI) for d_1 = 14 ... 100 mm,
	p_1 = 25 bar (363 PSI) for d_1 = 100 ... 200 mm,
	p_1 = 16 bar (232 PSI) for d_1 > 200 mm
Temperature	t = -50 °C...+220 °C (-58 °F...+428 °F)
Speed	20 m/s (66 ft/s)

Permissible Axial Movement

d_1 up to 22 mm:	± 1.0 mm
d_1 24 up to 58 mm:	± 1.5 mm
d_1 from 60 mm:	± 2.0 mm

Materials

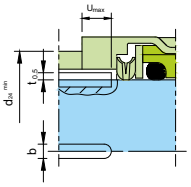
Seal face	Silicon carbide (Q1, Q2), Carbon graphite antimony impregnated (A), Aluminium oxide (V), CrMo cast steel (S)
Seat G9	Carbon graphite antimony impregnated (A), Carbon graphite resin impregnated (B), Silicon carbide (Q1*, Q2*)
Secondary seals	EPDM (E), NBR (P), FKM (V), FFKM (K)
Springs	CrNiMo steel (G)
Metal parts	CrNiMo steel (G), Duplex (G1)

* Cannot be combined with seal face made of S

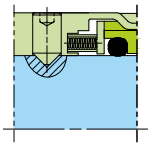
B750

Shaft diameter: d_1 = Upto 200 mm (Upto 7.875")
As B700N, but with multiple springs in sleeves (Item no.1.5)
Axial movement: ± 2 ... 4 mm, dependent on diameter

Torque Transmissions

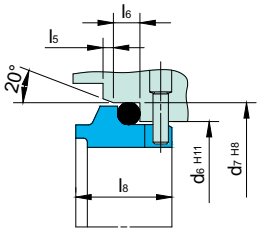


d_1 > 100 mm (4.000") Torque transmission by 4 set screws with cone point. Offset: 90°

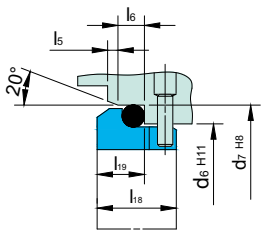


Drive key (B700S2 / B750S2)

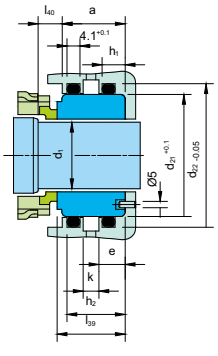
Stationary Seats



G9 (Carbon) (EN 12756)

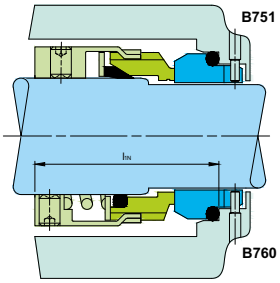


G16 (EN12756, but l_{1k} and l_2 are shorter than specified)



G115 Cooled seat especially for hot water applications.

Design Variations

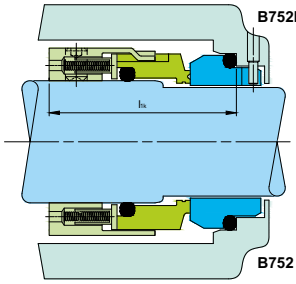


B760

Shaft Diameter: d_1 = Upto 100mm (Upto 4.000")
Dimensions, items and description as for B700N, but with spacial single spring (item no. 1.5) for compensating large axial movements (± 4 mm).

B751

Dimensions, Items & descriptions as per B750, but with PTFE wedge as secondary sealing

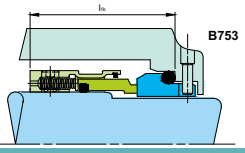


B752H

Dimensions, Items & descriptions as per B750, but with Solid Carbon Seal Face & Hydraulic Groove on the seal face

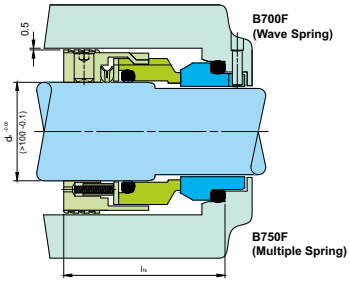
B752

Dimensions, Items & descriptions as per B750, but with Solid Carbon Seal Face



B753

Dimensions, Items & descriptions as per B750, but with Dry running face combination



B700F

Shaft diameter : d_1 = max. Upto 100mm (Upto 4.000")
Dimensions, items and descriptions as for B700N, but with single spring and pumping screw.
Dependent on direction of rotation.
(Viscosity ≤ ISO VG10).

B750F

Shaft Diameter: d_1 = Upto 200 mm (Upto 7.875")
Dimensions, items and descriptions as for B700N, but with multiple spring and pumping screw.
Dependent on direction of rotation.
(Viscosity ≤ ISO VG 10).

Dimensional Data

Dimensions in millimeter

d_1	d_2	d_3	d_6	d_7	d_8	d_9	d_{21}	d_{22}	d_s	l_{1K}	l_{1N}	l_2	l_3	l_5	l_6	l_7	l_8	l_9	l_{18}	l_{19}	l_{39}	l_{40}	a	b	e	f	h_1	h_2	k	m_x	$u_{max.}$	t
14*	18	33	21	25	3	20	-	-	38	42.5	-	18	32.5	1.5	4	8.5	17.5	10.0	-	-	-	-	-	5	-	6.0	-	-	-	M5	9	1.1
16*	20	35	23	27	3	22	-	-	40	42.5	-	18	32.5	1.5	4	8.5	17.5	10.0	-	-	-	-	-	5	-	6.0	-	-	-	M5	9	1.1
18*	22	37	27	33	3	24	-	-	42	45.0	55	20	33.5	2.0	5	9.0	19.5	11.5	15.0	7.0	-	-	-	6	-	7.0	-	-	-	M5	9	1.5
20*	24	39	29	35	3	26	-	-	44	45.0	60	20	33.5	2.0	5	9.0	19.5	11.5	15.0	7.0	-	-	-	6	-	5.5	-	-	-	M5	9	1.5
22*	26	41	31	37	3	28	-	-	45	45.0	60	20	33.5	2.0	5	9.0	19.5	11.5	15.0	7.0	-	-	-	6	-	8.0	-	-	-	M5	9	1.5
24*	28	43	33	39	3	30	-	-	47	47.5	60	20	36.0	2.0	5	9.0	19.5	11.5	15.0	7.0	-	-	-	6	-	5.5	-	-	-	M6	9	1.5
25*	30	45	34	40	3	32	-	-	49	47.5	60	20	36.0	2.0	5	9.0	19.5	11.5	15.0	7.0	-	-	-	6	-	5.5	-	-	-	M6	9	1.5
28*	33	48	37	43	3	35	44.65	50.57	51	50.0	65	20	38.5	2.0	5	9.0	19.5	11.5	15.0	7.0	24.0	8.5	24.0	6	8.0	8.0	6.6	22.6	9	M6	12	1.5
30*	35	50	39	45	3	37	47.83	53.75	54	50.0	65	20	38.5	2.0	5	9.0	19.5	11.5	15.0	7.0	24.5	9.0	24.0	6	8.0	8.0	6.6	22.6	9	M6	12	1.5
32*	38	55	42	48	3	40	47.83	53.75	59	50.0	65	20	38.5	2.0	5	9.0	19.5	11.5	15.0	7.0	24.5	9.0	24.0	6	8.0	8.0	6.6	22.6	9	M6	12	1.5
33*	38	55	42	48	3	40	47.83	53.75	59	50.0	65	20	38.5	2.0	5	9.0	19.5	11.5	15.0	7.0	24.5	9.0	24.0	6	8.0	8.0	6.6	22.6	9	M6	12	1.5
35*	40	57	44	50	3	42	51.00	56.92	61	50.0	65	20	38.5	2.0	5	9.0	19.5	11.5	15.0	7.0	24.5	9.0	24.0	6	8.0	8.0	6.6	22.6	9	M6	12	1.5
38*	43	60	49	56	4	45	54.18	60.10	65	52.5	75	23	38.5	2.0	6	9.0	22.0	14.0	16.0	8.0	26.0	11.0	24.0	6	8.0	8.0	6.6	22.6	9	M6	12	1.5
40*	45	62	51	58	4	47	60.53	66.45	66	52.5	75	23	38.5	2.0	6	9.0	22.0	14.0	16.0	8.0	26.0	11.0	24.0	6	8.0	8.0	6.6	22.6	9	M6	12	1.5
43*	48	65	54	61	4	50	63.70	69.62	69	52.5	75	23	38.5	2.0	6	9.0	22.0	14.0	16.0	8.0	26.0	11.0	24.0	6	8.0	8.0	6.6	22.6	9	M6	12	1.5
45*	50	67	56	63	4	52	63.70	69.62	71	52.5	75	23	38.5	2.0	6	9.0	22.0	14.0	16.0	8.0	26.0	11.0	24.0	6	8.0	8.0	6.6	22.6	9	M6	12	1.5
48*	53	70	59	66	4	55	66.88	72.80	75	52.5	85	23	38.5	2.0	6	9.0	22.0	14.0	16.0	8.0	26.0	11.0	24.0	6	8.0	8.0	6.6	22.6	9	M6	12	1.5
50*	55	72	62	70	4	57	70.05	75.97	76	57.5	85	25	42.5	2.5	6	9.0	23.0	15.0	17.0	9.5	26.5	12.5	24.0	6	8.0	8.0	6.6	24.6	9	M6	12	1.5
53*	58	79	65	73	4	60	76.40	82.32	83	57.5	85	25	42.5	2.5	6	9.0	23.0	15.0	17.0	9.5	26.5	12.5	24.0	8	8.0	9.0	6.6	24.6	9	M8	12	1.9
55*	60	81	67	75	4	62	76.40	82.32	85	57.5	85	25	42.5	2.5	6	9.0	23.0	15.0	17.0	9.5	28.5	12.5	26.0	8	8.0	9.0	6.6	24.6	11	M8	12	1.9
58*	63	84	70	78	4	65	79.58	85.50	88	62.5	85	25	47.5	2.5	6	9.0	23.0	15.0	18.0	10.5	28.5	12.5	26.0	8	8.0	9.0	6.6	24.6	11	M8	15	1.9
60*	65	86	72	80	4	67	82.75	88.67	95	62.5	95	25	47.5	2.5	6	9.0	23.0	15.0	18.0	10.5	28.5	12.5	26.0	8	8.0	9.0	6.6	24.6	11	M8	15	1.9
63*	68	89	75	83	4	70	85.93	91.85	93	62.5	95	25	47.5	2.5	6	9.0	23.0	15.0	18.0	10.5	28.5	12.5	26.0	8	8.0	9.0	6.6	24.6	11	M8	14	1.9
65*	70	91	77	85	4	72	85.93	91.85	95	62.5	95	25	47.5	2.5	6	9.0	23.0	15.0	18.0	10.5	28.5	12.5	26.0	8	8.0	9.0	6.6	24.6	11	M8	15	1.9
70*	75	99	83	92	4	77	89.10	95.02	105	70.0	95	28	52.0	2.5	7	9.0	26.0	18.0	19.0	11.5	30.5	14.5	26.0	8	8.0	10.0	6.6	24.6	11	M8	15	1.9
75*	80	104	88	97	4	82	98.63	104.55	109	70.0	105	28	52.0	2.5	7	9.0	26.0	18.0	19.0	11.5	30.5	14.5	26.0	8	8.0	10.0	6.6	24.6	11	M8	15	1.9
80*	85	109	95	105	4	87	101.80	107.72	114	70.0	105	28	51.8	3.0	7	9.0	26.2	18.2	19.0	11.5	30.2	14.0	26.0	8	8.0	10.0	6.6	24.6	11	M8	15	1.9
85*	90	114	100	110	4	92	108.15	114.07	119	75.0	105	28	56.8	3.0	7	9.0	26.2	18.2	19.0	11.5	30.2	14.0	26.0	10	8.0	10.0	6.6	24.6	11	M8	18	2.3
90*	95	119	105	115	4	97	114.50	120.42	124	75.0	105	28	56.8	3.0	7	9.0	26.2	18.2	20.5	13.0	30.2	14.0	26.0	10	8.0	10.0	6.6	24.6	11	M8	18	2.3
95*	100	124	110	120	4	102	117.68	123.60	129	75.0	105	28	57.8	3.0	7	9.0	25.2	17.2	20.5	13.0	29.2	14.0	26.0	10	8.0	10.0	6.6	24.6	11	M8	18	2.3
100*	105	129	115	125	4	107	124.03	129.95	134	75.0	105	28	57.8	3.0	7	9.0	25.2	17.2	20.5	13.0	29.2	14.0	26.0	10	8.0	10.0	6.6	24.6	11	M8	18	2.3
105*	115	148	122.2	134.3	5	118	128.98	134.90	153	73.0	-	32	53.0	2.0	10	-	30.0	20.0	-	-	29.2	15.2	26.0	10	8.0	10.0	6.6	24.6	11	M8	18	2.3
110*	120	153	128.2	140.3	5	123	135.30	141.20	158	73.0	-	32	53.0	2.0	10	-	30.0	20.0	-	-	32.5	14.5	30.0	10	9.5	10.0	6.6	28.6	13	M8	18	2.3
115*	125	158	136.2	148.3	5	128	140.30	146.20	163	73.0	-	32	53.0	2.0	10	-	30.0	20.0	-	-	32.5	14.5	30.0	10	9.5	10.0	6.6	28.6	13	M8	18	2.3
120*	130	163	138.2	150.3	5	133	145.30	151.20	168	73.0	-	32	53.0	2.0	10	-	30.0	20.0	-	-	32.5	14.5	30.0	10	9.5	10.0	6.6	28.6	13	M8	18	2.3
125*	135	168	142.2	154.3	5	138	150.30	156.20	173	73.0	-	32	53.0	2.0	10	-	30.0	20.0	-	-	32.5	14.5	30.0	10	9.5	10.0	6.6	28.6	13	M8	18	2.3
130*	140	173	146.2	158.3	5	143	155.30	161.20	178	73.0	-	32	53.0	2.0	10	-	30.0	20.0	-	-	32.5	14.5	30.0	10	9.5	10.0	6.6	28.6	13	M8	18	2.3
135*	145	178	152.2	164.3	5	148	160.30	166.20	183	73.0	-	32	53.0	2.0	10	-	30.0	20.0	-	-	32.5	14.5	30.0	10	9.5	10.0	6.6	28.6	13	M8	18	2.3
140*	150	183	156.2	168.3	5	153	165.30	171.20	188	73.0	-	32	53.0	2.0	10	-	30.0	20.0	-	-	32.5	14.5	30.0	10	9.5	10.0	6.6	28.6	13	M8	18	2.3
145*	155	191	161.2	173.3	5	158	172.30	178.20	196	83.0	-	34	63.0	2.0	10	-	30.0	20.0	-	-	34.5	16.5	32.0	12	10.0	12.0	7.1	30.1	14	M8	22	2.1
150*	160	196	168.2	180.3	5	163	177.30	183.20	201	85.0	-	36	63.0	2.0	10	-	32.0	22.0	-	-	34.5	16.5	32.0	12	10.0	12.0	7.1	30.1	14	M8	22	2.1
155*	165	201	173.2	185.3	5	168	182.30	188.20	206	87.0	-	38	63.0	2.0	12	-	34.0	24.0	-	-	34.5	16.5	32.0	12	10.0	12.0	7.1	30.1	14	M8	22	2.1
160*	170	206	178.2	190.3	5	173	187.30	193.20	211	87.0	-	38	63.0	2.0	12	-	34.0	24.0	-	-	34.5	16.5	32.0	12	10.0	12.0	7.1	30.1	14	M8	22	2.1
165*	175	211	183.2	195.3	5	178	192.30	198.20	216	87.0	-	38	63.0	2.0	12	-	34.0	24.0	-	-	34.5	16.5	32.0	12	10.0	12.0	7.1	30.1	14	M8	22	2.1
170*	180	216	188.2	200.3	5	183	197.30	203.20	221	87.0	-	38	63.0	2.0	12	-	34.0	24.0	-	-	37.0	16.5	34.5	12	10.0	12.0	7.1	32.1	16	M8	22	2.1
175*	185	221	193.2	205.3	5	188	202.30	208.20	226	87.0	-	38	63.0	2.0	12	-	34.0	24.0	-	-	37.0	16.5	34.5	12	10.0	12.0	7.1	32.1	16	M8	22	2.1
180*	190	226	207.5	219.3	5	193	207.30	213.20	231	91.0	-	42	63.0	2.0	12	-	38.0	28.0	-	-	37.0	16.5	34.5	12	10.0	12.0	7.1	32.1	16	M8	22	2.1
185*	195	231	212.5	224.3	5	198	212.30	218.20	236	91.0	-	42	63.0	2.0	12	-	38.0	28.0	-	-	37.0	16.5	34.5	12	10.0	12.0	7.1	32.1	16	M8	22	2.1
190*	200	236	217.5	229.3	5	203	217.30	223.20	241	91.0	-	42	63.0	2.0	12	-	38.0	28.0	-	-	37.0	16.5	34.5	12	10.0	12.0	7.1	32.1	16	M8	22	2.1
195*	205	245	222.5	234.2	5	208	225.30	231.20	250	94.0	-	43	66.0	2.0	12	-	38.0	28.0	-	-	37.0	17.5	34.5	12	10.0	14.0	7.1	32.1	16	M10	22	2.1
200*	210	250	227.5	239.3	5	213	230.30	236.20	255	94.0	-	43	66.0	2.0	12	-	38.0	28.0	-	-	37.0	17.5	34.5	12	10.0	14.0	7.1	32.1	16	M10	22	2.1

***EN 12756**
d_1 > 200 on request
inch size available from size 0.625 to 7.875
Note: Additional technical & dimensional information will be provided on request.