

HBrinker Mechanical Seal

Pusher seals Mechanical Seal HB7N



Mechanical Seal HB7N

Operating range

- Shaft diameter: $d_1 = 14 \dots 100 \text{ mm}$ (0.55 " ... 3.94 ")
- Pressure: $p_1 = 25 \text{ bar}$ (363 PSI)
- Temperature: $t = -50 \text{ }^\circ\text{C} \dots +220 \text{ }^\circ\text{C}$ (-58 °F ... +428 °F)
- Sliding velocity: $v_g = 20 \text{ m/s}$ (66 ft/s)
- Axial movement:
 - $d_1 = \text{up to } 25 \text{ mm: } \pm 1.0 \text{ mm}$
 - $d_1 = 28 \text{ up to } 63 \text{ mm: } \pm 1.5 \text{ mm}$
 - $d_1 = \text{from } 65 \text{ mm: } \pm 2.0 \text{ mm}$

Materials

- Seal face: Silicon carbide (Q1)
- Seat G9: Carbon graphite antimony impregnated (A), Carbon graphite resin impregnated (B), Silicon carbide (Q1)
- Seat G4, G6 (Q1), Seat G13 (A, B)
- Secondary seals: EPDM (E), FKM (V) FFKM (K)
- Springs: CrNiMo steel (G)
- Metal parts: CrNiMo steel (G), Duplex (G1)

Features

- For plain shafts
- Single seal
- Unbalanced
- Super-Sinus-spring
- \checkmark Independent of direction of rotation

Advantages

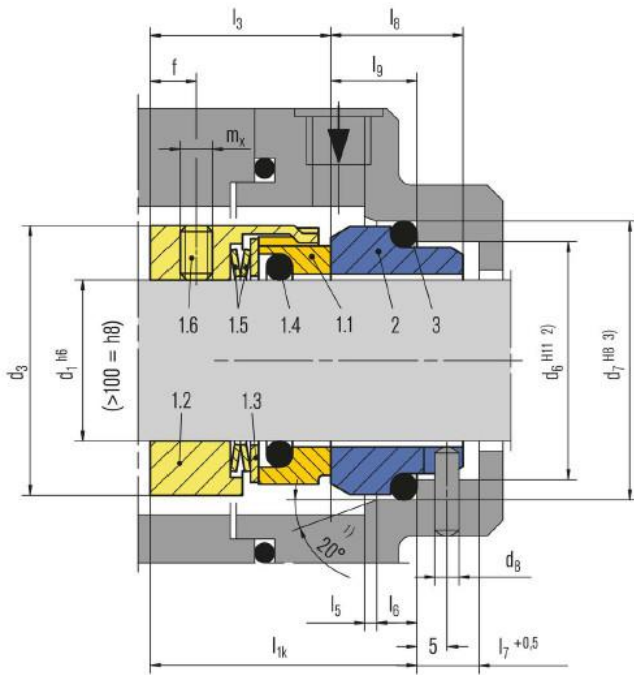
- Universal application opportunities
- Efficient stock keeping due to easily interchangeable faces
- Extended selection of materials
- Insensitive to low solids contents
- Flexibility in torque transmissions
- Self cleaning effect
- Short installation length possible (G16)
- Pumping screw for media with higher viscosity (M7..F)

Recommended applications

- Process industry
- Chemical industry
- Pulp and paper industry
- Water and waste water technology
- Shipbuilding
- Lube oils
- Low solids content media
- Water / sewage water pumps
- Chemical standard pumps
- Vertical screw pumps
- Gear wheel feed pumps
- Multistage pumps (drive side)
- Circulation of printing colors with viscosity 500 ... 15,000 mm²/s.

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Item	Part no. to DIN 24250	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

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Dimension Table in millimeter

d ₁	d ₃	d ₆	d ₇	d ₈	d ₁₁	d ₁₂	d ₂₄	d _s	l _{1k}	l ₃	l ₅	l ₆	l ₇
14*	25	21.0	25.0	3	20.5	24.6	16	34	35.0	25.0	1.5	4	8.5
16*	27	23.0	27.0	3	22.0	28.0	18	36	35.0	25.0	1.5	4	8.5
18*	33	27.0	33.0	3	24.0	30.0	20	38	37.5	26.0	2.0	5	9.0
20*	35	29.0	35.0	3	29.5	35.0	22	40	37.5	26.0	2.0	5	9.0
22*	37	31.0	37.0	3	29.5	35.0	24	42	37.5	26.0	2.0	5	9.0
24*	39	33.0	39.0	3	32.0	38.0	26	44	40.0	28.5	2.0	5	9.0
25*	40	34.0	40.0	3	32.0	38.0	27	45	40.0	28.5	2.0	5	9.0
28*	43	37.0	43.0	3	36.0	42.0	30	47	42.5	31.0	2.0	5	9.0
30*	45	39.0	45.0	3	39.2	45.0	32	49	42.5	31.0	2.0	5	9.0
32*	47	42.0	48.0	3	42.2	48.0	34	51	42.5	31.0	2.0	5	9.0
33*	48	42.0	48.0	3	44.2	50.0	35	51	42.5	31.0	2.0	5	9.0
35*	50	44.0	50.0	3	46.2	52.0	37	54	42.5	31.0	2.0	5	9.0
38*	55	49.0	56.0	4	49.2	55.0	40	59	45.0	31.0	2.0	6	9.0
40*	57	51.0	58.0	4	52.2	58.0	42	61	45.0	31.0	2.0	6	9.0
43*	60	54.0	61.0	4	53.3	62.0	45	65	45.0	31.0	2.0	6	9.0
45*	62	56.0	63.0	4	55.3	64.0	47	66	45.0	31.0	2.0	6	9.0
48*	65	59.0	66.0	4	59.7	68.4	50	69	45.0	31.0	2.0	6	9.0
50*	67	62.0	70.0	4	60.8	69.3	52	71	47.5	32.5	2.5	6	9.0
53*	70	65.0	73.0	4	63.8	72.3	55	75	47.5	32.5	2.5	6	9.0
55*	72	67.0	75.0	4	66.5	75.4	57	76	47.5	32.5	2.5	6	9.0
58*	79	70.0	78.0	4	69.5	78.4	60	83	52.5	37.5	2.5	6	9.0
60*	81	72.0	80.0	4	71.5	80.4	62	85	52.5	37.5	2.5	6	9.0
63*	84	75.0	83.0	4	74.5	83.4	65	88	52.5	37.5	2.5	6	9.0
65*	86	77.0	85.0	4	76.5	85.4	67	95	52.5	37.5	2.5	6	9.0
68*	89	81.0	90.0	4	82.7	91.5	70	93	52.5	34.5	2.5	7	9.0
70*	91	83.0	92.0	4	83.0	92.0	72	95	60.0	42.0	2.5	7	9.0
75*	99	88.0	97.0	4	90.2	99.0	77	105	60.0	42.0	2.5	7	9.0
80*	104	95.0	105.0	4	95.2	104.0	82	109	60.0	41.8	3.0	7	9.0
85*	109	100.0	110.0	4	100.2	109.0	87	114	60.0	41.8	3.0	7	9.0
90*	114	105.0	115.0	4	105.2	114.0	92	119	65.0	46.8	3.0	7	9.0
95*	119	110.0	120.0	4	111.6	120.3	97	124	65.0	47.8	3.0	7	9.0
100*	124	115.0	125.0	4	114.5	123.3	102	129	65.0	47.8	3.0	7	9.0
105	138	122.2	134.3	5	–	–	108	143	67.0	47.0	2.0	10	12.0
110	143	128.2	140.3	5	–	–	113	148	67.0	47.0	2.0	10	12.0
115	148	136.2	148.3	5	–	–	118	153	67.0	47.0	2.0	10	12.0
120	153	138.2	150.3	5	–	–	123	158	67.0	47.0	2.0	10	12.0
125	158	142.2	154.3	5	–	–	128	163	67.0	47.0	2.0	10	12.0
130	163	146.2	158.3	5	–	–	133	168	67.0	47.0	2.0	10	12.0
135	168	152.2	164.3	5	–	–	138	173	67.0	47.0	2.0	10	12.0
140	173	156.2	168.3	5	–	–	143	178	67.0	47.0	2.0	10	12.0
145	178	161.2	173.3	5	–	–	148	183	67.0	47.0	2.0	10	12.0
150	183	168.2	180.3	5	–	–	153	188	69.0	47.0	2.0	10	12.0
155	191	173.2	185.3	5	–	–	158	196	80.0	56.0	2.0	12	12.0
160	196	178.2	190.3	5	–	–	163	201	80.0	56.0	2.0	12	12.0
165	201	183.2	195.3	5	–	–	168	206	80.0	56.0	2.0	12	12.0
170	206	188.2	200.3	5	–	–	173	211	80.0	56.0	2.0	12	12.0
175	211	193.2	205.3	5	–	–	178	216	80.0	56.0	2.0	12	12.0
180	216	207.5	219.3	5	–	–	183	221	84.0	56.0	2.0	12	12.0
185	221	212.5	224.3	5	–	–	188	226	84.0	56.0	2.0	12	12.0
190	226	217.5	229.3	5	–	–	193	231	84.0	56.0	2.0	12	12.0
195	231	222.5	234.3	5	–	–	198	236	84.0	56.0	2.0	12	12.0
200	236	227.5	239.3	5	–	–	203	241	84.0	56.0	2.0	12	12.0

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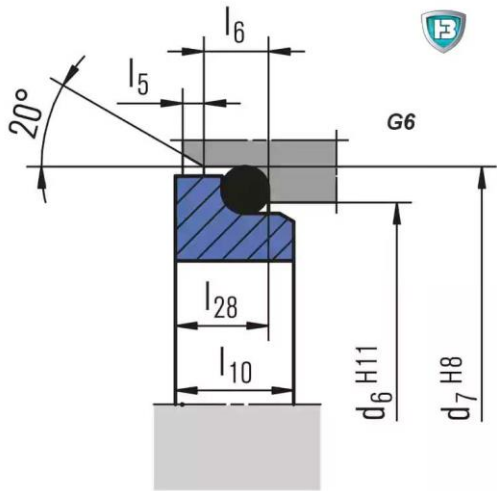


l ₈	l ₉	l ₁₀	l ₁₁	l ₁₂	l ₁₃	l ₁₄	l ₁₅	l ₁₆	l ₂₈	b	f	m _x	u _{max.}	t	R
17.5	10.0	7.5	10.0	6.5	7.6	5.6	1.2	3.8	6.6	4	6	M5	10	1.5	1.2
17.5	10.0	7.5	11.5	8.5	9.0	7.5	1.2	3.8	6.6	4	6	M5	10	1.5	1.5
19.5	11.5	8.5	12.5	9.0	10.0	8.0	1.5	5.0	7.5	5	7	M5	12	1.1	1.5
19.5	11.5	8.5	12.5	8.5	9.5	7.5	1.5	5.0	7.5	5	7	M5	12	1.1	1.5
19.5	11.5	8.5	12.5	8.5	9.5	7.5	1.5	5.0	7.5	6	7	M5	12	1.5	1.5
19.5	11.5	8.5	12.5	8.5	9.5	7.5	1.5	5.0	7.5	6	8	M5	12	1.5	1.5
19.5	11.5	8.5	12.5	8.5	9.5	7.5	1.5	5.0	7.5	6	8	M5	12	1.5	1.5
19.5	11.5	8.5	14.0	10.0	11.0	9.0	1.5	5.0	7.5	6	8	M6	13	1.5	1.5
19.5	11.5	8.5	14.0	11.5	11.0	10.5	1.5	5.0	7.5	6	8	M6	13	1.5	1.5
19.5	11.5	8.5	14.0	11.5	11.0	10.5	1.5	5.0	7.5	6	8	M6	13	1.5	1.5
19.5	11.5	8.5	14.5	12.0	11.5	10.5	1.5	5.0	7.5	6	8	M6	13	1.5	1.5
19.5	11.5	8.5	14.5	12.0	11.5	11.0	1.5	5.0	7.5	6	8	M6	13	1.5	1.5
22.0	14.0	10.0	14.5	11.3	11.5	10.3	1.5	5.0	9.0	6	8	M6	13	1.5	1.5
22.0	14.0	10.0	14.5	11.8	11.5	10.8	1.5	5.0	9.0	6	8	M6	13	1.5	1.5
22.0	14.0	10.0	17.0	13.2	14.3	12.0	2.0	6.0	9.0	6	8	M6	13	1.5	2.5
22.0	14.0	10.0	17.0	12.8	14.3	11.6	2.0	6.0	9.0	6	8	M6	13	1.5	2.5
22.0	14.0	10.0	17.0	12.8	14.3	11.6	2.0	6.0	9.0	6	8	M6	13	1.5	2.5
23.0	15.0	10.5	17.0	12.8	14.3	11.6	2.0	6.0	9.5	6	8	M6	13	1.5	2.5
23.0	15.0	12.0	17.0	13.5	14.3	12.3	2.0	6.0	11.0	6	8	M6	13	1.5	2.5
23.0	15.0	12.0	18.0	14.5	15.3	13.3	2.0	6.0	11.0	6	8	M6	13	1.5	2.5
23.0	15.0	12.0	18.0	14.5	15.3	13.3	2.0	6.0	11.0	8	9	M8	13	1.9	2.5
23.0	15.0	12.0	18.0	14.5	15.3	13.3	2.0	6.0	11.0	8	9	M8	13	1.9	2.5
23.0	15.0	12.0	18.0	14.2	15.3	13.3	2.0	6.0	11.0	8	9	M8	13	1.9	2.5
23.0	15.0	12.0	18.0	14.2	15.3	13.0	2.0	6.0	11.0	8	9	M8	13	1.9	2.5
26.0	18.0	12.5	19.0	14.9	16.0	13.7	2.0	6.0	11.3	8	9	M8	13	1.9	2.5
26.0	18.0	12.5	18.0	14.2	15.3	13.0	2.0	6.0	11.3	8	9	M8	16	1.9	2.5
26.0	18.0	12.5	18.0	15.2	15.3	14.0	2.0	6.0	11.3	8	10	M8	16	1.9	2.5
26.2	18.2	13.0	19.0	16.2	16.3	15.0	2.0	6.0	12.0	8	10	M8	16	1.9	2.5
26.2	18.2	15.0	19.0	16.0	16.3	14.8	2.0	6.0	14.0	8	10	M8	16	1.9	2.5
26.2	18.2	15.0	19.0	16.0	16.3	14.8	2.0	6.0	14.0	10	10	M8	20	2.3	2.5
25.2	17.2	15.0	20.0	17.0	17.3	15.8	2.0	6.0	14.0	10	10	M8	20	2.3	2.5
25.2	17.2	15.0	20.0	17.0	17.3	15.8	2.0	6.0	14.0	10	10	M8	20	2.3	2.5
30.0	20.0	-	-	-	-	-	-	-	-	10	10	M8	20	2.3	-
30.0	20.0	-	-	-	-	-	-	-	-	10	10	M8	20	2.3	-
30.0	20.0	-	-	-	-	-	-	-	-	10	10	M8	20	2.3	-
30.0	20.0	-	-	-	-	-	-	-	-	10	10	M8	20	2.3	-
30.0	20.0	-	-	-	-	-	-	-	-	10	10	M8	20	2.3	-
30.0	20.0	-	-	-	-	-	-	-	-	10	10	M8	20	2.3	-
30.0	20.0	-	-	-	-	-	-	-	-	10	10	M8	20	2.3	-
30.0	20.0	-	-	-	-	-	-	-	-	10	10	M8	20	2.3	-
30.0	20.0	-	-	-	-	-	-	-	-	10	10	M8	20	2.3	-
30.0	20.0	-	-	-	-	-	-	-	-	10	10	M8	20	2.3	-
30.0	20.0	-	-	-	-	-	-	-	-	10	10	M8	20	2.3	-
30.0	20.0	-	-	-	-	-	-	-	-	10	10	M8	20	2.3	-
30.0	20.0	-	-	-	-	-	-	-	-	10	10	M8	20	2.3	-
32.0	22.0	-	-	-	-	-	-	-	-	10	10	M8	20	2.3	-
34.0	24.0	-	-	-	-	-	-	-	-	12	12	M8	24	2.1	-
34.0	24.0	-	-	-	-	-	-	-	-	12	12	M8	24	2.1	-
34.0	24.0	-	-	-	-	-	-	-	-	12	12	M8	24	2.1	-
34.0	24.0	-	-	-	-	-	-	-	-	12	12	M8	24	2.1	-
34.0	24.0	-	-	-	-	-	-	-	-	12	12	M8	24	2.1	-
38.0	28.0	-	-	-	-	-	-	-	-	12	12	M8	24	2.1	-
38.0	28.0	-	-	-	-	-	-	-	-	12	12	M8	24	2.1	-
38.0	28.0	-	-	-	-	-	-	-	-	12	12	M8	24	2.1	-
38.0	28.0	-	-	-	-	-	-	-	-	12	12	M8	24	2.1	-
38.0	28.0	-	-	-	-	-	-	-	-	12	12	M8	24	2.1	-

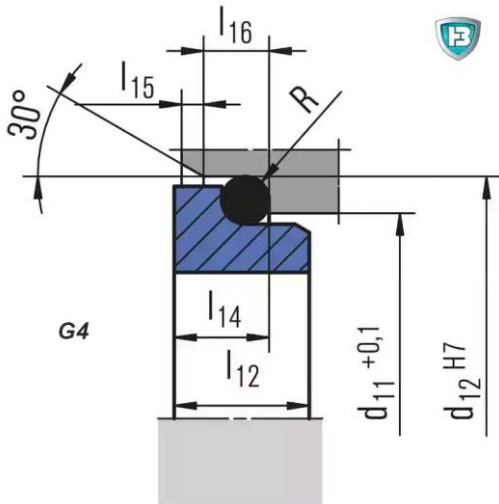
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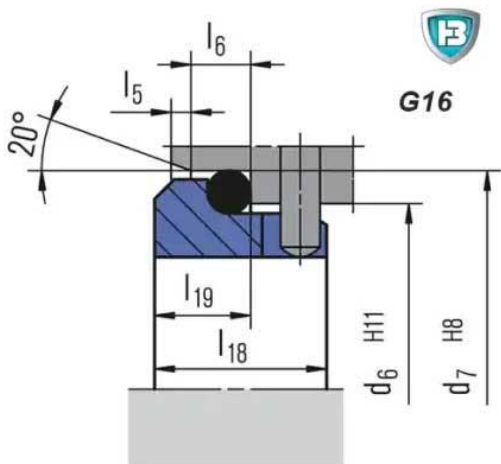
Seat alternatives



Seat G6



v
Seat G4

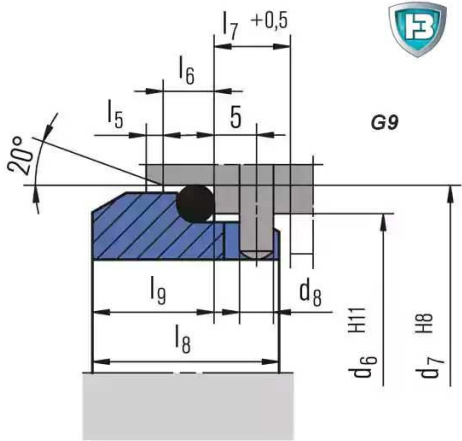


Seat G16

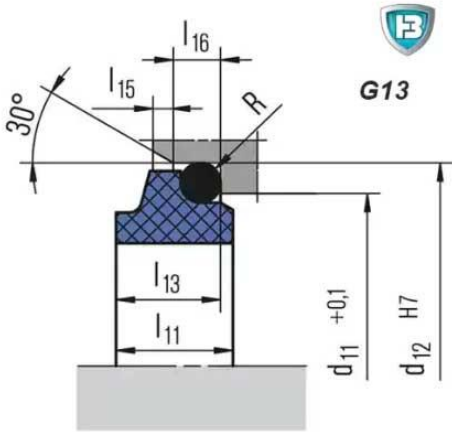


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Seat G9



Seat G13

