

# HBrinker Mechanical Seal

Pusher seals Mechanical Seal HB12N



## Mechanical Seal HB12N

### Operating range

- Shaft diameter:  $d_1 = 10 \dots 80 \text{ mm}$  (0.4" ... 3.125")
- Pressure:  $p_1 = 25 \text{ bar}$  (363 PSI)
- Temperature:  $t = -50 \text{ }^\circ\text{C} \dots +220 \text{ }^\circ\text{C}$  (-58 °F ... +430 °F)
- Sliding velocity:  $v_g = 15 \text{ m/s}$  (50 ft/s)
- Axial movement:  $\pm 1.0 \text{ mm}$



### Materials

- Seal face: Carbon graphite antimony impregnated (A)
- Seat G9: Silicon carbide (Q1), Special cast

### Features

- For stepped shafts
- Single seal
- Balanced
- Dependent of direction of rotation
- Torque transmission via conical spring

### Advantages

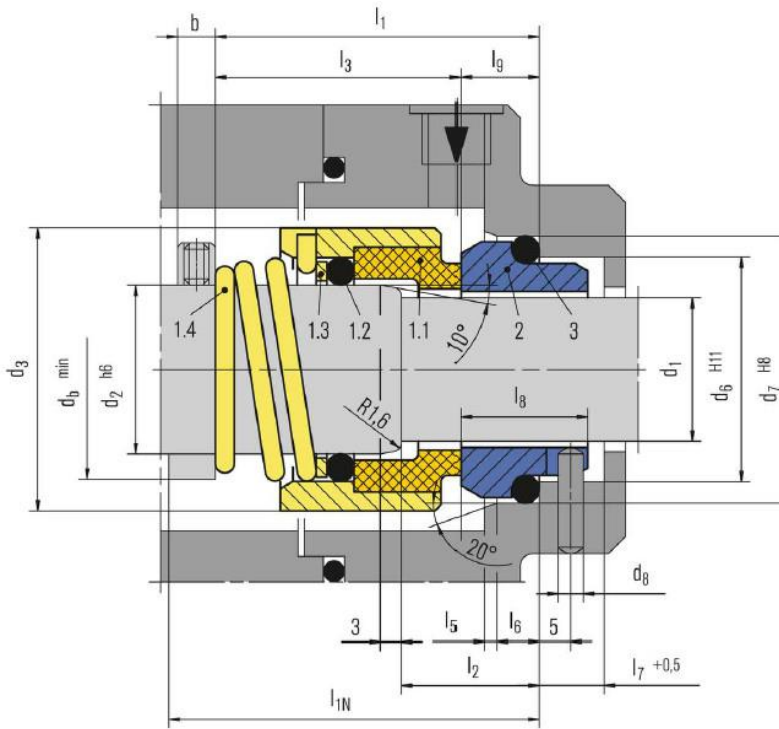
- High flexibility due to extended selection of materials
- Insensitive to low solids contents
- Short Installation length possible (G16)
- Economical balanced seal
- Seat cooling for hot water applications available (G115)
- No damage of the shaft by set screws

### Recommended applications

- Chemical industry
- Pulp and paper industry
- Water and waste water technology
- Low solids content media (H12GN)
- Hot water
- Chemical standard pumps
- Water and sewage pumps

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Item	Part no. To DIN 24250	Description
1.1	472/473	Seal face
1.2	412.1	O-Ring
1.3	474	Thrust ring
1.4	478	Righthand spring
1.4	479	Lefthand spring
2	475	Seat (G9)
3	412.2	O-Ring

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Dimension Table in millimeter

d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	d <sub>6</sub>	d <sub>7</sub>	d <sub>8</sub>	d <sub>21</sub>	d <sub>22</sub>	d <sub>b</sub>	l <sub>1N</sub>	l <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>5</sub>	l <sub>6</sub>
10	14	24	17	21	3	–	–	18	50	35.5	18	25.5	1.5	4
12	16	26	19	23	3	–	–	21	50	36.5	18	26.5	1.5	4
14	18	31	21	25	3	–	–	23	55	39.5	18	29.5	1.5	4
16	20	34	23	27	3	–	–	26	55	41.0	18	31.0	1.5	4
18	22	36	27	33	3	–	–	28	55	44.0	20	32.5	2.0	5
20	24	38	29	35	3	–	–	30	60	44.0	20	32.5	2.0	5
22	26	40	31	37	3	–	–	31	60	44.0	20	32.5	2.0	5
24	28	42	33	39	3	–	–	35	60	44.0	20	32.5	2.0	5
25	30	44	34	40	3	–	–	37	60	45.0	20	33.5	2.0	5
28	33	47	37	43	3	44.65	50.57	40	65	47.0	20	35.5	2.0	5
30	35	49	39	45	3	47.83	53.75	43	65	47.0	20	35.5	2.0	5
32	38	54	42	48	3	47.83	53.75	45	65	51.0	20	39.5	2.0	5
33	38	54	42	48	3	47.83	53.75	45	65	51.0	20	39.5	2.0	5
35	40	56	44	50	3	51	56.92	49	65	55.0	20	43.5	2.0	5
38	43	59	49	56	4	54.18	60.10	52	75	60.0	23	46.0	2.0	6
40	45	61	51	58	4	60.53	66.45	55	75	62.0	23	48.0	2.0	6
43	48	64	54	61	4	63.7	69.62	58	75	65.0	23	51.0	2.0	6
45	50	66	56	63	4	63.7	69.62	61	75	69.0	23	55.0	2.0	6
48	53	69	59	66	4	66.88	72.80	64	85	69.0	23	55.0	2.0	6
50	55	71	62	70	4	70.05	75.97	66	85	73.0	25	58.0	2.5	6
53	58	78	65	73	4	76.4	82.32	69	85	75.0	25	60.0	2.5	6
55	60	79	67	75	4	76.4	82.32	71	85	75.0	25	60.0	2.5	6
58	63	83	70	78	4	79.58	85.50	74	85	75.0	25	60.0	2.5	6
60	65	85	72	80	4	82.75	88.67	77	95	75.0	25	60.0	2.5	6
63	68	88	75	83	4	85.93	91.85	80	95	75.0	25	60.0	2.5	6
65	70	90	77	85	4	85.93	91.85	83	95	76.0	25	61.0	2.5	6
70	75	98	83	92	4	89.1	95.02	88	95	81.0	28	63.0	2.5	7
75	80	103	88	97	4	98.63	104.55	93	105	86.0	28	68.0	2.5	7
80	85	109	95	105	4	101.8	107.72	98	105	86.0	28	68.0	3.0	7

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$l_7$	$l_8$	$l_9$	$l_{18}$	$l_{19}$	$l_{39}$	$l_{40}$	$a$	$b$	$e$	$h_1$	$h_2$	$k$	$b^*)$
8.5	17.5	10.0	—	—	—	—	—	5	—	—	—	—	8.0
8.5	17.5	10.0	—	—	—	—	—	5	—	—	—	—	8.0
8.5	17.5	10.0	—	—	—	—	—	6	—	—	—	—	8.0
8.5	17.5	10.0	—	—	—	—	—	6	—	—	—	—	8.0
9.0	19.5	11.5	15	7	—	—	—	6	—	—	—	—	8.0
9.0	19.5	11.5	15	7	—	—	—	6	—	—	—	—	8.0
9.0	19.5	11.5	15	7	—	—	—	6	—	—	—	—	8.0
9.0	19.5	11.5	15	7	—	—	—	6	—	—	—	—	8.0
9.0	19.5	11.5	15	7	—	—	—	6	—	—	—	—	8.0
9.0	19.5	11.5	15	7	24	8.5	24	6	8	6.6	22.6	9	8.0
9.0	19.5	11.5	15	7	24.5	9.0	24	6	8	6.6	22.6	9	8.0
9.0	19.5	11.5	15	7	24.5	9.0	24	6	8	6.6	22.6	9	7.5
9.0	19.5	11.5	15	7	24.5	9.0	24	6	8	6.6	22.6	9	7.5
9.0	19.5	11.5	15	7	24.5	9.0	24	6	8	6.6	22.6	9	8.0
9.0	22.0	14.0	16	8	26	11	24	6	8	6.6	22.6	9	7.5
9.0	22.0	14.0	16	8	26	11	24	6	8	6.6	22.6	9	8.0
9.0	22.0	14.0	16	8	26	11	24	6	8	6.6	22.6	9	8.0
9.0	22.0	14.0	16	8	26	11	24	6	8	6.6	22.6	9	(8)
9.0	22.0	14.0	16	8	26	11	24	8	8	6.6	22.6	9	8.0
9.0	23.0	15.0	17	9.5	26.5	12.5	24	8	8	6.6	22.6	9	8.0
9.0	23.0	15.0	17	9.5	26.5	12.5	24	8	8	6.6	22.6	9	8.0
9.0	23.0	15.0	17	9.5	28.5	12.5	26	8	8	6.6	24.6	11	8.0
9.0	23.0	15.0	18	10.5	28.5	12.5	26	8	8	6.6	24.6	11	8.0
9.0	23.0	15.0	18	10.5	28.5	12.5	26	8	8	6.6	24.6	11	8.0
9.0	23.0	15.0	18	10.5	28.5	12.5	26	8	8	6.6	24.6	11	10.0
9.0	26.0	18.0	19	11.5	30.5	14.5	26	8	8	6.6	24.6	11	10.0
9.0	26.0	18.0	19	11.5	30.5	14.5	26	10	8	6.6	24.6	11	10.0
9.0	26.2	18.2	19	11.5	30.2	14	26	10	8	6.6	24.6	11	10.0

## Seat alternatives

