EagleBurgmann
a member of EKK and FREUDENBERG

RELY ON EXCELLENCE

BT-RN

Mechanical Seals | Mechanical seals for pumps | Pusher seals

Features

- For plain shafts
- Single seal
- Unbalanced
- Conical spring rotating
- Dependent on direction of rotation
- Torque transmission via conical spring

Notes

Alternative seat ring can be supplied with short tail or long tail with slot for pin (to prevent seat rotation).

Advantages

- Universal application opportunities
- Large choice of materials
- No shaft damage from set screws
- Dimensions can be adjusted and additional seats available
- Variants with shrink fitted face available

Operating range

Shaft diameter:
d1 = 6 ... 110 mm (0.24" ... 4.33"),
Pressure: p1* = 10 (12) bar (145 (174) PSI)
Temperature: t* = -20 °C ... +140 °C (-4 °F ... +284 °F)
Sliding velocity: vg = 15 m/s (50 ft/s)

* Dependent on medium, size and material

Materials

Seal face:
CrNi steel (F, F1), CrNiMo steel (G), Tungsten carbide (U), Silicon carbide (Q1)

Seat:
Carbon graphite antimony impregnated (A), Carbon graphite resin impregnated (B), Tungsten carbide (U), Silicon carbide (Q1)

Elastomers:
NBR (P), EPDM (E), FKM (V), FFKM (K)

Metal parts:
CrNi steel 1.4301 (F), CrNiMo steel 1.4401 (G)

Standards and approvals

- Various material approvals e.g. WRAS, UBA, ACS, NSF, FDA available (depending on type and material combinations). Please inquire!
- EN 12756

Recommended applications

- Water and wastewater technology
- Building services industry
- Chemical industry
- Food and Beverage industry
- Low solid content media
- Centrifugal pumps
- Cooling water pumps
- Clean water pumps

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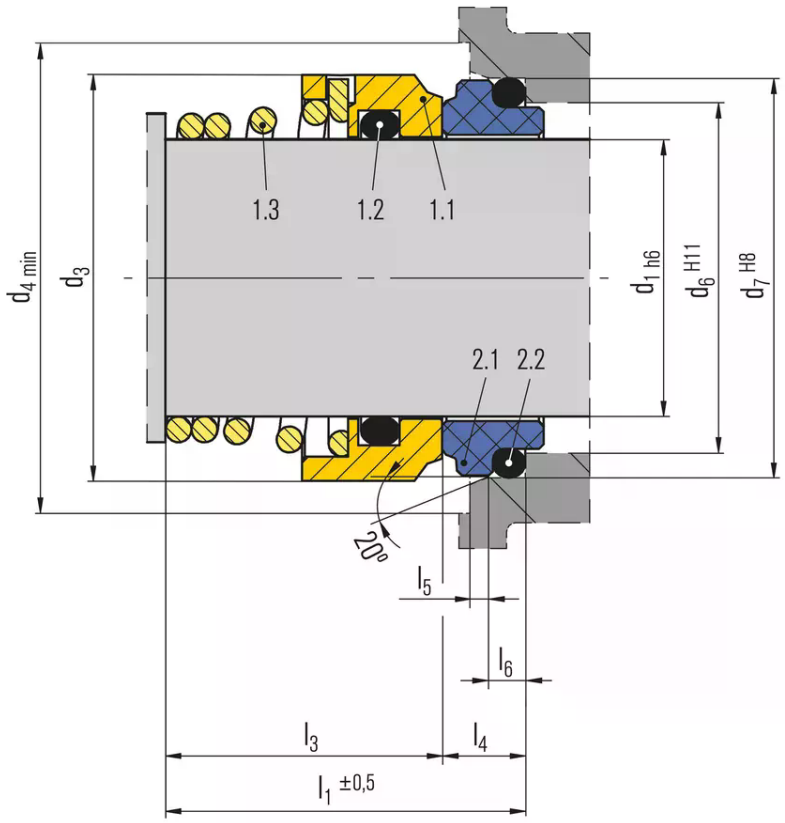
All technical specifications are based on extensive tests and our many years of experience. The diversity of possible applications means, however, that they can serve only as guide values.
We must be notified of the exact conditions of application before we can provide any guarantee for a specific case. Subject to change.



Item	Description
1.1	Seal face
1.2	O-ring
1.3	Spring
2.1	Seat
2.2	O-ring

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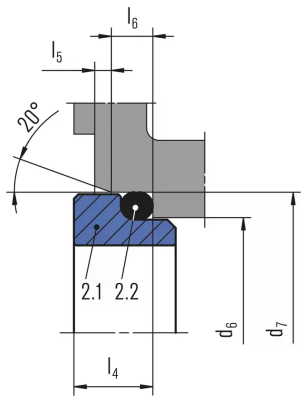
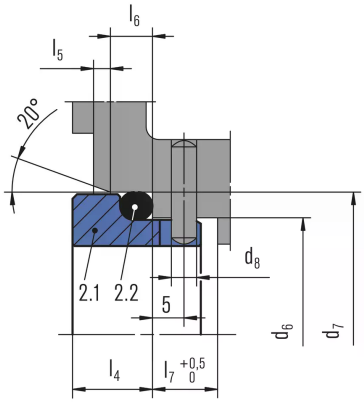
Seat alternatives



PF L

Item Description
2.1 Stationary seat
2.2 O-ring



PF L1

Item Description
2.1 Stationary seat
2.2 O-ring

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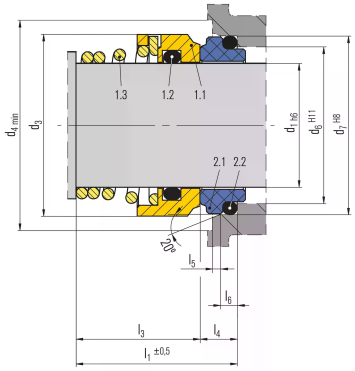
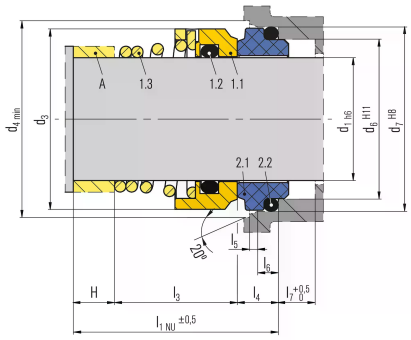
Product variants



BT-RN.KU

Items and designations same as for BT-RN, but with installation length l1K according to EN 12756 (Short, Unbalanced).

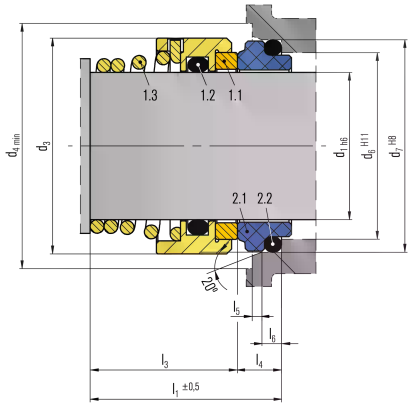
Item Description
1.1 Seal face
1.2 O-ring
1.3 Spring
2.1 Seat
2.2 O-ring



BT-RN.NU

Same items and designations as for BT-RN, but with installation length l1N according to EN 12756 (Normal, Unbalanced).

Item Description
1.1 Seal face
1.2 O-ring
1.3 Spring
A Spacer (upon request)
2.1 Seat
2.2 O-ring



BT-RN40

Same items and designations as for BT-RN, but with shrink-fitted seal face into the seal face carrier.

Seal face:
Tungsten carbide (U), Silicon carbide (Q1)

Shaft diameter:
d1 = 16 ... 80 mm (0.63" ... 3.15"),

Item Description
1.1 Seal face
1.2 O-ring
1.3 Spring
2.1 Seat
2.2 O-ring

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Dimensions

12
14
16
18
20
22
24
25
28
30
32
33
35
38
40
43
45
48
50
53
55
58
60
63
65
68
70
75
80
85
90
95
100

Measurements in MM

d_1	d_3	d_4	d_6	d_7	l_1	l_3	l_4	l_5	l_6
8	16	20	13.0	17.1	20.5	15	5.5	1.2	3
10	20	23	14.0	18.1	20.5	15	5.5	1.2	3
11	20	26	16.5	20.6	23.5	18	5.5	1.2	3
12	22	26	16.5	20.6	23.5	18	5.5	1.2	3
13	22	28	19.0	23.1	28.0	22	6.0	1.2	3
14	24	28	19.0	23.1	28.0	22	6.0	1.2	3
15	24	32	21.0	26.9	29.0	22	7.0	1.5	4
16	26	32	21.0	26.9	30.0	23	7.0	1.5	4
17	26	32	21.0	26.9	30.0	23	7.0	1.5	4
18	32	36	25.0	30.9	32.0	24	8.0	1.5	4
19	32	36	25.0	30.9	33.0	25	8.0	1.5	4
20	32	36	25.0	30.9	33.0	25	8.0	1.5	4

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d_1	d_3	d_4	d_6	d_7	l_1	l_3	l_4	l_5	l_6
21	32	38	30.0	35.4	33.0	25	8.0	2.0	4
22	36	41	30.0	35.4	33.0	25	8.0	2.0	4
23	36	41	30.0	35.4	35.0	27	8.0	2.0	4
24	38	41	30.0	35.4	35.0	27	8.0	2.0	4
25	39	43	33.0	38.2	35.5	27	8.5	2.0	4
26	39	43	33.0	38.2	35.5	27	8.5	2.0	4
28	42	50	38.0	43.3	38.0	29	9.0	2.0	4
29	42	50	38.0	43.3	38.0	29	9.0	2.0	4
30	44	50	38.0	43.3	39.0	30	9.0	2.0	4
32	46	50	38.0	43.3	39.0	30	9.0	2.0	4
33	47	57	45.0	53.5	50.5	39	11.5	2.0	6
34	48	57	45.0	53.5	50.5	39	11.5	2.0	6
35	49	57	45.0	53.5	50.5	39	11.5	2.0	6
36	50	57	45.0	53.5	50.5	39	11.5	2.0	6
37	52	57	45.0	53.5	50.5	39	11.5	2.0	6
38	54	64	52.0	60.5	50.5	39	11.5	2.0	6
40	56	64	52.0	60.5	50.5	39	11.5	2.0	6
42	59	64	52.0	60.5	50.5	39	11.5	2.0	6
43	59	64	52.0	60.5	50.5	39	11.5	2.0	6
44	60	69	57.0	65.5	52.5	41	11.5	2.0	6
45	61	69	57.0	65.5	52.5	41	11.5	2.0	6
48	64	69	57.0	65.5	52.5	41	11.5	2.0	6
50	66	76	64.0	72.5	56.5	45	11.5	2.0	6
55	71	80	64.0	72.5	58.5	47	11.5	2.0	6
60	80	85	72.0	79.3	60.5	49	11.5	2.0	6
65	85	90	77.0	84.5	62.5	51	11.5	2.0	6
70	90	97	82.0	89.5	62.5	51	11.5	2.0	6
75	99	103	87.0	94.5	68.5	57	11.5	2.0	6
80	104	110	92.0	99.5	70.5	59	11.5	2.0	6
85	109	116	98.0	105.5	72.5	59	13.5	2.5	6
90	114	121	105.0	111.5	75.5	62	13.5	2.5	6
95	119	126	110.0	116.5	75.5	62	13.5	2.5	6
100	124	131	114.0	119.5	88.5	75	13.5	2.5	6
110	143	149	124.0	132.2	92.5	75	17.5	4.0	7

BT-RN / BT-RN4 - Dimensions in millimeters

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