

RELY ON EXCELLENCE

## BT-RN.NB / BT-RN.KB

Mechanical Seals | Mechanical seals for pumps | Pusher seals



### Features

- Single seal
- For stepped shafts
- Balanced version of BT-RN
- 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

- Economical balanced seal
- Universal application opportunities
- No damage of the shaft by set screws
- Variants with shrink fitted face available

### Operating range

Shaft diameter:

d1 = 10 ... 100 mm (0.39" ... 3.94")

Pressure: p1\* = 25 bar (363 PSI)

Temperature:

t\* = -20 °C ... +180 °C (-4 °F ... +356 °F)

Sliding velocity: vg = 15 m/s (49 ft/s)

\* Dependent on medium, size and material

### Materials

Seal face:

rNi steel 1.4057 (F1), CrNiMo steel 1.4401 (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 (V)

Metal parts:

CrNiMo steel (G), CrNi steel (F, F1)

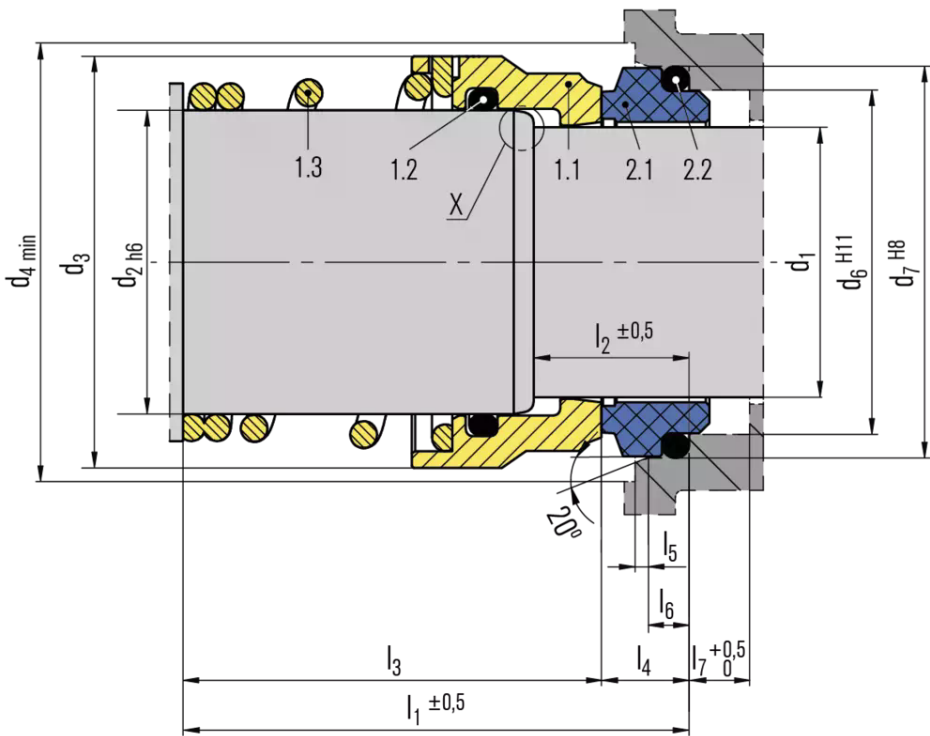
### Standards and approvals

- 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
- Low solid content media
- Centrifugal pumps
- Clean water pumps

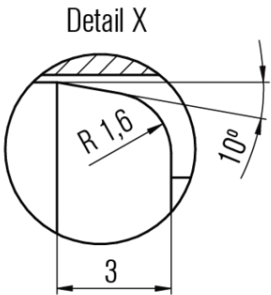
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Item	Description
1.1	Seal face
2.1	Stationary seat
1.2	O-Ring
1.3	Spring
2.2	O-Ring

BT-RN.NB has an installation length IIN in accordance with EN 12756 (normal length).

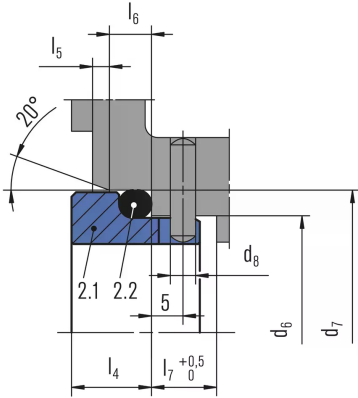
BT-RN.KB has an installation length IIK in accordance with EN 12756 (short length).



BT-RN.NB © EagleBurgmann

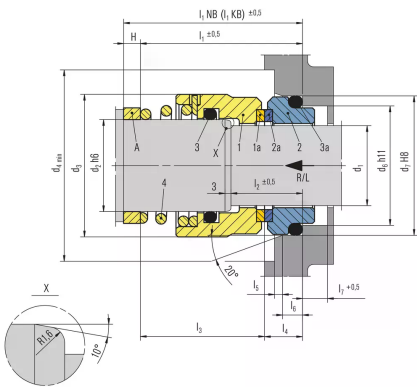
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### Seat alternatives



**PF L1**

**Item Description**  
 2.1 Stationary seat  
 2.2 O-Ring



**PF L**

**Item Description**  
 2.1 Stationary seat  
 2.2 O-Ring

### Product variants

**BT-RN3.NB / KB**

Seal faces made of brazed tungsten carbide which is suitable for media with medium corrosive and abrasive characteristics.

**Item Description**  
 1 Seal face housing  
 1a Brazed seal face  
 2 Stationary seat housing  
 2a Brazed stationary seat  
 3, 3a O-Ring  
 4 Spring  
 A Spacer (upon request)

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### Dimensions

BT-RN.NB d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub>	d <sub>4</sub>	d <sub>6</sub>	d <sub>7</sub>	d <sub>8</sub>	h <sub>1NB</sub>	H	h <sub>1</sub>	l <sub>2</sub>	l <sub>3</sub>	l <sub>4</sub>	l <sub>5</sub>	l <sub>6</sub>	l <sub>7</sub>	BT.RN.KB l <sub>1KB</sub>	l <sub>3</sub>
10	14	24	26	17	21	3	50	-	50	18	43	7	1.5	4	8.0	40.0	33.0
12	16	26	28	19	23	3	50	-	50	18	43	7	1.5	4	8.5	40.0	33.0
14	18	32	34	21	25	3	55	9	46	18	39	7	1.5	4	8.5	42.5	35.5
16	20	34	36	23	27	3	55	8	47	18	40	7	1.5	4	8.5	42.5	35.5
18	22	36	38	27	33	3	55	4	51	20	41	10	2.0	5	9.0	45.0	35.0
20	24	38	40	29	35	3	60	7	53	20	43	10	2.0	5	9.0	45.0	35.0
22	26	40	42	31	37	3	60	7	53	20	43	10	2.0	5	9.0	45.0	35.0
24	28	42	44	33	39	3	60	-	60	20	50	10	2.0	5	9.0	47.5	37.5
25	30	44	46	34	40	3	60	-	60	20	50	10	2.0	5	9.0	47.5	37.5
28	33	47	49	37	43	3	65	-	65	20	55	10	2.0	5	9.0	50.0	40.0
30	35	49	51	39	45	3	65	-	65	20	55	10	2.0	5	9.0	50.0	40.0
32	38	54	58	42	48	3	65	-	65	20	55	10	2.0	5	9.0	50.0	40.0
33	38	54	58	42	48	3	65	-	65	20	55	10	2.0	5	9.0	50.0	40.0
35	40	56	60	44	50	3	65	-	65	20	55	10	2.0	5	9.0	50.0	40.0
38	43	59	63	49	56	4	75	-	75	23	62	13	2.0	6	9.0	52.5	39.5
40	45	61	65	51	58	4	75	-	75	23	62	13	2.0	6	9.0	52.5	39.5
43	48	64	68	54	61	4	75	-	75	23	62	13	2.0	6	9.0	52.5	39.5
45	50	66	70	56	63	4	75	-	75	23	62	13	2.0	6	9.0	52.5	39.5
48	53	69	73	59	66	4	85	-	85	23	72	13	2.0	6	9.0	52.5	39.5
50	55	71	75	62	70	4	85	-	85	25	71	14	2.5	6	9.0	57.5	43.5
53	58	78	83	65	73	4	85	-	85	25	71	14	2.5	6	9.0	57.5	43.5
55	60	80	85	67	75	4	85	-	85	25	71	14	2.5	6	9.0	57.5	43.5
58	63	83	88	70	78	4	85	-	85	25	71	14	2.5	6	9.0	62.5	48.5
60	65	85	90	72	80	4	95	-	95	25	81	14	2.5	6	9.0	62.5	48.5
63	68	88	93	75	83	4	95	-	95	25	81	14	2.5	6	9.0	62.5	48.5
65	70	90	95	77	85	4	95	-	95	25	81	14	2.5	6	9.0	62.5	48.5
70	75	99	104	83	92	4	95	-	95	28	79	16	2.5	7	9.0	70.0	54.0
75	80	104	109	88	97	4	105	-	105	28	89	16	2.5	7	9.0	70.0	54.0
80	85	109	114	95	105	4	105	-	105	28	87	18	3.0	7	9.0	70.0	52.0
85	90	114	119	100	110	4	105	-	105	28	87	18	3.0	7	9.0	75.0	57.0
90	95	119	124	105	115	4	105	-	105	28	87	18	3.0	7	9.0	75.0	57.0
95	100	124	129	110	120	4	105	-	105	28	87	18	3.0	7	9.0	75.0	57.0
100	105	129	134	115	125	4	105	-	105	28	87	18	3.0	7	9.0	75.0	57.0

I~1NB~ complies with EN 12756 (normal length, unbalanced) BT-RN.NB / KB Balanced - Dimensions in millimeter