

## BT-RN Balanced

### EagleBurgmann BT Mechanical seals



#### Features

- Single pusher-type seal
- Balanced
- Conical spring
- Dependent on direction of rotation
- Short length (KB)
- Normal length (NB)

#### Advantages

The BT-RN.NB/KB represents a traditional pusher seal and is the balanced version of a BT-RN. Designed for high pressure fluids, it is made from the same material range as the BT-RN. The main characteristic is a short design combined with an economical seal solution. Length and dimensions according to EN 12756 (RN.NB normal length, RN.KB short length).

#### Operating range

Shaft diameter:  
 $d_1 = 10 \dots 100 \text{ mm (0.39" } \dots \text{ 3.94")}$   
 Pressure:  $p_1^* = 25 \text{ (40) bar (363 (580) PSI)}$   
 Temperature:  
 $t^* = -35 \text{ }^\circ\text{C } \dots \text{ } +180 \text{ }^\circ\text{C (-31 }^\circ\text{F } \dots \text{ } +292 \text{ }^\circ\text{F)}$   
 Sliding velocity:  $v_g = 15 \text{ m/s (49 ft/s)}$

\* Dependent on medium, size and material

#### Materials

Seal face:

CrNi steel 1.4057 (F1), CrNiMo steel 1.4401 (G), Tungsten carbide (U)

Seat:

Carbon graphite antimony impregnated (A), Carbon graphite resin impregnated (B), Tungsten carbide (U) Elastomers: NBR (P), EPDM (E), FKM (V), FFKM (V)  
 Metal parts: CrNiMo steel (G), CrNi steel (F, F1)

#### Standards and approvals

- KTW
- W270
- ACS
- WRAS
- NSF
- FDA
- DM 174/04

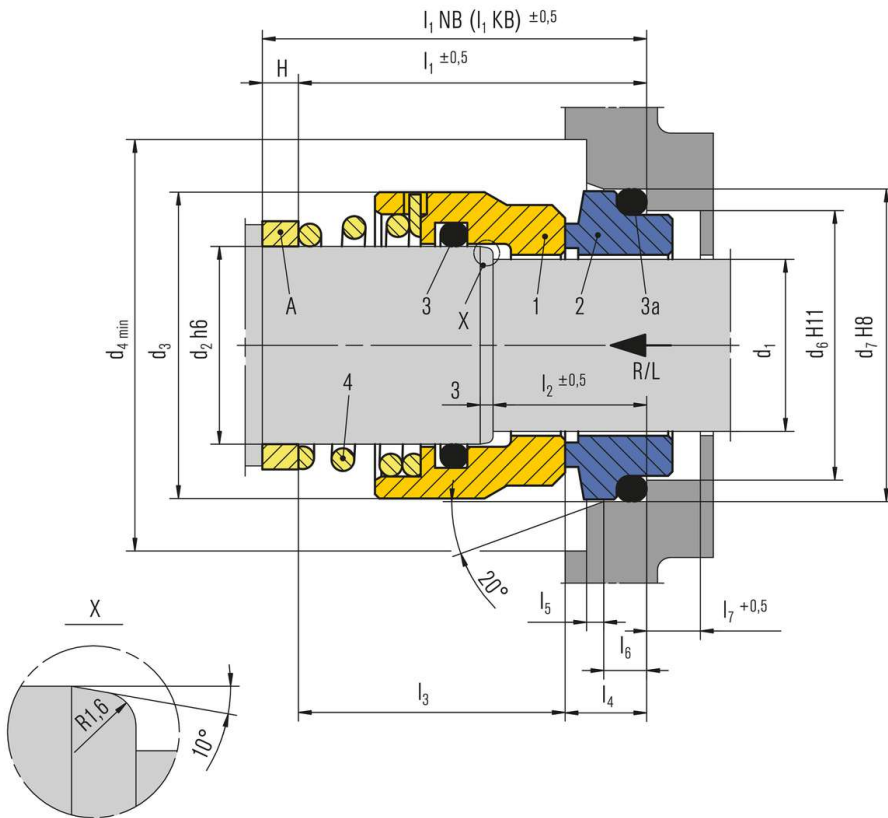
#### Notes

Seat ring of alternative seats can be supplied with short tail or with pin to block the seat and prevent seat rotation.

#### Recommended applications

- Building services industry
- Chemical industry
- Centrifugal pumps
- Clean water pumps

## RELY ON EXCELLENCE



### Item Description

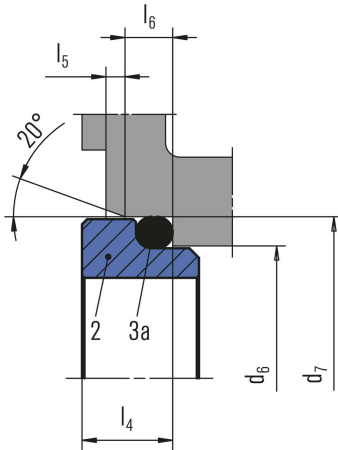
- 1 Seal face
- 2 Stationary seat
- 3, 3a O-Ring
- 4 Spring
- A Spacer (upon request)

BT-RN.NB has an installation length  $l_{1N}$  in accordance with EN 12756 (normal length).

BT-RN.KB has an installation length  $l_{1K}$  in accordance with EN 12756 (short length).

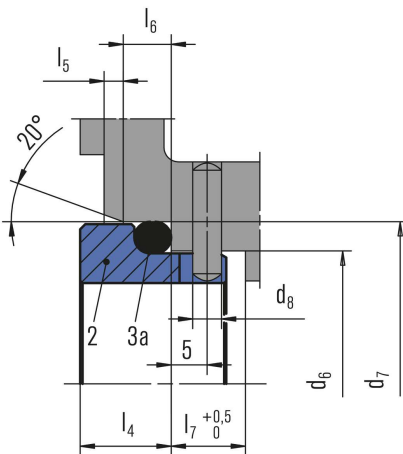
RELY ON EXCELLENCE

## Seat alternatives



PFL

**Item Description**  
 2 Stationary seat  
 3a O-Ring

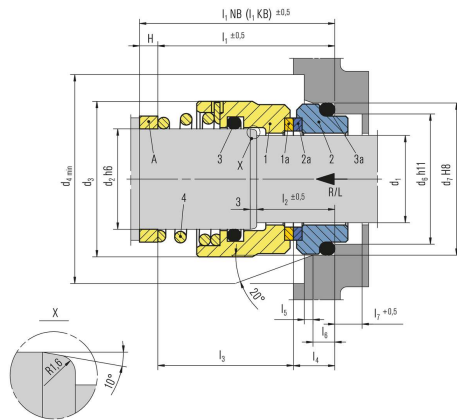


PFL1

**Item Description**  
 2 Stationary seat  
 3a O-Ring

RELY ON EXCELLENCE

## 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)

## RELY ON EXCELLENCE

### 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>	l <sub>1NB</sub>	H	l <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

l<sub>1NB</sub> complies with EN 12756 (normal length, unbalanced)

BT-RN.NB / KB Balanced - Dimensions in millimeter