

RELY ON EXCELLENCE

BT-FH

EagleBurgmann BT Mechanical seals



Features

- Single pusher-type seal
- Unbalanced
- Conical spring
- Dependent on direction of rotation

Advantages

The BT-FH is a seal for demanding applications where operating conditions in the pump require machined metal parts for the mechanical seal. The seals are available in a full range of diameters from 10 to 100 mm and in the standard diameters specifically for chemical applications.

Operating range

Shaft diameter:
 $d_1 = 10 \dots 100 \text{ mm (0.39" ... 3.94")}$
 Pressure: $p_1^* = 12 \text{ (16) bar (174 (232) PSI)}$
 Temperature:
 $t^* = -35 \text{ °C ... +200 °C (-31 °F ... +392 °F)}$
 Sliding velocity: $vg = 15 \text{ m/s (49 ft/s)}$

* Dependent on medium, size and material

Materials

Seal face:

Aluminium oxide (V), Silicon carbide (Q1), Tungsten carbide (U1)

Seat:

Carbon graphite antimony impregnated (A), Carbon graphite resin impregnated (B), Silicon carbide (Q1), Tungsten carbide (U1)

Elastomers:

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

Metal parts: CrNiMo steel 1.4401 (G)

Standards and approvals

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

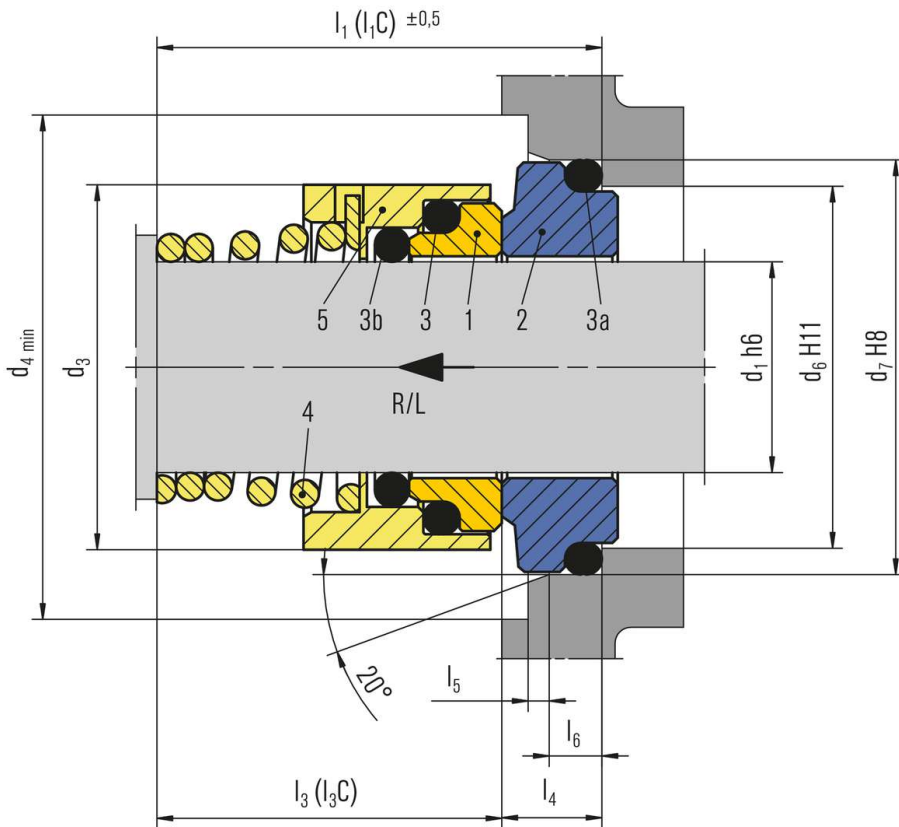
Notes

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

Recommended applications

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

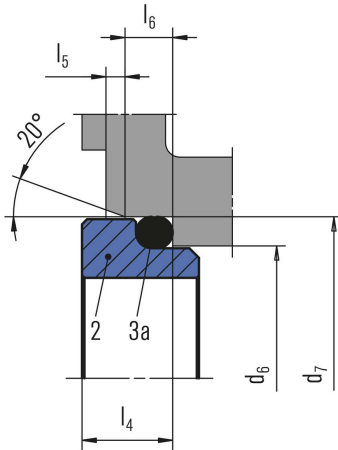
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Item	Description
1	Seal face
2	Stationary seat
3, 3a, 3b	O-Ring
4	Spring
5	Collar

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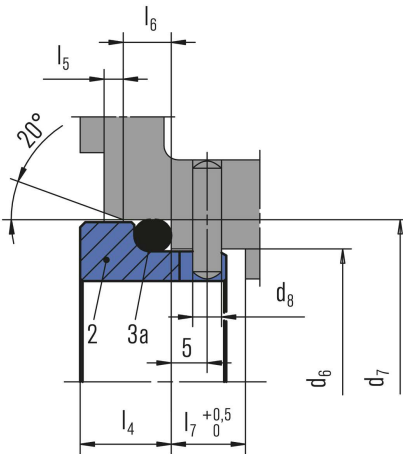
Seat alternatives



PFL

Item Description

- 2 Stationary seat
- 3a O-Ring



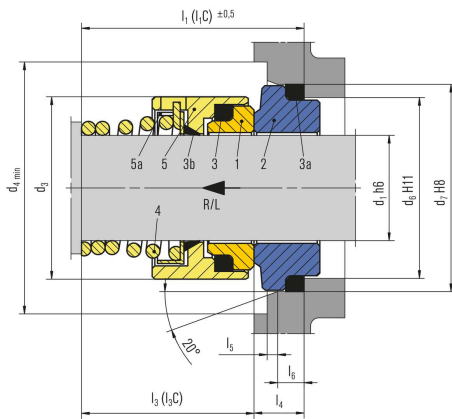
PFL1

Item Description

- 2 Stationary seat
- 3a O-Ring

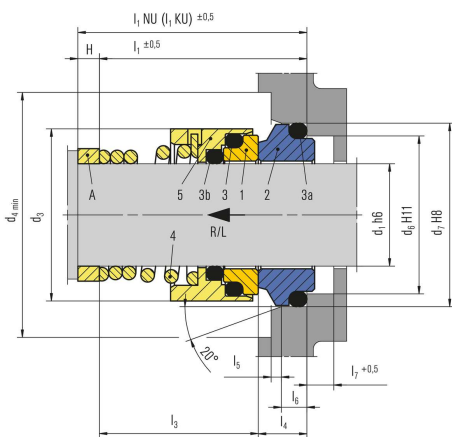
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Product variants



BT-FH6

Like BT-FH but with PTFE secondary seal elements instead of elastomers. Mainly used in the chemical industry and for corrosive media.



BT-FH.NU / KU

BT-FH.NU has an installation length l_{1N} and seat dimensions in accordance with EN 12756 (normal length).

BT-FH.KU has an installation length l_{1K} and seat dimensions in accordance with EN 12756 (short length).

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

BT-FHC

Like BT-FH but with shorter installation length (see l_{3C} in the dimension table). The model BT-FHC has the same installation length as the BT-RN.

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Dimensions

BT-FH d ₁	d ₃	d ₄	d ₆	d ₇	l ₁	l ₃	l ₄	l ₅	l ₆	BT-FHC l _{1C}	l _{3C}
10	20	22	14.0	18.1	25.5	20	5.5	1.2	3	20.5	15
12	22	25	16.5	20.6	27.5	22	5.5	1.2	3	23.5	18
14	25	28	19.0	23.1	33.0	27	6.0	1.2	3	28.0	22
15	29	32	21.0	26.9	34.0	27	7.0	1.5	4	28.0	22
16	29	32	21.0	26.9	35.0	28	7.0	1.5	4	30.0	23
18	33	36	25.0	30.9	38.0	30	8.0	1.5	4	32.0	24
20	33	36	25.0	30.9	38.0	30	8.0	1.5	4	33.0	25
22	38	41	30.0	35.4	38.0	30	8.0	2.0	4	33.0	25
24	38	41	30.0	35.4	40.0	32	8.0	2.0	4	35.0	27
25	40	45	33.0	38.2	41.5	33	8.5	2.0	4	35.5	27
26	40	45	33.0	38.2	41.5	33	8.5	2.0	4	35.5	27
28	46	50	38.0	43.3	45.0	36	9.0	2.0	4	38.0	29
30	46	50	38.0	43.3	46.0	37	9.0	2.0	4	39.0	30
32	46	50	38.0	43.3	46.0	37	9.0	2.0	4	39.0	30
34	56	62	45.0	53.3	59.5	48	11.5	2.0	6	50.5	39
35	56	62	45.0	53.5	59.5	48	11.5	2.0	6	50.5	39
36	56	62	45.0	53.5	59.5	48	11.5	2.0	6	50.5	39
38	63	70	52.0	60.5	59.5	48	11.5	2.0	6	50.5	39
40	63	70	52.0	60.5	59.5	48	11.5	2.0	6	50.5	39
42	63	70	52.0	60.5	59.5	48	11.5	2.0	6	50.5	39
43	63	70	52.0	60.5	59.5	48	11.5	2.0	6	52.5	41
45	69	75	57.0	65.5	62.5	51	11.5	2.0	6	52.5	41
48	69	75	57.0	65.5	62.5	51	11.5	2.0	6	52.5	41
50	76	83	64.0	72.5	66.5	55	11.5	2.0	6	56.5	45
55	76	83	64.0	72.5	68.5	57	11.5	2.0	6	58.5	47
60	84	90	72.0	79.3	72.5	61	11.5	2.0	6	60.5	49
65	89	96	77.0	84.5	74.5	63	11.5	2.0	6	62.5	51
70	94	101	82.0	89.5	74.5	63	11.5	2.0	6	62.5	51
75	100	106	87.0	94.5	79.5	68	11.5	2.0	6	68.5	57
80	105	111	92.0	99.5	81.5	70	11.5	2.0	6	70.5	59
85	115	125	98.0	105.5	85.5	72	13.5	2.5	6	72.5	59
90	120	132	105.0	111.5	88.5	75	13.5	2.5	6	75.5	62
95	126	137	110.0	116.5	88.5	75	13.5	2.5	6	75.5	62
100	130	143	114.0	119.5	98.5	85	13.5	2.5	6	88.5	75

BT-FH / BT-FHC - Dimensions in millimeter

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Dimensions

BT-FH.NU d ₁	d ₃	d ₄	d ₆			H	l ₁	l ₃	l ₄	l ₅	l ₆	l ₇	BT-FH.KU l _{1KU}	l ₃
10	20	22	17	21	40	18	22	15	7	1.5	4	8.5	32.5	25.5
12	22	25	19	23	40	15	25	18	7	1.5	4	8.5	32.5	25.5
14	25	28	21	25	40	11	29	22	7	1.5	4	8.5	35.0	28.0
16	29	32	23	27	40	10	30	23	7	1.5	4	8.5	35.0	28.0
18	33	36	27	33	45	11	34	24	10	2.0	5	9.0	37.5	27.5
18	33	36	27	33	45	11	34	24	10	2.0	5	9.0	37.5	27.5
20	33	36	29	35	45	10	35	25	10	2.0	5	9.0	37.5	27.5
22	38	41	31	37	45	10	35	25	10	2.0	5	9.0	37.5	27.5
24	38	41	33	39	50	13	37	27	10	2.0	5	9.0	40.0	30.0
25	40	45	34	40	50	13	37	27	10	2.0	5	9.0	40.0	30.0
28	46	50	37	43	50	11	39	27	10	2.0	5	9.0	42.5	32.5
30	46	50	39	45	50	10	40	29	10	2.0	5	9.0	42.5	32.5
32	46	50	42	48	55	15	40	30	10	2.0	5	9.0	42.5	32.5
33	52	56	42	48	55	6	49	39	10	2.0	5	9.0	42.5	32.5
35	56	62	44	50	55	6	49	39	10	2.0	5	9.0	42.5	32.5
38	63	70	49	56	55	-	55	42	13	2.0	6	9.0	45.0	32.0
40	63	70	51	58	55	-	55	42	13	2.0	6	9.0	45.0	32.0
43	63	70	54	61	60	-	60	47	13	2.0	6	9.0	45.0	32.0
45	69	75	56	63	60	-	60	47	13	2.0	6	9.0	45.0	32.0
48	69	75	59	66	60	-	60	47	13	2.0	6	9.0	45.0	32.0
50	76	83	62	70	60	-	60	46	14	2.5	6	9.0	47.5	33.5
53	76	83	65	73	70	-	70	56	14	2.5	6	9.0	47.5	33.5
55	76	83	67	75	70	-	70	56	14	2.5	6	9.0	47.5	33.5
58	82	88	70	78	70	-	70	56	14	2.5	6	9.0	52.5	38.5
60	84	90	72	80	70	-	70	56	14	2.5	6	9.0	52.5	38.5
63	86	93	75	83	70	-	70	56	14	2.5	6	9.0	52.5	38.5
65	89	96	77	85	80	-	80	66	14	2.5	6	9.0	52.5	38.5
68	92	99	81	90	80	-	80	64	16	2.5	7	9.0	52.5	36.5
70	94	101	83	92	80	-	80	64	16	2.5	7	9.0	60.0	44.0
75	100	106	88	97	80	-	80	64	16	2.5	7	9.0	60.0	44.0
80	105	111	95	105	90	-	90	72	18	3.0	7	9.0	60.0	42.0
85	115	125	100	110	90	-	90	72	18	3.0	7	9.0	60.0	42.0
90	120	132	105	115	90	-	90	72	18	3.0	7	9.0	65.0	47.0
95	126	137	110	120	90	-	90	72	18	3.0	7	9.0	65.0	47.0
100	130	143	115	125	90	-	90	72	18	3.0	7	9.0	65.0	47.0

d₃, d₄ dimensions not always in accordance with EN 12756

l_{1NU} complies with EN 12756 (normal length, unbalanced)

l_{1KU} complies with EN 12756 (short length, unbalanced)

BT-FH.NU / KU - Dimensions in millimeter