EagleBurgmann
a member of EKK and FREUDENBERG

RELY ON EXCELLENCE

BT-FN

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

Advantages
- Economical seal solution
- Universal application opportunities
- Designed for high volume seal applications
- High flexibility due to extended selectin of materials
- No damage of the shaft by clamping screws
- Dimensions can be customized
- Additional seats available

Operating range
Shaft diameter:
d1= 10 ... 40 mm (0.39" ... 1.57")
Pressure: p1*= 12 (16) bar (174 (232) PSI)
Temperature:
t* = -35 °C... +180 °C (-31 °F ... +356 °F)
Sliding velocity: vg = 15 m/s (50 ft/s)

* Dependent on medium, size and material

Materials
Materials Seal face: Al-Oxide (V, V1), Silicon carbide (Q1, Q6, Q7), Tungsten carbide (U) Seat: Carbon graphite antimony impregnated (A), Carbon graphite resin impregnated (B), Carbon graphite, full carbon (B3), Silicon carbide (Q1, Q6, Q7), Tungsten carbide (U) PTFE glass fiber reinforced (Y1), PTFE carbon reinforced (Y2) 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 (FN.NU, FN.KU)

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

Recommended applications
- Water and wastewater technology
- Building services industry
- Chemical industry
- Food and Beverage industry
- Low solid content media
- Centrifugal pumps
- Cooling water pumps
- Pumps for domestic applications
- Centrifugal pumps
- Clean water pumps
- Pumps for domestic applications and gardening

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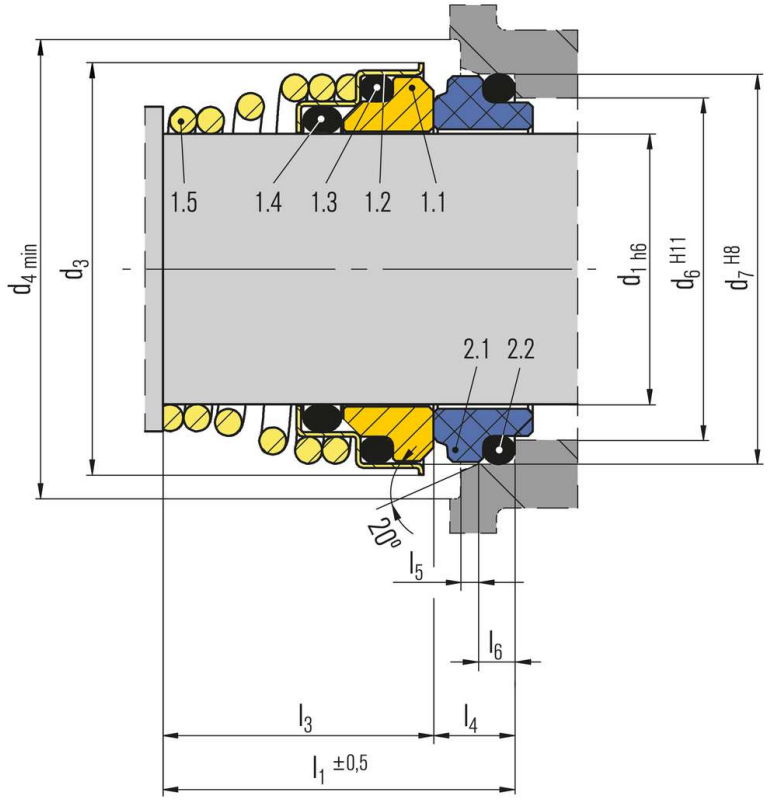
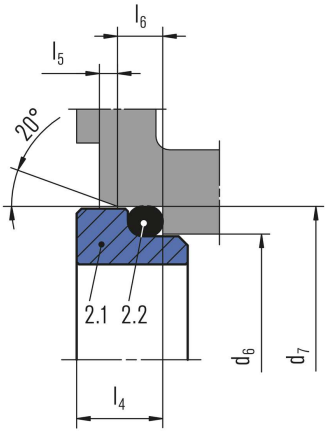


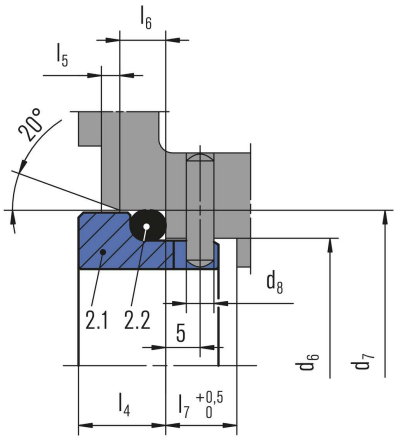
Item	Description
1.1	Seal face
1.2	Collar
1.3	O-Ring
1.4	O-Ring
1.5	Spring
2.1	Stationary seat
2.2	O-Ring

Seat alternatives



PF L

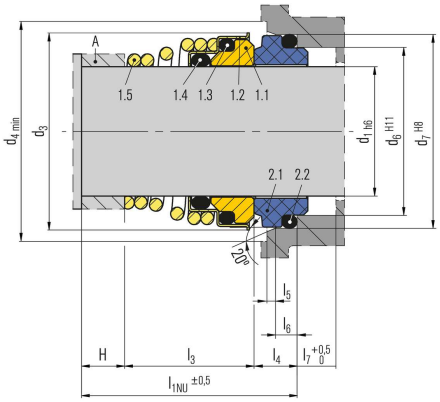
Item	Description
2	Stationary seat
2.1	O-Ring



PF L

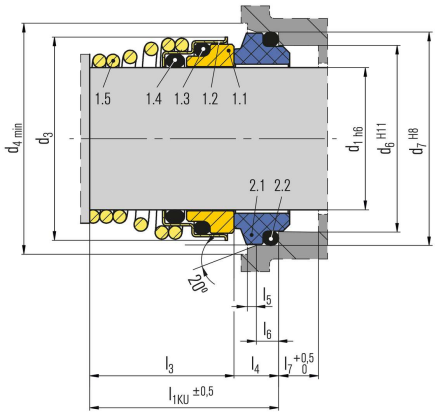
Item	Description
2	Stationary seat
2.1	O-Ring

Product variants



BT-FN.NU
Items and designations same as for BT-FN, but with installation length l1N according to EN 12756 (Normal, Unbalanced).

Item	Description
1.1	Seal face
1.2	Collar
1.3, 1.4	O-Ring
1.5	Spring
2.1	Stationary Seat
2.2	O-Ring



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

Item	Description
1.1	Seal face
1.2	Collar
1.3, 1.4	O-Ring
1.5	Spring
2.1	Stationary Seat
2.2	O-Ring

Dimensions

d_1	d_3	d_4	d_6	d_7	l_1	l_3	l_4	l_5	l_6
10	19.5	22	14.0	18.1	20.5	15	5.5	1.2	3
11	22.5	25	16.5	20.6	23.5	18	5.5	1.2	3
12	22.5	25	16.5	20.6	23.5	18	5.5	1.2	3
13	24.5	28	19.0	23.1	28.0	22	6.0	1.2	3
14	24.5	28	19.0	23.1	28.0	22	6.0	1.2	3
15	29.0	32	21.0	26.9	29.0	22	7.0	1.5	4
16	29.0	32	21.0	26.9	30.0	23	7.0	1.5	4
17	29.0	32	21.0	26.9	30.0	23	7.0	1.5	4
18	32.5	36	25.0	30.9	32.0	24	8.0	1.5	4
19	32.5	36	25.0	30.9	33.0	25	8.0	1.5	4
20	32.5	36	25.0	30.9	33.0	25	8.0	1.5	4
22	37.5	42	30.0	35.4	33.0	25	8.0	2.0	4
24	37.5	42	30.0	35.4	35.0	27	8.0	2.0	4
25	40.0	45	33.0	38.2	35.5	27	8.5	2.0	4
28	46.0	51	38.0	43.3	38.0	29	9.0	2.0	4
30	46.0	51	38.0	43.3	39.0	30	9.0	2.0	4
32	46.0	51	38.0	43.3	39.0	30	9.0	2.0	4
35	50.0	55	45.0	53.5	50.5	39	11.5	2.0	6
38	58.0	68	52.0	60.5	50.5	39	11.5	2.0	6
40	58.0	68	52.0	60.5	50.5	39	11.5	2.0	6

BT-FN - Dimensions in millimeter

Dimensions

BT-FN.NU d_1	d_3	d_4	d_6	d_7	d_8	l_{1N}	H	l_1	l_3	l_4	l_5	l_6	l_7	BT-FN.KU l_{1KU}	l_3
10	20.0	22	17	21	3	40	18	22	15	7	1.5	4	8.5	32.5	25.5
12	22.5	26	19	23	3	40	15	25	18	7	1.5	4	8.5	32.5	25.5
14	24.5	28	21	25	3	40	11	29	22	7	1.5	4	8.5	35.0	28.0
16	29.0	32	23	27	3	40	10	30	23	7	1.5	4	8.5	35.0	28.0
18	32.5	36	27	33	3	45	11	34	24	10	2.0	5	9.0	37.5	27.5
20	32.5	36	29	35	3	45	10	35	25	10	2.0	5	9.0	37.5	27.5
22	37.5	40	31	37	3	45	10	35	25	10	2.0	5	9.0	37.5	27.5
24	37.5	40	33	39	3	50	13	37	27	10	2.0	5	9.0	40.0	30.0
25	40.0	42	34	40	3	50	13	37	27	10	2.0	5	9.0	40.0	30.0
28	46.0	48	37	43	3	50	11	39	29	10	2.0	5	9.0	42.5	32.5
30	46.0	48	39	45	3	50	10	40	30	10	2.0	5	9.0	42.5	32.5
32	46.0	48	42	48	3	55	15	40	30	10	2.0	5	9.0	42.5	32.5
35	50.0	53	44	50	3	55	6	49	39	10	2.0	5	9.0	42.5	32.5
38	58.0	68	49	56	4	55	3	52	39	13	2.0	6	9.0	45.0	32.0
40	58.0	68	51	58	4	55	3	52	39	13	2.0	6	9.0	45.0	32.0

d_3, d_4 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-FN.NU / KU - Dimensions in millimeter