RELY ON EXCELLENCE

BT-FN

Mechanical Seals | Mechanical seals for pumps | Pusher seals

Features

- Single seal
- For plain shafts
- 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

- Economical seal solution
- Universal application opportunities
- Designed for high volume seal applications
- High flexibility due to extended selection 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)

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

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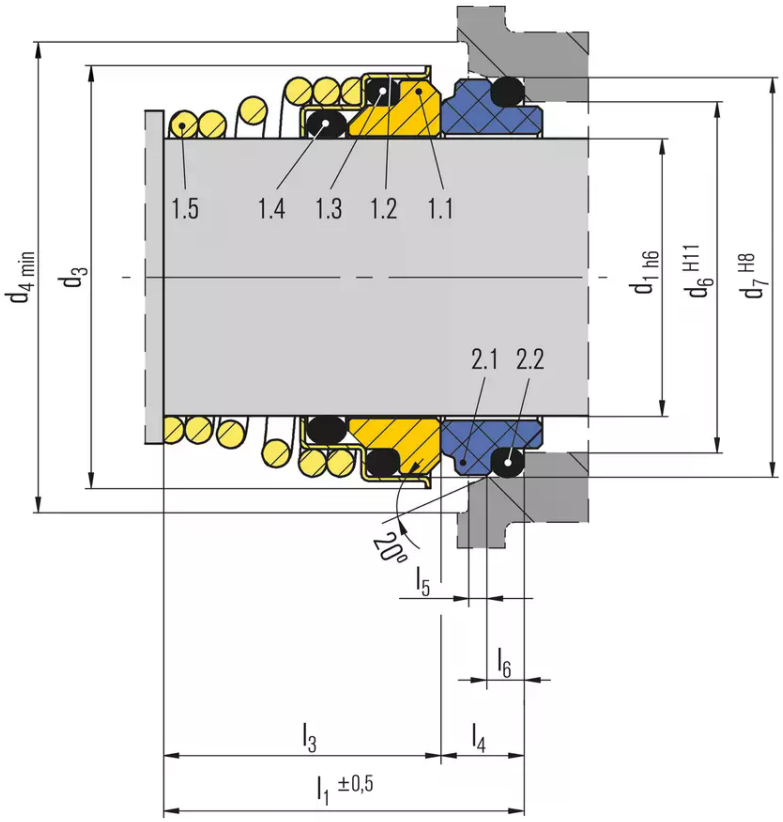
All technical specifications are based on extensive tests and our many years of experience. The diversity of possible applications means, however, that they can serve only as guide values.
We must be notified of the exact conditions of application before we can provide any guarantee for a specific case.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



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

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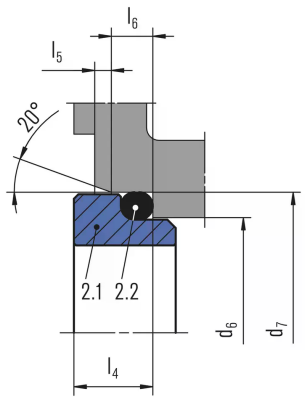
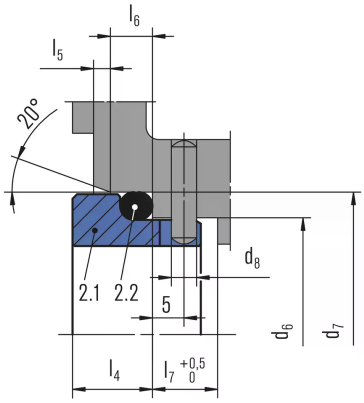
Seat alternatives



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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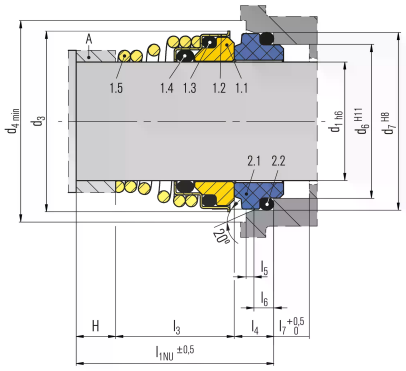
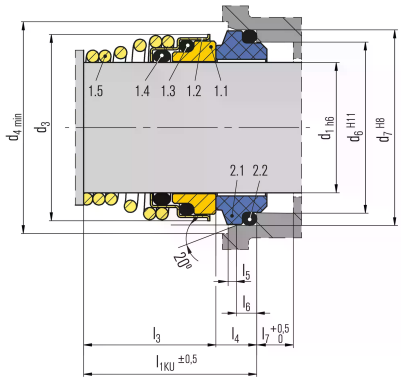
Product variants



BT-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

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Dimensions

d_1	d_3	d_4	d_6	d_7	l_1	l_3	l_4	l_5	l_6
10	19.5	23	14.0	18.1	20.5	15	5.5	1.2	3
11	23.0	26	16.5	20.6	23.5	18	5.5	1.2	3
12	23.0	26	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	25.0	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	33.0	36	25.0	30.9	32.0	24	8.0	1.5	4
19	33.0	36	25.0	30.9	33.0	25	8.0	1.5	4
20	33.0	36	25.0	30.9	33.0	25	8.0	1.5	4
22	37.5	41	30.0	35.4	33.0	25	8.0	2.0	4
24	37.5	41	30.0	35.4	35.0	27	8.0	2.0	4
25	40.0	43	33.0	38.2	35.5	27	8.5	2.0	4
28	46.0	50	38.0	43.3	38.0	29	9.0	2.0	4
30	46.0	50	38.0	43.3	39.0	30	9.0	2.0	4
32	46.0	50	38.0	43.3	39.0	30	9.0	2.0	4
35	51.0	57	45.0	53.5	50.5	39	11.5	2.0	6
38	58.0	64	52.0	60.5	50.5	39	11.5	2.0	6
40	58.0	64	52.0	60.5	50.5	39	11.5	2.0	6

BT-FN - Dimensions in millimeter

BT-FN.NU
d₁
10
12
14
16
18
20
22
24
25
28
30
32
35
38
40

d~3~ 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 / BT-FN.KU - Dimensions in millimeter

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