EagleBurgmann
a member of EKK and FREUDENBERG

RELY ON EXCELLENCE

BT-AR

Mechanical Seals | Mechanical seals for pumps | Elastomer bellows seals

Features

- Single and dual seal
- For plain shafts
- Elastomer bellows rotating
- Unbalanced
- Independent of direction of rotation
- Available in metric and imperial sizes

Advantages

- Shaft protection over entire seal length
- Short axial length
- High volume seal for use in low pressure, small diameter rotary shaft applications
- High flexibility thanks to extended selection of materials
- Best quality/price ratio
- Dimensions can be customized
- Additional seats available

Notes The BT-AR can also be used as a multiple seal in tandem or back-to-back arrangement. Installation suggestions are available upon request.

Dimensional adaptations for special conditions, such as inch shafts, different axial lengths, or specific seat dimensions are available upon request.

Operating range

Shaft diameter:
d1 = 6 ... 70 mm (0.24" ... 2.76")

Pressure: p1* = 6 bar (87 PSI), vacuum ... 0.5 bar (7.25 PSI) up to 1 bar (14.5 PSI) with seat locking

Temperature:
t* = -20 °C ... +120 °C (-4 °F ... +248 °F)

Sliding velocity:
vg = 10 m/s (33 ft/s)

* Dependent on medium, size and material

Materials

Seal face:
Carbon graphite antimony impregnated (A), Carbon graphite resin impregnated (B), Carbon graphite, full carbon (B3), Silicon carbide (Q1, Q6), Tungsten carbide (U), PTFE glass fiber reinforced (Y1)), PTFE carbon reinforced (Y2)

Seat:
Al-oxide (V, V1), Silicon carbide (Q1, Q6, Q7), Tungsten carbide (U), Cr steel (E), CrNi steel (F1), CrNiMo steel (G)

Elastomers:
NBR (P), EPDM (E), FKM (V), HNBR (X4)

Metal parts:
CrNi steel 1.4301 (F), CrNiMo steel 1.4401 (G), CrNi steel 1.4057 (F1)

Standards and approvals

- UBA
- W270
- ACS
- WRAS
- NSF
- DM 174/04
- FDA
- EC 1935/2004
- Various material approvals (depending on type and material combinations). Please inquire!

Recommended applications

- Water and wastewater technology
- Whirlpool and swimming pool pumps
- Domestic appliances
- Dishwasher pumps
- Submersible pumps
- Circulating pumps
- Low duty water pumps

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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.
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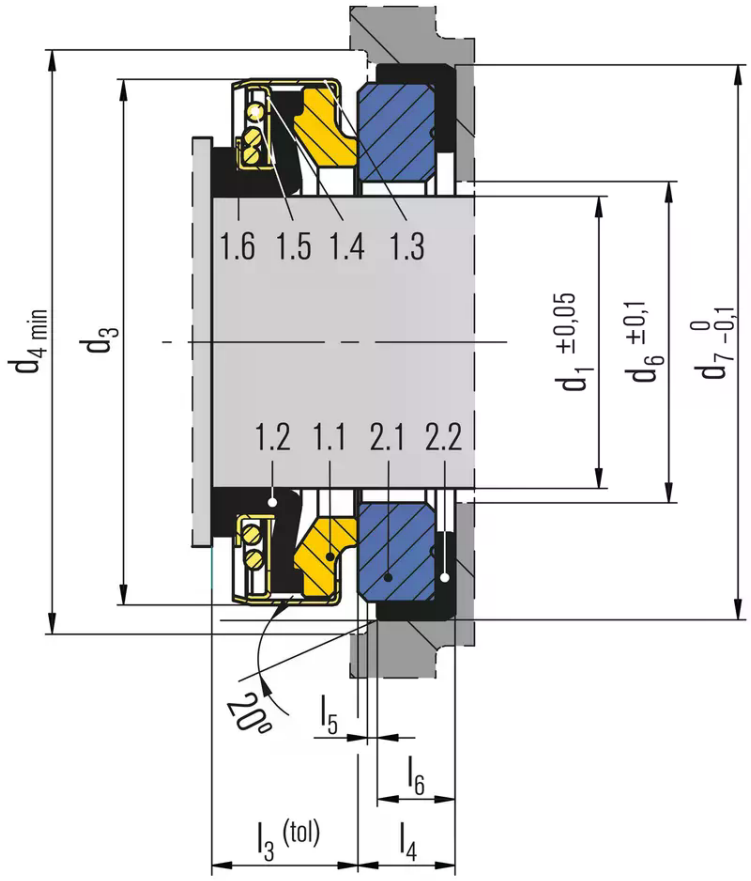

Item	Description
1.1	Seal face
1.2	Bellows
1.3	Collar
1.4	Locking ring
1.5	Spring
1.6	Drive ring
2.1	Stationary seat
2.2	Gasket

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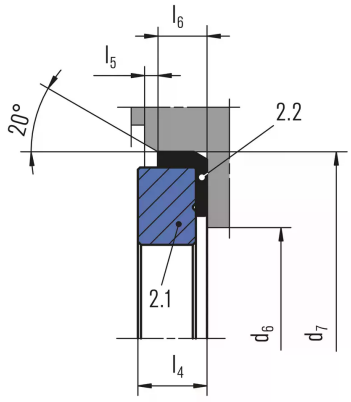
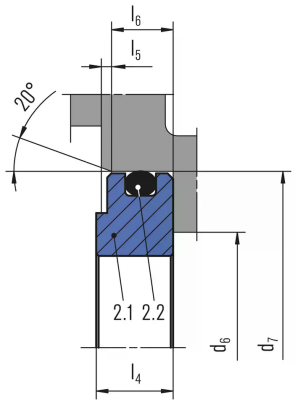
Seat alternatives



PF C

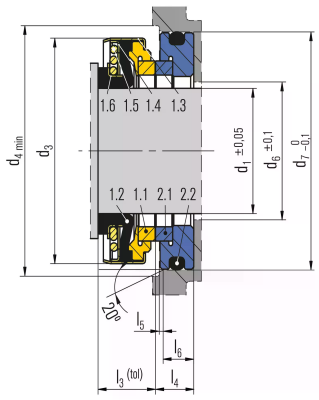
Item Description
2.1 Stationary seat
2.2 Gasket



PF A

Item Description
2.1 Stationary seat
2.2 O-Ring

Product variants



BT-AR4

Item and description as for type BT-AR, but with shrink fitted seal face to the seal face carrier. Shaft diameter: d1 = 25 ... 70 mm (0.98" ... 2.76").

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Dimensions

d_1	d_1	d_3	d_4	d_6	d_7	l_3	tol	l_4	l_5	l_6	Note
3/8"	9.53	24	27	12	25.40	11.0	+0.5/0	5.5	0.5	4.5	X06
3/8"	9.53	24	27	12	25.40	11.0	+0.5/0	7.5	1.0	5.5	X06
1/2"	12.70	24	27	15	25.40	12.8	+0.7/0	7.5	1.0	5.5	X08
1/2"	12.70	24	27	15	25.40	16.3	+0.7/0	8.0	1.0	6.0	X08
5/8"	15.88	32	35	18	31.75	12.8	+0.7/0	10.3	1.0	8.0	X10
5/8"	15.88	32	35	18	30,95	12.8	+0.7/0	10.3	1.0	8.0	X10
3/4"	19.05	35	39	21	35.00	19.00	+0.7/0	10.3	1.0	8.0	X12

BT-AR - Dimensions in inch/millimeter

d_1	d_3	d_4	d_6	d_7	l_3	tol	l_4	l_5	l_6	Note
6	18	23	8	22.0	8.0	+0.5/0	4.0	0.5	3.5	
6	18	21	8	18.0	8.0	+0.5/0	4.8	0.5	3.5	
8	20	23	10	22.0	11.0	+0.5/0	4.8	0.5	3.5	8S (std version)
8	18	23	10	22.0	11.0	+0.5/0	4.0	0.5	3.5	8R
10	24	27	12	26.0	11.0	+0.5/0	8.0	1.0	6.0	
10	24	27	12	26.0	11.0	+0.5/0	5.5	0.5	4.5	
11	24	27	13	26.0	11.0	+0.5/0	8.0	1.0	6.0	
11	24	27	13	26.0	11.0	+0.5/0	5.5	0.5	4.5	
12	24	27	14	26.0	11.0	+0.5/0	8.0	1.0	6.0	12C (short version)
12	24	27	14	26.0	11.0	+0.5/0	5.5	0.5	4.5	
12	24	27	14	26.0	12.8	+0.7/0	8.0	1.0	6.0	(std version)
12	24	27	14	26.0	12.8	+0.7/0	5.0	0.5	4.5	
13	24	27	15	26.0	12.8	+0.7/0	8.0	1.0	6.0	
13	24	27	15	26.0	12.8	+0.7/0	5.5	0.5	4.5	
14	28	31	18	28.5	12.8	+0.7/0	7.5	1.0	5.5	14S (std version)
14	28	31	18	29.5	12.8	+0.7/0	8.0	1.0	6.0	14S (std version)
14	28	31	18	28.5	15.3	±0.8	7.5	1.0	5.5	14L (long version)
14	32	31	16	25.0	15.3	±0.8	7.3	1.0	5.5	14L (long version)
15	32	35	17	29.5	12.8	+0.7/0	8.0	1.0	6.0	
15	32	35	17	30.0	12.8	+0.7/0	6.0	1.0	4.0	
15	32	40	17	38.0	12.8	+0.7/0	8.0	1.0	6.0	
16	32	35	18	29.5	12.8	+0.7/0	8.0	1.0	6.0	16R (std version)
16	32	35	18	30.0	12.8	+0.7/0	6.0	1.0	4.0	
16	32	40	17	38.0	12.8	+0.7/0	8.0	1.0	6.0	
17	39	43	19	42.0	12.8	+0.7/0	8.0	1.0	6.0	
18	39	43	20	42.0	12.8	+0.7/0	8.0	1.0	6.0	
19	39	43	21	42.0	12.8	+0.7/0	8.0	1.0	6.0	
20	35	39	22	35.0	17.8	±0.7	7.5	1.0	5.5	20R (std version)
20	39	43	22	42.0	12.8	+0.7/0	8.0	1.0	6.0	
22	42	47	24	45.0	12.8	+0.7/0	10.0	1.0	8.0	
24	47	52	26	50.0	13.5	+1/0	10.0	1.0	8.0	
25	42	52	27	50.0	13.5	+1/0	10.0	1.0	8.0	25R (std version)
25	42	47	27	45.0	13.5	+1/0	10.0	1.0	8.0	
25	47	52	27	50.0	13.5	+1/0	10.0	1.0	8.0	
27	47	52	30	50.0	13.5	+1/0	10.0	1.0	8.0	
28	54	60	31	57.0	15.0	+1/0	10.0	1.0	8.0	
30	54	60	33	57.0	15.0	+1/0	10.0	1.0	8.0	

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d_1	d_3	d_4	d_6	d_7	l_3	tol	l_4	l_5	l_6	Note
32	54	60	35	57.0	15.0	+1/0	10.0	1.0	8.0	
35	60	70	38	63.0	16.0	+1/0	10.0	1.0	8.0	
38	65	75	41	68.0	18.0	+1/0	12.0	2.0	9.0	
40	65	75	43	68.0	18.0	+1/0	12.0	2.0	9.0	
45	70	80	48	73.0	20.0	+1/0	12.0	2.0	9.0	
50	85	95	53	88.0	23.0	+1/0	15.0	2.0	12.0	
60	105	115	63	110.0	30.0	+1/0	15.0	2.0	12.0	
70	105	115	73	110.0	32.0	+1/0	15.0	2.0	12.0	

Dimensions in millimeter

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