

RELY ON EXCELLENCE

eMG13

Mechanical seals | Mechanical seals for pumps | Elastomer bellows seals



Features

- For plain shafts
- Single and dual seal
- Elastomer bellows rotating
- Unbalanced
- Independent of direction of rotation

Advantages

- **100 % compatible with MG13**
- Small outer diameter of bellows support (d_{bmin}) enables direct retaining ring support, or smaller spacer rings
- Optimal alignment characteristic through self-cleaning of disk/shaft
- Improved centering across entire pressure operating range
- No torsion on bellows
- Shaft protection over entire seal length
- Protection of seal face during installation due to special bellows design
- Insensitive to shaft deflections due to large axial movement ability
- Suitable for low-end sterile applications
- Dimension adaptations and additional seats available

Operating range

Shaft diameter:

$d_1 = 15 \dots 100 \text{ mm (0.59" \dots 3.94")}$

Pressure: $p_1 = 18 \text{ bar (261 PSI)}$,

vacuum ... $0.5 \text{ bar (7.25 PSI)}$,

up to 1 bar (14.5 PSI) with seat locking

Temperature: $t = -20 \text{ °C} \dots +140 \text{ °C}$

$(-4 \text{ °F} \dots +284 \text{ °F})$

Sliding velocity: $v_g = 10 \text{ m/s (33 ft/s)}$

Admissible axial movement: $\pm 2.0 \text{ mm } (\pm 0.08")$

Materials

Seal face: Carbon graphite antimony impregnated (A), Carbon graphite resin impregnated (B), Silicon carbide (eSiC-Q7, Q1)
 Seat: Silicon carbide (eSiC-Q7,Q1), Tungsten carbide (U3)
 Elastomer: NBR (P), EPDM (E), FKM (V), HNBR (X4)
 Metal parts: CrNiMo steel (G), Hastelloy® (M)

Further materials upon request.

Standards and approvals

Various material approvals available (depending on type and material combinations).

Please inquire!

- FDA
- WRAS
- UBA (KTW)
- ACS
- W270

Notes

The eMG13 can also be used as a multiple seal in tandem or in a back-to-back arrangement, please inquire. Dimension adaptations for specific conditions, e.g. shaft in inches or special seat dimensions are available upon request.

Recommended applications

- Fresh water supply
- Building services engineering
- Waste water technology
- Food technology
- Sugar production
- Pulp and paper industry
- Oil industry
- Petrochemical industry

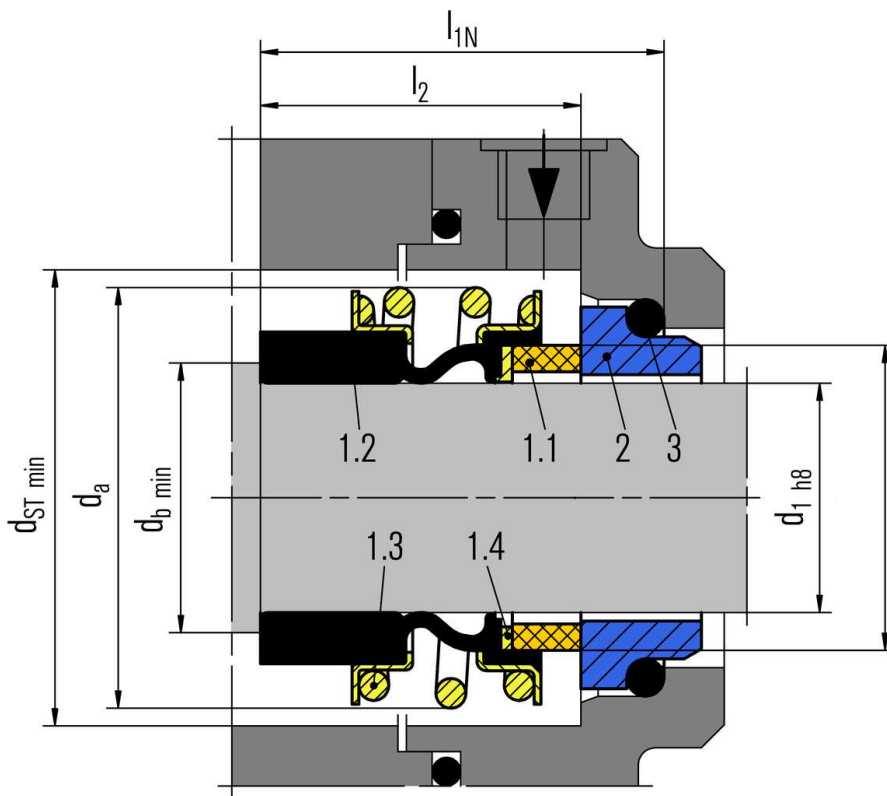
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- Chemical industry
- Water, waste water, slurries (up to 5 % by weight)
- Pulp (up to 4 % otro)
- Latex
- Dairies, beverages
- Sulfide slurries
- Chemicals
- Oils
- Chemical standard pumps
- Helical screw pumps
- Stock pumps
- Circulating pumps
- Submersible pumps
- Water and waste water pumps

eMG13

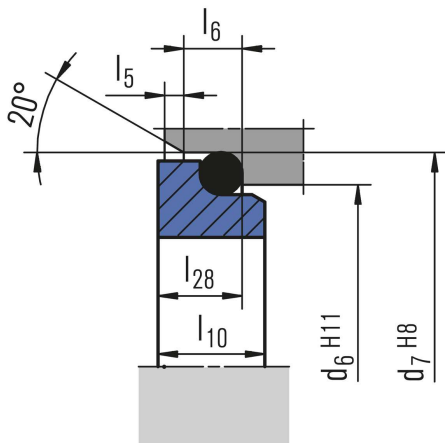
Item Description

- | Item | Description |
|------|----------------------|
| 1.1 | Seal face |
| 1.2 | Bellows |
| 1.3 | Set of springs |
| 1.4 | PEEK-PTFE disk |
| 2 | Seat (G6) |
| 3 | O-Ring or cup rubber |

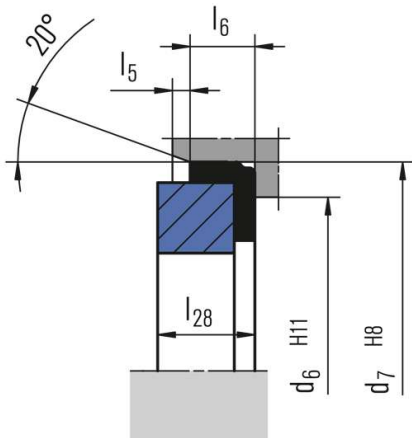


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Seat alternatives



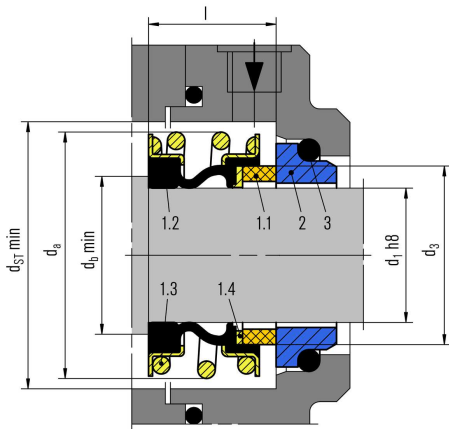
G6
EN 12756



G60
EN 12756

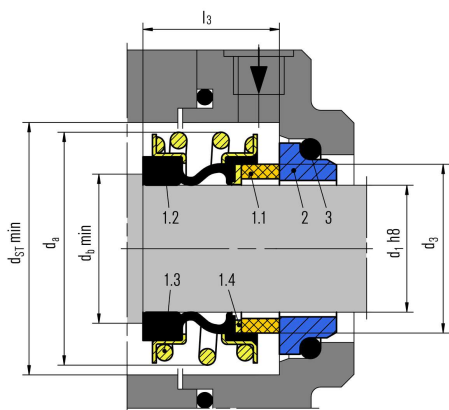
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Product variants



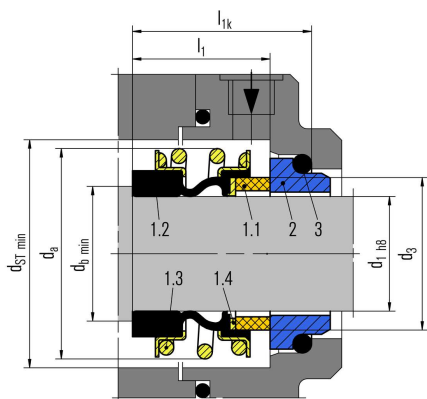
eMG

Dimensions, items and designations same as for eMG13, but with a shortened bellows tail to achieve the fitting length l . Shortest fitting length.



eMG1

Dimensions, items and designations same as for eMG, but with a shortened bellows tail to achieve the fitting length l_3 .



eMG12

Dimensions, items and designations same as for eMG13, but with a shortened bellows tail to achieve the fitting length l_{1k} according to EN 12756 in combination with seat G6 or G60 (d_a exceeds EN 12756).

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eRMG13

Identical to eMG13, but with a special bellows surface on the shaft side. For use in hot water pumps.

d1 = 12 ... 38 mm (0.47" ... 1.50")

Seat G6: Silicon carbide (eSiC-Q7)

A/eSiC-Q7:

120 °C (248 °F) and 25 bar (363 PSI) 140 °C (284 °F) and 16 bar (232 PSI)

B/eSiC-Q7:

120 °C (248 °F) and 18 bar (161 PSI)

eSiC-Q7/eSiC-Q7:

120 °C (248 °F) and 18 bar (161 PSI)

Dimensions

d ₁	d ₃	d ₆	d ₇	d _a	d _b *	d _{ST}	l	l ₁	l ₂	l ₃	l _{1K}	l _{1N}	l ₅	l ₆	l ₁₀	l ₂₈
15	20.8	-	-	28.5	18.5	30	15.0	-	-	17.0	-	-	-	-	-	-
16	21.0	23	27	28.5	19.5	30	15.0	28.4	33.4	17.0	35.0	40	1.5	4	7.5	6.6
18	23.7	27	33	32.0	21.5	33	17.0	30.0	-	19.5	37.5	-	2.0	5	8.5	7.5
20	26.7	29	35	37.0	24.0	38	19.0	30.0	-	21.5	37.5	-	2.0	5	8.5	7.5
22	27.7	31	37	37.0	26.0	38	19.0	30.0	-	21.5	37.5	-	2.0	5	8.5	7.5
24	31.2	33	39	42.5	28.0	44	19.0	32.5	-	22.5	40.0	-	2.0	5	8.5	7.5
25	31.2	34	40	42.5	29.0	44	19.0	32.5	-	23.0	40.0	-	2.0	5	8.5	7.5
28	35.0	37	43	49.0	32.0	50	23.0	35.0	42.5	26.5	42.5	50	2.0	5	8.5	7.5
30	37.0	39	45	49.0	34.0	50	23.0	35.0	-	26.5	42.5	-	2.0	5	8.5	7.5
32	40.2	42	48	53.5	36.0	55	23.5	35.0	-	27.5	42.5	-	2.0	5	8.5	7.5
33	40.2	42	48	53.5	37.0	55	23.5	35.0	-	27.5	42.5	-	2.0	5	8.5	7.5
35	43.2	44	50	57.0	40.0	59	24.5	35.0	-	28.5	42.5	-	2.0	5	8.5	7.5
38	46.2	49	56	59.0	43.0	61	25.0	36.0	46.0	30.0	45.0	55	2.0	6	10.0	9.0
40	48.8	51	58	62.0	45.0	64	25.5	36.0	-	30.0	45.0	-	2.0	6	10.0	9.0
43	51.8	54	61	65.5	48.0	67	25.5	36.0	-	30.0	45.0	-	2.0	6	10.0	9.0
45	53.8	56	63	68.0	50.0	70	25.5	36.0	-	30.0	45.0	-	2.0	6	10.0	9.0
48	56.8	59	66	70.5	53.0	74	26.0	36.0	51.0	30.5	45.0	60	2.0	6	10.0	9.0
50	58.8	62	70	74.0	55.0	77	26.0	38.0	-	30.5	-	-	2.5	6	10.5	9.5
55	64.2	67	75	81.0	60.0	83	30.0	36.5	59.0	35.0	47.5	70.0	2.5	6	12.0	11.0
58	67.2	70	78	85.5	64.0	88	31.0	-	-	37.0	-	-	2.5	6	12.0	11.0
60	70.0	72	80	88.5	66.0	91	32.0	41.5	59.0	38.0	52.5	70	2.5	6	12.0	11.0
65	75.0	77	85	93.5	71.0	96	34.0	41.5	-	40.0	52.5	-	2.5	6	12.0	11.0
68	78.0	81	90	96.5	74.0	100	34.0	-	-	40.0	-	-	2.5	7	12.5	11.3
70	80.0	83	92	99.5	76.0	103	34.0	48.7	-	40.0	60.0	-	2.5	7	12.5	11.3
75	85.5	88	97	107.0	81.0	110	34.0	48.7	-	40.0	60.0	-	2.5	7	12.5	11.3
80	90.5	95	105	112.0	86.0	116	34.0	-	-	40.0	-	-	3.0	7	13.0	12.0
85	96.0	100	110	120.0	92.0	124	35.0	-	-	41.0	-	-	3.0	7	15.0	14.0
90	102.0	105	115	127.0	97.0	131	38.0	-	-	45.0	-	-	3.0	7	15.0	14.0
95	107.0	110	120	132.0	102.0	136	39.0	-	-	46.0	-	-	3.0	7	15.0	14.0
100	112.0	115	125	137.0	107.0	140	40.0	-	-	47.0	-	-	3.0	7	15.0	14.0
110	123.0	-	-	150.0	118.0	154	43.0	-	-	49.0	-	-	-	-	-	-

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Dimensions in millimeter

Fitting length/axial movement tolerances: d_1 15 ... 18 mm ± 1.0 ; d_1 20 ... 26 mm ± 1.5 ; d_1 28 ... 110 mm ± 2.0

* Minimum diameter of the mating collar