

RELY ON EXCELLENCE

## eMG

Mechanical Seals | Mechanical seals for pumps | Elastomer bellows seals



### Features

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

### Notes

The eMG can also be used as a multiple seal in tandem or in a back-to-back arrangement, please inquire. Other materials and designs available on request.

### Advantages

**Identical with eMG1 but with approx. 20 % shorter installation length**

- Small outer diameter of bellows support (dbmin) 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

### Operating range

Shaft diameter:

d1 = 14 ... 110 mm (0.55" ... 4.33")

Pressure: p1 = 18 bar (261 PSI),

vacuum ... 0.5 bar (7.25 PSI),

up to 1 bar (14.5 PSI) with seat locking

Temperature:

t = -20 °C ... +140 °C

(-4 °F ... +284 °F)

Sliding velocity: v<sub>g</sub> = 10 m/s (33 ft/s)

Admissible axial movement: ±2.0 mm (±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)

### Standards and approvals

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

Please inquire!

- FDA
- UBA (KTW)
- ACS
- W270

### Recommended applications

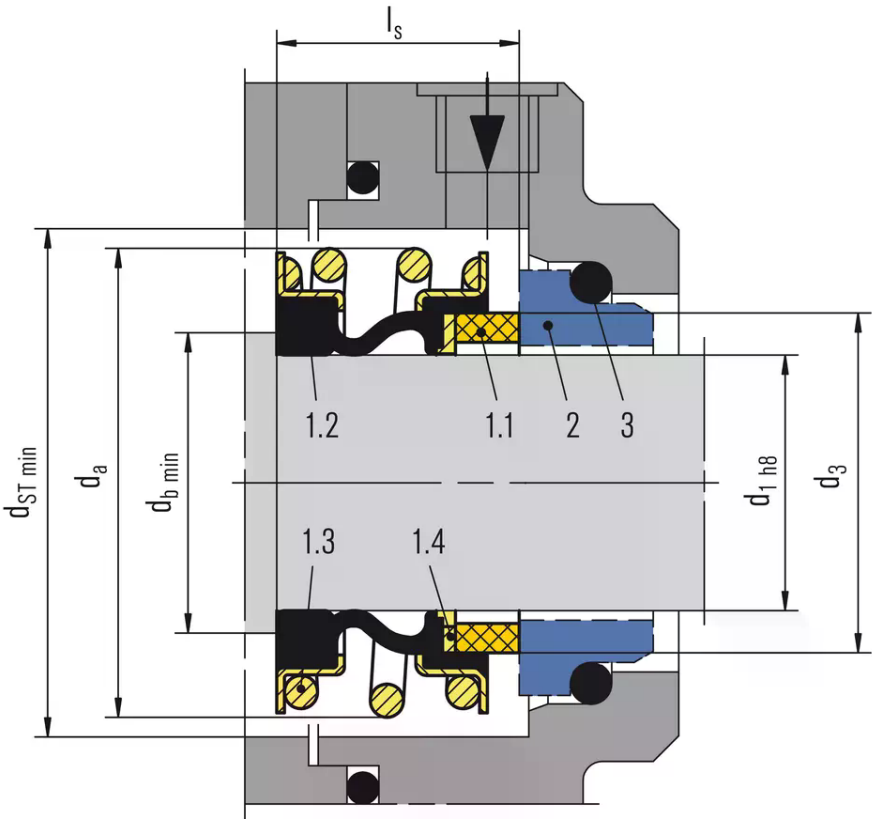
- Water, waste water, slurries (up to 5 % by weight)
- Pulp (up to 4 % otro)
- Latex
- Dairies, beverages
- Sulfide slurries
- Chemicals
- Oils
- Fresh water supply
- Building services engineering
- Waste water technology
- Food and beverage industry
- Sugar production
- Pulp and paper industry
- Oil industry
- Petrochemical industry
- Chemical industry
- Chemical standard pumps
- Helical screw pumps
- Stock pumps

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- Circulating pumps
- Submersible pumps
- Water and waste water pumps

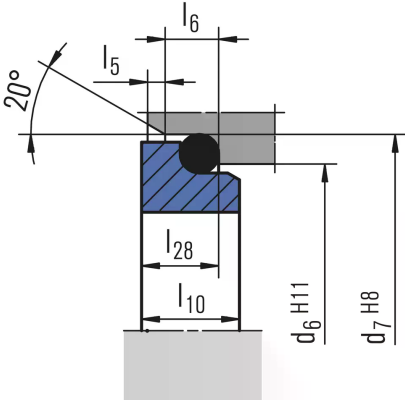
eMG

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

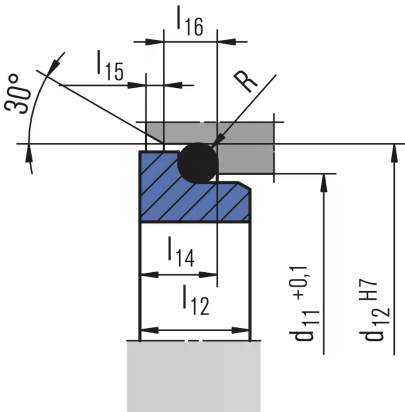


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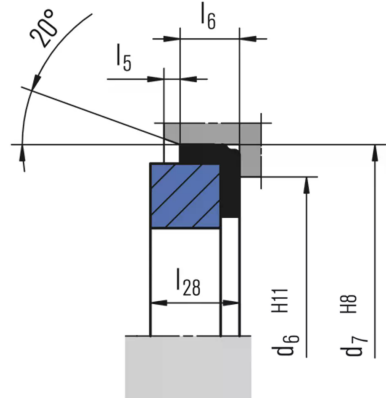
### Seat alternatives



**G6**  
EN 12756

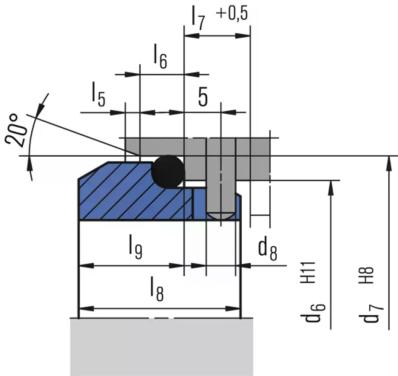


**G4 (optional)**

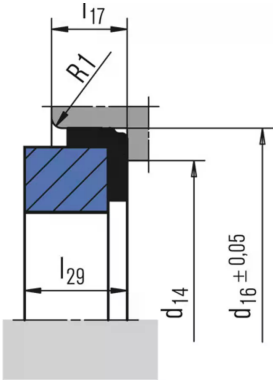


**G60 (optional)**  
EN 12756

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**G9**  
EN 12756



**G50**  
Euro standard

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### Product variants

#### eRMG

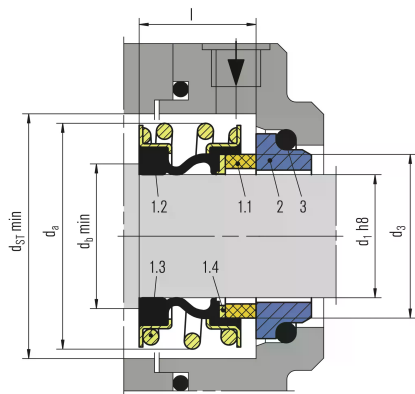
Identical to eMG, but with a special bellows surface on the shaft side. For use in hot water pumps.

$d_1 = 14 \dots 38 \text{ mm}$  (0.55" ... 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)

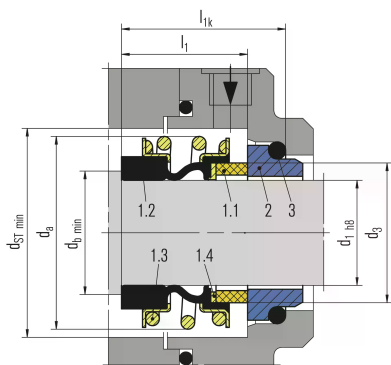
B/eSiC-Q7:  
120 °C (248 °F) and 18 bar (161 PSI)

eSiC-Q7/eSiC-Q7:  
120 °C (248 °F) and 18 bar (161 PSI)



#### eMG1

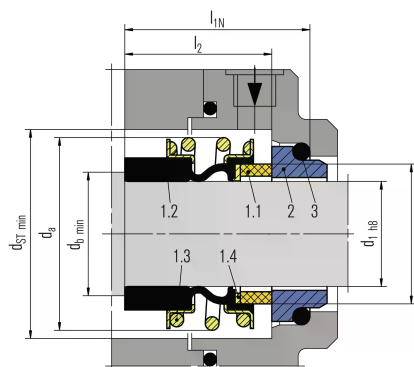
Dimensions, items and designations same as for eMG, but with an extended bellows tail to achieve the fitting length  $l_1$ .



#### eMG12

Dimensions, items and designations same as for eMG, but with an extended 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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### eMG13

Dimensions, items and designations same as for eMG, but with an extended bellows tail to achieve the fitting length  $l_{1N}$  according to EN 12756 in combination with seat G6 or G60 (da exceeds EN 12756).

## Dimensions

$d_1$	$d_3$	$d_6$	$d_7$	$d_{11}$	$d_{12}$	$d_a$	$d_b^*$	$d_{ST}$	$l_S$	$l$	$l_1$	$l_{1k}$	$l_2$	$l_{1N}$	$l_5$	$l_6$	$l_{10}$	$l_{12}$	$l_{14}$	$l_{15}$	$l_{16}$	$l_{28}$	R	
14	19.7	21	25	20.5	24.6	27	17.5	28.5	15	17	28.4	35	-	-	1.5	4	7.5	6.5	5.6	1.2	3.8	6.6	1.2	
15	20.8	-	-	20.5	24.6	28.5	18.5	30	15	17	-	-	-	-	-	-	-	7.5	6.6	1.2	3.8	-	1.2	
16	21	23	27	22	28	28.5	19.5	30	15	17	28.4	35	33.4	40	1.5	4	7.5	8.5	7.5	1.5	5	6.6	1.5	
18	23.7	27	33	24	30	32	21.5	33	17	19.5	30	37.5	-	-	2	5	8.5	9	8	1.5	5	7.5	1.5	
20	26.7	29	35	29.5	35	37	24	38	19	21.5	30	37.5	-	-	2	5	8.5	8.5	7.5	1.5	5	7.5	1.5	
22	27.7	31	37	29.5	35	37	26	38	19	21.5	30	37.5	37.5	45	2	5	8.5	8.5	7.5	1.5	5	7.5	1.5	
24	31.2	33	39	32	38	42.5	28	44	19	22.5	32.5	40	-	-	2	5	8.5	8.5	7.5	1.5	5	7.5	1.5	
25	31.2	34	40	32	38	42.5	29	44	19	23	32.5	40	-	-	2	5	8.5	8.5	7.5	1.5	5	7.5	1.5	
28	35	37	43	36	42	49	32	50	23	26.5	35	42.5	42.5	50	2	5	8.5	10	9	1.5	5	7.5	1.5	
30	37	39	45	39.2	45	49	34	50	23	26.5	35	42.5	-	-	2	5	8.5	11.5	10.5	1.5	5	7.5	1.5	
32	40.2	42	48	42.2	48	53.5	36	55	23.5	27.5	35	42.5	-	-	2	5	8.5	11.5	10.5	1.5	5	7.5	1.5	
33	40.2	42	48	44.2	50	53.5	37	55	23.5	27.5	35	42.5	-	-	2	5	8.5	12	11	1.5	5	7.5	1.5	
35	43.2	44	50	46.2	52	57	40	59	24.5	28.5	35	42.5	-	-	2	5	8.5	12	11	1.5	5	7.5	1.5	
38	46.2	49	56	49.2	55	59	43	61	25	30	36	45	46	55	2	6	10	11.3	10.3	1.5	5	9	1.5	
40	48.8	51	58	52.2	58	62	45	64	25.5	30	36	45	-	-	2	6	10	11.8	10.8	1.5	5	9	1.5	
43	51.8	54	61	53.3	62	65.5	48	67	25.5	30	36	45	-	-	2	6	10	13.2	12	2	6	9	2.5	
45	53.8	56	63	55.3	64	68	50	70	25.5	30	36	45	-	-	2	6	10	12.8	11.6	2	6	9	2.5	
48	56.8	59	66	59.7	68.4	70.5	53	74	26	30.5	36	45	51	60	2	6	10	12.8	11.6	2	6	9	2.5	
50	58.8	62	70	60.8	69.3	74	55	77	26	30.5	38	47.5	-	-	2.5	6	10.5	12.8	11.6	2	6	9.5	2.5	
53	62.2	65	73	63.8	72.3	78.5	58	81	29	33	36.5	47.5	-	-	2.5	6	12	13.5	12.3	2	6	11	2.5	
55	64.2	67	75	66.5	75.4	81	60	83	30	35	36.5	47.5	59	70	2.5	6	12	14.5	13.3	2	6	11	2.5	
58	67.2	70	78	69.5	78.4	85.5	64	88	31	37	-	-	-	-	2.5	6	12	14.5	13.3	2	6	11	2.5	
60	70	72	80	71.5	80.4	88.5	66	91	32	38	41.5	52.5	59	70	2.5	6	12	14.5	13.3	2	6	11	2.5	
65	75	77	85	76.5	85.4	93.5	71	96	34	40	41.5	52.5	-	-	2.5	6	12	14.2	13	2	6	11	2.5	
68	78	81	90	82.7	91.5	96.5	74	100	34	40	-	-	-	-	2.5	7	12.5	14.9	13.7	2	6	11.3	2.5	
70	80	83	92	83	92	99.5	76	103	34	40	48.7	60	-	-	2.5	7	12.5	14.2	13	2	6	11.3	2.5	
75	85.5	88	97	90.2	99	107	81	110	34	40	48.7	60	-	-	2.5	7	12.5	15.2	14	2	6	11.3	2.5	
80	90.5	95	105	95.2	104	112	86	116	34	40	48	60	-	-	3	7	13	16.2	15	2	6	12	2.5	
85	96	100	110	100.2	109	120	92	124	35	41	46	60	-	-	3	7	15	16	14.8	2	6	14	2.5	
90	102	105	115	105.2	114	127	97	131	38	45	51	65	-	-	3	7	15	16	14.8	2	6	14	2.5	
95	107	110	120	111.6	120.3	132	102	136	39	46	51	65	-	-	3	7	15	17	15.8	2	6	14	2.5	
100	112	115	125	114.5	123.3	137	107	140	40	47	51	65	-	-	3	7	15	17	15.8	2	6	14	2.5	
110	123	-	-	-	-	150	118	154	43	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-