

Innovation in detail

EagleBurgmann[®]
Rely on excellence

The new generation of elastomer bellows seals eMG1 and eMG

eMG1: 100 %

compatible with MG1

eMG: 20 %

shorter installation length

Chemical pumps, water and waste water pumps, circulating pumps, submersible motor pumps, ... – the new eMG1 and eMG generation covers the most diverse sealing challenges in numerous industrial sectors and applications. Safely and reliably.



Chemical industry



Pulp and paper industry



Food industry



Water and waste water technology



Oil industry



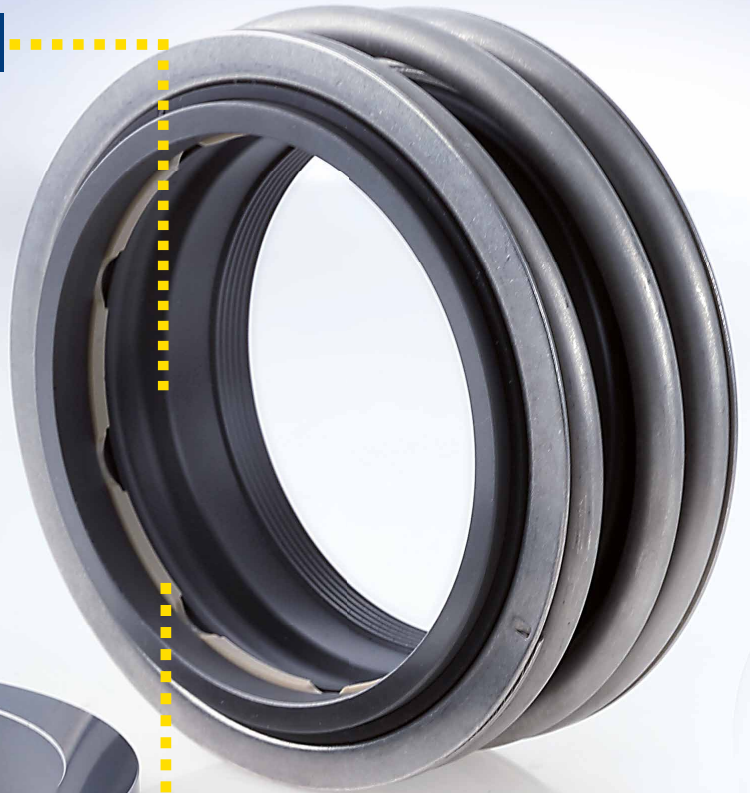
Petrochemical industry

eMG1 and eMG – innovation in detail

Optimized bellows design



- Reduced outer diameter of seal shoulder enables direct bellows support through retaining ring or smaller spacer rings
- Optimized automatic alignment for axial shaft movements
- Minimized stick-slip effects
- Impervious to shaft deflections through high axial mobility
- Protection of shaft across the entire seal length
- Special bellows design protects the seal face during assembly



Optimized high-performance SiC series



- Up to 50 % longer operating periods
- Extended emergency running properties
- Reduced power consumption



Innovative PEEK-PTFE disk

- Outstanding sliding properties and consistent centering across the entire pressure operating range
- Continuous self-cleaning of disk and shaft additionally ensures alignment of the elastomer bellows

Same performance – two installation lengths

eMG1

100 % compatible
with proven MG1



eMG

20 % shorter
installation length
than eMG1



The latest generation of elastomer bellows seals

The compatible one: eMG1

Millions of MG1 elastomer bellows seals have been in use for more than 35 years. It has become established as the worldwide leading shaft seal standard for pumps in diverse applications.

Excellent reliability, robust design and high cost effectiveness are the essential characteristics of the MG series by EagleBurgmann.

The latest eMG1 generation sets new standards again: an optimized seal design and innovative details guarantee maximum safety and reliability.

The new eMG1 is 100 % compatible with the proven MG1 and can be replaced one-to-one. This permits immediate use of all the advantages.

Customized dimensional adjustments and additional stationary seat geometries are possible as option.



The compact one: eMG

The new eMG is unbeatable when it comes to compact seal installation spaces of pumps with consistent requirements. Even with a reduced installation length of 20 %, the eMG has the same technical features as the eMG1.

The short installation length also opens new perspectives in the construction of new pumps. Standard seat of the eMG is type G6 - also very short in lengths.

Customized dimensional adjustments and additional stationary seat geometries are possible as option.



Innovative face material: eSiC

The eMG1 and eMG can be supplied in numerous material combinations. The program now includes the new optimized face material eSiC-Q7 series. A powerful face material optimized towards friction and wear with hydrodynamic properties.

In practice this means up to 50 % longer operating periods, expanded emergency running properties and reduced power consumption. Long-term tests performed at the customer's site confirm the efficiency.

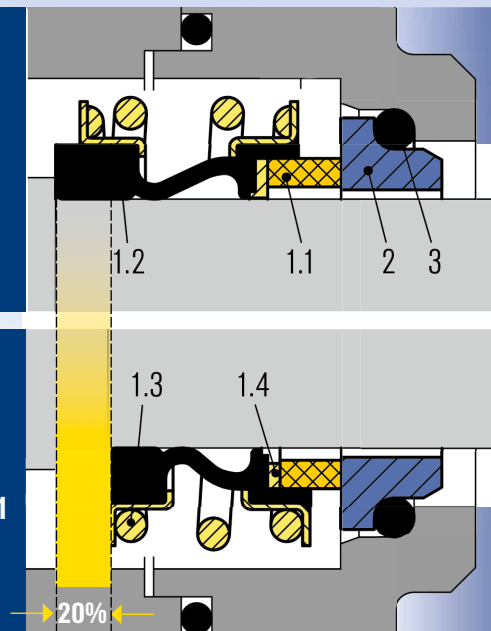


eMG1 and eMG in detail

eMG1

eMG

Identical in design with the eMG1 but with approx. 20 % shorter installation length.



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

Features

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

Advantages

- 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: $d_1 = 15 \dots 100 \text{ mm}$ (0.59" ... 3.94")
- Pressure: $p_1 = 16 \text{ bar}$ (230 PSI), vacuum ... 0.5 bar (7.25 PSI), up to 1 bar (14.5 PSI) with seat locking
- Temperature: $t = -20 \text{ }^\circ\text{C} \dots +140 \text{ }^\circ\text{C}$ (-4 °F ... +284 °F)
- Sliding velocity: $v_g = 10 \text{ m/s}$ (33 ft/s)
- Admissible axial movement: $\pm 2.0 \text{ mm}$

Materials

- Seal face: Carbon graphite antimony impregnated (A), Carbon graphite resin impregnated (B), Silicon carbide (Q1, eSiC-Q7), Tungsten carbide (U3)
- Seat: Silicon carbide (Q1, Q2, eSiC-Q7), Tungsten carbide (U3), Special cast CrMo steel (S), Aluminium oxide (V)
- Elastomer: NBR (P), EPDM (E), FKM (V), HNBR (X4)
- Metal parts: CrNiMo steel (G), Hastelloy® C-4 (M)

Note

The eMG1 can also be used as a multiple seal in tandem or in a back-to-back arrangement. Installation proposals available upon request.
Dimension adaptations for specific conditions, e.g. shaft in inches or special seat dimensions are available upon request.

Standards and approvals

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

- WRAS
- FDA
- KTW
- ACS
- W270

Recommended applications

- Process industry
- Chemical industry
- Pulp and paper industry
- Water and waste water technology
- Food and beverage industry
- Sugar 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

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