

eMG1



Operating range

Shaft diameter:
 $d_1 = 15 \dots 110 \text{ mm (0.59" ... 4.33")}$
 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: $t = -20 \text{ °C ... +140 °C}$
 $(-4 \text{ °F ... +284 °F})$
 Sliding velocity: $vg = 10 \text{ m/s (33 ft/s)}$
 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 eMG1 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

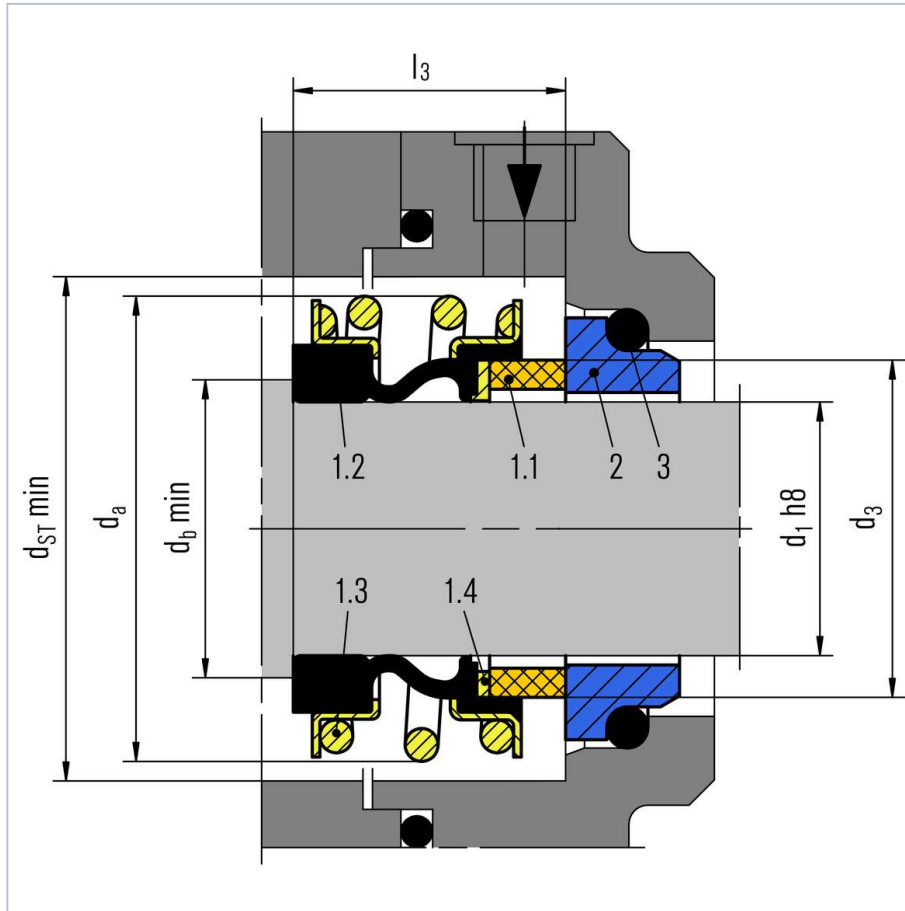
- Fresh water supply
- Building services engineering
- Waste water technology
- Food technology
- Sugar production
- Pulp and paper industry
- Oil industry
- Petrochemical industry
- Chemical industry
- Water, waste water, slurries (solids up to 5 % by weight)
- Pulp (up to 4 % otro)
- Latex
- Dairies,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

Features

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

Advantages

- **100 % compatible with MG1**
- Small outer diameter of bellows support ($d_{b \text{ min}}$) 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

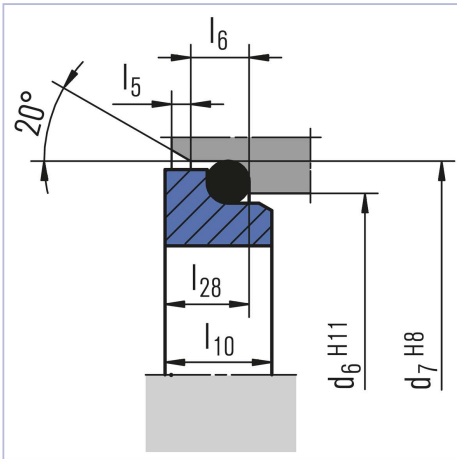


eMG1

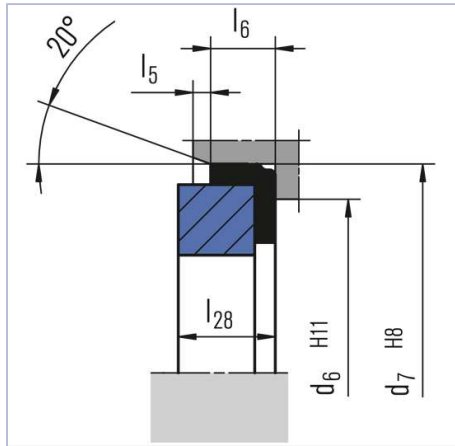
Item Description

- 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

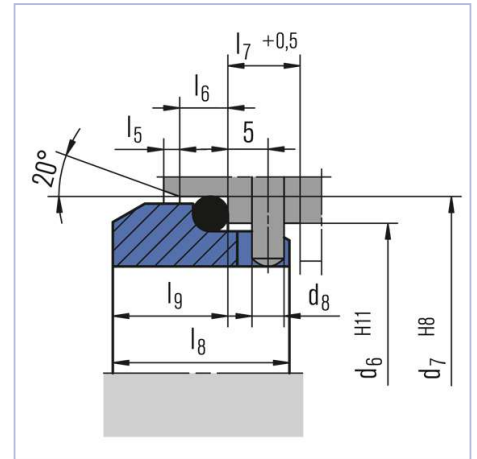
Seat alternatives



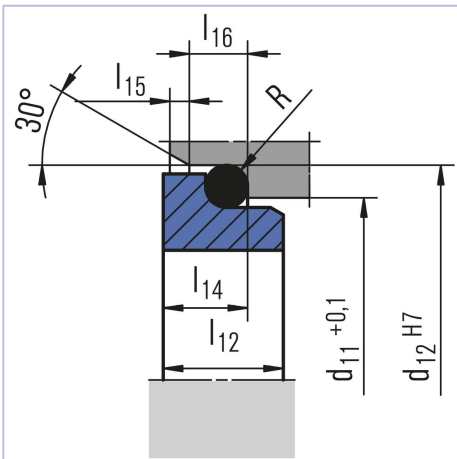
G6
EN 12756



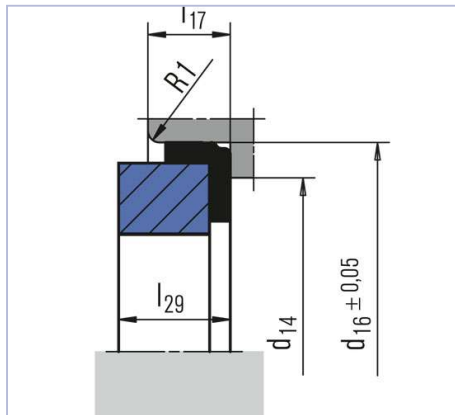
G60
EN 12756



G9
EN 12756

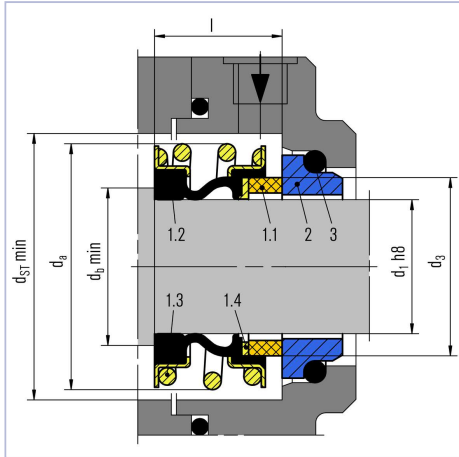


G4



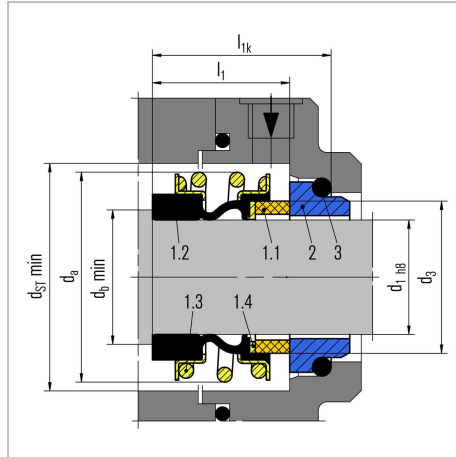
G50
Euro standard

Product variants



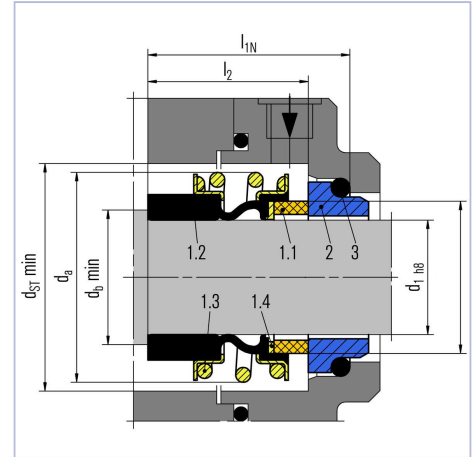
eMG

Dimensions, items and designations same as for eMG1, but with an shortened bellows tail to achieve the fitting length l . Shortest fitting length.



eMG12

Dimensions, items and designations same as for eMG1, 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).



eMG13

Dimensions, items and designations same as for eMG1, but with an extended bellows tail to achieve the fitting length l_{1N} according to EN 12756 in combination with seat G6 or G60 (d_a exceeds EN 12756).

eRMG1

Identical to eMG1, but with a special bellows surface on the shaft side. For use in hot water pumps

$d_1 = 12 \dots 38 \text{ mm (0.47" ... 1.50")}$

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 ₈ | d ₁₁ | d ₁₂ | d ₁₄ | d ₁₆ | d _a | d _b *) | d _{ST} | l | l ₁ | l _{1K} | l _{1N} | l ₂ | l ₃ | l ₅ | l ₆ | l ₇ | l ₈ | l ₉ | l ₁₀ | l ₁₂ | l ₁₄ | l ₁₅ | l ₁₆ | l ₁₇ | l ₂₈ | l ₂₉ | R | |
|----------------|----------------|----------------|-------------------------------|-----------------|-----------------|-----------------|-----------------|----------------|-------------------|-----------------|------|----------------|-----------------|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------|-----|
| 15 | 20.8 | - | - | 20.5 | 24.6 | 17.0 | 30.95 | 28.5 | 18.5 | 30 | 15.0 | - | - | - | 17.0 | - | - | - | - | - | - | 7.5 | 6.6 | 1.2 | 3.8 | 9.0 | - | 10.5 | 1.2 | | |
| 16 | 21.0 | 23 | 27 | 3 | 22.0 | 28.0 | 17.0 | 30.95 | 28.5 | 19.5 | 30 | 15.0 | 28.4 | 35.0 | 40 | 33.4 | 17.0 | 1.5 | 4 | 8.5 | 17.5 | 10.0 | 7.5 | 8.5 | 7.5 | 1.5 | 5.0 | 9.0 | 6.6 | 10.5 | 1.5 |
| 18 | 23.7 | 27 | 33 | 3 | 24.0 | 30.0 | 20.0 | 34.15 | 32.0 | 21.5 | 33 | 17.0 | 30.0 | 37.5 | - | 19.5 | 2.0 | 5 | 9 | 19.5 | 11.5 | 8.5 | 9.0 | 8.0 | 1.5 | 5.0 | 9.0 | 7.5 | 10.5 | 1.5 | |
| 20 | 26.7 | 29 | 35 | 3 | 29.5 | 35.0 | 21.5 | 35.70 | 37.0 | 24.0 | 38 | 19.0 | 30.0 | 37.5 | - | 21.5 | 2.0 | 5 | 9 | 19.5 | 11.5 | 8.5 | 8.5 | 7.5 | 1.5 | 5.0 | 9.0 | 7.5 | 10.5 | 1.5 | |
| 22 | 27.7 | 31 | 37 | 3 | 29.5 | 35.0 | 23.0 | 37.30 | 37.0 | 26.0 | 38 | 19.0 | 30.0 | 37.5 | - | 21.5 | 2.0 | 5 | 9 | 19.5 | 11.5 | 8.5 | 8.5 | 7.5 | 1.5 | 5.0 | 9.0 | 7.5 | 10.5 | 1.5 | |
| 24 | 31.2 | 33 | 39 | 3 | 32.0 | 38.0 | 26.5 | 40.50 | 42.5 | 28.0 | 44 | 19.0 | 32.5 | 40.0 | - | 22.5 | 2.0 | 5 | 9 | 19.5 | 11.5 | 8.5 | 8.5 | 7.5 | 1.5 | 5.0 | 9.0 | 7.5 | 10.5 | 1.5 | |
| 25 | 31.2 | 34 | 40 | 3 | 32.0 | 38.0 | 26.5 | 40.50 | 42.5 | 29.0 | 44 | 19.0 | 32.5 | 40.0 | - | 23.0 | 2.0 | 5 | 9 | 19.5 | 11.5 | 8.5 | 8.5 | 7.5 | 1.5 | 5.0 | 9.0 | 7.5 | 10.5 | 1.5 | |
| 28 | 35.0 | 37 | 43 | 3 | 36.0 | 42.0 | 29.5 | 47.65 | 49.0 | 32.0 | 50 | 23.0 | 35.0 | 42.5 | 50 | 42.5 | 26.5 | 2.0 | 5 | 9 | 19.5 | 11.5 | 8.5 | 10.0 | 9.0 | 1.5 | 5.0 | 10.5 | 7.5 | 12.0 | 1.5 |
| 30 | 37.0 | 39 | 45 | 3 | 39.2 | 45.0 | 32.5 | 50.80 | 49.0 | 34.0 | 50 | 23.0 | 35.0 | 42.5 | - | 26.5 | 2.0 | 5 | 9 | 19.5 | 11.5 | 8.5 | 11.5 | 10.5 | 1.5 | 5.0 | 10.5 | 7.5 | 12.0 | 1.5 | |
| 32 | 40.2 | 42 | 48 | 3 | 42.2 | 48.0 | 32.5 | 50.80 | 53.5 | 36.0 | 55 | 23.5 | 35.0 | 42.5 | - | 27.5 | 2.0 | 5 | 9 | 19.5 | 11.5 | 8.5 | 11.5 | 10.5 | 1.5 | 5.0 | 10.5 | 7.5 | 12.0 | 1.5 | |
| 33 | 40.2 | 42 | 48 | 3 | 44.2 | 50.0 | 36.5 | 54.00 | 53.5 | 37.0 | 55 | 23.5 | 35.0 | 42.5 | - | 27.5 | 2.0 | 5 | 9 | 19.5 | 11.5 | 8.5 | 12.0 | 11.0 | 1.5 | 5.0 | 10.5 | 7.5 | 12.0 | 1.5 | |
| 35 | 43.2 | 44 | 50 | 3 | 46.2 | 52.0 | 36.5 | 54.00 | 57.0 | 40.0 | 59 | 24.5 | 35.0 | 42.5 | - | 28.5 | 2.0 | 5 | 9 | 19.5 | 11.5 | 8.5 | 12.0 | 11.0 | 1.5 | 5.0 | 10.5 | 7.5 | 12.0 | 1.5 | |
| 38 | 46.2 | 49 | 56 | 4 | 49.2 | 55.0 | 39.5 | 57.15 | 59.0 | 43.0 | 61 | 25.0 | 36.0 | 45.0 | 55 | 46.0 | 30.0 | 2.0 | 6 | 9 | 22.0 | 14.0 | 10.0 | 11.3 | 10.3 | 1.5 | 5.0 | 10.5 | 9.0 | 12.0 | 1.5 |
| 40 | 48.8 | 51 | 58 | 4 | 52.2 | 58.0 | 42.5 | 60.35 | 62.0 | 45.0 | 64 | 25.5 | 36.0 | 45.0 | - | 30.0 | 2.0 | 6 | 9 | 22.0 | 14.0 | 10.0 | 11.8 | 10.8 | 1.5 | 5.0 | 10.5 | 9.0 | 12.0 | 1.5 | |
| 43 | 51.8 | 54 | 61 | 4 | 53.3 | 62.0 | 46.0 | 63.50 | 65.5 | 48.0 | 67 | 25.5 | 36.0 | 45.0 | - | 30.0 | 2.0 | 6 | 9 | 22.0 | 14.0 | 10.0 | 13.2 | 12.0 | 2.0 | 6.0 | 10.5 | 9.0 | 12.0 | 2.5 | |
| 45 | 53.8 | 56 | 63 | 4 | 55.3 | 64.0 | 46.0 | 63.50 | 68.0 | 50.0 | 70 | 25.5 | 36.0 | 45.0 | - | 30.0 | 2.0 | 6 | 9 | 22.0 | 14.0 | 10.0 | 12.8 | 11.6 | 2.0 | 6.0 | 10.5 | 9.0 | 12.0 | 2.5 | |
| 48 | 56.8 | 59 | 66 | 4 | 59.7 | 68.4 | 49.0 | 66.70 | 70.5 | 53.0 | 74 | 26.0 | 36.0 | 45.0 | 60 | 51.0 | 30.5 | 2.0 | 6 | 9 | 22.0 | 14.0 | 10.0 | 12.8 | 11.6 | 2.0 | 6.0 | 10.5 | 9.0 | 12.0 | 2.5 |
| 50 | 58.8 | 62 | 70 | 4 | 60.8 | 69.3 | 52.0 | 69.85 | 74.0 | 55.0 | 77 | 26.0 | 38.0 | - | - | 30.5 | 2.5 | 6 | 9 | 23.0 | 15.0 | 10.5 | 12.8 | 11.6 | 2.0 | 6.0 | 12.0 | 9.5 | 13.5 | 2.5 | |
| 55 | 64.2 | 67 | 75 | 4 | 66.5 | 75.4 | 58.5 | 76.20 | 81.0 | 60.0 | 83 | 30.0 | 36.5 | 47.5 | 70 | 59.0 | 35.0 | 2.5 | 6 | 9 | 23.0 | 15.0 | 12.0 | 14.5 | 13.3 | 2.0 | 6.0 | 12.0 | 11.0 | 13.5 | 2.5 |
| 58 | 67.2 | 70 | 78 | 4 | 69.5 | 78.4 | 61.5 | 79.40 | 85.5 | 64.0 | 88 | 31.0 | - | - | - | 37.0 | 2.5 | 6 | 9 | 23.0 | 15.0 | 12.0 | 14.5 | 13.3 | 2.0 | 6.0 | 12.0 | 11.0 | 13.5 | 2.5 | |
| 60 | 70.0 | 72 | 80 | 4 | 71.5 | 80.4 | 61.5 | 79.40 | 88.5 | 66.0 | 91 | 32.0 | 41.5 | 52.5 | 70 | 59.0 | 38.0 | 2.5 | 6 | 9 | 23.0 | 15.0 | 12.0 | 14.5 | 13.3 | 2.0 | 6.0 | 12.0 | 11.0 | 13.5 | 2.5 |
| 65 | 75.0 | 77 | 85 | 4 | 76.5 | 85.4 | 68.0 | 92.10 | 93.5 | 71.0 | 96 | 34.0 | 41.5 | 52.5 | - | 40.0 | 2.5 | 6 | 9 | 23.0 | 15.0 | 12.0 | 14.2 | 13.0 | 2.0 | 6.0 | 14.5 | 11.0 | 16.0 | 2.5 | |
| 68 | 78.0 | 81 | 90 | 4 | 82.7 | 91.5 | 71.0 | 95.25 | 96.5 | 74.0 | 100 | 34.0 | - | - | - | 40.0 | 2.5 | 7 | 9 | 26.0 | 18.0 | 12.5 | 14.9 | 13.7 | 2.0 | 6.0 | 14.5 | 11.3 | 16.0 | 2.5 | |
| 70 | 80.0 | 83 | 92 | 4 | 83.0 | 92.0 | 71.0 | 95.25 | 99.5 | 76.0 | 103 | 34.0 | 48.7 | 60.0 | - | 40.0 | 2.5 | 7 | 9 | 26.0 | 18.0 | 12.5 | 14.2 | 13.0 | 2.0 | 6.0 | 14.5 | 11.3 | 16.0 | 2.5 | |
| 75 | 85.5 | 88 | 97 | 4 | 90.2 | 99.0 | 77.5 | 101.60 | 107.0 | 81.0 | 110 | 34.0 | 48.7 | 60.0 | - | 40.0 | 2.5 | 7 | 9 | 26.0 | 18.0 | 12.5 | 15.2 | 14.0 | 2.0 | 6.0 | 14.5 | 11.3 | 16.0 | 2.5 | |
| 80 | 90.5 | 95 | 105 | 4 | 95.2 | 104.0 | 84.0 | 114.30 | 112.0 | 86.0 | 116 | 34.0 | - | - | - | 40.0 | 3.0 | 7 | 9 | 26.2 | 18.2 | 13.0 | 16.2 | 15.0 | 2.0 | 6.0 | 18.5 | 12.0 | 20.0 | 2.5 | |
| 85 | 96.0 | 100 | 110 | 4 | 100.2 | 109.0 | 87.0 | 117.50 | 120.0 | 92.0 | 124 | 35.0 | - | - | - | 41.0 | 3.0 | 7 | 9 | 26.2 | 18.2 | 15.0 | 16.0 | 14.8 | 2.0 | 6.0 | 18.5 | 14.0 | 20.0 | 2.5 | |
| 90 | 102.0 | 105 | 115 | 4 | 105.2 | 114.0 | 93.5 | 123.85 | 127.0 | 97.0 | 131 | 38.0 | - | - | - | 45.0 | 3.0 | 7 | 9 | 26.2 | 18.2 | 15.0 | 16.0 | 14.8 | 2.0 | 6.0 | 18.5 | 14.0 | 20.0 | 2.5 | |
| 95 | 107.0 | 110 | 120 | 4 | 111.6 | 120.3 | 96.5 | 127.00 | 132.0 | 102.0 | 136 | 39.0 | - | - | - | 46.0 | 3.0 | 7 | 9 | 25.2 | 17.2 | 15.0 | 17.0 | 15.8 | 2.0 | 6.0 | 18.5 | 14.0 | 20.0 | 2.5 | |
| 100 | 112.0 | 115 | 125 | 4 | 114.5 | 123.3 | 103.0 | 133.35 | 137.0 | 107.0 | 140 | 40.0 | - | - | - | 47.0 | 3.0 | 7 | 9 | 25.2 | 17.2 | 15.0 | 17.0 | 15.8 | 2.0 | 6.0 | 18.5 | 14.0 | 20.0 | 2.5 | |
| 110 | 123.0 | - | - | - | - | - | - | 150.0 | 118.0 | 154 | 43.0 | - | - | - | 49.0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Dimensions in millimeter

Fitting length/axial movement tolerances: d₁ 15 ... 18 mm ±1.0; d₁ 20 ... 26 mm ±1.5; d₁ 28 ... 110 mm ±2.0

* Minimum diameter of the mating collar