

## Accessories for electric positioning systems

**FESTO**



### Key features

#### At a glance

##### Elastomer spider couplings EAMC

→ Page 3



- Three-piece coupling with clamping hub, suitable for force-locked and backlash-free transmission of medium and high torques between electric motors and axes.
- System product for positioning technology
- Outside diameter 16, 20, 30, 40, 42, 56, 65, 67 mm

##### Elastomer spider couplings EAMD, with expanding mandrel

→ Page 8



- Three-piece coupling with expanding mandrel and clamping hub, suitable for force-locked and backlash-free transmission of medium and high torques between electric motors and axes with hollow shaft.
- System product for positioning technology
- Outside diameter 16, 19, 21, 25, 28, 30, 32, 33, 42, 56, 67, 75 mm

##### Connecting shafts KSK

→ Page 13



Electric axes are often combined to form multi-axis systems. When designing gantry systems with a medium centre distance between the axes and heavy loads, it is particularly important that the two basic axes are actuated synchronously. For these systems, two axes with toothed belt drive are generally coupled with a shared motor and synchronised using a connecting shaft.

#### Range of applications:

- For synchronising toothed belt axes EGC and ELGA or cantilever axes ELCC
- For torsion-resistant transmission of the necessary torque
- For slip-free transmission of an identical feed speed
- For compensating tolerances and alignment errors between two axes

## Type codes

| 001  | Series   |  |
|------|----------|--|
| EAMC | Coupling |  |

| 002 | Coupling type      |  |
|-----|--------------------|--|
|     | Ring gear coupling |  |

| 003 | Collar diameter [mm] |  |
|-----|----------------------|--|
| 16  | 16                   |  |
| 19  | 19                   |  |
| 20  | 20                   |  |
| 30  | 30                   |  |
| 40  | 40                   |  |
| 42  | 42                   |  |
| 56  | 56                   |  |
| 65  | 65                   |  |
| 67  | 67                   |  |

| 004 | Length |  |
|-----|--------|--|
| 20  | 20 mm  |  |
| 30  | 30 mm  |  |
| 32  | 32 mm  |  |
| 35  | 35 mm  |  |
| 50  | 50 mm  |  |
| 58  | 58 mm  |  |
| 62  | 62 mm  |  |
| 66  | 66 mm  |  |
| 90  | 90 mm  |  |
| 71  | 71 mm  |  |
| 80  | 80 mm  |  |

| 005  | Inside diameter 1 |  |
|------|-------------------|--|
| 3    | 3 mm              |  |
| 4    | 4 mm              |  |
| 5    | 5 mm              |  |
| 6    | 6 mm              |  |
| 6.35 | 6.35 mm           |  |
| 8    | 8 mm              |  |
| 9    | 9 mm              |  |
| 10   | 10 mm             |  |
| 11   | 11 mm             |  |
| 12   | 12 mm             |  |
| 15   | 15 mm             |  |
| 19   | 19 mm             |  |
| 20   | 20 mm             |  |
| 22   | 22 mm             |  |
| 24   | 24 mm             |  |
| 25   | 25 mm             |  |
| 32   | 32 mm             |  |
| 40   | 40 mm             |  |
| XX   | Closed            |  |

| 006  | Inside diameter 2 |  |
|------|-------------------|--|
| 5    | 5 mm              |  |
| 6    | 6 mm              |  |
| 6.35 | 6.35 mm           |  |
| 8    | 8 mm              |  |
| 9    | 9 mm              |  |
| 10   | 10 mm             |  |
| 11   | 11 mm             |  |
| 12   | 12 mm             |  |
| 14   | 14 mm             |  |
| 15   | 15 mm             |  |
| 16   | 16 mm             |  |
| 19   | 19 mm             |  |
| 20   | 20 mm             |  |
| 22   | 22 mm             |  |
| 24   | 24 mm             |  |
| 25   | 25 mm             |  |
| 32   | 32 mm             |  |
| 40   | 40 mm             |  |

| 007 | Ring gear hardness |  |
|-----|--------------------|--|
|     | Standard           |  |
| U   | 64 Sh D            |  |

## Datasheet

## Elastomer spider coupling EAMC

⌀ Diameter  
16 ... 67 mm



## General technical data

| Type                                         |                       | EAMC-16-20     | EAMC-19-20 | EAMC-20-30 | EAMC-30-32 |
|----------------------------------------------|-----------------------|----------------|------------|------------|------------|
| Mass moment of inertia                       | [kg mm <sup>2</sup> ] | 0.28           | 0.38       | 1.06       | 5.87       |
| Tightening torque for clamping screw         | [Nm]                  | 0.5            | 0.5        | 0.76       | 4          |
| Max. rotational speed                        | [rpm]                 | 10000          | 10000      | 9000       | 8000       |
| Corrosion resistance class CRC <sup>1)</sup> |                       | 1              |            |            |            |
| Materials                                    | Hubs                  | Aluminium      |            |            |            |
|                                              | Ring gear             | Polyurethane   |            |            |            |
| Note on materials                            |                       | RoHS-compliant |            |            |            |
| LABS (PWIS) conformity                       |                       | VDMA24364-B2-L |            |            |            |

| Type                                         |                       | EAMC-30-35     | EAMC-40-66 | EAMC-42-50 | EAMC-42-66 | EAMC-56-58 |
|----------------------------------------------|-----------------------|----------------|------------|------------|------------|------------|
| Mass moment of inertia                       | [kg mm <sup>2</sup> ] | 6.1            | 42.3       | 34.8       | 45.5       | 128        |
| Tightening torque for clamping screw         | [Nm]                  | 2.9            | 10.5       | 8          | 8          | 15         |
| Max. rotational speed                        | [rpm]                 | 8000           | 6500       | 6000       | 6000       | 5500       |
| Corrosion resistance class CRC <sup>1)</sup> |                       | 1              |            |            |            |            |
| Materials                                    | Hubs                  | Aluminium      |            |            |            |            |
|                                              | Ring gear             | Polyurethane   |            |            |            |            |
| Note on materials                            |                       | RoHS-compliant |            |            |            |            |
| LABS (PWIS) conformity                       |                       | VDMA24364-B2-L |            |            |            |            |

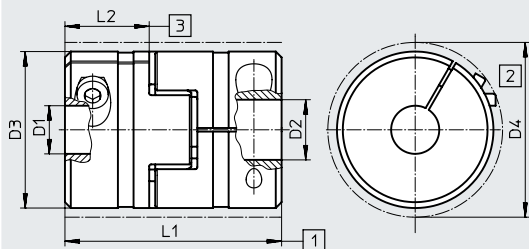
| Type                                         |                       | EAMC-65-90     | EAMC-67-62 | EAMC-67-71 | EAMC-67-80 |
|----------------------------------------------|-----------------------|----------------|------------|------------|------------|
| Mass moment of inertia                       | [kg mm <sup>2</sup> ] | 417            | 280        | 302        | 326        |
| Tightening torque for clamping screw         | [Nm]                  | 25             | 35         | 35         | 15         |
| Max. rotational speed                        | [rpm]                 | 4500           | 4500       | 4500       | 4500       |
| Corrosion resistance class CRC <sup>1)</sup> |                       | 1              |            |            |            |
| Materials                                    | Hubs                  | Aluminium      |            |            |            |
|                                              | Ring gear             | Polyurethane   |            |            |            |
| Note on materials                            |                       | RoHS-compliant |            |            |            |
| LABS (PWIS) conformity                       |                       | VDMA24364-B2-L |            |            |            |

1) Corrosion resistance class CRC 1 to Festo standard FN 940070

Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, or parts that are covered in the application (e.g. drive trunnions).

## Datasheet

## Dimensions and ordering data

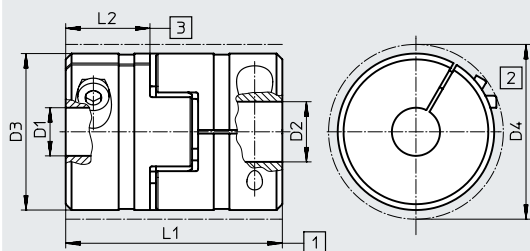
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- [1] Nominal length with axial offset compensation  
 [2] Min. installation diameter (interference profile of the clamping screw)  
 [3] Insertion depth

| Ø    | D1<br>Ø<br>H7 | D2<br>Ø<br>H7 | D3<br>Ø | D4<br>Ø | L1   | L2   | Transferable torque<br>[Nm] | Weight<br>[g] | Part no. | Type               |
|------|---------------|---------------|---------|---------|------|------|-----------------------------|---------------|----------|--------------------|
| [mm] |               |               |         |         |      |      |                             |               |          |                    |
| 16   | 3             | 5             | 16      | 17      | 20±1 | 6.5  | 0.2                         | 8             | 562672   | EAMC-16-20-3-5     |
|      | 3             | 6             | 16      | 17      | 20±1 | 6.5  | 0.2                         | 8             | 562671   | EAMC-16-20-3-6     |
|      | 3             | 8             | 16      | 17      | 20±1 | 6.5  | 0.2                         | 8             | 2310368  | EAMC-16-20-3-8     |
|      | 4             | 5             | 16      | 17      | 20±1 | 6.5  | 0.7                         | 8             | 562674   | EAMC-16-20-4-5     |
|      | 4             | 6             | 16      | 17      | 20±1 | 6.5  | 0.7                         | 8             | 562673   | EAMC-16-20-4-6     |
|      | 4             | 8             | 16      | 17      | 20±1 | 6.5  | 0.7                         | 8             | 562675   | EAMC-16-20-4-8     |
|      | 5             | 5             | 16      | 17      | 20±1 | 6.5  | 1.1                         | 8             | 562676   | EAMC-16-20-5-5     |
|      | 5             | 6             | 16      | 17      | 20±1 | 6.5  | 1.1                         | 8             | 543419   | EAMC-16-20-5-6     |
|      | 5             | 8             | 16      | 17      | 20±1 | 6.5  | 1.1                         | 8             | 562677   | EAMC-16-20-5-8     |
|      | 6             | 6             | 16      | 17      | 20±1 | 6.5  | 1.6                         | 8             | 543420   | EAMC-16-20-6-6     |
|      | 6             | 8             | 16      | 17      | 20±1 | 6.5  | 1.6                         | 8             | 1232854  | EAMC-16-20-6-8     |
| 19   | 5             | 9             | 19      | 19      | 20±1 | 6.5  | 1.1                         | 9             | 8126386  | EAMC-19-20-5-9     |
| 20   | 5             | 6             | 20      | 24      | 30   | 10   | 2.2                         | 20            | 558902   | EAMC-20-30-5-6     |
|      | 6             | 6             | 20      | 24      | 30   | 10   | 2.3                         | 20            | 558901   | EAMC-20-30-6-6     |
|      | 6             | 10            | 20      | 24      | 30   | 10   | 2.3                         | 20            | 1451964  | EAMC-20-30-6-10    |
| 30   | 5             | 6             | 30      | 30      | 32±1 | 10.3 | 3.5                         | 48            | 561333   | EAMC-30-32-5-6     |
|      | 5             | 8             | 30      | 30      | 32±1 | 10.3 | 3.5                         | 48            | 562678   | EAMC-30-32-5-8     |
|      | 6             | 6             | 30      | 30      | 32±1 | 10.3 | 6.5                         | 48            | 558312   | EAMC-30-32-6-6     |
|      | 6             | 6.35          | 30      | 30      | 32±1 | 10.3 | 6.5                         | 48            | 551002   | EAMC-30-32-6-6.35  |
|      | 6             | 8             | 30      | 30      | 32±1 | 10.3 | 6.5                         | 48            | 533708   | EAMC-30-32-6-8     |
|      | 6             | 9             | 30      | 30      | 32±1 | 10.3 | 6.5                         | 48            | 551003   | EAMC-30-32-6-9     |
|      | 6             | 10            | 30      | 30      | 32±1 | 10.3 | 6.5                         | 48            | 562681   | EAMC-30-32-6-10    |
|      | 6             | 11            | 30      | 30      | 32±1 | 10.3 | 6.5                         | 48            | 3187577  | EAMC-30-32-6-11    |
|      | 6             | 12            | 30      | 30      | 32±1 | 10.3 | 6.5                         | 48            | 8099435  | EAMC-30-32-6-12    |
|      | 6             | 14            | 30      | 31.4    | 32±1 | 10.3 | 6.5                         | 48            | 1233256  | EAMC-30-32-6-14    |
|      | 6.35          | 8             | 30      | 30      | 32±1 | 10.3 | 6.5                         | 48            | 543421   | EAMC-30-32-6.35-8  |
|      | 6.35          | 10            | 30      | 30      | 32±1 | 10.3 | 6.5                         | 48            | 562679   | EAMC-30-32-6.35-10 |
|      | 8             | 8             | 30      | 30      | 32±1 | 10.3 | 12.5                        | 48            | 543422   | EAMC-30-32-8-8     |
|      | 8             | 9             | 30      | 30      | 32±1 | 10.3 | 12.5                        | 48            | 543423   | EAMC-30-32-8-9     |
|      | 8             | 10            | 30      | 30      | 32±1 | 10.3 | 12.5                        | 48            | 558029   | EAMC-30-32-8-10    |
|      | 8             | 11            | 30      | 30      | 32±1 | 10.3 | 12.5                        | 48            | 551004   | EAMC-30-32-8-11    |
|      | 8             | 12            | 30      | 30      | 32±1 | 10.3 | 12.5                        | 48            | 8115760  | EAMC-30-32-8-12    |
|      | 8             | 14            | 30      | 31.4    | 32±1 | 10.3 | 12.5                        | 48            | 562682   | EAMC-30-32-8-14    |
|      | 9             | 10            | 30      | 30      | 32±1 | 10.3 | 12.5                        | 48            | 562680   | EAMC-30-32-9-10    |
|      | 10            | 10            | 30      | 30      | 32±1 | 10.3 | 12.5                        | 48            | 2310372  | EAMC-30-32-10-10   |
|      | 10            | 11            | 30      | 30      | 32±1 | 10.3 | 12.5                        | 48            | 565008   | EAMC-30-32-10-11   |
|      | 10            | 14            | 30      | 31.4    | 32±1 | 10.3 | 12.5                        | 48            | 562683   | EAMC-30-32-10-14   |

## Datasheet

## Dimensions and ordering data

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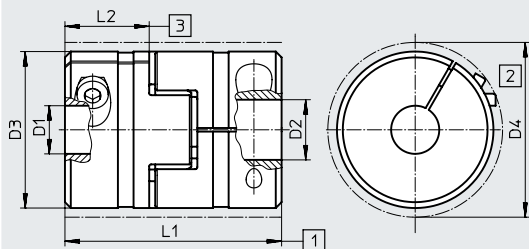
- [1] Nominal length with axial offset compensation  
 [2] Min. installation diameter (interference profile of the clamping screw)  
 [3] Insertion depth

| Ø  | D1<br>Ø<br>H7    | D2<br>Ø<br>H7 | D3<br>Ø | D4<br>Ø | L1      | L2 | Transferable torque<br>[Nm] | Weight<br>[g] | Part no. | Type               |
|----|------------------|---------------|---------|---------|---------|----|-----------------------------|---------------|----------|--------------------|
| 30 | 6                | 6.35          | 30      | 31.4    | 35±0.7  | 11 | 7.5                         | 45            | 530087   | EAMC-30-35-6-6.35  |
|    | 6                | 8             | 30      | 31.4    | 35±0.7  | 11 | 7.5                         | 45            | 123041   | EAMC-30-35-6-8     |
|    | 6                | 10            | 30      | 31.4    | 35±0.7  | 11 | 7.5                         | 45            | 1453062  | EAMC-30-35-6-10    |
|    | 6                | 11            | 30      | 31.4    | 35±0.7  | 11 | 7.5                         | 45            | 123843   | EAMC-30-35-6-11    |
|    | 6.35             | 8             | 30      | 31.4    | 35±0.7  | 11 | 7.5                         | 45            | 530088   | EAMC-30-35-6.35-8  |
|    | 6.35             | 12            | 30      | 31.4    | 35±0.7  | 11 | 7.5                         | 45            | 550995   | EAMC-30-35-6.35-12 |
|    | 8                | 8             | 30      | 31.4    | 35±0.7  | 11 | 8                           | 45            | 123044   | EAMC-30-35-8-8     |
|    | 8                | 9             | 30      | 31.4    | 35±0.7  | 11 | 8                           | 45            | 557390   | EAMC-30-35-8-9     |
|    | 8                | 10            | 30      | 31.4    | 35±0.7  | 11 | 8                           | 45            | 123050   | EAMC-30-35-8-10    |
|    | 8                | 11            | 30      | 31.4    | 35±0.7  | 11 | 8                           | 45            | 123042   | EAMC-30-35-8-11    |
|    | 8                | 12            | 30      | 31.4    | 35±0.7  | 11 | 8                           | 45            | 123043   | EAMC-30-35-8-12    |
|    | 8                | 14            | 30      | 31.4    | 35±0.7  | 11 | 8                           | 45            | 1453063  | EAMC-30-35-8-14    |
|    | 12               | 12            | 30      | 31.4    | 35±0.7  | 11 | 9.4                         | 45            | 123052   | EAMC-30-35-12-12   |
| 40 | 10               | 12            | 40      | 45.8    | 66±0.85 | 25 | 21                          | 139           | 1452794  | EAMC-40-66-10-12   |
|    | 11               | 11            | 40      | 45.8    | 66±0.85 | 25 | 21                          | 139           | 530090   | EAMC-40-66-11-11   |
|    | 11               | 12            | 40      | 45.8    | 66±0.85 | 25 | 21                          | 139           | 525864   | EAMC-40-66-11-12   |
|    | 11               | 14            | 40      | 45.8    | 66±0.85 | 25 | 21                          | 139           | 1452798  | EAMC-40-66-11-14   |
|    | 11               | 15            | 40      | 45.8    | 66±0.85 | 25 | 21                          | 139           | 550998   | EAMC-40-66-11-15   |
|    | 12               | 14            | 40      | 45.8    | 66±0.85 | 25 | 21                          | 139           | 1452803  | EAMC-40-66-12-14   |
|    | 12               | 15            | 40      | 45.8    | 66±0.85 | 25 | 21                          | 139           | 123850   | EAMC-40-66-12-15   |
|    | 12               | 20            | 40      | 45.8    | 66±0.85 | 25 | 21                          | 139           | 123851   | EAMC-40-66-12-20   |
|    | 15               | 16            | 40      | 45.8    | 66±0.85 | 25 | 21                          | 139           | 123846   | EAMC-40-66-15-16   |
|    | 15               | 19            | 40      | 45.8    | 66±0.85 | 25 | 21                          | 139           | 123844   | EAMC-40-66-15-19   |
|    | 15               | 20            | 40      | 45.8    | 66±0.85 | 25 | 21                          | 139           | 123845   | EAMC-40-66-15-20   |
|    | 15               | 22            | 40      | 45.8    | 66±0.85 | 25 | 21                          | 139           | 3307627  | EAMC-40-66-15-22   |
|    | 20               | 24            | 40      | 45.8    | 66±0.85 | 25 | 21                          | 139           | 176034   | EAMC-40-66-20-24   |
|    | XX <sup>1)</sup> | 15            | 40      | 45.8    | 66±0.85 | 25 | –                           | 139           | 176036   | EAMC-40-66-XX-15   |
|    | XX <sup>1)</sup> | 20            | 40      | 45.8    | 66±0.85 | 25 | –                           | 139           | 176037   | EAMC-40-66-XX-20   |

1) Hub predrilled to a diameter of 5 mm. Drilled hole max. 20 mm

## Datasheet

## Dimensions and ordering data

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- [1] Nominal length with axial offset compensation  
 [2] Min. installation diameter (interference profile of the clamping screw)  
 [3] Insertion depth

| Ø<br>[mm] | D1<br>Ø<br>H7    | D2<br>Ø<br>H7 | D3<br>Ø | D4<br>Ø | L1     | L2       | Transferable torque<br>[Nm] | Weight<br>[g] | Part no. | Type               |
|-----------|------------------|---------------|---------|---------|--------|----------|-----------------------------|---------------|----------|--------------------|
| 42        | 8                | 19            | 42      | 44.5    | 50±2   | 17       | 17                          | 140           | 2310376  | EAMC-42-50-8-19    |
|           | 9                | 12            | 42      | 44.5    | 50±2   | 17       | 17                          | 146           | 1732001  | EAMC-42-50-9-12    |
|           | 10               | 12            | 42      | 44.5    | 50±2   | 17       | 17                          | 145           | 1455666  | EAMC-42-50-10-12   |
|           | 11               | 12            | 42      | 44.5    | 50±2   | 17       | 17                          | 138           | 543424   | EAMC-42-50-11-12   |
|           | 12               | 12            | 42      | 44.5    | 50±2   | 17       | 17                          | 138           | 533709   | EAMC-42-50-12-12   |
|           | 12               | 14            | 42      | 44.5    | 50±2   | 17       | 17                          | 142           | 1455671  | EAMC-42-50-12-14   |
|           | 12               | 14            | 42      | 44.5    | 50±2   | 17       | 17                          | 143           | 8099432  | EAMC-42-50-12-14-U |
|           | 12               | 16            | 42      | 44.5    | 50±2   | 17       | 17                          | 140           | 1232880  | EAMC-42-50-12-16   |
|           | 12               | 16            | 42      | 44.5    | 50±2   | 17       | 17                          | 141           | 8099433  | EAMC-42-50-12-16-U |
|           | 12               | 19            | 42      | 44.5    | 50±2   | 17       | 17                          | 138           | 551005   | EAMC-42-50-12-19   |
|           | 12               | 20            | 42      | 44.5    | 50±2   | 17       | 17                          | 135           | 2138701  | EAMC-42-50-12-20   |
|           | 12               | 24            | 42      | 44.5    | 50±2   | 17       | 17                          | 130           | 558314   | EAMC-42-50-12-24   |
|           | 11               | 12            | 42      | 44.5    | 66±2   | 25       | 17                          | 166           | 558313   | EAMC-42-66-11-12   |
| 56        | 19               | 19            | 56      | 57      | 58±2   | 19.9     | 60                          | 288           | 1485673  | EAMC-56-58-19-19   |
|           | 19               | 20            | 56      | 57      | 58±2   | 19.9     | 60                          | 286           | 3181801  | EAMC-56-58-19-20   |
|           | 19               | 22            | 56      | 57      | 58±2   | 19.9     | 60                          | 283           | 8099430  | EAMC-56-58-19-22   |
|           | 19               | 24            | 56      | 57      | 58±2   | 19.9     | 60                          | 279           | 1485674  | EAMC-56-58-19-24   |
|           | 19               | 25            | 56      | 57      | 58±2   | 19.9     | 60                          | 277           | 558315   | EAMC-56-58-19-25   |
|           | 20               | 22            | 56      | 57      | 58±2   | 19.9     | 60                          | 281           | 8134825  | EAMC-56-58-20-22   |
|           | 22               | 24            | 56      | 57      | 58±2   | 19.9     | 60                          | 274           | 8134826  | EAMC-56-58-22-24   |
|           | 22               | 25            | 56      | 57      | 58±2   | 19.9     | 60                          | 272           | 8099431  | EAMC-56-58-22-25   |
| 65        | 15               | 24            | 65      | 72.6    | 90±1.1 | 35       | 80                          | 535           | 530940   | EAMC-65-90-15-24   |
|           | 25               | 32            | 65      | 72.6    | 90±1.1 | 35       | 92                          | 535           | 1745817  | EAMC-65-90-25-32   |
|           | XX <sup>2)</sup> | 25            | 65      | 72.6    | 90±1.1 | 35       | –                           | 535           | 176038   | EAMC-65-90-XX-25   |
| 67        | 24               | 24            | 66.5    | 68      | 62±2   | 21.25    | 143                         | 436           | 1451407  | EAMC-67-62-24-24   |
|           | 24               | 25            | 66.5    | 68      | 62±2   | 21.25    | 143                         | 434           | 3187895  | EAMC-67-62-24-25   |
|           | 24               | 32            | 66.5    | 68      | 62±2   | 21.25    | 143                         | 417           | 1485796  | EAMC-67-62-24-32   |
|           | 24               | 32            | 66.5    | 68      | 71±2   | 21.25/30 | 143                         | 462           | 8165044  | EAMC-67-71-24-32-U |
|           | 24               | 40            | 66.5    | 68      | 71±2   | 21.25/30 | 143                         | 429           | 8134949  | EAMC-67-71-24-40-U |
|           | 25               | 32            | 66.5    | 68      | 80±2   | 30       | 143                         | 513           | 8134828  | EAMC-67-80-25-32-U |
|           | 25               | 40            | 66.5    | 68      | 80±2   | 30       | 143                         | 480           | 8134948  | EAMC-67-80-25-40-U |
|           | 32               | 32            | 66.5    | 68      | 80±2   | 30       | 143                         | 490           | 8134829  | EAMC-67-80-32-32-U |
|           | 32               | 40            | 66.5    | 68      | 80±2   | 30       | 143                         | 458           | 8134950  | EAMC-67-80-32-40-U |
|           | 40               | 40            | 66.5    | 68      | 80±2   | 30       | 143                         | 424           | 8134953  | EAMC-67-80-40-40-U |

2) Hub predrilled to a diameter of 9.5 mm. Drilled hole max. 38 mm

## Type codes

|      |                                           |  |
|------|-------------------------------------------|--|
| 001  | Series                                    |  |
| EAMD | Ring gear coupling with expanding mandrel |  |

|     |                      |  |
|-----|----------------------|--|
| 002 | Collar diameter [mm] |  |
| 16  | 16                   |  |
| 19  | 19                   |  |
| 21  | 21                   |  |
| 25  | 25                   |  |
| 28  | 28                   |  |
| 30  | 30                   |  |
| 32  | 32                   |  |
| 33  | 33                   |  |
| 42  | 42                   |  |
| 56  | 56                   |  |
| 67  | 67                   |  |
| 75  | 75                   |  |

|     |                    |  |
|-----|--------------------|--|
| 003 | Collar length [mm] |  |
| 15  | 15                 |  |
| 22  | 22                 |  |
| 32  | 32                 |  |
| 40  | 40                 |  |
| 46  | 46                 |  |
| 51  | 51                 |  |
| 54  | 54                 |  |
| 62  | 62                 |  |
| 82  | 82                 |  |

|      |                   |  |
|------|-------------------|--|
| 004  | Inside diameter 1 |  |
| 5    | 5 mm              |  |
| 6    | 6 mm              |  |
| 6.35 | 6.35 mm           |  |
| 8    | 8 mm              |  |
| 9    | 9 mm              |  |
| 10   | 10 mm             |  |
| 11   | 11 mm             |  |
| 12   | 12 mm             |  |
| 14   | 14 mm             |  |
| 16   | 16 mm             |  |
| 18   | 18 mm             |  |
| 19   | 19 mm             |  |
| 20   | 20 mm             |  |
| 22   | 22 mm             |  |
| 24   | 24 mm             |  |
| 25   | 25 mm             |  |
| 32   | 32 mm             |  |
| 40   | 40 mm             |  |

|     |                                 |  |
|-----|---------------------------------|--|
| 005 | Expanding mandrel diameter [mm] |  |
| 8   | 8                               |  |
| 10  | 10                              |  |
| 16  | 16                              |  |
| 23  | 23                              |  |
| 32  | 32                              |  |

|     |                               |  |
|-----|-------------------------------|--|
| 006 | Expanding mandrel length [mm] |  |
| X10 | 10                            |  |
| X12 | 12                            |  |
| X20 | 20                            |  |
| X32 | 32                            |  |
| X25 | 25                            |  |
| X27 | 27                            |  |

|     |                    |  |
|-----|--------------------|--|
| 007 | Ring gear hardness |  |
|     | Standard           |  |
| U   | 64 Sh D            |  |

# Datasheet

## Elastomer spider coupling EAMD, with expanding mandrel

 Diameter  
 16 ... 75 mm



| General technical data                       |                       | EAMD-16-15     | EAMD-19-15 | EAMD-21-15 | EAMD-25-22 | EAMD-28-22 | EAMD-30-22 |
|----------------------------------------------|-----------------------|----------------|------------|------------|------------|------------|------------|
| Type                                         |                       |                |            |            |            |            |            |
| Mass moment of inertia                       | [kg mm <sup>2</sup> ] | 0.355          | 0.445      | 0.45       | 3.2        | 3.5        | 4.0        |
| Tightening torque for clamping screw D1      | [Nm]                  | 0.5            | 0.5        | 0.5        | 2          | 2          | 2          |
| Tightening torque for clamping screw D2      | [Nm]                  | 2              | 2          | 2          | 4          | 4          | 4          |
| Max. rotational speed                        | [rpm]                 | 10000          | 10000      | 10000      | 8000       | 8000       | 8000       |
| Corrosion resistance class CRC <sup>1)</sup> |                       | 1              |            |            |            |            |            |
| Materials                                    | Hubs                  | Aluminium      |            |            |            |            |            |
|                                              | Ring gear             | Polyurethane   |            |            |            |            |            |
| Note on materials                            |                       | RoHS-compliant |            |            |            |            |            |
| LABS (PWIS) conformity                       |                       | VDMA24364-B2-L |            |            |            |            |            |

| Type                                         |                       | EAMD-32-32     | EAMD-33-22 | EAMD-42-40 | EAMD-42-48 | EAMD-56-46 | EAMD-56-54 | EAMD-56-56 |
|----------------------------------------------|-----------------------|----------------|------------|------------|------------|------------|------------|------------|
| Mass moment of inertia                       | [kg mm <sup>2</sup> ] | 14.5           | 4.6        | 39         | 45         | 151        | 172        | 168        |
| Tightening torque for clamping screw D1      | [Nm]                  | 4              | 2          | 8          | 8          | 15         | 15         | 15         |
| Tightening torque for clamping screw D2      | [Nm]                  | 9              | 4          | 9.5        | 9.5        | 32         | 32         | 32         |
| Max. rotational speed                        | [rpm]                 | 8000           | 8000       | 6000       | 6000       | 5500       | 5500       | 5500       |
| Corrosion resistance class CRC <sup>1)</sup> |                       | 1              |            |            |            |            |            |            |
| Materials                                    | Hubs                  | Aluminium      |            |            |            |            |            |            |
|                                              | Ring gear             | Polyurethane   |            |            |            |            |            |            |
| Note on materials                            |                       | RoHS-compliant |            |            |            |            |            |            |
| LABS (PWIS) conformity                       |                       | VDMA24364-B2-L |            |            |            |            |            |            |

| Type                                         |                       | EAMD-56-62     | EAMD-67-51 | EAMD-67-60 | EAMD-67-82 | EAMD-75-51 | EAMD-67-91 | EAMD-75-51 |
|----------------------------------------------|-----------------------|----------------|------------|------------|------------|------------|------------|------------|
| Mass moment of inertia                       | [kg mm <sup>2</sup> ] | 192            | 374        | 402        | 831        | 425        | 858        | 425        |
| Tightening torque for clamping screw D1      | [Nm]                  | 15             | 35         | 15         | 35         | 35         | 15         | 35         |
| Tightening torque for clamping screw D2      | [Nm]                  | 32             | 60         | 60         | 60         | 60         | 60         | 60         |
| Max. rotational speed                        | [rpm]                 | 5500           | 4500       | 4500       | 4500       | 4500       | 4500       | 4500       |
| Corrosion resistance class CRC <sup>1)</sup> |                       | 1              |            |            |            |            |            |            |
| Materials                                    | Hubs                  | Aluminium      |            |            |            |            |            |            |
|                                              | Ring gear             | Polyurethane   |            |            |            |            |            |            |
| Note on materials                            |                       | RoHS-compliant |            |            |            |            |            |            |
| LABS (PWIS) conformity                       |                       | VDMA24364-B2-L |            |            |            |            |            |            |

1) Corrosion resistance class CRC 1 to Festo standard FN 940070

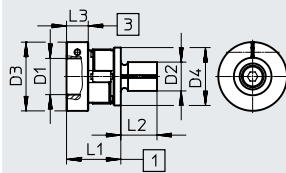
Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, or parts that are covered in the application (e.g. drive trunnions).

## Datasheet

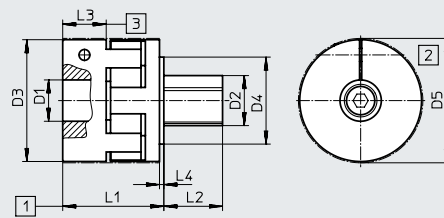
## Dimensions and ordering data

Download CAD data → [www.festo.com](http://www.festo.com)

## EAMD-16/EAMD-19



## EAMD-...



- [1] Nominal length with axial offset compensation  
 [2] Min. installation diameter (interference profile of the clamping screw)  
 [3] Insertion depth

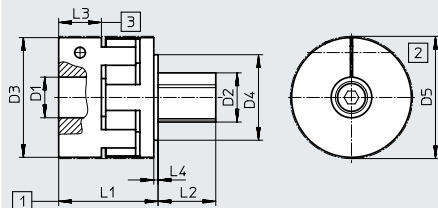
| Ø<br>[mm] | D1<br>Ø<br>H7 | D2<br>Ø<br>H7 | D3<br>Ø | D4<br>Ø | D5<br>Ø | L1   | L2 | L3   | L4  | Transferable torque<br>[Nm] | Weight<br>[g] | Part no. | Type                  |
|-----------|---------------|---------------|---------|---------|---------|------|----|------|-----|-----------------------------|---------------|----------|-----------------------|
| 16        | 5             | 8             | 16      | –       | 17      | 15±1 | 10 | 6.5  | –   | 1.2                         | 13            | 4819892  | EAMD-16-15-5-8X10     |
|           | 6             | 8             | 16      | –       | 17      | 15±1 | 10 | 6.5  | –   | 1.5                         | 12.8          | 4819883  | EAMD-16-15-6-8X10     |
|           | 6.35          | 8             | 16      | –       | 17      | 15±1 | 10 | 6.5  | –   | 1.6                         | 12.8          | 561292   | EAMD-16-15-6.35-8X10  |
|           | 8             | 8             | 16      | –       | 17      | 15±1 | 10 | 6.5  | –   | 2                           | 12            | 1184697  | EAMD-16-15-8-8X10     |
| 19        | 9             | 8             | 19      | –       | 19      | 15±1 | 10 | 6.5  | –   | 2                           | 13.5          | 557999   | EAMD-19-15-9-8X10     |
|           | 10            | 8             | 19      | –       | 19      | 15±1 | 10 | 6.5  | –   | 2                           | 13            | 557998   | EAMD-19-15-10-8X10    |
| 21        | 11            | 8             | 21      | –       | 21.5    | 15±1 | 10 | 6.5  | –   | 2                           | 13.7          | 4820350  | EAMD-21-15-11-8X10    |
|           | 12            | 8             | 21      | –       | 21.5    | 15±1 | 10 | 6.5  | –   | 2                           | 13.5          | 4820335  | EAMD-21-15-12-8X10    |
| 25        | 6.35          | 10            | 25      | 22      | 25      | 22±1 | 12 | 8.1  | 1   | 3.6                         | 43.7          | 561293   | EAMD-25-22-6.35-10X12 |
|           | 8             | 10            | 25      | 22      | 25      | 22±1 | 12 | 8.1  | 1   | 8                           | 43.4          | 5010861  | EAMD-25-22-8-10X12    |
|           | 9             | 10            | 25      | 22      | 25      | 22±1 | 12 | 8.1  | 1   | 9                           | 43.2          | 3717923  | EAMD-25-22-9-10X12    |
|           | 10            | 10            | 25      | 22      | 25      | 22±1 | 12 | 8.1  | 1   | 9                           | 43.5          | 1453860  | EAMD-25-22-10-10X12   |
|           | 11            | 10            | 25      | 22      | 25      | 22±1 | 12 | 8.1  | 1   | 9                           | 43.5          | 558000   | EAMD-25-22-11-10X12   |
|           | 12            | 10            | 25      | 22      | 25      | 22±1 | 12 | 8.1  | 1   | 9                           | 42.1          | 5029897  | EAMD-25-22-12-10X12   |
| 28        | 14            | 10            | 28      | 22      | 28      | 22±1 | 12 | 8.1  | 1   | 9                           | 43            | 1453861  | EAMD-28-22-14-10X12   |
| 30        | 16            | 10            | 30      | 22      | 30      | 22±1 | 12 | 8.1  | 1   | 9                           | 44.8          | 5030235  | EAMD-30-22-16-10X12   |
| 32        | 9             | 16            | 32      | 25      | 32      | 32±1 | 20 | 10.3 | 1.5 | 12.5                        | 127           | 5038002  | EAMD-32-32-9-16X20    |
|           | 10            | 16            | 32      | 25      | 32      | 32±1 | 20 | 10.3 | 1.5 | 16                          | 126           | 5273329  | EAMD-32-32-10-16X20-U |
|           | 11            | 16            | 32      | 25      | 32      | 32±1 | 20 | 10.3 | 1.5 | 12.5                        | 126           | 558001   | EAMD-32-32-11-16X20   |
|           | 11            | 16            | 32      | 25      | 32      | 32±1 | 20 | 10.3 | 1.5 | 12.5                        | 126           | 8086050  | EAMD-32-32-11-16X20-U |
|           | 12            | 16            | 32      | 25      | 32      | 32±1 | 20 | 10.3 | 1.5 | 12.5                        | 125           | 8070762  | EAMD-32-32-12-16X20   |
|           | 14            | 16            | 32      | 25      | 32      | 32±1 | 20 | 10.3 | 1.5 | 12.5                        | 124           | 1377840  | EAMD-32-32-14-16X20   |
|           | 14            | 16            | 32      | 25      | 32      | 32±1 | 20 | 10.3 | 1.5 | 12.5                        | 124           | 8086051  | EAMD-32-32-14-16X20-U |
|           | 16            | 16            | 32      | 25      | 32      | 32±1 | 20 | 10.3 | 1.5 | 12.5                        | 123           | 1184858  | EAMD-32-32-16-16X20   |
| 33        | 19            | 10            | 33      | 22      | 33      | 22±1 | 12 | 8.1  | 1   | 9                           | 46.1          | 5030024  | EAMD-33-22-19-10X12   |

## Datasheet

## Dimensions and ordering data

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EAMD-...



[1] Nominal length with axial offset compensation

[2] Min. installation diameter (interference profile of the clamping screw)

[3] Insertion depth

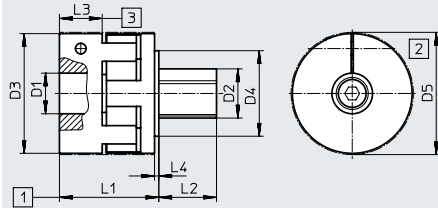
| Ø<br>[mm] | D1<br>Ø<br>H7 | D2<br>Ø<br>H7 | D3<br>Ø | D4<br>Ø | D5<br>Ø | L1     | L2 | L3 | L4  | Transferable torque<br>[Nm] | Weight<br>[g] | Part no. | Type                  |
|-----------|---------------|---------------|---------|---------|---------|--------|----|----|-----|-----------------------------|---------------|----------|-----------------------|
| 42        | 10            | 16            | 42      | 25      | 44.5    | 40±2   | 25 | 17 | 1.5 | 17                          | 199           | 5200227  | EAMD-42-40-10-16X25   |
|           | 11            | 16            | 42      | 25      | 44.5    | 40±2   | 25 | 17 | 1.5 | 17                          | 198           | 5200234  | EAMD-42-40-11-16X25   |
|           | 12            | 16            | 42      | 25      | 44.5    | 40±2   | 25 | 17 | 1.5 | 17                          | 198           | 5200241  | EAMD-42-40-12-16X25   |
|           | 14            | 16            | 42      | 25      | 44.5    | 40±2   | 25 | 17 | 1.5 | 21                          | 196           | 3420022  | EAMD-42-40-14-16X25-U |
|           | 16            | 16            | 42      | 25      | 44.5    | 40±2   | 25 | 17 | 1.5 | 17                          | 194           | 5153079  | EAMD-42-40-16-16X25   |
|           | 18            | 16            | 42      | 25      | 44.5    | 40±2   | 25 | 17 | 1.5 | 17                          | 192           | 5056644  | EAMD-42-40-18-16X25   |
|           | 19            | 16            | 42      | 25      | 44.5    | 40±2   | 25 | 17 | 1.5 | 17                          | 190           | 558002   | EAMD-42-40-19-16X25   |
|           | 20            | 16            | 42      | 25      | 44.5    | 40±2   | 25 | 17 | 1.5 | 17                          | 189           | 1188350  | EAMD-42-40-20-16X25   |
|           | 20            | 16            | 42      | 25      | 44.5    | 40±2   | 25 | 17 | 1.5 | 21                          | 189           | 1781043  | EAMD-42-40-20-16X25-U |
|           | 22            | 16            | 42      | 25      | 44.5    | 40±2   | 25 | 17 | 1.5 | 17                          | 186           | 5046328  | EAMD-42-40-22-16X25   |
|           | 16            | 16            | 42      | 25      | 44.5    | 48±2   | 25 | 25 | 1.5 | 17                          | 217           | 8121126  | EAMD-42-48-16-16X25   |
|           | 19            | 16            | 42      | 25      | 44.5    | 48±2   | 25 | 25 | 1.5 | 17                          | 212           | 8121127  | EAMD-42-48-19-16X25   |
| 56        | 14            | 23            | 56      | 40      | 57      | 46.5±2 | 27 | 20 | 2   | 38                          | 424           | 5062229  | EAMD-56-46-14-23X27   |
|           | 16            | 23            | 56      | 40      | 57      | 46.5±2 | 27 | 20 | 2   | 48                          | 422           | 8166642  | EAMD-56-46-16-23X27   |
|           | 18            | 23            | 56      | 40      | 57      | 46.5±2 | 27 | 20 | 2   | 57                          | 419           | 5063729  | EAMD-56-46-18-23X27   |
|           | 19            | 23            | 56      | 40      | 57      | 46.5±2 | 27 | 20 | 2   | 60                          | 418           | 558003   | EAMD-56-46-19-23X27   |
|           | 19            | 23            | 56      | 40      | 57      | 46.5±2 | 27 | 20 | 2   | 60                          | 418           | 8164975  | EAMD-56-46-19-23X27-U |
|           | 20            | 23            | 56      | 40      | 57      | 46.5±2 | 27 | 20 | 2   | 60                          | 416           | 558004   | EAMD-56-46-20-23X27   |
|           | 20            | 23            | 56      | 40      | 57      | 46.5±2 | 27 | 20 | 2   | 65                          | 416           | 8165049  | EAMD-56-46-20-23X27-U |
|           | 22            | 23            | 56      | 40      | 57      | 46.5±2 | 27 | 20 | 2   | 60                          | 413           | 4435489  | EAMD-56-46-22-23X27   |
|           | 22            | 23            | 56      | 40      | 57      | 46.5±2 | 27 | 20 | 2   | 72                          | 413           | 8164974  | EAMD-56-46-22-23X27-U |
|           | 24            | 23            | 56      | 40      | 57      | 46.5±2 | 27 | 20 | 2   | 60                          | 409           | 558005   | EAMD-56-46-24-23X27   |
|           | 24            | 23            | 56      | 40      | 57      | 46.5±2 | 27 | 20 | 2   | 75                          | 409           | 8134726  | EAMD-56-46-24-23X27-U |
|           | 25            | 23            | 56      | 40      | 57      | 46.5±2 | 27 | 20 | 2   | 60                          | 407           | 1188801  | EAMD-56-46-25-23X27   |
|           | 25            | 23            | 56      | 40      | 57      | 46.5±2 | 27 | 20 | 2   | 75                          | 407           | 1781045  | EAMD-56-46-25-23X27-U |
|           | 32            | 23            | 56      | 40      | 57      | 46.5±2 | 27 | 20 | 2   | 60                          | 390           | 5063745  | EAMD-56-46-32-23X27   |
|           | 18            | 23            | 56      | 40      | 57      | 54.5±2 | 27 | 20 | 2   | 60                          | 466           | 5225774  | EAMD-56-54-18-23X27   |
|           | 19            | 23            | 56      | 40      | 57      | 54.5±2 | 27 | 20 | 2   | 60                          | 464           | 5215476  | EAMD-56-54-19-23X27   |
|           | 22            | 23            | 56      | 40      | 57      | 54.5±2 | 27 | 20 | 2   | 60                          | 457           | 5226828  | EAMD-56-54-22-23X27   |
|           | 25            | 23            | 56      | 40      | 57      | 56.5±2 | 27 | 20 | 2   | 75                          | 452           | 8165047  | EAMD-56-56-25-23X27-U |
|           | 32            | 23            | 56      | 40      | 57      | 56.5±2 | 27 | 20 | 2   | 75                          | 429           | 8165048  | EAMD-56-56-32-23X27-U |
|           | 20            | 23            | 56      | 40      | 57      | 62.5±2 | 27 | 20 | 2   | 60                          | 507           | 5228153  | EAMD-56-62-20-23X27   |

## Datasheet

## Dimensions and ordering data

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EAMD-...



- [1] Nominal length with axial offset compensation
- [2] Min. installation diameter (interference profile of the clamping screw)
- [3] Insertion depth

| Ø<br>[mm] | D1<br>Ø<br>H7 | D2<br>Ø<br>H7 | D3<br>Ø | D4<br>Ø | D5<br>Ø | L1   | L2 | L3    | L4 | Transferable torque<br>[Nm] | Weight<br>[g] | Part no. | Type                  |
|-----------|---------------|---------------|---------|---------|---------|------|----|-------|----|-----------------------------|---------------|----------|-----------------------|
| 67        | 16            | 32            | 66.5    | –       | 68      | 51±2 | 32 | 21.25 | –  | 93                          | 750           | 5071095  | EAMD-67-51-16-32x32-U |
|           | 19            | 32            | 66.5    | –       | 68      | 51±2 | 32 | 21.25 | –  | 113                         | 745           | 3398671  | EAMD-67-51-19-32X32-U |
|           | 20            | 32            | 66.5    | –       | 68      | 51±2 | 32 | 21.25 | –  | 120                         | 744           | 3717812  | EAMD-67-51-20-32X32-U |
|           | 22            | 32            | 66.5    | –       | 68      | 51±2 | 32 | 21.25 | –  | 133                         | 740           | 5070937  | EAMD-67-51-22-32X32-U |
|           | 24            | 32            | 66.5    | –       | 68      | 51±2 | 32 | 21.25 | –  | 143                         | 736           | 558008   | EAMD-67-51-24-32X32-U |
|           | 25            | 32            | 66.5    | –       | 68      | 51±2 | 32 | 21.25 | –  | 150                         | 734           | 558006   | EAMD-67-51-25-32X32-U |
|           | 32            | 32            | 66.5    | –       | 68      | 51±2 | 32 | 21.25 | –  | 192                         | 717           | 1379269  | EAMD-67-51-32-32X32-U |
|           | 25            | 32            | 66.5    | –       | 68      | 60±2 | 32 | 30    | –  | 150                         | 789           | 8164976  | EAMD-67-60-25-32X32-U |
|           | 32            | 32            | 66.5    | –       | 68      | 60±2 | 32 | 30    | –  | 180                         | 766           | 8164977  | EAMD-67-60-32-32X32-U |
|           | 40            | 32            | 66.5    | –       | 68      | 60±2 | 32 | 30    | –  | 200                         | 733           | 8164978  | EAMD-67-60-40-32X32-U |
|           | 24            | 32            | 66.5    | –       | 68      | 82±2 | 32 | 21.25 | –  | 143                         | 1559          | 558009   | EAMD-67-82-24-32X32-U |
|           | 25            | 32            | 66.5    | –       | 68      | 82±2 | 32 | 21.25 | –  | 150                         | 1557          | 558007   | EAMD-67-82-25-32X32-U |
|           | 32            | 32            | 66.5    | –       | 68      | 82±2 | 32 | 21.25 | –  | 192                         | 1540          | 1379270  | EAMD-67-82-32-32X32-U |
|           | 32            | 32            | 66.5    | –       | 68      | 91±2 | 32 | 30    | –  | 180                         | 1586          | 8165458  | EAMD-67-91-32-32X32-U |
| 75        | 40            | 32            | 75      | –       | 75      | 51±2 | 32 | 21.25 | –  | 200                         | 741           | 5078084  | EAMD-75-51-40-32x32-U |

## Type codes

| 001 | Series           |  |
|-----|------------------|--|
| KSK | Connecting shaft |  |
| 002 | Product version  |  |
|     | Standard         |  |
| A   | Deviating design |  |

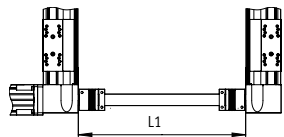
| 003 | Size [mm] |  |
|-----|-----------|--|
| 50  | 50        |  |
| 70  | 70        |  |
| 80  | 80        |  |
| 120 | 120       |  |
| 185 | 185       |  |

| 004 | Nominal length [mm] |  |
|-----|---------------------|--|
| ... | 200 ... 2000 mm     |  |

# Datasheet

## Connecting shafts KSK For toothed belt axis EGC-TB-KF

Size  
50, 70, 80, 120 and 185



Nominal length  $L_1$  = Clear width  
between the drive covers

The total mass is calculated as follows:  
 $m_{total} = m_0 + m_L \times L_1$

The moment of inertia is calculated as  
follows:  
 $J_{total} = J_0 + J_L \times L_1$

### General technical data

| Size                                                         | 50                                                                                                            | 70   | 80   | 120          | 185          |
|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|------|------|--------------|--------------|
| Design                                                       | Connecting tube with a coupling at each end as well as two drive shaft adapters for adapting the hollow shaft |      |      |              |              |
| Mounting position                                            | Horizontal (vertical on request)                                                                              |      |      |              |              |
| Nominal length $L_1$                                         | 200 ... 2000                                                                                                  |      |      | 250 ... 2000 | 350 ... 2000 |
| Basic moment of inertia $J_0$<br>with $L_1 = 0$ mm           | 34                                                                                                            | 35   | 159  | 1390         | 7261         |
| Additional moment of inertia $J_L$<br>per 1 m nominal length | 34                                                                                                            | 34   | 80   | 333          | 1946         |
| Max. permissible<br>axial offset                             | ±2                                                                                                            |      |      |              | ±5           |
| Basic weight $m_0$<br>with $L_1 = 0$ mm                      | 0.28                                                                                                          | 0.29 | 0.53 | 2.28         | 5.29         |
| Additional weight $m_L$<br>per 1 m nominal length            | 0.32                                                                                                          | 0.32 | 0.48 | 0.8          | 1.89         |

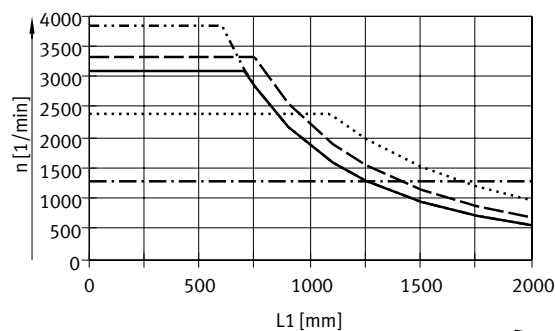
### Operating and environmental conditions

|                                              |      |                                              |
|----------------------------------------------|------|----------------------------------------------|
| Ambient temperature                          | [°C] | -10 ... +60                                  |
| Corrosion resistance class CRC <sup>1)</sup> |      | 2                                            |
| Materials                                    |      |                                              |
| Coupling, hub                                |      | Wrought aluminium alloy                      |
| Coupling, bellows                            |      | High-alloy steel                             |
| Connecting tube, drive shaft adapters        |      | High-alloy steel                             |
| Note on materials                            |      | RoHS-compliant                               |
|                                              |      | Contains paint-wetting impairment substances |

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

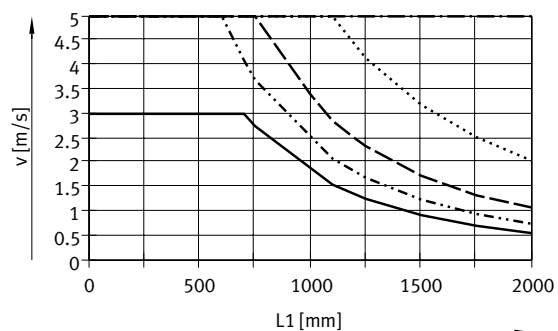
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements that are in direct contact with a normal industrial environment.

### Max. rotational speed n as a function of nominal length L1



— KSK-50  
..... KSK-70  
--- KSK-80  
- . - . KSK-120  
- - - KSK-185

### Max. speed v as a function of nominal length L1

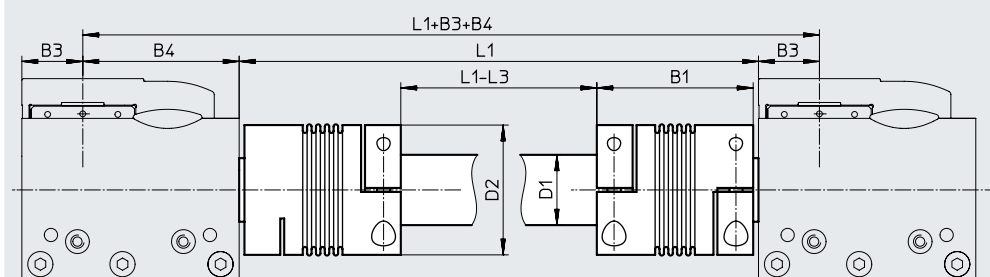


## Datasheet

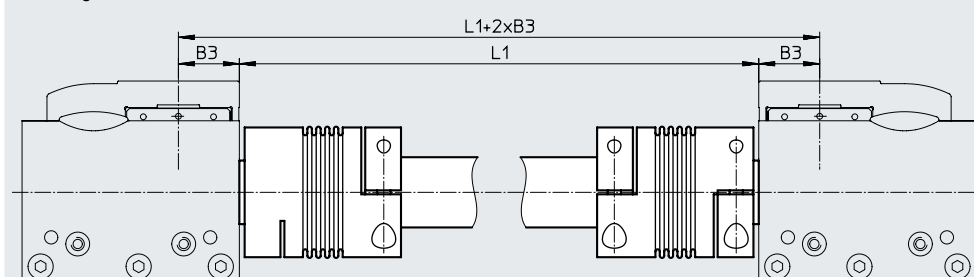
## Dimensions and ordering data

Download CAD data → [www.festo.com](http://www.festo.com)

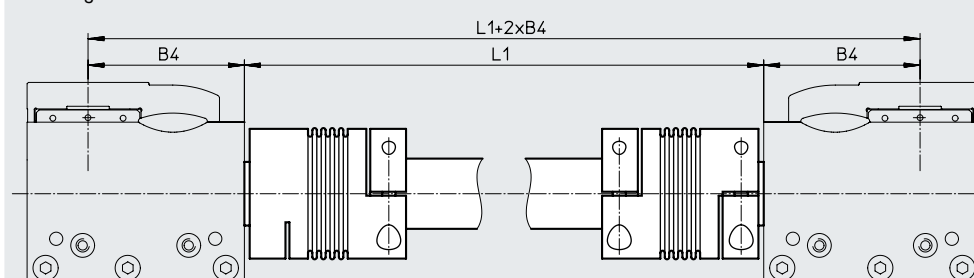
## Internal/external guide



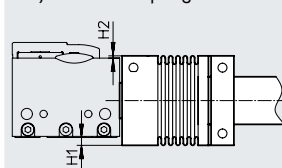
## Internal guide



## External guide



## Projection of coupling



| Size of axis [mm] | B1  | B3   | B4   | D1<br>Ø | D2<br>Ø | H1 | H2 | L1 | L3    | Part no. | Type        |
|-------------------|-----|------|------|---------|---------|----|----|----|-------|----------|-------------|
| 50                | 50  | 12.5 | 35.5 | 21.27   | 40      | 4  | 1  | 1) | 102.2 | 563710   | KSK-50-...  |
| 70                | 50  | 17.5 | 51.5 | 21.27   | 40      | –  | –  |    | 103.7 | 562520   | KSK-70-...  |
| 80                | 59  | 23   | 59   | 26.52   | 49      | –  | –  |    | 122   | 562521   | KSK-80-...  |
| 120               | 94  | 35   | 85   | 41.6    | 81      | –  | 1  |    | 192   | 562522   | KSK-120-... |
| 185               | 111 | 55   | 131  | 65.4    | 110     | –  | –  |    | 228   | 562523   | KSK-185-... |

1) Clear width between the drive covers

 **Note**

The nominal length L1 must be specified in the type code when ordering. The nominal length L1 indicates the clear width between the drive covers in this case.

## Order example:

Two toothed belt axes EGC-70-...-TB-KF are to be linked using a connecting shaft with a nominal length L1 = 1000 mm.

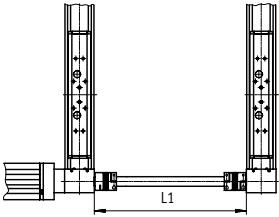
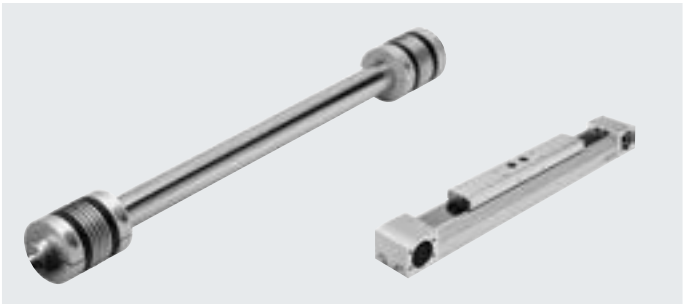
The following connecting shaft is required:

Type: KSK-70-1000  
Part no. 562520

Datasheet

Connecting shafts KSK  
For toothed belt axis ELGA-TB-RF

Size  
A-70, 80, 120



Nominal length L1 = Clear width between the drive covers

The total mass is calculated as follows:  
 $m_{total} = m_0 + m_L \times L1$

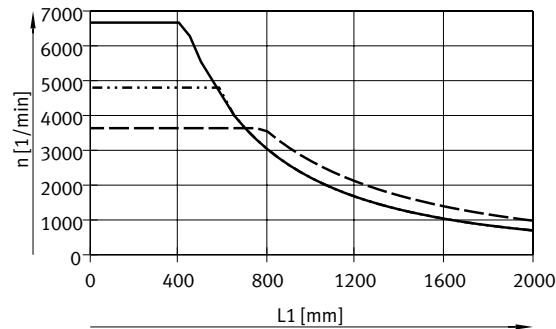
The moment of inertia is calculated as follows:  
 $J_{total} = J_0 + J_L \times L1$

| General technical data                                             |                         | A-70                                                                                                                                                                                                 | 80   | 120          |
|--------------------------------------------------------------------|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|--------------|
| Size                                                               |                         | A-70                                                                                                                                                                                                 | 80   | 120          |
| Design                                                             |                         | Connecting tube with a coupling at each end as well as 2 drive shaft adapters for adapting the hollow shaft.<br>With the KSK-185, 2 plugs are additionally supplied for inserting into the tube ends |      |              |
| Mounting position                                                  |                         | Horizontal (vertical on request)                                                                                                                                                                     |      |              |
| Nominal length L1                                                  | [mm]                    | 200 ... 2000                                                                                                                                                                                         |      | 250 ... 2000 |
| Basic moment of inertia J <sub>0</sub> with L1 = 0 mm              | [kg mm <sup>2</sup> ]   | 161                                                                                                                                                                                                  | 159  | 1390         |
| Additional moment of inertia J <sub>L</sub> per 1 m nominal length | [kg mm <sup>2</sup> /m] | 80                                                                                                                                                                                                   | 80   | 333          |
| Max. permissible axial offset                                      | [mm]                    | ±2                                                                                                                                                                                                   |      |              |
| Basic weight m <sub>0</sub> with L1 = 0 mm                         | [kg]                    | 0.54                                                                                                                                                                                                 | 0.53 | 2.28         |
| Additional weight m <sub>L</sub> per 1 m nominal length            | [kg/m]                  | 0.48                                                                                                                                                                                                 | 0.48 | 0.8          |

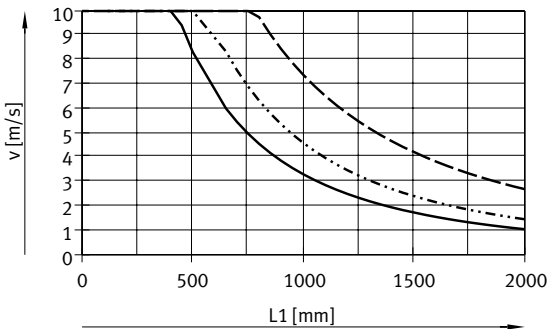
| Operating and environmental conditions       |                         |
|----------------------------------------------|-------------------------|
| Ambient temperature [°C]                     | −10 ... +60             |
| Corrosion resistance class CRC <sup>1)</sup> | 2                       |
| Materials                                    |                         |
| Coupling, hub                                | Wrought aluminium alloy |
| Coupling, bellows                            | High-alloy steel        |
| Connecting tube, drive shaft adapters        | High-alloy steel        |
| Note on materials                            |                         |
| RoHS-compliant                               |                         |
| Contains paint-wetting impairment substances |                         |

1) Corrosion resistance class CRC 2 to Festo standard FN 940070  
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements that are in direct contact with a normal industrial environment.

Max. rotational speed n as a function of nominal length L1      Max. speed v as a function of nominal length L1



— KSK-A-70  
····· KSK-80  
--- KSK-120

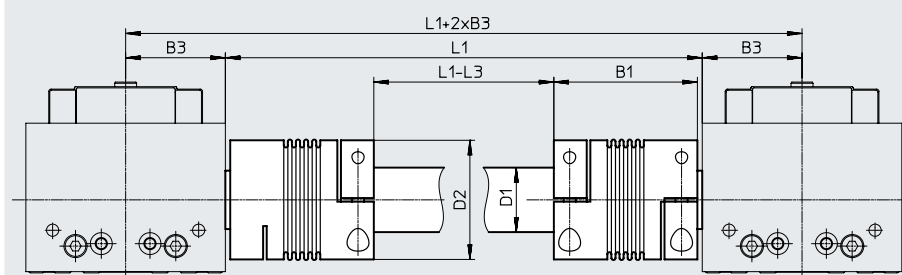


## Datasheet

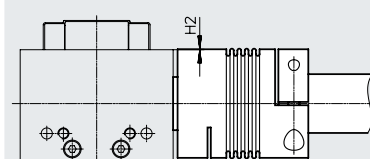
## Dimensions and ordering data

Download CAD data → [www.festo.com](http://www.festo.com)

Internal/external guide



## Projection of coupling



| Size of axis [mm] | B1 | B3   | D1<br>Ø<br>H7 | D2<br>Ø | H2  | L1 | L3  | Part no. | Type         |
|-------------------|----|------|---------------|---------|-----|----|-----|----------|--------------|
| 70                | 59 | 34.5 | 26.52         | 49      | 0.2 | 1) | 122 | 2261462  | KSK-A-70-... |
| 80                | 59 | 41   | 26.52         | 49      | –   |    | 122 | 562521   | KSK-80-...   |
| 120               | 94 | 60   | 41.6          | 81      | –   |    | 192 | 562522   | KSK-120-...  |

1) Clear width between the drive covers

 **Note**

The nominal length L1 must be specified in the type code when ordering. The nominal length L1 indicates the clear width between the drive covers in this case.

Order example:  
Two toothed belt axes ELGA-TB-RF-80-... are to be linked using a connecting shaft with a nominal length L1 = 1000 mm.

The following connecting shaft is required:  
Type: KSK-80-1000  
Part no. 562521

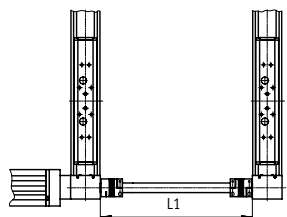
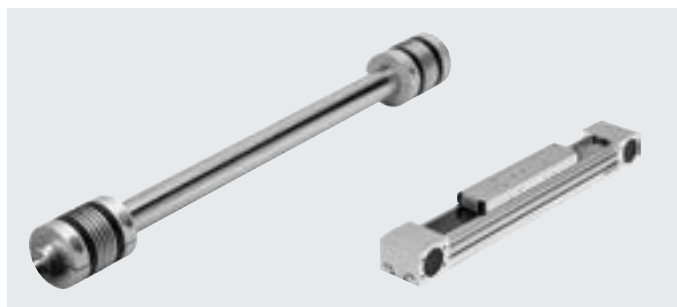
## Datasheet

### Connecting shafts KSK

#### For toothed belt axis ELGA-TB-KF

Size  
A-70, 80, 120, 185

The connecting shaft KSK-185 is used in combination with the toothed belt axis ELGA-TB-KF-150.



Nominal length L1 = Clear width between the drive covers

The total mass is calculated as follows:

$$m_{\text{total}} = m_0 + m_L \times L1$$

The moment of inertia is calculated as follows:

$$J_{\text{total}} = J_0 + J_L \times L1$$

#### General technical data

| Size                                                      | A-70                                                                                                                                                                                                   | 80   | 120          | 185          |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|--------------|--------------|
| Design                                                    | Connecting tube with a coupling at each end as well as two drive shaft adapters for adapting the hollow shaft.<br>With the KSK-185, 2 plugs are additionally supplied for inserting into the tube ends |      |              |              |
| Mounting position                                         | Horizontal (vertical on request)                                                                                                                                                                       |      |              |              |
| Nominal length L1                                         | [mm] 200 ... 2000                                                                                                                                                                                      |      | 250 ... 2000 | 350 ... 2000 |
| Basic moment of inertia $J_0$ with L1 = 0 mm              | [kg mm <sup>2</sup> ] 161                                                                                                                                                                              | 159  | 1390         | 7261         |
| Additional moment of inertia $J_L$ per 1 m nominal length | [kg mm <sup>2</sup> /m] 80                                                                                                                                                                             | 80   | 333          | 1946         |
| Max. permissible axial offset                             | [mm] ±2                                                                                                                                                                                                |      |              | ±5           |
| Basic weight $m_0$ with L1 = 0 mm                         | [kg] 0.54                                                                                                                                                                                              | 0.53 | 2.28         | 5.29         |
| Additional weight $m_L$ per 1 m nominal length            | [kg/m] 0.48                                                                                                                                                                                            | 0.48 | 0.8          | 1.89         |

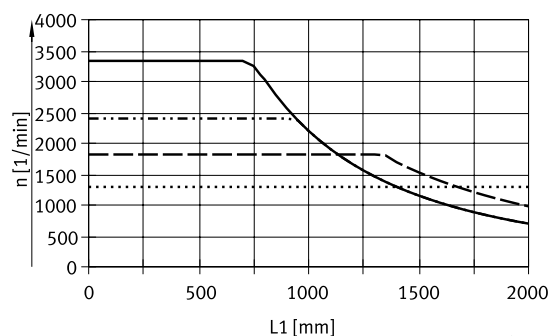
#### Operating and environmental conditions

|                                              |      |                                                                |
|----------------------------------------------|------|----------------------------------------------------------------|
| Ambient temperature                          | [°C] | -10 ... +60                                                    |
| Corrosion resistance class CRC <sup>1)</sup> |      | 2                                                              |
| Materials                                    |      |                                                                |
| Coupling, hub                                |      | Wrought aluminium alloy                                        |
| Coupling, bellows                            |      | High-alloy steel                                               |
| Connecting tube, drive shaft adapters        |      | High-alloy steel                                               |
| Note on materials                            |      | RoHS-compliant<br>Contains paint-wetting impairment substances |

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

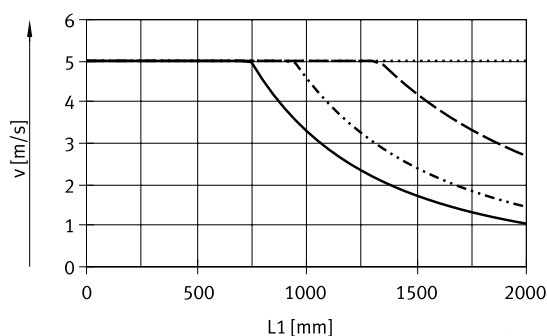
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements that are in direct contact with a normal industrial environment.

#### Max. rotational speed n as a function of nominal length L1



— KSK-A-70  
- - - KSK-120  
- · - · - KSK-80  
····· KSK-185

#### Max. speed v as a function of nominal length L1

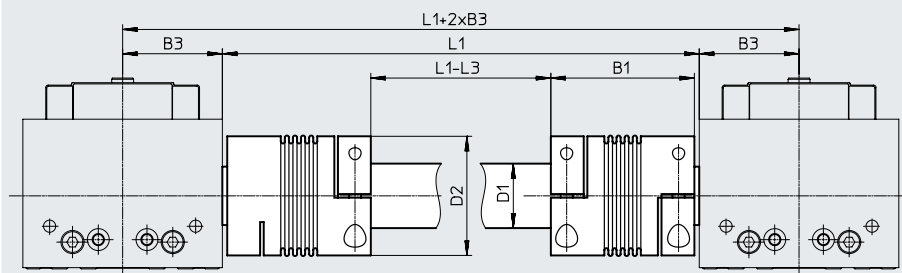


# Datasheet

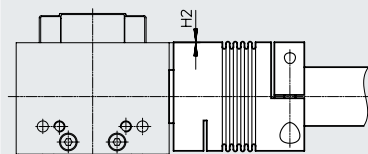
## Dimensions and ordering data

[Download CAD data → www.festo.com](http://www.festo.com)

Internal/external guide



## Projection of coupling



| Size of axis<br>[mm] | B1  | B3   | D1<br>Ø<br>H7 | D2<br>Ø | H2  | L1 | L3  | Part no. | Type         |
|----------------------|-----|------|---------------|---------|-----|----|-----|----------|--------------|
| 70                   | 59  | 34.5 | 26.52         | 49      | 0.2 | 1) | 122 | 2261462  | KSK-A-70-... |
| 80                   | 59  | 41   | 26.52         | 49      | –   |    | 122 | 562521   | KSK-80-...   |
| 120                  | 94  | 60   | 41.6          | 81      | –   |    | 192 | 562522   | KSK-120-...  |
| 185 <sup>2)</sup>    | 111 | 77   | 65.4          | 110     | –   |    | 228 | 562523   | KSK-185-...  |

1) Clear width between the drive covers

2) For ELGA-TB-KF-150

## Note

The nominal length L1 must be specified in the type code when ordering. The nominal length L1 indicates the clear width between the drive covers in this case.

Order example:  
Two toothed belt axes ELGA-TB-KF-80-... are to be linked using a connecting shaft with a nominal length L1 = 1000 mm.

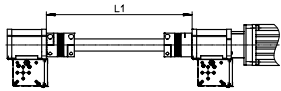
The following connecting shaft is required:  
Type: KSK-80-1000  
Part no. 562521

## Datasheet

## Connecting shafts KSK

## For cantilever axis ELCC-TB-KF

Size  
80, 120, 185



Nominal length  $L_1$  = Clear width  
between the drive covers

The total mass is calculated as follows:  
 $m_{\text{total}} = m_0 + m_L \times L_1$

The moment of inertia is calculated as  
follows:

$$J_{\text{total}} = J_0 + J_L \times L_1$$

## General technical data

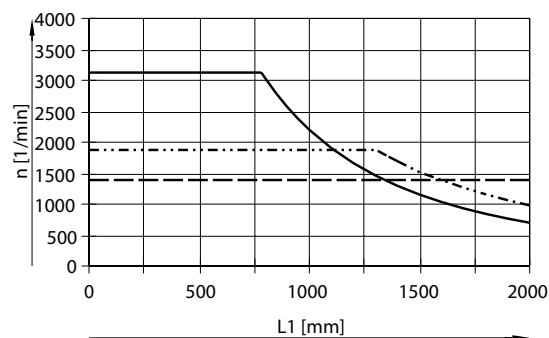
| Size                                                         | 80                                                                                                                                                                                                     | 120          | 185          |
|--------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|
| Design                                                       | Connecting tube with a coupling at each end as well as two drive shaft adapters for adapting the hollow shaft.<br>With the KSK-185, 2 plugs are additionally supplied for inserting into the tube ends |              |              |
| Mounting position                                            | Horizontal (vertical on request)                                                                                                                                                                       |              |              |
| Nominal length $L_1$                                         | [mm] 200 ... 2000                                                                                                                                                                                      | 250 ... 2000 | 350 ... 2000 |
| Basic moment of inertia $J_0$<br>with $L_1 = 0$ mm           | [kg mm <sup>2</sup> ] 159                                                                                                                                                                              | 1390         | 7261         |
| Additional moment of inertia $J_L$<br>per 1 m nominal length | [kg mm <sup>2</sup> /m] 80                                                                                                                                                                             | 333          | 1946         |
| Max. permissible<br>axial offset                             | [mm] $\pm 2$                                                                                                                                                                                           |              | $\pm 5$      |
| Basic weight $m_0$<br>with $L_1 = 0$ mm                      | [kg] 0.53                                                                                                                                                                                              | 2.28         | 5.29         |
| Additional weight $m_L$<br>per 1 m nominal length            | [kg/m] 0.48                                                                                                                                                                                            | 0.8          | 1.89         |

## Operating and environmental conditions

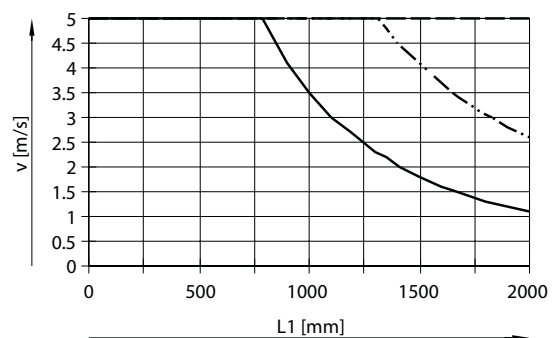
|                                              |                                                                |
|----------------------------------------------|----------------------------------------------------------------|
| Ambient temperature                          | [°C] -10 ... +60                                               |
| Corrosion resistance class CRC <sup>1)</sup> | 2                                                              |
| Materials                                    |                                                                |
| Coupling, hub                                | Wrought aluminium alloy                                        |
| Coupling, bellows                            | High-alloy steel                                               |
| Connecting tube, drive shaft adapters        | High-alloy steel                                               |
| Note on materials                            | RoHS-compliant<br>Contains paint-wetting impairment substances |

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements that are in direct contact with a normal industrial environment.

Max. rotational speed  $n$  as a function of nominal length  $L_1$ 

— KSK-80  
 ..... KSK-120  
 --- KSK-185

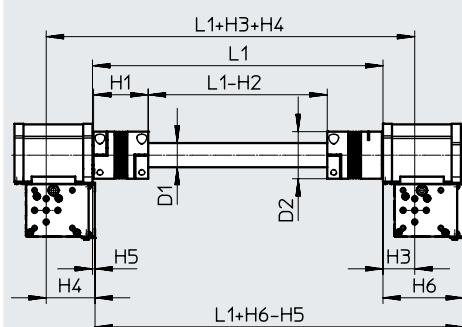
Max. speed  $v$  as a function of nominal length  $L_1$ 

## Datasheet

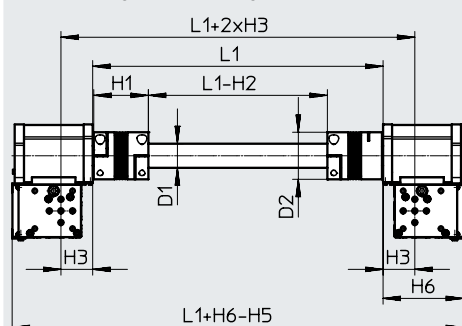
## Dimensions and ordering data

Download CAD data → [www.festo.com](http://www.festo.com)

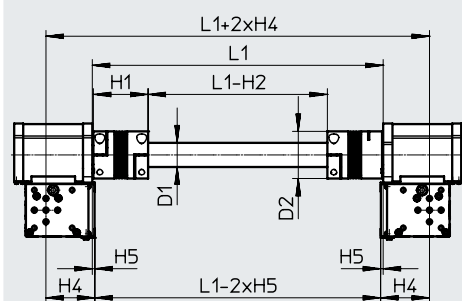
Axis mounting surfaces facing the same direction



Axis mounting surfaces facing outwards



Axis mounting surfaces facing one another



| Size of axis [mm] | D1<br>Ø<br>H7 | D2<br>Ø | H1  | H2  | H3   | H4   | H5   | H6    | L1 | Part no. | Type        |
|-------------------|---------------|---------|-----|-----|------|------|------|-------|----|----------|-------------|
| 60                | 26.6          | 49      | 59  | 122 | 43.1 | 27.1 | 8.5  | 78.6  | 1) | 562521   | KSK-80-...  |
| 70                | 26.6          | 49      | 59  | 122 | 48   | 53.5 | 10.5 | 112   |    | 562521   | KSK-80-...  |
| 90                | 41.7          | 81      | 94  | 192 | 54.6 | 79.6 | 4.4  | 138.6 |    | 562522   | KSK-120-... |
| 110               | 65.5          | 110     | 111 | 228 | 73.6 | 85.6 | 11.4 | 170.6 |    | 562523   | KSK-185-... |

1) Clear width between the contact surfaces

 **Note**

The nominal length L1 must be specified in the type code when ordering. The nominal length L1 indicates the clear width between the drive covers in this case.

Order example:  
Two cantilever axes ELCC-TB-KF-70-... are to be linked using a connecting shaft with a nominal length L1 = 1000 mm.

The following connecting shaft is required:  
Type: KSK-80-1000  
Part no. 562521