

## Piston rod attachments

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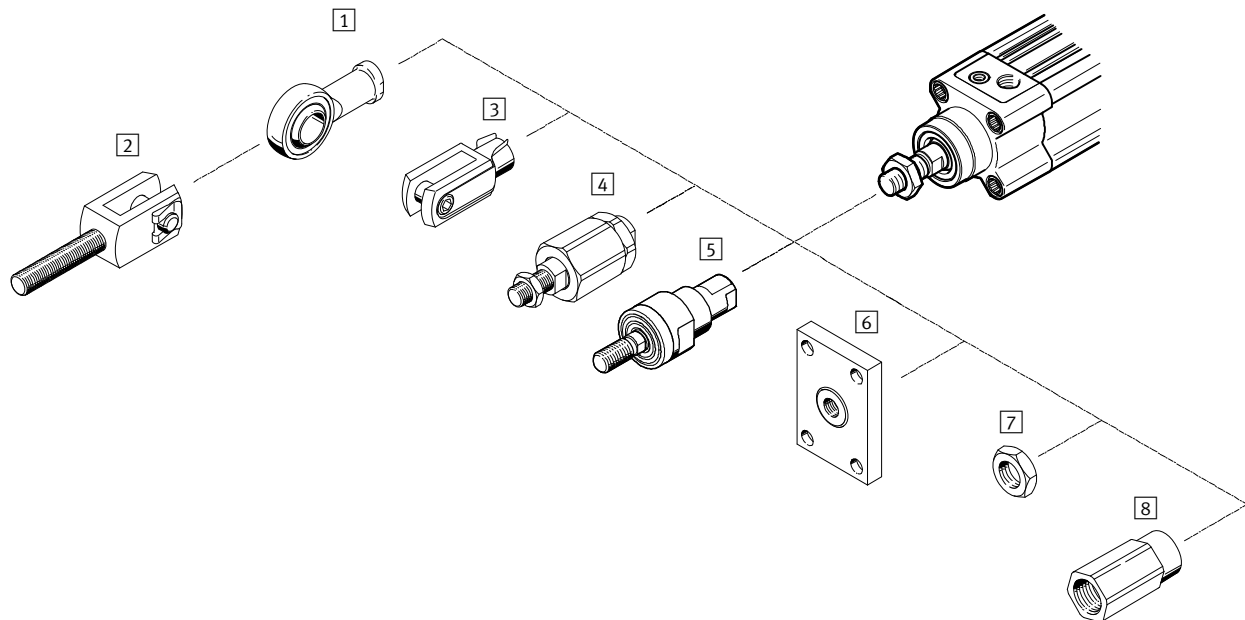
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# Piston rod attachments

Peripherals overview

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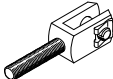


| Mounting attachments and accessories |                                   | Description                                                                                                                                                                                            |
|--------------------------------------|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1                                    | Rod eye<br>SGS                    | Rod eyes are maintenance-free due to the combination of steel and PTFE-bronze material in the swivel bearing. Corresponds to ISO 12240-4 dimensional series K.                                         |
|                                      | Rod eye<br>CRSGS                  | Corrosion and acid-resistant design. Corresponds to ISO 12240-4 dimensional series K.                                                                                                                  |
| 2                                    | Rod clevis<br>SGA                 | Rod clevises are used in combination with the rod eye SGS for spherical connection of cylinders.                                                                                                       |
| 3                                    | Rod clevis<br>SG                  | This rod clevis is fitted to the threaded end of the piston rod and permits a swivelling movement of the cylinder in one plane. Corresponds to ISO 8140 or DIN 71752.                                  |
|                                      | Rod clevis<br>CRSG                | Corrosion and acid-resistant design. Corresponds to ISO 8140 or DIN 71752.                                                                                                                             |
| 4                                    | Self-aligning rod coupler<br>FK   | Rod couplers link the piston rod end of all cylinder types to the machine parts to be moved. This compensates for radial and angular deviations (misalignment).                                        |
| 5                                    | Self-aligning rod coupler<br>CRFK | Corrosion and acid-resistant design.                                                                                                                                                                   |
| 6                                    | Coupling piece<br>KSG             | Coupling pieces link the piston rod end of all cylinder types to the machine parts to be moved. They compensate radial misalignments up to $\pm 1$ mm.                                                 |
|                                      | Coupling piece<br>KSZ             | For cylinders with non-rotating piston rods. With this coupling piece, a cylinder can be connected with positional stability to the component being moved in order to compensate for radial deviation. |
| 7                                    | Hex nut<br>MSK                    | Based on and/or corresponds to ISO 8675.                                                                                                                                                               |
| 8                                    | Adapter<br>AD                     | Specially for through, hollow piston rods, e.g. for connecting vacuum generators.                                                                                                                      |

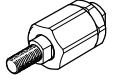
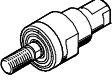
# Piston rod attachments

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Product range overview

| Piston rod attachments         |        |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |
|--------------------------------|--------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Piston rod thread              |        | Rod eye                                                                           |                                                                                   | Rod clevis                                                                        |                                                                                     |                                                                                     |
| Male                           | Female | SGS-...                                                                           | CRSGS-...                                                                         | SGA-... <sup>1)</sup>                                                             | SG-...                                                                              | CRSG-...                                                                            |
|                                |        |  |  |  |  |  |
| M4                             |        | ■                                                                                 | —                                                                                 | —                                                                                 | ■                                                                                   | —                                                                                   |
| M6                             |        | ■                                                                                 | ■                                                                                 | —                                                                                 | ■                                                                                   | ■                                                                                   |
| M8                             |        | ■                                                                                 | ■                                                                                 | —                                                                                 | ■                                                                                   | ■                                                                                   |
| M10                            |        | ■                                                                                 | —                                                                                 | —                                                                                 | ■                                                                                   | —                                                                                   |
| M10x1.25                       |        | ■                                                                                 | ■                                                                                 | ■                                                                                 | ■                                                                                   | ■                                                                                   |
| M12                            |        | ■                                                                                 | —                                                                                 | ■                                                                                 | ■                                                                                   | —                                                                                   |
| M12x1.25                       |        | ■                                                                                 | ■                                                                                 | ■                                                                                 | ■                                                                                   | ■                                                                                   |
| M16                            |        | ■                                                                                 | —                                                                                 | ■                                                                                 | ■                                                                                   | —                                                                                   |
| M16x1.5                        |        | ■                                                                                 | ■                                                                                 | ■                                                                                 | ■                                                                                   | ■                                                                                   |
| M20x1.5                        |        | ■                                                                                 | ■                                                                                 | ■                                                                                 | ■                                                                                   | ■                                                                                   |
| M27x2                          |        | ■                                                                                 | ■                                                                                 | ■                                                                                 | ■                                                                                   | ■                                                                                   |
| M36x2                          |        | ■                                                                                 | —                                                                                 | —                                                                                 | ■                                                                                   | —                                                                                   |
| M42x2                          |        | ■                                                                                 | —                                                                                 | —                                                                                 | ■                                                                                   | —                                                                                   |
| M48x2                          |        | ■                                                                                 | —                                                                                 | —                                                                                 | ■                                                                                   | —                                                                                   |
| Technical data → Page/Internet |        | 11                                                                                | LEERER MERKER                                                                     | LEERER MERKER                                                                     | LEERER MERKER                                                                       | LEERER MERKER                                                                       |

1) Only to be attached to the piston rod in conjunction with the rod eye SGS.

| Piston rod attachments         |        |                                                                                     |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |
|--------------------------------|--------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Piston rod thread              |        | Self-aligning rod coupler                                                           |                                                                                     | Coupling piece                                                                      |                                                                                      | Hex nut                                                                               | Adapter                                                                               |
| Male                           | Female | FK-...                                                                              | CRFK-...                                                                            | KSG-...                                                                             | KSZ-...                                                                              | MSK-...                                                                               | AD-...                                                                                |
|                                |        |  |  |  |  |  |  |
| M4                             |        | ■                                                                                   | —                                                                                   | —                                                                                   | —                                                                                    | —                                                                                     | —                                                                                     |
| M6                             |        | ■                                                                                   | —                                                                                   | —                                                                                   | ■                                                                                    | —                                                                                     | ■                                                                                     |
| M8                             |        | ■                                                                                   | —                                                                                   | —                                                                                   | ■                                                                                    | —                                                                                     | ■                                                                                     |
| M10                            |        | ■                                                                                   | —                                                                                   | —                                                                                   | —                                                                                    | —                                                                                     | —                                                                                     |
| M10x1.25                       |        | ■                                                                                   | ■                                                                                   | ■                                                                                   | ■                                                                                    | ■                                                                                     | ■                                                                                     |
| M12                            |        | ■                                                                                   | —                                                                                   | —                                                                                   | —                                                                                    | —                                                                                     | —                                                                                     |
| M12x1.25                       |        | ■                                                                                   | ■                                                                                   | ■                                                                                   | ■                                                                                    | ■                                                                                     | ■                                                                                     |
| M16                            |        | ■                                                                                   | —                                                                                   | —                                                                                   | —                                                                                    | —                                                                                     | —                                                                                     |
| M16x1.5                        |        | ■                                                                                   | ■                                                                                   | ■                                                                                   | ■                                                                                    | ■                                                                                     | —                                                                                     |
| M20x1.5                        |        | ■                                                                                   | ■                                                                                   | ■                                                                                   | ■                                                                                    | —                                                                                     | —                                                                                     |
| M27x2                          |        | ■                                                                                   | —                                                                                   | ■                                                                                   | —                                                                                    | —                                                                                     | —                                                                                     |
| M36x2                          |        | ■                                                                                   | —                                                                                   | —                                                                                   | —                                                                                    | —                                                                                     | —                                                                                     |
| M42x2                          |        | —                                                                                   | —                                                                                   | —                                                                                   | —                                                                                    | —                                                                                     | —                                                                                     |
| M48x2                          |        | —                                                                                   | —                                                                                   | —                                                                                   | —                                                                                    | —                                                                                     | —                                                                                     |
|                                | M4     | ■                                                                                   | —                                                                                   | —                                                                                   | —                                                                                    | —                                                                                     | —                                                                                     |
|                                | M5     | ■                                                                                   | —                                                                                   | —                                                                                   | —                                                                                    | —                                                                                     | —                                                                                     |
|                                | M6     | ■                                                                                   | —                                                                                   | —                                                                                   | —                                                                                    | —                                                                                     | —                                                                                     |
|                                | M8     | ■                                                                                   | —                                                                                   | —                                                                                   | —                                                                                    | —                                                                                     | —                                                                                     |
|                                | M10    | ■                                                                                   | —                                                                                   | —                                                                                   | —                                                                                    | —                                                                                     | —                                                                                     |
|                                | M12    | ■                                                                                   | —                                                                                   | —                                                                                   | —                                                                                    | —                                                                                     | —                                                                                     |
| Technical data → Page/Internet |        | LEERER MERKER                                                                       | LEERER MERKER                                                                       | LEERER MERKER                                                                       | 13                                                                                   | LEERER MERKER                                                                         | LEERER MERKER                                                                         |

# Rod eyes SGS

Technical data

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## Rod eye SGS

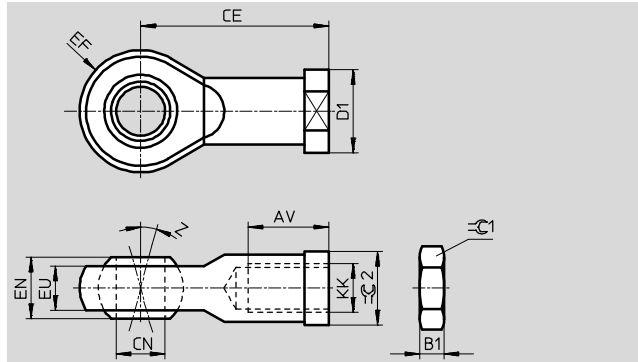
Scope of delivery:

1 rod eye, 1 hex nut to DIN 439

Material:

Galvanised steel

RoHS-compliant



| Dimensions and ordering data |       |      |     |               |         |            |    |      |
|------------------------------|-------|------|-----|---------------|---------|------------|----|------|
| KK                           | AV    | B1   | CE  | CN<br>Ø<br>H7 | D1<br>Ø | EF<br>±0.5 | EN | EU   |
| M4                           | 10 -2 | 2.2  | 27  | 5             | 11      | 9          | 8  | 6    |
| M6                           | 12 -2 | 3.2  | 30  | 6             | 13      | 10         | 9  | 6.8  |
| M8                           | 16 -2 | 4    | 36  | 8             | 16      | 12         | 12 | 9    |
| M10                          | 20 -2 | 5    | 43  | 10            | 19      | 14         | 14 | 10.5 |
| M10x1.25                     |       |      |     |               |         |            |    |      |
| M12                          | 22 -2 | 6    | 50  | 12            | 22      | 16         | 16 | 12   |
| M12x1.25                     |       |      |     |               |         |            |    |      |
| M16                          | 28 -2 | 8    | 64  | 16            | 27      | 21         | 21 | 15   |
| M16x1.5                      |       |      |     |               |         |            |    |      |
| M20x1.5                      | 33 -2 | 10   | 77  | 20            | 34      | 25         | 25 | 18   |
| M27x2                        | 51 -2 | 13.5 | 110 | 30            | 50      | 35         | 37 | 25   |
| M36x2                        | 56 +2 | 18   | 125 | 35            | 58      | 40         | 43 | 28   |
| M42x2                        | 60 +2 | 21   | 142 | 40            | 65      | 45         | 49 | 33   |
| M48x2                        | 65 +2 | 24   | 160 | 50            | 75      | 58         | 60 | 45   |

| KK       | Z<br>[°] | ⊥1 | ⊥2 | ISO 12240-4<br>dimensional<br>series K | CRC <sup>1) 2)</sup> | Weight<br>[g] | Part No. | Type         |
|----------|----------|----|----|----------------------------------------|----------------------|---------------|----------|--------------|
| M4       | 13       | 7  | 9  | –                                      | 1                    | 21            | 9253     | SGS-M4       |
| M6       | 13       | 10 | 11 | ■                                      | 1                    | 29            | ★ 9254   | SGS-M6       |
| M8       | 13       | 13 | 14 | ■                                      | 1                    | 53            | ★ 9255   | SGS-M8       |
| M10      | 13       | 17 | 17 | ■                                      | 1                    | 88            | 9256     | SGS-M10      |
| M10x1.25 |          |    |    | –                                      | 1                    | 87            | ★ 9261   | SGS-M10x1,25 |
| M12      | 13       | 19 | 19 | ■                                      | 1                    | 131           | 9257     | SGS-M12      |
| M12x1.25 |          |    |    | –                                      | 1                    | 129           | ★ 9262   | SGS-M12x1,25 |
| M16      | 15       | 24 | 22 | ■                                      | 1                    | 263           | 9258     | SGS-M16      |
| M16x1.5  |          |    |    | –                                      | 1                    | 259           | ★ 9263   | SGS-M16x1,5  |
| M20x1.5  | 15       | 30 | 30 | ■                                      | 1                    | 464           | ★ 9264   | SGS-M20x1,5  |
| M27x2    | 15       | 41 | 41 | –                                      | 1                    | 1333          | 10774    | SGS-M27x2    |
| M36x2    | 15       | 55 | 50 | ■                                      | 1                    | 2084          | 10775    | SGS-M36x2    |
| M42x2    | 15       | 65 | 55 | ■                                      | 1                    | 3132          | 10776    | SGS-M42x2    |
| M48x2    | 12       | 75 | 65 | ■                                      | 1                    | 5498          | 10777    | SGS-M48x2    |

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

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

2) The following applies for the ball:

Corrosion resistance class CRC 0 to Festo standard FN 940070

No corrosion stress. Applies to small, optically irrelevant standard parts such as threaded pins, circlips and clamping sleeves which are usually only available in a phosphated or burnished version (and possibly oiled) as well as to ball bearings (for components < CRC 3) and plain bearings.

Festo core product range

★ Ready for dispatch from the Festo factory in 24 hours

☆ Ready for dispatch in 5 days maximum from stock

# Rod eyes CRSGS, stainless steel

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Technical data

## Rod eye CRSGS

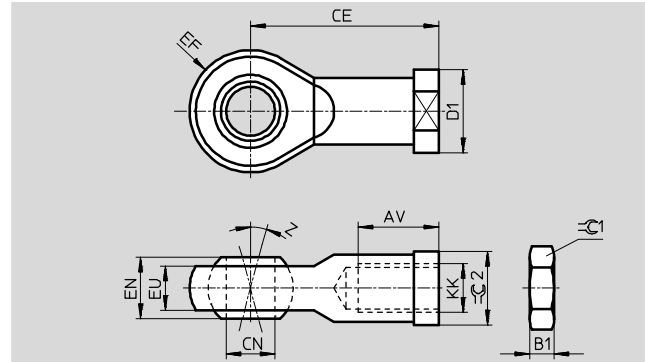
Scope of delivery:

1 rod eye, 1 hex nut to DIN 439

Material:

High-alloy steel

RoHS-compliant



| Dimensions and ordering data |    |      |     |               |         |            |    |      |
|------------------------------|----|------|-----|---------------|---------|------------|----|------|
| KK                           | AV | B1   | CE  | CN<br>Ø<br>H7 | D1<br>Ø | EF<br>±0.5 | EN | EU   |
| M6                           | 12 | 3.2  | 30  | 6             | 13      | 10         | 9  | 6.8  |
| M8                           | 16 | 4    | 36  | 8             | 16      | 12         | 12 | 9    |
| M10x1.25                     | 20 | 5    | 43  | 10            | 19      | 14         | 14 | 10.5 |
| M12x1.25                     | 22 | 6    | 50  | 12            | 22      | 16         | 16 | 12   |
| M16x1.5                      | 28 | 8    | 64  | 16            | 27      | 21         | 21 | 15   |
| M20x1.5                      | 33 | 10   | 77  | 20            | 34      | 25         | 25 | 18   |
| M27x2                        | 51 | 13.5 | 110 | 30            | 50      | 35         | 37 | 25   |

| KK       | Z<br>[°] | ⌀C1 | ⌀C2 | ISO 12240-4<br>dimensional<br>series K | CRC <sup>1) 2)</sup> | Weight<br>[g] | Part No. | Type           |
|----------|----------|-----|-----|----------------------------------------|----------------------|---------------|----------|----------------|
| M6       | 13       | 10  | 11  | ■                                      | 3                    | 29            | 195580   | CRSGS-M6       |
| M8       | 13       | 13  | 14  | ■                                      | 3                    | 53            | 195581   | CRSGS-M8       |
| M10x1.25 | 13       | 17  | 17  | –                                      | 3                    | 87            | 195582   | CRSGS-M10x1,25 |
| M12x1.25 | 13       | 19  | 19  | –                                      | 3                    | 129           | 195583   | CRSGS-M12x1,25 |
| M16x1.5  | 15       | 24  | 22  | –                                      | 3                    | 259           | 195584   | CRSGS-M16x1,5  |
| M20x1.5  | 15       | 30  | 30  | ■                                      | 3                    | 464           | 195585   | CRSGS-M20x1,5  |
| M27x2    | 15       | 41  | 41  | –                                      | 3                    | 1333          | 195586   | CRSGS-M27x2    |

1) Corrosion resistance class CRC 3 to Festo standard FN 940070

High corrosion stress. Outdoor exposure under moderate corrosive conditions. External visible parts with primarily functional requirements for the surface and which are in direct contact with a normal industrial environment.

2) The following applies for the ball:

Corrosion resistance class CRC 1 to Festo standard FN 940070

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

# Rod clevises SGA

Technical data

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## Rod clevis SGA

Scope of delivery:

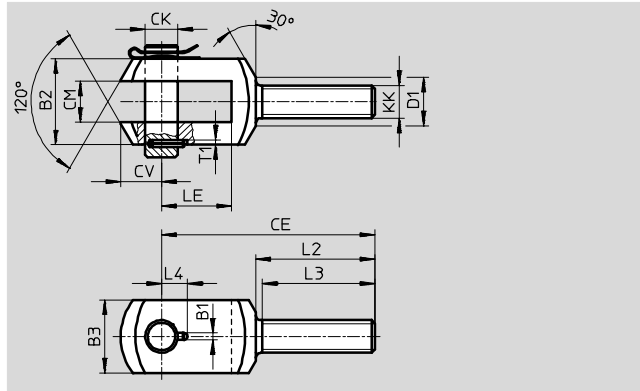
1 rod clevis, 1 pivot pin  
and 1 retaining clip

Material:

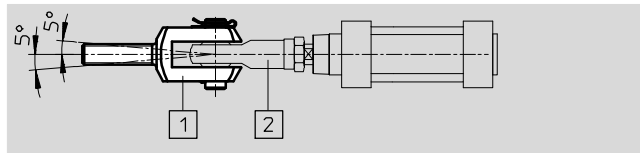
Galvanised steel

Free of copper and PTFE

RoHS-compliant



The rod clevis SGA <sup>1</sup> is used in combination with the rod eye SGS <sup>2</sup> (→ page 11) for spherical mounting of cylinders.



| Dimensions and ordering data |     |    |    |     |                  |           |    |         |
|------------------------------|-----|----|----|-----|------------------|-----------|----|---------|
| KK                           | B1  | B2 | B3 | CE  | CK<br>Ø<br>F7/h9 | CM<br>B12 | CV | D1<br>Ø |
| M10x1.25                     | 3.3 | 28 | 20 | 78  | 10               | 14        | 12 | 18      |
| M12                          | 4.3 | 30 | 25 | 92  | 12               | 16        | 16 | 19      |
| M12x1.25                     |     |    |    |     |                  |           |    |         |
| M16                          | 4.3 | 40 | 35 | 108 | 16               | 21        | 21 | 24      |
| M16x1.5                      |     |    |    |     |                  |           |    |         |
| M20x1.5                      | 4.3 | 50 | 40 | 131 | 20               | 25        | 25 | 30      |
| M27x2                        | 6.3 | 67 | 60 | 168 | 30               | 37        | 32 | 38      |
| M36x2                        | 6.3 | 78 | 70 | 211 | 35               | 43        | 39 | 48      |

| KK       | L2  | L3  | L4   | LE | T1 | CRC <sup>1)</sup> | Weight<br>[g] | Part No. | Type         |
|----------|-----|-----|------|----|----|-------------------|---------------|----------|--------------|
| M10x1.25 | 53  | 50  | 11   | 20 | 3  | 1                 | 129           | 32954    | SGA-M10x1,25 |
| M12      | 58  | 55  | 12   | 26 | 3  | 1                 | 222           | 6523     | SGA-M12      |
| M12x1.25 |     |     |      |    |    | 1                 | 222           | 10767    | SGA-M12x1,25 |
| M16      | 65  | 62  | 14   | 31 | 3  | 1                 | 512           | 6524     | SGA-M16      |
| M16x1.5  |     |     |      |    |    | 1                 | 512           | 10768    | SGA-M16x1,5  |
| M20x1.5  | 73  | 69  | 16   | 43 | 3  | 1                 | 954           | 10769    | SGA-M20x1,5  |
| M27x2    | 98  | 92  | 24   | 54 | 5  | 1                 | 2189          | 10770    | SGA-M27x2    |
| M36x2    | 121 | 115 | 26.5 | 72 | 5  | 1                 | 3938          | 10771    | SGA-M36x2    |

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

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

# Rod clevises SG

Technical data

FESTO

## Rod clevis SG

Scope of delivery:

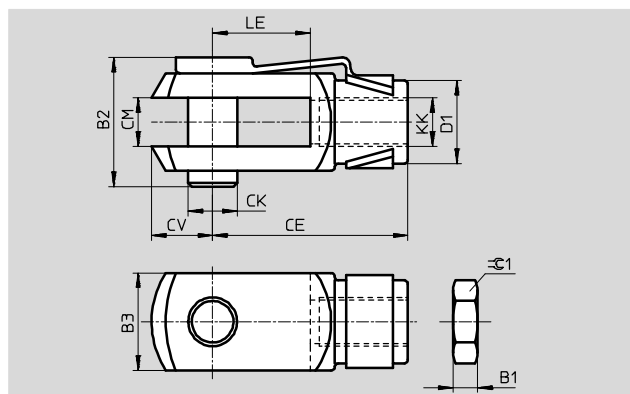
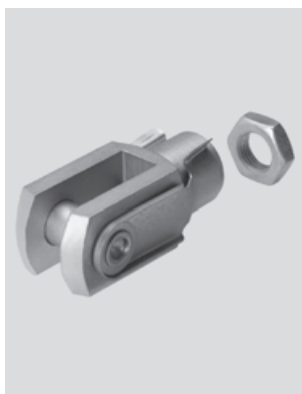
1 rod clevis, 1 hinged spring pin,  
1 hex nut (M4: DIN 934, M6 ... M16:  
DIN 439)

Material:

Galvanised steel

Free of copper and PTFE

RoHS-compliant



| Dimensions and ordering data |     |      |    |        |         |              |    |         |
|------------------------------|-----|------|----|--------|---------|--------------|----|---------|
| KK                           | B1  | B2   | B3 | CE     | CK<br>Ø | CM           | CV | D1<br>Ø |
| M4                           | 3.2 | 11.1 | 8  | 16±0.3 | 4h11    | 4B13         | 5  | 8       |
| M6                           | 3.2 | 16.2 | 12 | 24±0.3 | 6h11    | 6B13         | 7  | 10      |
| M8                           | 4   | 21.6 | 16 | 32±0.4 | 8h11    | 8B13         | 10 | 14      |
| M10                          | 5   | 26   | 20 | 40±0.4 | 10h11   | 10B13        | 12 | 18      |
| M10x1.25                     |     |      |    |        |         |              |    |         |
| M12                          | 6   | 31.1 | 24 | 48±0.4 | 12h11   | 12+0.7/+0.15 | 14 | 20      |
| M12x1.25                     |     |      |    |        |         |              |    |         |
| M16                          | 8   | 39.5 | 32 | 64±0.4 | 16h11   | 16+0.7/+0.15 | 19 | 26      |
| M16x1.5                      |     |      |    |        |         |              |    |         |

| KK       | LE<br>±0.5 | ≡C1 | ISO 8140 | DIN 71752 | CRC <sup>1)</sup> | Weight<br>[g] | Part No. | Type        |
|----------|------------|-----|----------|-----------|-------------------|---------------|----------|-------------|
| M4       | 8          | 7   | –        | ■         | 1                 | 10            | 6532     | SG-M4       |
| M6       | 12         | 10  | ■        | ■         | 1                 | 25            | ★ 3110   | SG-M6       |
| M8       | 16         | 13  | ■        | ■         | 1                 | 55            | ★ 3111   | SG-M8       |
| M10      | 20         | 17  | –        | ■         | 1                 | 105           | 2674     | SG-M10      |
| M10x1.25 |            |     | ■        | ■         | 1                 | 105           | ★ 6144   | SG-M10x1,25 |
| M12      | 24         | 19  | –        | ■         | 1                 | 165           | 2675     | SG-M12      |
| M12x1.25 |            |     | ■        | ■         | 1                 | 165           | ★ 6145   | SG-M12x1,25 |
| M16      | 32         | 24  | –        | ■         | 1                 | 385           | 2676     | SG-M16      |
| M16x1.5  |            |     | ■        | ■         | 1                 | 385           | ★ 6146   | SG-M16x1,5  |

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

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Festo core product range

★ Ready for dispatch from the Festo factory in 24 hours

☆ Ready for dispatch in 5 days maximum from stock

# Rod clevises SG

Technical data

FESTO

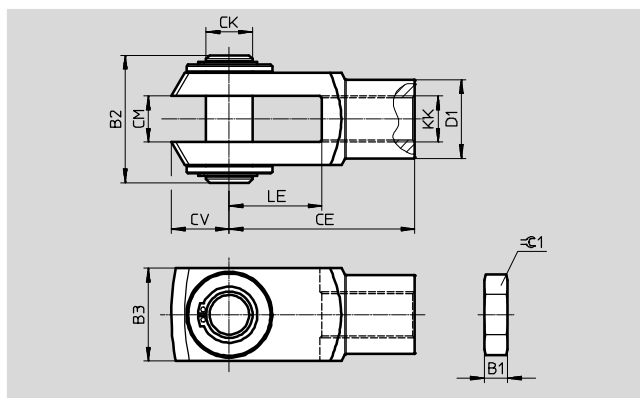
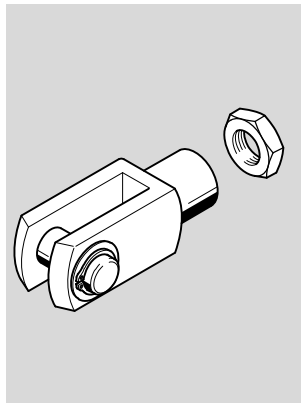
## Rod clevis SG

Scope of delivery:

1 rod clevis, 1 bolt, 1 retaining ring  
1 hex nut (DIN 439)

Material:

Galvanised steel  
Free of copper and PTFE  
RoHS-compliant



| Dimensions and ordering data |      |       |    |               |                     |                          |    |                     |
|------------------------------|------|-------|----|---------------|---------------------|--------------------------|----|---------------------|
| KK                           | B1   | B2    | B3 | CE            | CK<br>$\varnothing$ | CM                       | CV | D1<br>$\varnothing$ |
| M20x1.5                      | 10   | 55    | 40 | 80 $\pm$ 0.4  | 20e8                | 20 $\pm$ 0.7/ $\pm$ 0.15 | 25 | 34                  |
| M27x2                        | 13.5 | 73    | 55 | 110 $\pm$ 0.4 | 30e8                | 30 $\pm$ 0.7/ $\pm$ 0.15 | 38 | 48                  |
| M36x2                        | 18   | 93    | 70 | 144 $\pm$ 0.4 | 35e8                | 35 $\pm$ 0.7/ $\pm$ 0.15 | 44 | 60                  |
| M42x2                        | 21   | 111   | 85 | 168 $\pm$ 0.4 | 40e8                | 40 $\pm$ 0.7/ $\pm$ 0.15 | 64 | 70                  |
| M48x2                        | 24   | 121.5 | 90 | 192 $\pm$ 0.4 | 50e8                | 50 $\pm$ 0.7/ $\pm$ 0.15 | 73 | 80                  |

| KK      | LE<br>$\pm$ 0.5 | $\approx 1$ | ISO 8140 | CRC <sup>1)</sup> | Weight<br>[g] | Part No. | Type       |
|---------|-----------------|-------------|----------|-------------------|---------------|----------|------------|
| M20x1.5 | 40              | 30          | ■        | 1                 | 785           | ★ 6147   | SG-M20x1,5 |
| M27x2   | 54              | 41          | ■        | 1                 | 2145          | 14987    | SG-M27x2-B |
| M36x2   | 72              | 55          | ■        | 1                 | 4220          | 9581     | SG-M36x2   |
| M42x2   | 84              | 65          | ■        | 1                 | 7520          | 9582     | SG-M42x2   |
| M48x2   | 96              | 75          | ■        | 1                 | 10030         | 9583     | SG-M48x2   |

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

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

Festo core product range

★ Ready for dispatch from the Festo factory in 24 hours  
★ Ready for dispatch in 5 days maximum from stock

# Rod clevises CRSG, stainless steel

FESTO

Technical data

## Rod clevis CRSG

Scope of delivery:

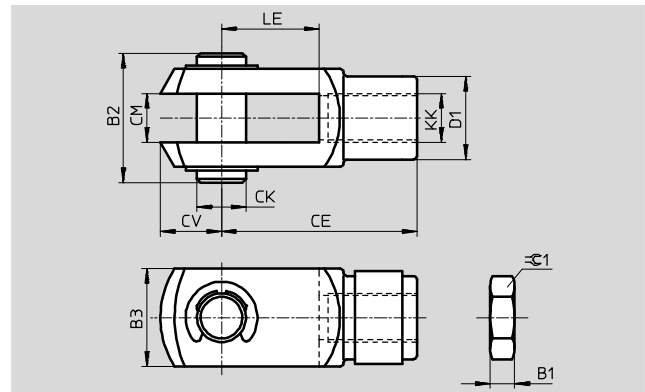
1 rod clevis, 1 pivot pin,  
1 hex nut to DIN 439

Material:

High-alloy steel

Free of copper and PTFE

RoHS-compliant



| Dimensions and ordering data |      |    |     |         |                  |              |    |                 |
|------------------------------|------|----|-----|---------|------------------|--------------|----|-----------------|
| KK                           | B1   | B2 | B3  | CE      | CK<br>Ø<br>H9/e8 | CM           | CV | D1<br>Ø<br>±0.3 |
|                              |      |    | h11 |         |                  |              |    |                 |
| M6                           | 3.2  | 19 | 12  | 24±0.3  | 6                | 6B13         | 7  | 10              |
| M8                           | 4    | 24 | 16  | 32±0.4  | 8                | 8B13         | 10 | 14              |
| M10x1.25                     | 5    | 27 | 20  | 40±0.4  | 10               | 10B13        | 12 | 18              |
| M12x1.25                     | 6    | 33 | 24  | 48±0.4  | 12               | 12+0.7/+0.15 | 14 | 20              |
| M16x1.5                      | 8    | 43 | 32  | 64±0.4  | 16               | 16+0.7/+0.15 | 19 | 26              |
| M20x1.5                      | 10   | 53 | 40  | 80±0.4  | 20               | 20+0.7/+0.15 | 25 | 34              |
| M27x2                        | 13.5 | 70 | 55  | 110±0.4 | 30               | 30+0.7/+0.15 | 38 | 48              |

| KK       | LE<br>±0.5 | ⌀1 | ISO 8140 | DIN 71752 | CRC <sup>1)</sup> | Weight<br>[g] | Part No. | Type          |
|----------|------------|----|----------|-----------|-------------------|---------------|----------|---------------|
| M6       | 12         | 10 | ■        | ■         | 4                 | 25            | 13567    | CRSG-M6       |
| M8       | 16         | 13 | ■        | ■         | 4                 | 55            | 13568    | CRSG-M8       |
| M10x1.25 | 20         | 17 | ■        | ■         | 4                 | 110           | 13569    | CRSG-M10x1,25 |
| M12x1.25 | 24         | 19 | ■        | ■         | 4                 | 180           | 13570    | CRSG-M12x1,25 |
| M16x1.5  | 32         | 24 | ■        | ■         | 4                 | 395           | 13571    | CRSG-M16x1,5  |
| M20x1.5  | 40         | 30 | ■        | —         | 4                 | 800           | 13572    | CRSG-M20x1,5  |
| M27x2    | 54         | 41 | ■        | —         | 4                 | 1900          | 185361   | CRSG-M27x2    |

1) Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, for instance in the chemical or food industries. These applications may need to be supported by special tests (→ also FN 940082) using appropriate media.

# Self-aligning rod couplers FK

Technical data

FESTO

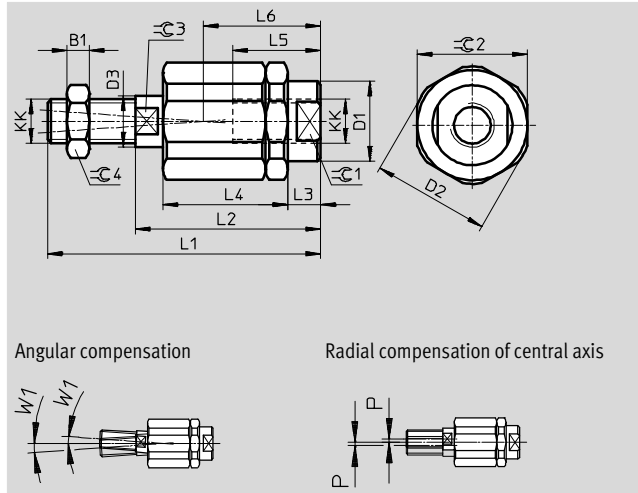
## Self-aligning rod coupler FK

Scope of delivery:

- 1 self-aligning rod coupler,
- 1 hex nut to DIN 439

Material:

- Galvanised steel
- Free of copper and PTFE
- RoHS-compliant



| Dimensions and ordering data |      |         |         |         |      |      |      |      |      |      |           |     |     |
|------------------------------|------|---------|---------|---------|------|------|------|------|------|------|-----------|-----|-----|
| KK                           | B1   | D1<br>Ø | D2<br>Ø | D3<br>Ø | L1   | L2   | L3   | L4   | L5   | L6   | W1<br>[°] | ≈C1 | ≈C2 |
| M4                           | 2.2  | –       | –       | 3.8     | 33   | 24   | 4.5  | 16.5 | 12.5 | 16   | 4         | 11  | 11  |
| M5                           | 2.7  | 8.5     | 14.5    | 5.8     | 38.5 | 25   | 4.4  | 17.5 | 11.5 | 15.7 | 4         | 7   | 13  |
| M6                           | 3.2  | 8.5     | 14.5    | 5.8     | 37   | 25   | 4.4  | 17.5 | 11.5 | 15.7 | 4         | 7   | 13  |
| M8                           | 4    | 12.5    | 19      | 7.8     | 49   | 34   | 6    | 23.5 | 14   | 20.5 | 4         | 10  | 17  |
| M10                          | 5    | 21.4    | 32.5    | 13.8    | 67.5 | 49.5 | 9    | 34   | 23   | 31   | 4         | 19  | 30  |
| M10x1.25                     |      |         |         |         | 69.5 |      |      |      |      |      | 4         |     |     |
| M12                          | 6    | 21.4    | 32.5    | 13.8    | 70.5 | 49.5 | 9    | 34   | 23   | 31   | 4         | 19  | 30  |
| M12x1.25                     |      |         |         |         | 74.5 |      |      |      |      |      | 4         |     |     |
| M16                          | 8    | 33.8    | 45      | 22      | 97   | 71   | 10   | 53   | 32   | 44.5 | 4         | 30  | 41  |
| M16x1.5                      |      |         |         |         | 103  |      |      |      |      |      | 4         |     |     |
| M20x1.5                      | 10   | 33.8    | 45      | 22      | 120  | 80   | 19   | 53   | 41   | 53.5 | 4         | 30  | 41  |
| M27x2                        | 13.5 | 62      | 62      | 28      | 157  | 103  | 12.2 | 79   | 42   | 62.5 | 4         | 55  | 55  |
| M36x2                        | 18   | 80      | 80      | 38      | 251  | 179  | 22   | 136  | 78   | 110  | 4         | 75  | 75  |

| KK       | ≈C3 | ≈C4 | Tensile and compressive load max.<br>[N] | Axial play<br>[mm] | Radial deviation<br>P<br>[mm] | CRC <sup>1)</sup> | Weight<br>[g] | Part No. | Type        |
|----------|-----|-----|------------------------------------------|--------------------|-------------------------------|-------------------|---------------|----------|-------------|
| M4       | 3.2 | 7   | 750                                      | 0.04 ... 0.2       | ±0.5                          | 2                 | 17            | 6528     | FK-M4       |
| M5       | 5   | 8   | 1200                                     | 0.04 ... 0.2       | ±0.5                          | 2                 | 23            | 30984    | FK-M5       |
| M6       | 5   | 10  | 1200                                     | 0.04 ... 0.2       | ±0.5                          | 2                 | 24            | ★ 2061   | FK-M6       |
| M8       | 7   | 13  | 2500                                     | 0.04 ... 0.2       | ±0.5                          | 2                 | 56            | ★ 2062   | FK-M8       |
| M10      | 12  | 17  | 5000                                     | 0.05 ... 0.25      | ±0.7                          | 2                 | 236           | 2063     | FK-M10      |
| M10x1.25 |     |     | 5000                                     | 0.05 ... 0.25      | ±0.7                          | 2                 | 236           | ★ 6140   | FK-M10x1,25 |
| M12      | 12  | 19  | 5000                                     | 0.05 ... 0.25      | ±0.7                          | 2                 | 242           | 2064     | FK-M12      |
| M12x1.25 |     |     | 5000                                     | 0.05 ... 0.25      | ±0.7                          | 2                 | 245           | ★ 6141   | FK-M12x1,25 |
| M16      | 19  | 24  | 10000                                    | 0.05 ... 0.25      | ±1                            | 2                 | 706           | 2065     | FK-M16      |
| M16x1.5  |     |     | 10000                                    | 0.05 ... 0.25      | ±1                            | 2                 | 709           | ★ 6142   | FK-M16x1,5  |
| M20x1.5  | 19  | 30  | 10000                                    | 0.05 ... 0.25      | ±1                            | 2                 | 792           | ★ 6143   | FK-M20x1,5  |
| M27x2    | 24  | 41  | 30000                                    | 0.05 ... 0.25      | ±1                            | 2                 | 2129          | 10485    | FK-M27x2    |
| M36x2    | 32  | 55  | 40000                                    | 0.05 ... 0.25      | ±1                            | 2                 | 6076          | 10746    | FK-M36x2    |

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

Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

Festo core product range

- ★ Ready for dispatch from the Festo factory in 24 hours
- ★ Ready for dispatch in 5 days maximum from stock

# Self-aligning rod couplers CRFK, stainless steel

FESTO

Technical data

## Self-aligning rod coupler CRFK

Scope of delivery:

1 self-aligning rod coupler

Material:

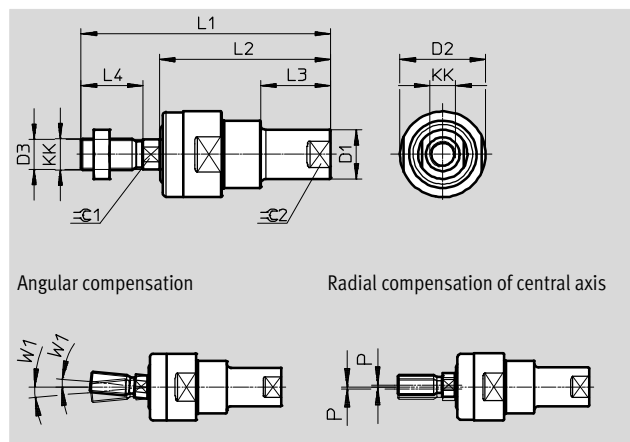
Housing, nut, threaded pin:

High-alloy stainless steel

Cap: Elastomer

Free of copper and PTFE

RoHS-compliant



| Dimensions and ordering data |         |         |         |     |     |    |    |           |            |            |
|------------------------------|---------|---------|---------|-----|-----|----|----|-----------|------------|------------|
| KK                           | D1<br>Ø | D2<br>Ø | D3<br>Ø | L1  | L2  | L3 | L4 | W1<br>[°] | $\alpha_1$ | $\alpha_2$ |
| M10x1.25                     | 19      | 33      | 11.5    | 94  | 66  | 27 | 22 | 5         | 10         | 16         |
| M12x1.25                     | 19      | 33      | 11.5    | 96  | 66  | 27 | 24 | 5         | 10         | 16         |
| M16x1.5                      | 27      | 47      | 16      | 129 | 89  | 32 | 32 | 5         | 14         | 22         |
| M20x1.5                      | 35      | 57      | 21      | 165 | 114 | 40 | 40 | 5         | 18         | 30         |

| KK       | Tensile and compressive load max.<br>[N] | Axial play<br>[mm] | Radial deviation<br>P<br>[mm] | Ambient temperature<br>[°C] |
|----------|------------------------------------------|--------------------|-------------------------------|-----------------------------|
| M10x1.25 | 2100                                     | 0.01 ... 0.03      | ±1                            | -20 ... +100                |
| M12x1.25 | 2100                                     | 0.01 ... 0.03      | ±1                            | -20 ... +100                |
| M16x1.5  | 5600                                     | 0.01 ... 0.03      | ±1                            | -20 ... +100                |
| M20x1.5  | 13800                                    | 0.01 ... 0.03      | ±1                            | -20 ... +100                |

| KK       | CRC <sup>1)</sup> | Weight<br>[g] | Part No. | Type          |
|----------|-------------------|---------------|----------|---------------|
| M10x1.25 | 4                 | 230           | 2305778  | CRFK-M10x1,25 |
| M12x1.25 | 4                 | 230           | 2305779  | CRFK-M12x1,25 |
| M16x1.5  | 4                 | 670           | 2490673  | CRFK-M16x1,5  |
| M20x1.5  | 4                 | 1280          | 2545677  | CRFK-M20x1,5  |

1) Corrosion resistance class CRC 4 to Festo standard FN 940070

Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, for instance in the chemical or food industries. These applications may need to be supported by special tests (→ also FN 940082) using appropriate media.

# Coupling pieces KSG

Technical data

FESTO

## Coupling piece KSG

These coupling pieces connect the piston-rod thread of all types of cylinders to machine components which need to be driven. The pieces can compensate for radial alignment deviations of up to 1 mm.

Scope of delivery:

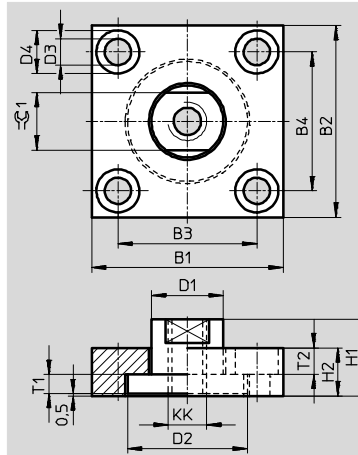
1 flange plate, 1 threaded coupling

Material:

Galvanised steel

Free of copper and PTFE

RoHS-compliant



| Dimensions and ordering data |    |    |    |    |                               |                |                 |                |                |    |
|------------------------------|----|----|----|----|-------------------------------|----------------|-----------------|----------------|----------------|----|
| KK                           | B1 | B2 | B3 | B4 | B5<br>Max. radial<br>backlash | D1<br>Ø<br>H11 | D2<br>Ø<br>-0.2 | D3<br>Ø<br>H13 | D4<br>Ø<br>H13 | H1 |
| M10x1.25                     | 60 | 37 | 36 | 23 | 1                             | 20             | 32              | 6.6            | 11             | 24 |
| M12x1.25                     | 60 | 56 | 42 | 38 |                               | 25             | 42              | 9              | 15             | 30 |
| M16x1.5                      | 80 | 80 | 58 | 58 |                               | 30             | 52              | 11             | 18             | 32 |
| M20x1.5                      | 90 | 90 | 65 | 65 |                               | 40             | 62              | 14             | 20             | 35 |
| M27x2                        | 90 | 90 | 65 | 65 |                               | 40             | 62              | 14             | 20             | 35 |

| KK       | H2 | T1<br>Min. axial<br>backlash | T2  | Ø1 | Max. tightening<br>torque <sup>1)</sup><br>[Nm] | CRC <sup>2)</sup> | Weight<br>[g] | Part No.     | Type                |
|----------|----|------------------------------|-----|----|-------------------------------------------------|-------------------|---------------|--------------|---------------------|
| M10x1.25 | 15 | 0.5                          | 6.8 | 17 | 9.9                                             | 1                 | 230           | <b>32963</b> | <b>KSG-M10x1,25</b> |
| M12x1.25 | 20 |                              | 9   | 19 | 24                                              | 1                 | 450           | <b>32964</b> | <b>KSG-M12x1,25</b> |
| M16x1.5  | 20 |                              | 11  | 24 | 47                                              | 1                 | 885           | <b>32965</b> | <b>KSG-M16x1,5</b>  |
| M20x1.5  | 20 |                              | 13  | 36 | 82                                              | 1                 | 1140          | <b>32966</b> | <b>KSG-M20x1,5</b>  |
| M27x2    | 20 |                              | 13  | 36 | 82                                              | 1                 | 1080          | <b>32967</b> | <b>KSG-M27x2</b>    |

1) For mounting screws with standard threads and strength class 8.8

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

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

# Coupling pieces KSZ

Technical data

FESTO

## Coupling piece KSZ

for non-rotating piston rods with male threads

These coupling pieces can be used to connect a cylinder with a non-rotating piston rod to another component with a defined orientation without rotating either the cylinder or other component.

Scope of delivery:

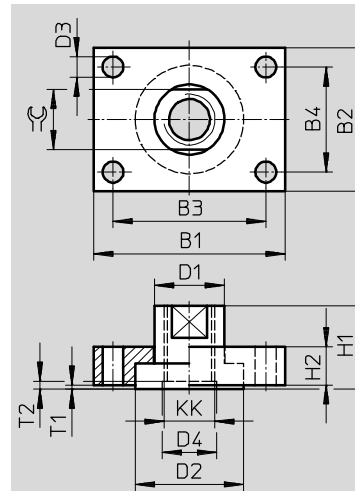
1 flange plate, 1 threaded coupling

Material:

Galvanised steel

Free of copper and PTFE

RoHS-compliant



| Dimensions and ordering data |    |    |    |    |         |         |                |         |    |    |            |    |
|------------------------------|----|----|----|----|---------|---------|----------------|---------|----|----|------------|----|
| KK                           | B1 | B2 | B3 | B4 | D1<br>Ø | D2<br>Ø | D3<br>Ø<br>H13 | D4<br>Ø | H1 | H2 | T1<br>min. | T2 |
| M6                           | 30 | 25 | 20 | 15 | 12-01   | 18      | 5.5            | 8       | 16 | 8  | 0.1        | 2  |
| M8                           | 35 | 30 | 25 | 20 | 14-01   | 20      | 5.5            | –       | 22 | 8  | 0.1        | –  |
| M10x1.25                     | 40 | 35 | 30 | 25 | 17-02   | 26      | 5.5            | –       | 20 | 10 | 0.1        | –  |
| M12x1.25                     | 50 | 40 | 40 | 30 | 17-02   | 26      | 5.5            | –       | 22 | 12 | 0.1        | –  |
| M16x1.5                      | 60 | 45 | 48 | 33 | 22-02   | 34      | 6.6            | –       | 25 | 12 | 0.1        | –  |
| M20x1.5                      | 72 | 50 | 57 | 35 | 30-02   | 44      | 9              | –       | 32 | 15 | 0.1        | –  |

| KK       | ⌀  | Max. tightening torque <sup>1)</sup><br>[Nm] | Max. tightening torque <sup>2)</sup><br>[Nm] | Max. tightening torque <sup>3)</sup><br>[Nm] | CRC <sup>4)</sup> | Weight<br>[g] | Part No. | Type         |
|----------|----|----------------------------------------------|----------------------------------------------|----------------------------------------------|-------------------|---------------|----------|--------------|
| M6       | 10 | 5.9                                          | 6.9                                          | 2.1                                          | 1                 | 45            | 36123    | KSZ-M6       |
| M8       | 13 | 5.9                                          | 16                                           | 5                                            | 1                 | 70            | 36124    | KSZ-M8       |
| M10x1.25 | 15 | 5.9                                          | 34                                           | 12                                           | 1                 | 110           | 36125    | KSZ-M10x1,25 |
| M12x1.25 | 15 | 5.9                                          | 61                                           | 22                                           | 1                 | 180           | 36126    | KSZ-M12x1,25 |
| M16x1.5  | 19 | 9.9                                          | 148                                          | 57                                           | 1                 | 250           | 36127    | KSZ-M16x1,5  |
| M20x1.5  | 27 | 24                                           | 296                                          | 120                                          | 1                 | 420           | 36128    | KSZ-M20x1,5  |

1) For mounting screws with standard threads and strength class 8.8

2) For use with lock nut on piston rod

3) Torque which coupling can transmit with coefficient of friction  $\mu$  0,1 and 10x safety margin at max. permissible tightening torque

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

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



Note

The torque on the coupling piece must not exceed the permissible torque on the cylinder.  
The mounting screws should be tightened evenly.

# Hex nuts MSK

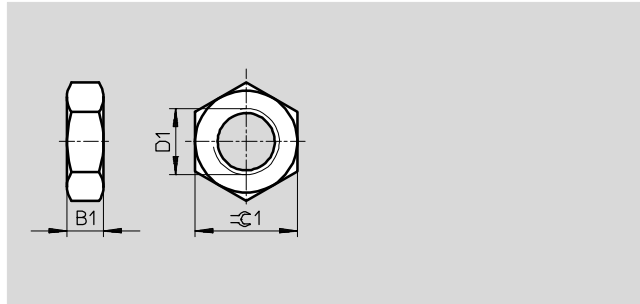
Technical data

FESTO

## Hex nut MSK

Material:

Galvanised steel



| Dimensions and ordering data |    |    |                         |                      |                   |               |               |                     |                  |
|------------------------------|----|----|-------------------------|----------------------|-------------------|---------------|---------------|---------------------|------------------|
| D1                           | B1 | C1 | Conforms to<br>ISO 8675 | Based on<br>ISO 8675 | CRC <sup>1)</sup> | Weight<br>[g] | Part No.      | Type                | PU <sup>2)</sup> |
| M10x1.25                     | 5  | 17 | –                       | ■                    | 2                 | 7             | <b>189005</b> | <b>MSK-M10x1,25</b> | 10               |
| M12x1.25                     | 6  | 19 | –                       | ■                    | 2                 | 9             | <b>189006</b> | <b>MSK-M12x1,25</b> |                  |
| M16x1.5                      | 8  | 24 | ■                       | –                    | 2                 | 18            | <b>189007</b> | <b>MSK-M16x1,5</b>  |                  |

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

Moderate corrosion stress. Indoor applications in which condensation may occur. External visible parts with primarily decorative requirements for the surface and which are in direct contact with the ambient atmosphere typical for industrial applications.

2) Packaging unit quantity

# Adapter AD

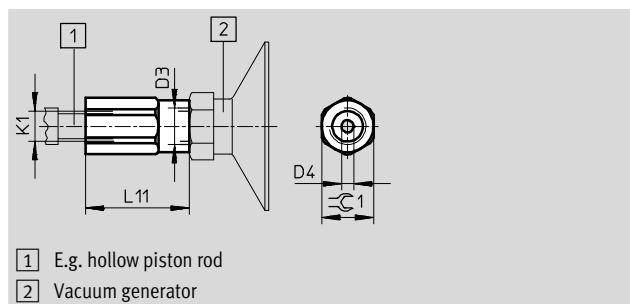
Technical data

FESTO

## Adapter AD

Material:

Anodised aluminium



| Dimensions and ordering data |      |         |     |     |               |          |                 |
|------------------------------|------|---------|-----|-----|---------------|----------|-----------------|
| K1                           | D3   | D4<br>Ø | L11 | ≈C1 | Weight<br>[g] | Part No. | Type            |
| M6                           | M5   | 2.3     | 27  | 10  | 6             | 157328   | AD-M6-M5        |
| M6                           | G1/8 | 2.3     | 27  | 13  | 9             | 157329   | AD-M6-1/8       |
| M6                           | G1/4 | 2.3     | 30  | 17  | 17            | 157330   | AD-M6-1/4       |
| M8                           | G1/8 | 3.2     | 29  | 13  | 8             | 157331   | AD-M8-1/8       |
| M8                           | G1/4 | 3.2     | 32  | 17  | 16            | 157332   | AD-M8-1/4       |
| M10x1.25                     | G1/8 | 4       | 31  | 13  | 10            | 157333   | AD-M10x1,25-1/8 |
| M10x1.25                     | G1/4 | 4       | 34  | 17  | 16            | 157334   | AD-M10x1,25-1/4 |
| M12x1.25                     | G1/4 | 6       | 34  | 17  | 28            | 160256   | AD-M12x1,25-1/4 |
| M12x1.25                     | G3/8 | 6       | 37  | 22  | 14            | 160257   | AD-M12x1,25-3/8 |

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