# Electric cylinders ESBF, with spindle drive

FESTO

| | |
|---|---|
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# Key features

**At a glance**

The electric cylinder ESBF is a mechanical linear drive unit with piston rod. The drive component consists of an electrically actuated spindle that converts the rotary motion of the motor into linear motion of the piston rod.

The electric cylinder is based on the ISO 15552 standard. The mechanical interfaces are largely compatible with the standards-based cylinder DSBF. The lead screws have lifetime lubrication and are thus maintenance-free.

Two spindle types to choose from:
Size 32 ... 50:
- Ball screw (BS)
- Lead screw (LS)

Size 63 ... 100:
- Ball screw (BS)

Options:
- High corrosion protection
- Degree of protection IP65
- Extended piston rod
- NSF-H1 lubricant for food & beverage industry applications
- Extensive accessories

**Complete system consisting of electric cylinder, motor and motor mounting kit**

Electric cylinder → Page 4

Motor → Page 27

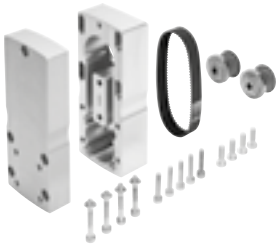
**Note**

Specially adapted complete solutions are available for the electric cylinder ESBF and the motors.

Motor mounting kit → Page 27

Axial kit

Parallel kit



A range of complete kits is available for both parallel and axial motor mounting.

**Bellows kit EADB for use in dusty environments** → Page 43

The bellows protects the piston rod, the seal and the bearings from the effects of a wide range of media, which has a positive impact on the service life of these components.
The bellows kit is a leak-free system. To prevent unwanted media from being drawn in, the supply and exhaust air for the kit must be ducted via a pressure compensation hole in the connection part [1].
The kit protects the piston rod, seal and bearing against a wide variety of media, for example:
- Dust
- Chippings
- Oil
- Grease
- Petrol

# Key features

**Use in wet environments with protection to IP65**

→ Page 43

The electric cylinder to IP65 fulfils the requirements of IEC 60529.
Air is exchanged between the interior of the cylinder and the environment via a pressure compensation hole [1]. This prevents negative pressure or excess pressure in the interior of the cylinder.
Connecting plastic tubing prevents unwanted media from being drawn in.
Sealing air can also be connected to the pressure compensation hole if required (e.g. during a cleaning process).

**NSF-H1 lubricant for food & beverage applications (feature F1)**

The electric cylinder is of limited suitability for the food industry.
Can only be selected in combination with the ball screw system (BS).
NSF-H1 lubricant for piston rod and threaded spindle as well as other parts.
Supplementary material information:
Additional information: www.festo.com/sp → Certificates

**For manufacturing lithium-ion batteries**

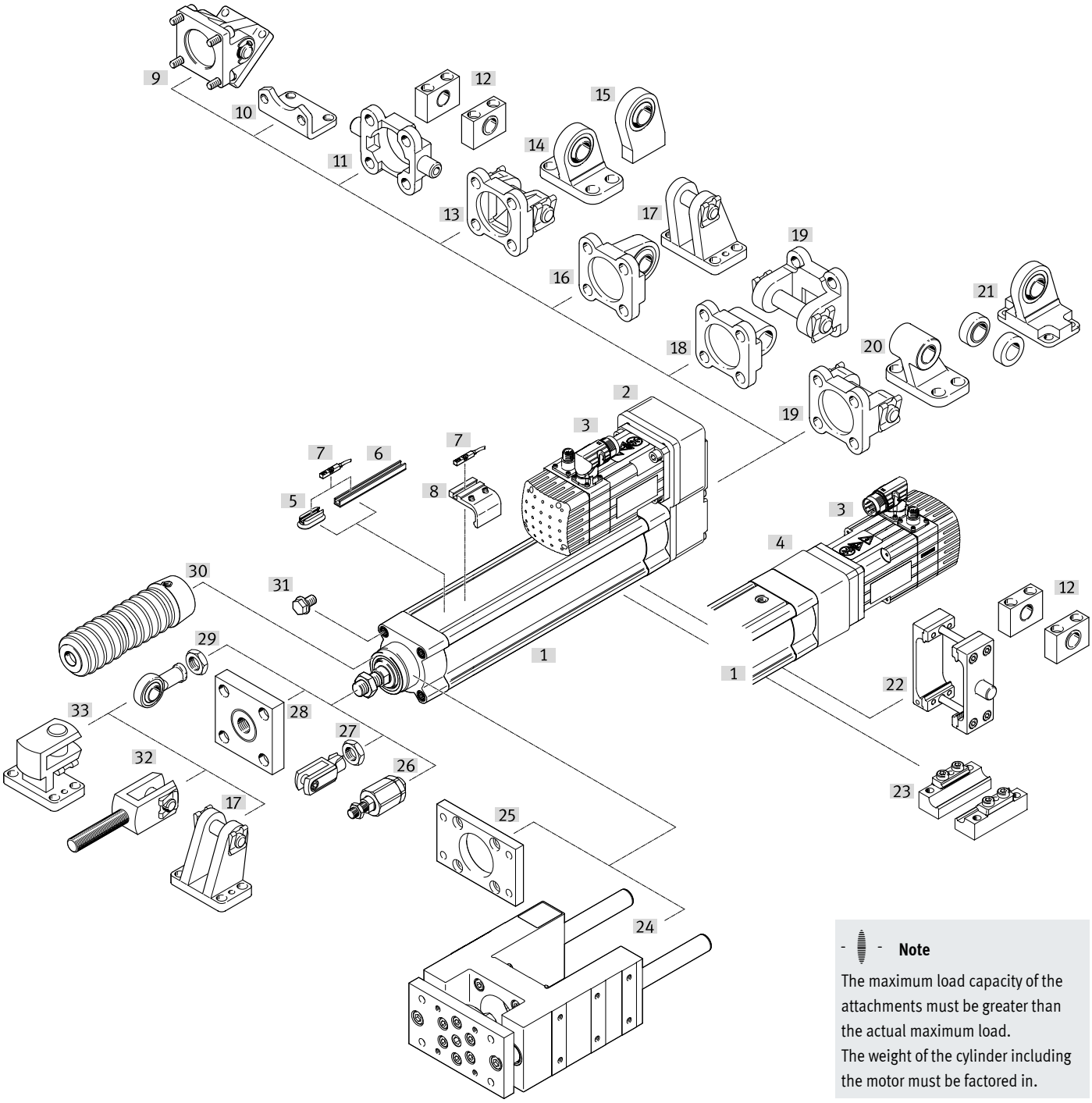
ESBF-...-F1A

Recommended for production plants for manufacturing lithium-ion batteries (Cu<=1%, Zn<=1%, Ni<=1%).
Metals with copper, zinc or nickel as the main constituent are excluded from use.
Exceptions are nickel in steels, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils.

Accessories

Your Festo contact partner can provide information about which accessories are suitable for manufacturing lithium-ion batteries.

# Peripherals overview




**Note**

The maximum load capacity of the attachments must be greater than the actual maximum load.
The weight of the cylinder including the motor must be factored in.

**Mounting attachments and accessories**

| | | Description | Suitable for high forces[1] | → Page/Internet |
|---|---|---|---|---|
| [1] | Electric cylinder ESBF | Electric drive | ■ | 6 |
| [2] | Parallel kit EAMM-U | For parallel motor mounting | ■ | 38 |
| [3] | Motors EMMT, EMMS | Motors specially matched to the axis, with or without brake | ■ | 27 |
| [4] | Axial kit EAMM-A | For axial motor mounting | ■ | 27 |

1) Indicates which accessories can be used within the entire force range. For restricted force ranges see the relevant accessory part, from page 50

# Peripherals overview

**Mounting attachments and accessories**

| | | Description | Suitable for high forces[1] | → Page/Internet |
|---|---|---|---|---|
| [5] | Mounting kit<br>CRSMB | For proximity sensor with T-slot | ■ | 64 |
| [6] | Sensor rail<br>SAMH | For proximity sensor with T-slot | ■ | 64 |
| [7] | Proximity sensors<br>SMT/CRSMT-8 | For position sensing | ■ | 65 |
| [8] | Mounting kit<br>SMB-8-FENG | For proximity sensor with T-slot | ■ | 64 |
| [9] | Swivel flange<br>DAMS | With parallel motor mounting, for spherical bearing | ■ | 55 |
| [10] | Foot mounting<br>HNC/CRHNC | For mounting the cylinder. The foot mounting can only be secured at the rear on the parallel kit | – | 50 |
| [11] | Trunnion flange<br>ZNCF/CRZNG | For spherical bearing | – | 52 |
| [12] | Trunnion support<br>LNZG/CRLNZG | For cylinders with trunnion flange mounting | – | 53 |
| [13] | Swivel flange<br>SNC | With parallel motor mounting | – | 56 |
| [14] | Clevis foot<br>LSNG | With parallel motor mounting, with spherical bearing | – | 61 |
| [15] | Clevis foot<br>LSNSG | With parallel motor mounting, weld-on, with spherical bearing | – | 61 |
| [16] | Swivel flange<br>SNCS/CRSNCS/SNCS-...-R3 | With parallel motor mounting | – | 57 |
| [17] | Clevis foot<br>LBG/LBG-...-R3 | With parallel motor mounting, for spherical bearing | – | 61 |
| [18] | Swivel flange<br>SNCL | With parallel motor mounting | – | 58 |
| [19] | Swivel flange<br>SNCB/SNCB-...-R3 | With parallel motor mounting, for spherical bearing | – | 59 |
| [20] | Clevis foot<br>LNG/CRLNG | With parallel motor mounting | – | 61 |
| [21] | Clevis foot<br>LSN | With parallel motor mounting, for spherical bearing | – | 61 |
| [22] | Trunnion flange kit<br>DAMT | For mounting anywhere along the cylinder profile barrel. Cannot be mounted in the vicinity of the motor with parallel motor mounting | – | 60 |
| [23] | Profile mounting<br>EAHF-...-P | • For mounting the electric cylinder via the profile<br>• Cannot be mounted in conjunction with the parallel kit EAMM-U (in the vicinity of the motor) in some combinations | ■ | 49 |
| [24] | Guide unit<br>EAGF | • For protecting electric cylinders against rotation at high torque loads<br>• Cannot be used in combination with bellows kit EADB | ■ | 63 |
| [25] | Flange mounting<br>EAHH | • On the bearing cap<br>• Cannot be used in combination with bellows kit EADB | ■ | 51 |
| [26] | Self-aligning rod coupler<br>FK/CRFK | For compensating radial and angular deviations | – | 62 |
| [27] | Rod clevis<br>SG/CRSG | Permits a swivelling movement of the cylinder in one plane | ■ | 62 |
| [28] | Coupling piece<br>KSZ | For compensating radial deviations | – | 62 |
| [29] | Rod eye<br>SGS/CRSGS | With spherical bearing | ■ | 62 |
| [30] | Bellows kit<br>EADB | • Protects the cylinder (piston rod, seal and bearings) against a wide range of media and thus prevents premature wear<br>• The kit can only be used in combination with an extended piston rod (...E) | ■ | 43 |
| [31] | Plug screw<br>DAMD-PS | For covering unused mounting threads | ■ | 65 |
| [32] | Rod clevis<br>SGA | For swivel mounting of the cylinder | ■ | 62 |
| [33] | Right angle clevis foot<br>LQG | For rod eye SGS | – | 61 |

1) Indicates which accessories can be used within the entire force range. For restricted force ranges see the relevant accessory part, from page 50.

# Type codes

| 001 | Series | |
|---|---|---|
| **ESBF** | Electric cylinder, with spindle drive | |

| 002 | Drive system | |
|---|---|---|
| **BS** | Ball screw drive | |
| **LS** | Lead screw | |

| 003 | Size | |
|---|---|---|
| **32** | 32 | |
| **40** | 40 | |
| **50** | 50 | |
| **63** | 63 | |
| **80** | 80 | |
| **100** | 100 | |

| 004 | Stroke | |
|---|---|---|
| **100** | 100 | |
| **200** | 200 | |
| **300** | 300 | |
| **400** | 400 | |
| **...** | 30 ... 1500 | |

| 005 | Spindle pitch | |
|---|---|---|
| **2.5P** | 2.5 mm | |
| **3P** | 3 mm | |
| **4P** | 4 mm | |
| **5P** | 5 mm | |
| **10P** | 10 mm | |
| **15P** | 15 mm | |
| **16P** | 16 mm | |
| **20P** | 20 mm | |
| **25P** | 25 mm | |
| **32P** | 32 mm | |
| **40P** | 40 mm | |

| 006 | Piston rod thread type | |
|---|---|---|
| | Male thread | |
| **F** | Female thread | |

| 007 | Degree of protection, electrical system | |
|---|---|---|
| | Standard | |
| **S1** | IP65 | |

| 008 | Corrosion protection | |
|---|---|---|
| | Standard | |
| **R3** | High corrosion protection | |

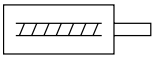
| 009 | Special material properties | |
|---|---|---|
| | None | |
| **F1A** | Recommended for production facilities for the manufacture of lithium-ion batteries (Cu<=1%, ,Zn<=1%, Ni<=1%) | |

| 010 | Additional characteristics | |
|---|---|---|
| | None | |
| **F1** | Food-safe according to supplementary information on materials | |

| 011 | Piston rod extension | |
|---|---|---|
| **...E** | 1 ... 500 mm | |

# Data sheet

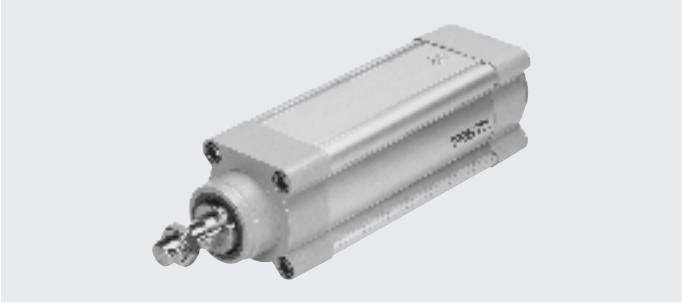
Function



Size
32 ... 100

Stroke length
30 ... 1500 mm

www.festo.com



| General technical data | | | | | | | |
|---|---|---|---|---|---|---|---|
| Size | | 32 | 40 | 50 | 63 | 80 | 100 |
| Based on standard | | ISO 15552 | | | | | |
| Design | | Electric cylinder with ball screw or lead screw | | | Electric cylinder with ball screw | | |
| Piston rod thread | | | | | | | |
| Male thread | | M10x1.25 | M12x1.25 | M16x1.5 | M16x1.5 | M20x1.5 | M20x1.5 |
| Female thread | | M6 | M8 | M10 | M10 | M12 | M12 |
| Working stroke | [mm] | 30 ... 800 | 30 ... 800 | 30 ... 1000 | 30 ... 1200 | 30 ... 1500 | 30 ... 1500 |
| Protection against rotation/guide | | Piston rod protected against rotation, with plain-bearing guide | | | | | |
| Duty cycle | [%] | 100 | | | | | |
| Position sensing | | For proximity sensor | | | | | |
| Type of mounting | | With female thread/accessories | | | | | |
| Mounting position | | Any | | | | | |

| Mechanical data – Ball screw | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Size | | 32 | | 40 | | | 50 | | |
| Spindle pitch | [mm/rev] | 5 | 10 | 5 | 10 | 16 | 5 | 10 | 20 |
| Spindle diameter | [mm] | 12 | | 16 | | | 20 | | |
| Max. cylinder force[1] | [kN] | 1 | 1 | 3 | 3 | 2.6 | 5 | 5 | 4.5 |
| Max. driving torque | [Nm] | 1.1 | 2 | 3 | 5.6 | 7.7 | 4.8 | 9.2 | 16.3 |
| Max. radial force[2] | [N] | 115 | | 130 | | | 300 | | |
| Max. speed | [m/s] | 0.55 | 1.1 | 0.4 | 0.8 | 1.2 | 0.3 | 0.6 | 1.2 |
| Max. rotational speed | [rpm] | 6600 | 6600 | 4800 | 4800 | 4500 | 3600 | 3600 | 3600 |
| Max. acceleration | [m/s²] | 5 | 15 | 5 | 15 | 25 | 5 | 15 | 25 |
| Max. angle of rotation of piston rod[3] | [°] | ±0.25 | | ±0.2 | | | ±0.15 | | |
| Reversing backlash[3] | [mm] | < 0.03 | < 0.04 | < 0.03 | < 0.03 | < 0.04 | < 0.03 | < 0.03 | < 0.04 |
| Repetition accuracy | [mm] | ±0.01 | | | | | | | |
| No-load driving torque[4] | [Nm] | 0.1 | | 0.2 | | | 0.3 | | |

| Size | | 63 | | | 80 | | | 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Spindle pitch | [mm/rev] | 5 | 10 | 25 | 5 | 15 | 32 | 5 | 20 | 40 |
| Spindle diameter | [mm] | 25 | | | 32 | | | 40 | | |
| Max. cylinder force[1] | [kN] | 7 | 7 | 6 | 12 | 12 | 10 | 17 | 17 | 14.5 |
| Max. driving torque | [Nm] | 7 | 13.1 | 26.5 | 11.9 | 33.7 | 56.6 | 16.9 | 63.7 | 102.6 |
| Max. radial force[2] | [N] | 700 | | | 1100 | | | 1100 | | |
| Max. speed | [m/s] | 0.27 | 0.53 | 1.35 | 0.21 | 0.62 | 1.34 | 0.16 | 0.67 | 1.34 |
| Max. rotational speed | [rpm] | 3250 | 3220 | 3260 | 2530 | 2515 | 2515 | 2010 | 2010 | 2010 |
| Max. acceleration | [m/s²] | 5 | 15 | 25 | 5 | 15 | 25 | 5 | 15 | 25 |
| Max. angle of rotation of piston rod[3] | [°] | ±0.4 | | | ±0.5 | | | ±0.5 | | |
| Reversing backlash[3] | [mm] | < 0.03 | < 0.03 | < 0.04 | < 0.03 | < 0.03 | < 0.04 | < 0.03 | < 0.03 | < 0.04 |
| Repetition accuracy | [mm] | ±0.015 | ±0.01 | | | | | | | |
| No-load driving torque[4] | [Nm] | 0.4 | 0.45 | 0.5 | 0.5 | 0.6 | 0.65 | 0.7 | 0.9 | 1.0 |

1) The pressure force is dependent on the stroke and has an effect on the service life → page 12
2) On the drive shaft
3) In new condition
4) At a rotational speed of the spindle of 200 rpm

# Data sheet

| **Mechanical data – Lead screw** | | | | |
|---|---|---|---|---|
| Size | | 32 | 40 | 50 |
| Spindle pitch | [mm/rev] | 2.5 | 3 | 4 |
| Spindle diameter | [mm] | 12 | 16 | 20 |
| Max. cylinder force[1)] | [kN] | 0.6 | 1 | 1.6 |
| Max. driving torque | [Nm] | 1.1 | 2.4 | 4.8 |
| Max. radial force[2)] | [N] | 115 | 130 | 300 |
| Max. speed | [m/s] | 0.05 | 0.05 | 0.05 |
| Max. rotational speed | [rpm] | 1200 | 1000 | 750 |
| Max. acceleration | [m/s$^2$] | 2.5 | 2.5 | 2.5 |
| Max. angle of rotation of the piston rod | [°] | ±0.25 | ±0.2 | ±0.15 |
| Reversing backlash[3)] | [mm] | < 0.1 | < 0.1 | < 0.1 |
| Repetition accuracy | [mm] | ±0.05 | | |
| No-load driving torque[4)] | [Nm] | 0.1 | 0.2 | 0.3 |

1) Electric cylinder with lead screw can be operated at max. force over the entire stroke range.
2) On the drive shaft
3) In new condition
4) At a rotational speed of the spindle of 200 rpm

| **Weight [g] – Ball screw** | | | | | | |
|---|---|---|---|---|---|---|
| Size | 32 | 40 | 50 | 63 | 80 | 100 |
| Basic weight $m_0$ with 0 mm stroke | 781 | 1237 | 1982 | 3165 | 7393 | 11123 |
| Additional weight $m_{10}$ per 10 mm stroke | 33 | 47 | 65 | 87 | 155 | 193 |
| Moving mass $m_{b0}$ with 0 mm stroke | 281 | 467 | 793 | 1831 | 5300 | 8786 |
| Moving mass $m_{b10}$ per 10 mm stroke | 9 | 26 | 35 | 52 | 103 | 132 |

| **Weight [g] – Lead screw** | | | |
|---|---|---|---|
| Size | 32 | 40 | 50 |
| Basic weight $m_0$ with 0 mm stroke | 667 | 1079 | 1716 |
| Additional weight $m_{10}$ per 10 mm stroke | 34 | 48 | 67 |
| Moving mass $m_{b0}$ with 0 mm stroke | 198 | 317 | 532 |
| Moving mass $m_{b10}$ per 10 mm stroke | 9 | 11 | 13 |

**Total weight $m_{total}$:**

$$m = m_0 + m_{10} \cdot \frac{l}{10}$$

l = stroke

**Total moving mass $m_{btotal}$:**

$$m_b = m_{b0} + m_{b10} \cdot \frac{l}{10}$$

# Data sheet

| Operating and environmental conditions | | |
|---|---|---|
| Ambient temperature[1] | | |
| ESBF-BS-... | [°C] | 0 ... +60 |
| ESBF-LS-... | [°C] | 0 ... +50 |
| Storage temperature | [°C] | –20 ... +60 |
| Degree of protection to IEC 60529 | | |
| ESBF-... | | IP40 |
| ESBF-...-S1 | | IP65 |
| Relative humidity | [%] | 0 ... 95 (non-condensing) |
| Duty cycle | [%] | 100 |
| Maintenance interval | | Lifetime lubrication (for integrated lead screw) |
| Food-safe with ESBF-...-F1[2] | | Supplementary material information |
| Corrosion resistance class CRC[3] | | |
| ESBF-... | | 2 |
| ESBF-...-R3 | | 3 |

1) Note operating range of proximity sensors and motors

2) Additional information: www.festo.com/sp → Certificates
Only in combination with ESBF-BS-... (ball screw)

3) 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 which are in direct contact with a normal industrial environment.
Corrosion resistance class CRC 3 to Festo standard FN 940070
High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

| Mass moment of inertia – Ball screw | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Size | | 32 | | 40 | | | 50 | | |
| Spindle pitch | [mm/rev] | 5 | 10 | 5 | 10 | 16 | 5 | 10 | 20 |
| $J_0$ with 0 mm stroke | [kg cm²] | 0.023 | 0.036 | 0.050 | 0.078 | 0.125 | 0.145 | 0.187 | 0.329 |
| $J_H$ per metre stroke | [kg cm²/m] | 0.122 | 0.139 | 0.460 | 0.480 | 0.523 | 1.019 | 1.043 | 1.139 |
| $J_L$ per kg payload | [kg cm²/kg] | 0.006 | 0.025 | 0.006 | 0.025 | 0.065 | 0.006 | 0.025 | 0.101 |

| Size | | 63 | | | 80 | | | 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Spindle pitch | [mm/rev] | 5 | 10 | 25 | 5 | 15 | 32 | 5 | 20 | 40 |
| $J_0$ with 0 mm stroke | [kg cm²] | 0.491 | 0.486 | 0.650 | 1.529 | 1.648 | 2.119 | 4.696 | 5.050 | 6.710 |
| $J_H$ per metre stroke | [kg cm²/m] | 2.832 | 2.859 | 3.053 | 7.699 | 7.815 | 8.277 | 18.978 | 19.310 | 20.372 |
| $J_L$ per kg payload | [kg cm²/kg] | 0.006 | 0.025 | 0.158 | 0.006 | 0.057 | 0.259 | 0.006 | 0.101 | 0.405 |

| Mass moment of inertia – Lead screw | | | | |
|---|---|---|---|---|
| Size | | 32 | 40 | 50 |
| Spindle pitch | [mm/rev] | 2.5 | 3 | 4 |
| $J_0$ with 0 mm stroke | [kg cm²] | 0.016 | 0.045 | 0.141 |
| $J_H$ per metre stroke | [kg cm²/m] | 0.161 | 0.508 | 1.238 |
| $J_L$ per kg payload | [kg cm²/kg] | 0.002 | 0.002 | 0.004 |

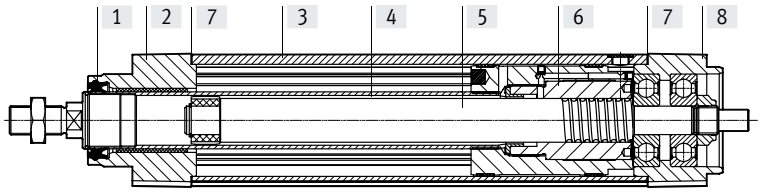
The mass moment of inertia $J_A$ of the electric cylinder is calculated as follows:

$J_A = J_0 + J_H \times \text{working stroke [m]} + J_L \times m_{\text{moving payload}}$ [kg]

# Data sheet

**Materials**

Sectional view

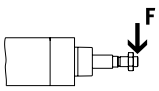


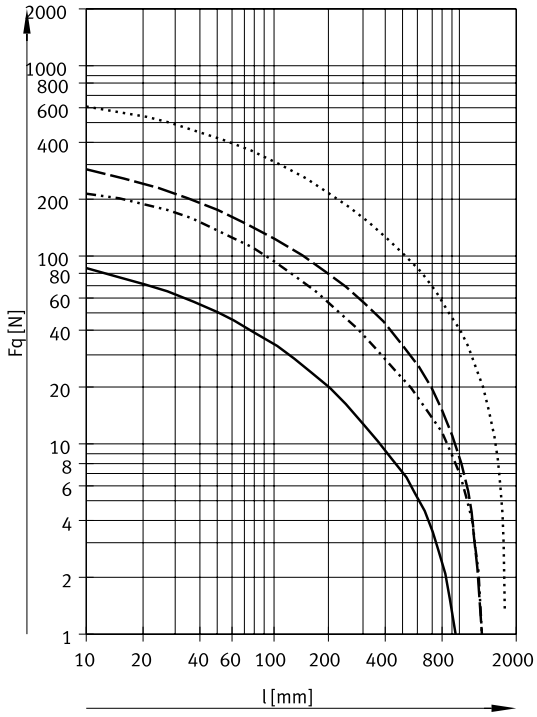

| Size | | 32 ... 50 | 63 ... 100 |
|---|---|---|---|
| [1] | Wiper | TPE-U | |
| [2] | Bearing cap | Coated wrought aluminium alloy | Coated gravity die-cast aluminium |
| [3] | Cylinder barrel | Smooth-anodised wrought aluminium alloy | |
| [4] | Piston rod | High-alloy stainless steel | |
| [5] | Spindle | | |
| | ESBF-BS-... | Rolled steel | |
| | ESBF-LS-... | High-strength steel | |
| [6] | Spindle nut | | |
| | ESBF-BS-... | Rolled steel | |
| | ESBF-LS-... | POM with PTFE | |
| [7] | Flat seal (with ESBF-...-S1) | Fibre-reinforced thermoplastic | |
| [8] | Drive cover | Coated wrought aluminium alloy | Coated gravity die-cast aluminium |
| – | Note on materials | RoHS-compliant | |
| | | Contains paint-wetting impairment substances | |
| | ESBF-F1A | Metals with copper, zinc or nickel as the main constituent are excluded from use.<br>Exceptions are nickel in steels, chemically nickel-plated surfaces, printed circuit boards, cables, electrical plug connectors and coils. | |

# Data sheet

**Lateral force Fq as a function of stroke length l**

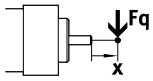
On the piston rod



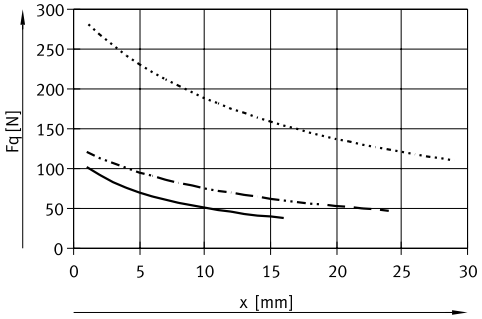




ESBF-32
ESBF-40
ESBF-50, 63
ESBF-80, 100

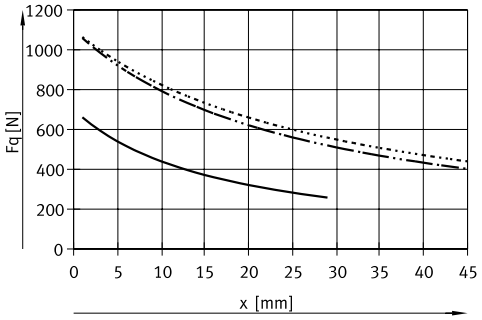
On the drive shaft




ESBF-BS-32/40/50



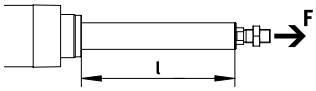

ESBF-BS-63/80/100




ESBF-32
ESBF-40
ESBF-50
ESBF-63
ESBF-80
ESBF-100

# Data sheet

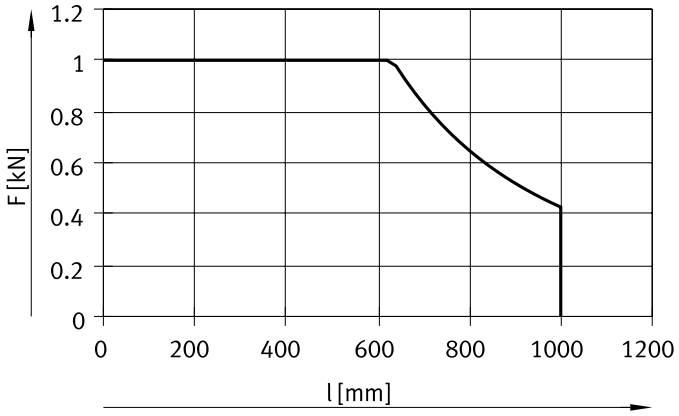
**Max. pressure force F as a function of piston rod length l (l = stroke + optional piston rod extension)**




Dependent on the stroke, the pressure force must be limited due to possible buckling.
This does not affect the tensile force.

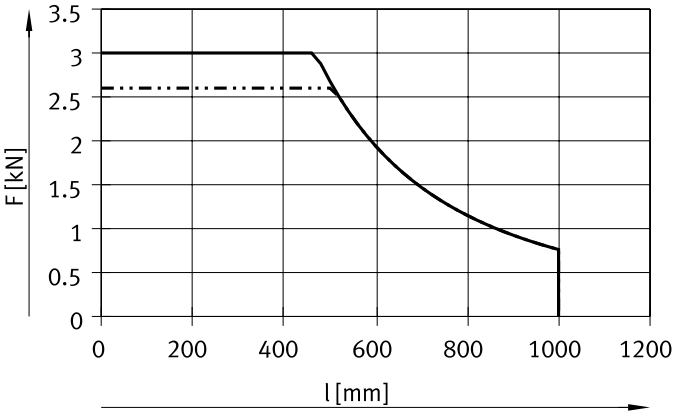
For ball screw

ESBF-BS-32-...



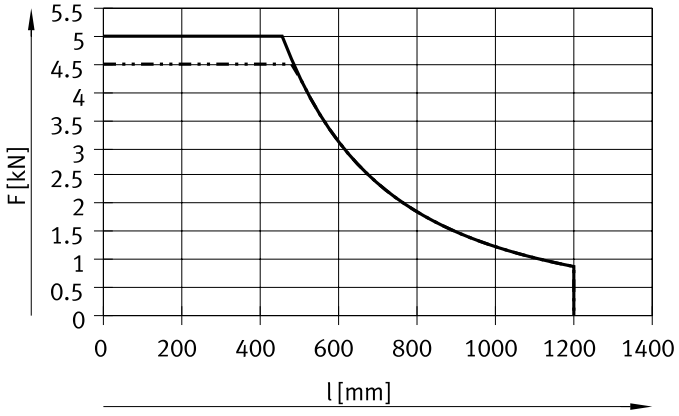

ESBF-BS-32-...-5P/10P

ESBF-BS-40-...



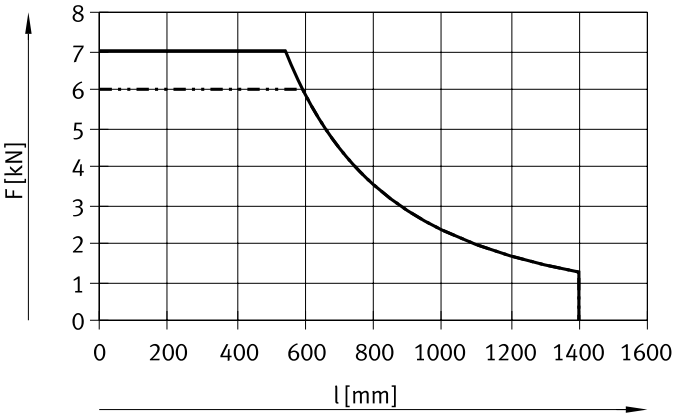

ESBF-BS-40-...-5P/10P
ESBF-BS-40-...-16P

ESBF-BS-50-...




ESBF-BS-50-...-5P/10P
ESBF-BS-50-...-20P

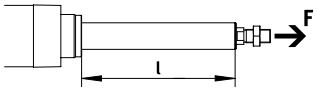
ESBF-BS-63-...




ESBF-BS-63-...-5P/10P
ESBF-BS-63-...-25P

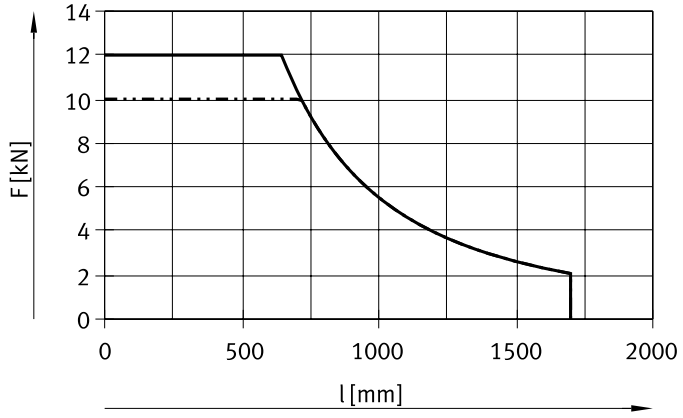
# Data sheet

**Max. pressure force F as a function of piston rod length l (l = stroke + optional piston rod extension)**



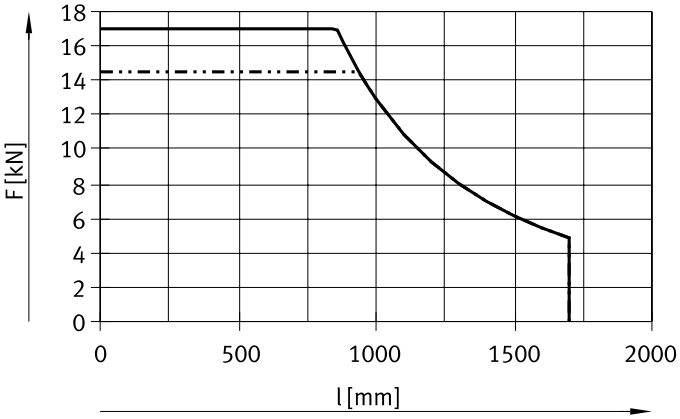

Dependent on the stroke, the pressure force must be limited due to possible buckling.
This does not affect the tensile force.

For ball screw
ESBF-BS-80-...



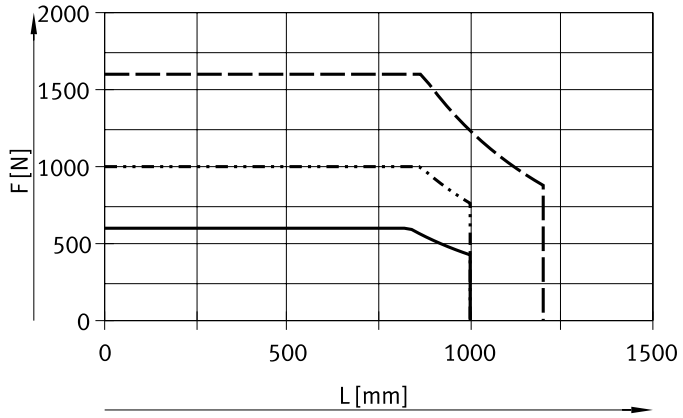

ESBF-BS-80-...-5P/15P
ESBF-BS-80-...-32P

ESBF-BS-100-...




ESBF-BS-100-...-5P/20P
ESBF-BS-100-...-40P

For lead screw
ESBF-LS-...



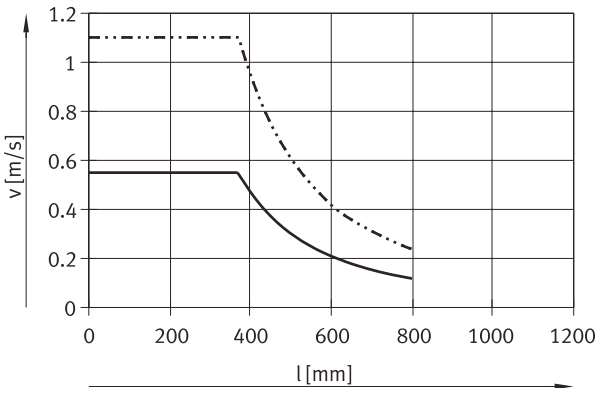

ESBF-LS-32
ESBF-LS-40
ESBF-LS-50

# Data sheet

**Max. feed speed v as a function of stroke length l**

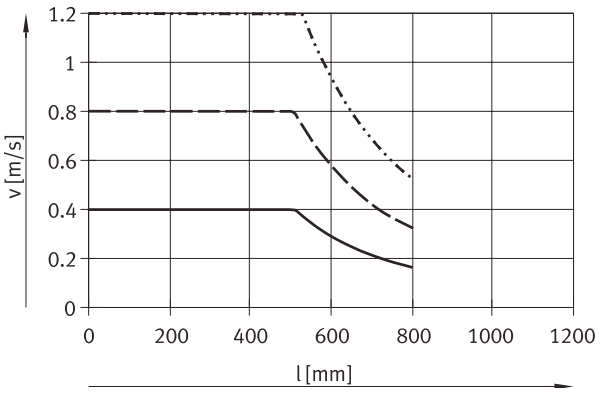
For ball screw

ESBF-BS-32-...



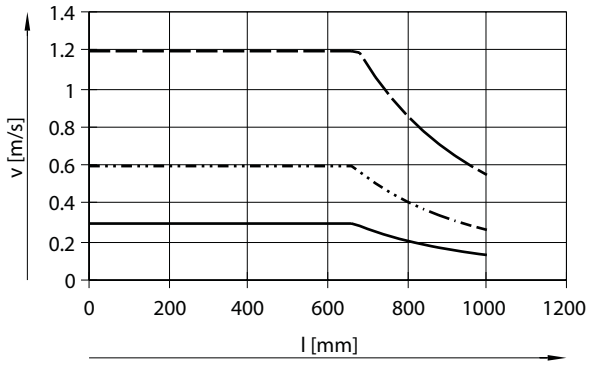

ESBF-BS-32-...-5P
ESBF-BS-32-...-10P

ESBF-BS-40-...



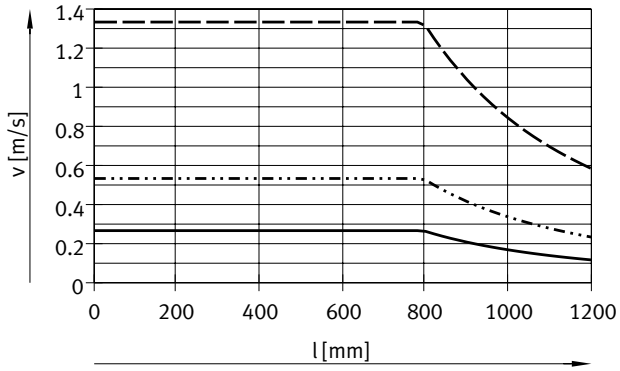

ESBF-BS-40-...-5P
ESBF-BS-40-...-10P
ESBF-BS-40-...-16P

ESBF-BS-50-...



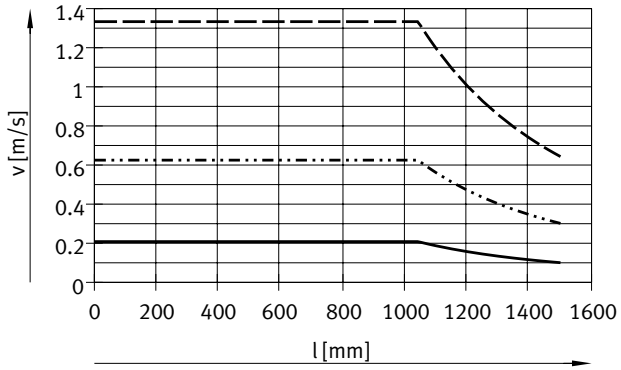

ESBF-BS-50-...-5P
ESBF-BS-50-...-10P
ESBF-BS-50-...-20P

ESBF-BS-63-...



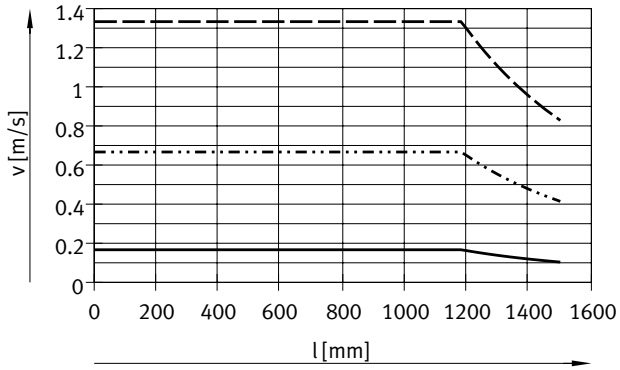

ESBF-BS-63-...-5P
ESBF-BS-63-...-10P
ESBF-BS-63-...-25P

ESBF-BS-80-...




ESBF-BS-80-...-5P
ESBF-BS-80-...-15P
ESBF-BS-80-...-32P

ESBF-BS-100-...



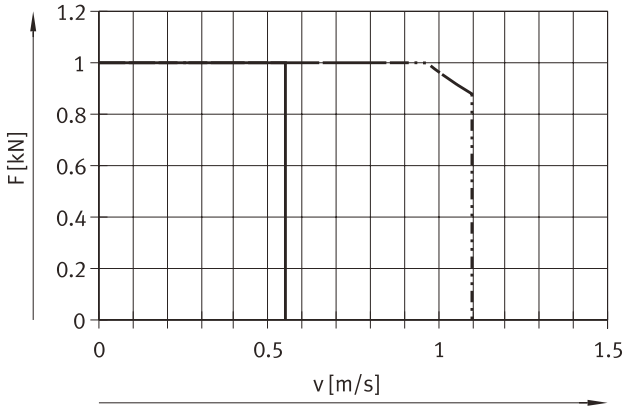

ESBF-BS-100-...-5P
ESBF-BS-100-...-20P
ESBF-BS-100-...-40P

# Data sheet

**Maximum feed force F as a function of feed speed v**

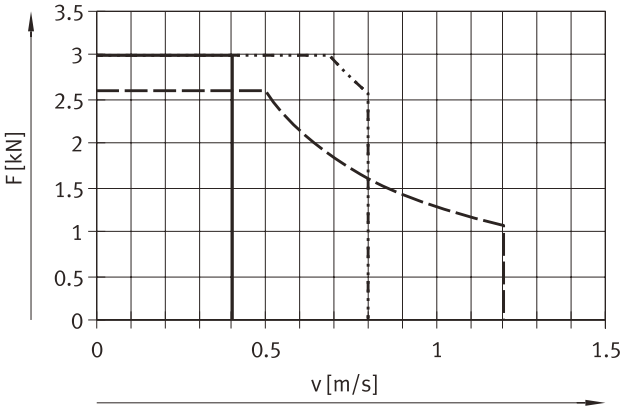
For ball screw

ESBF-BS-32-...



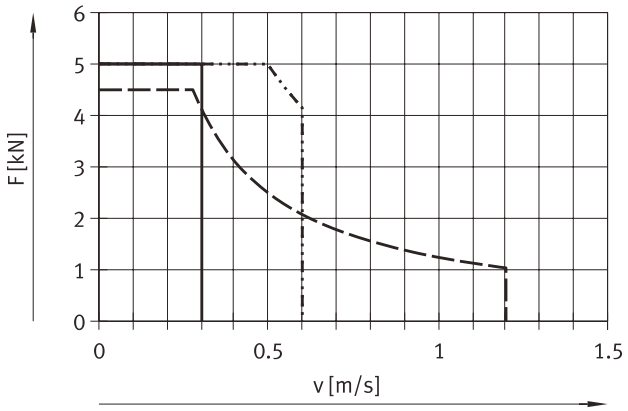

ESBF-32-...-5P
ESBF-32-...-10P

ESBF-BS-40-...



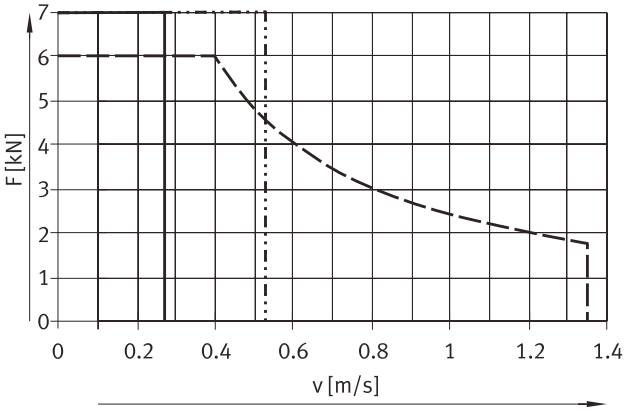

ESBF-40-...-5P
ESBF-40-...-10P
ESBF-40-...-16P

ESBF-BS-50-...



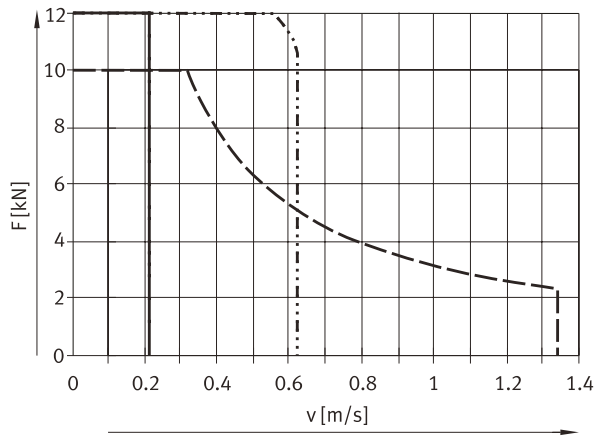

ESBF-50-...-5P
ESBF-50-...-10P
ESBF-50-...-20P

ESBF-BS-63-...



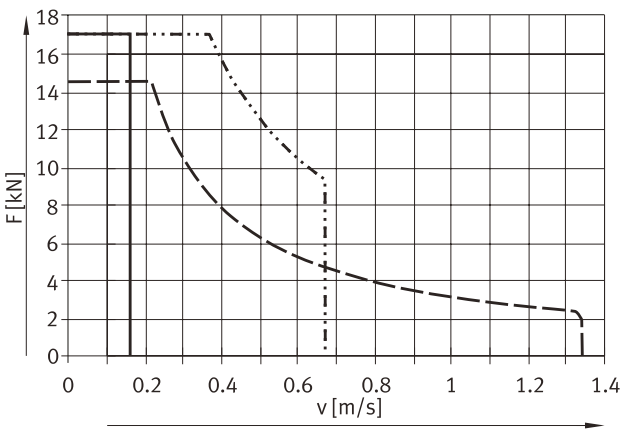

ESBF-BS-63...-5P
ESBF-BS-63-...-10P
ESBF-BS-63-...-25P

ESBF-BS-80-...




ESBF-BS-80-...-5P
ESBF-BS-80-...-15P
ESBF-BS-80-...-32P

ESBF-BS-100-...



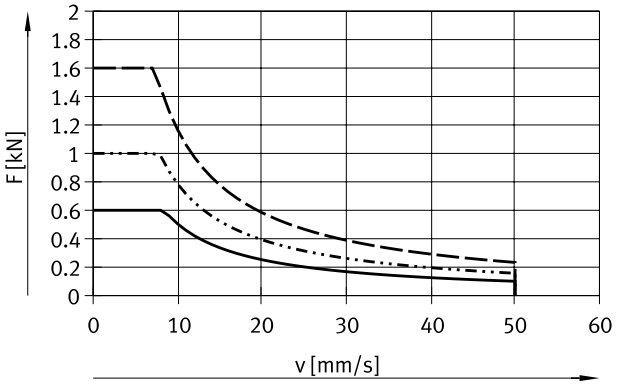

ESBF-BS-100-...-5P
ESBF-BS-100-...-20P
ESBF-BS-100-...-40P

# Data sheet

**Maximum feed force F as a function of feed speed v**

For lead screw

ESBF-LS-...




ESBF-LS-32
ESBF-LS-40
ESBF-LS-50

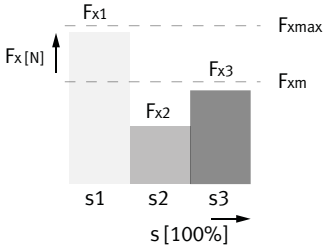
**Service life**

- The service life of the electric cylinder depends largely on that of the lead screw.
  The operating coefficient plays a considerable role in determining the possible service life, and can be determined with the help of the table (➔ page 17)
- The operating coefficient for the variant ESBF-...-F1 (NSF-H1 lubricant for food & beverage applications) matches that of the standard type
- The service life ends when the maximum number of switching cycles or maximum running performance has been reached:
  – ESBF-BS: 10 million
  – ESBF-LS: ➔ page 17 (below)
- The distance between the furthermost and rearmost positions must be at least 2.5 times the spindle pitch per travel cycle
- The specifications for running performance are based on experimentally determined and theoretically calculated data (at room temperature).
  The running performance that can be achieved in practice can deviate considerably from the specified curves under different parameters

Calculation of the mean feed force $F_{xm}$ with ball screw (ESBF-BS)

$$F_{xm} = \sqrt[3]{\frac{F_{x1}^3 \cdot s_1 + \ ... \ + F_n^3 \cdot s_n}{s_1 + \ ... \ + s_n}}$$

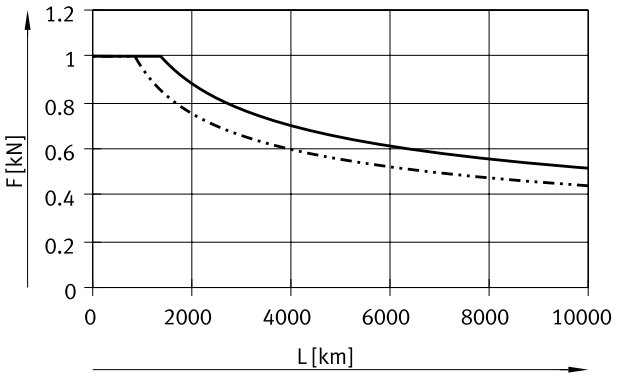
$F_{xm}$ = Mean feed force
$F_{x1/n}$ = Feed force of section
$s_{1/n}$ = Part of movement cycle that is travel




Mean feed force $F_{xm}$ as a function of running performance L, with an operating coefficient $f_B$ of 1.0, at room temperature

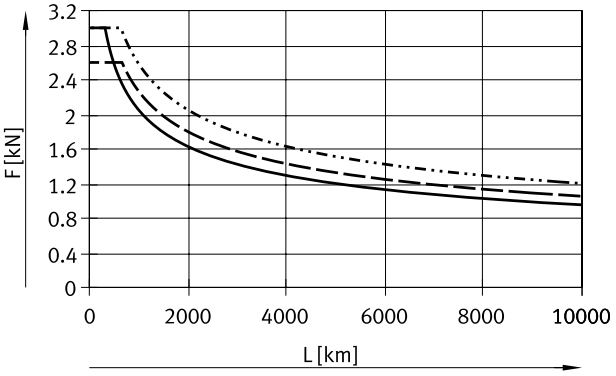
For ball screw

ESBF-BS-32-...




ESBF-32-...-5P
ESBF-32-...-10P

ESBF-BS-40-...




ESBF-40-...-5P
ESBF-40-...-10P
ESBF-40-...-16P

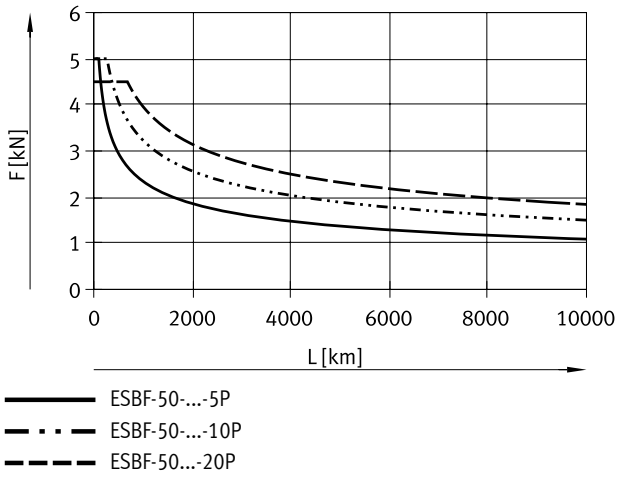
# Data sheet

**Service life**

Mean feed force $F_{xm}$ as a function of running performance L, with an operating coefficient $f_B$ of 1.0, at room temperature

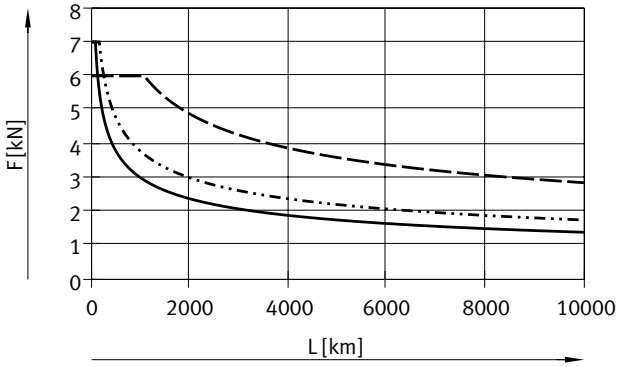
For ball screw

ESBF-BS-50-...



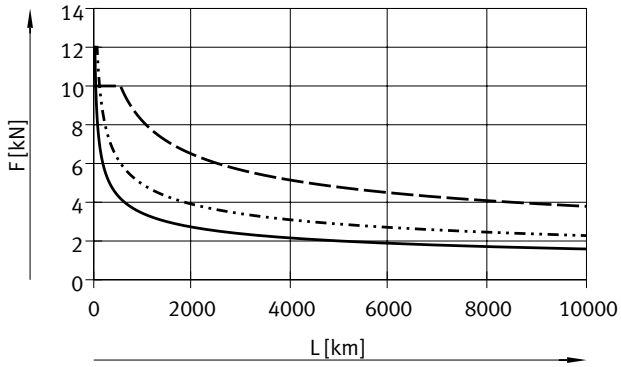

ESBF-50-...-5P
ESBF-50-...-10P
ESBF-50...-20P

ESBF-BS-63-...



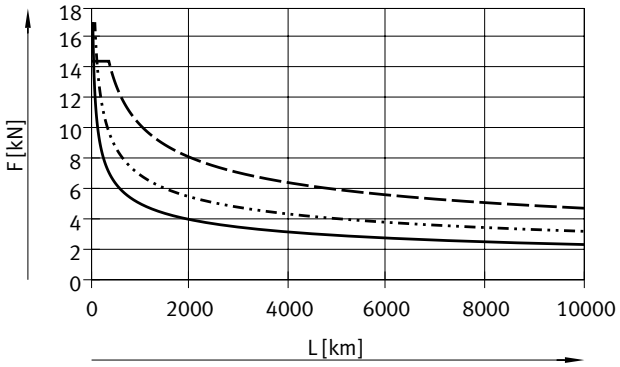

ESBF-63-...-5P
ESBF-63-...-10P
ESBF-63-...-25P

ESBF-BS-80-...




ESBF-80-...-5P
ESBF-80-...-15P
ESBF-80-...-32P

ESBF-BS-100-...




ESBF-100-...-5P
ESBF-100-...-20P
ESBF-100-...-40P

Service life taking into account the operating coefficient

$$L_1 = \frac{L}{f_B^3}$$

$L_{ist}$ = Actual service life
L = Target service life (➔ graphs)
$f_B$ = Operating coefficient

| Load[1] | Operating coefficient $f_B$ | Application example |
|---|---|---|
| None | 1.0 ... 1.2 | Measuring machine |
| Light | 1.2 ... 1.4 | Handling, robotics |
| Medium | 1.4 ... 1.6 | Press-in operations |
| High | 1.6 ... 2.0 | Construction, agriculture |

1) This refers to loads caused by impact, temperature, contamination, shock and vibrations that affect the cylinder or piston rod.

Reference values for lead screw (ESBF-LS)

| Size | | 32 | 40 | 50 |
|---|---|---|---|---|
| Running performance L | [km] | 200 | 250 | 300 |
| Load cycle L[1] | [million] | 1.0 | 1.2 | 1.4 |
| Switching cycles L[2] | [million] | 0.5 | 0.6 | 0.7 |

1) Movement from position A to B with acceleration and deceleration to a standstill.
2) Two load cycles to return to starting point

# Data sheet

## Friction losses and driving torque

### Friction losses

The friction losses comprise the no-load driving torque and the speed-dependent friction losses.

$M_{friction} = M_{no\text{-}load} + M_V$

$M_{friction}$ = Friction torque
$M_{no\text{-}load}$ = No-load driving torque
$M_V$ = Friction torque as a function of feed speed

### Driving torque

The driving torque required for the cylinder comprises the friction torque and the effective torque.

$M_{drive} = M_{friction} + M_{eff}$

$M_{drive}$ = Required driving torque
$M_{friction}$ = Friction torque
$M_{eff}$ = Effective torque

**No-load driving torque – Ball screw[1)]**

| Size | | 32 | | 40 | | | 50 | | |
|---|---|---|---|---|---|---|---|---|---|
| Spindle pitch | [mm/rev] | 5 | 10 | 5 | 10 | 16 | 5 | 10 | 20 |
| No-load driving torque $M_{no\text{-}load}$ | [Nm] | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 |

| Size | | 63 | | | 80 | | | 100 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Spindle pitch | [mm/rev] | 5 | 10 | 25 | 5 | 15 | 32 | 5 | 20 | 40 |
| No-load driving torque $M_{no\text{-}load}$ | [Nm] | 0.4 | 0.45 | 0.5 | 0.5 | 0.6 | 0.65 | 0.7 | 0.9 | 1.0 |

**No-load driving torque – Lead screw[1)]**

| Size | | 32 | 40 | 50 |
|---|---|---|---|---|
| Spindle pitch | [mm/rev] | 2.5 | 3 | 4 |
| No-load driving torque $M_{no\text{-}load}$ | [Nm] | 0.1 | 0.2 | 0.3 |

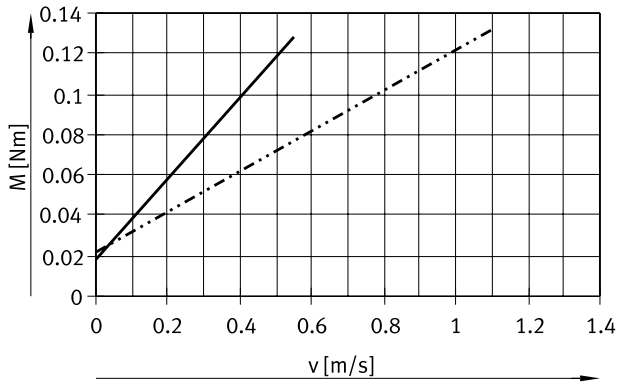
1) Corresponds to the driving torque required without load at a rotational speed of the spindle of 200 rpm

# Data sheet

**Friction torque $M_v$ as a function of feed speed v**

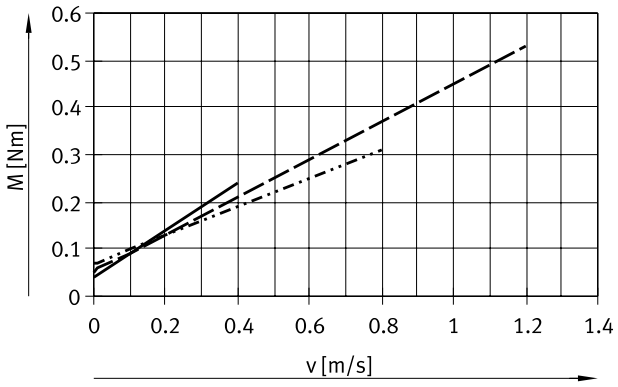
For ball screw

ESBF-BS-32-...



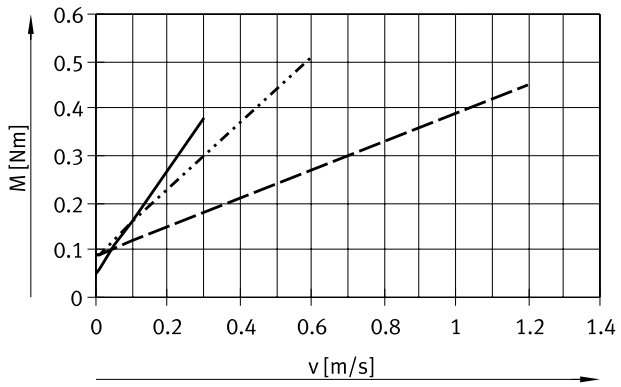

ESBF-BS-32-...-5P
ESBF-BS-32-...-10P

ESBF-BS-40-...



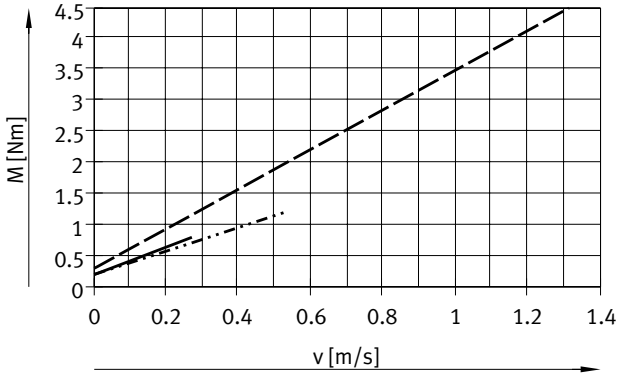

ESBF-BS-40-...-5P
ESBF-BS-40-...-10P
ESBF-BS-40-...-16P

ESBF-BS-50-...



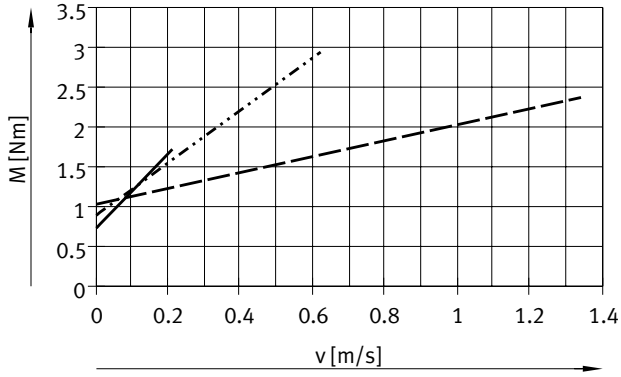

ESBF-BS-50-...-5P
ESBF-BS-50-...-10P
ESBF-BS-50-...-20P

ESBF-BS-63-...



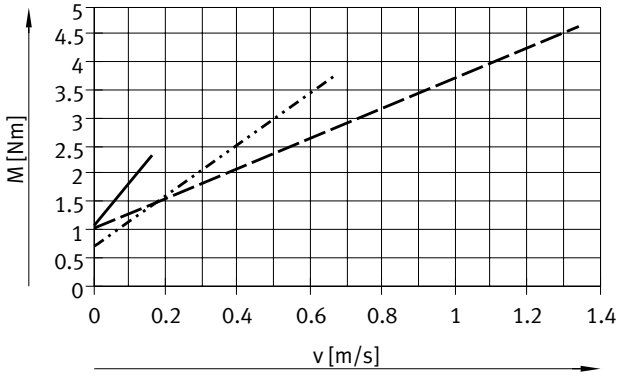

ESBF-BS-63-...-5P
ESBF-BS-63-...-10P
ESBF-BS-63-...-25P

ESBF-BS-80-...




ESBF-BS-80-...-5P
ESBF-BS-80-...-15P
ESBF-BS-80-...-20P

ESBF-BS-100-...



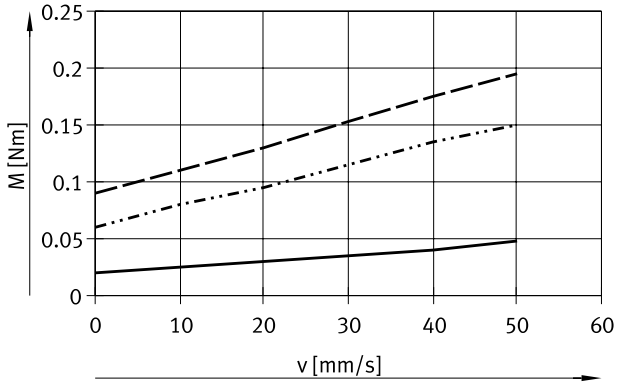

ESBF-BS-100-...-5P
ESBF-BS-100-...-20P
ESBF-BS-100-...-40P

# Data sheet

**Friction torque $M_v$ as a function of feed speed v**

For lead screw

ESBF-LS-...

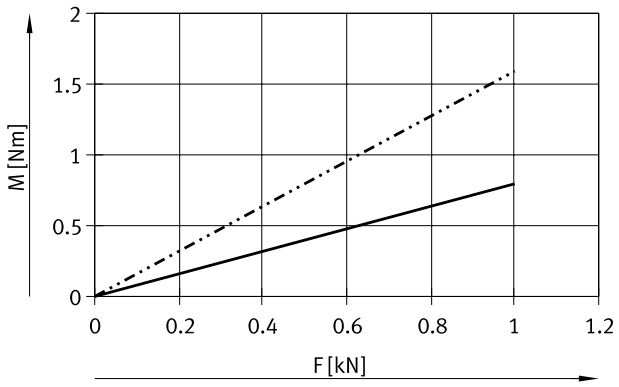



ESBF-LS-32
ESBF-LS-40
ESBF-LS-50

**Effective torque $M_{eff}$ as a function of feed force F**

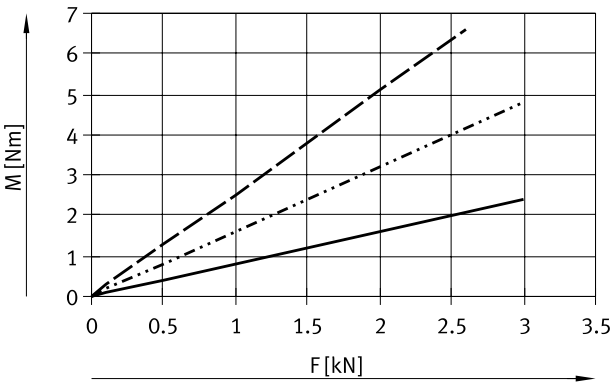
For ball screw

ESBF-BS-32-...



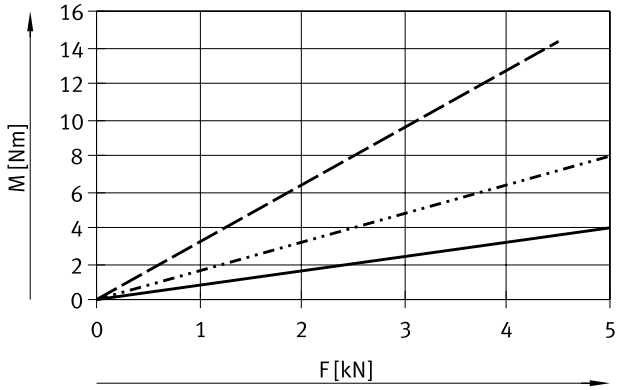

ESBF-BS-32...-5P
ESBF-BS-32-...-10P

ESBF-BS-40-...



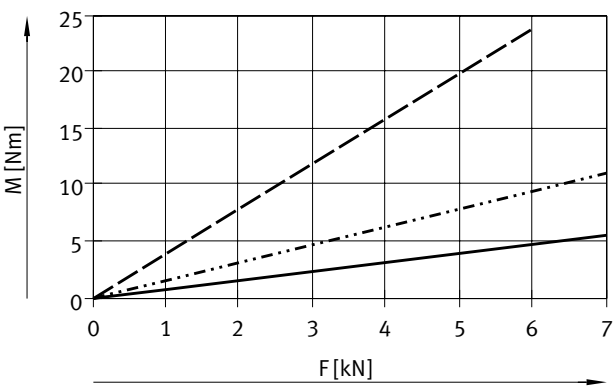

ESBF-BS-40-...-5P
ESBF-BS-40-...-10P
ESBF-BS-40-...-16P

ESBF-BS-50-...




ESBF-BS-50-...-5P
ESBF-BS-50-...-10P
ESBF-BS-50-...-20P

ESBF-BS-63-...



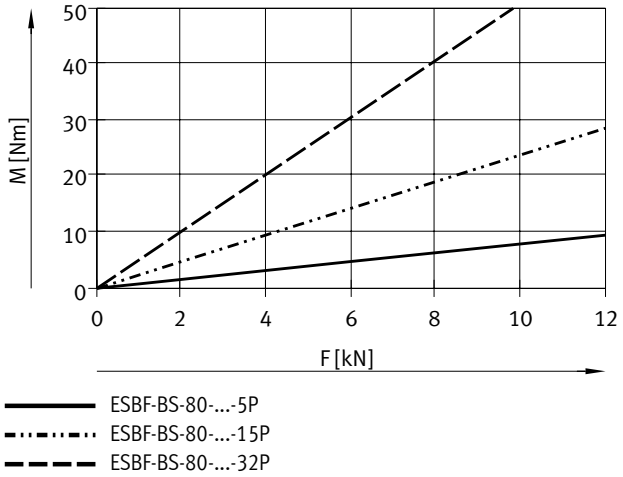

ESBF-BS-63-...-5P
ESBF-BS-63-...-10P
ESBF-BS-63-...-25P

# Data sheet

**Effective torque $M_{eff}$ as a function of feed force F**

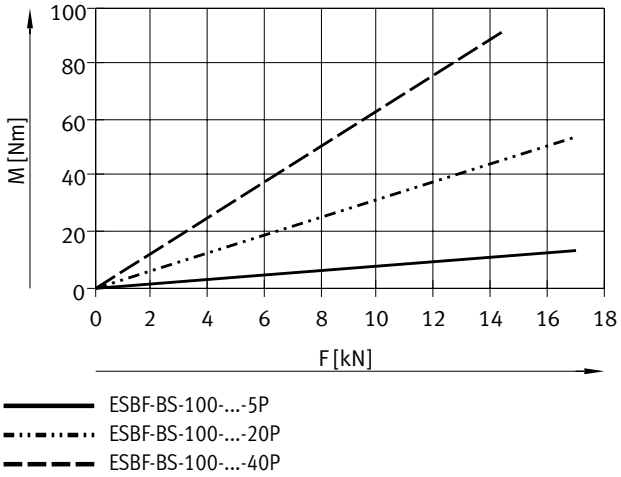
For ball screw

ESBF-BS-80-...




ESBF-BS-80-...-5P
ESBF-BS-80-...-15P
ESBF-BS-80-...-32P

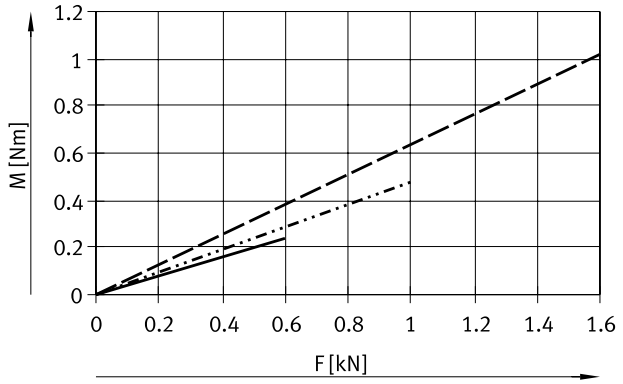
ESBF-BS-100-...




ESBF-BS-100-...-5P
ESBF-BS-100-...-20P
ESBF-BS-100-...-40P

For lead screw

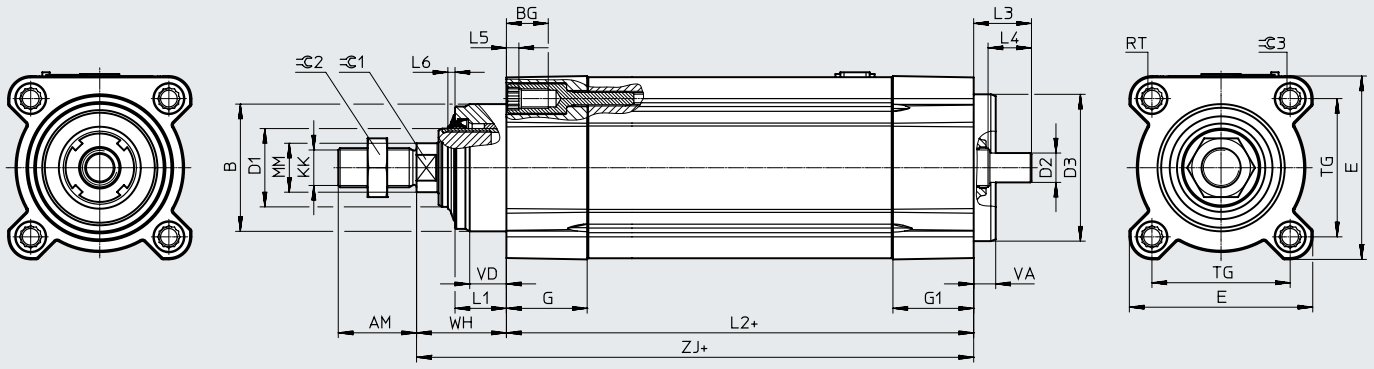
ESBF-LS-...




ESBF-LS-32
ESBF-LS-40
ESBF-LS-50

# Data sheet

**Dimensions** Download CAD data ➔ www.festo.com




\+ = plus stroke length

| Size | AM<br>−0.5 | B<br>ø<br>d11 | BG<br>min. | D1<br>ø<br>h9 | D2<br>ø<br>h6 | D3<br>ø<br>f7 | E | G |
|---|---|---|---|---|---|---|---|---|
| 32 | 22 | 34 | 16 | 20 | 6 | 32 | $45^{+0.5}$ | $25.5_{-0.1}$ |
| 40 | 24 | 39 | 16 | 24 | 8 | 40 | $54^{+0.5}$ | $30_{-0.1}$ |
| 50 | 32 | 45 | 17 | 28 | 12 | 50 | $64^{+0.5}$ | $30_{-0.1}$ |
| 63 | 32 | 52 | 17 | 32 | 12 | 60 | 75+0.5/−0.1 | 33±0.1 |
| 80 | 40 | 60 | 17 | 40 | 19 | 80 | 93+0.5/−0.1 | 39±0.1 |
| 100 | 40 | 70 | 17 | 50 | 24 | 100 | 110+0.5/−0.1 | 39±0.1 |

| Size | G1 | L1 | L2 | L3 | L4<br>±0.2 | L5<br>min. | L6 | KK | MM<br>ø<br>−0.1 |
|---|---|---|---|---|---|---|---|---|---|
| 32 | $25.5_{-0.1}$ | $12^{+0.2}$ | 122.5+0.2/−1.4 | 15.9+0.8/−0.3 | 8 | 4 | 4 | M10x1.25 | 14 |
| 40 | $30_{-0.1}$ | $14^{+0.2}$ | 144+0.2/−1.4 | 18.4+0.8/−0.3 | 14 | 4 | 4 | M12x1.25 | 16 |
| 50 | $34_{-0.1}$ | $20^{+0.2}$ | 163+0.2/−1.4 | 27+0.8/−0.3 | 17 | 5 | 4 | M16x1.5 | 20 |
| 63 | 33±0.1 | $21_{-0.5}$ | 171+0.7/−1.2 | 23.5±0.5 | 17 | 5 | 5 | M16x1.5 | 20 |
| 80 | 39±0.1 | $28_{-0.5}$ | 204+0.7/−1.2 | 33.5±0.5 | 26 | 25.9 | 5 | M20x1.5 | 25 |
| 100 | 39±0.1 | $33_{-0.5}$ | 224+0.7/−1.2 | 39.5±0.5 | 30 | 25.9 | 5 | M20x1.5 | 25 |

| Size | RT | TG | VA | VD | WH | ZJ | ⊂1 | ⊂2 | ⊂3 |
|---|---|---|---|---|---|---|---|---|---|
| 32 | M6 | 32.5 | $7_{-0.2}$ | 8±0.1 | 25.5+1.9/−0.8 | 148+2.1/−1.1 | 10 | 17 | 6 |
| 40 | M6 | 38 | $7_{-0.2}$ | 9±0.1 | 29.5+1.9/−0.8 | 173.5+2.1/−1.1 | 13 | 19 | 6 |
| 50 | M8 | 46.5 | $9_{-0.2}$ | 11.5±0.1 | 36.5+1.9/−0.8 | 199.5+2.1/−1.1 | 17 | 24 | 8 |
| 63 | M8 | 56.5±0.5 | 9±0.2 | 15±0.2 | 37+1.8/−1.7 | 208 | 17 | 24 | 8 |
| 80 | M10 | 72±0.5 | 10±0.2 | 18±0.2 | 46+1.8/−1.7 | 250 | 22 | 30 | 6 |
| 100 | M10 | 89±0.5 | 12±0.2 | 20±0.2 | 51+1.8/−1.7 | 275 | 22 | 30 | 6 |

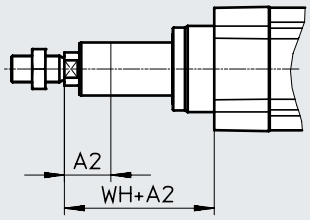
**Note**
Spanner flat ⊂1 can be aligned either way.

# Data sheet

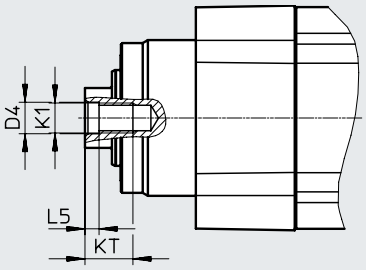
**Dimensions** Download CAD data ➔ www.festo.com

Variants

...E – Extended piston rod

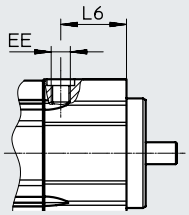



F – Female thread

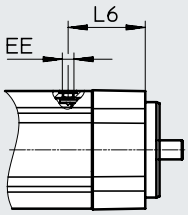



S1 – Degree of protection IP65 / F1 – For the food zone

ESBF-32 ... 50




ESBF-63 ... 100




| Size | A2<br>max. | D4<br>ø | EE | L5<br>±0.2 | L6 | K1 | KT<br>min. | WH |
|---|---|---|---|---|---|---|---|---|
| 32 | 200 | $6.4^{+0.2}$ | M7 | 2.6 | 19.5 | M6 | 12 | $25.5^{+1.9/-0.8}$ |
| 40 | 200 | $8.4^{+0.2}$ | M7 | 3.3 | 24 | M8 | 12 | $29.5^{+1.9/-0.8}$ |
| 50 | 200 | $10.5^{+0.2}$ | M7 | 4.7 | 28 | M10 | 16 | $36.5^{+1.9/-0.8}$ |
| 63 | 200 | $10.5^{+0.1}$ | G1/8 | 4.7 | 48.5 | M10 | 16 | $37^{+1.8/-1.7}$ |
| 80 | 200 | $13^{+0.1}$ | G1/8 | 6.1 | 57.5 | M12 | 20 | $46^{+1.8/-1.7}$ |
| 100 | 200 | $13^{+0.1}$ | G1/8 | 6.1 | 68.5 | M12 | 20 | $51^{+1.8/-1.7}$ |

# Data sheet

**Ordering data – Ball screw**

| Spindle pitch [mm/rev] | Stroke [mm] | Part no. | Type |
|---|---|---|---|
| **ESBF-32** | | | |
| 5 | 100 | ☆ **8022562** | **ESBF-BS-32-100-5P** |
| | 200 | ☆ **2215384** | **ESBF-BS-32-200-5P** |
| | 300 | ☆ **8022563** | **ESBF-BS-32-300-5P** |
| | 400 | ☆ **8022564** | **ESBF-BS-32-400-5P** |
| 10 | 100 | ☆ **8022565** | **ESBF-BS-32-100-10P** |
| | 200 | ☆ **8022566** | **ESBF-BS-32-200-10P** |
| | 300 | ☆ **8022567** | **ESBF-BS-32-300-10P** |
| | 400 | ☆ **8022568** | **ESBF-BS-32-400-10P** |
| **ESBF-40** | | | |
| 5 | 100 | ☆ **8022574** | **ESBF-BS-40-100-5P** |
| | 200 | ☆ **2215385** | **ESBF-BS-40-200-5P** |
| | 300 | ☆ **8022575** | **ESBF-BS-40-300-5P** |
| | 400 | ☆ **8022576** | **ESBF-BS-40-400-5P** |
| 10 | 100 | ☆ **8022577** | **ESBF-BS-40-100-10P** |
| | 200 | ☆ **8022578** | **ESBF-BS-40-200-10P** |
| | 300 | ☆ **8022579** | **ESBF-BS-40-300-10P** |
| | 400 | ☆ **8022580** | **ESBF-BS-40-400-10P** |
| 16 | 100 | ☆ **8022581** | **ESBF-BS-40-100-16P** |
| | 200 | ☆ **8022582** | **ESBF-BS-40-200-16P** |
| | 300 | ☆ **8022583** | **ESBF-BS-40-300-16P** |
| | 400 | ☆ **8022584** | **ESBF-BS-40-400-16P** |
| **ESBF-50** | | | |
| 5 | 100 | ☆ **8022590** | **ESBF-BS-50-100-5P** |
| | 200 | ☆ **2215386** | **ESBF-BS-50-200-5P** |
| | 300 | ☆ **8022591** | **ESBF-BS-50-300-5P** |
| | 400 | ☆ **8022592** | **ESBF-BS-50-400-5P** |
| 10 | 100 | ☆ **8022593** | **ESBF-BS-50-100-10P** |
| | 200 | ☆ **8022594** | **ESBF-BS-50-200-10P** |
| | 300 | ☆ **8022595** | **ESBF-BS-50-300-10P** |
| | 400 | ☆ **8022596** | **ESBF-BS-50-400-10P** |
| 20 | 100 | ☆ **8022597** | **ESBF-BS-50-100-20P** |
| | 200 | ☆ **8022598** | **ESBF-BS-50-200-20P** |
| | 300 | ☆ **8022599** | **ESBF-BS-50-300-20P** |
| | 400 | ☆ **8022600** | **ESBF-BS-50-400-20P** |
| **ESBF-63** | | | |
| 5 | 100 | ☆ **574093** | **ESBF-BS-63-100-5P** |
| | 200 | ☆ **1347390** | **ESBF-BS-63-200-5P** |
| | 300 | ☆ **574094** | **ESBF-BS-63-300-5P** |
| | 400 | ☆ **574095** | **ESBF-BS-63-400-5P** |
| 10 | 100 | ☆ **574096** | **ESBF-BS-63-100-10P** |
| | 200 | ☆ **574097** | **ESBF-BS-63-200-10P** |
| | 300 | ☆ **574098** | **ESBF-BS-63-300-10P** |
| | 400 | ☆ **574099** | **ESBF-BS-63-400-10P** |
| 25 | 100 | ☆ **574100** | **ESBF-BS-63-100-25P** |
| | 200 | ☆ **574101** | **ESBF-BS-63-200-25P** |
| | 300 | ☆ **574102** | **ESBF-BS-63-300-25P** |
| | 400 | ☆ **574103** | **ESBF-BS-63-400-25P** |

**Note**

Order variable strokes and variants via the modular product system
➔ page 26

Festo core product range
★ Generally ready for dispatch from the factory within 24 hours
☆ Generally ready for dispatch from the factory within 5 days

# Data sheet

**Ordering data – Ball screw**

| Spindle pitch [mm/rev] | Stroke [mm] | Part no. | Type |
|---|---|---|---|
| **ESBF-80** | | | |
| 5 | 100 | **574104** | **ESBF-BS-80-100-5P** |
| | 200 | **1347391** | **ESBF-BS-80-200-5P** |
| | 300 | **574105** | **ESBF-BS-80-300-5P** |
| | 400 | **574106** | **ESBF-BS-80-400-5P** |
| 15 | 100 | **574107** | **ESBF-BS-80-100-15P** |
| | 200 | **574108** | **ESBF-BS-80-200-15P** |
| | 300 | **574109** | **ESBF-BS-80-300-15P** |
| | 400 | **574110** | **ESBF-BS-80-400-15P** |
| 32 | 100 | **574111** | **ESBF-BS-80-100-32P** |
| | 200 | **574112** | **ESBF-BS-80-200-32P** |
| | 300 | **574113** | **ESBF-BS-80-300-32P** |
| | 400 | **574114** | **ESBF-BS-80-400-32P** |
| **ESBF-100** | | | |
| 5 | 100 | **574115** | **ESBF-BS-100-100-5P** |
| | 200 | **1347393** | **ESBF-BS-100-200-5P** |
| | 300 | **574116** | **ESBF-BS-100-300-5P** |
| | 400 | **574117** | **ESBF-BS-100-400-5P** |
| 20 | 100 | **574118** | **ESBF-BS-100-100-20P** |
| | 200 | **574119** | **ESBF-BS-100-200-20P** |
| | 300 | **574120** | **ESBF-BS-100-300-20P** |
| | 400 | **574121** | **ESBF-BS-100-400-20P** |
| 40 | 100 | **574122** | **ESBF-BS-100-100-40P** |
| | 200 | **574123** | **ESBF-BS-100-200-40P** |
| | 300 | **574124** | **ESBF-BS-100-300-40P** |
| | 400 | **574125** | **ESBF-BS-100-400-40P** |

**Ordering data – Lead screw**

| Spindle pitch [mm/rev] | Stroke [mm] | Part no. | Type |
|---|---|---|---|
| **ESBF-32** | | | |
| 2.5 | 100 | **8022570** | **ESBF-LS-32-100-2.5P** |
| | 200 | **2295381** | **ESBF-LS-32-200-2.5P** |
| | 300 | **8022571** | **ESBF-LS-32-300-2.5P** |
| | 400 | **8022572** | **ESBF-LS-32-400-2.5P** |
| **ESBF-40** | | | |
| 3 | 100 | **8022586** | **ESBF-LS-40-100-3P** |
| | 200 | **2295382** | **ESBF-LS-40-200-3P** |
| | 300 | **8022587** | **ESBF-LS-40-300-3P** |
| | 400 | **8022588** | **ESBF-LS-40-400-3P** |
| **ESBF-50** | | | |
| 4 | 100 | **8022602** | **ESBF-LS-50-100-4P** |
| | 200 | **2295383** | **ESBF-LS-50-200-4P** |
| | 300 | **8022603** | **ESBF-LS-50-300-4P** |
| | 400 | **8022604** | **ESBF-LS-50-400-4P** |

**Note**

Order variable strokes and variants via the modular product system

➔ page 26

# Ordering data – Modular product system

**Ordering table**

| Size | | 32 | 40 | 50 | 63 | 80 | 100 | Conditions | Code | Enter code |
|---|---|---|---|---|---|---|---|---|---|---|
| Module no. | | **8022569** | **8022585** | **8022601** | **574090** | **574091** | **574092** | | | |
| Function | | Electric cylinder | | | | | | | **ESBF** | ESBF |
| Drive type | | Ball screw | | | | | | [1] | **-BS** | |
| | | Lead screw | | | – | | | [2] | **-LS** | |
| Size | | 32 | 40 | 50 | 63 | 80 | 100 | | **-...** | |
| Stroke | [mm] | 100 | | | | | | | **-...** | |
| | | 200 | | | | | | | | |
| | | 300 | | | | | | | | |
| | | 400 | | | | | | | | |
| | | 30 ... 800 | 30 ... 800 | 30 ... 1000 | 30 ... 1200 | 30 ... 1500 | 30 ... 1500 | | | |
| Spindle pitch | [mm] | 2.5 | – | – | – | – | – | | **-...P** | |
| | | – | 3 | – | – | – | – | | | |
| | | – | – | 4 | – | – | – | | | |
| | | 5 | 5 | 5 | 5 | 5 | 5 | | | |
| | | 10 | 10 | 10 | 10 | – | – | | | |
| | | – | – | – | – | 15 | – | | | |
| | | – | 16 | – | – | – | – | | | |
| | | – | – | 20 | – | – | 20 | | | |
| | | – | – | – | 25 | – | – | | | |
| | | – | – | – | – | 32 | – | | | |
| | | – | – | – | – | – | 40 | | | |
| Piston rod thread type | | Male thread | | | | | | | | |
| | | Female thread | | | | | | | **-F** | |
| Degree of protection, electrical system | | Standard | | | | | | | | |
| | | IP65 | | | | | | | **-S1** | |
| Corrosion protection | | Standard | | | | | | | | |
| | | High corrosion protection | | | | | | [3] | **-R3** | |
| Special material properties | | None | | | | | | | | |
| | | Recommended for production facilities for manufacturing lithium-ion batteries | | | | | | [4] | **-F1A** | |
| Additional features | | None | | | | | | | | |
| | | Food-safe as per supplementary material information | | | | | | [5] | **-F1** | |
| Extended piston rod | | None | | | | | | | | |
| | | 1 ... 200 | | | | | | | **-...E** | |

[1] **BS** Only with spindle pitch 5P, 10P, 15P, 16P, 20P, 25P, 32P, 40P

[2] **LS** Only with spindle pitch 2.5P, 3P, 4P

[3] **R3** Only with S1

[4] **F1A** Not with S1
Not with LS
Not with R3
Not with F1

[5] **F1** Only with R3
Not with LS

# Accessories

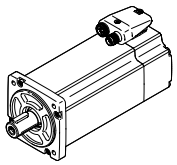
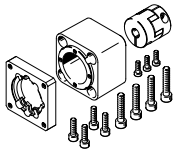
**Note**

Depending on the combination of motor and drive, it may not be possible to reach the maximum feed force of the drive.

When using parallel kits, the no-load driving torque of the particular kit must be taken into consideration.

**Permissible axis/motor combinations with axial kit**

Data sheets → Internet: eamm-a

| Motor/gear unit[1] | Axial kit | | |
|---|---|---|---|
|  |  | • Kits for third-party motors → Internet: eamm-a | |
| Type | Part no. | Type | |
| **ESBF-32** | | | |
| **With servo motor** | | | |
| **EMME-AS-40-...** | ☆ **1976465** | **EAMM-A-D32-40P** | |
| | **2207372** | **EAMM-A-D32-40P-S1**[2] | |
| **EMMT-AS-60-..., EMME-AS-60-...** | ☆ **1956054** | **EAMM-A-D32-60P** | |
| | **2234020** | **EAMM-A-D32-60P-S1**[2] | |
| **With servo motor and gear unit** | | | |
| **EMME-AS-40-...** | **1454238** | **EAMM-A-D32-40G** | |
| **EMGA-40-P-G...-EAS-40** | **2256396** | **EAMM-A-D32-40G-S1**[2] | |
| **EMMT-AS-60-..., EMME-AS-60-...** | **2946760** | **EAMM-A-D32-60H** | |
| **EMGA-60-P-G...-EAS-60** | **2946761** | **EAMM-A-D32-60H-S1**[2] | |
| **With stepper motor** | | | |
| **EMMS-ST-42-...** | ☆ **543148** | **EAMM-A-D32-42A** | |
| | **1322179** | **EAMM-A-D32-42A-S1**[2] | |
| **EMMS-ST-57-...** | ☆ **550980** | **EAMM-A-D32-57A** | |
| | **1322181** | **EAMM-A-D32-57A-S1**[2] | |

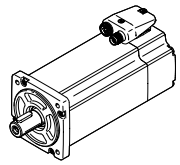
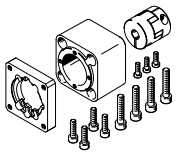
1) The input torque must not exceed the max. permissible transferable torque of the axial kit.
2) With degree of protection IP65

Festo core product range
★ Generally ready for dispatch from the factory within 24 hours
☆ Generally ready for dispatch from the factory within 5 days

# Accessories

**Permissible axis/motor combinations with axial kit**

Data sheets ➔ Internet: eamm-a

| Motor/gear unit[1] | Axial kit | |
|---|---|---|
|  |  • Kits for third-party motors ➔ Internet: eamm-a | |
| Type | Part no. | Type |
| **ESBF-32** | | |
| **With stepper motor and gear unit** | | |
| **EMMS-ST-42-...** | **1454238** | **EAMM-A-D32-40G** |
| **EMGA-40-P-G...-SST-42** | **2256396** | **EAMM-A-D32-40G-S1[2]** |
| **EMMS-ST-57-...** | **2946758** | **EAMM-A-D32-60G** |
| **EMGA-60-P-G...-SST-57** | **2946759** | **EAMM-A-D32-60G-S1[2]** |
| **With integrated drive** | | |
| **EMCA-EC-67-...** | **1454239** | **EAMM-A-D32-67A** |
| | **2256397** | **EAMM-A-D32-67A-S1[2]** |
| **With integrated drive and gear unit** | | |
| **EMCA-EC-67-...** | **1454238** | **EAMM-A-D32-40G** |
| **EMGC-40-...** | **2256396** | **EAMM-A-D32-40G-S1[2]** |
| **EMCA-EC-67-...** | **2946760** | **EAMM-A-D32-60H** |
| **EMGC-60-...** | **2946761** | **EAMM-A-D32-60H-S1[2]** |
| **ESBF-40** | | |
| **With servo motor** | | |
| **EMMT-AS-60-..., EMME-AS-60-...** | ☆ **1977000** | **EAMM-A-D40-60P** |
| | **2151519** | **EAMM-A-D40-60P-S1[2]** |
| **With servo motor and gear unit** | | |
| **EMME-AS-40-...** | ☆ **560282** | **EAMM-A-D40-40G** |
| **EMGA-40-P-G...-EAS-40** | **2256398** | **EAMM-A-D40-40G-G2[3]** |
| | **2256399** | **EAMM-A-D40-40G-S1[2]** |
| **EMMT-AS-60-..., EMME-AS-60-...** | **1454242** | **EAMM-A-D40-60H** |
| **EMGA-60-P-G...-EAS-60** | **2256401** | **EAMM-A-D40-60H-S1[2]** |

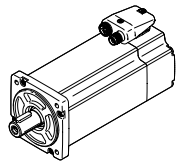
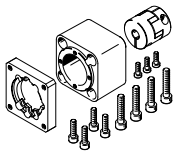
1) The input torque must not exceed the max. permissible transferable torque of the axial kit.
2) With degree of protection IP65
3) The axial kit can be retrofitted from IP40 to IP65 with the help of a seal set EADS-F ➔ page 66.

| | | |
|---|---|---|
| Festo core product range | ★ | Generally ready for dispatch from the factory within 24 hours |
| | ☆ | Generally ready for dispatch from the factory within 5 days |

# Accessories

**Permissible axis/motor combinations with axial kit**

Data sheets ➔ Internet: eamm-a

| Motor/gear unit[1] | Axial kit | |
|---|---|---|
|  |  • Kits for third-party motors ➔ Internet: eamm-a | |
| Type | Part no. | Type |
| **ESBF-40** | | |
| **With stepper motor** | | |
| **EMMS-ST-57-...** | ☆ **543154** | **EAMM-A-D40-57A** |
| | **1322183** | **EAMM-A-D40-57A-S1**[2] |
| **EMMS-ST-87-...** | ☆ **550982** | **EAMM-A-D40-87A** |
| | **1322186** | **EAMM-A-D40-87A-S1**[2] |
| **With stepper motor and gear unit** | | |
| **EMMS-ST-42-...**<br>**EMGA-40-P-G...-SST-42** | ☆ **560282** | **EAMM-A-D40-40G** |
| | **2256398** | **EAMM-A-D40-40G-G2**[3] |
| | **2256399** | **EAMM-A-D40-40G-S1**[2] |
| **EMMS-ST-57-...**<br>**EMGA-60-P-G...-SST-57** | **2256400** | **EAMM-A-D40-60G** |
| | **2256409** | **EAMM-A-D40-60G-S1**[2] |
| **With integrated drive** | | |
| **EMCA-EC-67-...** | **1454243** | **EAMM-A-D40-67A** |
| | **2256695** | **EAMM-A-D40-67A-S1**[2] |
| **With integrated drive and gear unit** | | |
| **EMCA-EC-67-...**<br>**EMGC-40-...** | ☆ **560282** | **EAMM-A-D40-40G** |
| | **2256398** | **EAMM-A-D40-40G-G2**[3] |
| | **2256399** | **EAMM-A-D40-40G-S1**[2] |
| **EMCA-EC-67-...**<br>**EMGC-60-...** | **1454242** | **EAMM-A-D40-60H** |
| | **2256401** | **EAMM-A-D40-60H-S1**[2] |

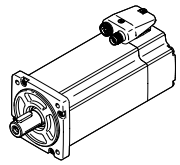
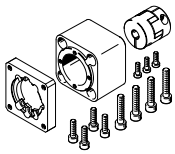
1) The input torque must not exceed the max. permissible transferable torque of the axial kit.
2) With degree of protection IP65
3) The axial kit can be retrofitted from IP40 to IP65 with the help of a seal set EADS-F ➔ page 66.

| | | |
|---|---|---|
| Festo core product range | ★ | Generally ready for dispatch from the factory within 24 hours |
| | ☆ | Generally ready for dispatch from the factory within 5 days |

# Accessories

**Permissible axis/motor combinations with axial kit**

Data sheets ➔ Internet: eamm-a

| Motor/gear unit[1] | Axial kit | |
|---|---|---|
|  |  • Kits for third-party motors ➔ Internet: eamm-a | |
| Type | Part no. | Type |
| **ESBF-50** | | |
| **With servo motor** | | |
| **EMMT-AS-80-..., EMME-AS-80-...** | ☆ **2733785** | **EAMM-A-D50-80P** |
| | **2734289** | **EAMM-A-D50-80P-S1**[2] |
| **EMMT-AS-100-..., EMME-AS-100-...** | ☆ **2733784** | **EAMM-A-D50-100A** |
| | **2734288** | **EAMM-A-D50-100A-S1**[2] |
| **With servo motor and gear unit** | | |
| **EMMT-AS-60-..., EMME-AS-60-...** | **2733796** | **EAMM-A-D50-60H** |
| **EMGA-60-P-G...-EAS-60** | **2907418** | **EAMM-A-D50-60H-S1**[2] |
| **EMMT-AS-80-..., EMME-AS-80-...** | **2733787** | **EAMM-A-D50-80G** |
| **EMGA-80-P-G...-EAS-80** | **2734291** | **EAMM-A-D50-80G-S1**[2] |
| **EMMT-AS-100-..., EMME-AS-100-...** | **2733787** | **EAMM-A-D50-80G** |
| **EMGA-80-P-G...-SAS-100** | **2734291** | **EAMM-A-D50-80G-S1**[2] |

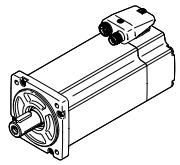
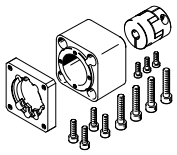
1) The input torque must not exceed the max. permissible transferable torque of the axial kit.
2) With degree of protection IP65
3) The axial kit can be retrofitted from IP40 to IP65 with the help of a seal set EADS-F ➔ page 66.

| | | |
|---|---|---|
| Festo core product range | ★ | Generally ready for dispatch from the factory within 24 hours |
| | ☆ | Generally ready for dispatch from the factory within 5 days |

# Accessories

**Permissible axis/motor combinations with axial kit**

Data sheets ➔ Internet: eamm-a

| Motor/gear unit[1] | Axial kit | |
|---|---|---|
|  |  • Kits for third-party motors ➔ Internet: eamm-a | |
| Type | Part no. | Type |
| **ESBF-50** | | |
| **With stepper motor** | | |
| **EMMS-ST-87-...** | ☆ **2733781** | **EAMM-A-D50-87A** |
| | **2734286** | **EAMM-A-D50-87A-S1**[2] |
| **With stepper motor and gear unit** | | |
| **EMMS-ST-57-...** | **2733786** | **EAMM-A-D50-60G** |
| **EMGA-60-P-G...-SST-57** | **2734290** | **EAMM-A-D50-60G-S1**[2] |
| **EMMS-ST-87-...** | **2733787** | **EAMM-A-D50-80G** |
| **EMGA-80-P-G...-SST-87** | **2734291** | **EAMM-A-D50-80G-S1**[2] |
| **With integrated drive and gear unit** | | |
| **EMCA-EC-67-...** | **2733796** | **EAMM-A-D50-60H** |
| **EMGC-60-...** | **2907418** | **EAMM-A-D50-60H-S1**[2] |
| **ESBF-63** | | |
| **With servo motor** | | |
| **EMMT-AS-80-..., EMME-AS-80-...** | ☆ **1977073** | **EAMM-A-D60-80P** |
| | **2218564** | **EAMM-A-D60-80P-S1**[2] |
| **EMMT-AS-100-..., EMME-AS-100-...** | ☆ **550983** | **EAMM-A-D60-100A** |
| | **2256700** | **EAMM-A-D60-100A-S1**[2] |
| **With servo motor and gear unit** | | |
| **EMMT-AS-60-..., EMME-AS-60-...** | **1454245** | **EAMM-A-D60-60H** |
| **EMGA-60-P-G...-EAS-60** | **2256697** | **EAMM-A-D60-60H-S1**[2] |
| **EMMT-AS-80-..., EMME-AS-80-...** | **1499402** | **EAMM-A-D60-80G** |
| **EMGA-80-P-G...-EAS-80** | **2946762** | **EAMM-A-D60-80G-S1**[2] |
| **EMMT-AS-100-..., EMME-AS-100-...** | **1499402** | **EAMM-A-D60-80G** |
| **EMGA-80-P-G...-SAS-100** | **2946762** | **EAMM-A-D60-80G-S1**[2] |

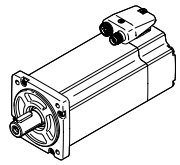
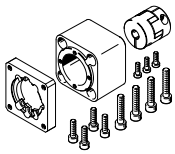
1) The input torque must not exceed the max. permissible transferable torque of the axial kit.
2) With degree of protection IP65
3) The axial kit can be retrofitted from IP40 to IP65 with the help of a seal set EADS-F ➔ page 66.

| | | |
|---|---|---|
| Festo core product range | ★ | Generally ready for dispatch from the factory within 24 hours |
| | ☆ | Generally ready for dispatch from the factory within 5 days |

# Accessories

**Permissible axis/motor combinations with axial kit**

Data sheets ➔ Internet: eamm-a

| Motor/gear unit[1] | Axial kit | |
|---|---|---|
|  |  • Kits for third-party motors ➔ Internet: eamm-a | |
| Type | Part no. | Type |
| **ESBF-63** | | |
| **With stepper motor** | | |
| **EMMS-ST-87-...** | ☆ **543162** | **EAMM-A-D60-87A** |
| | **1322188** | **EAMM-A-D60-87A-S1**[2] |
| **With stepper motor and gear unit** | | |
| **EMMS-ST-57-...** | ☆ **560283** | **EAMM-A-D60-60G** |
| **EMGA-60-P-G...-SST-57** | **2256696** | **EAMM-A-D60-60G-G2**[3] |
| | **2256698** | **EAMM-A-D60-60G-S1**[2] |
| **EMMS-ST-87-...** | **1499402** | **EAMM-A-D60-80G** |
| **EMGA-80-P-G...-SST-87** | **2946762** | **EAMM-A-D60-80G-S1**[2] |
| **With integrated drive and gear unit** | | |
| **EMCA-EC-67-...** | **1454245** | **EAMM-A-D60-60H** |
| **EMGC-60-...** | **2256697** | **EAMM-A-D60-60H-S1**[2] |
| **ESBF-80** | | |
| **With servo motor** | | |
| **EMMT-AS-100-..., EMME-AS-100-...** | **1589665** | **EAMM-A-D80-100A** |
| | **1600673** | **EAMM-A-D80-100A-S1**[2] |
| **EMMS-AS-140-...** | **1588299** | **EAMM-A-D80-140A** |
| | **1600674** | **EAMM-A-D80-140A-S1**[2] |
| **With servo motor and gear unit** | | |
| **EMMT-AS-80-..., EMME-AS-80-...** | **2946763** | **EAMM-A-D80-80G** |
| **EMGA-80-P-G...-EAS-80** | **2946764** | **EAMM-A-D80-80G-S1**[2] |
| **EMMT-AS-100-..., EMME-AS-100-...** | **2946763** | **EAMM-A-D80-80G** |
| **EMGA-80-P-G...-SAS-100** | **2946764** | **EAMM-A-D80-80G-S1**[2] |

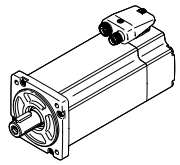
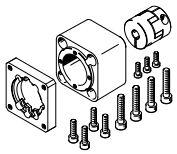
1) The input torque must not exceed the max. permissible transferable torque of the axial kit.
2) With degree of protection IP65
3) The axial kit can be retrofitted from IP40 to IP65 with the help of a seal set EADS-F ➔ page 66.

| | | |
|---|---|---|
| Festo core product range | ★ | Generally ready for dispatch from the factory within 24 hours |
| | ☆ | Generally ready for dispatch from the factory within 5 days |

# Accessories

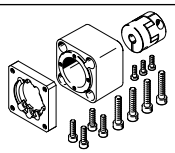
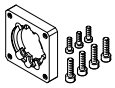
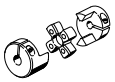
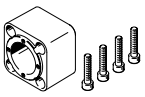
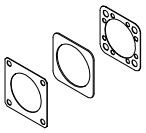
**Permissible axis/motor combinations with axial kit**

Data sheets ➔ Internet: eamm-a

| Motor/gear unit[1] | Axial kit | |
|---|---|---|
|  |  | • Kits for third-party motors ➔ Internet: eamm-a |
| Type | Part no. | Type |
| **ESBF-80** | | |
| **With stepper motor and gear unit** | | |
| **EMMS-ST-87-...** | **2946763** | **EAMM-A-D80-80G** |
| **EMGA-80-P-G...-SST-87** | **2946764** | **EAMM-A-D80-80G-S1[2]** |
| **ESBF-100** | | |
| **With servo motor** | | |
| **EMMT-AS-100-..., EMME-AS-100-...** | **3356796** | **EAMM-A-D100-100A** |
| | **3356931** | **EAMM-A-D100-100A-S1[2]** |
| **EMMS-AS-140-...** | **1588349** | **EAMM-A-D100-140A** |
| | **1600675** | **EAMM-A-D100-140A-S1[2]** |
| **With servo motor and gear unit** | | |
| **EMMT-AS-100-..., EMME-AS-100-...** | **2449341** | **EAMM-A-D100-120G** |
| **EMGA-120-P-G...-SAS-100** | **2946765** | **EAMM-A-D100-120G-S1[2]** |
| **EMMS-AS-140-...** | **2449341** | **EAMM-A-D100-120G** |
| **EMGA-120-P-G...-SAS-140** | **2946765** | **EAMM-A-D100-120G-S1[2]** |

1) The input torque must not exceed the max. permissible transferable torque of the axial kit.
2) With degree of protection IP65

# Accessories

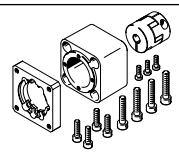
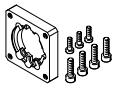
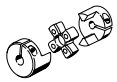
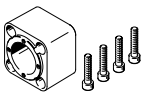
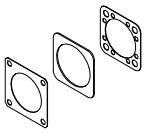
| Individual components of the axial kit | | | | |
|---|---|---|---|---|
| Axial kit | Comprising: | | | |
| | Motor flange | Coupling | Coupling housing | Seal set |
|  |  |  |  |  |
| Part no.<br>Type | Part no.<br>Type | Part no.<br>Type | Part no.<br>Type | Part no.<br>Type |
| **ESBF-32** | | | | |
| **543147**<br>**EAMM-A-D32-40A** | **552163**<br>**EAMF-A-28B-40A** | **543420**<br>**EAMC-16-20-6-6** | **552155**<br>**EAMK-A-D32-28B** | **–** |
| **1322178**<br>**EAMM-A-D32-40A-S1** | | | | **1561526**<br>**EADS-F-D32-40A** |
| **1454238**<br>**EAMM-A-D32-40G** | **1460095**<br>**EAMF-A-44C-40G-S1** | **562681**<br>**EAMC-30-32-6-10** | **551006**<br>**EAMK-A-D32-44A/C** | **–** |
| **2256396**<br>**EAMM-A-D32-40G-S1** | | | | **2253500**<br>**EADS-F-D32-40G** |
| ☆ **1976465**<br>**EAMM-A-D32-40P** | **1976704**<br>**EAMF-A-28B-40P** | **1232854**<br>**EAMC-16-20-6-8** | **552155**<br>**EAMK-A-D32-28B** | **–** |
| **2207372**<br>**EAMM-A-D32-40P-S1** | | | | **2207219**<br>**EADS-F-D32-40P** |
| ☆ **543148**<br>**EAMM-A-D32-42A** | **552164**<br>**EAMF-A-28B-42A** | **543419**<br>**EAMC-16-20-5-6** | **552155**<br>**EAMK-A-D32-28B** | **–** |
| **1322179**<br>**EAMM-A-D32-42A-S1** | | | | **1561527**<br>**EADS-F-D32-42A** |
| **550979**<br>**EAMM-A-D32-55A** | **529942**<br>**EAMF-A-44A/B-55A** | **551003**<br>**EAMC-30-32-6-9** | **551006**<br>**EAMK-A-D32-44A/C** | **–** |
| **1322180**<br>**EAMM-A-D32-55A-S1** | | | | **1561528**<br>**EADS-F-D32-55A** |
| ☆ **550980**<br>**EAMM-A-D32-57A** | **530081**<br>**EAMF-A-44A/B-57A** | **551002**<br>**EAMC-30-32-6-6.35** | **551006**<br>**EAMK-A-D32-44A/C** | **–** |
| **1322181**<br>**EAMM-A-D32-57A-S1** | | | | **1561529**<br>**EADS-F-D32-57A** |
| **2946758**<br>**EAMM-A-D32-60G** | **1460105**<br>**EAMF-A-44C-60G/H-S1** | **3187577**<br>**EAMC-30-32-6-11** | **551006**<br>**EAMK-A-D32-44A/C** | **–** |
| **2946759**<br>**EAMM-A-D32-60G-S1** | | | | **8022150**<br>**EADS-F-D32-60G/H** |
| **2946760**<br>**EAMM-A-D32-60H** | **1460105**<br>**EAMF-A-44C-60G/H-S1** | **1233256**<br>**EAMC-30-32-6-14** | **551006**<br>**EAMK-A-D32-44A/C** | **–** |
| **2946761**<br>**EAMM-A-D32-60H-S1** | | | | **8022150**<br>**EADS-F-D32-60G/H** |
| ☆ **1956054**<br>**EAMM-A-D32-60P** | **1956846**<br>**EAMF-A-44C-60P** | **1233256**<br>**EAMC-30-32-6-14** | **551006**<br>**EAMK-A-D32-44A/C** | **–** |
| **2234020**<br>**EAMM-A-D32-60P-S1** | | | | **2234012**<br>**EADS-F-D32-60P** |
| **1454239**<br>**EAMM-A-D32-67A** | **1476305**<br>**EAMF-A-44A/B/C-67A-S1** | **551003**<br>**EAMC-30-32-6-9** | **551006**<br>**EAMK-A-D32-44A/C** | **–** |
| **2256397**<br>**EAMM-A-D32-67A-S1** | | | | **2253501**<br>**EADS-F-D32-67A** |

Festo core product range

★ Generally ready for dispatch from the factory within 24 hours

☆ Generally ready for dispatch from the factory within 5 days

# Accessories

| Individual components of the axial kit | | | | |
|---|---|---|---|---|
| Axial kit | Comprising: | | | |
| | Motor flange | Coupling | Coupling housing | Seal set |
|  |  |  |  |  |
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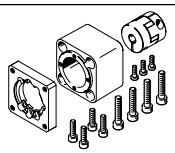
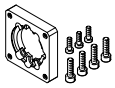
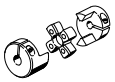
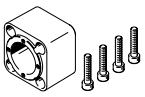
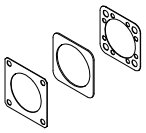
| ☆ **560282**<br>**EAMM-A-D40-40G** | **550986**<br>**EAMF-A-44A/B-40G** | **558029**<br>**EAMC-30-32-8-10** | **552157**<br>**EAMK-A-D40-44A/C** | – |
| **2256398**<br>**EAMM-A-D40-40G-G2** | **1460095**<br>**EAMF-A-44C-40G-S1** | | | |
| **2256399**<br>**EAMM-A-D40-40G-S1** | | | | **2253502**<br>**EADS-F-D40-40G** |
| **543153**<br>**EAMM-A-D40-55A** | **529942**<br>**EAMF-A-44A/B-55A** | **543423**<br>**EAMC-30-32-8-9** | **552157**<br>**EAMK-A-D40-44A/C** | – |
| **1322182**<br>**EAMM-A-D40-55A-S1** | | | | **1561530**<br>**EADS-F-D40-55A** |
| ☆ **543154**<br>**EAMM-A-D40-57A** | **530081**<br>**EAMF-A-44A/B-57A** | **543421**<br>**EAMC-30-32-6.35-8** | **552157**<br>**EAMK-A-D40-44A/C** | – |
| **1322183**<br>**EAMM-A-D40-57A-S1** | | | | **1561531**<br>**EADS-F-D40-57A** |
| **2256400**<br>**EAMM-A-D40-60G** | **1460105**<br>**EAMF-A-44C-60G/H-S1** | **551004**<br>**EAMC-30-32-8-11** | **552157**<br>**EAMK-A-D40-44A/C** | – |
| **2256409**<br>**EAMM-A-D40-60G-S1** | | | | **2253503**<br>**EADS-F-D40-60G/H** |
| **1454242**<br>**EAMM-A-D40-60H** | **1460105**<br>**EAMF-A-44C-60G/H-S1** | **562682**<br>**EAMC-30-32-8-14** | **552157**<br>**EAMK-A-D40-44A/C** | – |
| **2256401**<br>**EAMM-A-D40-60H-S1** | | | | **2253503**<br>**EADS-F-D40-60G/H** |
| ☆ **1977000**<br>**EAMM-A-D40-60P** | **1956846**<br>**EAMF-A-44C-60P** | **562682**<br>**EAMC-30-32-8-14** | **552157**<br>**EAMK-A-D40-44A/C** | – |
| **2151519**<br>**EAMM-A-D40-60P-S1** | | | | **2151545**<br>**EADS-F-D40-60P** |
| **1454243**<br>**EAMM-A-D40-67A** | **1476305**<br>**EAMF-A-44A/B/C-67A-S1** | **543423**<br>**EAMC-30-32-8-9** | **552157**<br>**EAMK-A-D40-44A/C** | – |
| **2256695**<br>**EAMM-A-D40-67A-S1** | | | | **2253501**<br>**EADS-F-D32-67A** |
| **550981**<br>**EAMM-A-D40-70A** | **529943**<br>**EAMF-A-44A/B-70A** | **551004**<br>**EAMC-30-32-8-11** | **552157**<br>**EAMK-A-D40-44A/C** | – |
| **1322185**<br>**EAMM-A-D40-70A-S1** | | | | **1561532**<br>**EADS-F-D40-70A** |
| ☆ **550982**<br>**EAMM-A-D40-87A** | **530082**<br>**EAMF-A-44A/B-87A** | **551004**<br>**EAMC-30-32-8-11** | **552157**<br>**EAMK-A-D40-44A/C** | – |
| **1322186**<br>**EAMM-A-D40-87A-S1** | | | | **1561533**<br>**EADS-F-D40-87A** |

| | | |
|---|---|---|
| Festo core product range | ★ | Generally ready for dispatch from the factory within 24 hours |
| | ☆ | Generally ready for dispatch from the factory within 5 days |

# Accessories

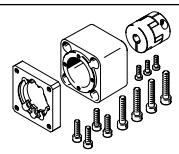
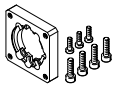
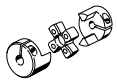
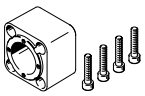
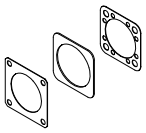
**Individual components of the axial kit**

| Axial kit | Comprising: | | | |
|---|---|---|---|---|
| | Motor flange | Coupling | Coupling housing | Seal set |
|  |  |  |  |  |
| Part no.<br>Type | Part no.<br>Type | Part no.<br>Type | Part no.<br>Type | Part no.<br>Type |
| **ESBF-50** | | | | |
| **2733786**<br>**EAMM-A-D50-60G** | **2256289**<br>**EAMF-A-64B-60G/H-S1** | **543424**<br>**EAMC-42-50-11-12** | **2733780**<br>**EAMK-A-D50-64B** | **–** |
| **2734290**<br>**EAMM-A-D50-60G-S1** | | | | **2733792**<br>**EADS-F-D50-60G/H** |
| **2733796**<br>**EAMM-A-D50-60H** | **2256289**<br>**EAMF-A-64B-60G/H-S1** | **1455671**<br>**EAMC-42-50-12-14** | **2733780**<br>**EAMK-A-D50-64B** | **–** |
| **2907418**<br>**EAMM-A-D50-60H-S1** | | | | **2733792**<br>**EADS-F-D50-60G/H** |
| **2733783**<br>**EAMM-A-D50-70A** | **529945**<br>**EAMF-A-64A/B-70A** | **543424**<br>**EAMC-42-50-11-12** | **2733780**<br>**EAMK-A-D50-64B** | **–** |
| **2734287**<br>**EAMM-A-D50-70A-S1** | | | | **2733789**<br>**EADS-F-D50-70A** |
| **2733787**<br>**EAMM-A-D50-80G** | **2843290**<br>**EAMF-A-64C-80G-S1** | **2138701**<br>**EAMC-42-50-12-20** | **2836865**<br>**EAMK-A-D50-64C** | **–** |
| **2734291**<br>**EAMM-A-D50-80G-S1** | | | | **2733793**<br>**EADS-F-D50-80G** |
| ☆ **2733785**<br>**EAMM-A-D50-80P** | **1977113**<br>**EAMF-A-64A/C-80P** | **551005**<br>**EAMC-42-50-12-19** | **2836865**<br>**EAMK-A-D50-64C** | **–** |
| **2734289**<br>**EAMM-A-D50-80P-S1** | | | | **2733791**<br>**EADS-F-D50-80P** |
| ☆ **2733781**<br>**EAMM-A-D50-87A** | **533140**<br>**EAMF-A-64A/B-87A** | **543424**<br>**EAMC-42-50-11-12** | **2733780**<br>**EAMK-A-D50-64B** | **–** |
| **2734286**<br>**EAMM-A-D50-87A-S1** | | | | **2733788**<br>**EADS-F-D50-87A** |
| ☆ **2733784**<br>**EAMM-A-D50-100A** | **529947**<br>**EAMF-A-64A/C/D-100A** | **551005**<br>**EAMC-42-50-12-19** | **2836865**<br>**EAMK-A-D50-64C** | **–** |
| **2734288**<br>**EAMM-A-D50-100A-S1** | | | | **2733790**<br>**EADS-F-D50-100A** |
| **ESBF-63** | | | | |
| ☆ **560283**<br>**EAMM-A-D60-60G** | **550987**<br>**EAMF-A-64A/B-60G/H** | **543424**<br>**EAMC-42-50-11-12** | **552160**<br>**EAMK-A-D60-64B** | **–** |
| **2256696**<br>**EAMM-A-D60-60G-G2** | **2256289**<br>**EAMF-A-64B-60G/H-S1** | | | |
| **2256698**<br>**EAMM-A-D60-60G-S1** | | | | **2253505**<br>**EADS-F-D60-60G/H** |
| **1454245**<br>**EAMM-A-D60-60H** | **2256289**<br>**EAMF-A-64B-60G/H-S1** | **1455671**<br>**EAMC-42-50-12-14** | **552160**<br>**EAMK-A-D60-64B** | **–** |
| **2256697**<br>**EAMM-A-D60-60H-S1** | | | | **2253505**<br>**EADS-F-D60-60G/H** |
| **543161**<br>**EAMM-A-D60-70A** | **529945**<br>**EAMF-A-64A/B-70A** | **543424**<br>**EAMC-42-50-11-12** | **552160**<br>**EAMK-A-D60-64B** | **–** |
| **2256699**<br>**EAMM-A-D60-70A-S1** | | | | **8022145**<br>**EADS-F-D60-70A** |

| | | |
|---|---|---|
| Festo core product range | ★ | Generally ready for dispatch from the factory within 24 hours |
| | ☆ | Generally ready for dispatch from the factory within 5 days |

# Accessories

**Individual components of the axial kit**

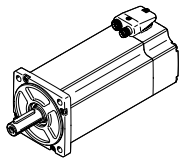
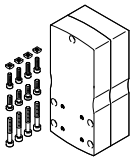
| Axial kit | Comprising: | | | |
|---|---|---|---|---|
| | Motor flange | Coupling | Coupling housing | Seal set |
|  |  |  |  |  |
| Part no.<br>Type | Part no.<br>Type | Part no.<br>Type | Part no.<br>Type | Part no.<br>Type |
| **ESBF-63** | | | | |
| **1499402**<br>**EAMM-A-D60-80G** | **2843290**<br>**EAMF-A-64C-80G-S1** | **2138701**<br>**EAMC-42-50-12-20** | **551007**<br>**EAMK-A-D60-64C** | **–** |
| **2946762**<br>**EAMM-A-D60-80G-S1** | | | | **8022146**<br>**EADS-F-D60-80G** |
| ☆ **1977073**<br>**EAMM-A-D60-80P** | **1977113**<br>**EAMF-A-64A/C-80P** | **551005**<br>**EAMC-42-50-12-19** | **551007**<br>**EAMK-A-D60-64C** | **–** |
| **2218564**<br>**EAMM-A-D60-80P-S1** | | | | **2218523**<br>**EADS-F-D60-80P** |
| ☆ **543162**<br>**EAMM-A-D60-87A** | **533140**<br>**EAMF-A-64A/B-87A** | **543424**<br>**EAMC-42-50-11-12** | **552160**<br>**EAMK-A-D60-64B** | **–** |
| **1322188**<br>**EAMM-A-D60-87A-S1** | | | | **1561536**<br>**EADS-F-D60-87A** |
| ☆ **550983**<br>**EAMM-A-D60-100A** | **529947**<br>**EAMF-A-64A/C/D-100A** | **551005**<br>**EAMC-42-50-12-19** | **551007**<br>**EAMK-A-D60-64C** | **–** |
| **2256700**<br>**EAMM-A-D60-100A-S1** | | | | **2253507**<br>**EADS-F-D60-100A** |
| **ESBF-80** | | | | |
| **2946763**<br>**EAMM-A-D80-80G** | **2933286**<br>**EAMF-A-77A-80G-S1** | **3181801**<br>**EAMC-56-58-19-20** | **1593627**<br>**EAMK-A-D80-77A** | **–** |
| **2946764**<br>**EAMM-A-D80-80G-S1** | | | | **8022147**<br>**EADS-F-D80-80G** |
| **1589665**<br>**EAMM-A-D80-100A** | **1593628**<br>**EAMF-A-77A-100A** | **1485673**<br>**EAMC-56-58-19-19** | **1593627**<br>**EAMK-A-D80-77A** | **–** |
| **1600673**<br>**EAMM-A-D80-100A-S1** | | | | **1593617**<br>**EADS-F-D80-100A** |
| **1588299**<br>**EAMM-A-D80-140A** | **1593636**<br>**EAMF-A-77A-140A** | **1485674**<br>**EAMC-56-58-19-24** | **1593627**<br>**EAMK-A-D80-77A** | **–** |
| **1600674**<br>**EAMM-A-D80-140A-S1** | | | | **1593671**<br>**EADS-F-D80-140A** |
| **ESBF-100** | | | | |
| **1588349**<br>**EAMM-A-D100-140A** | **1593636**<br>**EAMF-A-77A-140A** | **1451407**<br>**EAMC-67-62-24-24** | **1593914**<br>**EAMK-A-D100-77A/B** | **–** |
| **1600675**<br>**EAMM-A-D100-140A-S1** | | | | **1593991**<br>**EADS-F-D100-140A** |
| **3356796**<br>**EAMM-A-D100-100A** | **1593628**<br>**EAMF-A-77A-100A** | **1485674**<br>**EAMC-56-58-19-24** | **1593914**<br>**EAMK-A-D100-77A/B** | **–** |
| **3356931**<br>**EAMM-A-D100-100A-S1** | | | | **3356966**<br>**EADS-F-D100-100A** |
| **2449341**<br>**EAMM-A-D100-120G** | **2449380**<br>**EAMF-A-77B-120G-S1** | **3187895**<br>**EAMC-67-62-24-25** | **1593914**<br>**EAMK-A-D100-77A/B** | **–** |
| **2946765**<br>**EAMM-A-D100-120G-S1** | | | | **8022148**<br>**EADS-F-D100-120G** |

Festo core product range
★ Generally ready for dispatch from the factory within 24 hours
☆ Generally ready for dispatch from the factory within 5 days

# Accessories

**Permissible axis/motor combinations with parallel kit**

Data sheets → Internet: eamm-u

| Motor/gear unit[1] | Parallel kit | | |
|---|---|---|---|
|  |  | • The kit can be mounted in all directions<br>• Optionally with degree of protection IP65<br>• Kits for third-party motors → Internet: eamm-u | |
| Type | Part no. | Type | |
| **ESBF-32** | | | |
| **With servo motor** | | | |
| **EMME-AS-40-...** | ☆ **2153283** | **EAMM-U-50-D32-40P-78** | |
| | **2154009** | **EAMM-U-50-D32-40P-78-S1**[2] | |
| **EMMT-AS-60-..., EMME-AS-60-...** | ☆ **2619586** | **EAMM-U-70-D32-60P-96** | |
| | **2619688** | **EAMM-U-70-D32-60P-96-S1**[2] | |
| **With stepper motor** | | | |
| **EMMS-ST-42-...** | ☆ **1201607** | **EAMM-U-50-D32-42A-78** | |
| | **1202312** | **EAMM-U-50-D32-42A-78-S1**[2] | |
| **EMMS-ST-57-...** | ☆ **1210419** | **EAMM-U-60-D32-57A-91** | |
| | **1210453** | **EAMM-U-60-D32-57A-91-S1**[2] | |
| **With integrated drive** | | | |
| **EMCA-EC-67-...** | **1577063** | **EAMM-U-60-D32-67A-91** | |
| | **1529422** | **EAMM-U-60-D32-67A-91-S1** | |
| **With servo motor and gear unit** | | | |
| **EMME-AS-40-...**<br>**EMGA-40-P-...** | **1577358** | **EAMM-U-60-D32-40G-91** | |
| | **1577346** | **EAMM-U-60-D32-40G-91-S1**[2] | |
| **EMMT-AS-60-..., EMME-AS-60-...**<br>**EMGA-60-P-...-EAS**[3] | **2778393** | **EAMM-U-70-D32-60H-96** | |
| | **2781450** | **EAMM-U-70-D32-60H-96-S1**[2] | |
| **With stepper motor and gear unit** | | | |
| **EMMS-ST-42-...**<br>**EMGA-40-P-...-SST** | **1577358** | **EAMM-U-60-D32-40G-91** | |
| | **1577346** | **EAMM-U-60-D32-40G-91-S1**[2] | |
| **EMMS-ST-57-...**<br>**EMGA-60-P-...-SST**[3] | **2748181** | **EAMM-U-70-D32-60G-96** | |
| | **2778302** | **EAMM-U-70-D32-60G-96-S1**[2] | |
| **With integrated drive and gear unit** | | | |
| **EMCA-EC-67-...**<br>**EMGC-40-P-...** | **1577358** | **EAMM-U-60-D32-40G-91** | |
| | **1577346** | **EAMM-U-60-D32-40G-91-S1**[2] | |
| **EMCA-EC-67-...**<br>**EMGC-60-P-...**[3] | **2778393** | **EAMM-U-70-D32-60H-96** | |
| | **2781450** | **EAMM-U-70-D32-60H-96-S1**[2] | |

1) The input torque must not exceed the max. permissible transferable torque of the parallel kit.
2) With degree of protection IP65
3) Gear unit drive shaft diameter: EMGA-60-P-...-SAS/-SST: 11 mm; EMGA-60-P-...-EAS, EMGC-60-P: 14 mm.

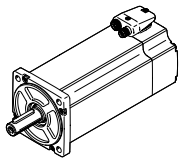
Festo core product range
★ Generally ready for dispatch from the factory within 24 hours
☆ Generally ready for dispatch from the factory within 5 days

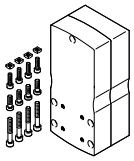
# Accessories

**Permissible axis/motor combinations with parallel kit**

Data sheets → Internet: eamm-u

Motor/gear unit[1)] | Parallel kit





- The kit can be mounted in all directions
- Optionally with degree of protection IP65
- Kits for third-party motors → Internet: eamm-u

| Type | Part no. | Type |
|---|---|---|
| **ESBF-40** | | |
| **With servo motor** | | |
| **EMMT-AS-60-..., EMME-AS-60-...** | ☆ **2617488** | **EAMM-U-70-D40-60P-96** |
| | **2546123** | **EAMM-U-70-D40-60P-96-S1**[2)] |
| **EMMT-AS-80-..., EMME-AS-80-...** | ☆ **2802441** | **EAMM-U-86-D40-80P-102** |
| | **2802656** | **EAMM-U-86-D40-80P-102-S1**[2)] |
| **With stepper motor** | | |
| **EMMS-ST-57-...** | ☆ **1210442** | **EAMM-U-60-D40-57A-91** |
| | **1210462** | **EAMM-U-60-D40-57A-91-S1**[2)] |
| **EMMS-ST-87-...** | ☆ **1215802** | **EAMM-U-86-D40-87A-102** |
| | **1215814** | **EAMM-U-86-D40-87A-102-S1**[2)] |
| **With integrated drive** | | |
| **EMCA-EC-67-...** | **1577083** | **EAMM-U-60-D40-67A-91** |
| | **1435249** | **EAMM-U-60-D40-67A-91-S1** |
| **With servo motor and gear unit** | | |
| **EMME-AS-40-...**<br>**EMGA-40-P-...** | **1577165** | **EAMM-U-60-D40-40G-91** |
| | **1435968** | **EAMM-U-60-D40-40G-91-S1**[2)] |
| **EMMT-AS-60-..., EMME-AS-60-...**<br>**EMGA-60-P-...-EAS**[3)] | **2786101** | **EAMM-U-70-D40-60H-96** |
| | **2786137** | **EAMM-U-70-D40-60H-96-S1**[2)] |
| | **1586496** | **EAMM-U-86-D40-60H-102** |
| | **1586372** | **EAMM-U-86-D40-60H-102-S1**[2)] |
| **With stepper motor and gear unit** | | |
| **EMMS-ST-42-...**<br>**EMGA-40-P-...-SST** | **1577165** | **EAMM-U-60-D40-40G-91** |
| | **1435968** | **EAMM-U-60-D40-40G-91-S1**[2)] |
| **EMMS-ST-57-...**<br>**EMGA-60-P-...-SST**[3)] | **2785471** | **EAMM-U-70-D40-60G-96** |
| | **2785542** | **EAMM-U-70-D40-60G-96-S1**[2)] |
| | **1586445** | **EAMM-U-86-D40-60G-102** |
| | **1586429** | **EAMM-U-86-D40-60G-102-S1**[2)] |
| **With integrated drive and gear unit** | | |
| **EMCA-EC-67-...**<br>**EMGC-40-P-...** | **1577165** | **EAMM-U-60-D40-40G-91** |
| | **1435968** | **EAMM-U-60-D40-40G-91-S1**[2)] |
| **EMCA-EC-67-...**<br>**EMGC-60-P-...**[3)] | **2786101** | **EAMM-U-70-D40-60H-96** |
| | **2786137** | **EAMM-U-70-D40-60H-96-S1**[2)] |
| | **1586496** | **EAMM-U-86-D40-60H-102** |
| | **1586372** | **EAMM-U-86-D40-60H-102-S1**[2)] |

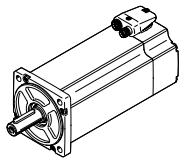
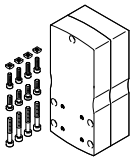
1) The input torque must not exceed the max. permissible transferable torque of the parallel kit.
2) With degree of protection IP65
3) Gear unit drive shaft diameter: EMGA-60-P-...-SAS/-SST: 11 mm; EMGA-60-P-...-EAS, EMGC-60-P: 14 mm.

| | | |
|---|---|---|
| Festo core product range | ★ | Generally ready for dispatch from the factory within 24 hours |
| | ☆ | Generally ready for dispatch from the factory within 5 days |

# Accessories

**Permissible axis/motor combinations with parallel kit**

Data sheets ➔ Internet: eamm-u

| Motor/gear unit[1] | Parallel kit | | |
|---|---|---|---|
|  |  | • The kit can be mounted in all directions<br>• Optionally with degree of protection IP65<br>• Kits for third-party motors ➔ Internet: eamm-u | |
| Type | Part no. | Type | |
| **ESBF-50** | | | |
| **With servo motor** | | | |
| **EMMT-AS-80-..., EMME-AS-80-...** | ☆ **2803053** | **EAMM-U-86-D50-80P-102** | |
| | **2803073** | **EAMM-U-86-D50-80P-102-S1**[2] | |
| **EMMT-AS-100-..., EMME-AS-100-...** | ☆ **2799424** | **EAMM-U-110-D50-100A-120** | |
| | **2799488** | **EAMM-U-110-D50-100A-120-S1**[2] | |
| **With stepper motor** | | | |
| **EMMS-ST-87-...** | ☆ **2802708** | **EAMM-U-86-D50-87A-102** | |
| | **2802742** | **EAMM-U-86-D50-87A-102-S1**[2] | |
| **With servo motor and gear unit** | | | |
| **EMMT-AS-60-..., EMME-AS-60-...**<br>**EMGA-60-P-...-EAS**[3] | **2803326** | **EAMM-U-86-D50-60H-102** | |
| | **2803325** | **EAMM-U-86-D50-60H-102-S1**[2] | |
| | **2798760** | **EAMM-U-110-D50-60H-120** | |
| | **2799150** | **EAMM-U-110-D50-60H-120-S1**[2] | |
| **EMMT-AS-80-..., EMMT-AS-100-...**<br>**EMME-AS-80-..., EMME-AS-100-...**<br>**EMGA-80-P-...** | **2799196** | **EAMM-U-110-D50-80G-120** | |
| | **2799281** | **EAMM-U-110-D50-80G-120-S1**[2] | |
| **With stepper motor and gear unit** | | | |
| **EMMS-ST-57-...**<br>**EMGA-60-P-...-SST**[3] | **2803125** | **EAMM-U-86-D50-60G-102** | |
| | **2803197** | **EAMM-U-86-D50-60G-102-S1**[2] | |
| | **2797368** | **EAMM-U-110-D50-60G-120** | |
| | **2798665** | **EAMM-U-110-D50-60G-120-S1**[2] | |
| **EMMS-ST-87-...**<br>**EMGA-80-P-...-SST** | **2799196** | **EAMM-U-110-D50-80G-120** | |
| | **2799281** | **EAMM-U-110-D50-80G-120-S1**[2] | |
| **With integrated drive and gear unit** | | | |
| **EMCA-EC-67-...**<br>**EMGC-60-P-...**[3] | **2803326** | **EAMM-U-86-D50-60H-102** | |
| | **2803325** | **EAMM-U-86-D50-60H-102-S1**[2] | |
| | **2798760** | **EAMM-U-110-D50-60H-120** | |
| | **2799150** | **EAMM-U-110-D50-60H-120-S1**[2] | |

1) The input torque must not exceed the max. permissible transferable torque of the parallel kit.
2) With degree of protection IP65
3) Gear unit drive shaft diameter: EMGA-60-P-...-SAS/-SST: 11 mm; EMGA-60-P-...-EAS, EMGC-60-P: 14 mm.

**Note**

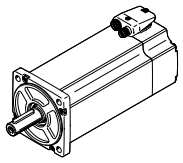
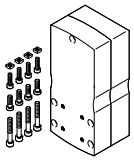
The clamping element EADT is required to adjust the toothed belt pretensioning for EAMM-U-110.
The motor and/or axis shaft can optionally be supported with a counter bearing EAMG.
Additional information ➔ eamm-u

Festo core product range
★ Generally ready for dispatch from the factory within 24 hours
☆ Generally ready for dispatch from the factory within 5 days

# Accessories

**Permissible axis/motor combinations with parallel kit**

Data sheets ➔ Internet: eamm-u

| Motor/gear unit[1] | Parallel kit | |
|---|---|---|
|  |  | • The kit can be mounted in all directions<br>• Optionally with degree of protection IP65<br>• Kits for third-party motors ➔ Internet: eamm-u |
| Type | Part no. | Type |
| **ESBF-63** | | |
| **With servo motor** | | |
| **EMMT-AS-80-..., EMME-AS-80-...** | ☆ **2155875** | **EAMM-U-86-D60-80P-102** |
| | **2156527** | **EAMM-U-86-D60-80P-102-S1**[2] |
| **EMMT-AS-100-..., EMME-AS-100-...** | ☆ **1202436** | **EAMM-U-110-D60-100A-120** |
| | **1203112** | **EAMM-U-110-D60-100A-120-S1**[2] |
| **With stepper motor** | | |
| **EMMS-ST-87-...** | ☆ **1215784** | **EAMM-U-86-D60-87A-102** |
| | **1215810** | **EAMM-U-86-D60-87A-102-S1**[2] |
| **With servo motor and gear unit** | | |
| **EMMT-AS-60-..., EMME-AS-60-...**<br>**EMGA-60-P-...-EAS**[3] | **1586276** | **EAMM-U-86-D60-60H-102** |
| | **1530837** | **EAMM-U-86-D60-60H-102-S1**[2] |
| | **1542264** | **EAMM-U-110-D60-60H-120** |
| | **1530621** | **EAMM-U-110-D60-60H-120-S1**[2] |
| **EMMT-AS-80-..., EMMT-AS-100-...**<br>**EMME-AS-80-..., EMME-AS-100-...**<br>**EMGA-80-P-...** | **1532949** | **EAMM-U-110-D60-80G-120** |
| | **1530875** | **EAMM-U-110-D60-80G-120-S1**[2] |
| **With stepper motor and gear unit** | | |
| **EMMS-ST-57-...**<br>**EMGA-60-P-...-SST**[3] | **1586347** | **EAMM-U-86-D60-60G-102** |
| | **1437163** | **EAMM-U-86-D60-60G-102-S1**[2] |
| | **1543240** | **EAMM-U-110-D60-60G-120** |
| | **1436183** | **EAMM-U-110-D60-60G-120-S1**[2] |
| **EMMS-ST-87-...**<br>**EMGA-80-P-...-SST** | **1532949** | **EAMM-U-110-D60-80G-120** |
| | **1530875** | **EAMM-U-110-D60-80G-120-S1**[2] |
| **With integrated drive and gear unit** | | |
| **EMCA-EC-67-...**<br>**EMGC-60-P-...**[3] | **1586276** | **EAMM-U-86-D60-60H-102** |
| | **1530837** | **EAMM-U-86-D60-60H-102-S1**[2] |
| | **1542264** | **EAMM-U-110-D60-60H-120** |
| | **1530621** | **EAMM-U-110-D60-60H-120-S1**[2] |

1) The input torque must not exceed the max. permissible transferable torque of the parallel kit.
2) With degree of protection IP65
3) Gear unit drive shaft diameter: EMGA-60-P-...-SAS/-SST: 11 mm; EMGA-60-P-...-EAS, EMGC-60-P: 14 mm.

**Note**

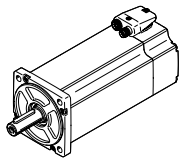
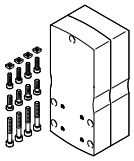
The clamping element EADT is required to adjust the toothed belt pretensioning for EAMM-U-110.
The motor and/or axis shaft can optionally be supported with a counter bearing EAMG.
Additional information ➔ eamm-u

| | | |
|---|---|---|
| Festo core product range | ★ | Generally ready for dispatch from the factory within 24 hours |
| | ☆ | Generally ready for dispatch from the factory within 5 days |

# Accessories

**Permissible axis/motor combinations with parallel kit**

Data sheets ➔ Internet: eamm-u

| Motor/gear unit[1] | Parallel kit | | |
|---|---|---|---|
|  |  | • The kit can be mounted in all directions<br>• Optionally with degree of protection IP65<br>• Kits for third-party motors ➔ Internet: eamm-u | |
| Type | Part no. | Type | |
| **ESBF-80** | | | |
| **With servo motor** | | | |
| **EMMT-AS-100-..., EMME-AS-100-...** | **1465438** | **EAMM-U-110-D80-100A-120** | |
| | **1433650** | **EAMM-U-110-D80-100A-120-S1[2]** | |
| **EMMS-AS-140-...** | **1465530** | **EAMM-U-145-D80-140A-188** | |
| | **1433709** | **EAMM-U-145-D80-140A-188-S1[2]** | |
| **With servo motor and gear unit** | | | |
| **EMMT-AS-80-..., EMMT-AS-100-...** | **1589614** | **EAMM-U-110-D80-80G-120** | |
| **EMME-AS-80-..., EMME-AS-100-...** **EMGA-80-P-...** | **1589706** | **EAMM-U-110-D80-80G-120-S1[2]** | |
| **With stepper motor and gear unit** | | | |
| **EMMS-ST-87-...** | **1589614** | **EAMM-U-110-D80-80G-120** | |
| **EMGA-80-P-...-SST** | **1589706** | **EAMM-U-110-D80-80G-120-S1[2]** | |
| **ESBF-100** | | | |
| **With servo motor** | | | |
| **EMMS-AS-140-...** | **1465541** | **EAMM-U-145-D100-140A-188** | |
| | **1433852** | **EAMM-U-145-D100-140A-188-S1[2]** | |
| **With servo motor and gear unit** | | | |
| **EMMT-AS-100-..., EMME-AS-100-...** | **2803620** | **EAMM-U-145-D100-120G-188** | |
| **EMMS-AS-140-...** **EMGA-120-P-...** | **2803622** | **EAMM-U-145-D100-120G-188-S1[2]** | |

1) The input torque must not exceed the max. permissible transferable torque of the parallel kit.
2) With degree of protection IP65
3) Gear unit drive shaft diameter: EMGA-60-P-...-SAS/-SST: 11 mm; EMGA-60-P-...-EAS, EMGC-60-P: 14 mm.

**Note**

The clamping element EADT is required to adjust the toothed belt pretensioning for EAMM-U-110.

The motor and/or axis shaft can optionally be supported with a counter bearing EAMG.

Additional information ➔ eamm-u

# Accessories

**Bellows kit EADB**

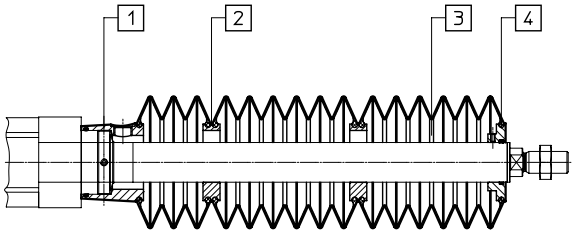
| General technical data | | | | | | |
|---|---|---|---|---|---|---|
| Type EADB-V2- | | 32 | 40 | 50 | 63 | 80 |
| Max. stroke range of the cylinder[1] | [mm] | 30 ... 500 | 30 ... 500 | 30 ... 500 | 30 ... 500 | 30 ... 500 |
| Type of mounting | | Push-on | | | | |
| | | Via threaded pin | | | | |
| Mounting position | | Any | | | | |
| Media resistance | | Dust, chippings, oil, grease, fuel (→ Internet: media resistance) | | | | |
| Ambient temperature[2] | [°C] | –10 ... +80 | | | | |
| Degree of protection to IEC 60529 | | IP65 | | | | |
| Corrosion resistance class CRC[3] | | 3 | | | | |

1) In combination with the bellows kit EADB
2) Note operating range of proximity sensors and cylinder
3) Corrosion resistance class CRC 3 to Festo standard FN 940070
High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

# Accessories

**Materials**

Sectional view




| Bellows | | |
|---|---|---|
| [1] | Connection | Anodised wrought aluminium alloy |
| [2] | Adapter | Polyamide |
| [3] | Bellows | NBR |
| [4] | End piece | Anodised wrought aluminium alloy |
| – | O-ring | NBR |
| | Note on materials | Free of copper and PTFE |
| | | RoHS-compliant |

**Weight [g]**

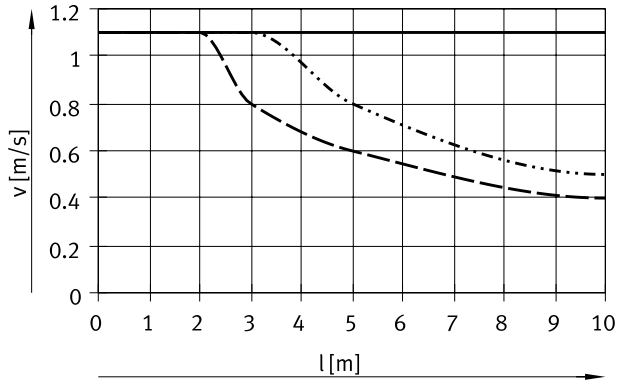
| Type EADB-V2-<br>Stroke [mm] | 32 | 40 | 50 | 63 | 80 |
|---|---|---|---|---|---|
| **Product weight** | | | | | |
| 10 ... 100 | 116 | 109 | 190 | 203 | 269 |
| 101 ... 200 | 155 | 146 | 261 | 265 | 327 |
| 201 ... 300 | 173 | 164 | 306 | 307 | 365 |
| 301 ... 400 | 212 | 201 | 377 | 370 | 423 |
| 401 ... 500 | 233 | 222 | 402 | 391 | 444 |
| **Moving mass** | | | | | |
| 10 ... 100 | 46 | 44 | 93 | 79 | 72 |
| 101 ... 200 | 85 | 82 | 164 | 142 | 130 |
| 201 ... 300 | 104 | 99 | 209 | 183 | 168 |
| 301 ... 400 | 143 | 137 | 280 | 246 | 226 |
| 401 ... 500 | 163 | 157 | 305 | 267 | 247 |

# Accessories

**Travel speed v as a function of tubing length l**

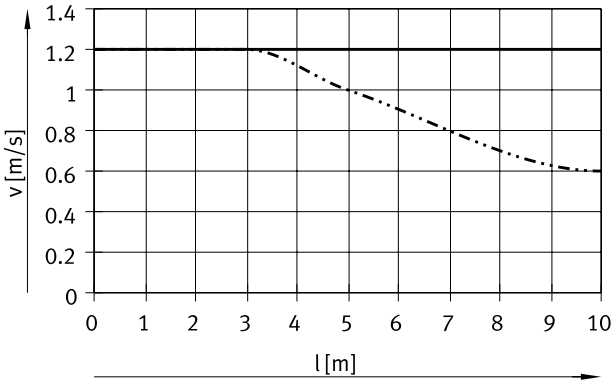
The bellows kit is a leak-free system.
To prevent unwanted media from being drawn in, the supply and exhaust air must be ducted via a pressure compensation hole in the connection part [1].
The pressure generated in the bellows kit by the positioning motion is largely defined by the travel speed and tubing length.
The recommended tubing length based on the travel speed of the drive can be read from the graph.

For size 32



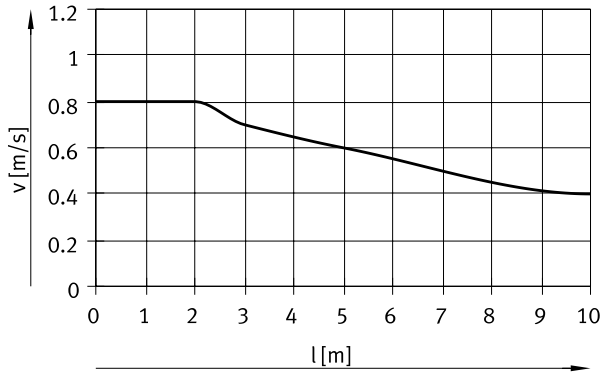

With QS-G1/4-12, QSH-16-12, PUN-16x2.5P
With QS-G1/4-12, PUN-12x2
With QS-G1/4-10, PUN-10x1.5

For size 40



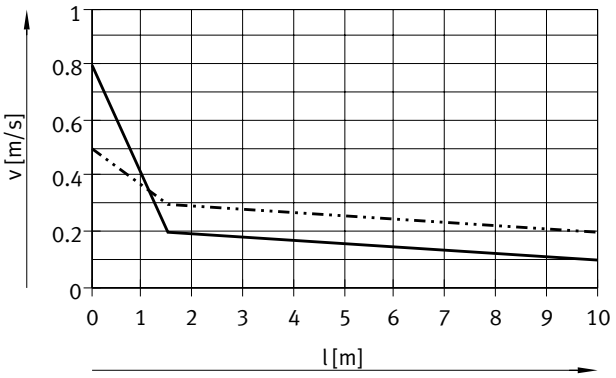

With QS-G1/4-12, QSH-16-12, PUN-16x2.5
With QS-G1/4-10, PUN-10x1.5P

For size 50



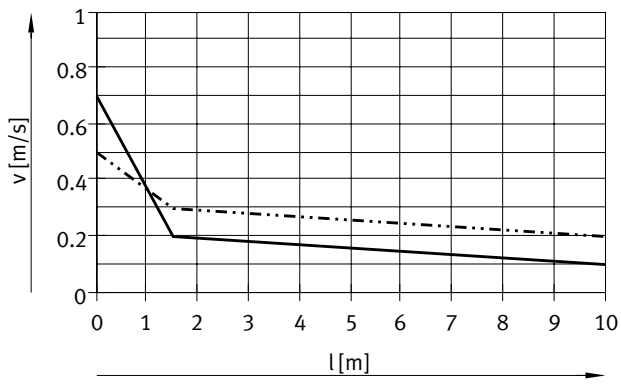

With QS-G1/4-12, QSH-16-12, PUN-16x2.5

For size 63




With QS-G1/4-12, PUN-12x2
With QS-G1/4-12, QSH-16-12, PUN-16x2.5

For size 80




With QS-G1/4-12, PUN-12x2
With QS-G1/4-12, QSH-16-12, PUN-16x2.5

# Accessories

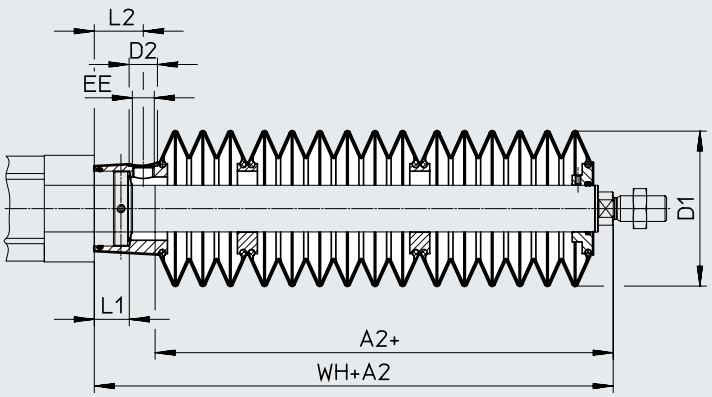
## Tubing size and push-in fitting for pressure compensation hole

The push-in fittings in the following table must be used for the pressure compensation hole.
Silencers can be used as an alternative. This reduces the travel speed slightly.

| For size | Tubing O.D. [mm] | Push-in fitting Part no. | Type | Push-in sleeve Part no. | Type | Plastic tubing Type |
|---|---|---|---|---|---|---|
| 32, 40, 50, 63, 80 | 16 | ★ **186350** | **QS-G1/4-12** | **153261** | **QSH-16-12** | **PUN-16x2.5** |
| 32, 63, 80 | 12 | ★ **186350** | **QS-G1/4-12** | **–** | | **PUN-12x2** |
| 32, 40 | 10 | ★ **186101** | **QS-G1/4-10** | **–** | | **PUN-10x1.5** |

## Dimensions

Download CAD data ➔ www.festo.com




\+ = plus stroke length

| Size | 32 | | | | | | |
|---|---|---|---|---|---|---|---|
| Stroke [mm] | A2[1] | D1 max. | D2 | EE | L1 | L2 | WH+A2 |
| 10 ... 100 | 52 | 57 | 17 | G1/4 | 15 | 23.3 | 77.5 |
| 101 ... 200 | 81 | | | | | | 106.5 |
| 201 ... 300 | 92 | | | | | | 117.5 |
| 301 ... 400 | 121 | | | | | | 146.5 |
| 401 ... 500 | 139 | | | | | | 164.5 |

| Size | 40 | | | | | | |
|---|---|---|---|---|---|---|---|
| Stroke [mm] | A2[1] | D1 max. | D2 | EE | L1 | L2 | WH+A2 |
| 10 ... 100 | 50 | 57 | 17 | G1/4 | 15 | 23.3 | 79.5 |
| 101 ... 200 | 79 | | | | | | 108.5 |
| 201 ... 300 | 90 | | | | | | 119.5 |
| 301 ... 400 | 119 | | | | | | 148.5 |
| 401 ... 500 | 137 | | | | | | 166.5 |

1) The dimension corresponds to the E value (piston rod extension) of the cylinder

Festo core product range
★ Generally ready for dispatch from the factory within 24 hours
☆ Generally ready for dispatch from the factory within 5 days

## Accessories

| Size | 50 | | | | | | |
|---|---|---|---|---|---|---|---|
| Stroke [mm] | A2[1)] | D1 max. | D2 | EE | L1 | L2 | WH+A2 |
| 10 ... 100 | 46 | 93 | 17 | G1/4 | 21 | 29.4 | 82.5 |
| 101 ... 200 | 70 | | | | | | 106.5 |
| 201 ... 300 | 82 | | | | | | 118.5 |
| 301 ... 400 | 107 | | | | | | 143.5 |
| 401 ... 500 | 119 | | | | | | 155.5 |

| Size | 63 | | | | | | |
|---|---|---|---|---|---|---|---|
| Stroke [mm] | A2[1)] | D1 max. | D2 | EE | L1 | L2 | WH+A2 |
| 10 ... 100 | 45 | 93 | 17 | G1/4 | 25 | 33.9 | 82 |
| 101 ... 200 | 70 | | | | | | 107 |
| 201 ... 300 | 82 | | | | | | 119 |
| 301 ... 400 | 106 | | | | | | 143 |
| 401 ... 500 | 119 | | | | | | 156 |

| Size | 80 | | | | | | |
|---|---|---|---|---|---|---|---|
| Stroke [mm] | A2[1)] | D1 max. | D2 | EE | L1 | L2 | WH+A2 |
| 10 ... 100 | 48 | 93 | 17 | G1/4 | 31 | 42.9 | 94 |
| 101 ... 200 | 73 | | | | | | 119 |
| 201 ... 300 | 85 | | | | | | 131 |
| 301 ... 400 | 109 | | | | | | 155 |
| 401 ... 500 | 122 | | | | | | 168 |

1) The dimension corresponds to the E value (piston rod extension) of the cylinder

# Accessories

**Ordering data – Bellows kit**

An extended piston rod (order code ...E) ➔ page 26 is absolutely essential if a bellows kit is to be used.

The necessary dimensions for ...E as a function of cylinder size and stroke as well as the relevant bellows kit are indicated in the following table:

**Order example:**
Selected electric cylinder:
ESBF-BS-63-250-5P-...E
The dimension for the corresponding E value (see table):
82 mm
Complete type code for electric cylinder:
ESBF-BS-63-250-5P-82E
The corresponding bellows kit:
EADB-V2-63-S201-300

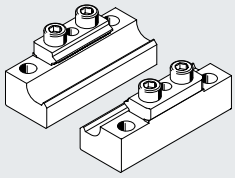
| Cylinder data | | | Bellows kit | |
|---|---|---|---|---|
| Size | Stroke [mm] | Dimension for ...E [mm] | Part no. | Type |
| 32 | 10 ... 100 | 52 | **2828829** | **EADB-V2-32-S10-100** |
| | 101 ... 200 | 81 | **2828830** | **EADB-V2-32-S101-200** |
| | 201 ... 300 | 92 | **2828831** | **EADB-V2-32-S201-300** |
| | 301 ... 400 | 121 | **2828832** | **EADB-V2-32-S301-400** |
| | 401 ... 500 | 139 | **2828833** | **EADB-V2-32-S401-500** |
| 40 | 10 ... 100 | 50 | **2828834** | **EADB-V2-40-S10-100** |
| | 101 ... 200 | 79 | **2828835** | **EADB-V2-40-S101-200** |
| | 201 ... 300 | 90 | **2828836** | **EADB-V2-40-S201-300** |
| | 301 ... 400 | 119 | **2828837** | **EADB-V2-40-S301-400** |
| | 401 ... 500 | 137 | **2828838** | **EADB-V2-40-S401-500** |
| 50 | 10 ... 100 | 46 | **2828839** | **EADB-V2-50-S10-100** |
| | 101 ... 200 | 70 | **2828840** | **EADB-V2-50-S101-200** |
| | 201 ... 300 | 82 | **2828841** | **EADB-V2-50-S201-300** |
| | 301 ... 400 | 107 | **2828842** | **EADB-V2-50-S301-400** |
| | 401 ... 500 | 119 | **2828843** | **EADB-V2-50-S401-500** |
| 63 | 10 ... 100 | 45 | **1488361** | **EADB-V2-63-S10-100** |
| | 101 ... 200 | 70 | **1488362** | **EADB-V2-63-S101-200** |
| | 201 ... 300 | 82 | **1488363** | **EADB-V2-63-S201-300** |
| | 301 ... 400 | 106 | **1488364** | **EADB-V2-63-S301-400** |
| | 401 ... 500 | 119 | **1488365** | **EADB-V2-63-S401-500** |
| 80 | 10 ... 100 | 48 | **1489406** | **EADB-V2-80-S10-100** |
| | 101 ... 200 | 73 | **1489407** | **EADB-V2-80-S101-200** |
| | 201 ... 300 | 85 | **1489408** | **EADB-V2-80-S201-300** |
| | 301 ... 400 | 109 | **1489409** | **EADB-V2-80-S301-400** |
| | 401 ... 500 | 122 | **1489410** | **EADB-V2-80-S401-500** |

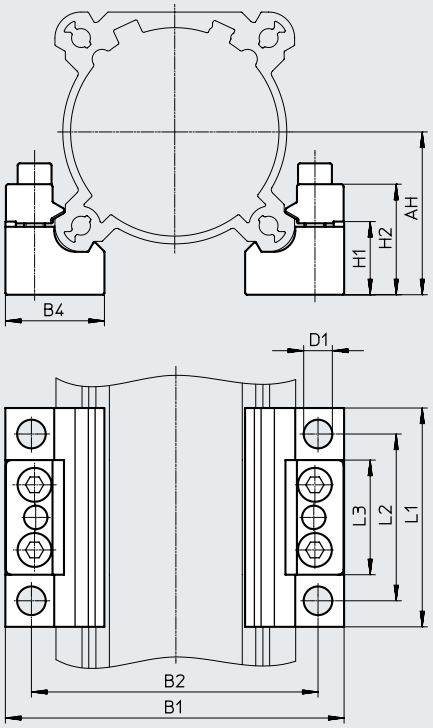
# Accessories

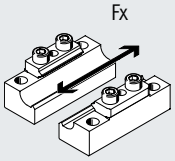
**Profile mounting EAHF**

Material:
Plate: Anodised aluminium
Clamping piece: Coated steel

RoHS-compliant






**Dimensions and ordering data**

| For size | AH | B1 | B2 | B4 | D1 ø | H1 | H2 | L1 | L2 | L3 |
|---|---|---|---|---|---|---|---|---|---|---|
| 32 | 32 | 76 | 60 | 26 | 9 | 16 | 23.6 | 80 | 60 | 34 |
| 40 | 36 | 84.5 | 68 | 26 | 9 | 16 | 23.6 | 80 | 60 | 34 |
| 50 | 44.5 | 94 | 81 | 30 | 9 | 22.8 | 30.4 | 80 | 60 | 41 |
| 63 | 50 | 105 | 92 | 30 | 9 | 22.8 | 30.4 | 80 | 60 | 41 |
| 80 | 62.5 | 130 | 110 | 38 | 11 | 28.1 | 42.5 | 84 | 64 | 44 |
| 100 | 71 | 147 | 127 | 38 | 11 | 28.1 | 42.5 | 84 | 64 | 44 |

| For size | Transferable axial force $F_x$ [kN] | CRC[1)] | Weight [g] | Part no. | Type |
|---|---|---|---|---|---|
| 32, 40 | 1.6 | 3 | 218 | ☆ **2838839** | **EAHF-V2-32/40-P** |
| 50, 63 | 3.6 | 3 | 340 | ☆ **1547781** | **EAHF-V2-50/63-P** |
| 80, 100 | 4.0 | 3 | 570 | **1547780** | **EAHF-V2-80/100-P** |

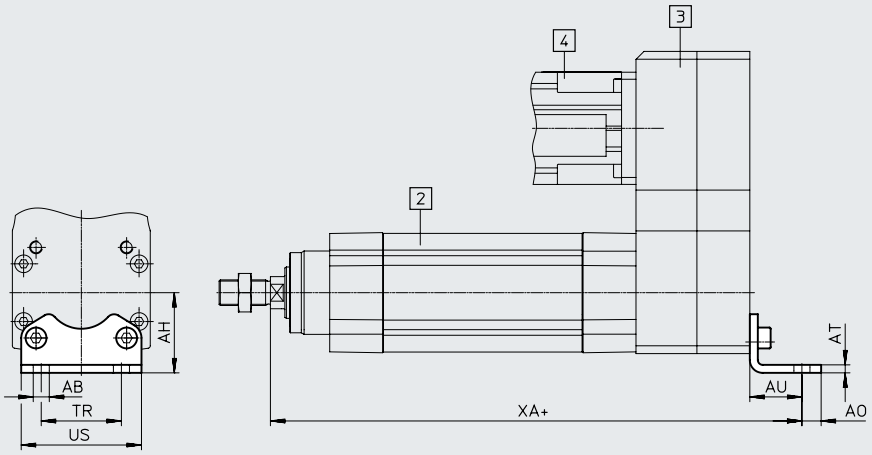
1) Corrosion resistance class CRC 3 to Festo standard FN 940070
High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

Festo core product range
★ Generally ready for dispatch from the factory within 24 hours
☆ Generally ready for dispatch from the factory within 5 days

# Accessories

**Foot mounting HNC/CRHNC, for parallel motor mounting**

Material:
HNC: Galvanised steel
CRHNC: High-alloy steel
Free of copper and PTFE




[2] Electric cylinders ESBF
[3] Parallel kit EAMM-U
[4] Motor EMME-AS/EMMT-AS
\+ = plus stroke length

**Note**

The foot mounting can only be secured at the rear on the parallel kit.

**Dimensions and ordering data**

| For size | AB<br>Ø | AH | AO | AT | AU<br>±0.2 | TR<br>JS14 | US |
|---|---|---|---|---|---|---|---|
| 32 | 7 | 32 | 6.5 | 4 | 24 | 32 | $45_{-0.5}$ |
| 40 | 10 | 36 | 9 | 4 | 28 | 36 | $54_{-0.6}$ |
| 50 | 10 | 45 | 9.5 | 5 | 32 | 45 | $64_{-0.6}$ |
| 63 | 10 | 50 | 12.5 | 5 | 32 | 50 | $75_{-0.6}$ |
| 80 | 12 | 63 | 15 | 6 | 41 | 63 | $93_{-0.8}$ |
| 100 | 14.5 | 71 | 17.5 | 6 | 41 | 75 | $110_{-0.8}$ |

| For size | XA<br>With parallel kit | | | | | |
|---|---|---|---|---|---|---|
| | EAMM-U-50 | EAMM-U-60 | EAMM-U-70 | EAMM-U-86 | EAMM-U-110 | EAMM-U-145 |
| 32 | 217 | 228 | 236.5 | – | – | – |
| 40 | – | 257.5 | 266 | 270.5 | – | – |
| 50 | – | – | 298 | 302.5 | 313.5 | – |
| 63 | – | – | – | 311 | 322 | – |
| 80 | – | – | – | – | 373 | 390.5 |
| 100 | – | – | – | – | – | 415.5 |

| For size | Max. load capacity [kN] | ESBF-... | | | | ESBF-...-R3 | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | CRC[1] | Weight [g] | Part no. | Type | CRC[1] | Weight [g] | Part no. | Type |
| 32 | 0.9 | 2 | 144 | ★ **174369** | **HNC-32** | 4 | 139 | **176937** | **CRHNC-32** |
| 40 | 1.5 | 2 | 193 | ★ **174370** | **HNC-40** | 4 | 188 | **176938** | **CRHNC-40** |
| 50 | 2.5 | 2 | 353 | ★ **174371** | **HNC-50** | 4 | 341 | **176939** | **CRHNC-50** |
| 63 | 4 | 2 | 436 | ★ **174372** | **HNC-63** | 4 | 424 | **176940** | **CRHNC-63** |
| 80 | 6 | 2 | 829 | ★ **174373** | **HNC-80** | 4 | 809 | **176941** | **CRHNC-80** |
| 100 | 9 | 2 | 1009 | **174374** | **HNC-100** | 4 | 990 | **176942** | **CRHNC-100** |

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 which are in direct contact with a normal industrial environment.
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, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

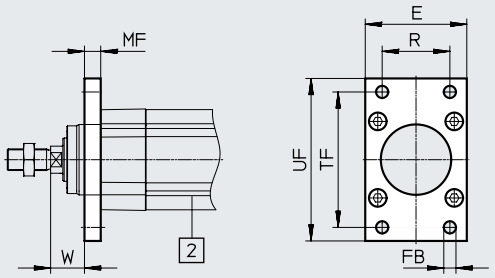
Festo core product range
★ Generally ready for dispatch from the factory within 24 hours
☆ Generally ready for dispatch from the factory within 5 days

# Accessories

**Flange mounting EAHH**

Material:
High-alloy stainless steel

RoHS-compliant
Free of copper and PTFE




[2] Electric cylinders ESBF

**Dimensions and ordering data**

| For size | E | FB<br>ø<br>H13 | MF<br>js14 | R | TF | UF<br>±1 | W |
|---|---|---|---|---|---|---|---|
| 32 | 45 | 7 | 10 | 32 | 64 | 80 | 15.5 |
| 40 | 54 | 9 | 10 | 36 | 72 | 90 | 19.5 |
| 50 | 64 | 9 | 12 | 45 | 90 | 110 | 24.5 |
| 63 | 75 | 9 | 12 | 50 | 100 | 120 | 25 |
| 80 | 93 | 12 | 16 | 63 | 126 | 150 | 30 |
| 100 | 110 | 14 | 16 | 75 | 150 | 175 | 35 |

| For size | Max. load capacity<br>[kN] | ESBF-...-R3<br>CRC[1)] | Weight<br>[g] | Part no. | Type |
|---|---|---|---|---|---|
| 32 | 1 | 3 | 206 | ☆ **2827587** | **EAHH-V2-32-R1** |
| 40 | 3 | 3 | 275 | ☆ **2827588** | **EAHH-V2-40-R1** |
| 50 | 5 | 3 | 496 | ☆ **2827589** | **EAHH-V2-50-R1** |
| 63 | 7 | 3 | 633 | ☆ **1502305** | **EAHH-V2-63-R1** |
| 80 | 12 | 3 | 1360 | **1502306** | **EAHH-V2-80-R1** |
| 100 | 17 | 3 | 1880 | **1502307** | **EAHH-V2-100-R1** |

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 surface requirements which are in direct contact with a normal industrial environment.

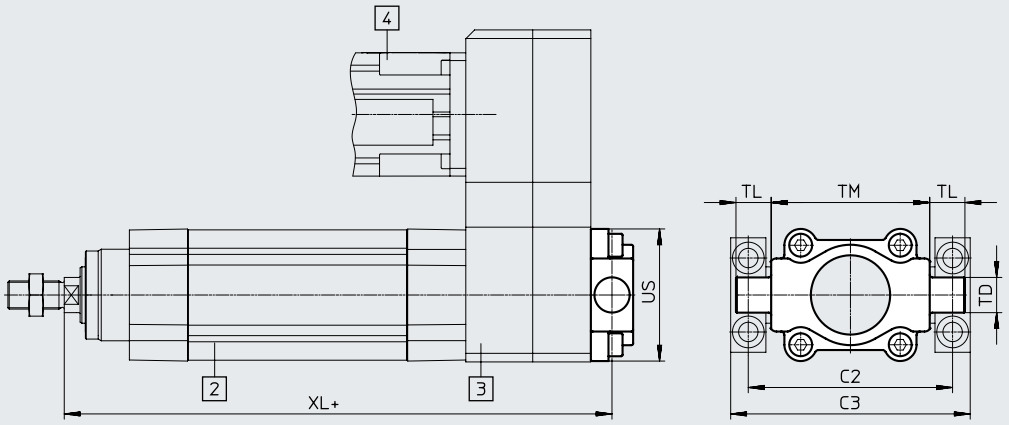
Festo core product range
★ Generally ready for dispatch from the factory within 24 hours
☆ Generally ready for dispatch from the factory within 5 days

# Accessories

**Trunnion flange ZNCF/CRZNG**

Material:
ZNCF: Stainless steel casting
CRZNG: Electropolished stainless steel casting

Free of copper and PTFE




[2] Electric cylinders ESBF
[3] Parallel kit EAMM-U
[4] Motor EMME-AS/EMMT-AS
\+ = plus stroke length

**Dimensions and ordering data**

| For size | C2 | C3 | TD<br>ø<br>E9 | TL | TM<br>h14 | US |
|---|---|---|---|---|---|---|
| 32 | 71 | 86 | 12 | $12_{h14}$ | 50 | 45 |
| 40 | 87 | 105 | 16 | $16_{h14}$ | 63 | 54 |
| 50 | 99 | 117 | 16 | $16_{h14}$ | 75 | 64 |
| 63 | 116 | 136 | 20 | $20^{+0.5/-0.7}$ | 90 | 75 |
| 80 | 136 | 156 | 20 | $19.5^{+0.5/-0.7}$ | 110 | 93 |
| 100 | 164 | 189 | 25 | $24.5^{+0.5/-0.7}$ | 132 | 110 |

| For size | XL<br>With parallel kit | | | | | |
|---|---|---|---|---|---|---|
| | EAMM-U-50 | EAMM-U-60 | EAMM-U-70 | EAMM-U-86 | EAMM-U-110 | EAMM-U-145 |
| 32 | 201 | 212 | 220.5 | – | – | – |
| 40 | – | 239.5 | 248 | 252.5 | – | – |
| 50 | – | – | 278 | 282.5 | 293.5 | – |
| 63 | – | – | – | 291 | 302 | – |
| 80 | – | – | – | – | 346 | 363.5 |
| 100 | – | – | – | – | – | 393.5 |

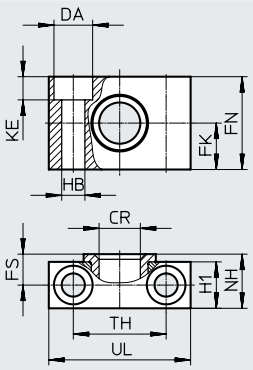
| For size | Max. load capacity [kN] | ESBF-... | | | | ESBF-...-R3 | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | CRC[1] | Weight [g] | Part no. | Type | CRC[1] | Weight [g] | Part no. | Type |
| 32 | 0.9 | 2 | 150 | **174411** | **ZNCF-32** | 4 | 150 | **161852** | **CRZNG-32** |
| 40 | 1.5 | 2 | 285 | **174412** | **ZNCF-40** | 4 | 285 | **161853** | **CRZNG-40** |
| 50 | 2.5 | 2 | 473 | **174413** | **ZNCF-50** | 4 | 473 | **161854** | **CRZNG-50** |
| 63 | 4 | 2 | 687 | **174414** | **ZNCF-63** | 4 | 687 | **161855** | **CRZNG-63** |
| 80 | 6 | 2 | 1296 | **174415** | **ZNCF-80** | 4 | 1296 | **161856** | **CRZNG-80** |
| 100 | 9 | 2 | 2254 | **174416** | **ZNCF-100** | 4 | 2254 | **161857** | **CRZNG-100** |

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 which are in direct contact with a normal industrial environment.
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, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

# Accessories

**Trunnion support LNZG**

Material:
Trunnion support: Anodised aluminium
Plain bearing: Plastic
Free of copper and PTFE




**Dimensions and ordering data**

| For size | Max. load capacity [kN] | CR ø D11 | DA ø H13 | FK ±0.1 | FN | FS | H1 | HB ø H13 |
|---|---|---|---|---|---|---|---|---|
| 32 | 0.9 | 12 | 11 | 15 | 30 | 10.5 | 15 | 6.6 |
| 40, 50 | 2.5 | 16 | 15 | 18 | 36 | 12 | 18 | 9 |
| 63, 80 | 6 | 20 | 18 | 20 | 40 | 13 | 20 | 11 |
| 100 | 9 | 25 | 20 | 25 | 50 | 16 | 24.5 | 14 |

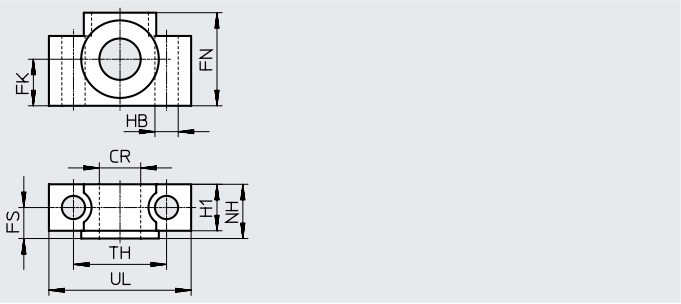
| For size | KE | NH | TH ±0.2 | UL | CRC[1)] | Weight [g] | Part no. | Type |
|---|---|---|---|---|---|---|---|---|
| 32 | 6.8 | 18 | 32 | 46 | 2 | 83 | **32959** | **LNZG-32** |
| 40, 50 | 9 | 21 | 36 | 55 | 2 | 129 | **32960** | **LNZG-40/50** |
| 63, 80 | 11 | 23 | 42 | 65 | 2 | 178 | **32961** | **LNZG-63/80** |
| 100 | 13 | 28.5 | 50 | 75 | 2 | 306 | **32962** | **LNZG-100/125** |

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 which are in direct contact with a normal industrial environment.

# Accessories

**Trunnion support CRLNZG**

Material:
High-alloy steel
Free of copper and PTFE




**Dimensions and ordering data**

| For size | Max. load capacity [kN] | CR ø D11 | FK ±0.1 | FN | FS | H1 | HB ø H13 |
|---|---|---|---|---|---|---|---|
| 32 | 0.9 | 12 | 15 | 30 | 10.5 | 15 | 6.6 |
| 40/50 | 2.5 | 16 | 18 | 36 | 12 | 18 | 9 |
| 63, 80 | 6 | 20 | 20 | 40 | 13 | 20 | 11 |
| 100 | 9 | 25 | 25 | 50 | 16 | 24.5 | 14 |

| For size | NH | TH ±0.2 | UL | CRC[1)] | Weight [g] | Part no. | Type |
|---|---|---|---|---|---|---|---|
| 32 | 18 | 32 | 46 | 4 | 205 | **161874** | **CRLNZG-32** |
| 40/50 | 21 | 36 | 55 | 4 | 323 | **161875** | **CRLNZG-40/50** |
| 63, 80 | 23 | 42 | 65 | 4 | 435 | **161876** | **CRLNZG-63/80** |
| 100 | 28.5 | 50 | 75 | 4 | 739 | **161877** | **CRLNZG-100/125** |

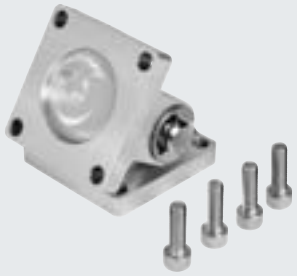
1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

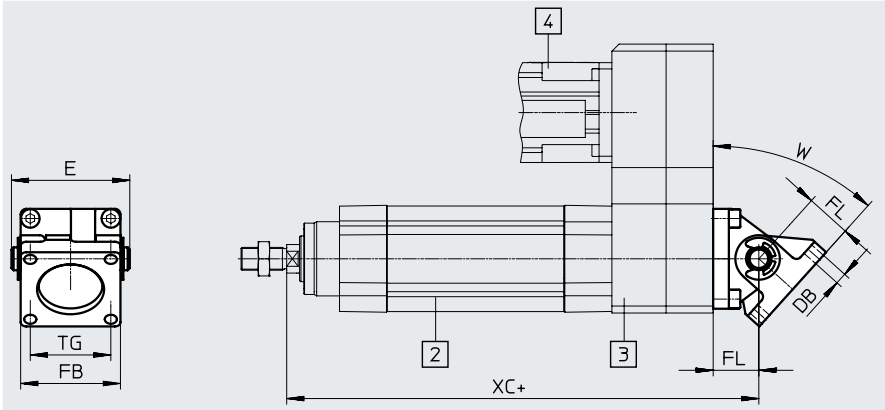
# Accessories

**Swivel flange DAMS**

Material:
Aluminium

RoHS-compliant
Free of copper and PTFE






[2] Electric cylinders ESBF
[3] Parallel kit EAMM-U
[4] Motor EMME-AS/EMMT-AS
\+ = plus stroke length

**Dimensions and ordering data**

| For size | DB<br>Ø | E | FB | FL | TG | W<br>max.<br>[°] |
|---|---|---|---|---|---|---|
| 40 | 6.5 | 63 | 52 | 25 | 38 | 32 |
| 50 | 8.5 | 73 | 60 | 27 | 46.5 | 45 |
| 63 | 8.5 | 83 | 70 | 32 | 56.5 | 42 |
| 80 | 10.5 | 103 | 90 | 36 | 72 | 31 |
| 100 | 10.5 | 127 | 110 | 41 | 89 | 36 |

| For size | XC<br>With parallel kit | | | | |
|---|---|---|---|---|---|
| | EAMM-U-60 | EAMM-U-70 | EAMM-U-86 | EAMM-U-110 | EAMM-U-145 |
| 40 | 254.5 | 263 | 267.5 | – | – |
| 50 | – | 293 | 297.5 | 308.5 | – |
| 63 | – | – | 311 | 322 | – |
| 80 | – | – | – | 368 | 385.5 |
| 100 | – | – | – | – | 415.5 |

| For size | Max. load capacity<br>[kN] | CRC[1)] | Weight<br>[g] | Part no. | Type |
|---|---|---|---|---|---|
| 40 | 3 | 3 | 258 | **2787470** | **DAMS-K-V1-40-V-R3** |
| 50 | 5 | 3 | 451 | **2787651** | **DAMS-K-V1-50-V-R3** |
| 63 | 7 | 3 | 657 | **1555443** | **DAMS-K-V1-63-V-R3** |
| 80 | 12 | 3 | 1240 | **1556588** | **DAMS-K-V1-80-V-R3** |
| 100 | 17 | 3 | 1940 | **1560237** | **DAMS-K-V1-100-V-R3** |

1) Corrosion resistance class CRC 3 to Festo standard FN 940070
High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

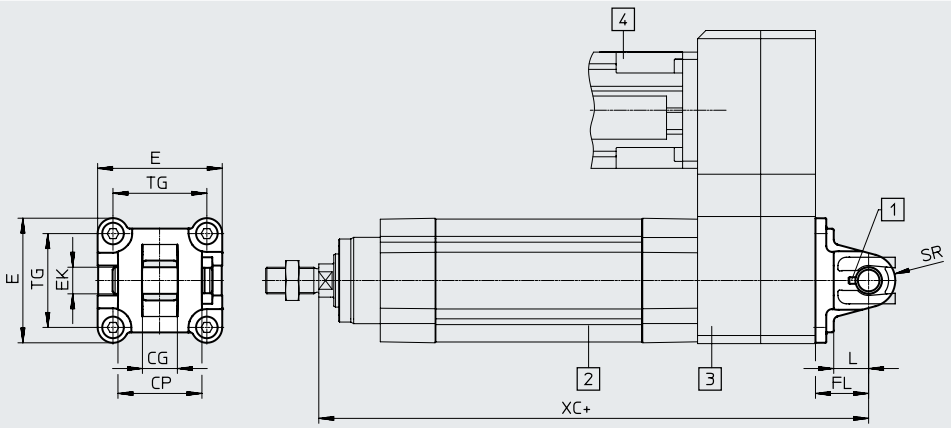
**Note**
The swivel flange SNCS or SNCB (max. load capacity of 1 kN) can be used for size 32.

# Accessories

**Swivel flange SNC**

Material:
Die-cast aluminium

Free of copper and PTFE
RoHS-compliant




[1] The pivot pin is secured against rotation with a spring pin

[2] Electric cylinders ESBF
[3] Parallel kit EAMM-U
[4] Motor EMME-AS/EMMT-AS

\+ = plus stroke length

**Dimensions and ordering data**

| For size | CG<br>H14 | CP<br>h14 | E | EK<br>Ø<br>H9 | FL<br>±0.2 | L | SR | TG |
|---|---|---|---|---|---|---|---|---|
| 32 | 14 | 34 | $45^{+0.2}_{-0.5}$ | 10 | 22 | 13 | 10 | 32.5 |
| 40 | 16 | 40 | $54_{-0.5}$ | 12 | 25 | 16 | 12 | 38 |
| 50 | 21 | 45 | $64_{-0.6}$ | 16 | 27 | 16 | 12 | 46.5 |
| 63 | 21 | 51 | $75_{-0.6}$ | 16 | 32 | 21 | 16 | 56.5 |
| 80 | 25 | 65 | $93_{-0.8}$ | 20 | 36 | 22 | 16 | 72 |
| 100 | 25 | 75 | $110^{+0.3}_{-0.8}$ | 20 | 41 | 27 | 20 | 89 |

| For size | XC<br>With parallel kit | | | | | |
|---|---|---|---|---|---|---|
| | EAMM-U-50 | EAMM-U-60 | EAMM-U-70 | EAMM-U-86 | EAMM-U-110 | EAMM-U-145 |
| 32 | 215 | 226 | 234.5 | – | – | |
| 40 | – | 254.5 | 263 | 267.5 | – | – |
| 50 | – | – | 293 | 297.5 | 308.5 | – |
| 63 | – | – | – | 311 | 322 | – |
| 80 | – | – | – | – | 368 | 385.5 |
| 100 | – | – | – | – | – | 415.5 |

| For size | Max. load capacity<br>[kN] | CRC[1] | Weight<br>[g] | Part no. | Type |
|---|---|---|---|---|---|
| 32 | 0.9 | 1 | 93 | ★ **174383** | **SNC-32** |
| 40 | 1.5 | 1 | 140 | ★ **174384** | **SNC-40** |
| 50 | 2.5 | 1 | 234 | ★ **174385** | **SNC-50** |
| 63 | 4 | 1 | 331 | ★ **174386** | **SNC-63** |
| 80 | 6 | 1 | 618 | ★ **174387** | **SNC-80** |
| 100 | 9 | 1 | 865 | **174388** | **SNC-100** |

1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind coverings, in the non-visible interior area, and parts which are covered in the application (e.g. drive shaft).

Festo core product range
★ Generally ready for dispatch from the factory within 24 hours
☆ Generally ready for dispatch from the factory within 5 days

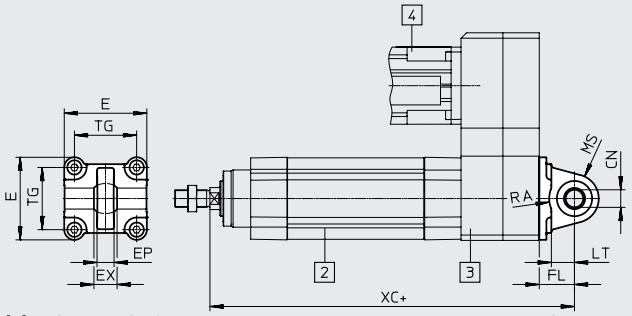
# Accessories

**Swivel flange**
**SNCS/CRSNCS/SNCS-...-R3**

Material:
SNCS 32 ... 50:
Die-cast aluminium
SNCS 63 ... 100:
Wrought aluminium alloy

CRSNCS 32 ... 80:
High-alloy stainless steel
SNCS-100-R3:
Wrought aluminium alloy with protective coating

Free of copper and PTFE
RoHS-compliant




[2] Electric cylinders ESBF
[3] Parallel kit EAMM-U
[4] Motor EMME-AS/EMMT-AS
\+ = plus stroke length

**Dimensions and ordering data**

| For size | CN Ø | | E | | EP ±0.2 | EX | FL ±0.2 | LT | MS | |
|---|---|---|---|---|---|---|---|---|---|---|
| | ESBF-... | ESBF-...-R3 | ESBF-... | ESBF-...-R3 | | | | | ESBF-... | ESBF-...-R3 |
| 32 | $10^{+0.013}$ | 10+0.015/–0.04 | 45+0.2/–0.5 | 45+0.2/–0.5 | 10.5 | 14 | 22 | 13 | $15^{+0.5}$ | $15^{+0.5}$ |
| 40 | $12^{+0.015}$ | 12+0.018/–0.04 | $54_{-0.5}$ | 54–0.5 | 12 | 16 | 25 | 16 | $17^{+0.5}$ | $17^{+0.5}$ |
| 50 | $16^{+0.015}$ | 16+0.018/–0.04 | $64_{-0.6}$ | 64–0.6 | 15 | 21 | 27 | 16 | $20^{+0.5}$ | $20^{+0.5}$ |
| 63 | $16^{+0.015}$ | 16+0.018/–0.04 | 74.5±0.5 | $75_{-0.6}$ | 15 | 21 | 32 | 21 | $23_{-0.5}$ | $22^{+0.5}$ |
| 80 | $20^{+0.018}$ | 20+0.021/–0.04 | 92.2±0.8 | $93_{-0.6}$ | 18 | 25 | 36 | 22 | $28_{-0.5}$ | $27^{+0.5}$ |
| 100 | $20^{+0.018}$ | 20+0.021/–0.04 | 109+1/–0.7 | $109_{-0.8}$ | 18 | 25 | 41 | 27 | 30±0.5 | 30±0.5 |

| For size | RA +1 | | TG | XC With parallel kit | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | ESBF-... | ESBF-...-R3 | | EAMM-U-50 | EAMM-U-60 | EAMM-U-70 | EAMM-U-86 | EAMM-U-110 | EAMM-U-145 |
| 32 | 14.5 | 14.5 | 32.5 | 215 | 226 | 234.5 | – | – | – |
| 40 | 17.5 | 17.5 | 38 | – | 254.5 | 263 | 267.5 | – | – |
| 50 | 18.5 | 19 | 46.5 | – | – | 293 | 297.5 | 308.5 | – |
| 63 | 23 | 23 | 56.5 | – | – | – | 311 | 322 | – |
| 80 | 25 | 25 | 72 | – | – | – | – | 368 | 385.5 |
| 100 | 95 | 100 | 89 | – | – | – | – | – | 415.5 |

| For size | Max. load capacity [kN] | Basic type | | | | High corrosion protection | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | CRC[1] | Weight [g] | Part no. | Type | CRC[1] | Weight [g] | Part no. | Type |
| 32 | 1 | 1 | 86 | ★ **174397** | **SNCS-32** | 4 | 161 | **2895920** | **CRSNCS-32** |
| 40 | 1.5 | 1 | 122 | ★ **174398** | **SNCS-40** | 4 | 239 | **2895921** | **CRSNCS-40** |
| 50 | 2.5 | 1 | 216 | ★ **174399** | **SNCS-50** | 4 | 403 | **2895922** | **CRSNCS-50** |
| 63 | 4 | 2 | 281 | ★ **174400** | **SNCS-63** | 4 | 576 | **2895923** | **CRSNCS-63** |
| 80 | 6 | 2 | 557 | ★ **174401** | **SNCS-80** | 4 | 1173 | **2895924** | **CRSNCS-80** |
| 100 | 9 | 2 | 683 | **174402** | **SNCS-100** | 3 | 684 | **2895925** | **SNCS-100-R3** |

1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind coverings, in the non-visible interior area, and parts which are covered in the application (e.g. drive shaft).
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 which are in direct contact with a normal industrial environment.
Corrosion resistance class CRC 3 to Festo standard FN 940070
High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.
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, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.

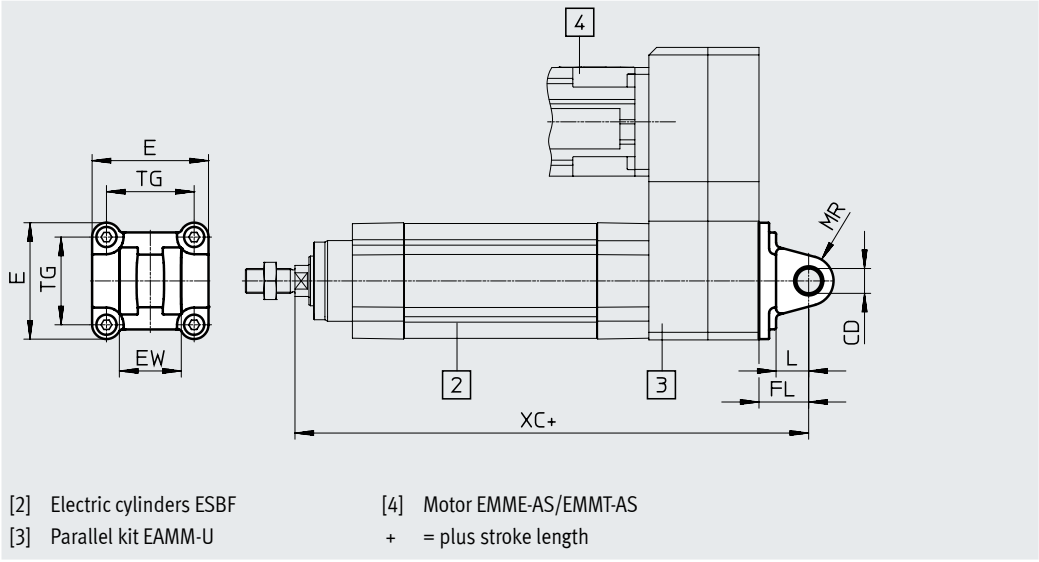
Festo core product range
★ Generally ready for dispatch from the factory within 24 hours
☆ Generally ready for dispatch from the factory within 5 days

# Accessories

**Swivel flange SNCL**

Material:
Die-cast aluminium

Free of copper and PTFE
RoHS-compliant




[2] Electric cylinders ESBF
[3] Parallel kit EAMM-U
[4] Motor EMME-AS/EMMT-AS
\+ = plus stroke length

**Dimensions and ordering data**

| For size | CD<br>ø<br>H9 | E | EW<br>–0.2/–0.6 | FL<br>±0.2 | L | MR | TG |
|---|---|---|---|---|---|---|---|
| 32 | 10 | $45^{+0.2/-0.5}$ | 26 | 22 | 13 | 10 | 32.5 |
| 40 | 12 | $54_{-0.5}$ | 28 | 25 | 16 | 12 | 38 |
| 50 | 12 | $64_{-0.6}$ | 32 | 27 | 16 | 12 | 46.5 |
| 63 | 16 | $75_{-0.6}$ | 40 | 32 | 21 | 16 | 56.5 |
| 80 | 16 | $93_{-0.8}$ | 50 | 36 | 22 | 16 | 72 |
| 100 | 20 | $110^{+0.3/-0.8}$ | 60 | 41 | 27 | 20 | 89 |

| For size | XC<br>With parallel kit | | | | | |
|---|---|---|---|---|---|---|
| | EAMM-U-50 | EAMM-U-60 | EAMM-U-70 | EAMM-U-86 | EAMM-U-110 | EAMM-U-145 |
| 32 | 215 | 226 | 234.5 | – | – | |
| 40 | – | 254.5 | 263 | 267.5 | – | – |
| 50 | – | – | 293 | 297.5 | 308.5 | – |
| 63 | – | – | – | 311 | 322 | – |
| 80 | – | – | – | – | 368 | 385.5 |
| 100 | – | – | – | – | – | 415.5 |

| For size | Max. load capacity<br>[kN] | CRC[1] | Weight<br>[g] | Part no. | Type |
|---|---|---|---|---|---|
| 32 | 0.9 | 1 | 71 | ★ **174404** | **SNCL-32** |
| 40 | 1.5 | 1 | 95 | ★ **174405** | **SNCL-40** |
| 50 | 2.5 | 1 | 158 | ★ **174406** | **SNCL-50** |
| 63 | 4 | 1 | 225 | ★ **174407** | **SNCL-63** |
| 80 | 6 | 1 | 436 | ★ **174408** | **SNCL-80** |
| 100 | 9 | 1 | 606 | **174409** | **SNCL-100** |

1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind coverings, in the non-visible interior area, and parts which are covered in the application (e.g. drive shaft).

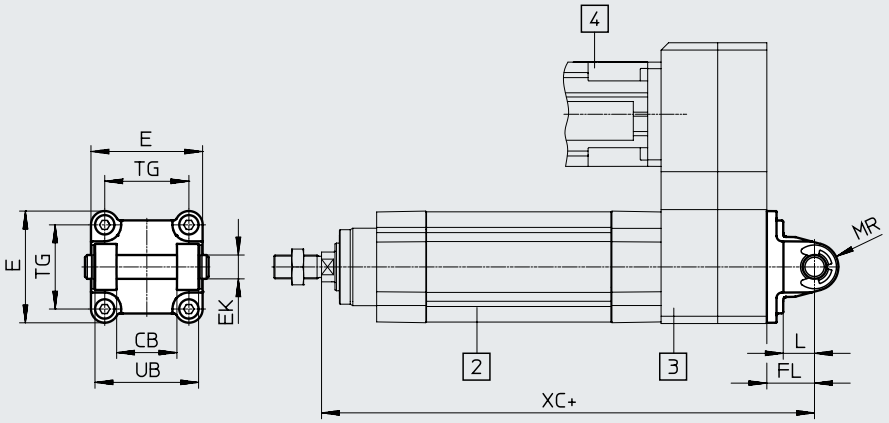
Festo core product range
★ Generally ready for dispatch from the factory within 24 hours
☆ Generally ready for dispatch from the factory within 5 days

# Accessories

**Swivel flange**
**SNCB/SNCB-...-R3**

Material:
SNCB: Die-cast aluminium
SNCB-...-R3: Die-cast aluminium with protective coating, high corrosion protection

Free of copper and PTFE
RoHS-compliant




[2] Electric cylinders ESBF
[3] Parallel kit EAMM-U
[4] Motor EMME-AS/EMMT-AS
\+ = plus stroke length

**Dimensions and ordering data**

| For size | CB<br>H14 | E | EK<br>ø<br>E8 | FL<br>±0.2 | L | MR<br>–0.5 | TG | UB<br>h14 |
|---|---|---|---|---|---|---|---|---|
| 32 | 26 | $45^{+0.2/-0.5}$ | 10 | 22 | 13 | 8.5 | 32.5 | 45 |
| 40 | 28 | $54_{-0.5}$ | 12 | 25 | 16 | 12 | 38 | 52 |
| 50 | 32 | $64_{-0.6}$ | 12 | 27 | 16 | 12 | 46.5 | 60 |
| 63 | 40 | $75_{-0.6}$ | 16 | 32 | 21 | 16 | 56.5 | 70 |
| 80 | 50 | $93_{-0.8}$ | 16 | 36 | 22 | 16 | 72 | 90 |
| 100 | 60 | $110^{+0.3/-0.8}$ | 20 | 41 | 27 | 20 | 89 | 110 |

| For size | XC<br>With parallel kit | | | | | |
|---|---|---|---|---|---|---|
| | EAMM-U-50 | EAMM-U-60 | EAMM-U-70 | EAMM-U-86 | EAMM-U-110 | EAMM-U-145 |
| 32 | 215 | 226 | 234.5 | – | – | – |
| 40 | – | 254.5 | 263 | 267.5 | – | – |
| 50 | – | – | 293 | 297.5 | 308.5 | – |
| 63 | – | – | – | 311 | 322 | – |
| 80 | – | – | – | – | 368 | 385.5 |
| 100 | – | – | – | – | – | 415.5 |

| For size | Max. load capacity [kN] | ESBF-... | | | | ESBF-...-R3 | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | CRC[1] | Weight [g] | Part no. | Type | CRC[1] | Weight [g] | Part no. | Type |
| 32 | 1 | 1 | 103 | ★ **174390** | **SNCB-32** | 3 | 100 | **176944** | **SNCB-32-R3** |
| 40 | 1.5 | 1 | 155 | ★ **174391** | **SNCB-40** | 3 | 151 | **176945** | **SNCB-40-R3** |
| 50 | 2.5 | 1 | 232 | ★ **174392** | **SNCB-50** | 3 | 228 | **176946** | **SNCB-50-R3** |
| 63 | 4 | 1 | 375 | ★ **174393** | **SNCB-63** | 3 | 371 | **176947** | **SNCB-63-R3** |
| 80 | 6 | 1 | 636 | ★ **174394** | **SNCB-80** | 3 | 632 | **176948** | **SNCB-80-R3** |
| 100 | 9 | 1 | 1035 | **174395** | **SNCB-100** | 3 | 986 | **176949** | **SNCB-100-R3** |

1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind coverings, in the non-visible interior area, and parts which are covered in the application (e.g. drive shaft).
Corrosion resistance class CRC 3 to Festo standard FN 940070
High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

Festo core product range
★ Generally ready for dispatch from the factory within 24 hours
☆ Generally ready for dispatch from the factory within 5 days

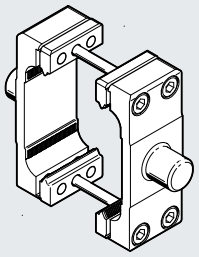
# Accessories

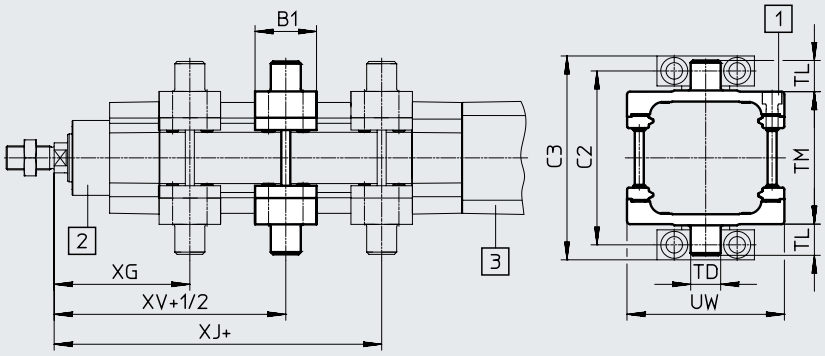
**Trunnion flange kit DAMT**

Material:
Galvanised steel

Free of copper and PTFE
RoHS-compliant

The kit can be attached at any position along the profile barrel of the cylinder. The trunnion flange kit cannot be mounted in the vicinity of the motor in conjunction with the parallel kit EAMM-U.






[1] Max. tightening torque
[2] Electric cylinders ESBF
[3] Axial kit EAMM-A

\+ = plus stroke length
+1/2 = plus stroke length

**Dimensions and ordering data**

| For size | B1 | C2 | C3 | TD ø E9 | TL | TM | UW | XG |
|---|---|---|---|---|---|---|---|---|
| 32 | 30 | 71 | 86 | 12 | 12 | 50 | 65 | 66 |
| 40 | 32 | 87 | 105 | 16 | 16 | 63 | 75 | 75.5 |
| 50 | 34 | 99 | 117 | 16 | 16 | 75 | 95 | 83.5 |
| 63 | 41 | 116 | 136 | 20 | 20 | 90 | 105 | 90.5 |
| 80 | 44 | 136 | 156 | 20 | 20 | 110 | 130 | 107 |
| 100 | 48 | 164 | 189 | 25 | 25 | 132 | 145 | 114 |

| For size | XJ | XV | Max. tightening torque [Nm] | Max. load capacity [kN] | CRC[1] | Weight [g] | Part no. | Type |
|---|---|---|---|---|---|---|---|---|
| 32 | 107.5 | 86.8 | 4+1 | 0.9 | 1 | 212.7 | ★ **2213233** | **DAMT-V1-32-A** |
| 40 | 127.5 | 101.5 | 8+1 | 1.5 | 1 | 387.5 | ★ **2214899** | **DAMT-V1-40-A** |
| 50 | 152.5 | 118 | 8+2 | 2.5 | 1 | 607.6 | ★ **2214909** | **DAMT-V1-50-A** |
| 63 | 154.5 | 122.5 | 18+2 | 4 | 1 | 910.5 | ★ **2214971** | **DAMT-V1-63-A** |
| 80 | 189 | 148 | 28+2 | 6 | 1 | 1493.7 | ★ **163529** | **DAMT-V1-80-A** |
| 100 | 212 | 163 | 28+2 | 9 | 1 | 2094.8 | **163530** | **DAMT-V1-100-A** |

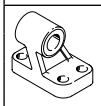
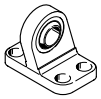
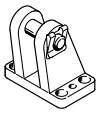
1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind coverings, in the non-visible interior area, and parts which are covered in the application (e.g. drive shaft).

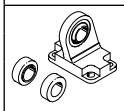
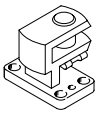
Festo core product range
★ Generally ready for dispatch from the factory within 24 hours
☆ Generally ready for dispatch from the factory within 5 days

# Accessories

**Ordering data – Mounting components**

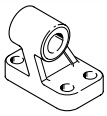
Data sheets → Internet: clevis foot

| Designation | For size | Max. load capacity [kN] | Part no. | Type |
|---|---|---|---|---|
| Clevis foot LNG | | | | |
|  | 32 | 0.9 | ★ 33890 | LNG-32 |
| | 40 | 1.5 | ★ 33891 | LNG-40 |
| | 50 | 2.5 | ★ 33892 | LNG-50 |
| | 63 | 4 | ★ 33893 | LNG-63 |
| | 80 | 6 | ★ 33894 | LNG-80 |
| | 100 | 9 | 33895 | LNG-100 |
| Clevis foot LSNG | | | | |
|  | 32 | 0.9 | 31740 | LSNG-32 |
| | 40 | 1.5 | 31741 | LSNG-40 |
| | 50 | 2.5 | 31742 | LSNG-50 |
| | 63 | 4 | 31743 | LSNG-63 |
| | 80 | 6 | 31744 | LSNG-80 |
| | 100 | 9 | 31745 | LSNG-100 |
| Clevis foot LBG | | | | |
|  | 32 | 0.9 | 31761 | LBG-32 |
| | 40 | 1.5 | 31762 | LBG-40 |
| | 50 | 2.5 | 31763 | LBG-50 |
| | 63 | 4 | 31764 | LBG-63 |
| | 80 | 6 | 31765 | LBG-80 |
| | 100 | 9 | 31766 | LBG-100 |

| Designation | For size | Max. load capacity [kN] | Part no. | Type |
|---|---|---|---|---|
| Clevis foot LSN | | | | |
|  | 32 | 0.9 | 5561 | LSN-32 |
| | 40 | 1.5 | 5562 | LSN-40 |
| | 50 | 2.5 | 5563 | LSN-50 |
| | 63 | 4 | 5564 | LSN-63 |
| | 80 | 6 | 5565 | LSN-80 |
| | 100 | 9 | 5566 | LSN-100 |
| Clevis foot LSNSG | | | | |
| | 32 | 0.9 | 31747 | LSNSG-32 |
| | 40 | 1.5 | 31748 | LSNSG-40 |
| | 50 | 2.5 | 31749 | LSNSG-50 |
| | 63 | 4 | 31750 | LSNSG-63 |
| | 80 | 6 | 31751 | LSNSG-80 |
| | 100 | 9 | 31752 | LSNSG-100 |
| Right angle clevis foot LQG | | | | |
|  | 32 | 0.9 | 31768 | LQG-32 |
| | 40 | 1.5 | 31769 | LQG-40 |
| | 50 | 2.5 | 31770 | LQG-50 |
| | 63 | 4 | 31771 | LQG-63 |
| | 80 | 6 | 31772 | LQG-80 |
| | 100 | 9 | 31773 | LQG-100 |

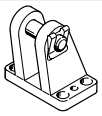
**Ordering data – Mounting components, corrosion-resistant**

Data sheets → Internet: clevis foot

| Designation | For size | Max. load capacity [kN] | Part no. | Type |
|---|---|---|---|---|
| Clevis foot CRLNG | | | | |
|  | 32 | 0.9 | 161840 | CRLNG-32 |
| | 40 | 1.5 | 161841 | CRLNG-40 |
| | 50 | 2.5 | 161842 | CRLNG-50 |
| | 63 | 4 | 161843 | CRLNG-63 |
| | 80 | 6 | 161844 | CRLNG-80 |
| | 100 | 9 | 161845 | CRLNG-100 |

**Ordering data – Mounting components, high corrosion protection**

Data sheets → Internet: clevis foot

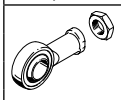
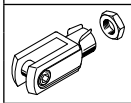
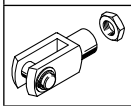
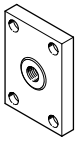
| Designation | For size | Max. load capacity [kN] | Part no. | Type |
|---|---|---|---|---|
| Clevis foot LBG-R3 | | | | |
|  | 32 | 0.9 | 2078790 | LBG-32-R3 |
| | 40 | 1.5 | 2078792 | LBG-40-R3 |
| | 50 | 2.5 | 2078794 | LBG-50-R3 |
| | 63 | 4 | 2078795 | LBG-63-R3 |
| | 80 | 6 | 2078797 | LBG-80-R3 |
| | 100 | 9 | 2078799 | LBG-100-R3 |

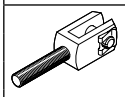
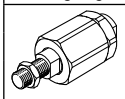
Festo core product range
★ Generally ready for dispatch from the factory within 24 hours
☆ Generally ready for dispatch from the factory within 5 days

# Accessories

**Ordering data – Piston rod attachments**

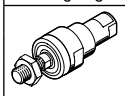
Data sheets → Internet: piston rod attachment

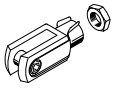
| Designation | For size | Max. load capacity [kN] | Part no. | Type |
|---|---|---|---|---|
| Rod eye SGS | | | | |
|  | 32 | 0.9 | ★ **9261** | **SGS-M10x1.25** |
| | 40 | 1.5 | ★ **9262** | **SGS-M12x1.25** |
| | 50, 63 | 4 | ★ **9263** | **SGS-M16x1.5** |
| | 80, 100 | 9 | ★ **9264** | **SGS-M20x1.5** |
| Rod clevis SG | | | | |
|  | 32 | 0.9 | ★ **6144** | **SG-M10x1.25** |
| | 40 | 1.5 | ★ **6145** | **SG-M12x1.25** |
| | 50, 63 | 4 | ★ **6146** | **SG-M16x1.5** |
|  | 80, 100 | 9 | ★ **6147** | **SG-M20x1.5** |
| Coupling piece KSZ | | | | |
|  | 32 | 0.9 | **36125** | **KSZ-M10x1.25** |
| | 40 | 1.5 | **36126** | **KSZ-M12x1.25** |
| | 50, 63 | 4 | **36127** | **KSZ-M16x1.5** |
| | 80, 100 | 9 | **36128** | **KSZ-M20x1.5** |

| Designation | For size | Max. load capacity [kN] | Part no. | Type |
|---|---|---|---|---|
| Rod clevis SGA | | | | |
|  | 32 | 0.9 | **32954** | **SGA-M10x1.25** |
| | 40 | 1.5 | **10767** | **SGA-M12x1.25** |
| | 50, 63 | 4 | **10768** | **SGA-M16x1.5** |
| | 80, 100 | 9 | **10769** | **SGA-M20x1.5** |
| Self-aligning rod coupler FK | | | | |
|  | 32 | 0.9 | ★ **6140** | **FK-M10x1.25** |
| | 40 | 1.5 | ★ **6141** | **FK-M12x1.25** |
| | 50, 63 | 4 | ★ **6142** | **FK-M16x1.5** |
| | 80, 100 | 9 | ★ **6143** | **FK-M20x1.5** |

**Ordering data – Piston rod attachments, corrosion-resistant**

Data sheets → Internet: piston rod attachment

| Designation | For size | Max. load capacity [kN] | Part no. | Type |
|---|---|---|---|---|
| Rod eye CRSGS | | | | |
| | 32 | 0.9 | **195582** | **CRSGS-M10x1.25** |
| | 40 | 1.5 | **195583** | **CRSGS-M12x1.25** |
| | 50, 63 | 4 | **195584** | **CRSGS-M16x1.5** |
| | 80, 100 | 9 | **195585** | **CRSGS-M20x1.5** |
| Self-aligning rod coupler CRFK | | | | |
|  | 32 | 0.9 | **2305778** | **CRFK-M10x1.25** |
| | 40 | 1.5 | **2305779** | **CRFK-M12x1.25** |
| | 50, 63 | 4 | **2490673** | **CRFK-M16x1.5** |
| | 80, 100 | 9 | **2545677** | **CRFK-M20x1.5** |

| Designation | For size | Max. load capacity [kN] | Part no. | Type |
|---|---|---|---|---|
| Rod clevis CRSG | | | | |
|  | 32 | 0.9 | **13569** | **CRSG-M10x1.25** |
| | 40 | 1.5 | **13570** | **CRSG-M12x1.25** |
| | 50, 63 | 4 | **13571** | **CRSG-M16x1.5** |
| | 80, 100 | 9 | **13572** | **CRSG-M20x1.5** |

Festo core product range

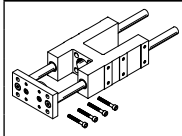
★ Generally ready for dispatch from the factory within 24 hours

☆ Generally ready for dispatch from the factory within 5 days

# Accessories

**Ordering data – Guide units**

Data sheets → Internet: eagf



| Stroke [mm] | Part no. | Type |
|---|---|---|
| **For size 32** | | |
| 10 ... 100 | ☆ **2782679** | **EAGF-V2-KF-32-100** |
| 10 ... 200 | ☆ **2782818** | **EAGF-V2-KF-32-200** |
| 10 ... 320 | ☆ **2782885** | **EAGF-V2-KF-32-320** |
| 10 ... 400 | ☆ **2782923** | **EAGF-V2-KF-32-400** |
| 1 ... 500 | **3038083** | **EAGF-V2-KF-32-** |
| **For size 50** | | |
| 10 ... 100 | ☆ **2783639** | **EAGF-V2-KF-50-100** |
| 10 ... 200 | ☆ **2784152** | **EAGF-V2-KF-50-200** |
| 10 ... 320 | ☆ **2784164** | **EAGF-V2-KF-50-320** |
| 10 ... 400 | ☆ **2784184** | **EAGF-V2-KF-50-400** |
| 1 ... 500 | **3038094** | **EAGF-V2-KF-50-** |
| **For size 80** | | |
| 10 ... 100 | **1725846** | **EAGF-V2-KF-80-100** |
| 10 ... 200 | **1725847** | **EAGF-V2-KF-80-200** |
| 10 ... 320 | **1725848** | **EAGF-V2-KF-80-320** |
| 10 ... 400 | **1725849** | **EAGF-V2-KF-80-400** |
| 1 ... 500 | **2608528** | **EAGF-V2-KF-80-** |

| Stroke [mm] | Part no. | Type |
|---|---|---|
| **For size 40** | | |
| 10 ... 100 | ☆ **2782939** | **EAGF-V2-KF-40-100** |
| 10 ... 200 | ☆ **2782976** | **EAGF-V2-KF-40-200** |
| 10 ... 320 | ☆ **2783047** | **EAGF-V2-KF-40-320** |
| 10 ... 400 | ☆ **2783080** | **EAGF-V2-KF-40-400** |
| 1 ... 500 | **3038089** | **EAGF-V2-KF-40-** |
| **For size 63** | | |
| 10 ... 100 | ☆ **1725842** | **EAGF-V2-KF-63-100** |
| 10 ... 200 | ☆ **1725843** | **EAGF-V2-KF-63-200** |
| 10 ... 320 | ☆ **1725844** | **EAGF-V2-KF-63-320** |
| 10 ... 400 | ☆ **1725845** | **EAGF-V2-KF-63-400** |
| 1 ... 500 | **2608521** | **EAGF-V2-KF-63-** |
| **For size 100** | | |
| 10 ... 100 | **1725850** | **EAGF-V2-KF-100-100** |
| 10 ... 200 | **1725851** | **EAGF-V2-KF-100-200** |
| 10 ... 320 | **1725852** | **EAGF-V2-KF-100-320** |
| 10 ... 400 | **1725853** | **EAGF-V2-KF-100-400** |
| 1 ... 500 | **2608532** | **EAGF-V2-KF-100-** |

**Note**

A guide unit with a suitable length must be selected for cylinders with piston rod extensions.

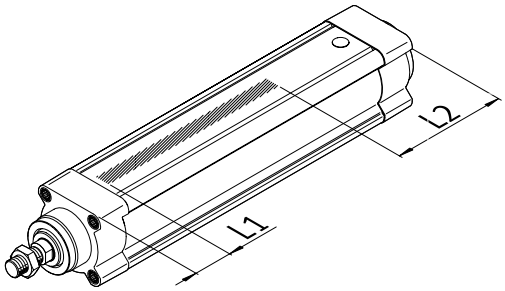
| | | |
|---|---|---|
| Festo core product range | ★ | Generally ready for dispatch from the factory within 24 hours |
| | ☆ | Generally ready for dispatch from the factory within 5 days |

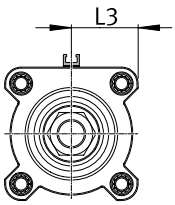
# Accessories

## Sensor mounting

The sensor mountings can only be attached within the marked area due to the asymmetry of the internal magnet.

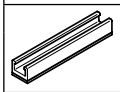
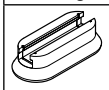
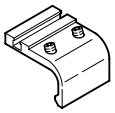
Reliable switching of the proximity sensors is not guaranteed outside of this area.




| Size | L1 | L2 | L3 |
|---|---|---|---|
| 32 | 26 | 48 | 22.3 |
| 40 | 30 | 65 | 26.5 |
| 50 | 30 | 84 | 31.5 |
| 63 | 33 | 99 | 37 |
| 80 | 39 | 132 | 46 |
| 100 | 39 | 151 | 54.5 |

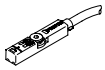
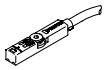
**Ordering data – Sensor mounting for T-slot**

| | For diam. | Description | Length [mm] | Part no. | Type |
|---|---|---|---|---|---|
| **Sensor rail** | | | | | |
|  | 32 ... 100 | • For proximity sensor SMT/CRSMT-8<br>• The sensor rail is glued onto the cylinder | 50 | **1600093** | **SAMH-N8-SR-50** |
| | | | 100 | **1600118** | **SAMH-N8-SR-100** |
| **Mounting kit** | | | | | |
|  | 32 ... 100 | • For proximity sensor SMT/CRSMT-8<br>• The overall length corresponds to the length of the sensing range plus an adjusting range of approx. 10 mm for the proximity sensors<br>• The kit is glued onto the cylinder | 35 | **525565** | **CRSMB-8-32/100** |
| **Mounting kit** | | | | | |
|  | 32, 40 | • For proximity sensor SMT/CRSMT-8<br>• The kit is mounted on the profile using two screws | 27 | **175705** | **SMB-8-FENG-32/40** |
| | 50, 63 | | | **175706** | **SMB-8-FENG-50/63** |
| | 80, 100 | | | **175707** | **SMB-8-FENG-80/100** |

# Accessories

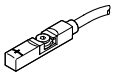
**Ordering data – Proximity sensors for T-slot, magneto-resistive**

Data sheets → Internet: smt

| | Type of mounting | Switching output | Electrical connection | Cable length [m] | Part no. | Type |
|---|---|---|---|---|---|---|
| **N/O contact** | | | | | | |
|  | Insertable in the slot from above, flush with the cylinder profile, short design | PNP | Cable, 3-wire | 2.5 | ★ **574335** | **SMT-8M-A-PS-24V-E-2.5-OE** |
| | | | Plug M8x1, 3-pin | 0.3 | ★ **574334** | **SMT-8M-A-PS-24V-E-0.3-M8D** |
| | | NPN | Cable, 3-wire | 2.5 | ★ **574338** | **SMT-8M-A-NS-24V-E-2,5-OE** |
| | | | Plug M8x1, 3-pin | 0.3 | ★ **574339** | **SMT-8M-A-NS-24V-E-0,3-M8D** |
| **N/C contact** | | | | | | |
|  | Insertable in the slot from above, flush with the cylinder profile, short design | PNP | Cable, 3-wire | 7.5 | ★ **574340** | **SMT-8M-A-PO-24V-E-7.5-OE** |
| | | NPN | | 2.5 | **8138000** | **SMT-8M-A-NO-24V-E-2,5-OE** |
| | | | | 7.5 | **8138001** | **SMT-8M-A-NO-24V-E-7,5-OE** |

**Ordering data – Proximity sensors for T-slot, magneto-resistive, corrosion resistant**

Data sheets → Internet: crsmt

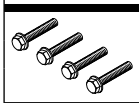
| | Type of mounting | Switching output | Electrical connection | Cable length [m] | Part no. | Type |
|---|---|---|---|---|---|---|
| **N/O contact** | | | | | | |
|  | Inserted in the slot from above, flush with the mounting kit | PNP | Cable, 3-wire | 5 | **574380** | **CRSMT-8M-PS-24V-K-5.0-OE** |
| | | | Plug M12x1, 3-pin | 0.3 | **574382** | **CRSMT-8M-PS-24V-K-0.3-M12** |
| | | | Plug M8x1, 3-pin | 0.3 | **574383** | **CRSMT-8M-PS-24V-K-0.3-M8D** |

**Ordering data – Connecting cables**

Data sheets → Internet: nebu

| | Electrical connection, left | Electrical connection, right | Cable length [m] | Part no. | Type |
|---|---|---|---|---|---|
| | Straight socket, M8x1, 3-pin | Cable, open end, 3-wire | 2.5 | ★ **541333** | **NEBU-M8G3-K-2.5-LE3** |
| | | | 5 | ★ **541334** | **NEBU-M8G3-K-5-LE3** |
| | Straight socket, M12x1, 5-pin | Cable, open end, 3-wire | 2.5 | ★ **541363** | **NEBU-M12G5-K-2.5-LE3** |
| | | | 5 | ★ **541364** | **NEBU-M12G5-K-5-LE3** |
| | Angled socket, M8x1, 3-pin | Cable, open end, 3-wire | 2.5 | ★ **541338** | **NEBU-M8W3-K-2.5-LE3** |
| | | | 5 | ★ **541341** | **NEBU-M8W3-K-5-LE3** |
| | Angled socket, M12x1, 5-pin | Cable, open end, 3-wire | 2.5 | **541367** | **NEBU-M12W5-K-2.5-LE3** |
| | | | 5 | **541370** | **NEBU-M12W5-K-5-LE3** |

**Ordering data – Plug screws, corrosion-resistant**

| | For diam. | Material | CRC[1] | Weight [g] | Part no. | Type | PU[2] |
|---|---|---|---|---|---|---|---|
|  | 32, 40 | High-alloy steel | 3 | 6.5 | **1355016** | **DAMD-PS-M6-12-R1** | 4 |
| | 50, 63 | | 3 | 17.5 | **650121** | **DAMD-PS-M8-16-R1** | |
| | 80, 100 | | 3 | 23 | **1355026** | **DAMD-PS-M10-16-R1** | |

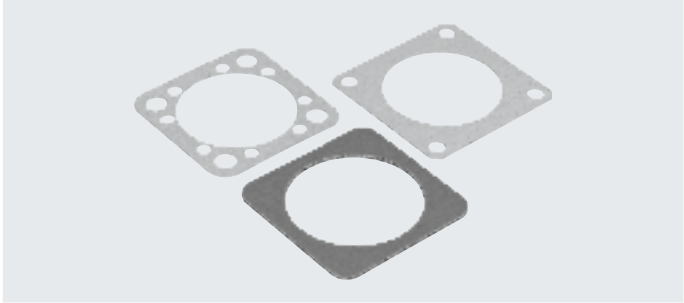
1) Corrosion resistance class CRC 3 to Festo standard FN 940070
High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

2) Packaging unit

Festo core product range ★ Generally ready for dispatch from the factory within 24 hours
☆ Generally ready for dispatch from the factory within 5 days

# Accessories

**Seal set**
Contains paint-wetting impairment substances
RoHS-compliant



**Ordering data**

| Type | For axial kit | For electric cylinder | Ambient temperature [°C] | CRC[1] | Part no. | Type |
|---|---|---|---|---|---|---|
| EADS-F-D32-40A | EAMM-A-D32-40A | ESBF, EGSL, ERMB, ERMH | –25 ... +60 | 4 | **1561526** | **EADS-F-D32-40A** |
| EADS-F-D32-40G | EAMM-A-D32-40G | | | | **2253500** | **EADS-F-D32-40G** |
| EADS-F-D32-40P | EAMM-A-D32-40P | | | | **2207219** | **EADS-F-D32-40P** |
| EADS-F-D32-60G/H | EAMM-A-D32-60G<br>EAMM-A-D32-60H | | | | **8022150** | **EADS-F-D32-60G/H** |
| EADS-F-D32-60P | EAMM-A-D32-60P | | | | **2234012** | **EADS-F-D32-60P** |
| EADS-F-D32-67A | EAMM-A-D32-67A | | | | **2253501** | **EADS-F-D32-67A** |
| EADS-F-D32-42A | EAMM-A-D32-42A | | | | **1561527** | **EADS-F-D32-42A** |
| EADS-F-D32-55A | EAMM-A-D32-55A | | | | **1561528** | **EADS-F-D32-55A** |
| EADS-F-D32-57A | EAMM-A-D32-57A | | | | **1561529** | **EADS-F-D32-57A** |
| EADS-F-D40-40G | EAMM-A-D40-40G | | | | **2253502** | **EADS-F-D40-40G** |
| EADS-F-D40-55A | EAMM-A-D40-55A | | | | **1561530** | **EADS-F-D40-55A** |
| EADS-F-D40-57A | EAMM-A-D40-57A | | | | **1561531** | **EADS-F-D40-57A** |
| EADS-F-D40-60G/H | EAMM-A-D40-60G<br>EAMM-A-D40-60H | | | | **2253503** | **EADS-F-D40-60G/H** |
| EADS-F-D40-60P | EAMM-A-D40-60P | | | | **2151545** | **EADS-F-D40-60P** |
| EADS-F-D40-67A | EAMM-A-D40-67A | | | | **2253504** | **EADS-F-D40-67A** |
| EADS-F-D40-70A | EAMM-A-D40-70A | | | | **1561532** | **EADS-F-D40-70A** |
| EADS-F-D40-87A | EAMM-A-D40-87A | | | | **1561533** | **EADS-F-D40-87A** |
| EADS-F-D50-60G/H | EAMM-A-D50-60G<br>EAMM-A-D50-60H | | | | **2733792** | **EADS-F-D50-60G/H** |
| EADS-F-D50-70A | EAMM-A-D50-70A | | | | **2733789** | **EADS-F-D50-70A** |
| EADS-F-D50-80G | EAMM-A-D50-80G | | | | **2733793** | **EADS-F-D50-80G** |
| EADS-F-D50-80P | EAMM-A-D50-80P | | | | **2733791** | **EADS-F-D50-80P** |
| EADS-F-D50-87A | EAMM-A-D50-87A | | | | **2733788** | **EADS-F-D50-87A** |
| EADS-F-D50-100A | EAMM-A-D50-100A | | | | **2733790** | **EADS-F-D50-100A** |
| EADS-F-D60-70A | EAMM-A-D60-70A | | | | **8022145** | **EADS-F-D60-70A** |
| EADS-F-D60-80G | EAMM-A-D60-80G | | | | **8022146** | **EADS-F-D60-80G** |
| EADS-F-D60-60G/H | EAMM-A-D60-60G<br>EAMM-A-D60-60H | | | | **2253505** | **EADS-F-D60-60G/H** |
| EADS-F-D60-80P | EAMM-A-D60-80P | | | | **2218523** | **EADS-F-D60-80P** |
| EADS-F-D60-87A | EAMM-A-D60-87A | | | | **1561536** | **EADS-F-D60-87A** |
| EADS-F-D60-100A | EAMM-A-D60-100A | | | | **2253507** | **EADS-F-D60-100A** |
| EADS-F-D80-80G | EAMM-A-D80-80G | | | | **8022147** | **EADS-F-D80-80G** |
| EADS-F-D80-100A | EAMM-A-D80-100A | | | | **1593617** | **EADS-F-D80-100A** |
| EADS-F-D80-140A | EAMM-A-D80-140A | | | | **1593671** | **EADS-F-D80-140A** |
| EADS-F-D100-100A | EAMM-A-D100-100A | | | | **3356966** | **EADS-F-D100-100A** |
| EADS-F-D100-120G | EAMM-A-D100-120G | | | | **8022148** | **EADS-F-D100-120G** |
| EADS-F-D100-140A | EAMM-A-D100-140A | | | | **1593991** | **EADS-F-D100-140A** |

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, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing (→ also FN 940082), using appropriate media.