Electric cylinders ESBF, with spindle drive

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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 25

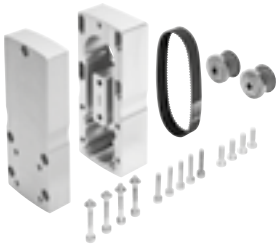
Note

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

Motor mounting kit → Page 25

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 41

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 and type codes

Bellows kit EADB for use in wet environments

→ Page 41

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 overpressure arising in the interior of the cylinder.
It also prevents unwanted media 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

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	

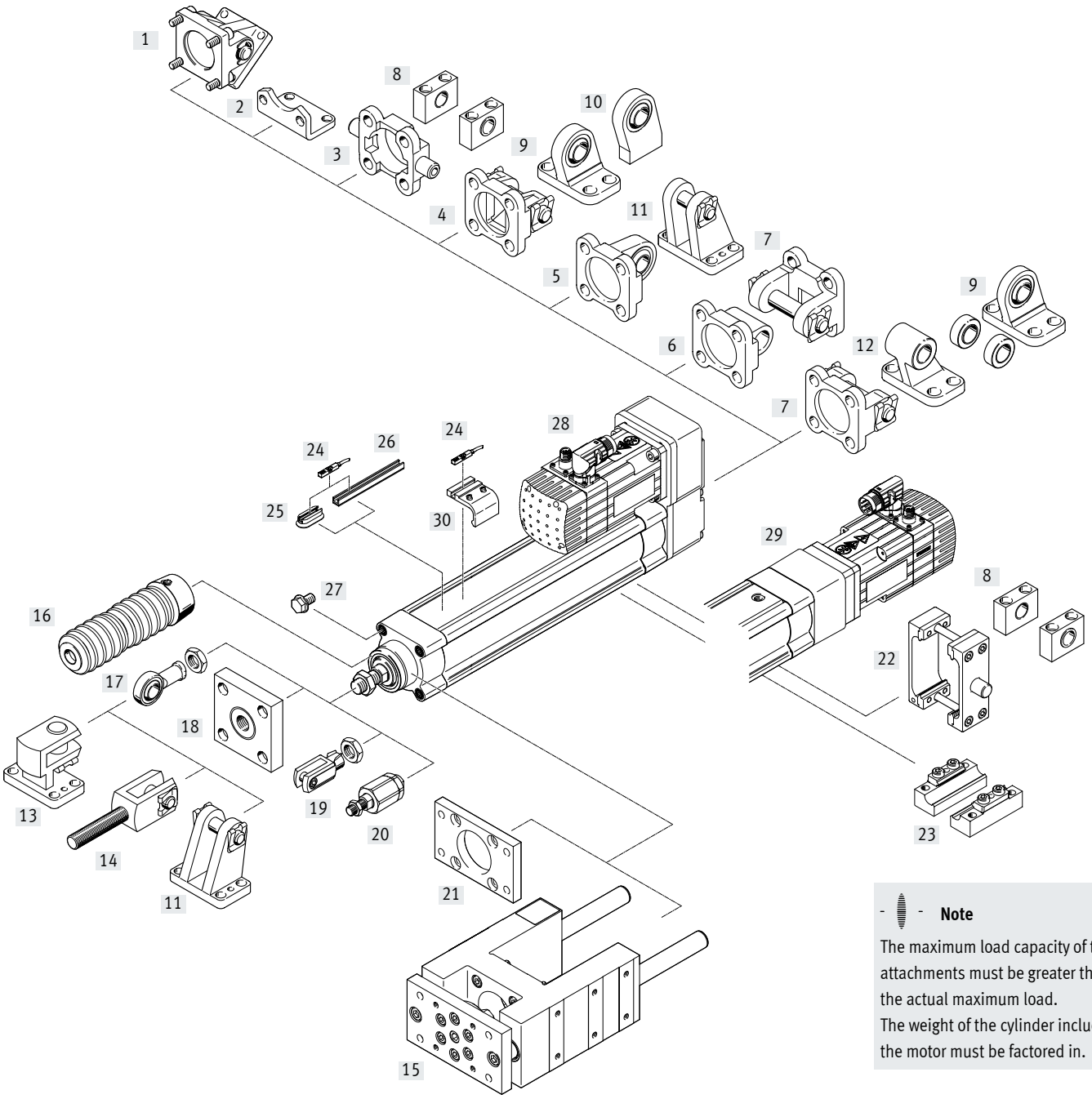
007	Degree of protection, electrical system	
S6	IP40	
S1	IP65	

008	Corrosion protection	
	Standard	
R3	High corrosion protection	

009	Additional characteristics	
	None	
F1	Food-safe according to supplementary information on materials	

010	Piston rod extension	
...E	1 ... 500 mm	

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] Swivel flange DAMS	With parallel motor mounting, for spherical bearing	■	53
[2] Foot mounting HNC/CRHNC	For mounting the cylinder. The foot mounting can only be secured at the rear on the parallel kit	–	48
[3] Trunnion flange ZNCF/CRZNG	For spherical bearing	–	50
[4] Swivel flange SNC	With parallel motor mounting	–	54
[5] Swivel flange SNCS/CRSNCS/SNCS-...-R3	With parallel motor mounting	–	55
[6] Swivel flange SNCL	With parallel motor mounting	–	56

1) Indicates which accessories can be used within the entire force range. For restricted force ranges see the relevant accessory part, from page 48

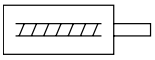
Peripherals overview

Mounting attachments and accessories				
		Description	Suitable for high forces[1]	→ Page/Internet
[7]	Swivel flange SNCB/SNCB-...-R3	With parallel motor mounting, for spherical bearing	–	57
[8]	Trunnion support LNZG/CRLNZG	For cylinders with trunnion flange mounting	–	51
[9]	Clevis foot LSNG	With parallel motor mounting, with spherical bearing	–	59
[10]	Clevis foot LSNSG	With parallel motor mounting, weld-on, with spherical bearing	–	59
[11]	Clevis foot LBG/LBG-...-R3	With parallel motor mounting, for spherical bearing	–	59
[12]	Clevis foot LNG/CRLNG	With parallel motor mounting	–	59
[13]	Right angle clevis foot LQG	For rod eye SGS	–	59
[14]	Rod clevis SGA	For swivel mounting of the cylinder	■	60
[15]	Guide unit EAGF	• For protecting electric cylinders against rotation at high torque loads • Cannot be used in combination with bellows kit EADB	■	61
[16]	Bellows kit EADB	• Protects the cylinder (piston rod, seal and bearings) against a wide range of media and thus prevents premature wear • The kit can only be used in combination with an extended piston rod (...E)	■	41
[17]	Rod eye SGS/CRSGS	With spherical bearing	■	60
[18]	Coupling piece KSZ	For compensating radial deviations	–	60
[19]	Rod clevis SG/CRSG	Permits a swivelling movement of the cylinder in one plane	■	60
[20]	Self-aligning rod coupler FK/CRFK	For compensating radial and angular deviations	–	60
[21]	Flange mounting EAHH	• On the bearing cap • Cannot be used in combination with bellows kit EADB	■	49
[22]	Trunnion flange kit DAMT	For mounting anywhere along the cylinder profile barrel. Cannot be mounted in the vicinity of the motor with parallel motor mounting	–	58
[23]	Profile mounting EAHF-...-P	• For mounting the electric cylinder via the profile • Cannot be mounted in conjunction with the parallel kit EAMM-U (in the vicinity of the motor) in some combinations	■	47
[24]	Proximity sensors SMT/CRSMT-8	For position sensing	■	63
[25]	Mounting kit CRSMB	For proximity sensor with T-slot	■	62
[26]	Sensor rail SAMH	For proximity sensor with T-slot	■	62
[27]	Plug screw DAMD-PS	For covering unused mounting threads	■	63
[28]	Parallel kit EAMM-U	For parallel motor mounting	■	36
[29]	Axial kit EAMM-A	For axial motor mounting	■	25
[30]	Mounting kit SMB-8-FENG	For proximity sensor with T-slot	■	62

1) Indicates which accessories can be used within the entire force range. For restricted force ranges see the relevant accessory part, from page 48.

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 10
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

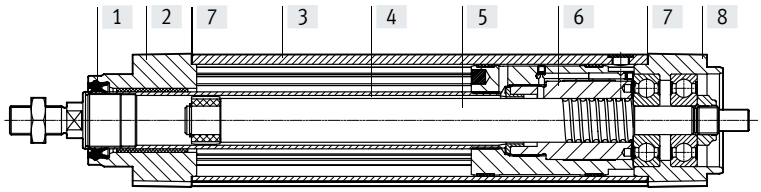
The mass moment of inertia J_A of the electric cylinder is calculated as follows:

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

Data sheet

Materials

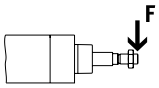
Sectional view

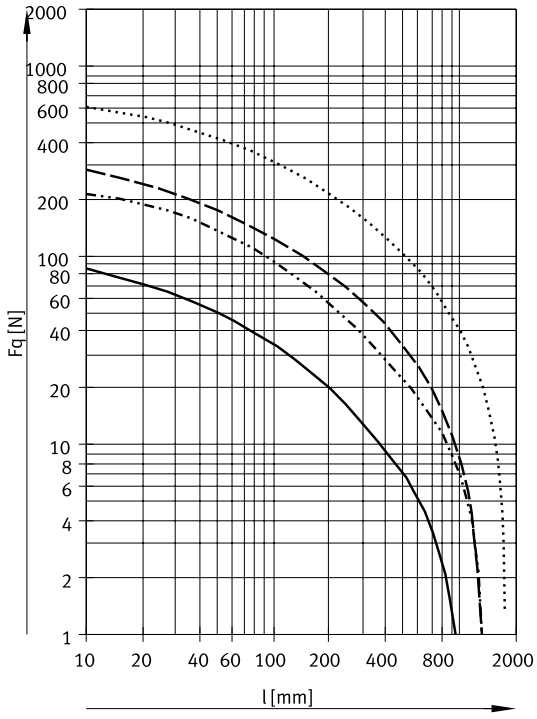


Size		32 ... 50	63 ... 100
[1]	Wiper	TPE-U	
[2]	Bearing cap	Coated wrought aluminium alloy	Coated gravity die-cast aluminium
[3]	Cylinder barrel	Smooth-anodised wrought aluminium alloy	
[4]	Piston rod	High-alloy stainless steel	
[5]	Spindle		
	ESBF-BS-...	Rolled steel	
	ESBF-LS-...	High-strength steel	
[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	

Lateral force Fq as a function of stroke length l

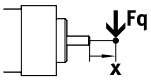
On the piston rod



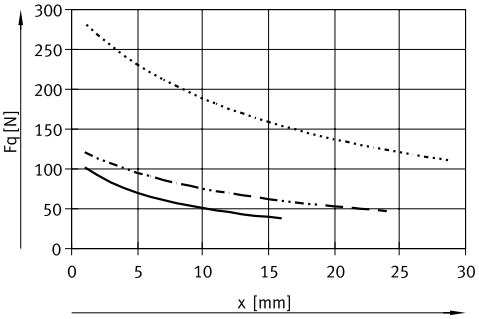


ESBF-32
ESBF-40
ESBF-50, 63
ESBF-80, 100

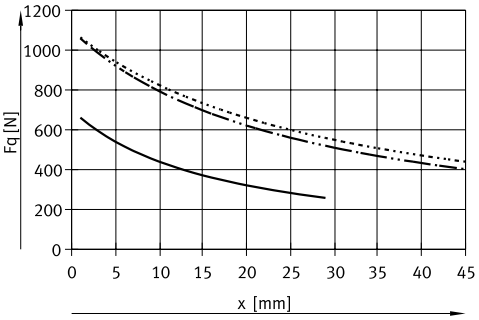
On the drive shaft



ESBF-BS-32/40/50



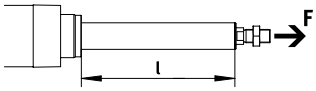
ESBF-BS-63/80/100



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

Data sheet

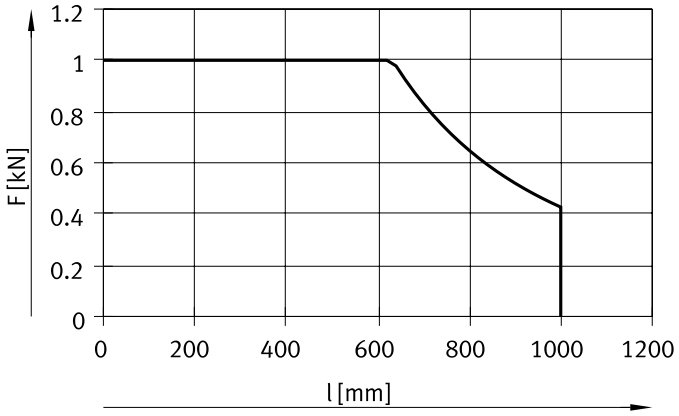
Max. pressure force F as a function of piston rod length l (l = stroke + optional piston rod extension)



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

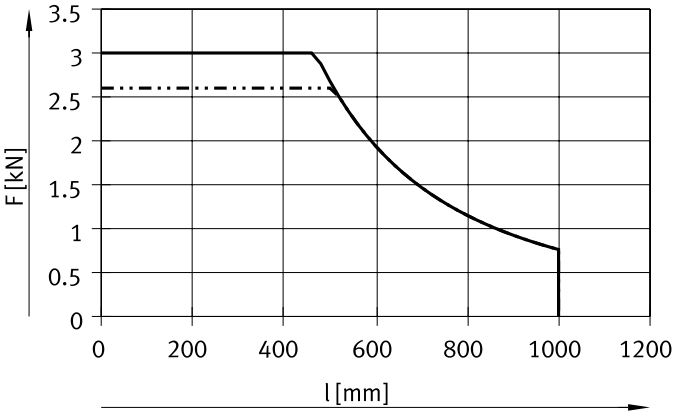
For ball screw

ESBF-BS-32-...



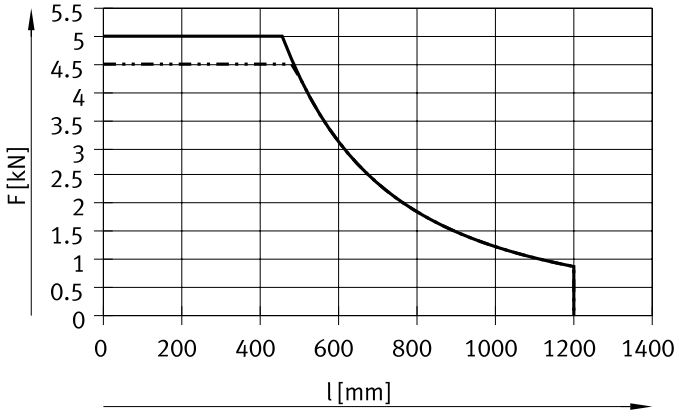
ESBF-BS-32-...-5P/10P

ESBF-BS-40-...



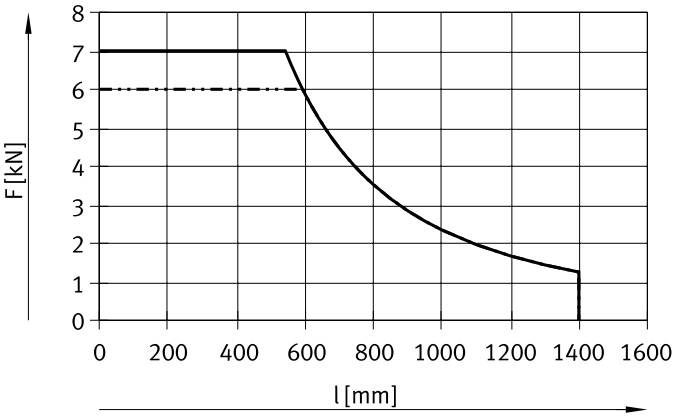
ESBF-BS-40-...-5P/10P
ESBF-BS-40-...-16P

ESBF-BS-50-...



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

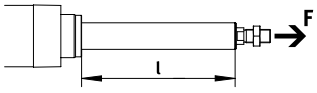
ESBF-BS-63-...



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

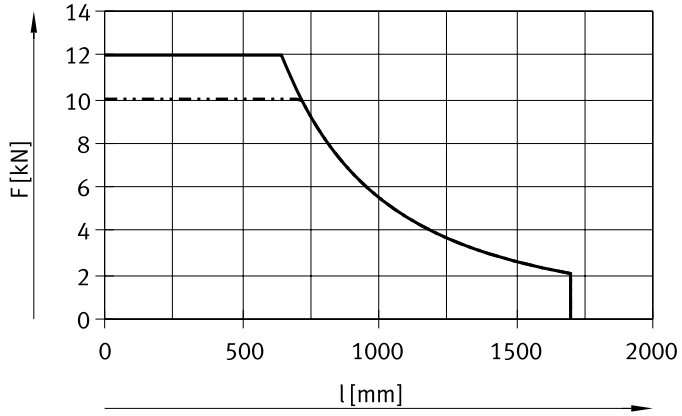
Data sheet

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



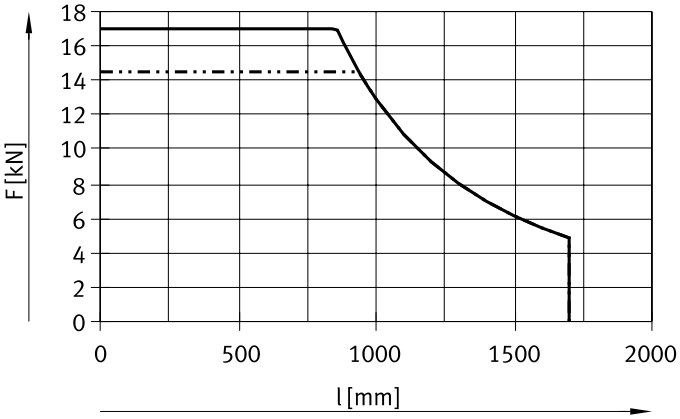
Dependent on the stroke, the pressure force must be limited due to possible buckling.
This does not affect the tensile force.

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



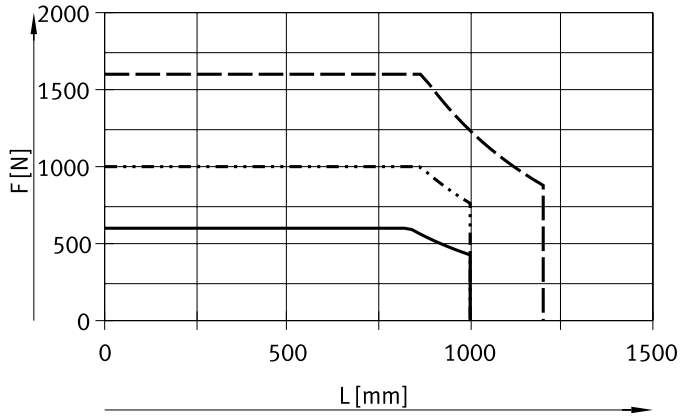
ESBF-BS-80-...-5P/15P
ESBF-BS-80-...-32P

ESBF-BS-100-...



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

For lead screw
ESBF-LS-...



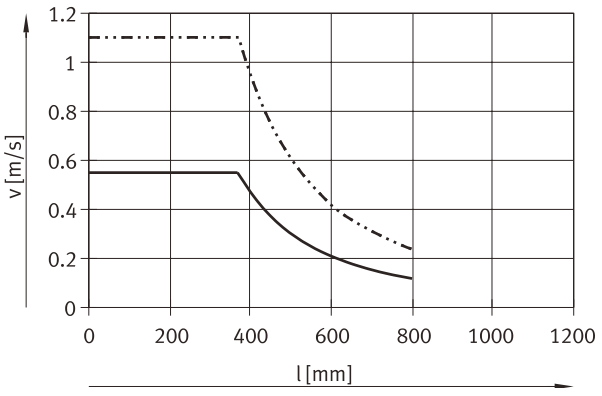
ESBF-LS-32
ESBF-LS-40
ESBF-LS-50

Data sheet

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

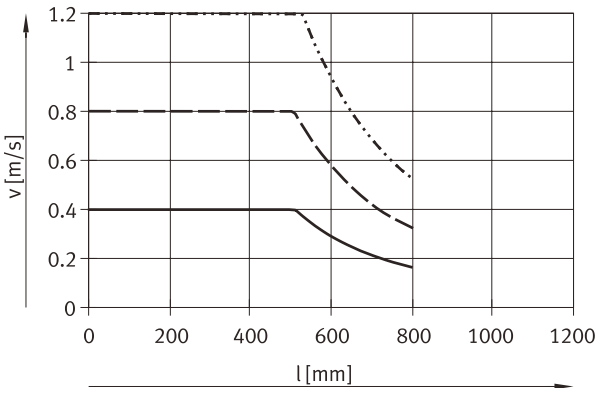
For ball screw

ESBF-BS-32-...



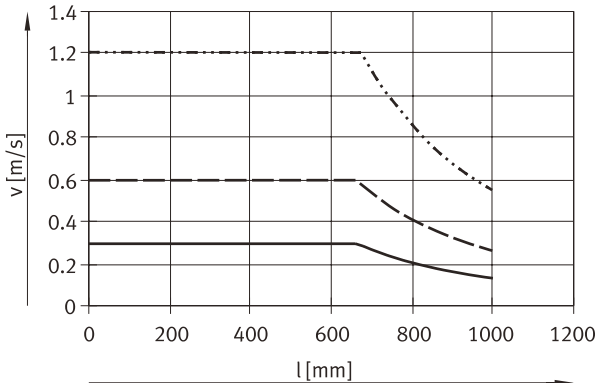
ESBF-BS-32-...-5P
ESBF-BS-32-...-10P

ESBF-BS-40-...



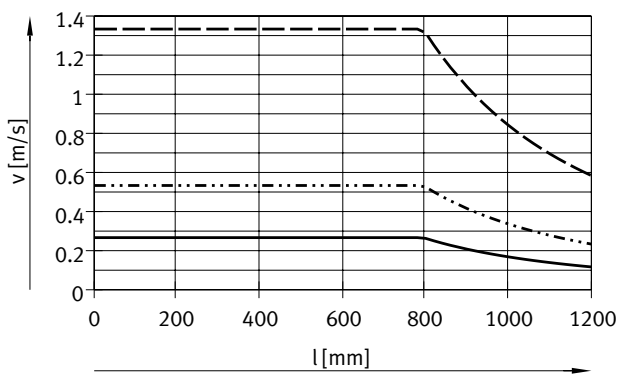
ESBF-BS-40-...-5P
ESBF-BS-40-...-10P
ESBF-BS-40-...-16P

ESBF-BS-50-...



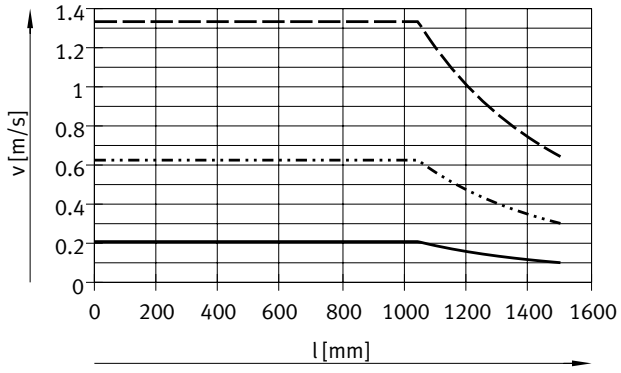
ESBF-BS-50-...-5P
ESBF-BS-50-...-10P
ESBF-BS-50-...-20P

ESBF-BS-63-...



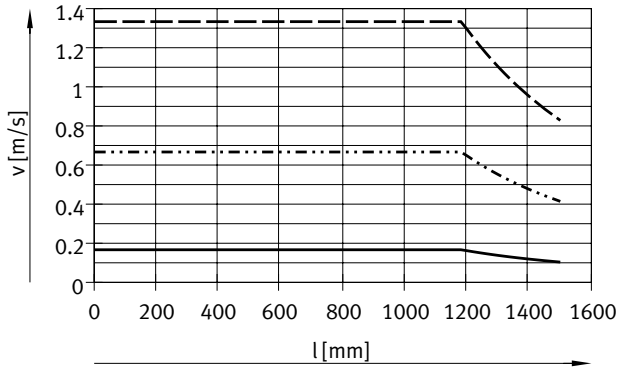
ESBF-BS-63-...-5P
ESBF-BS-63-...-10P
ESBF-BS-63-...-25P

ESBF-BS-80-...



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

ESBF-BS-100-...



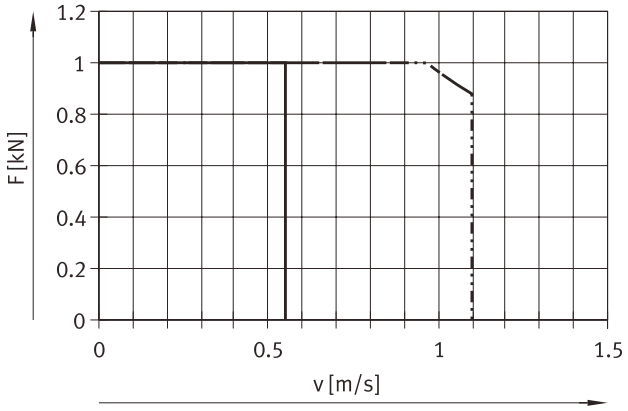
ESBF-BS-100-...-5P
ESBF-BS-100-...-20P
ESBF-BS-100-...-40P

Data sheet

Maximum feed force F as a function of feed speed v

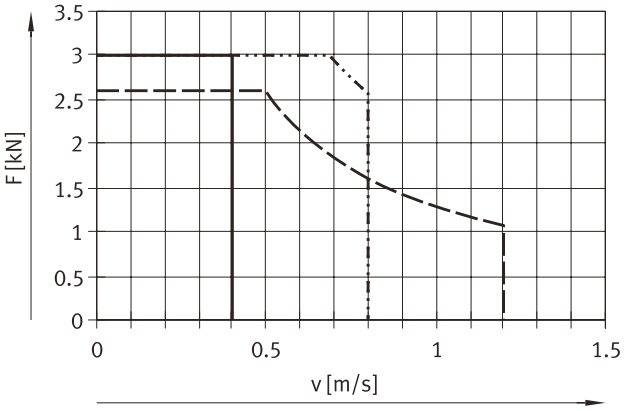
For ball screw

ESBF-BS-32-...



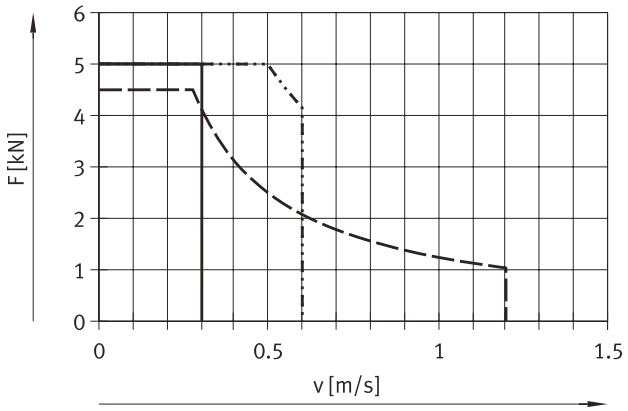
ESBF-32-...-5P
ESBF-32-...-10P

ESBF-BS-40-...



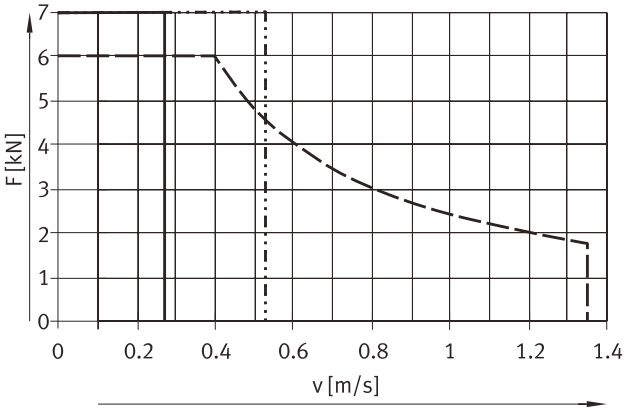
ESBF-40-...-5P
ESBF-40-...-10P
ESBF-40-...-16P

ESBF-BS-50-...



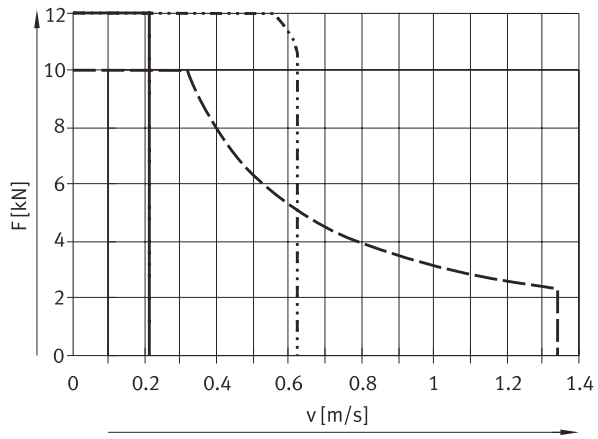
ESBF-50-...-5P
ESBF-50-...-10P
ESBF-50-...-20P

ESBF-BS-63-...



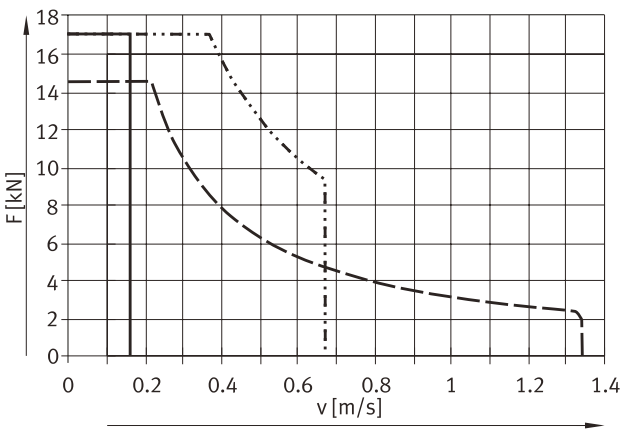
ESBF-BS-63...-5P
ESBF-BS-63-...-10P
ESBF-BS-63-...-25P

ESBF-BS-80-...



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

ESBF-BS-100-...



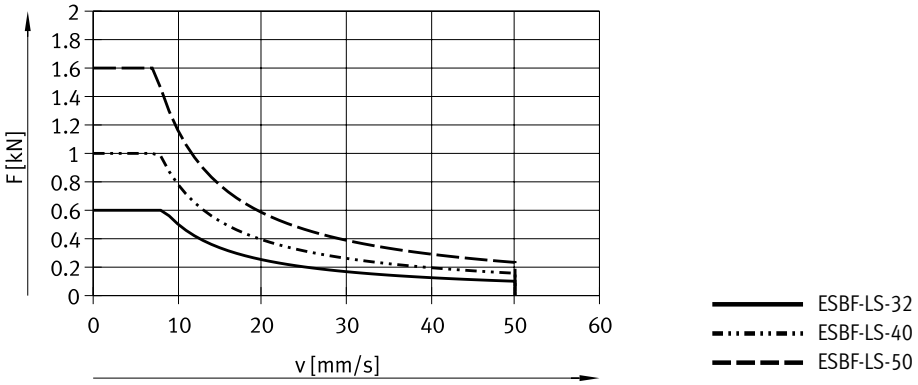
ESBF-BS-100-...-5P
ESBF-BS-100-...-20P
ESBF-BS-100-...-40P

Data sheet

Maximum feed force F as a function of feed speed v

For lead screw

ESBF-LS-...



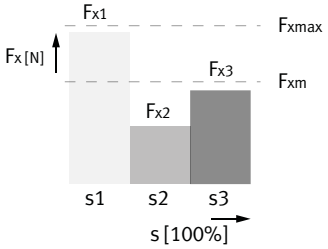
Service life

- 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 15)
- 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 15 (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)

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

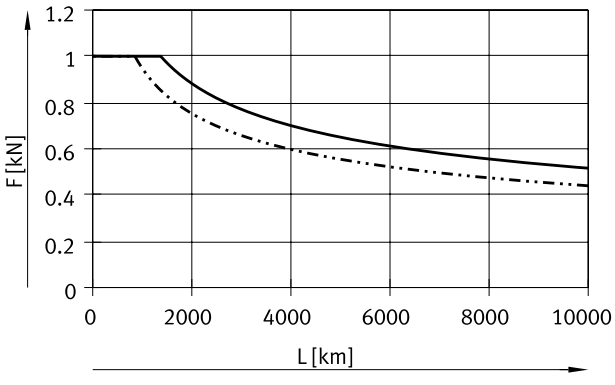
F_{xm} = Mean feed force
$F_{x1/n}$ = Feed force of section
$s_{1/n}$ = Part of movement cycle that is travel



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

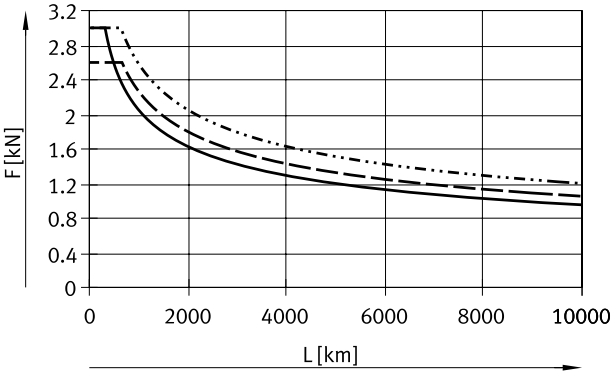
For ball screw

ESBF-BS-32-...



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

ESBF-BS-40-...



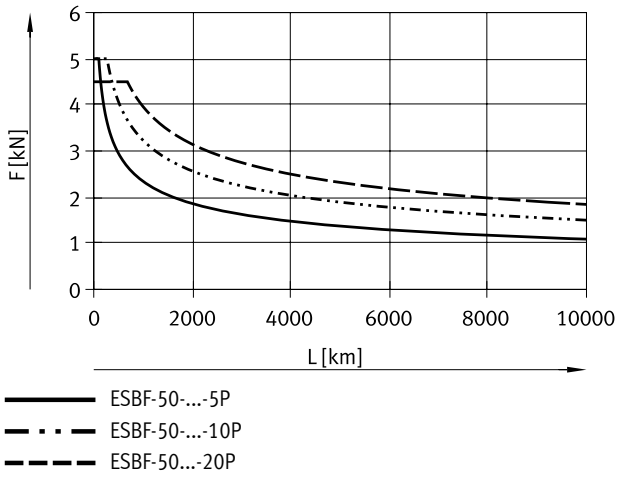
ESBF-40-...-5P
ESBF-40-...-10P
ESBF-40-...-16P

Data sheet

Service life

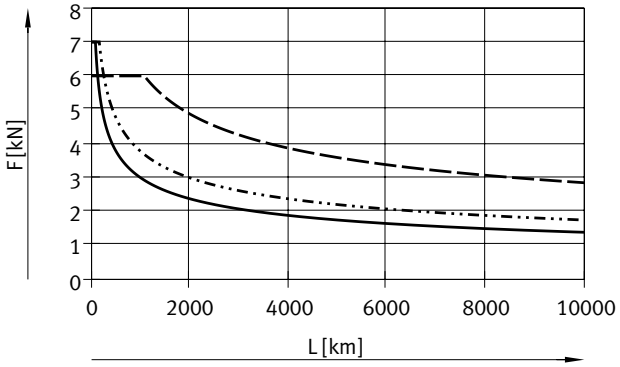
Mean feed force F_{xm} as a function of running performance L, with an operating coefficient f_B of 1.0, at room temperature
For ball screw

ESBF-BS-50-...



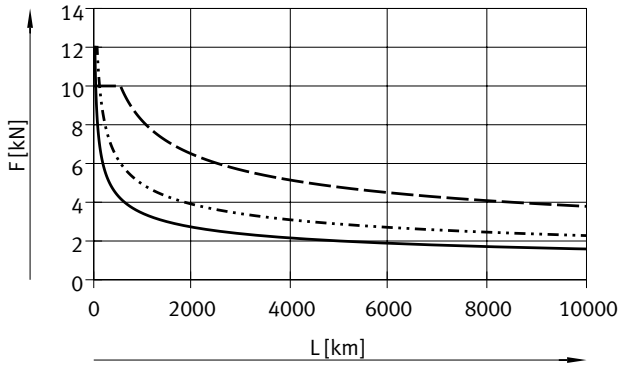
ESBF-50-...-5P
ESBF-50-...-10P
ESBF-50...-20P

ESBF-BS-63-...



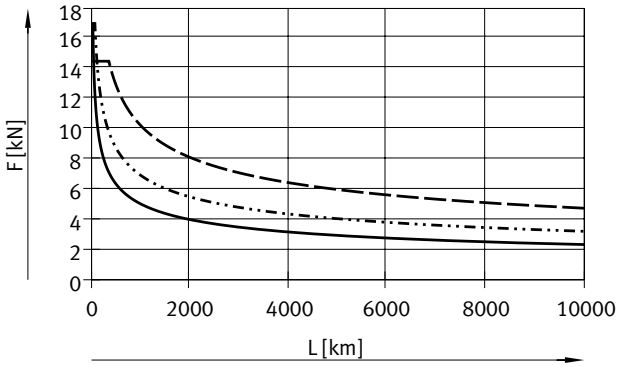
ESBF-63-...-5P
ESBF-63-...-10P
ESBF-63-...-25P

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

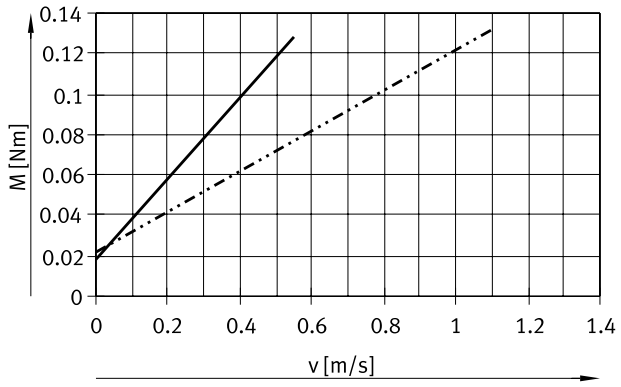
1) Corresponds to the driving torque required without load at a rotational speed of the spindle of 200 rpm

Data sheet

Friction torque M_v as a function of feed speed v

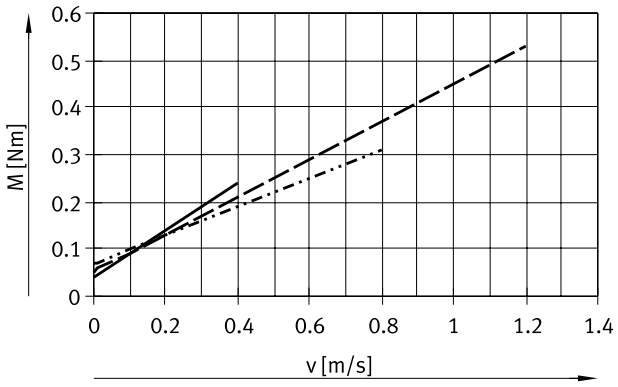
For ball screw

ESBF-BS-32-...



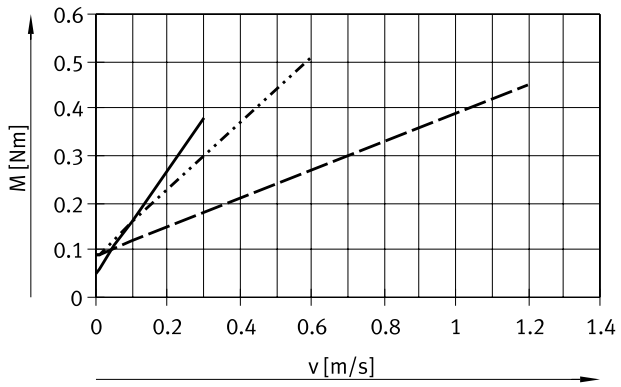
ESBF-BS-32-...-5P
ESBF-BS-32-...-10P

ESBF-BS-40-...



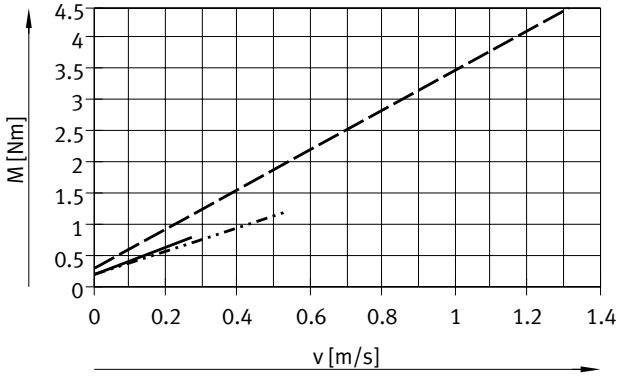
ESBF-BS-40-...-5P
ESBF-BS-40-...-10P
ESBF-BS-40-...-16P

ESBF-BS-50-...



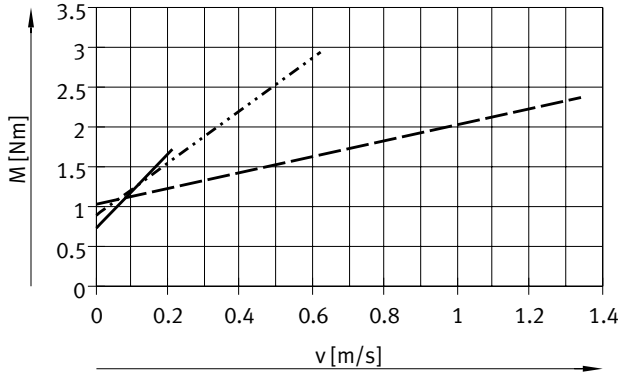
ESBF-BS-50-...-5P
ESBF-BS-50-...-10P
ESBF-BS-50-...-20P

ESBF-BS-63-...



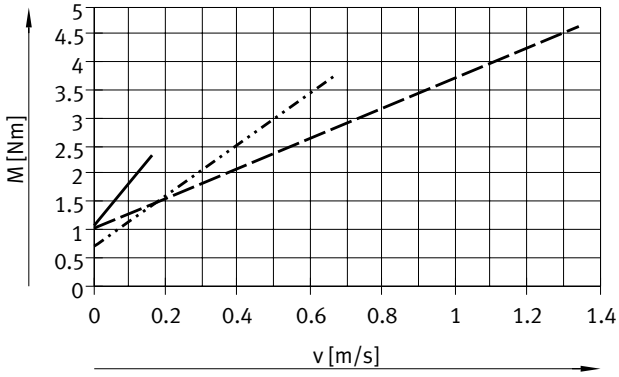
ESBF-BS-63-...-5P
ESBF-BS-63-...-10P
ESBF-BS-63-...-25P

ESBF-BS-80-...



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

ESBF-BS-100-...



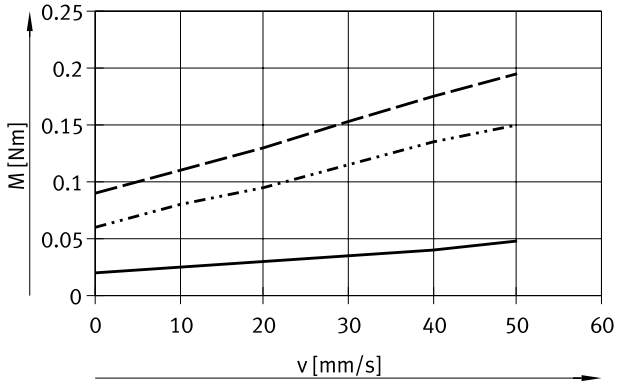
ESBF-BS-100-...-5P
ESBF-BS-100-...-20P
ESBF-BS-100-...-40P

Data sheet

Friction torque M_v as a function of feed speed v

For lead screw

ESBF-LS-...

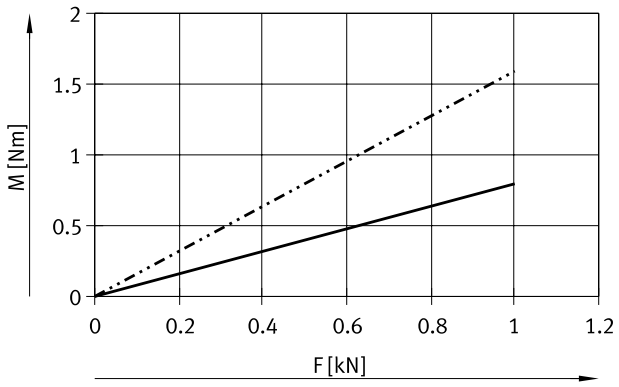


ESBF-LS-32
ESBF-LS-40
ESBF-LS-50

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

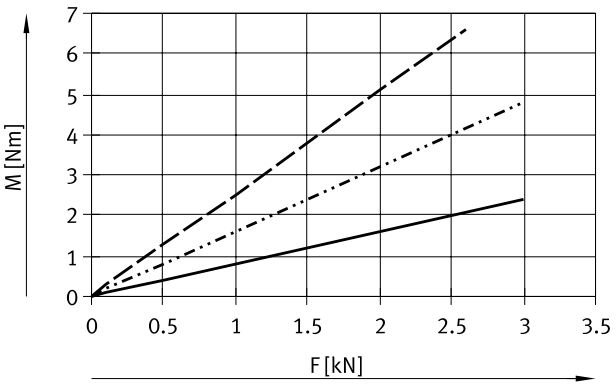
For ball screw

ESBF-BS-32-...



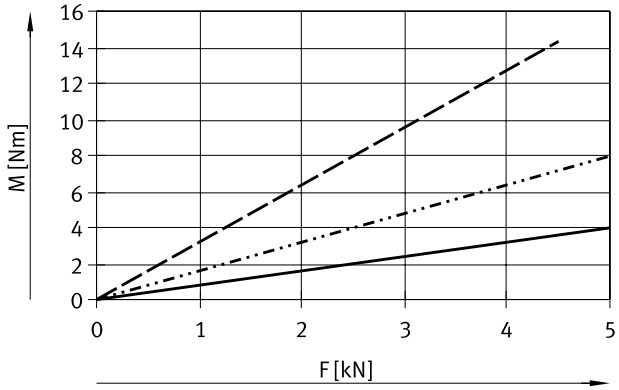
ESBF-BS-32...-5P
ESBF-BS-32-...-10P

ESBF-BS-40-...



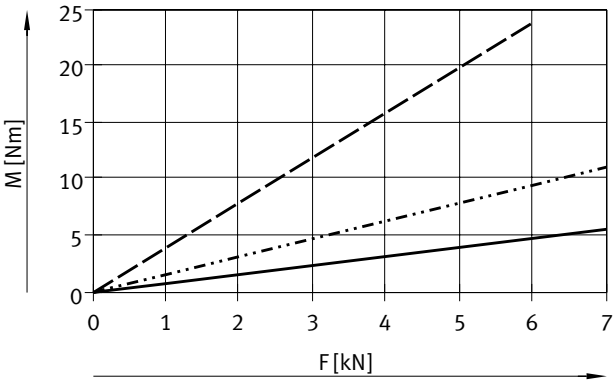
ESBF-BS-40-...-5P
ESBF-BS-40-...-10P
ESBF-BS-40-...-16P

ESBF-BS-50-...



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

ESBF-BS-63-...



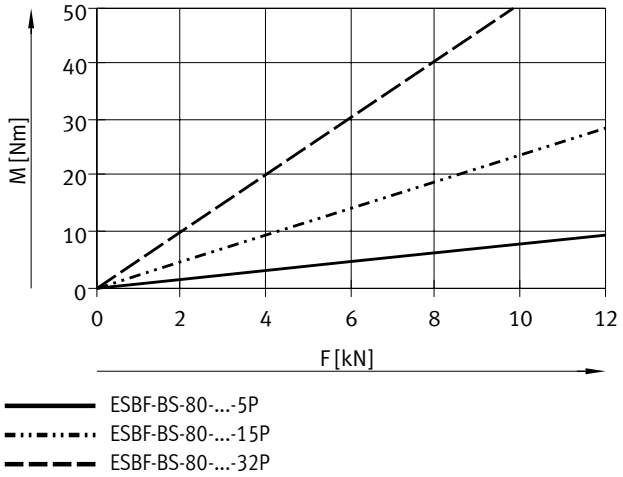
ESBF-BS-63-...-5P
ESBF-BS-63-...-10P
ESBF-BS-63-...-25P

Data sheet

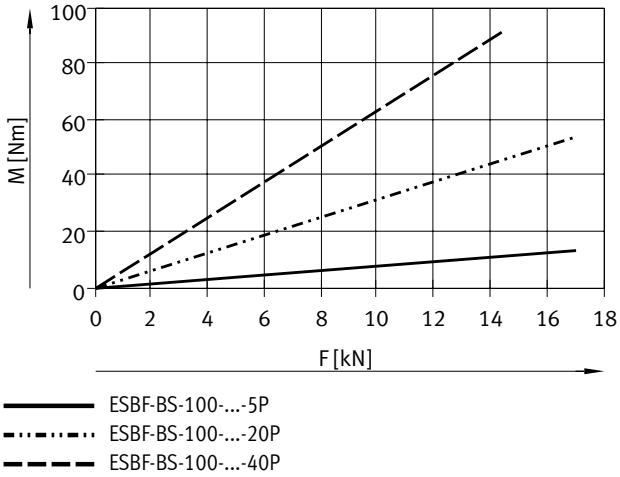
Effective torque M_{eff} as a function of feed force F

For ball screw

ESBF-BS-80-...

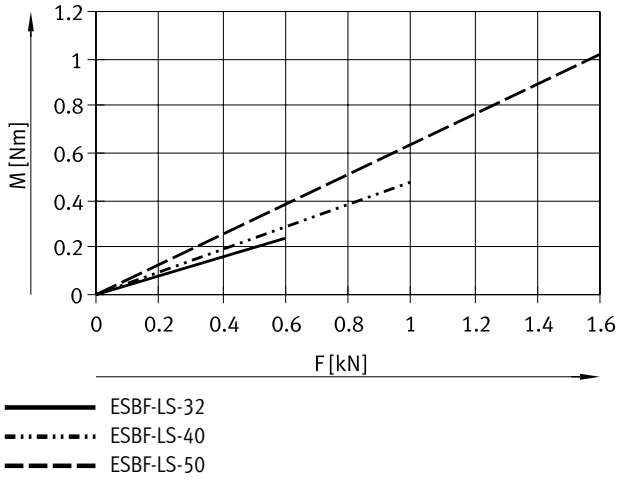


ESBF-BS-100-...



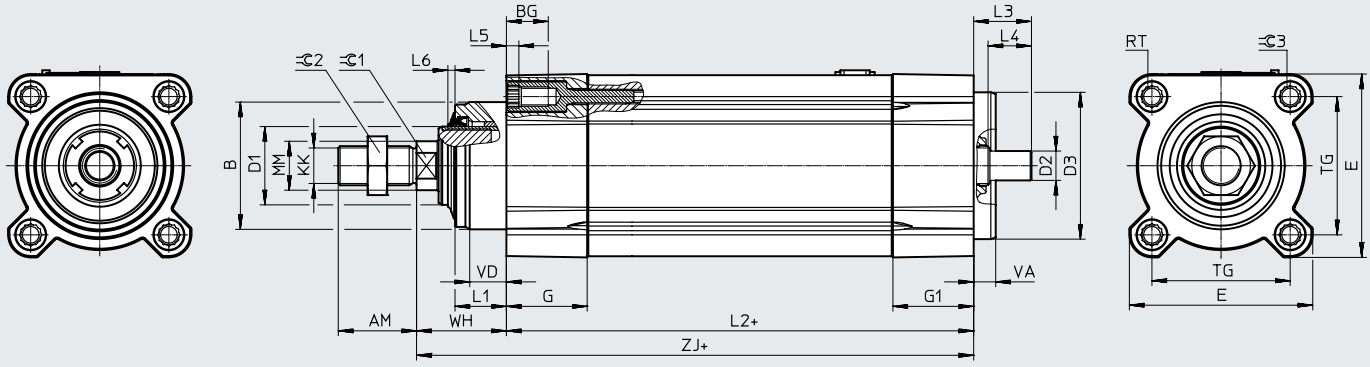
For lead screw

ESBF-LS-...



Data sheet

Dimensions Download CAD data ➔ www.festo.com



\+ = plus stroke length

Size	AM −0.5	B ø d11	BG min.	D1 ø h9	D2 ø h6	D3 ø 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 ±0.2	L5 min.	L6	KK	MM ø −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

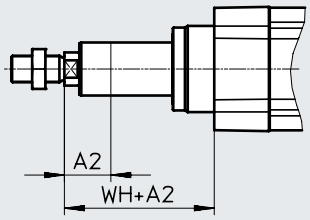
Note
Spanner flat ⊂1 can be aligned either way.

Data sheet

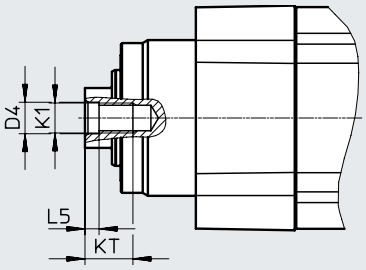
Dimensions Download CAD data ➔ www.festo.com

Variants

...E – Extended piston rod

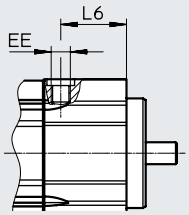


F – Female thread

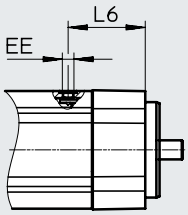


S1 – Degree of protection IP65 / F1 – For the food zone

ESBF-32 ... 50



ESBF-63 ... 100



Size	A2 max.	D4 ø	EE	L5 ±0.2	L6	K1	KT 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**

Spindle pitch [mm/rev]	Stroke [mm]	Part no.	Type
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 24

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 24

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**	
Additional features		None								
		Food-safe as per supplementary material information						[4]	**-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] **F1** Only with R3
Not with LS

Accessories

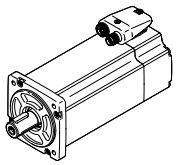
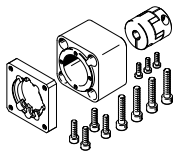
Note

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	
		
Type	Part no.	Type
ESBF-32		
With servo motor		
EMME-AS-40-...	☆ **1976465**	**EAMM-A-D32-40P**
	2207372	**EAMM-A-D32-40P-S1**[2]
EMMS-AS-40-...	**543147**	**EAMM-A-D32-40A**
	1322178	**EAMM-A-D32-40A-S1**[2]
EMMS-AS-55-...	**550979**	**EAMM-A-D32-55A**
	1322180	**EAMM-A-D32-55A-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]
EMMS-AS-40-...	**1454238**	**EAMM-A-D32-40G**
EMGA-40-P-G...-SAS-40	**2256396**	**EAMM-A-D32-40G-S1**[2]
EMMS-AS-55-...	**2946758**	**EAMM-A-D32-60G**
EMGA-60-P-G...-SAS-55	**2946759**	**EAMM-A-D32-60G-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]
EMMS-AS-70-...	**2946758**	**EAMM-A-D32-60G**
EMGA-60-P-G...-SAS-70	**2946759**	**EAMM-A-D32-60G-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]

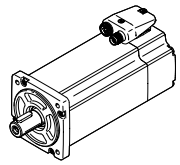
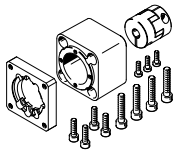
1) The input torque must not exceed the max. permissible transferable torque of the axial kit.
2) With degree of protection IP65

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	
		
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		
EMMS-AS-55-...	**543153**	**EAMM-A-D40-55A**
	1322182	**EAMM-A-D40-55A-S1**[2]
EMMT-AS-60-..., EMME-AS-60-...	☆ **1977000**	**EAMM-A-D40-60P**
	2151519	**EAMM-A-D40-60P-S1**[2]
EMMS-AS-70-...	**550981**	**EAMM-A-D40-70A**
	1322185	**EAMM-A-D40-70A-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]
EMMS-AS-40-...	☆ **560282**	**EAMM-A-D40-40G**
EMGA-40-P-G...-SAS-40	**2256398**	**EAMM-A-D40-40G-G2**[3]
	2256399	**EAMM-A-D40-40G-S1**[2]
EMMS-AS-55-...	**2256400**	**EAMM-A-D40-60G**
EMGA-60-P-G...-SAS-55	**2256409**	**EAMM-A-D40-60G-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]
EMMS-AS-70-...	**2256400**	**EAMM-A-D40-60G**
EMGA-60-P-G...-SAS-70	**2256409**	**EAMM-A-D40-60G-S1**[2]

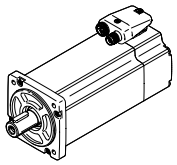
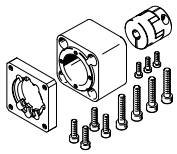
1) The input torque must not exceed the max. permissible transferable torque of the axial kit.
2) With degree of protection IP65
3) The axial kit can be retrofitted from IP40 to IP65 with the help of a seal set EADS-F ➔ page 64.

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	
		
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-... **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-... **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-... **EMGC-40-...**	☆ **560282**	**EAMM-A-D40-40G**
	2256398	**EAMM-A-D40-40G-G2**[3]
	2256399	**EAMM-A-D40-40G-S1**[2]
EMCA-EC-67-... **EMGC-60-...**	**1454242**	**EAMM-A-D40-60H**
	2256401	**EAMM-A-D40-60H-S1**[2]

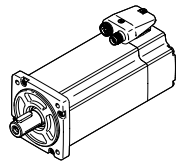
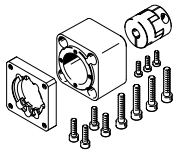
1) The input torque must not exceed the max. permissible transferable torque of the axial kit.
2) With degree of protection IP65
3) The axial kit can be retrofitted from IP40 to IP65 with the help of a seal set EADS-F → page 64.

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	
		
Type	Part no.	Type
ESBF-50		
With servo motor		
EMMS-AS-70-...	**2733783**	**EAMM-A-D50-70A**
	2734287	**EAMM-A-D50-70A-S1**[2]
EMMT-AS-80-..., EMME-AS-80-...	☆ **2733785**	**EAMM-A-D50-80P**
	2734289	**EAMM-A-D50-80P-S1**[2]
EMMT-AS-100-..., EMME-AS-100-..., EMMS-AS-100-...	☆ **2733784**	**EAMM-A-D50-100A**
	2734288	**EAMM-A-D50-100A-S1**[2]
With servo motor and gear unit		
EMMS-AS-55-...	**2733786**	**EAMM-A-D50-60G**
EMGA-60-P-G...-SAS-55	**2734290**	**EAMM-A-D50-60G-S1**[2]
EMMT-AS-60-..., EMME-AS-60-...	**2733796**	**EAMM-A-D50-60H**
EMGA-60-P-G...-EAS-60	**2907418**	**EAMM-A-D50-60H-S1**[2]
EMMS-AS-70-...	**2733786**	**EAMM-A-D50-60G**
EMGA-60-P-G...-SAS-70	**2734290**	**EAMM-A-D50-60G-S1**[2]
EMMS-AS-70-...	**2733787**	**EAMM-A-D50-80G**
EMGA-80-P-G...-SAS-70	**2734291**	**EAMM-A-D50-80G-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-..., EMMS-AS-100-... EMGA-80-P-G...-SAS-100	**2733787**	**EAMM-A-D50-80G**
	2734291	**EAMM-A-D50-80G-S1**[2]

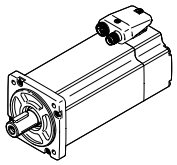
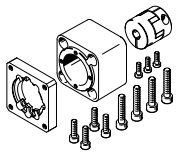
1) The input torque must not exceed the max. permissible transferable torque of the axial kit.
2) With degree of protection IP65
3) The axial kit can be retrofitted from IP40 to IP65 with the help of a seal set EADS-F ➔ page 64.

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	
		
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		
EMMS-AS-70-...	**543161**	**EAMM-A-D60-70A**
	2256699	**EAMM-A-D60-70A-S1**[2]
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**
EMMS-AS-100-...	**2256700**	**EAMM-A-D60-100A-S1**[2]
With servo motor and gear unit		
EMMS-AS-55-...	☆ **560283**	**EAMM-A-D60-60G**
EMGA-60-P-G...-SAS-55	**2256696**	**EAMM-A-D60-60G-G2**[3]
	2256698	**EAMM-A-D60-60G-S1**[2]
EMMT-AS-60-..., EMME-AS-60-...	**1454245**	**EAMM-A-D60-60H**
EMGA-60-P-G...-EAS-60	**2256697**	**EAMM-A-D60-60H-S1**[2]
EMMS-AS-70-...	☆ **560283**	**EAMM-A-D60-60G**
EMGA-60-P-G...-SAS-70	**2256696**	**EAMM-A-D60-60G-G2**[3]
	2256698	**EAMM-A-D60-60G-S1**[2]
EMMS-AS-70-...	**1499402**	**EAMM-A-D60-80G**
EMGA-80-P-G...-SAS-70	**2946762**	**EAMM-A-D60-80G-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**
EMMS-AS-100-...	**2946762**	**EAMM-A-D60-80G-S1**[2]
EMGA-80-P-G...-SAS-100		

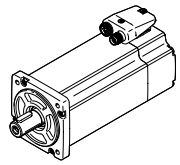
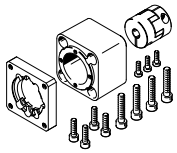
1) The input torque must not exceed the max. permissible transferable torque of the axial kit.
2) With degree of protection IP65
3) The axial kit can be retrofitted from IP40 to IP65 with the help of a seal set EADS-F → page 64.

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	
		
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-... **EMGA-60-P-G...-SST-57**	☆ **560283**	**EAMM-A-D60-60G**
	2256696	**EAMM-A-D60-60G-G2**[3]
	2256698	**EAMM-A-D60-60G-S1**[2]
EMMS-ST-87-... **EMGA-80-P-G...-SST-87**	**1499402**	**EAMM-A-D60-80G**
	2946762	**EAMM-A-D60-80G-S1**[2]
With integrated drive and gear unit		
EMCA-EC-67-... **EMGC-60-...**	**1454245**	**EAMM-A-D60-60H**
	2256697	**EAMM-A-D60-60H-S1**[2]
ESBF-80		
With servo motor		
EMMT-AS-100-..., EMME-AS-100-..., **EMMS-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		
EMMS-AS-70-... **EMGA-80-P-G...-SAS-70**	**2946763**	**EAMM-A-D80-80G**
	2946764	**EAMM-A-D80-80G-S1**[2]
EMMT-AS-80-..., EMME-AS-80-... **EMGA-80-P-G...-EAS-80**	**2946763**	**EAMM-A-D80-80G**
	2946764	**EAMM-A-D80-80G-S1**[2]
EMMT-AS-100-..., EMME-AS-100-..., **EMMS-AS-100-...** **EMGA-80-P-G...-SAS-100**	**2946763**	**EAMM-A-D80-80G**
	2946764	**EAMM-A-D80-80G-S1**[2]

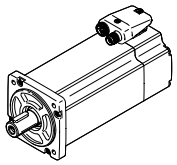
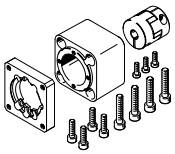
1) The input torque must not exceed the max. permissible transferable torque of the axial kit.
2) With degree of protection IP65
3) The axial kit can be retrofitted from IP40 to IP65 with the help of a seal set EADS-F ➔ page 64.

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

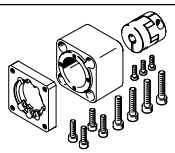
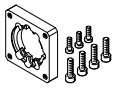
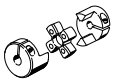
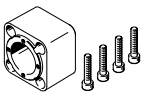
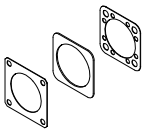
Permissible axis/motor combinations with axial kit

Data sheets → Internet: eamm-a

Motor/gear unit[1]	Axial kit	
		
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**
EMMS-AS-100-...	**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**
EMMS-AS-100-... **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]**

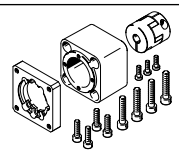
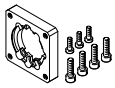
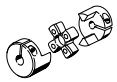
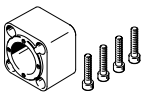
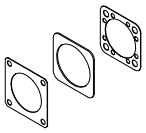
1) The input torque must not exceed the max. permissible transferable torque of the axial kit.
2) With degree of protection IP65

Accessories

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

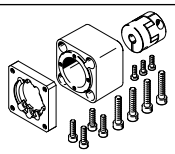
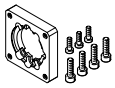
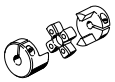
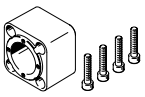
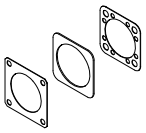
Accessories

Individual components of the axial kit				
Axial kit	Comprising:			
	Motor flange	Coupling	Coupling housing	Seal set
				
Part no. Type	Part no. Type	Part no. Type	Part no. Type	Part no. Type
ESBF-40				
☆ **560282** **EAMM-A-D40-40G**	**550986** **EAMF-A-44A/B-40G**	**558029** **EAMC-30-32-8-10**	**552157** **EAMK-A-D40-44A/C**	–
2256398 **EAMM-A-D40-40G-G2**	**1460095** **EAMF-A-44C-40G-S1**			
2256399 **EAMM-A-D40-40G-S1**				**2253502** **EADS-F-D40-40G**
543153 **EAMM-A-D40-55A**	**529942** **EAMF-A-44A/B-55A**	**543423** **EAMC-30-32-8-9**	**552157** **EAMK-A-D40-44A/C**	–
1322182 **EAMM-A-D40-55A-S1**				**1561530** **EADS-F-D40-55A**
☆ **543154** **EAMM-A-D40-57A**	**530081** **EAMF-A-44A/B-57A**	**543421** **EAMC-30-32-6.35-8**	**552157** **EAMK-A-D40-44A/C**	–
1322183 **EAMM-A-D40-57A-S1**				**1561531** **EADS-F-D40-57A**
2256400 **EAMM-A-D40-60G**	**1460105** **EAMF-A-44C-60G/H-S1**	**551004** **EAMC-30-32-8-11**	**552157** **EAMK-A-D40-44A/C**	–
2256409 **EAMM-A-D40-60G-S1**				**2253503** **EADS-F-D40-60G/H**
1454242 **EAMM-A-D40-60H**	**1460105** **EAMF-A-44C-60G/H-S1**	**562682** **EAMC-30-32-8-14**	**552157** **EAMK-A-D40-44A/C**	–
2256401 **EAMM-A-D40-60H-S1**				**2253503** **EADS-F-D40-60G/H**
☆ **1977000** **EAMM-A-D40-60P**	**1956846** **EAMF-A-44C-60P**	**562682** **EAMC-30-32-8-14**	**552157** **EAMK-A-D40-44A/C**	–
2151519 **EAMM-A-D40-60P-S1**				**2151545** **EADS-F-D40-60P**
1454243 **EAMM-A-D40-67A**	**1476305** **EAMF-A-44A/B/C-67A-S1**	**543423** **EAMC-30-32-8-9**	**552157** **EAMK-A-D40-44A/C**	–
2256695 **EAMM-A-D40-67A-S1**				**2253501** **EADS-F-D32-67A**
550981 **EAMM-A-D40-70A**	**529943** **EAMF-A-44A/B-70A**	**551004** **EAMC-30-32-8-11**	**552157** **EAMK-A-D40-44A/C**	–
1322185 **EAMM-A-D40-70A-S1**				**1561532** **EADS-F-D40-70A**
☆ **550982** **EAMM-A-D40-87A**	**530082** **EAMF-A-44A/B-87A**	**551004** **EAMC-30-32-8-11**	**552157** **EAMK-A-D40-44A/C**	–
1322186 **EAMM-A-D40-87A-S1**				**1561533** **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. Type	Part no. Type	Part no. Type	Part no. Type	Part no. Type
ESBF-50				
2733786 **EAMM-A-D50-60G**	**2256289** **EAMF-A-64B-60G/H-S1**	**543424** **EAMC-42-50-11-12**	**2733780** **EAMK-A-D50-64B**	**–**
2734290 **EAMM-A-D50-60G-S1**				**2733792** **EADS-F-D50-60G/H**
2733796 **EAMM-A-D50-60H**	**2256289** **EAMF-A-64B-60G/H-S1**	**1455671** **EAMC-42-50-12-14**	**2733780** **EAMK-A-D50-64B**	**–**
2907418 **EAMM-A-D50-60H-S1**				**2733792** **EADS-F-D50-60G/H**
2733783 **EAMM-A-D50-70A**	**529945** **EAMF-A-64A/B-70A**	**543424** **EAMC-42-50-11-12**	**2733780** **EAMK-A-D50-64B**	**–**
2734287 **EAMM-A-D50-70A-S1**				**2733789** **EADS-F-D50-70A**
2733787 **EAMM-A-D50-80G**	**2843290** **EAMF-A-64C-80G-S1**	**2138701** **EAMC-42-50-12-20**	**2836865** **EAMK-A-D50-64C**	**–**
2734291 **EAMM-A-D50-80G-S1**				**2733793** **EADS-F-D50-80G**
☆ **2733785** **EAMM-A-D50-80P**	**1977113** **EAMF-A-64A/C-80P**	**551005** **EAMC-42-50-12-19**	**2836865** **EAMK-A-D50-64C**	**–**
2734289 **EAMM-A-D50-80P-S1**				**2733791** **EADS-F-D50-80P**
☆ **2733781** **EAMM-A-D50-87A**	**533140** **EAMF-A-64A/B-87A**	**543424** **EAMC-42-50-11-12**	**2733780** **EAMK-A-D50-64B**	**–**
2734286 **EAMM-A-D50-87A-S1**				**2733788** **EADS-F-D50-87A**
☆ **2733784** **EAMM-A-D50-100A**	**529947** **EAMF-A-64A/C/D-100A**	**551005** **EAMC-42-50-12-19**	**2836865** **EAMK-A-D50-64C**	**–**
2734288 **EAMM-A-D50-100A-S1**				**2733790** **EADS-F-D50-100A**
ESBF-63				
☆ **560283** **EAMM-A-D60-60G**	**550987** **EAMF-A-64A/B-60G/H**	**543424** **EAMC-42-50-11-12**	**552160** **EAMK-A-D60-64B**	**–**
2256696 **EAMM-A-D60-60G-G2**	**2256289** **EAMF-A-64B-60G/H-S1**			
2256698 **EAMM-A-D60-60G-S1**				**2253505** **EADS-F-D60-60G/H**
1454245 **EAMM-A-D60-60H**	**2256289** **EAMF-A-64B-60G/H-S1**	**1455671** **EAMC-42-50-12-14**	**552160** **EAMK-A-D60-64B**	**–**
2256697 **EAMM-A-D60-60H-S1**				**2253505** **EADS-F-D60-60G/H**
543161 **EAMM-A-D60-70A**	**529945** **EAMF-A-64A/B-70A**	**543424** **EAMC-42-50-11-12**	**552160** **EAMK-A-D60-64B**	**–**
2256699 **EAMM-A-D60-70A-S1**				**8022145** **EADS-F-D60-70A**

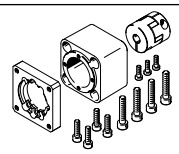
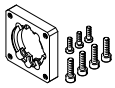
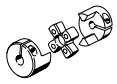
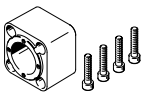
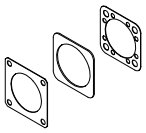
Festo core product range

★ 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

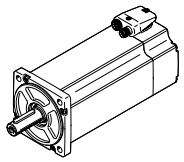
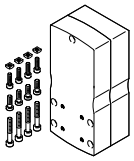
Axial kit	Comprising:			
	Motor flange	Coupling	Coupling housing	Seal set
				
Part no. Type	Part no. Type	Part no. Type	Part no. Type	Part no. Type
ESBF-63				
1499402 **EAMM-A-D60-80G**	**2843290** **EAMF-A-64C-80G-S1**	**2138701** **EAMC-42-50-12-20**	**551007** **EAMK-A-D60-64C**	**–**
2946762 **EAMM-A-D60-80G-S1**				**8022146** **EADS-F-D60-80G**
☆ **1977073** **EAMM-A-D60-80P**	**1977113** **EAMF-A-64A/C-80P**	**551005** **EAMC-42-50-12-19**	**551007** **EAMK-A-D60-64C**	**–**
2218564 **EAMM-A-D60-80P-S1**				**2218523** **EADS-F-D60-80P**
☆ **543162** **EAMM-A-D60-87A**	**533140** **EAMF-A-64A/B-87A**	**543424** **EAMC-42-50-11-12**	**552160** **EAMK-A-D60-64B**	**–**
1322188 **EAMM-A-D60-87A-S1**				**1561536** **EADS-F-D60-87A**
☆ **550983** **EAMM-A-D60-100A**	**529947** **EAMF-A-64A/C/D-100A**	**551005** **EAMC-42-50-12-19**	**551007** **EAMK-A-D60-64C**	**–**
2256700 **EAMM-A-D60-100A-S1**				**2253507** **EADS-F-D60-100A**
ESBF-80				
2946763 **EAMM-A-D80-80G**	**2933286** **EAMF-A-77A-80G-S1**	**3181801** **EAMC-56-58-19-20**	**1593627** **EAMK-A-D80-77A**	**–**
2946764 **EAMM-A-D80-80G-S1**				**8022147** **EADS-F-D80-80G**
1589665 **EAMM-A-D80-100A**	**1593628** **EAMF-A-77A-100A**	**1485673** **EAMC-56-58-19-19**	**1593627** **EAMK-A-D80-77A**	**–**
1600673 **EAMM-A-D80-100A-S1**				**1593617** **EADS-F-D80-100A**
1588299 **EAMM-A-D80-140A**	**1593636** **EAMF-A-77A-140A**	**1485674** **EAMC-56-58-19-24**	**1593627** **EAMK-A-D80-77A**	**–**
1600674 **EAMM-A-D80-140A-S1**				**1593671** **EADS-F-D80-140A**
ESBF-100				
1588349 **EAMM-A-D100-140A**	**1593636** **EAMF-A-77A-140A**	**1451407** **EAMC-67-62-24-24**	**1593914** **EAMK-A-D100-77A/B**	**–**
1600675 **EAMM-A-D100-140A-S1**				**1593991** **EADS-F-D100-140A**
3356796 **EAMM-A-D100-100A**	**1593628** **EAMF-A-77A-100A**	**1485674** **EAMC-56-58-19-24**	**1593914** **EAMK-A-D100-77A/B**	**–**
3356931 **EAMM-A-D100-100A-S1**				**3356966** **EADS-F-D100-100A**
2449341 **EAMM-A-D100-120G**	**2449380** **EAMF-A-77B-120G-S1**	**3187895** **EAMC-67-62-24-25**	**1593914** **EAMK-A-D100-77A/B**	**–**
2946765 **EAMM-A-D100-120G-S1**				**8022148** **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 • Optionally with degree of protection IP65 • Use in combination with third-party motors on request

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]
EMMS-AS-40-...	**1201591**	**EAMM-U-50-D32-40A-78**
	1202302	**EAMM-U-50-D32-40A-78-S1**[2]
EMMS-AS-55-...	**1210126**	**EAMM-U-60-D32-55A-91**
	1210450	**EAMM-U-60-D32-55A-91-S1**[2]
EMMT-AS-60-..., EMME-AS-60-...	☆ **2619586**	**EAMM-U-70-D32-60P-96**
	2619688	**EAMM-U-70-D32-60P-96-S1**[2]
EMMS-AS-70-...	**2755565**	**EAMM-U-70-D32-70A-96**
	2781711	**EAMM-U-70-D32-70A-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-..., EMMS-AS-40-...	**1577358**	**EAMM-U-60-D32-40G-91**
EMGA-40-P-...	**1577346**	**EAMM-U-60-D32-40G-91-S1**[2]
EMMS-AS-55-..., EMMS-AS-70-...	**2748181**	**EAMM-U-70-D32-60G-96**
EMGA-60-P-...-SAS[3]	**2778302**	**EAMM-U-70-D32-60G-96-S1**[2]
EMMT-AS-60-..., EMME-AS-60-...	**2778393**	**EAMM-U-70-D32-60H-96**
EMGA-60-P-...-EAS[3]	**2781450**	**EAMM-U-70-D32-60H-96-S1**[2]
With stepper motor and gear unit		
EMMS-ST-42-...	**1577358**	**EAMM-U-60-D32-40G-91**
EMGA-40-P-...-SST	**1577346**	**EAMM-U-60-D32-40G-91-S1**[2]
EMMS-ST-57-...	**2748181**	**EAMM-U-70-D32-60G-96**
EMGA-60-P-...-SST[3]	**2778302**	**EAMM-U-70-D32-60G-96-S1**[2]
With integrated drive and gear unit		
EMCA-EC-67-...	**1577358**	**EAMM-U-60-D32-40G-91**
EMGC-40-P-...	**1577346**	**EAMM-U-60-D32-40G-91-S1**[2]
EMCA-EC-67-...	**2778393**	**EAMM-U-70-D32-60H-96**
EMGC-60-P-...[3]	**2781450**	**EAMM-U-70-D32-60H-96-S1**[2]

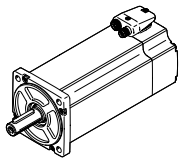
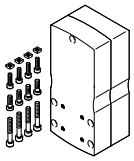
1) The input torque must not exceed the max. permissible transferable torque of the parallel kit.
2) With degree of protection IP65
3) Gear unit drive shaft diameter: EMGA-60-P-...-SAS/-SST: 11 mm; EMGA-60-P-...-EAS, EMGC-60-P: 14 mm.

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 • Use in combination with third-party motors on request
Type	Part no.	Type
ESBF-40		
With servo motor		
EMMS-AS-55-...	**1210438**	**EAMM-U-60-D40-55A-91**
	1210458	**EAMM-U-60-D40-55A-91-S1**[2]
EMMT-AS-60-..., EMME-AS-60-...	☆ **2617488**	**EAMM-U-70-D40-60P-96**
	2546123	**EAMM-U-70-D40-60P-96-S1**[2]
EMMS-AS-70-...	**2786204**	**EAMM-U-70-D40-70A-96**
	2786316	**EAMM-U-70-D40-70A-96-S1**[2]
	1212826	**EAMM-U-86-D40-70A-102**
	1212854	**EAMM-U-86-D40-70A-102-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-..., EMMS-AS-40-... **EMGA-40-P-...**	**1577165**	**EAMM-U-60-D40-40G-91**
	1435968	**EAMM-U-60-D40-40G-91-S1**[2]
EMMS-AS-55-..., EMMS-AS-70-... **EMGA-60-P-...-SAS**[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]
EMMT-AS-60-..., EMME-AS-60-... **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-... **EMGA-40-P-...-SST**	**1577165**	**EAMM-U-60-D40-40G-91**
	1435968	**EAMM-U-60-D40-40G-91-S1**[2]
EMMS-ST-57-... **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-... **EMGC-40-P-...**	**1577165**	**EAMM-U-60-D40-40G-91**
	1435968	**EAMM-U-60-D40-40G-91-S1**[2]
EMCA-EC-67-... **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]

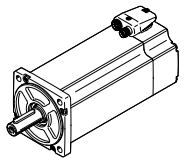
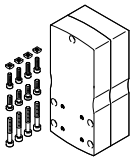
1) The input torque must not exceed the max. permissible transferable torque of the parallel kit.
2) With degree of protection IP65
3) Gear unit drive shaft diameter: EMGA-60-P-...-SAS/-SST: 11 mm; EMGA-60-P-...-EAS, EMGC-60-P: 14 mm.

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 • Optionally with degree of protection IP65 • Use in combination with third-party motors on request

Type	Part no.	Type
ESBF-50		
With servo motor		
EMMS-AS-70-...	**2786899**	**EAMM-U-70-D50-70A-96**
	2756078	**EAMM-U-70-D50-70A-96-S1**[2]
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-..., EMMS-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		
EMMS-AS-55-..., EMMS-AS-70-... EMGA-60-P-...-SAS[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]
EMMT-AS-60-..., EMME-AS-60-... 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-..., EMME-AS-80-..., EMME-AS-100-... 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-... 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-... 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-... 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

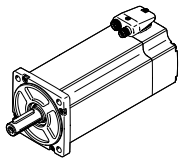
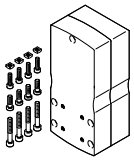
The clamping element EADT is required to adjust the toothed belt pretensioning for EAMM-U-110.
The motor and/or axis shaft can optionally be supported with a counter bearing EAMG.
Additional information ➔ eamm-u

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 • Optionally with degree of protection IP65 • Use in combination with third-party motors on request	
Type	Part no.	Type	
ESBF-63			
With servo motor			
EMMS-AS-70-...	**1212477**	**EAMM-U-86-D60-70A-102**	
	1212835	**EAMM-U-86-D60-70A-102-S1**[2]	
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-..., EMMS-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			
EMMS-AS-55-..., EMMS-AS-70-... EMGA-60-P-...-SAS[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]	
EMMT-AS-60-..., EMME-AS-60-... 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-..., EMME-AS-80-..., EMME-AS-100-... 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-... 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-... 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-... 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

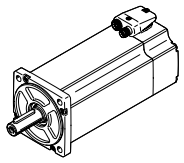
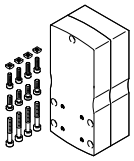
The clamping element EADT is required to adjust the toothed belt pretensioning for EAMM-U-110.
The motor and/or axis shaft can optionally be supported with a counter bearing EAMG.
Additional information → eamm-u

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 • Optionally with degree of protection IP65 • Use in combination with third-party motors on request	
Type	Part no.	Type	
ESBF-80			
With servo motor			
EMMT-AS-100-..., EMME-AS-100-...,	**1465438**	**EAMM-U-110-D80-100A-120**	
EMMS-AS-100-...	**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-...	**1589706**	**EAMM-U-110-D80-80G-120-S1[2]**	
EMGA-80-P-...			
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-100-..., EMMS-AS-140-...	**2803622**	**EAMM-U-145-D100-120G-188-S1[2]**	
EMGA-120-P-...			

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

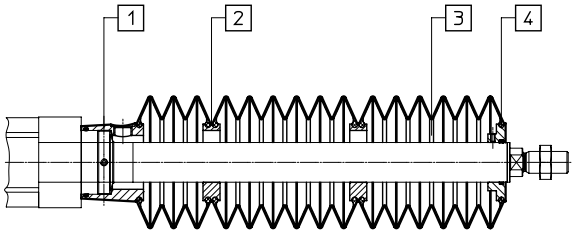
General technical data						
Type EADB-V2-		32	40	50	63	80
Max. stroke range of the cylinder[1]	[mm]	30 ... 500	30 ... 500	30 ... 500	30 ... 500	30 ... 500
Type of mounting		Push-on				
		Via threaded pin				
Mounting position		Any				
Media resistance		Dust, chippings, oil, grease, fuel (→ Internet: 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]

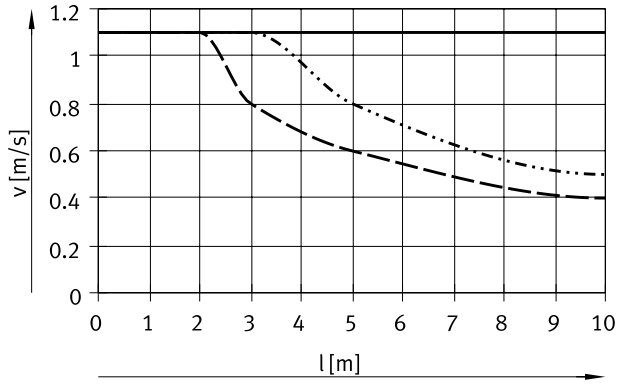
Type EADB-V2- Stroke [mm]	32	40	50	63	80
Product weight					
10 ... 100	116	109	190	203	269
101 ... 200	155	146	261	265	327
201 ... 300	173	164	306	307	365
301 ... 400	212	201	377	370	423
401 ... 500	233	222	402	391	444
Moving mass					
10 ... 100	46	44	93	79	72
101 ... 200	85	82	164	142	130
201 ... 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

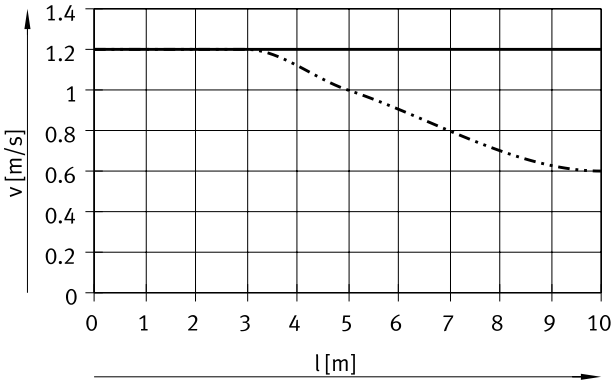
The bellows kit is a leak-free system.
To prevent unwanted media from being drawn in, the supply and exhaust air must be ducted via a pressure compensation hole in the connection part [1].
The pressure generated in the bellows kit by the positioning motion is largely defined by the travel speed and tubing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

For size 32



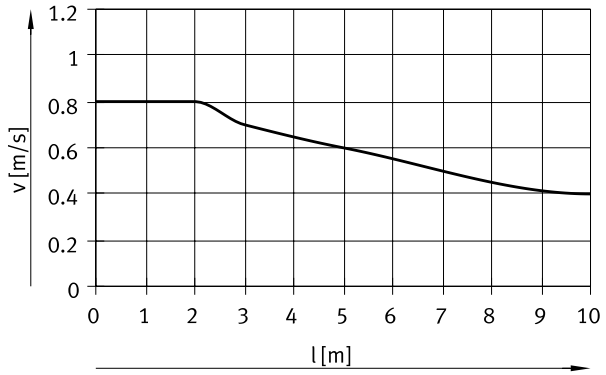
With QS-G1/4-12, QSH-16-12, PUN-16x2.5P
With QS-G1/4-12, PUN-12x2
With QS-G1/4-10, PUN-10x1.5

For size 40



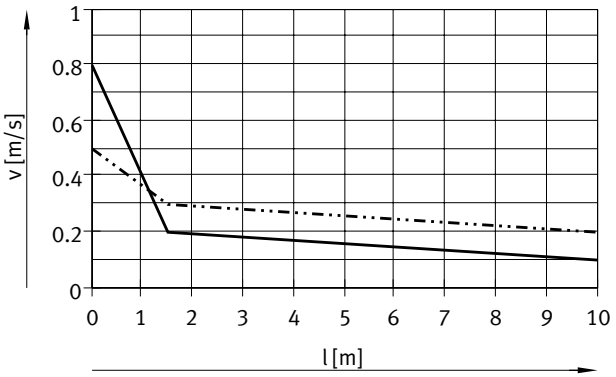
With QS-G1/4-12, QSH-16-12, PUN-16x2.5
With QS-G1/4-10, PUN-10x1.5P

For size 50



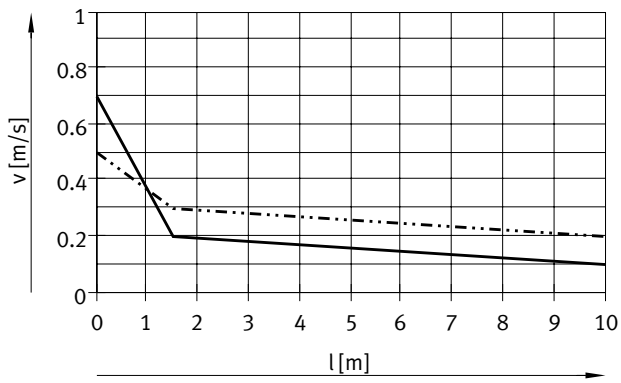
With QS-G1/4-12, QSH-16-12, PUN-16x2.5

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

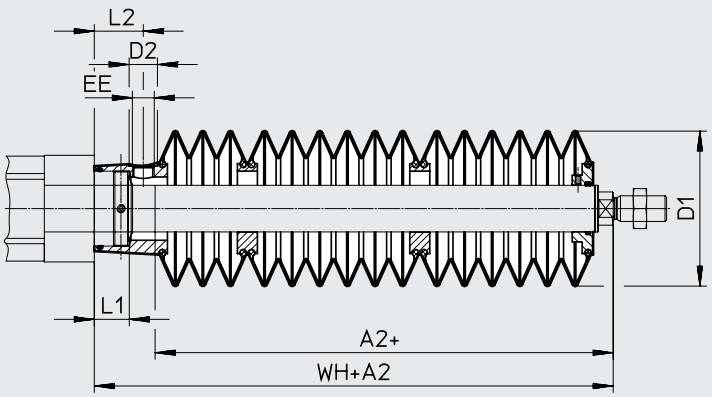
Tubing size and push-in fitting for pressure compensation hole

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 24 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

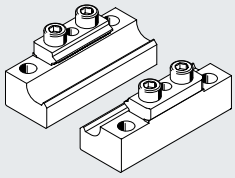
Cylinder data			Bellows kit	
Size	Stroke [mm]	Dimension for ...E [mm]	Part no.	Type
32	10 ... 100	52	**2828829**	**EADB-V2-32-S10-100**
	101 ... 200	81	**2828830**	**EADB-V2-32-S101-200**
	201 ... 300	92	**2828831**	**EADB-V2-32-S201-300**
	301 ... 400	121	**2828832**	**EADB-V2-32-S301-400**
	401 ... 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**

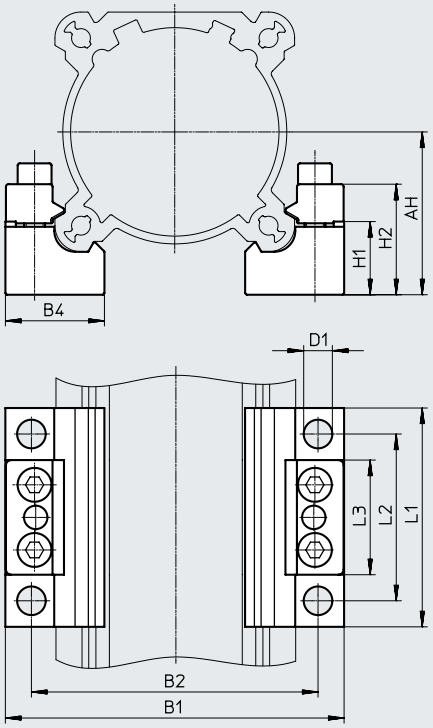
Accessories

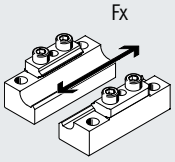
Profile mounting EAHF

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**

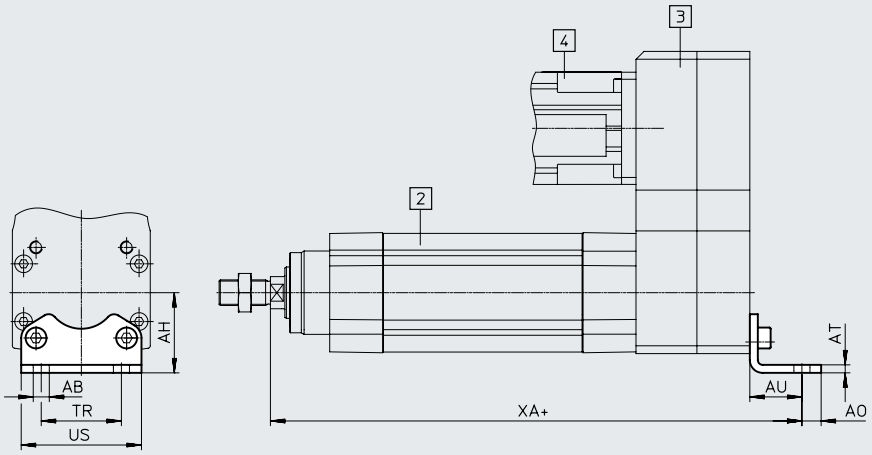
1) Corrosion resistance class CRC 3 to Festo standard FN 940070
High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

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/EMMS-A
\+ = 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 Ø	AH	AO	AT	AU ±0.2	TR 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 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.

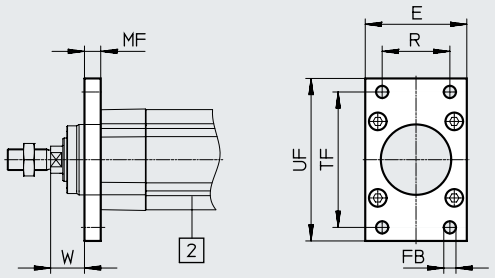
Festo core product range
★ Generally ready for dispatch from the factory within 24 hours
☆ Generally ready for dispatch from the factory within 5 days

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 ø H13	MF js14	R	TF	UF ±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 [kN]	ESBF-...-R3 CRC[1)]	Weight [g]	Part no.	Type
32	1	4	206	☆ **2827587**	**EAHH-V2-32-R1**
40	3	4	275	☆ **2827588**	**EAHH-V2-40-R1**
50	5	4	496	☆ **2827589**	**EAHH-V2-50-R1**
63	7	4	633	☆ **1502305**	**EAHH-V2-63-R1**
80	12	4	1360	**1502306**	**EAHH-V2-80-R1**
100	17	4	1880	**1502307**	**EAHH-V2-100-R1**

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.

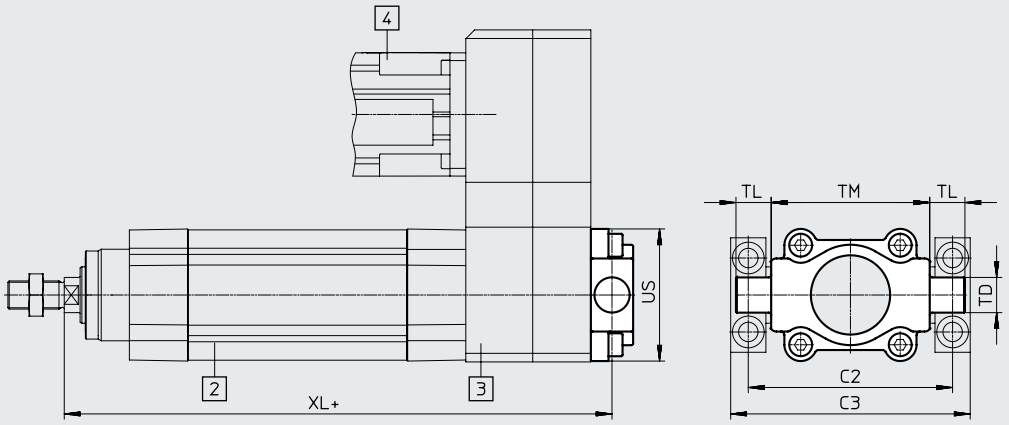
Festo core product range
★ Generally ready for dispatch from the factory within 24 hours
☆ Generally ready for dispatch from the factory within 5 days

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/EMMS-AS
\+ = plus stroke length

Dimensions and ordering data

For size	C2	C3	TD ø E9	TL	TM 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 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

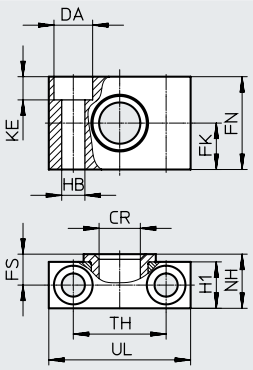
For size	Max. load capacity [kN]	ESBF-...				ESBF-...-R3			
		CRC[1]	Weight [g]	Part no.	Type	CRC[1]	Weight [g]	Part no.	Type
32	0.9	2	150	**174411**	**ZNCF-32**	4	150	**161852**	**CRZNG-32**
40	1.5	2	285	**174412**	**ZNCF-40**	4	285	**161853**	**CRZNG-40**
50	2.5	2	473	**174413**	**ZNCF-50**	4	473	**161854**	**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

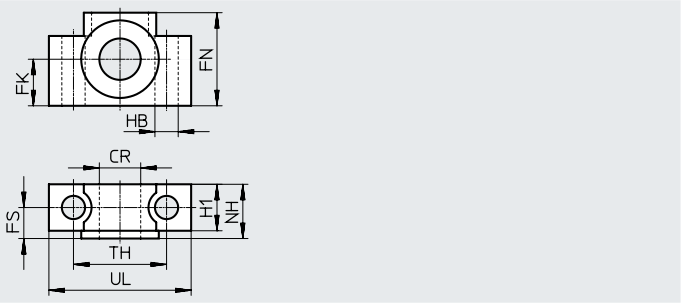
For size	KE	NH	TH ±0.2	UL	CRC[1)]	Weight [g]	Part no.	Type
32	6.8	18	32	46	2	83	**32959**	**LNZG-32**
40, 50	9	21	36	55	2	129	**32960**	**LNZG-40/50**
63, 80	11	23	42	65	2	178	**32961**	**LNZG-63/80**
100	13	28.5	50	75	2	306	**32962**	**LNZG-100/125**

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**

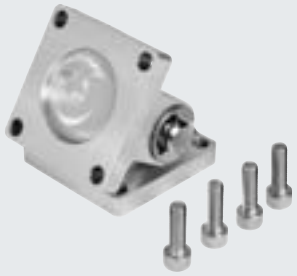
1) Corrosion resistance class CRC 4 to Festo standard FN 940070
Particularly high corrosion stress. Outdoor exposure under extreme corrosive conditions. Parts exposed to aggressive media, e.g. in the chemical or food industries. Such applications may need to be safeguarded by means of special testing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

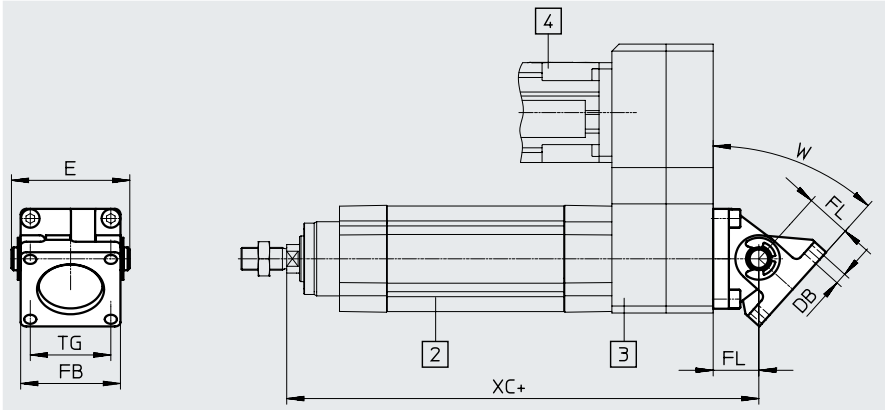
Accessories

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/EMMS-AS
\+ = plus stroke length

Dimensions and ordering data

For size	DB Ø	E	FB	FL	TG	W max. [°]
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 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 [kN]	CRC[1)]	Weight [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.

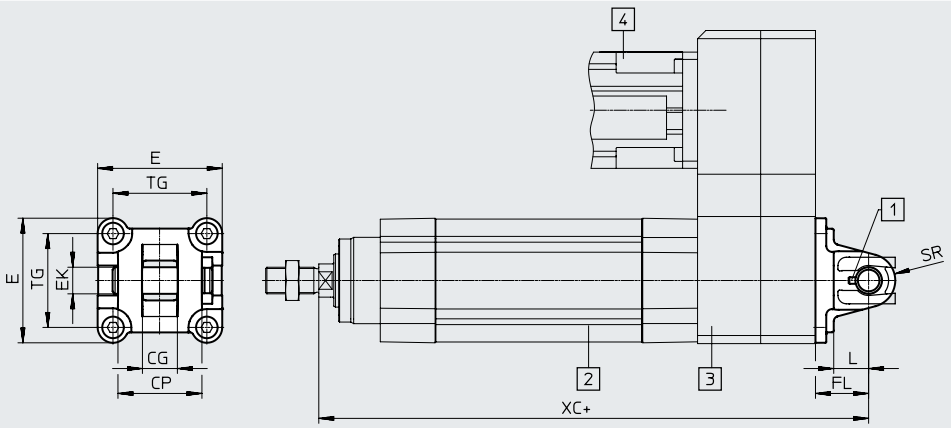
Note
The swivel flange SNCS or SNCB (max. load capacity of 1 kN) can be used for size 32.

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/EMMS-AS

\+ = plus stroke length

Dimensions and ordering data

For size	CG H14	CP h14	E	EK Ø H9	FL ±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 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]	CRC[1]	Weight [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

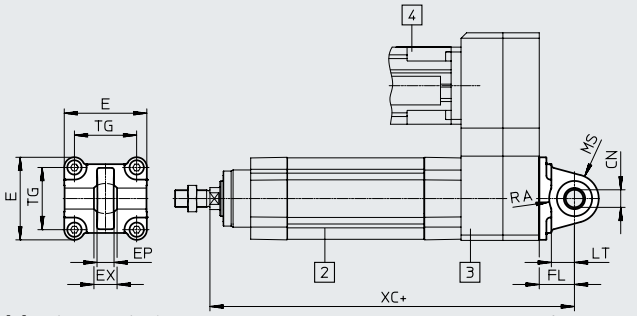
Accessories

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/EMMS-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.

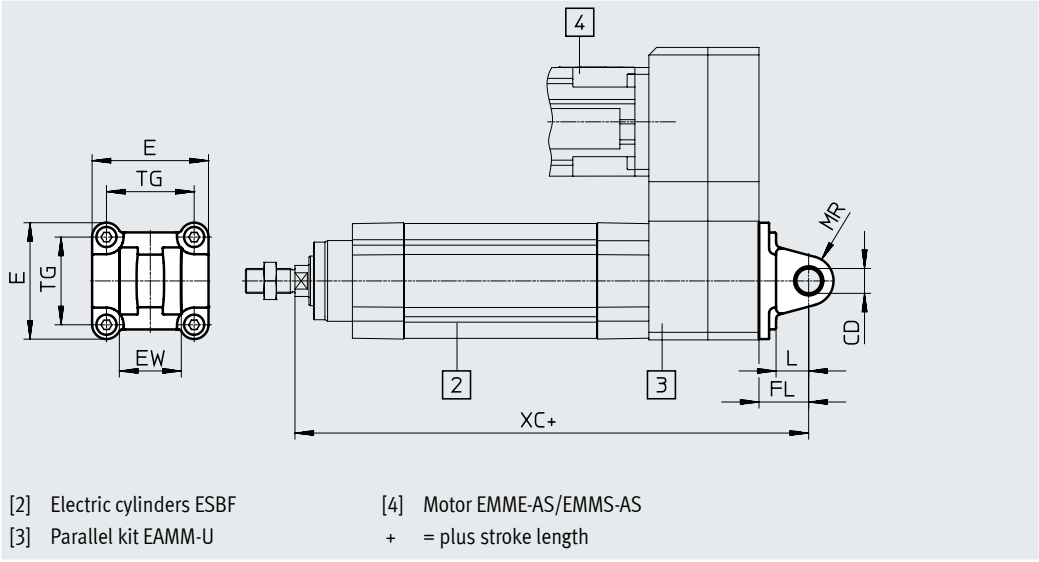
Festo core product range
★ Generally ready for dispatch from the factory within 24 hours
☆ Generally ready for dispatch from the factory within 5 days

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/EMMS-AS
\+ = plus stroke length

Dimensions and ordering data

For size	CD ø H9	E	EW −0.2/−0.6	FL ±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 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]	CRC[1]	Weight [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).

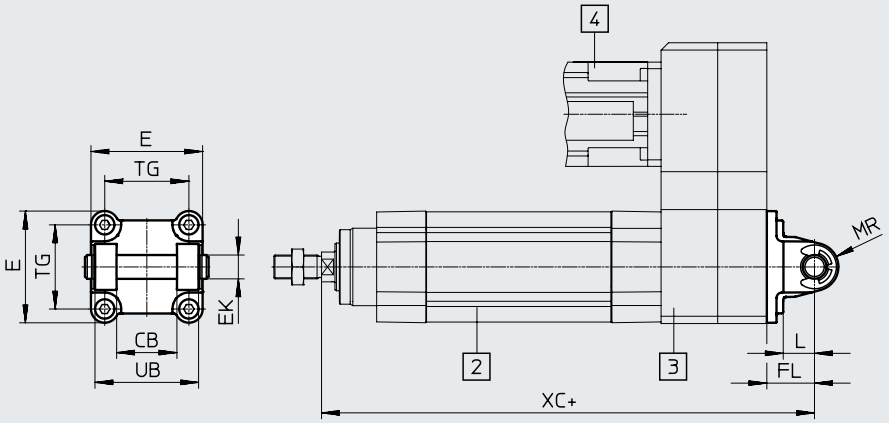
Festo core product range
★ Generally ready for dispatch from the factory within 24 hours
☆ Generally ready for dispatch from the factory within 5 days

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/EMMS-AS
\+ = plus stroke length

Dimensions and ordering data

For size	CB	E	EK ø	FL	L	MR	TG	UB
	H14		E8	±0.2		–0.5		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 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

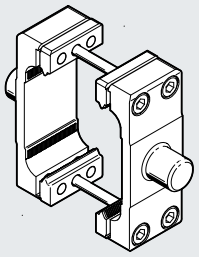
Accessories

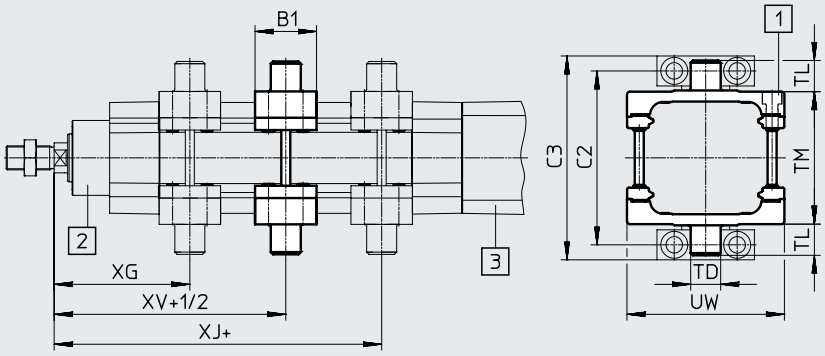
Trunnion flange kit DAMT

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**

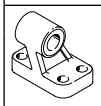
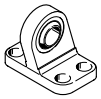
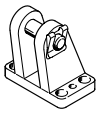
1) Corrosion resistance class CRC 1 to Festo standard FN 940070
Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind coverings, in the non-visible interior area, and parts which are covered in the application (e.g. drive shaft).

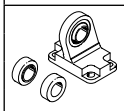
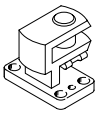
Festo core product range
★ Generally ready for dispatch from the factory within 24 hours
☆ Generally ready for dispatch from the factory within 5 days

Accessories

Ordering data – Mounting components

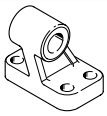
Data sheets → Internet: clevis foot

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

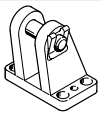
Ordering data – Mounting components, corrosion-resistant

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

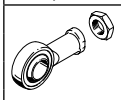
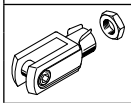
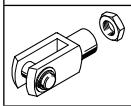
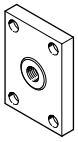
Designation	For size	Max. load capacity [kN]	Part no.	Type
Clevis foot LBG-R3				
	32	0.9	2078790	LBG-32-R3
	40	1.5	2078792	LBG-40-R3
	50	2.5	2078794	LBG-50-R3
	63	4	2078795	LBG-63-R3
	80	6	2078797	LBG-80-R3
	100	9	2078799	LBG-100-R3

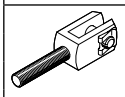
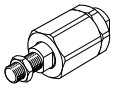
Festo core product range
★ Generally ready for dispatch from the factory within 24 hours
☆ Generally ready for dispatch from the factory within 5 days

Accessories

Ordering data – Piston rod attachments

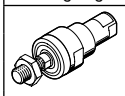
Data sheets → Internet: piston rod attachment

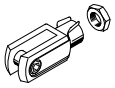
Designation	For size	Max. load capacity [kN]	Part no.	Type
Rod eye SGS				
	32	0.9	★ **9261**	**SGS-M10x1.25**
	40	1.5	★ **9262**	**SGS-M12x1.25**
	50, 63	4	★ **9263**	**SGS-M16x1.5**
	80, 100	9	★ **9264**	**SGS-M20x1.5**
Rod clevis SG				
	32	0.9	★ **6144**	**SG-M10x1.25**
	40	1.5	★ **6145**	**SG-M12x1.25**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

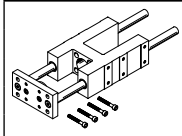
★ Generally ready for dispatch from the factory within 24 hours

☆ 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.

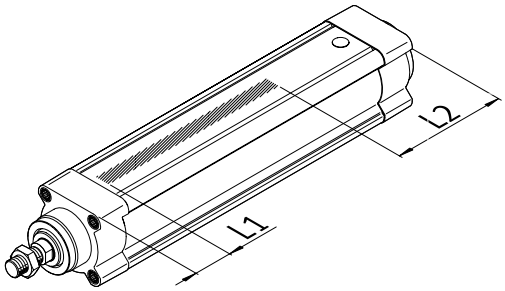
Festo core product range	★	Generally ready for dispatch from the factory within 24 hours
	☆	Generally ready for dispatch from the factory within 5 days

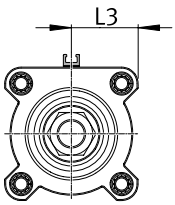
Accessories

Sensor mounting

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

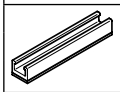
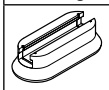
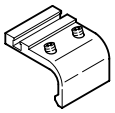
Reliable switching of the proximity sensors is not guaranteed outside of this area.





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

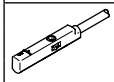
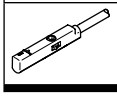
Ordering data – Sensor mounting for T-slot

	For diam.	Description	Length [mm]	Part no.	Type
Sensor rail					
	32 ... 100	• For proximity sensor SMT/CRSMT-8 • 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 • The overall length corresponds to the length of the sensing range plus an adjusting range of approx. 10 mm for the proximity sensors • The kit is glued onto the cylinder	35	**525565**	**CRSMB-8-32/100**
Mounting kit					
	32, 40	• For proximity sensor SMT/CRSMT-8 • 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

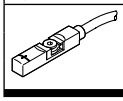
Ordering data – Proximity sensors for T-slot, magneto-resistive

Data sheets → Internet: smt

	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part no.	Type
N/O contact						
	Inserted in the slot from above, flush with the mounting kit, 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**
			Plug M12x1, 3-pin	0.3	★ **574337**	**SMT-8M-A-PS-24V-E-0.3-M12**
		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						
	Inserted in the slot from above, flush with the mounting kit, short design	PNP	Cable, 3-wire	7.5	★ **574340**	**SMT-8M-A-PO-24V-E-7.5-OE**

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

Data sheets → Internet: crsmt

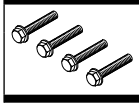
	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part no.	Type
N/O contact						
	Inserted in the slot from above, flush with the mounting kit	PNP	Cable, 3-wire	5	**574380**	**CRSMT-8M-PS-24V-K-5.0-OE**
			Plug M12x1, 3-pin	0.3	**574382**	**CRSMT-8M-PS-24V-K-0.3-M12**
			Plug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

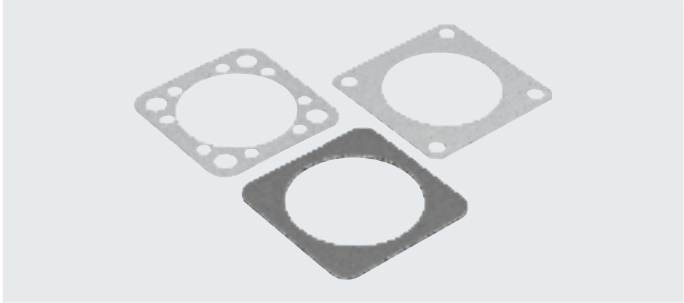
1) Corrosion resistance class CRC 3 to Festo standard FN 940070
High corrosion stress. Outdoor exposure under moderate corrosive conditions. Externally visible parts with primarily functional surface requirements which are in direct contact with a normal industrial environment.

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 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 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 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 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.