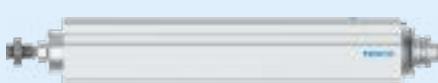


Electric cylinder units EPCS-BS

FESTO



This product is also available as a modular mechanical system
Electric cylinder EPCC



Key features

At a glance

Plug and work with the Simplified Motion Series



IO-Link

The simplicity of pneumatics is now combined for the first time with the advantages of electric automation thanks to the Simplified Motion Series.

These integrated drives are the perfect solution for all users who are looking for an electric alternative for very simple movement and positioning tasks between two mechanical end positions, but don't want the commissioning process for traditional electric drive systems that can often be quite complex.

Integrated

The integrated electronics in the drive are at the heart of the Simplified Motion Series.

Easy

- For commissioning, simply set all relevant parameters directly on the drive:
- Speed and force
- Reference end position and cushioning
- Manual operation

Standardised

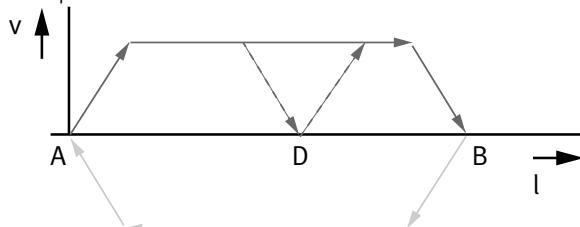
- Electrical connection via M12 plug design
- Power (4-pin): power supply for the motor
- Logic (8-pin): control signal, sensor signal and power for the integrated electronics

Connected

- Use of extended functions possible via IO-Link®:
- Remote configuration of motion parameters
- Copy and backup function for transferring parameters
- Read function for extended process parameters
- Freely definable intermediate position
- Firmware update

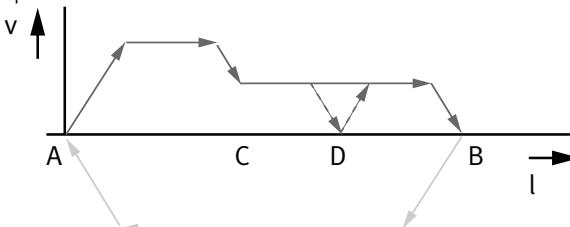
The functions of the Simplified Motion Series

Basic profile for movement between two end positions:
with speed control



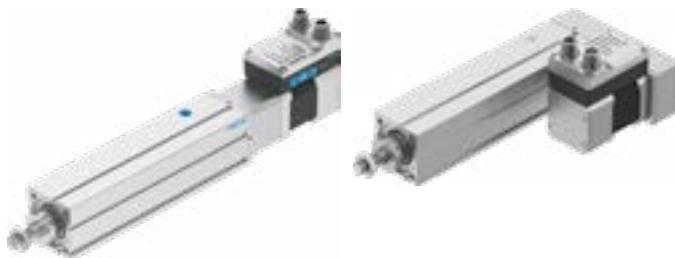
- These drives are designed for simple movements between two end positions.
- Proximity switches are required in order to implement any intermediate positions.
- With the intermediate position that can be freely configured via IO-Link®, movements can be stopped at any point between the end positions, without the need for proximity switches or external stops

Extended motion profile for simplified press-fitting and clamping functions: with speed and force control



Key features

At a glance



- Without external servo drive: all the necessary electronic components are combined in the integrated drive
- Two control options integrated as standard: digital I/O and IO-Link®
- Complete solution for simple movements between mechanical end positions
- Simplified commissioning: all parameters can be manually set directly on the drive
- No special expertise required for commissioning
- End-position feedback similar to that of a conventional proximity switch is integrated as standard
- Very high-quality ball screw with low internal friction
- Ideal for precise and fast movement in sorting, distribution or clamping applications

The products in the Simplified Motion Series

Electric cylinder unit
EPCE



Mini slide unit
EGSS-BS-KF



Toothed belt axis unit
ELGS-TB-KF



Electric cylinder unit
EPCS



Mini slide unit with parallel motor
mounting
EGSS-BS-KF



Toothed belt axis unit
ELGE



Electric cylinder unit with parallel
motor mounting
EPSCS



Spindle axis unit
ELGS-BS-KF



Rotary drive unit
ERMS



Spindle axis unit with parallel motor
mounting
ELGS-BS-KF



Modular and flexible with motor, motor mounting kit and servo drive

This product is also available as a modular mechanical system as electric cylinder EPCC-BS:



When it comes down to flexibility and adaptability, the compact dimensions and different combinations are ideal for making optimal use of the installation space.

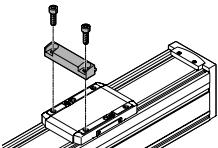
- Compact: optimum ratio of installation space to working space
- Unique: "one-size-down" mounting system
- Modular: individual combinations with motor, motor mounting kit and servo drive
- Flexible: wide range of mounting options for optimum machine integration

Key features

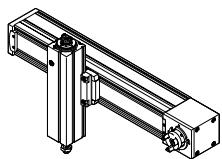
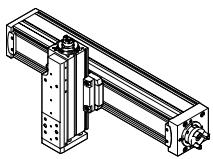
Combination matrix between axis ELGC-TB/ELGS-TB, ELGC-BS/ELGS-BS, mini slide EGSC-BS/EGSS-BS, electric cylinder EPCC-BS/EPSCS-BS and guide axis ELFC
 Mounting options with profile mounting and with angle kit

	Size	25	32	45	60
Base axis ELGC-BS/-TB; ELFC; ELGS-BS/-TB	32	■	-	-	-
	45	-	■	-	-
	60	-	-	■	-
	80	-	-	-	■

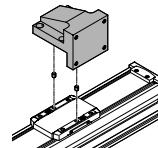
With profile mounting EAHF-L2-...-P-D...



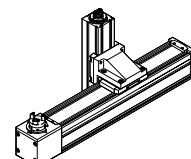
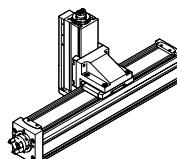
- Mounting option: base axis with one-size-down assembly axis



With angle kit EHAA-D-L2-...-AP



- Mounting option: base axis rotated through 90° with one-size-down assembly axis



Key features

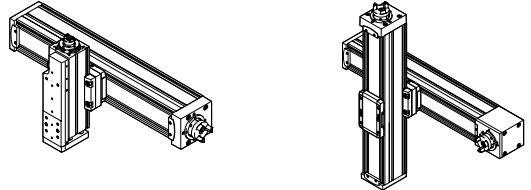
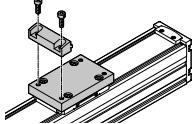
Combination matrix between axis ELGC/ELGS-TB, ELGC/ELGS-BS, mini slides EGSC/EGSS-BS, electric cylinder EPCC/EPCS-BS and guide axis ELFC
Mounting options with adapter kit or direct fastening

	Assembly axis ELGC-BS/-TB; ELFC; EGSC-BS; EPCC-BS; ELGS-BS/-TB; EGSS-BS, EPCS-BS					
	Size	25	32	45	60	80
Base axis ELGC-BS/-TB; ELFC; ELGS-BS/-TB	32	■	-	-	-	-
	45	-	■	-	-	-
	60	-	-	■	-	-
	80	-	-	-	-	■

	Assembly axis EGSC-BS; EGSS-BS				
	Size	25	32	45	60
Base axis EGSC-BS; EGSS-BS	25	■	-	-	-
	32	-	■	-	-
	45	-	-	■	-
	60	-	-	-	■

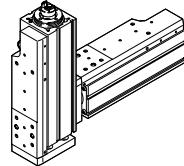
With adapter kit EHAA-D-L2

- Mounting option: base axis with the same size assembly axis
- Mounting option: base axis with height compensation for one-size-down assembly axis
- When motors are mounted using parallel kits, this may lead to interfering contours. In this case, the adapter plate is required for height compensation



With direct mounting

- Mounting option: base axis with the same size assembly axis

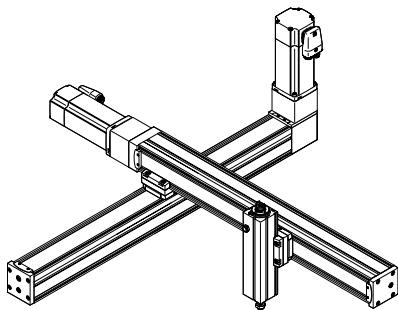


Key features

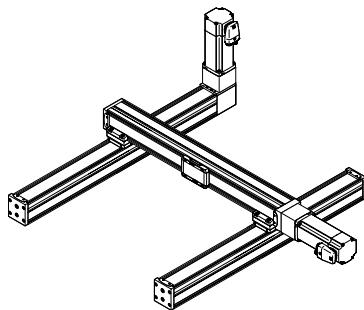
Typical handling systems

The axes ELGC can be combined into very space-saving handling systems that are suitable for assembly systems, test and inspection systems, small parts handling, the electronics industry and desktop applications where compact dimensions are essential. Combining the very compact linear axes ELGC, mini slides EGSC and electric cylinder EPCC offers an optimum ratio of installation space to working space. These feature a common system approach and platform architecture and the connections are largely adapterless.

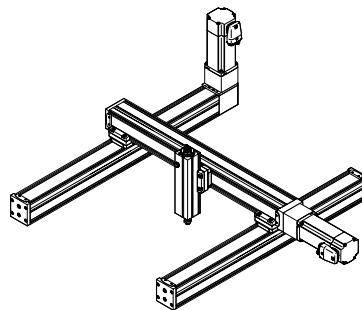
Cantilever system



Planar surface gantry



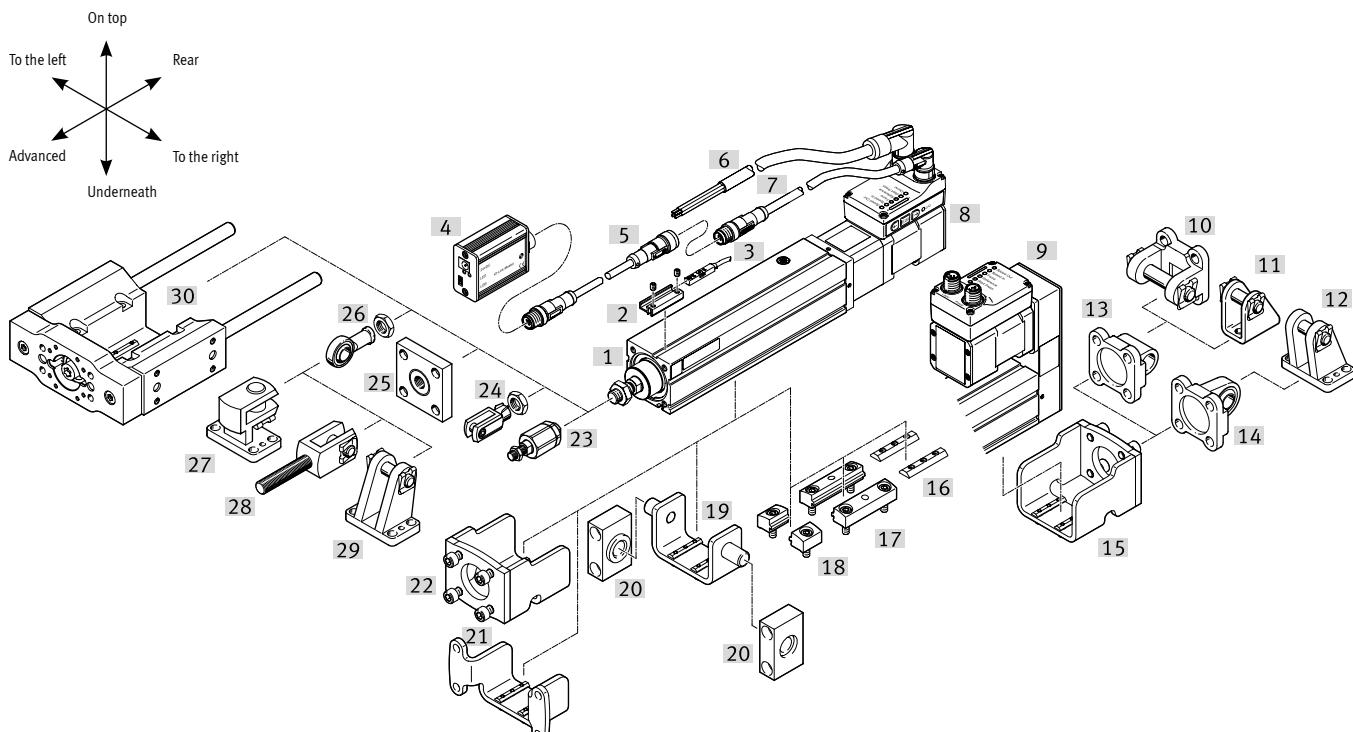
3-dimensional gantry



Type codes

001	Series	007	Motor type
EPCS	Electric cylinder	ST	Stepper motor ST
002	Drive system	008	Controller
BS	Ball screw drive	M	Integrated
003	Size	009	Control panel
32	32	H1	Integrated
45	45	010	Bus protocol/activation
60	60	PLK	PNP and IO-Link®
004	Stroke [mm]	NLK	NPN and IO-Link®
25	25	011	End-position sensing
50	50	AA	With integrated end-position sensing
75	75	012	Cable outlet direction
100	100		Standard
125	125	D	Underneath
150	150	L	Left
175	175	R	Right
200	200	013	Motor attachment position
250	250		Standard
300	300	PL	Parallel, left
350	350	PR	Parallel, right
400	400	PD	Parallel, bottom
500	500	PT	Parallel, top
005	Spindle pitch	014	Electrical accessories
3P	3 mm		None
5P	5 mm	L1	Adapter for operation as IO-Link® device
8P	8 mm		
10P	10 mm		
12P	12 mm		
006	Position sensing		
A	For proximity sensor		

Peripherals overview



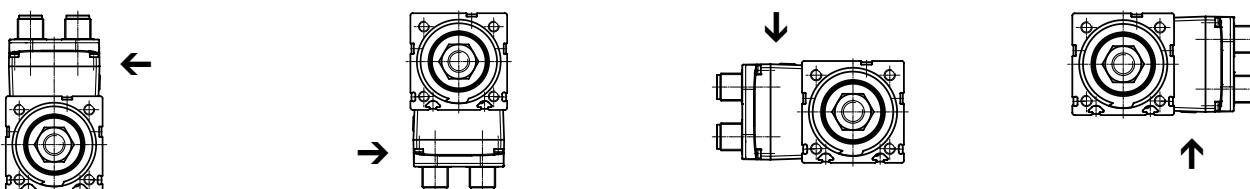
Cable outlet direction

Standard

[D] Underneath

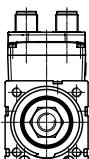
[L] Left

[R] Right

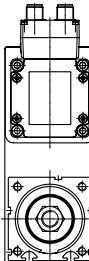


Motor attachment variants

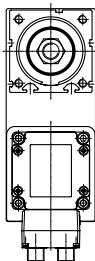
Standard



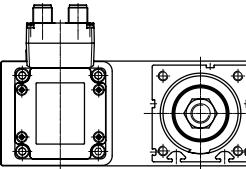
[PT] Top



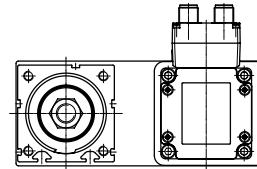
[PD] Underneath



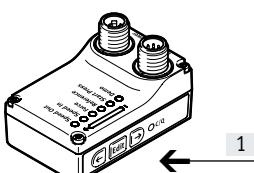
[PL] Left



[PR] Right



Control elements



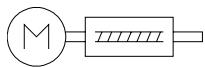
[1] Pushbutton actuators for parameterisation and control

Peripherals overview

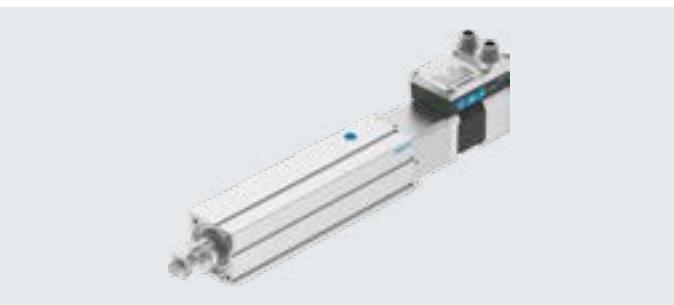
Accessories			→ Page/Internet
Type/order code	Description		
[1] Electric cylinder unit EPCS-BS	Electric drive		8
[2] Sensor bracket ¹⁾ EAPM-L2	For mounting the proximity switches on the axis. The proximity switches can only be mounted using the sensor bracket		40
[3] Proximity switch ¹⁾ SMT-8M	Magnetic proximity switches, for T-slot		40
[4] IO-Link master USB CDSU-1	For straightforward use of the electric cylinder unit with IO-Link®		41
[5] Adapter NEFC-M12G8	Connection between the motor and the IO-Link master		41
[6] Supply cable NEBLT12	For connecting load and logic supply		41
[7] Connecting cable NEBC-M12	For connection to a controller		41
[8] Axial kit	For axial motor mounting (included in the scope of delivery)		8
[9] Parallel kit	For parallel motor mounting (included in the scope of delivery)		8
[10] Swivel flange SNCB	With parallel motor mounting, for spherical bearing		37
[11] Clevis foot LBN	With parallel motor mounting, for spherical bearing		38
[12] Clevis foot LBG/LBG-...-R3	With parallel motor mounting, for spherical bearing		38
[13] Swivel flange SNCL	With parallel motor mounting		36
[14] Swivel flange SNCS/CRSNCS/SNCS-...-R3	With parallel motor mounting		35
[15] Adapter kit EAHA-P2	<ul style="list-style-type: none"> • For mounting the swivel flange and trunnion flange on the front • Can only be mounted on the rear in conjunction with parallel kit EAMM-U 		33
[16] Slot nut ABAN	For mounting the electric cylinder		38
[17] Profile mounting EAHF-L2-P	<ul style="list-style-type: none"> • For mounting the axis on the side of the profile • The profile mounting can be attached to the mounting surface using the drilled hole in the centre 		31
[18] Profile mounting EAHF-L2-PS	For mounting the axis on the side of the profile		30
[19] Trunnion support LNZG	For cylinders with trunnion flange mounting		34
[20] Swivel mounting EAHS-P2	Position freely selectable along the cylinder length		34
[21] Flange mounting EAHH-P2	<ul style="list-style-type: none"> • For mounting the electric cylinder via the profile • Position freely selectable along the cylinder length 		32
[22] Adapter kit EAHA-P2	<ul style="list-style-type: none"> • For mounting the swivel flange and trunnion flange on the front • Can only be mounted on the rear in conjunction with parallel kit EAMM-U 		33
[23] Self-aligning rod coupler FK/CRFK	To compensate for radial and angular deviations		38
[24] Rod clevis SG/CRSG	Permits a swivelling movement of the cylinder in one plane		38
[25] Coupling piece KSG	To compensate for radial deviations		38
[26] Rod eye SGS/CRSGS	With spherical bearing		38
[27] Right angle clevis foot LQG	For rod eye SGS		38
[28] Rod clevis SGA	For swivel mounting of the cylinder		38
[29] Clevis foot LBG/LBG-...-R3	With parallel motor mounting, for spherical bearing		38
[30] Guide unit EAGF	For protecting electric cylinders against rotation at high torque loads		39

1) Proximity switches are optional and only required in order to sense any intermediate positions.

Datasheet



- Ø - Size
32 ... 60
- | - Stroke length
25 ... 500 mm



General technical data						
Size		32	45	60		
Design		Electric cylinder with ball screw				
Motor type		Stepper motor				
Protection against rotation/guide		With plain-bearing guide				
Mounting position		Any				
Piston rod thread	M8		M10x1.25		M12x1.25	
Piston rod end		Male thread				
Working stroke [mm]	25, 50, 75, 100, 125, 150, 175, 200		25, 50, 75, 100, 125, 150, 175, 200, 250, 300		25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400, 500	
Stroke reserve [mm]	0					
Max. angle of rotation of the piston rod [°]	≤ ±1					
Additional functions		Built-in end-position sensing				
		User interface				
Display		LED				
Homing		Positive fixed stop block				
		Negative fixed stop block				
Type of mounting		Via female thread				
		Via accessories				
Max. cable length						
Inputs/outputs [m]	15					
IO-Link® operation [m]	20					

Mechanical data						
Size		32	45	60		
Spindle design	3P	8P	3P	10P	5P	12P
Spindle pitch [mm/rev]	3	8	3	10	5	12
Spindle diameter [mm]	8	8	10	10	12	12
Max. payload						
Horizontal [kg]	24	24	60	40	120	56
Vertical [kg]	12	9	23	13	46	18
Max. feed force F _x [N]	150	150	450	250	900	375
Max. radial force ¹⁾ [N]	75	75	180	180	230	230
Repetition accuracy [mm]	±0.02					
Reversing backlash ²⁾ [mm]	≤ 0.1					
Position sensing		Via proximity switch				
		Via IO-Link®				
With axial motor mounting						
Max. speed ³⁾ [m/s]	0.079	0.21	0.074	0.23	0.09	0.22
Speed "Speed Press" ⁴⁾ [m/s]	0.01					
Max. acceleration ⁴⁾ [m/s ²]	1.5	5	1.5	5	1.5	5
With parallel motor mounting						
Max. speed ³⁾ [m/s]	0.075	0.2	0.07	0.22	0.09	0.21
Speed "Speed Press" ⁴⁾ [m/s]	0.01					
Max. acceleration ⁴⁾ [m/s ²]	0.5	1.5	0.5	1.5	0.5	1.5

1) At the drive shaft

2) When new

3) Adjustable in increments of 10%

4) Unchangeable parameter

Datasheet

Electrical data			
Size	32	45	60
Motor			
Nominal voltage DC	[V]	24 ($\pm 15\%$)	
Nominal current	[A]	3	3
Max. current consumption (load)	[A]	3	5.3
Max. current consumption (logic)	[mA]	300	
Encoder			
Rotor position sensor		Absolute encoder, single turn	
Rotor position sensor measuring principle		Magnetic	
Rotor position sensor resolution	[Bit]	16	
Interfaces			
Size	32	45	60
Parameterisation interface			
IO-Link®		Yes	
User interface		Yes	
Digital inputs			
Number		2	
Switching logic		PNP	
		NPN	
Characteristics		Not galvanically isolated	
		Configurable	
Specification		Based on IEC 61131-2, type 1	
Operating range	[V]	24	
Digital outputs			
Number		2	
Switching logic		PNP	
		NPN	
Rotor position sensor		Absolute encoder, single turn	
Characteristics		Not galvanically isolated	
		Configurable	
Max. current	[mA]	100	

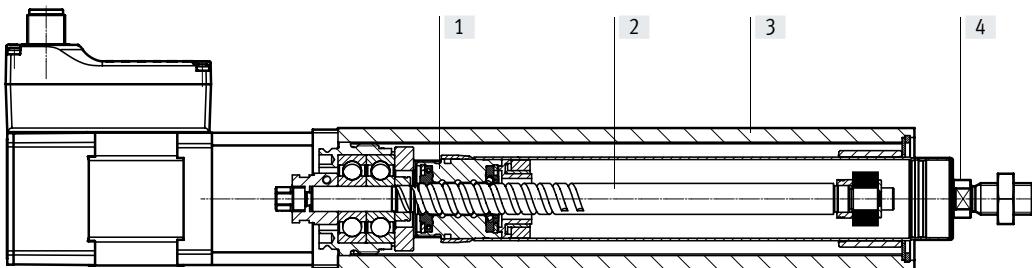
Datasheet

Technical data – IO-Link®				
Size	32	45	60	
SIO mode support	Yes			
Communication mode	COM3 (230.4 kBd)			
Connection technology	Plug			
Port class	A			
Number of ports	1			
Process data length OUT	[byte]	2		
Process data content OUT	[bit]	1 (Move in)		
	[bit]	1 (Move out)		
	[bit]	1 (Move Intermediate)		
	[bit]	1 (Quit Error)		
Process data length IN	[byte]	2		
Process data content IN	[bit]	1 (State Device)		
	[bit]	1 (State Move)		
	[bit]	1 (State in)		
	[bit]	1 (State out)		
	[bit]	1 (State Intermediate)		
Service data content IN	[bit]	32 (Force)		
	[bit]	32 (Position)		
	[bit]	32 (Speed)		
Minimum cycle time	[ms]	1		
Data memory required	[kilobyte]	0.5		
Protocol version		Device V 1.1		
Operating and environmental conditions				
Size	32	45	60	
Insulation class	B			
Ambient temperature	[°C]	0 ... +50		
Storage temperature	[°C]	-20 ... +60		
Note on ambient temperature		Above an ambient temperature of 30°C, the power must be reduced by 2% per K		
Temperature monitoring		Switch-off in the event of over-temperature		
		Integrated precise CMOS temperature sensor with analogue output		
Relative humidity	[%]	0 ... 90 (non-condensing)		
Protection class		III		
Degree of protection		IP40		
Duty cycle	[%]	100		
CE marking		To EU EMC Directive for EMCS-ST → festo.com/sp		
		To EU RoHS Directive		
UKCA marking (see declaration of conformity)		To UK EMC regulations		
KC marking		KC EMC		
Certification		RCM		
Vibration resistant		Transport application test with severity level 1 to FN 942017-4 and EN 61800-2 and EN 61800-5-1		
Shock resistance		Shock test with severity level 1 to FN 942017-5 and EN 61800-2		
Cleanroom class		Class 9 according to ISO 14644-1		
Maintenance interval		Lifetime lubrication		
Weight				
Size	32	45	60	
With axial motor mounting				
Basic weight with 0 mm stroke	[g]	818	1185	2294
Additional weight per 10 mm stroke	[g]	24	41	69
Moving mass with 0 mm stroke	[g]	98	179	305
Additional moving mass per 10 mm stroke	[g]	3.3	4.9	6.5
With parallel motor mounting				
Basic weight with 0 mm stroke	[g]	982	1308	2558
Additional weight per 10 mm stroke	[g]	24	41	69
Moving mass with 0 mm stroke	[g]	98	179	305
Additional moving mass per 10 mm stroke	[g]	3.3	4.9	6.5

Datasheet

Materials

Sectional view



Electric cylinder

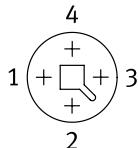
[1] Spindle nut	Steel
[2] Spindle	Roller bearing steel
[3] Housing	Smooth-anodised wrought aluminium alloy
[4] Piston rod	High-alloy stainless steel
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364 zone III

Pin allocation

Power supply

Plug

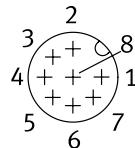
M12x1, 4-pin, T-coded to EN 61076-2-111



Logic interface

Plug

M12x1, 8-pin, A-coded to EN 61076-2-101



Pin

Pin	Function
1	Power voltage supply (24 V DC)
2	Reference potential, power voltage supply (GND)
3	Reserved, do not connect
4	Functional earth (FE)

When used with digital I/O

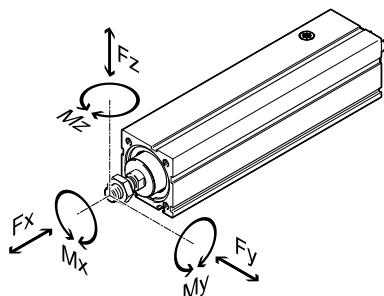
Pin	Function
1	Logic voltage supply (24 V DC)
2	Digital output 1 (State "In")
3	Digital output 2 (State "Out")
4	Reference potential, logic voltage supply (GND)
5	Digital input 1 (Move "In")
6	Digital input 2 (Move "Out")
7	Reserved, do not connect
8	Reference potential, logic voltage supply (GND)

When used with IO-Link®

Pin	Function
1	L+ IO-Link® power supply (24 V DC)
2	Reserved, do not connect
3	C/Q communication with the IO-Link master
4	L – Reference potential, IO-Link® power supply (0 V)
5	Reserved, do not connect
6	Reserved, do not connect
7	Reserved, do not connect
8	L – Reference potential, IO-Link® power supply (0 V)

Datasheet

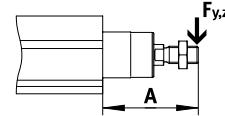
Maximum permissible loads on the piston rod



If there are two or more forces and torques simultaneously acting on the piston rod, the following equations must be satisfied:

F_1/M_1 = dynamic value

F_2/M_2 = maximum value

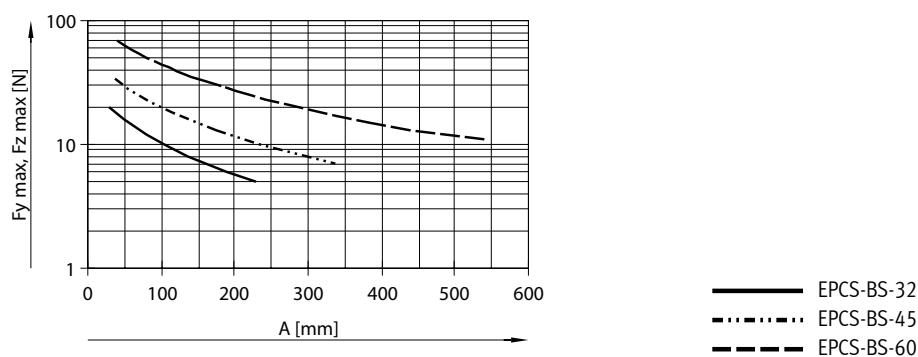


$$f_v = \frac{|F_{y1}|}{F_{y2}} + \frac{|F_{z1}|}{F_{z2}} + \frac{|M_{y1}|}{M_{y2}} + \frac{|M_{z1}|}{M_{z2}} \leq 1$$

$$|Fx| \leq Fx_{max}$$

$$|Mx| \leq Mx_{max}$$

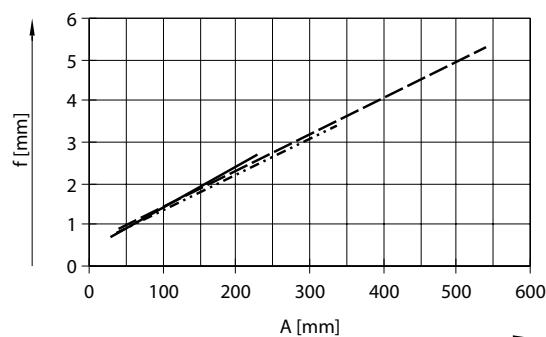
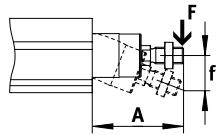
Maximum permissible lateral forces $F_{y,max}$ and $F_{z,max}$ on the piston rod as a function of projection A



Size	32		45		60	
Spindle design	3P	8P	3P	10P	5P	12P
$F_{x,max}$ (static) [N]	150	150	450	450	1000	1000
$M_{x,max}$ [Nm]	0					
$M_{y,max}, M_{z,max}$ [Nm]	1.5		2.9		6.4	

	Note
Engineering software	
Electric Motion Sizing	
→ www.festo.com/x/electric-motion-sizing	

Datasheet

Piston rod deflection f_2 as a function of projection A and lateral force F

- EPCS-BS-32 ($F_2 = 3.5 \text{ N}$)
- - - EPCS-BS-45 ($F_2 = 4.0 \text{ N}$)
- - - - EPCS-BS-60 ($F_2 = 8.0 \text{ N}$)

$$f_1 = \frac{F_1}{F_2} \cdot f_2$$

f_1 = Piston rod deflection caused by lateral force [mm]

F_1 = Lateral force [N]

F_2 = Standardised lateral force [N] (constant force from graph)

f_2 = Piston rod deflection caused by lateral force [N]
(reading from graph)

Example: Electric cylinder EPCS-32-50-8P with a lateral force of 7 N

$F_1 = 7 \text{ N}$ and $F_{\text{standard}} = 3.5 \text{ N}$

Value read from graph for EPCS-32 and projection = 50 mm

$f_2 = 1 \text{ mm}$

Calculation of deflection caused by lateral force:

$$f_1 = \frac{F_1}{F_2} \cdot f_2 = \frac{3 \text{ N}}{1,5 \text{ N}} \cdot 1 \text{ mm} = 2 \text{ mm}$$

Datasheet

Calculating the mean feed force F_{xm} with the electric cylinder EPSCS

The peak feed force value must not exceed the maximum feed force within a movement cycle. The peak value is generally achieved in vertical operation during the acceleration phase of the upwards stroke. If the maximum feed force is exceeded, this can increase wear and thus shorten the service life of the ball screw. The maximum speed must likewise not be exceeded:

$F_x \leq F_{x\max}$
and
 $v_x \leq v_{x\max}$

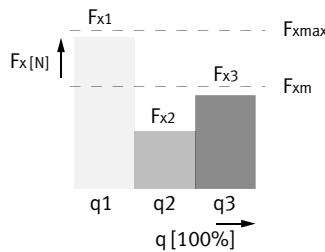
Calculating the mean feed force F_{xm} (to DIN 69051-4)

During operation, the continuous feed force may be briefly exceeded up to the maximum feed force. The continuous feed force must, however, be adhered to when averaged over a movement cycle:

$F_{xm} \leq F_{x\text{continuous}}$

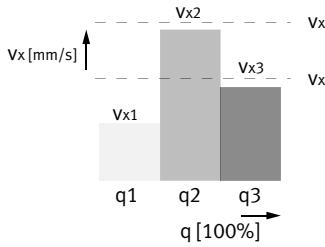
$$F_{xm} = \sqrt[3]{\sum F_x^3 \cdot \frac{v_x}{v_{xm}} \cdot \frac{q}{100}} =$$

$$F_{xm} = \sqrt[3]{F_{x1}^3 \cdot \frac{v_{x1}}{v_{xm}} \cdot \frac{q_1}{100} + F_{x2}^3 \cdot \frac{v_{x2}}{v_{xm}} \cdot \frac{q_2}{100} + F_{x3}^3 \cdot \frac{v_{x3}}{v_{xm}} \cdot \frac{q_3}{100} + \dots}$$



Mean feed speed (to DIN 69051-4)

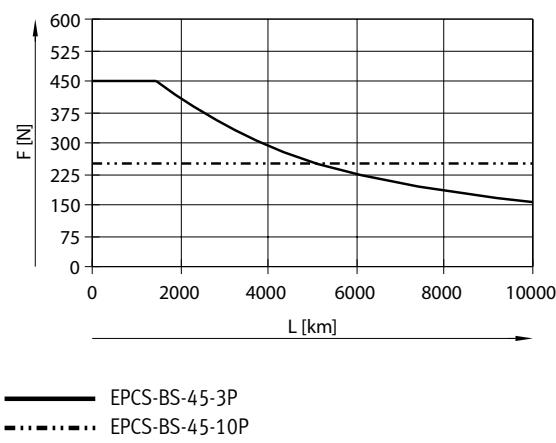
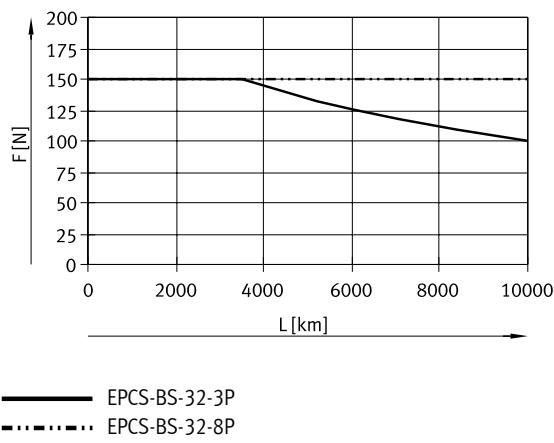
$$v_{xm} = \sum v_x \cdot \frac{q}{100} = v_{x1} \cdot \frac{q_1}{100} + v_{x2} \cdot \frac{q_2}{100} + v_{x3} \cdot \frac{q_3}{100} + \dots$$



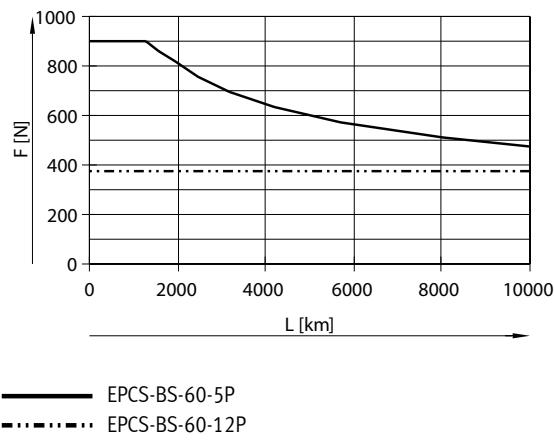
F_x	Feed force
F_{xm}	Mean feed force
$F_{x\max}$	Max. feed force
$F_{x\text{continuous}}$	Continuous feed force
q	Time
v_x	Feed speed
v_{xm}	Mean feed speed
$v_{x\max}$	Max. Feed speed

Datasheet

Mean feed force F_{xm} as a function of running performance L , with an operating coefficient f_B of 1.0 at room temperature
Size 32



Size 60



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

L_1 Actual service life
 L Target service life
 (→ graphs)
 f_B Operating coefficient

Service life taking into account the operating coefficient

Load ¹⁾	Operating coefficient f_B	Sample application
None	1.0 ... 1.2	Measuring machine
Light	1.2 ... 1.4	Handling, robot technology
Medium	1.4 ... 1.6	Press-in operations
High	1.6 ... 2.0	Construction, agriculture

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

- **Note**

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.

Datasheet

Sizing example

Application data:

- Payload: 25 kg
- Mounting position: horizontal
- Motor mounting position: axial
- Stroke: 150 mm
- Max. permissible positioning time: 2 s (one direction)

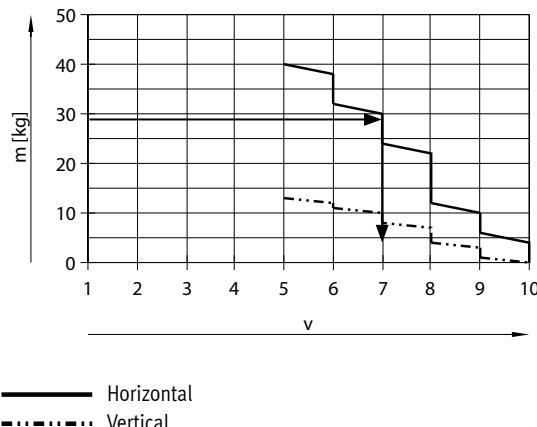
Step 1: Selecting the smallest possible size from the table → page 10

Mechanical data

Size	32	45	60			
Spindle design	3P	8P	3P	10P	5P	12P
Max. payload						
Horizontal	[kg]	24	24	60	40	120
Vertical	[kg]	12	9	23	13	46
						56
						18

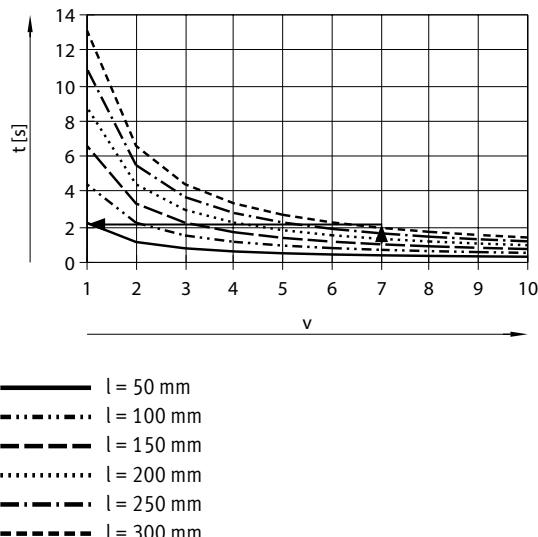
→ Smallest possible size: EPCS-BS-45-10P

Step 2: Selecting the max. speed level v for payload m



→ Max. speed level for the payload: level 7

Step 3: Reading off the min. positioning time t for stroke l



→ Min. positioning time for 150 mm at level 7: 1 s

Result

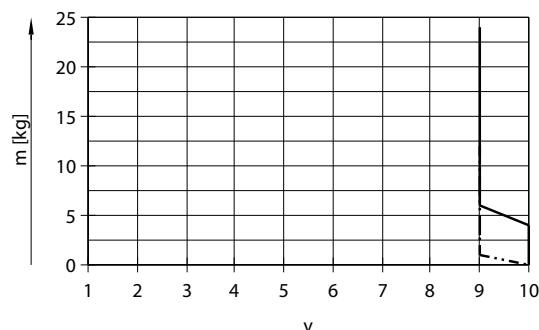
The application can be implemented using EPCS-BS-45-150-10P. A minimum positioning time (one direction) of 1 s is achieved. Longer positioning times can be selected at any time using a lower speed level.

Datasheet

Mass m as a function of speed level v

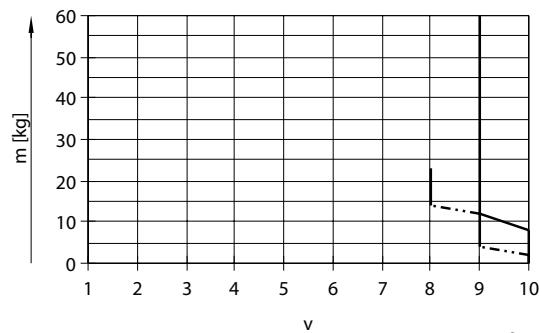
With axial kit

EPSCS-BS-32-8P



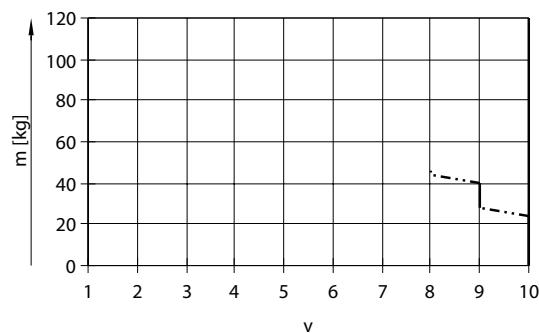
— Horizontal
- - - Vertical

EPSCS-BS-45-3P



— Horizontal
- - - Vertical

EPSCS-BS-60-5P

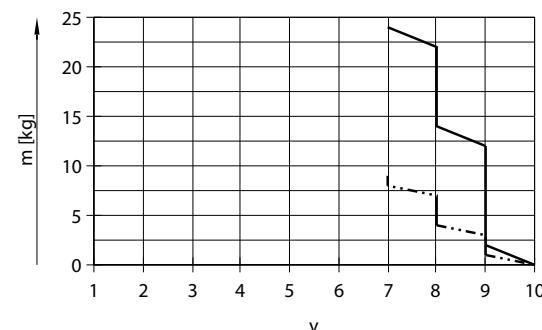


— Horizontal
- - - Vertical

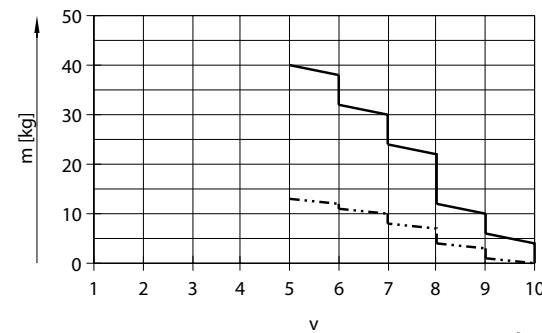
- - Note

The lines represent the maximum values. The lower speed levels can be set at any time.

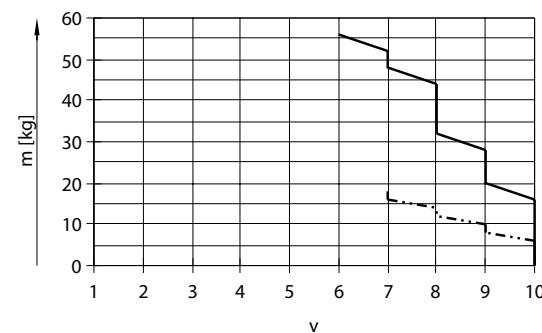
EPSCS-BS-32-8P



EPSCS-BS-45-10P



EPSCS-BS-60-12P

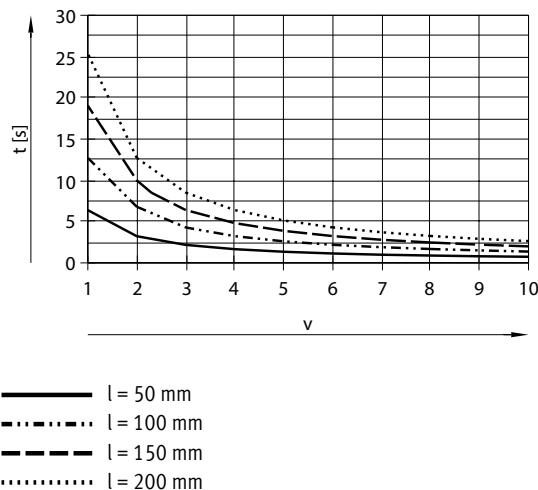


Datasheet

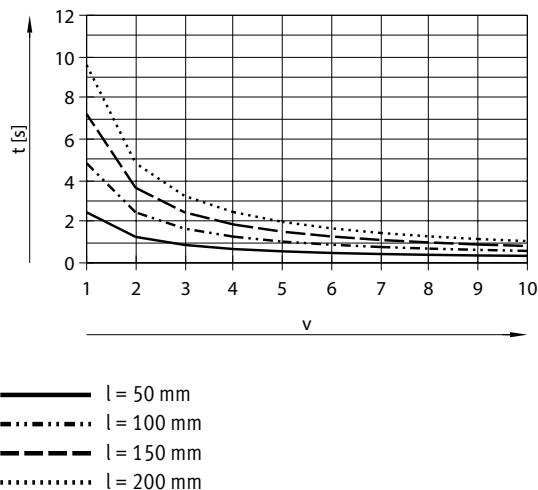
Positioning time t as a function of speed level v and stroke l

With axial kit

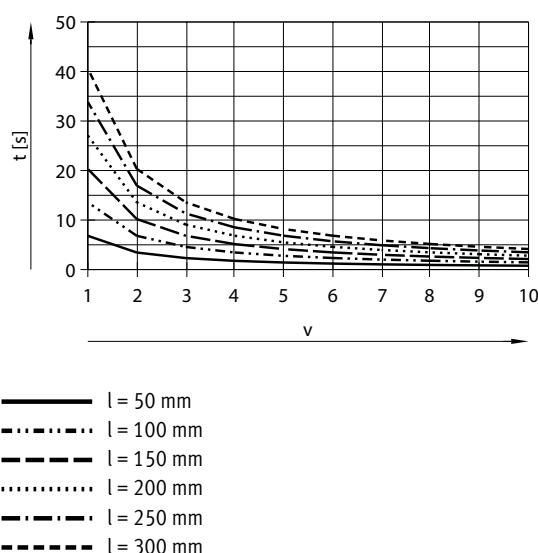
EPCS-BS-32-3P



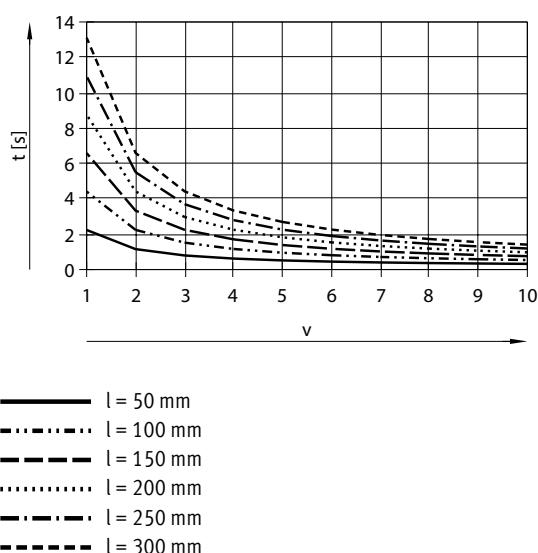
EPCS-BS-32-8P



EPCS-BS-45-3P



EPCS-BS-45-10P



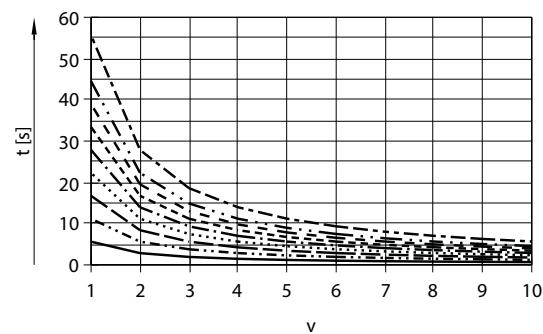
Datasheet

Positioning time t as a function of speed level v and stroke l

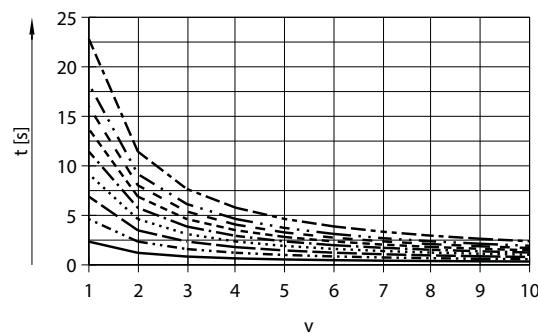
With axial kit

EPSCS-BS-60-5P

EPSCS-BS-60-12P



- l = 50 mm
- l = 100 mm
- - l = 150 mm
- l = 200 mm
- l = 250 mm
- - l = 300 mm
- - l = 350 mm
- - l = 400 mm
- - l = 500 mm



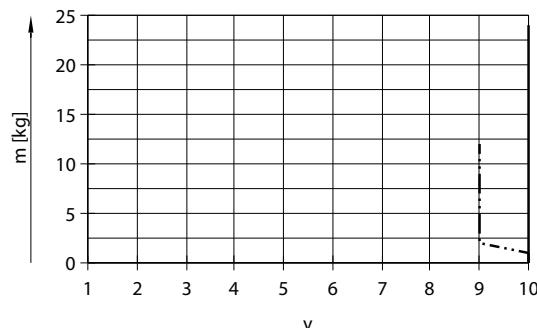
- l = 50 mm
- l = 100 mm
- - l = 150 mm
- l = 200 mm
- l = 250 mm
- - l = 300 mm
- - l = 350 mm
- - l = 400 mm
- - l = 500 mm

Datasheet

Mass m as a function of speed level v

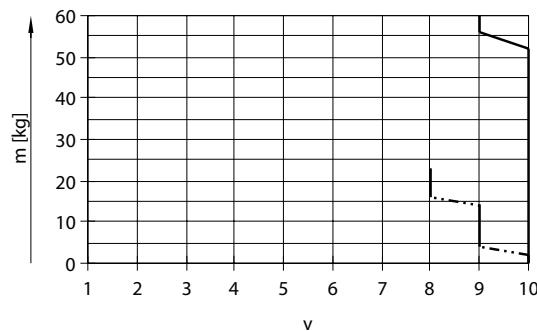
With parallel kit

EPCS-BS-32-3P



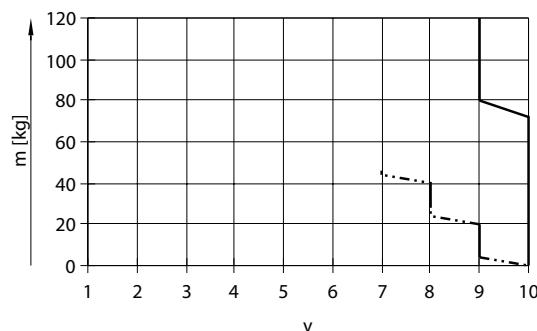
— Horizontal
- - - - Vertical

EPCS-BS-45-3P



— Horizontal
- - - - Vertical

EPCS-BS-60-5P

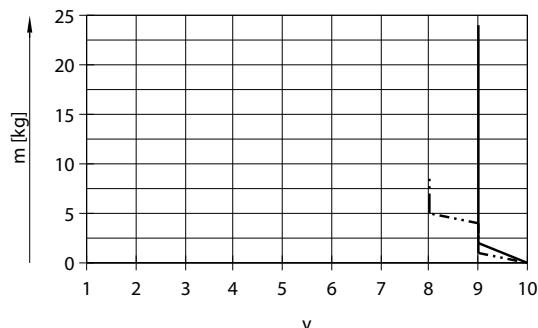


— Horizontal
- - - - Vertical

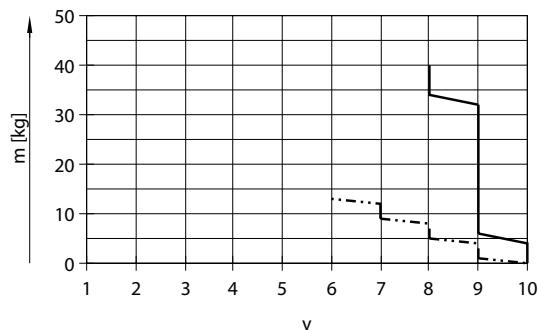
- - Note

The lines represent the maximum values. The lower speed levels can be set at any time.

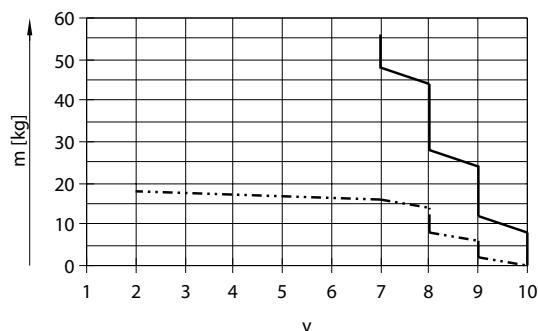
EPCS-BS-32-8P



EPCS-BS-45-10P



EPCS-BS-60-12P



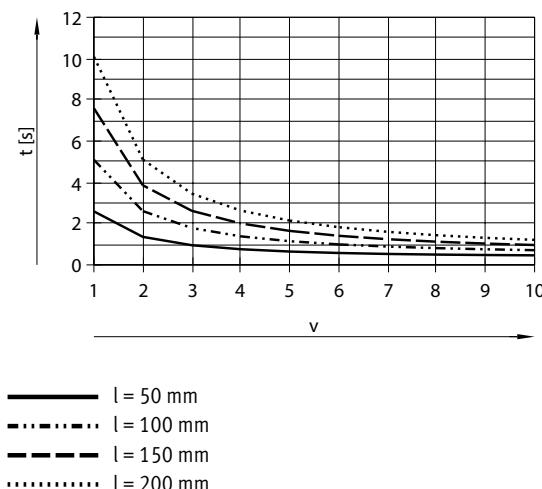
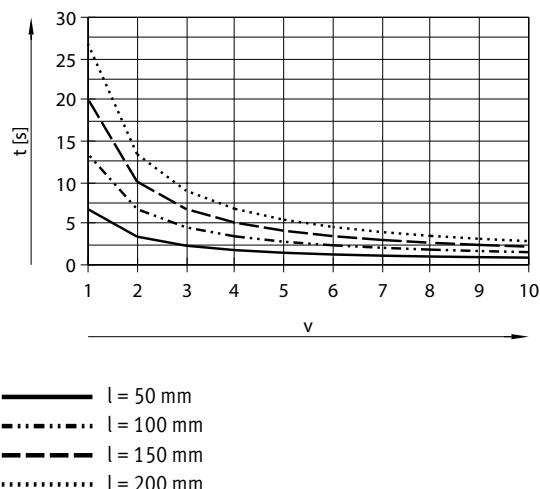
Datasheet

Positioning time t as a function of speed level v and stroke l

With parallel kit

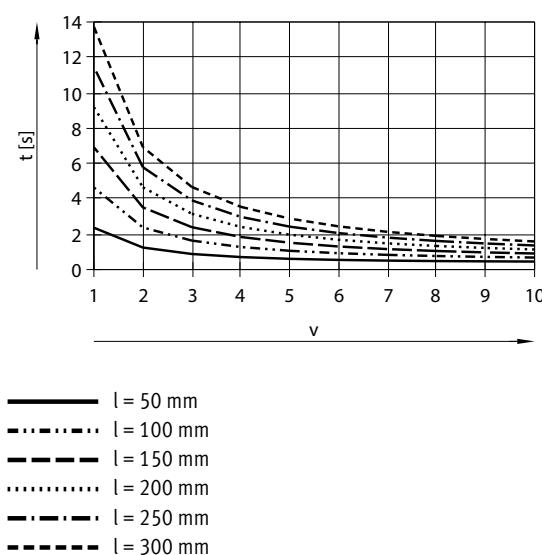
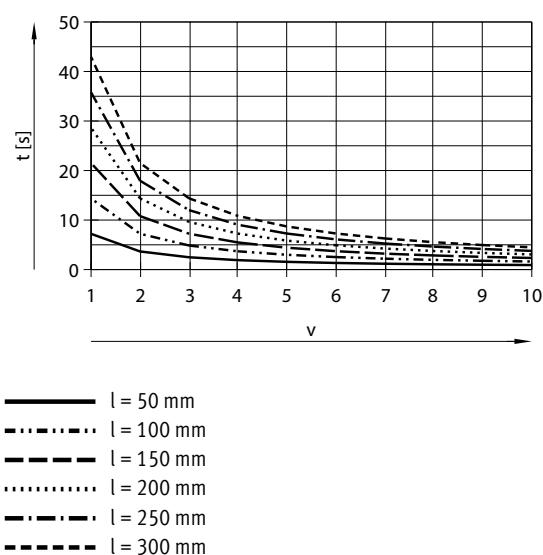
EPSCS-BS-32-3P

EPSCS-BS-32-8P



EPSCS-BS-45-3P

EPSCS-BS-45-10P

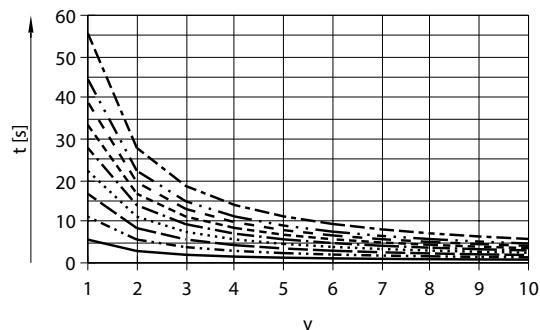


Datasheet

Positioning time t as a function of speed level v and stroke l

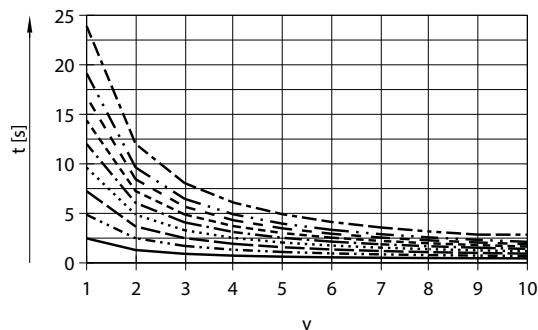
With parallel kit

EPCS-BS-60-5P



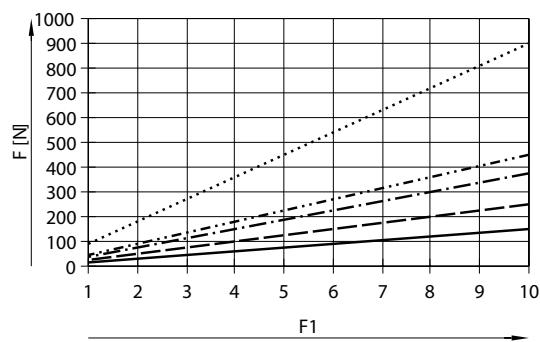
- l = 50 mm
- - - - l = 100 mm
- - - - - l = 150 mm
- l = 200 mm
- - - - - - l = 250 mm
- - - - - - - l = 300 mm
- - - - - - - - l = 350 mm
- - - - - - - - - l = 400 mm
- - - - - - - - - - l = 500 mm

EPCS-BS-60-12P



- l = 50 mm
- - - - l = 100 mm
- - - - - l = 150 mm
- l = 200 mm
- - - - - - l = 250 mm
- - - - - - - l = 300 mm
- - - - - - - - l = 350 mm
- - - - - - - - - l = 400 mm
- - - - - - - - - - l = 500 mm

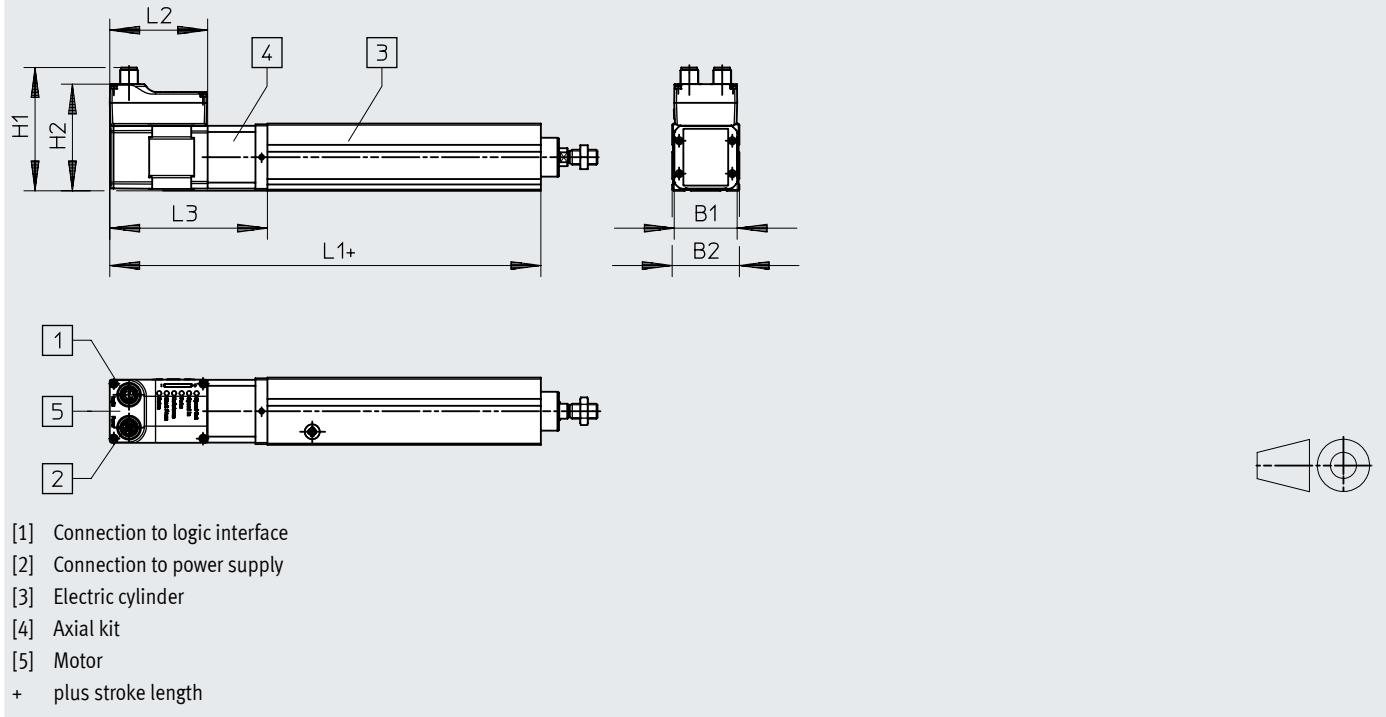
Feed force F as a function of force level F1



- EPCS-BS-32-3P/-8P
- - - - EPCS-BS-45-3P
- - - - - EPCS-BS-45-10P
- EPCS-BS-60-5P
- - - - - - EPCS-BS-60-12P

Datasheet

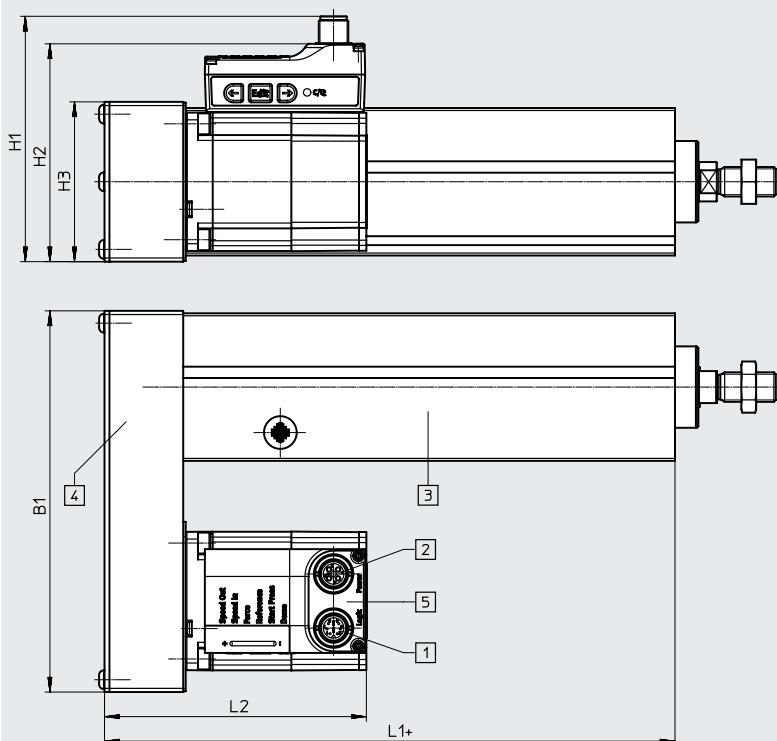
Dimensions – With axial motor

Download CAD data → www.festo.com

| Size | B1 | B2 | H1 | H2 | L1 | L2 | L3 |
|------|------|----|------|------|-------|------|-------|
| 32 | 42.3 | 32 | 81.1 | 69.9 | 175.5 | 65.5 | 105.5 |
| 45 | 42.3 | 45 | 82.6 | 71.4 | 188.5 | 65.5 | 105.5 |
| 60 | 56.6 | 60 | 97.3 | 86.1 | 216.5 | 73.5 | 116.5 |

Datasheet

Dimensions – With parallel motor

Download CAD data → www.festo.com

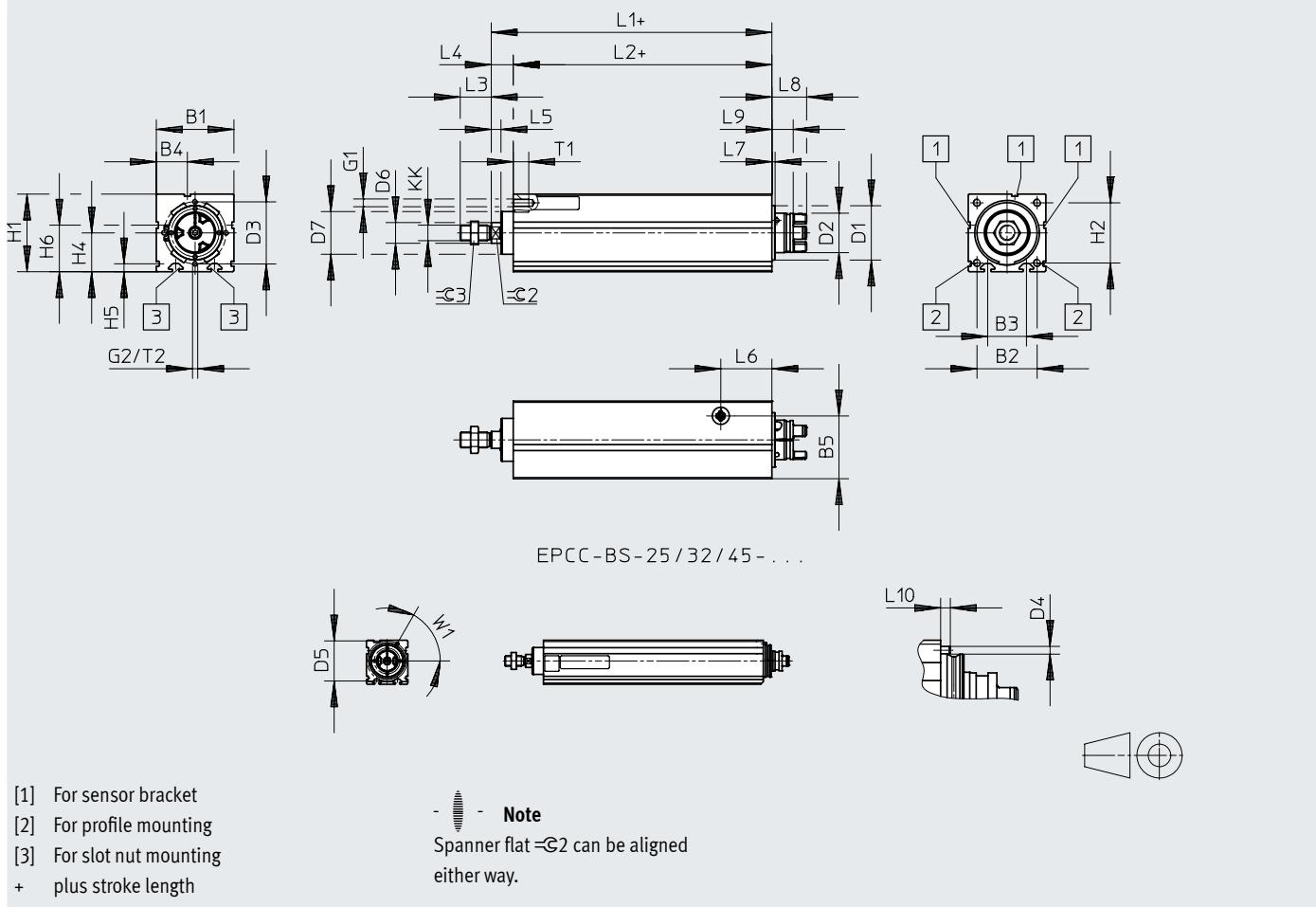
- [1] Connection to logic interface
- [2] Connection to power supply
- [3] Electric cylinder
- [4] Parallel kit
- [5] Motor
- + plus stroke length

Dimensions for other motor mounting variants → CAD data.

| Size | B1 | H1 | H2 | H3 | L1 | L2 |
|------|-----|-----|----|----|-----|-------|
| 32 | 111 | 83 | 72 | 45 | 94 | 90.7 |
| 45 | 111 | 83 | 72 | 45 | 107 | 90.7 |
| 60 | 155 | 100 | 90 | 65 | 132 | 107.7 |

Datasheet

Dimensions – Mechanical system

Download CAD data → www.festo.com

| Size | B1 | B2 | B3 | B4 | B5 | D1
Ø | D2
Ø | D3
Ø | D4
Ø |
|------|-------|------|----|------|------|---------|---------|---------|---------|
| | ±0.15 | | | | | | | | |
| 32 | 32 | 24 | 16 | 8.1 | 25.5 | 25 | 15.5 | – | 2 |
| 45 | 45 | 32.5 | 24 | 16.5 | 35 | 32 | 16.3 | – | 3 |
| 60 | 60 | 46.5 | 30 | 24 | 48.5 | 42 | 31.4 | 48 | – |

| Size | D5
Ø | D6
Ø | D7
Ø | G1 | G2 | H1
±0.15 | H2 | H4 | H5 |
|------|---------|---------|---------|----|----|-------------|------|----|-----|
| 32 | 31 | 10 | 21.3 | M4 | – | 34 | 24 | – | 4.9 |
| 45 | 41 | 12 | 26.5 | M5 | – | 45 | 32.5 | – | 6.1 |
| 60 | – | 16 | 33.6 | M6 | M4 | 60 | 46.5 | 30 | 6.1 |

| Size | H6
+0.15 | KK | L1 | L2 | L3 | L4 | L5 | L6 | L7 |
|------|-------------|----------|------|-----|----|------|-----|------|-----|
| 32 | 26 | M8 | 82.9 | 70 | 16 | 12.9 | 5.2 | 24.2 | 6 |
| 45 | 28.5 | M10x1.25 | 99.9 | 83 | 20 | 16.9 | 5.7 | 30.5 | 6 |
| 60 | 36 | M12x1.25 | 116 | 100 | 24 | 16 | 7.5 | 39.5 | 2.5 |

| Size | L8 | L9 | L10 | T1 | T2 | W1 | =G2 | =G3 |
|------|------|------|-----|----|----|-----|-----|-----|
| 32 | 19.9 | 14.5 | 2.5 | 8 | – | 60° | 9 | 13 |
| 45 | 19.9 | 14.5 | 3 | 10 | – | 60° | 10 | 16 |
| 60 | 26.9 | 16.5 | – | 12 | 10 | – | 13 | 18 |

Datasheet

Ordering data

EPCS-BS-32

| Stroke
[mm] | Part no. | Type | Stroke
[mm] | Part no. | Type |
|-------------------------------|----------------|------------------------------------|----------------|----------------|------------------------------------|
| Spindle pitch 3 mm/rev | | | | | |
| 50 | 8118267 | EPCS-BS-32-50-3P-A-ST-M-H1-PLK-AA | 50 | 8118271 | EPCS-BS-32-50-8P-A-ST-M-H1-PLK-AA |
| 100 | 8118268 | EPCS-BS-32-100-3P-A-ST-M-H1-PLK-AA | 100 | 8118272 | EPCS-BS-32-100-8P-A-ST-M-H1-PLK-AA |
| 150 | 8118269 | EPCS-BS-32-150-3P-A-ST-M-H1-PLK-AA | 150 | 8118273 | EPCS-BS-32-150-8P-A-ST-M-H1-PLK-AA |
| 200 | 8118270 | EPCS-BS-32-200-3P-A-ST-M-H1-PLK-AA | 200 | 8118274 | EPCS-BS-32-200-8P-A-ST-M-H1-PLK-AA |

EPCS-BS-45

| Stroke
[mm] | Part no. | Type | Stroke
[mm] | Part no. | Type |
|-------------------------------|----------------|------------------------------------|----------------|----------------|-------------------------------------|
| Spindle pitch 3 mm/rev | | | | | |
| 50 | 8118275 | EPCS-BS-45-50-3P-A-ST-M-H1-PLK-AA | 50 | 8118281 | EPCS-BS-45-50-10P-A-ST-M-H1-PLK-AA |
| 100 | 8118276 | EPCS-BS-45-100-3P-A-ST-M-H1-PLK-AA | 100 | 8118282 | EPCS-BS-45-100-10P-A-ST-M-H1-PLK-AA |
| 150 | 8118277 | EPCS-BS-45-150-3P-A-ST-M-H1-PLK-AA | 150 | 8118283 | EPCS-BS-45-150-10P-A-ST-M-H1-PLK-AA |
| 200 | 8118278 | EPCS-BS-45-200-3P-A-ST-M-H1-PLK-AA | 200 | 8118284 | EPCS-BS-45-200-10P-A-ST-M-H1-PLK-AA |
| 250 | 8118279 | EPCS-BS-45-250-3P-A-ST-M-H1-PLK-AA | 250 | 8118285 | EPCS-BS-45-250-10P-A-ST-M-H1-PLK-AA |
| 300 | 8118280 | EPCS-BS-45-300-3P-A-ST-M-H1-PLK-AA | 300 | 8118286 | EPCS-BS-45-300-10P-A-ST-M-H1-PLK-AA |

EPCS-BS-60

| Stroke
[mm] | Part no. | Type | Stroke
[mm] | Part no. | Type |
|-------------------------------|----------------|------------------------------------|----------------|----------------|-------------------------------------|
| Spindle pitch 5 mm/rev | | | | | |
| 50 | 8118287 | EPCS-BS-60-50-5P-A-ST-M-H1-PLK-AA | 50 | 8118296 | EPCS-BS-60-50-12P-A-ST-M-H1-PLK-AA |
| 100 | 8118288 | EPCS-BS-60-100-5P-A-ST-M-H1-PLK-AA | 100 | 8118297 | EPCS-BS-60-100-12P-A-ST-M-H1-PLK-AA |
| 150 | 8118289 | EPCS-BS-60-150-5P-A-ST-M-H1-PLK-AA | 150 | 8118298 | EPCS-BS-60-150-12P-A-ST-M-H1-PLK-AA |
| 200 | 8118290 | EPCS-BS-60-200-5P-A-ST-M-H1-PLK-AA | 200 | 8118299 | EPCS-BS-60-200-12P-A-ST-M-H1-PLK-AA |
| 250 | 8118291 | EPCS-BS-60-250-5P-A-ST-M-H1-PLK-AA | 250 | 8118300 | EPCS-BS-60-250-12P-A-ST-M-H1-PLK-AA |
| 300 | 8118292 | EPCS-BS-60-300-5P-A-ST-M-H1-PLK-AA | 300 | 8118301 | EPCS-BS-60-300-12P-A-ST-M-H1-PLK-AA |
| 350 | 8118293 | EPCS-BS-60-350-5P-A-ST-M-H1-PLK-AA | 350 | 8118302 | EPCS-BS-60-350-12P-A-ST-M-H1-PLK-AA |
| 400 | 8118294 | EPCS-BS-60-400-5P-A-ST-M-H1-PLK-AA | 400 | 8118303 | EPCS-BS-60-400-12P-A-ST-M-H1-PLK-AA |
| 500 | 8118295 | EPCS-BS-60-500-5P-A-ST-M-H1-PLK-AA | 500 | 8118304 | EPCS-BS-60-500-12P-A-ST-M-H1-PLK-AA |

Ordering data – Modular product system

| Ordering table | | | | | | |
|---------------------------|--------------------------------------|---|---|------------|-------|------------|
| Size | 32 | 45 | 60 | Conditions | Code | Enter code |
| Module no. | 8118264 | 8118265 | 8118266 | | | |
| Series | EPSCS | | | | EPSCS | EPSCS |
| Drive system | Ball screw | | | | -BS | -BS |
| Size | 32 | 45 | 60 | | -... | |
| Stroke [mm] | 25, 50, 75, 100, 125, 150, 175, 200 | 25, 50, 75, 100, 125, 150, 175, 200, 250, 300 | 25, 50, 75, 100, 125, 150, 200, 250, 300, 350, 400, 500 | | -... | |
| Spindle pitch [mm] | 3 | 3 | – | | -...P | |
| | – | – | 5 | | | |
| | 8 | – | – | | | |
| | – | 10 | – | | | |
| | – | – | 12 | | | |
| Position sensing | Via proximity switch | | | | -A | -A |
| Motor type | Stepper motor ST | | | | -ST | -ST |
| Controller | Built in | | | | -M | -M |
| Operator panel | Built in | | | | -H1 | -H1 |
| Bus protocol/activation | NPN and IO-Link® | | | | -NLK | |
| | PNP and IO-Link® | | | | -PLK | |
| End-position detection | With integrated end-position sensing | | | | -AA | -AA |
| Cable outlet direction | Standard | | | [1] | | |
| | To the left | | | [2] | -L | |
| | Underneath | | | [3] | -D | |
| | To the right | | | [4] | -R | |
| Motor attachment position | Axial (standard) | | | | | |
| | Parallel, left | | | [5] | -PL | |
| | Parallel, right | | | [6] | -PR | |
| | Parallel, underneath | | | [7] | -PD | |
| | Parallel, top | | | [8] | -PT | |
| Electrical accessories | None | | | | | |
| | Adapter for operation as IO device | | | | +L1 | |

[1] Not with motor mounting position PD

[2] Not with motor mounting position PR

[3] Not with motor mounting position PT

[4] Not with motor mounting position PL

[5] Not in combination with cable outlet direction R

[6] Not in combination with cable outlet direction L

[7] Not in combination with cable outlet direction standard

[8] Not in combination with cable outlet direction D

Accessories

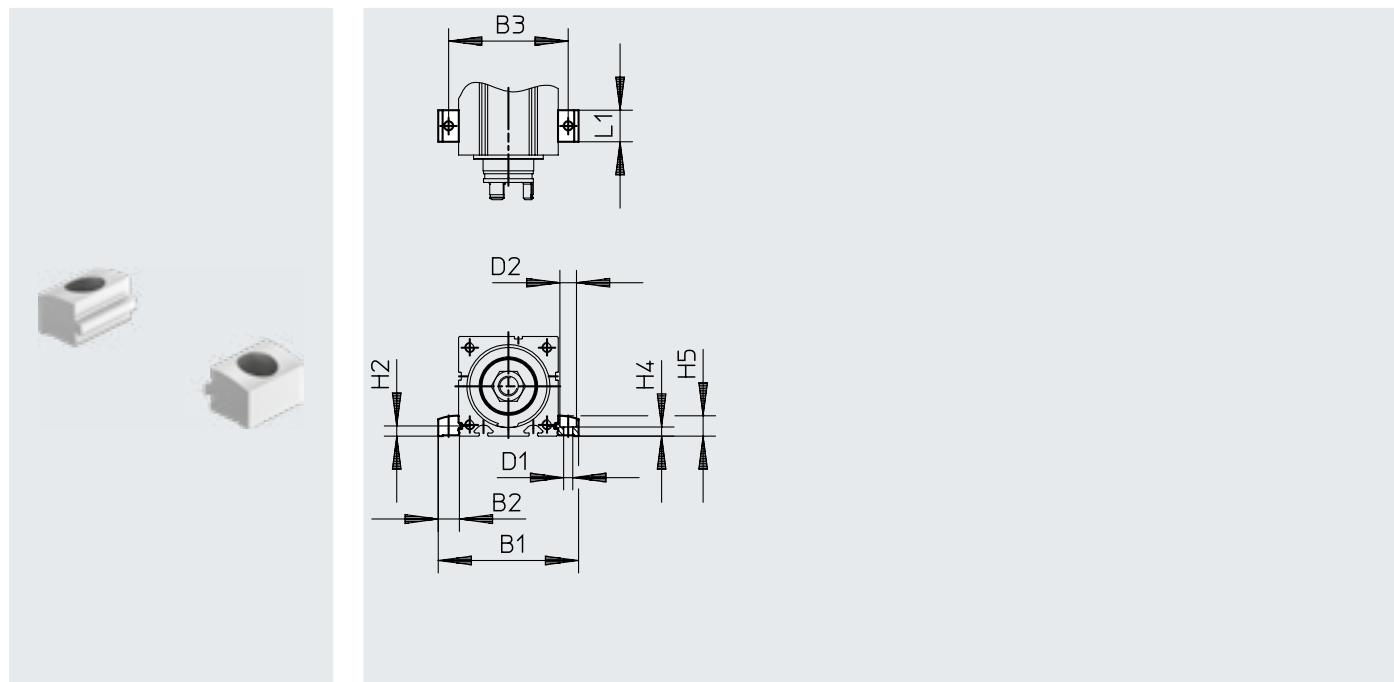
Profile mounting EAHF-L2-...-P-S

Material:

Anodised wrought aluminium alloy

RoHS-compliant

- For mounting the cylinder on the side of the profile



Dimensions and ordering data

| For size | B1 | B2 | B3 | D1
∅
H13 | D2
∅
H13 | H2 |
|----------|------|------|----|----------------|----------------|-----|
| 32 | 51.4 | 9.7 | 42 | 4.5 | 8 | 4.9 |
| 45 | 70.6 | 12.8 | 58 | 5.5 | 10 | 6.1 |
| 60 | 85.6 | 12.8 | 73 | 5.5 | 10 | 6.1 |

| For size | H4
±0.1 | H5 | L1 | Weight
[g] | Part no. | Type |
|----------|------------|------|----|---------------|----------|----------------|
| 32 | 4.2 | 9 | 19 | 4 | 5183153 | EAHF-L2-25-P-S |
| 45 | 5.5 | 12.2 | 19 | 6 | 5184133 | EAHF-L2-45-P-S |
| 60 | 5.5 | 12.2 | 19 | 6 | 5184133 | EAHF-L2-45-P-S |

Accessories

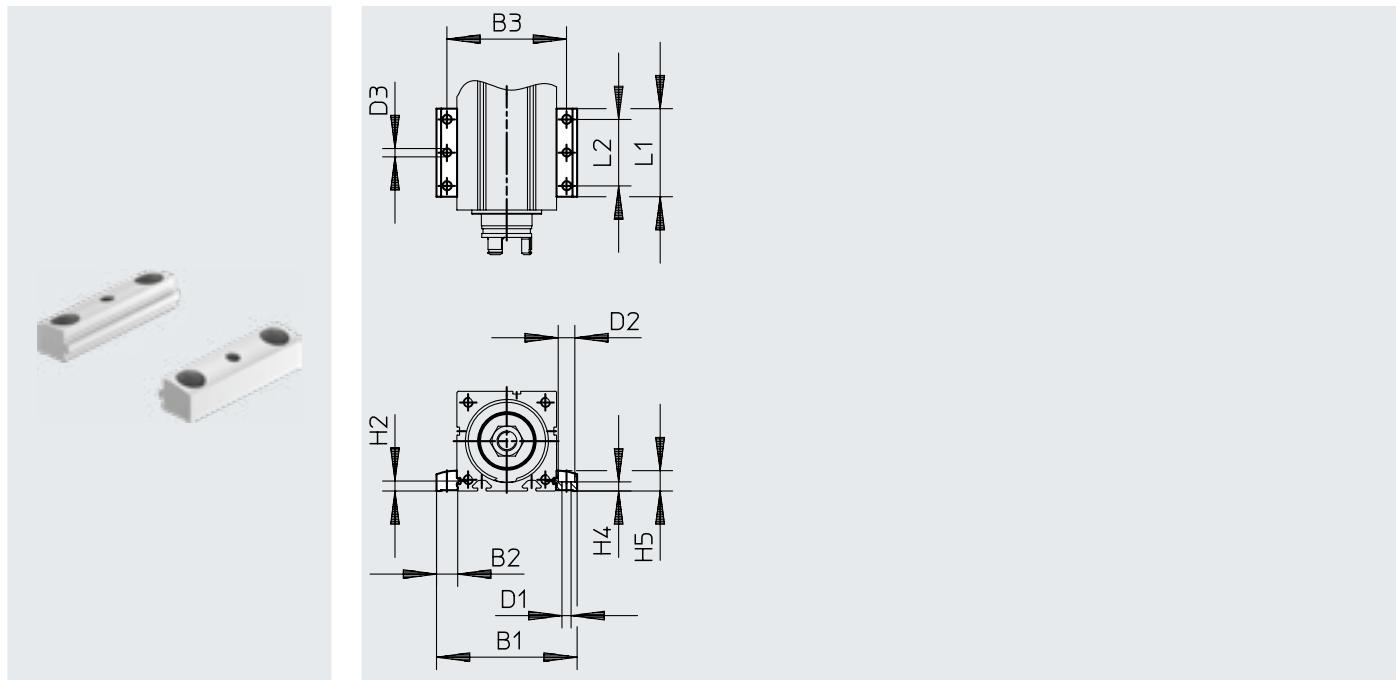
Profile mounting EAHF-L2-...-P

Material:

Anodised wrought aluminium alloy

RoHS-compliant

- For mounting the cylinder on the side of the profile.
The profile mounting can be attached to the mounting surface using the drilled hole in the centre



Dimensions and ordering data

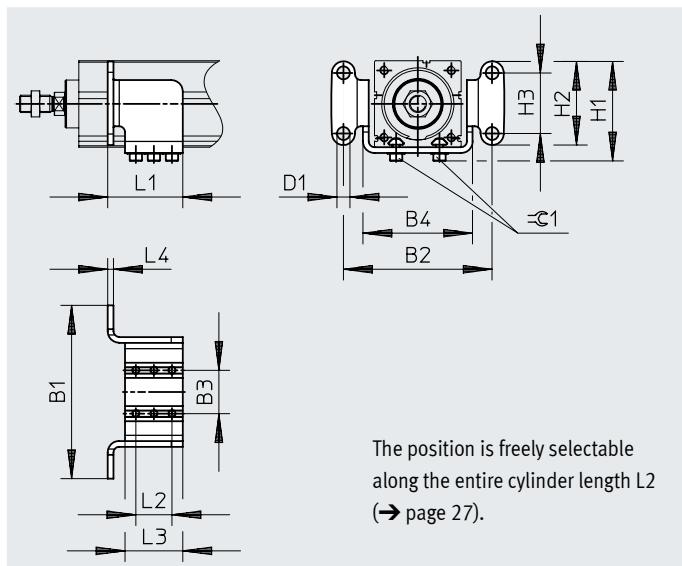
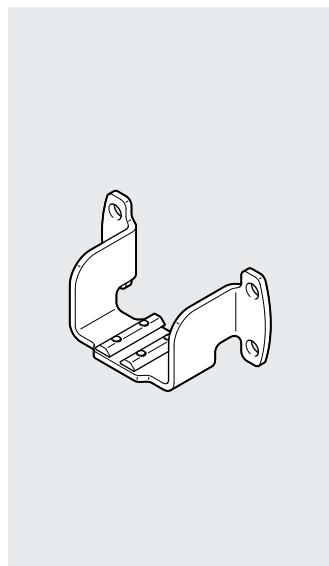
| For size | B1 | B2 | B3 | D1
Ø
H13 | D2
Ø
H13 | D3
Ø | H2 |
|----------|------|------|----|----------------|----------------|---------|-----|
| 32 | 51.4 | 9.7 | 42 | 4.5 | 8 | 4 | 4.9 |
| 45 | 70.6 | 12.8 | 58 | 5.5 | 10 | 5 | 6.1 |
| 60 | 85.6 | 12.8 | 73 | 5.5 | 10 | 5 | 6.1 |

| For size | H4 | H5 | L1 | L2 | Weight
[g] | Part no. | Type |
|----------|------|------|----|----|---------------|----------|--------------|
| | ±0.1 | | | | | | |
| 32 | 4.2 | 9 | 53 | 40 | 19 | 4835684 | EAHF-L2-25-P |
| 45 | 5.5 | 12.2 | 53 | 40 | 35 | 4835728 | EAHF-L2-45-P |
| 60 | 5.5 | 12.2 | 53 | 40 | 35 | 4835728 | EAHF-L2-45-P |

Accessories

Flange mounting EAHH

Material:
Galvanised steel
RoHS-compliant



| Dimensions and ordering data | | | | | | | | | |
|------------------------------|-----|-----|----|----|---------|------|----|----|----|
| For size | B1 | B2 | B3 | B4 | D1
∅ | H1 | H2 | H3 | L1 |
| 32 | 70 | 58 | 16 | 42 | 5.5 | 39 | 31 | 20 | 38 |
| 45 | 100 | 85 | 24 | 61 | 6.6 | 54.5 | 48 | 35 | 42 |
| 60 | 120 | 103 | 30 | 76 | 9 | 69 | 58 | 42 | 52 |

| For size | L2 | L3 | L4 | =C1 | CRC ¹⁾ | Weight
[g] | Part no. | Type |
|----------|----|----|-----|-----|-------------------|---------------|----------|------------|
| 32 | 20 | 30 | 2.5 | 2.5 | 1 | 80 | 5126157 | EAHH-P2-32 |
| 45 | 20 | 30 | 4 | 2.5 | 1 | 185 | 5126669 | EAHH-P2-45 |
| 60 | 25 | 40 | 4 | 4 | 1 | 320 | 5127005 | EAHH-P2-60 |

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

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

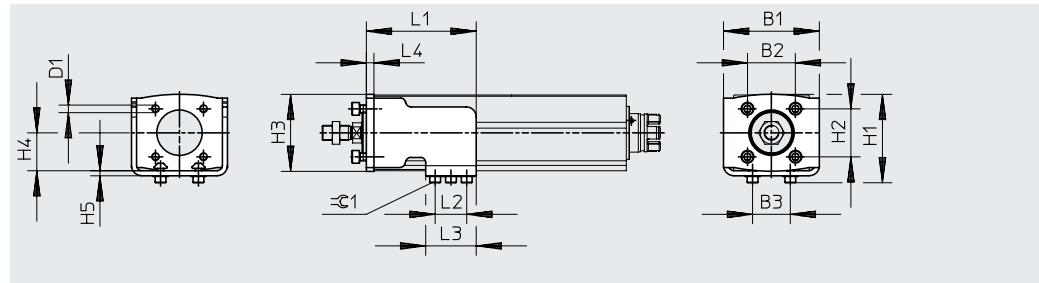
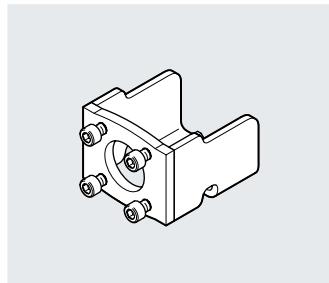
Accessories

Adapter kit EAHA

Material:

RoHS-compliant

Galvanised steel



| Dimensions and ordering data | | | | | | | | | |
|------------------------------|----|------|----|----|------|------|----|------|-----|
| For size | B1 | B2 | B3 | D1 | H1 | H2 | H3 | H4 | H5 |
| 32 | 53 | 22 | 16 | M5 | 42 | 22 | 37 | 18 | 2.5 |
| 45 | 61 | 32.5 | 24 | M6 | 54 | 32.5 | 49 | 22.5 | 4 |
| 60 | 76 | 38 | 30 | M6 | 69.5 | 38 | 61 | 30 | 4 |

| For size | L1 | L2 | L3 | L4 | =C1 | CRC ¹⁾ | Weight
[g] | Part no. | Type |
|----------|----|----|----|----|-----|-------------------|---------------|----------|------------|
| 32 | 64 | 20 | 30 | 4 | 2.5 | 1 | 165 | 5173020 | EAHA-P2-32 |
| 45 | 68 | 20 | 30 | 6 | 2.5 | 1 | 340 | 5172353 | EAHA-P2-45 |
| 60 | 87 | 25 | 40 | 6 | 4 | 1 | 560 | 5173082 | EAHA-P2-60 |

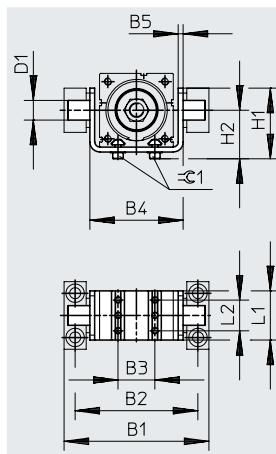
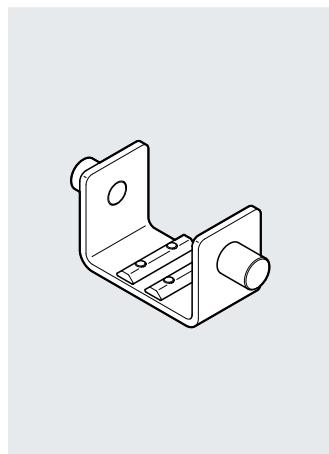
1) Corrosion resistance class CRC 1 to Festo standard FN 940070

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

Accessories

Swivel mounting EAHS

Material:
Galvanised steel
RoHS-compliant



The position is freely selectable along the entire cylinder length L2 (→ page 27).

| Dimensions and ordering data | | | | | | | | |
|------------------------------|-----|-----|----|----|-----|---------------|------|--|
| For size | B1 | B2 | B3 | B4 | B5 | D1
Ø
e9 | H1 | |
| 32 | 68 | 57 | 16 | 42 | 2.5 | 8 | 32 | |
| 45 | 98 | 83 | 24 | 62 | 4 | 12 | 44.5 | |
| 60 | 118 | 100 | 30 | 76 | 4 | 16 | 57 | |

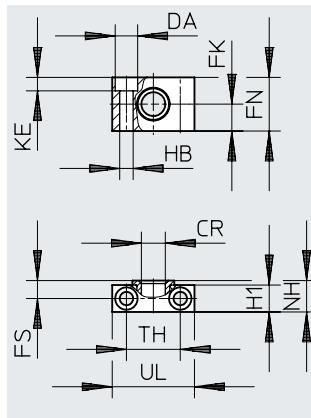
| For size | H2 | L1 | L2 | =C1 | CRC ¹⁾ | Weight
[g] | Part no. | Type |
|----------|------|----|----|-----|-------------------|---------------|----------|------------|
| 32 | 23.5 | 30 | 20 | 2.5 | 1 | 75 | 5125041 | EAHS-P2-32 |
| 45 | 29.5 | 30 | 20 | 2.5 | 1 | 165 | 5125167 | EAHS-P2-45 |
| 60 | 39 | 40 | 25 | 4 | 1 | 305 | 5125281 | EAHS-P2-60 |

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

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

Trunnion support LNZG

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



| Dimensions and ordering data | | | | | | | | | | | | | | | |
|------------------------------|----------------|----------------|-----------------|----|------|----|----------------|-----|----|----|----|-------------------|---------------|----------|-------------|
| For size | CR
Ø
D11 | DA
Ø
H13 | FK
Ø
±0.1 | FN | FS | H1 | HB
Ø
H13 | KE | NH | TH | UL | CRC ¹⁾ | Weight
[g] | Part no. | Type |
| 32 | 8 | 8 | 10 | 20 | 7.5 | 11 | 4.5 | 4.6 | 13 | 20 | 30 | 2 | 26 | 1434912 | LNZG-16 |
| 45 | 12 | 11 | 15 | 30 | 10.5 | 15 | 6.6 | 6.8 | 18 | 32 | 46 | 2 | 83 | 32959 | LNZG-32 |
| 60 | 16 | 15 | 18 | 36 | 12 | 18 | 9 | 9 | 21 | 36 | 55 | 2 | 129 | 32960 | LNZG-4/0/50 |

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

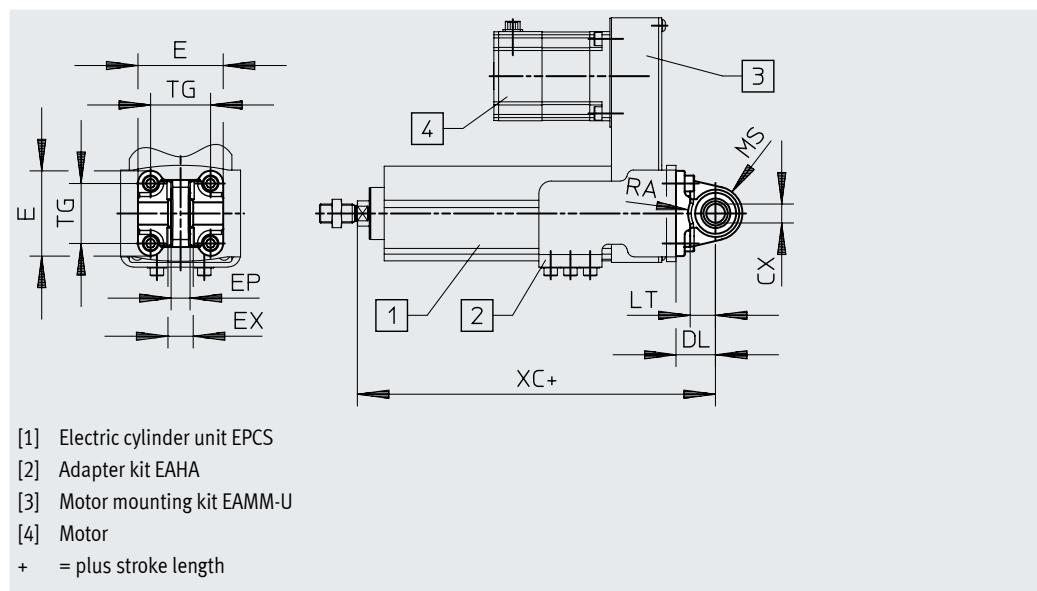
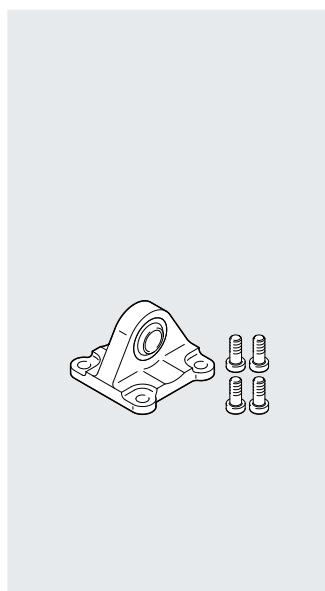
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements that are in direct contact with a normal industrial environment.

Accessories

Swivel flange SNCS

Material:
Die-cast aluminium

Free of copper and PTFE
RoHS-compliant



| Dimensions and ordering data | | | | | | | | |
|------------------------------|--------------|------|---------------|-------|-------------------|---------------|----------|---------|
| For size | CX | DL | E | L | EP | EX | LT | |
| 45 | $10^{-0.13}$ | 22 | $45+0.2/-0.5$ | 3 | 10.5 | 14 | 13 | |
| 60 | $12^{+0.15}$ | 25 | $54_{-0.5}$ | 3 | 12 | 16 | 16 | |
| For size | MS | RA | TG | XC | CRC ¹⁾ | Weight
[g] | Part no. | Type |
| 45 | 15 | 14.5 | 32.5 | 154.9 | 1 | 86 | 174397 | SNCS-32 |
| 60 | 17 | 17.5 | 38 | 182 | 1 | 122 | 174398 | SNCS-40 |

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

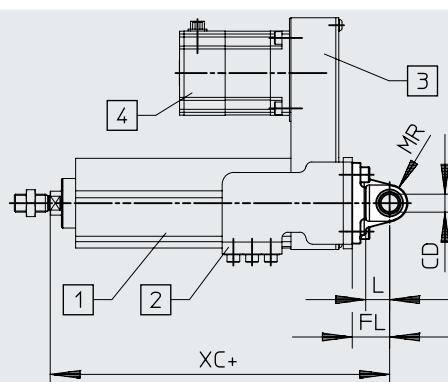
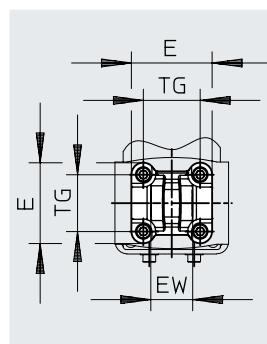
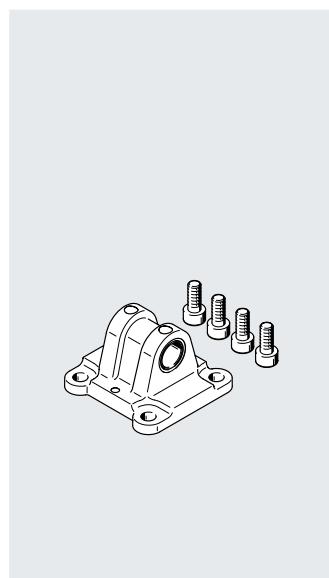
Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, or parts that are covered in the application (e.g. drive trunnions).

Accessories

Swivel flange SNCL

Material:
Wrought aluminium alloy

Free of copper and PTFE
RoHS-compliant



- [1] Electric cylinder unit EPCS
 - [2] Adapter kit EAHA
 - [3] Motor mounting kit EAMM-U
 - [4] Motor
- + = plus stroke length

Dimensions and ordering data

| For size | CD
Ø
H10 | E | EW | FL | L | LT |
|----------|----------------|-------------------------|-------------------------|----|---|----|
| 25 | 6 | 27.5 _{-0.6} | 12 _{h12} | 16 | 3 | 10 |
| 32 | 8 | 34.5 _{-0.6} | 16 _{h12} | 20 | 3 | 14 |
| 45 | 10 | 45 _{+0.2/-0.5} | 26 _{-0.2/-0.6} | 22 | 3 | 13 |
| 60 | 12 | 54 _{-0.5} | 28 _{-0.2/-0.6} | 25 | 3 | 16 |

| For size | MR | TG | XC | CRC ¹⁾ | Weight
[g] | Part no. | Type |
|----------|----|------|-------|-------------------|---------------|----------|---------|
| 25 | 6 | 18 | 115.7 | 2 | 21 | 537791 | SNCL-16 |
| 32 | 8 | 22 | 133.9 | 2 | 38 | 537792 | SNCL-20 |
| 45 | 10 | 32.5 | 154.9 | 1 | 71 | 174404 | SNCL-32 |
| 60 | 12 | 38 | 182 | 1 | 95 | 174405 | SNCL-40 |

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

Low corrosion stress. Dry internal application or transport and storage protection. Also applies to parts behind covers, in the non-visible interior area, or parts that are covered in the application (e.g. drive trunnions). Corrosion resistance class CRC 2 to Festo standard FN 940070

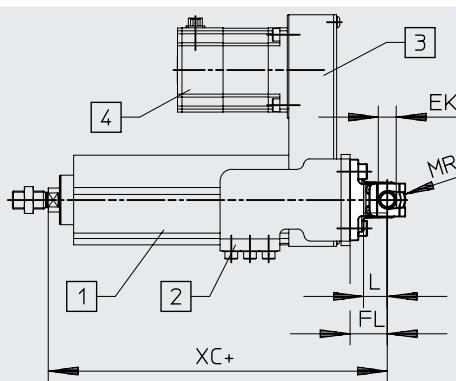
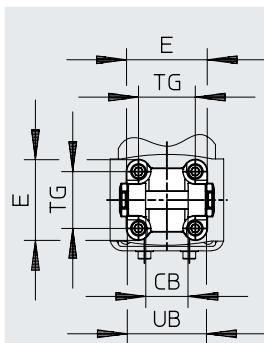
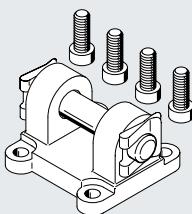
Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements that are in direct contact with a normal industrial environment.

Accessories

Swivel flange SNCB

Material:
Die-cast aluminium

Free of copper and PTFE
RoHS-compliant



- [1] Electric cylinder unit EPCS
 - [2] Adapter kit EAHA
 - [3] Motor mounting kit EAMM-U
 - [4] Motor
- + = plus stroke length

Dimensions and ordering data

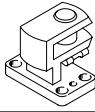
| For size | CB | E | EK
Ø | FL | L | LT | MR |
|----------|-----|-------------------------|---------|------|---|----|------|
| | H14 | | H10/e8 | ±0.2 | | | -0.5 |
| 45 | 26 | 45 _{+0.2/-0.5} | 10 | 22 | 3 | 13 | 8.5 |
| 60 | 28 | 54 _{-0.5} | 12 | 25 | 3 | 16 | 12 |

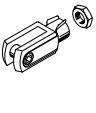
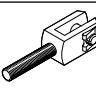
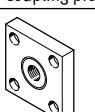
| For size | TG | UB | XC | CRC ¹⁾ | Weight
[g] | Part no. | Type |
|----------|------|-----|-------|-------------------|---------------|----------|---------|
| | | h14 | | | | | |
| 45 | 32.5 | 45 | 154.9 | 1 | 103 | 174390 | SNCB-32 |
| 60 | 38 | 52 | 182 | 1 | 155 | 174391 | SNCB-40 |

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

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

Accessories

| Ordering data – Mounting components | | | | Datasheets → Internet: clevis foot | | | |
|--|----------|----------|-----------|------------------------------------|----------|----------|--------|
| Designation | For size | Part no. | Type | Designation | For size | Part no. | Type |
| Right angle clevis foot LQG | | | | | | | |
|  | 45 | 31768 | LQG-32 | | 45 | 31761 | LBG-32 |
| | 60 | 31769 | LQG-40 | | 60 | 31762 | LBG-40 |
| Clevis foot LBN | | | | | | | |
|  | 32 | 6059 | LBN-20/25 | | | | |

| Ordering data – Piston rod attachments | | | | Datasheets → Internet: piston rod attachment | | | |
|--|----------|----------|--------------|--|----------|----------|--------------|
| Designation | For size | Part no. | Type | Designation | For size | Part no. | Type |
| Rod eye SG | | | | | | | |
|  | 32 | 9255 | SGS-M8 |  | 32 | 3111 | SG-M8 |
| | 45 | 9261 | SGS-M10x1.25 | | 45 | 6144 | SG-M10x1.25 |
| | 60 | 9262 | SGS-M12x1.25 | | 60 | 6145 | SG-M12x1.25 |
| Self-aligning rod coupler FK | | | | | | | |
|  | 32 | 2062 | FK-M8 |  | 45 | 32954 | SGA-M10x1.25 |
| | 45 | 6140 | FK-M10x1.25 | | 60 | 10767 | SGA-M12x1.25 |
| | 60 | 6141 | FK-M12x1.25 | | | | |
| Coupling piece KSG | | | | | | | |
|  | 45 | 32963 | KSG-M10x1.25 | | | | |
| | 60 | 32964 | KSG-M12x1.25 | | | | |

| Ordering data – Push-in fitting for sealing air connection | | | | Part no. | Type | PU ¹⁾ |
|--|----------|--|--|----------|--------------|------------------|
| | For size | | | | | |
|  | 32 | | | 133003 | QSM-M5-3-I-R | 10 |
| | 45 | | | 133004 | QSM-M5-4-I-R | |
| | 60 | | | 186266 | QSM-G1/8-4-I | |
| | | | | 186267 | QSM-G1/8-6-I | |
| | | | | 186108 | QS-G1/4-6-I | |
| | | | | 186110 | QS-G1/4-8-I | |

1) Packaging unit

| Ordering data – Slot nut | | | | Part no. | Type | PU ¹⁾ |
|--|----------|---|--|----------|--------------------|------------------|
| | For size | Description | | | | |
|  | 32, 45 | For mounting the electric cylinder unit | | 8169987 | ABAN-3-3M3-30-M-P2 | 2 |
| | | | | 8169988 | ABAN-5-3M5-40-M-P2 | |

1) Packaging unit

Accessories

Ordering data – Guide units

| | Stroke
[mm] | Datasheets → Internet: eagf | |
|--|----------------|-----------------------------|-------------------|
| | | Part no. | Type |
| For size 32 | | | |
| 50 | | 8158032 | EAGF-P2-KF-32-50 |
| 100 | | 8158029 | EAGF-P2-KF-32-100 |
| 150 | | 8158027 | EAGF-P2-KF-32-150 |
| 200 | | 8158028 | EAGF-P2-KF-32-200 |
| 25, 75, 125, 175 | | 8158030 | EAGF-P2-KF-32- |
| For size 45 | | | |
| 50 | | 8158131 | EAGF-P2-KF-45-50 |
| 100 | | 8158123 | EAGF-P2-KF-45-100 |
| 150 | | 8158125 | EAGF-P2-KF-45-150 |
| 200 | | 8158127 | EAGF-P2-KF-45-200 |
| 300 | | 8158130 | EAGF-P2-KF-45-300 |
| 25, 75, 125, 175, 250 | | 8158133 | EAGF-P2-KF-45- |
| For size 60 | | | |
| 100 | | 8158138 | EAGF-P2-KF-60-100 |
| 150 | | 8158140 | EAGF-P2-KF-60-150 |
| 200 | | 8158142 | EAGF-P2-KF-60-200 |
| 300 | | 8158031 | EAGF-P2-KF-60-300 |
| 25, 50, 75, 125, 175, 250, 350, 400, 500 | | 8158150 | EAGF-P2-KF-60- |

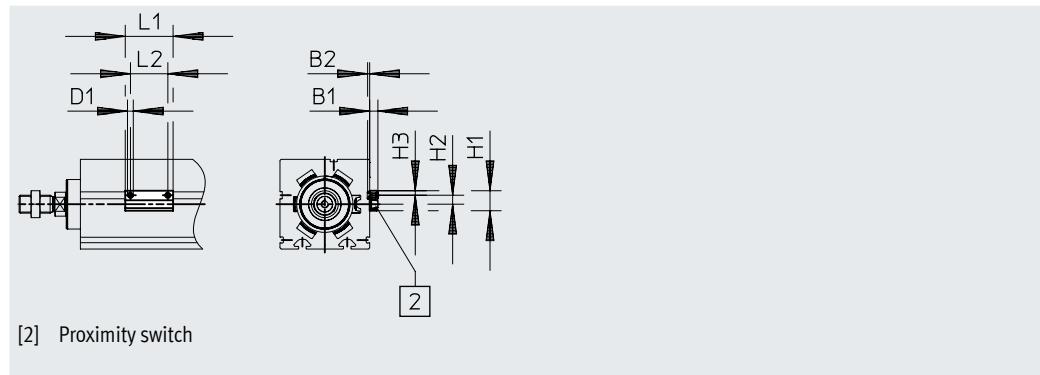
Accessories

Sensor bracket EAPM-L2

Material:

Anodised wrought aluminium alloy

RoHS-compliant



Dimensions and ordering data

| For size | B1 | B2 | D1 | H1 | H2 | |
|------------|-----|-----|----|---------------|----------|------------|
| 32, 45, 60 | 5.5 | 1.3 | M4 | 13.4 | 6 | |
| For size | H3 | L1 | L2 | Weight
[g] | Part no. | Type |
| 32, 45, 60 | 3 | 32 | 25 | 4 | 4759852 | EAPM-L2-SH |

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

Datasheets → Internet: smt

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

Ordering data – Connecting cables

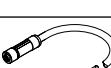
Datasheets → Internet: nebu

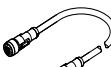
| | Electrical connection, left | Electrical connection, right | Cable length [m] | Part no. | Type |
|--|------------------------------|------------------------------|------------------|----------|---------------------|
| | Straight socket, M8x1, 3-pin | Cable, open end, 3-core | 2.5 | 541333 | NEBU-M8G3-K-2.5-LE3 |
| | | | 5 | 541334 | NEBU-M8G3-K-5-LE3 |
| | Angled socket, M8x1, 3-pin | Cable, open end, 3-core | 2.5 | 541338 | NEBU-M8W3-K-2.5-LE3 |
| | | | 5 | 541341 | NEBU-M8W3-K-5-LE3 |

Accessories

| Ordering data – IO-Link master USB | | | | | Datasheets → Internet: cdsu |
|---|--|------------------|----------|--------|-----------------------------|
| | Description | Cable length [m] | Part no. | Type | |
|  | <ul style="list-style-type: none"> For using the unit with IO-Link® An external power supply plug is also required (not included in the scope of delivery) | 0.3 | 8091509 | CDSU-1 | |

| Ordering data – Adapter | | | | | Datasheets → Internet: nefc |
|---|-------------------------------|------------------------------|------------------|----------|-----------------------------|
| | Electrical connection, left | Electrical connection, right | Cable length [m] | Part no. | Type |
|  | Straight socket, M12x1, 8-pin | Straight plug M12x1, 5-pin | 0.3 | 8080777 | NEFC-M12G8-0.3-M12G5-LK |

| Ordering data – Supply cables | | | | | Datasheets → Internet: nebl |
|---|-------------------------------|------------------------------|------------------|----------|-----------------------------|
| | Electrical connection, left | Electrical connection, right | Cable length [m] | Part no. | Type |
|  | Angled socket, M12x1, 4-pin | Cable, open end, 4-core | 2 | 8080778 | NEBL-T12W4-E-2-N-LE4 |
| | | | 5 | 8080779 | NEBL-T12W4-E-5-N-LE4 |
| | | | 10 | 8080780 | NEBL-T12W4-E-10-N-LE4 |
| | | | 15 | 8080781 | NEBL-T12W4-E-15-N-LE4 |
|  | Straight socket, M12x1, 4-pin | Cable, open end, 4-core | 2 | 8080790 | NEBL-T12G4-E-2-N-LE4 |
| | | | 5 | 8080791 | NEBL-T12G4-E-5-N-LE4 |
| | | | 10 | 8080792 | NEBL-T12G4-E-10-N-LE4 |
| | | | 15 | 8080793 | NEBL-T12G4-E-15-N-LE4 |

| Ordering data – Connecting cables | | | | | Datasheets → Internet: nebc |
|---|-------------------------------|------------------------------|------------------|----------|-----------------------------|
| | Electrical connection, left | Electrical connection, right | Cable length [m] | Part no. | Type |
|  | Angled socket, M12x1, 8-pin | Cable, open end, 8-core | 2 | 8094476 | NEBC-M12W8-E-2-N-B-LE8 |
| | | | 5 | 8094478 | NEBC-M12W8-E-5-N-B-LE8 |
| | | | 10 | 8094481 | NEBC-M12W8-E-10-N-B-LE8 |
| | | | 15 | 8094479 | NEBC-M12W8-E-15-N-B-LE8 |
|  | Straight plug, M12x1, 8-pin | Cable, open end, 8-core | 2 | 8080786 | NEBC-M12W8-E-2-N-M12G8 |
| | | | 5 | 8080787 | NEBC-M12W8-E-5-N-M12G8 |
| | | | 10 | 8080788 | NEBC-M12W8-E-10-N-M12G8 |
| | | | 15 | 8080789 | NEBC-M12W8-E-15-N-M12G8 |
|  | Straight socket, M12x1, 8-pin | Cable, open end, 8-core | 2 | 8094480 | NEBC-M12G8-E-2-N-B-LE8 |
| | | | 5 | 8094477 | NEBC-M12G8-E-5-N-B-LE8 |
| | | | 10 | 8094482 | NEBC-M12G8-E-10-N-B-LE8 |
| | | | 15 | 8094475 | NEBC-M12G8-E-15-N-B-LE8 |
|  | Straight plug, M12x1, 8-pin | Cable, open end, 8-core | 2 | 8080782 | NEBC-M12G8-E-2-N-M12G8 |
| | | | 5 | 8080783 | NEBC-M12G8-E-5-N-M12G8 |
| | | | 10 | 8080784 | NEBC-M12G8-E-10-N-M12G8 |
| | | | 15 | 8080785 | NEBC-M12G8-E-15-N-M12G8 |

 Note

The cables are positioned at a 45° angle to the axis.

