

## Electric cylinder units EPCE

**FESTO**



## Key features

### At a glance

#### Plug and work with the Simplified Motion Series

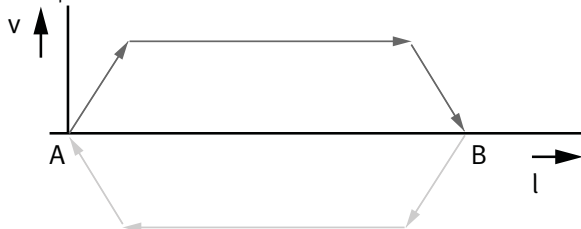


The simplicity of pneumatics is now combined for the first time with the advantages of electric automation thanks to the Simplified Motion Series. These integrated drives are the perfect solution for all users who are looking for an electric alternative for very simple movement and positioning tasks between two mechanical end positions, but don't want the commissioning process for traditional electric drive systems that can often be quite complex.

Integrated	Simple	Standardised	Connected
The integrated electronics in the drive are at the core of the Simplified Motion Series.	For commissioning, simply set all relevant parameters directly on the drive: <ul style="list-style-type: none"> <li>• Speed and force</li> <li>• Reference end position and cushioning</li> <li>• Manual operation</li> </ul>	Electrical connection via M12 plug design <ul style="list-style-type: none"> <li>• Power (4-pin): power supply for the motor</li> <li>• Logic (8-pin): control signal, sensor signal and power for the integrated electronics</li> </ul>	Use of extended functions possible via IO-Link: <ul style="list-style-type: none"> <li>• Motion parameters can be set remotely</li> <li>• Copy and backup function for transferring parameters</li> <li>• Read function for extended process parameters</li> </ul>

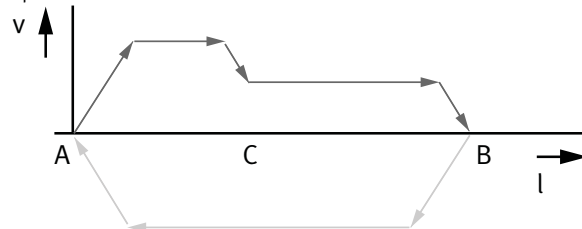
### The functions of the Simplified Motion Series

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



- These drives are designed for simple movements between two end positions.
- External, inductive sensing of the piston rod is required in order to implement any intermediate positions.

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



### The products in the Simplified Motion Series

Spindle axis unit  
ELGS-BS-KF



Toothed belt axis unit  
ELGS-TB-KF



Mini slide unit  
EGSS-BS-KF



Electric cylinder unit  
EPCS



Toothed belt axis unit  
ELGE



Rotary drive unit  
ERMS



Electric cylinder unit  
EPCE



## Key features

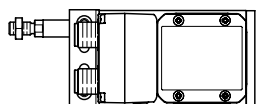
## At a glance



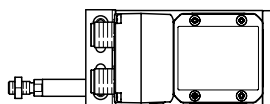
- Without external servo drive: all the necessary electronic components are combined in the integrated drive
- Two control options integrated as standard: digital I/O and IO-Link
- Complete solution for simple movements between mechanical end positions
- Simplified commissioning: all parameters can be manually set directly on the drive
- No special expertise required for commissioning
- Minimal zero stroke and extremely compact design make this product the perfect choice for applications where space is at a premium
- Innovative interpretation of toothed belt technology for maximum dynamic response and minimal positioning times
- Ideal for fast movement in sorting, distribution and testing applications

## Piston rod variants

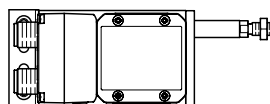
Front left



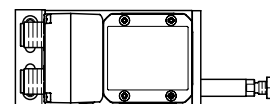
Front right



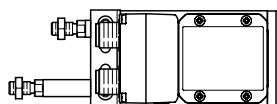
Rear left



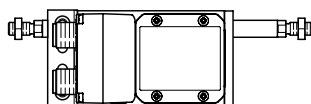
Rear right



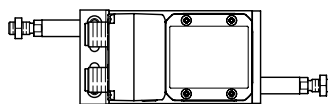
Double piston rod



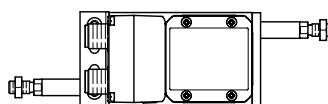
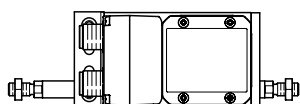
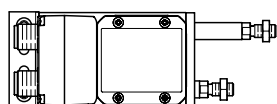
Through piston rod



Piston rods acting in opposite directions

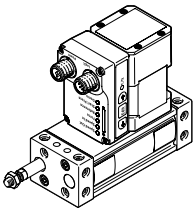
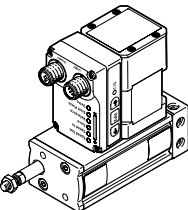
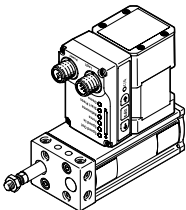
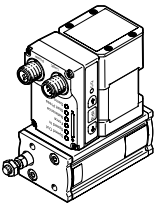


Other variants with 3 or 4 piston rods available.



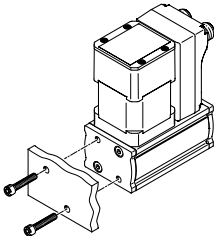
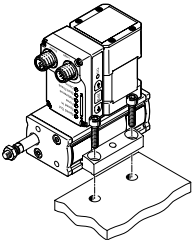
Peripherals overview

Cover variants			
Standard	Multimount, front	Multimount, rear	Multimount, both ends

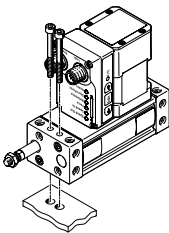
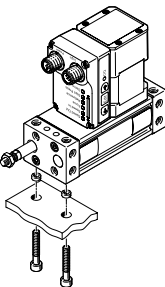
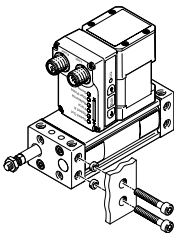
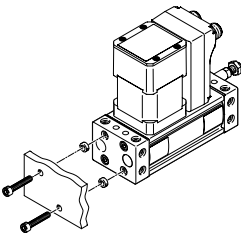


For the variants with multimount cover (EPCE-TB-...-MF / -MB / -MD), lateral female threads with centring diameter and through-holes are also available.

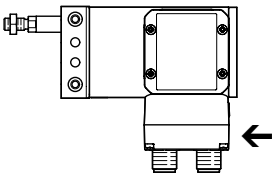
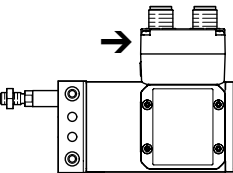
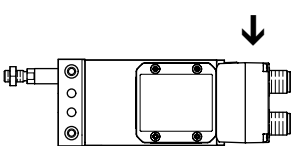
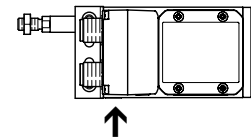
Mounting options	
With standard cover variant	On the end face via thread



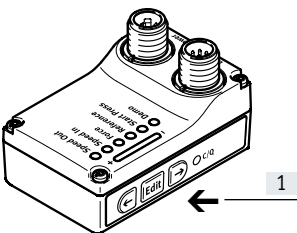
With multimount cover	At the side/underneath via thread	Via through-holes
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Motor mounting variants			
Standard	[B] Rear	[L] Left	[R] Right

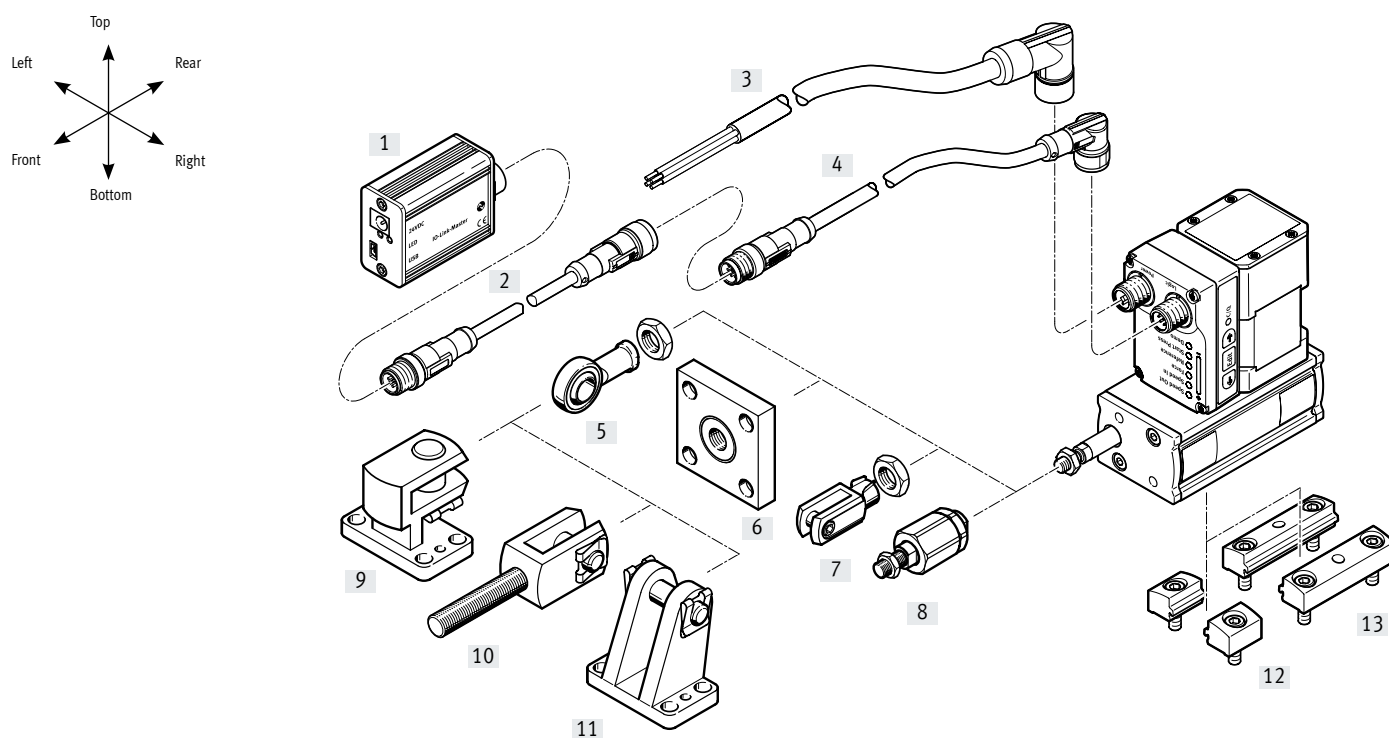


Control elements



[1] Pushbuttons for parameterisation and control

## Peripherals overview



## Accessories

Type/order code	Description	→ Page/Internet
[1] IO-Link master USB CDSU-1	For straightforward use of the electric cylinder unit with IO-Link	23
[2] Adapter NEFC-M12G8	Connection between the motor and the IO-Link master	23
[3] Supply cable NEBL-T12	For connecting load and logic supply	23
[4] Connecting cable NEBC-M12	For connection to a controller	23
[5] Rod eye SGS	With spherical bearing	22
[6] Coupling piece KSG	For compensating radial deviations	22
[7] Rod clevis SG	Permits a swivelling movement of the cylinder in one plane	22
[8] Self-aligning rod coupler FK	For compensating radial and angular deviations	22
[9] Right angle clevis foot LQG	For rod eye SGS	22
[10] Rod clevis SGA	For swivel mounting of the cylinder	22
[11] Clevis foot LBG	With parallel motor mounting, for spherical bearing	22
[12] Profile mounting EAHF-L2-P-S	For mounting the axis on the side of the profile	20
[13] Profile mounting EAHF-L2-P	<ul style="list-style-type: none"> <li>For mounting the axis on the side of the profile</li> <li>The profile mounting can be attached to the mounting surface using the drilled hole in the centre</li> </ul>	21
– Centring sleeve ZBH	Centring sleeves can be used to centre the electric cylinder unit in combination with the multimount cover	22

## Type codes

001	Series	
EPCE	Toothed belt	

002	Drive system	
TB	Toothed belt	

003	Size	
45	45	
60	60	

004	Stroke	
5	5	
10	10	
15	15	
20	20	
25	25	
30	30	
35	35	
40	40	
45	45	
50	50	
60	60	
80	80	

005	Piston rod, front left	
	None	
FL	Piston rod with male thread	

006	Piston rod, rear left	
	None	
BL	Piston rod with male thread	

007	Piston rod, front right	
	None	
FR	Piston rod with male thread	

008	Piston rod, rear right	
	None	
BR	Piston rod with male thread	

009	Cover variant	
	Standard	
MB	Multimount, rear	
MD	Multimount, both ends	
MF	Multimount, front	

010	Motor type	
ST	Stepper motor ST	

011	Controller	
M	Integrated	

012	Control panel	
H1	Integrated	

013	Bus protocol/activation	
PLK	PNP and IO-Link®	
NLK	NPN and IO-Link®	

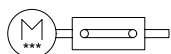
014	End-position sensing	
AA	With integrated end-position sensing	

015	Cable outlet direction	
	Standard	
L	Left	
R	Right	
B	Rear	

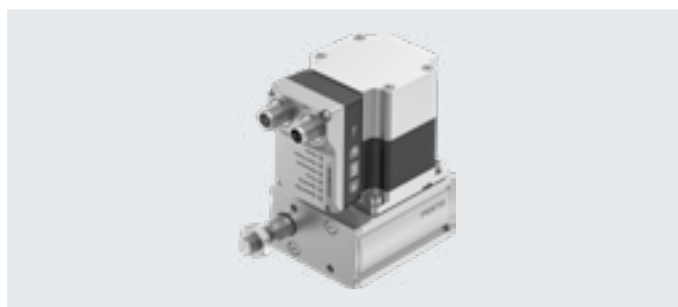
016	Electrical accessories	
	None	
L1	Adapter for operation as IO-Link® device	

017	Operating instructions	
	With operating instructions	
DN	Without operating instructions	

## Data sheet



- Ø - Size  
45, 60
- I - Stroke length  
5 ... 80 mm



General technical data			
Size		45	60
Design		Electric cylinder with toothed belt and integrated drive	
Motor type		Stepper motor	
Protection against rotation/guide		With plain-bearing guide	
Piston rod end		Male thread	
Piston rod thread		M6	M10x1.25
Mounting position		Any	
Working stroke	[mm]	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 60, 80
Stroke reserve	[mm]	0	
Additional functions		Integrated end-position sensing	
		User interface	
Display		LED	
Homing		Positive fixed stop block	
		Negative fixed stop block	
Type of mounting		Via female thread	
		Via through-hole (only with multimount cover)	
		With accessories	
		Via centring sleeve (only with multimount cover)	
Max. cable length			
Inputs/outputs	[m]	15	
IO-Link operation	[m]	20	
Reference value, service life	[km]	50 ... 500	50 ... 800
	[cycles]	5 million	5 million

Mechanical data			
Size		45	60
Max. payload			
Horizontal	[kg]	5	10
Vertical	[kg]	2.5	5
Max. feed force $F_x$	[N]	85	150
Max. speed	[m/s]	0.44	0.6
Speed press	[m/s]	0.02	
Max. acceleration	[m/s <sup>2</sup> ]	9	9
Repetition accuracy	[mm]	±0.05	±0.05
Max. impact energy	[J]	0.003	0.016
Position sensing		Via IO-Link	

## Data sheet

Toothed belt			
Size		45	60
Pitch	[mm]	2	
Elongation <sup>1)</sup>	[%]	0.310	0.375
Effective diameter	[mm]	10.18	
Feed constant	[mm/rev]	32	

1) At max. feed force

Electrical data			
Size		45	60
Motor			
Nominal voltage DC	[V]	24 (±15%)	
Nominal current	[A]	3	5.3
Max. current consumption (load)	[A]	3	5.3
Max. current consumption (logic)	[mA]	300	
Encoder			
Rotor position encoder		Absolute encoder, single turn	
Rotor position encoder measuring principle		Magnetic	
Rotor position encoder resolution	[bit]	16	

Interfaces		
Size	45	60
Parameterisation interface		
IO-Link	Yes	
User interface	Yes	
Digital inputs		
Quantity	2	
Switching logic	PNP	
	NPN	
Characteristics	Not galvanically isolated	
	Configurable	
Specification	Based on IEC 61131-2, type 1	
Operating range	[V]	24
Digital outputs		
Quantity	2	
Switching logic	PNP	
	NPN	
Rotor position encoder	Absolute encoder, single turn	
Characteristics	Not galvanically isolated	
	Configurable	
Max. current	[mA]	100

## Data sheet

Technical data – IO-Link		
Size	45	60
SIO mode support	Yes	
Communication mode	COM3 (230.4 kBd)	
Connection technology	Plug	
Port class	A	
Number of ports	1	
Process data width OUT	[byte]	2
Process data content OUT	[bit]	1 (Move in)
	[bit]	1 (Move out)
	[bit]	1 (Quit Error)
Process data width IN	[byte]	2
Process data content IN	[bit]	1 (State Device)
	[bit]	1 (State Move)
	[bit]	1 (State in)
	[bit]	1 (State out)
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	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 for excessive 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	
	To EU RoHS Directive	
KC mark	KC EMC	
Certification	RCM mark	
Vibration resistance	Transport application test with severity class 1 in accordance with FN 942017-4 and EN 60068-2-6	
Shock resistance	Shock test with severity level 1 to FN 942017-5 and EN 60068-2-27	
Maintenance interval	Lifetime lubrication	

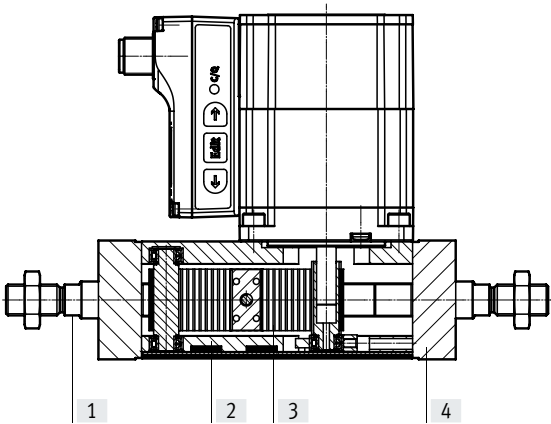
Weight		
Size	45	60
Basic weight with 0 mm stroke	[g]	775/807 <sup>1)</sup>
Additional weight per 10 mm stroke	[g]	29
Moving mass at 0 mm stroke	[g]	83/87 <sup>1)</sup>
Additional moving mass per 10 mm stroke	[g]	4.55
		1350/1397 <sup>1)</sup>
		45
		188/197 <sup>1)</sup>
		9.75

1) With cover variant EPCE-...-MF

Data sheet

Materials

Sectional view



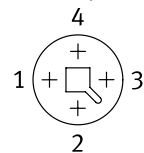
Axis		
[1]	Piston rod	High-alloy stainless steel
[2]	Housing	Anodised wrought aluminium alloy
[3]	Toothed belt	Polychloroprene with glass fibre
[4]	Cover	Anodised wrought aluminium alloy
Note on materials		RoHS-compliant
		Contains paint-wetting impairment substances

Pin allocation

Power supply

Plug

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

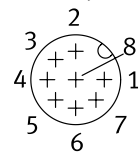


Pin	Function
1	Power voltage supply (24 V DC)
2	Reference potential, power voltage supply (GND)
3	Reserved, do not connect
4	Functional earth (FE)

Logic interface

Plug

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

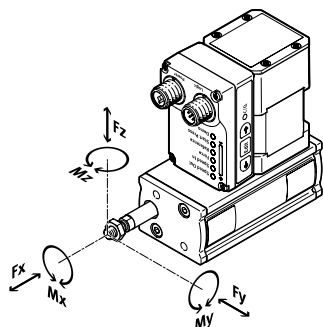


When used with digital I/O	
Pin	Function
1	Logic voltage supply (24 V DC)
2	Digital output 1 (State "In")
3	Digital output 2 (State "Out")
4	Reference potential, logic voltage supply (GND)
5	Digital input 1 (Move "In")
6	Digital input 2 (Move "Out")
7	Reserved, do not connect
8	Reference potential, logic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

## Data sheet

## 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:

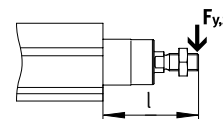
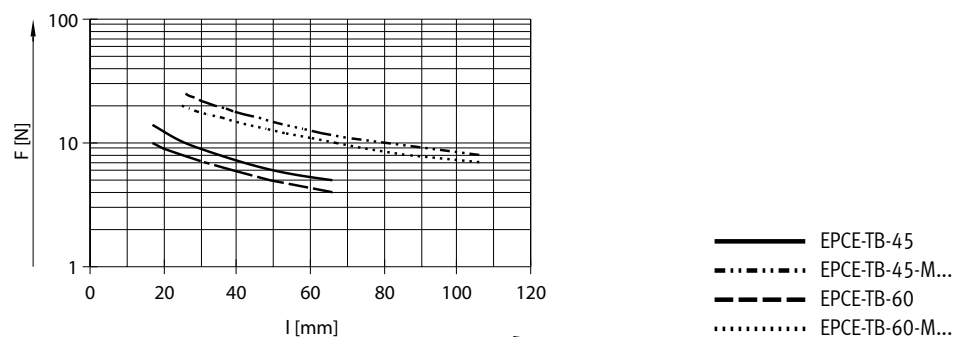
$F_1/M_1$  = dynamic value

$F_2/M_2$  = maximum value

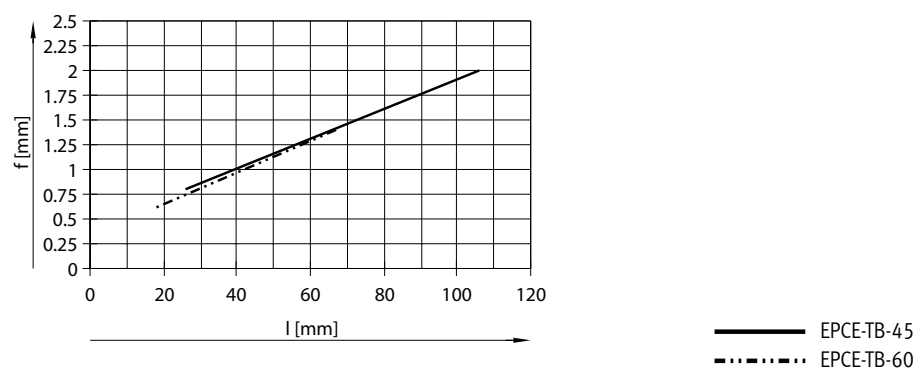
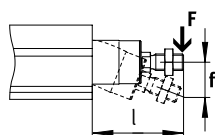
$$f_v = \frac{|F_{y1}|}{F_{y2}} + \frac{|F_{z1}|}{F_{z2}} + \frac{|M_{y1}|}{M_{y2}} + \frac{|M_{z1}|}{M_{z2}} \leq 1$$

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

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

Maximum permissible lateral forces  $F_{y_{max}}$  and  $F_{z_{max}}$  on the piston rod as a function of stroke length  $l$ 

Size		45	60
$F_{x_{max}}$ (static)	[N]	85	150
$M_{x_{max}}$ (dynamic)	[Nm]	0	
$M_{y_{max}}, M_{z_{max}}$	[Nm]	0.9	2.9

Piston rod displacement  $f$  as a function of stroke length  $l$ 

## Data sheet

## Sizing example

Application data:

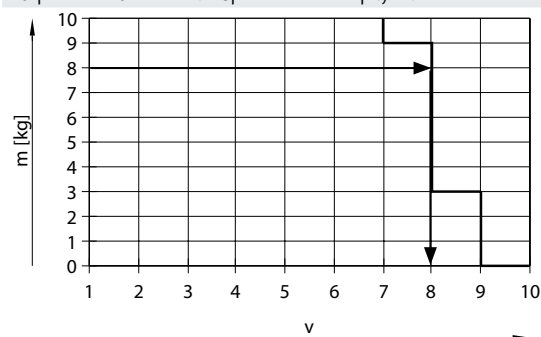
- Payload: 8 kg
- Mounting position: horizontal
- Stroke: 60 mm
- Max. permissible positioning time: 0.5 s (one direction)

Step 1: Selection of the smallest possible size from the table → page 12

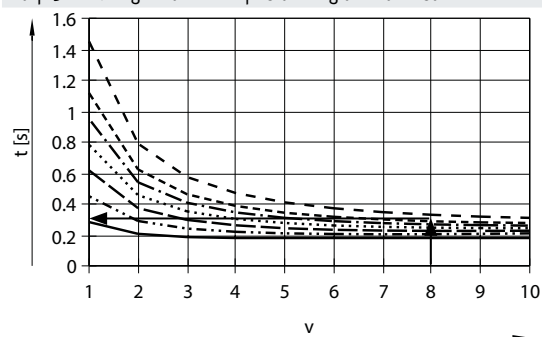
Mechanical data			
Size		45	60
Max. payload			
Horizontal	[kg]	5	10
Vertical	[kg]	2.5	5

→ Smallest possible size: EPCE-TB-60

Step 2: Selection of max. speed level v for payload m



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



- l = 10 mm
- l = 20 mm
- l = 30 mm
- ..... l = 40 mm
- · - · l = 50 mm
- l = 60 mm
- - - - l = 80 mm

→ Max. speed level for payload: level 8

→ Min. positioning time for 60 mm at level 8: 0.3 s

## Result

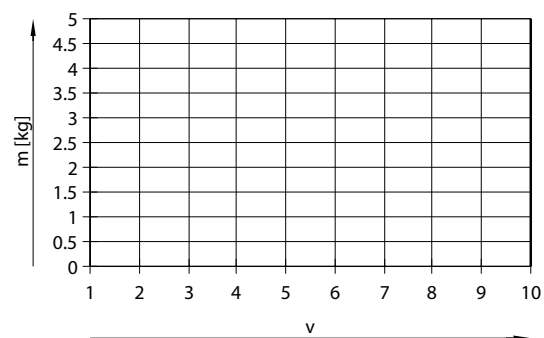
The application can be implemented using EPCE-TB-60-60. A minimum positioning time (one direction) of 0.3 s is achieved. Longer positioning times can be selected at any time using a lower speed level.

## Data sheet

Mass  $m$  as a function of speed level  $v$ 

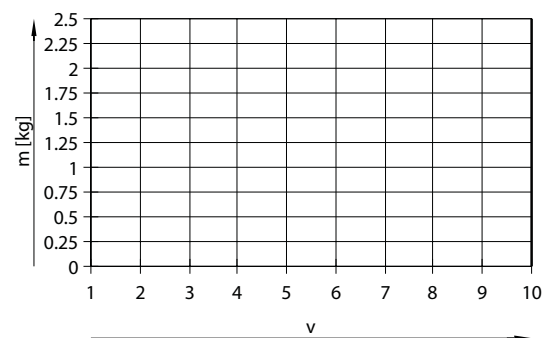
Horizontal

EPCE-45

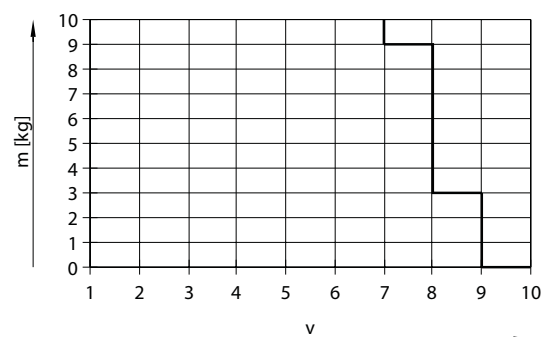


Vertical

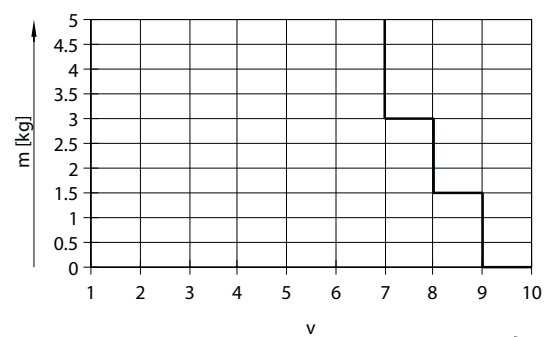

EPCE-45



EPCE-60



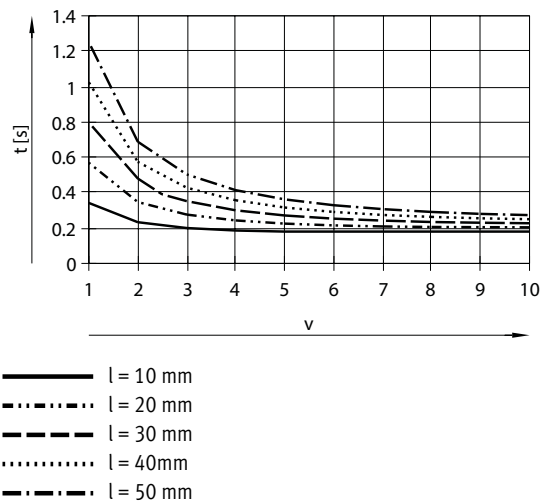
EPCE-60


 **Note**

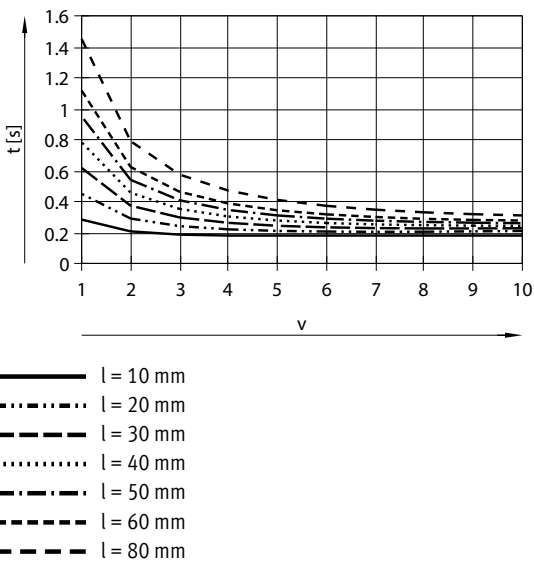
The lines represent the maximum values. The lower speed levels can be set at any time.

Data sheet

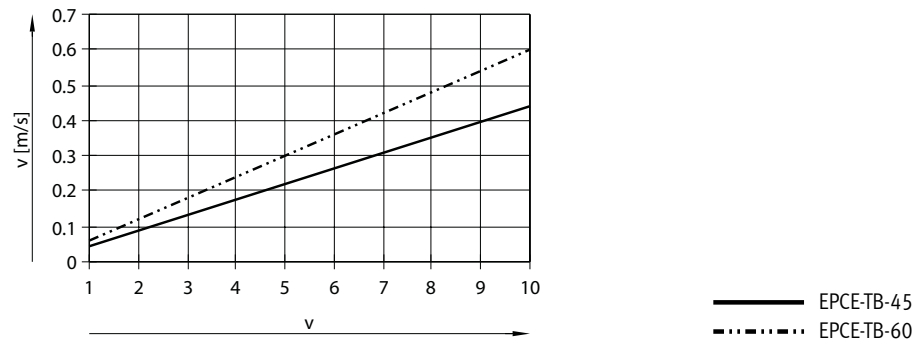
Positioning time  $t$  as a function of speed level  $v$  and stroke  $l$   
EPCE-45



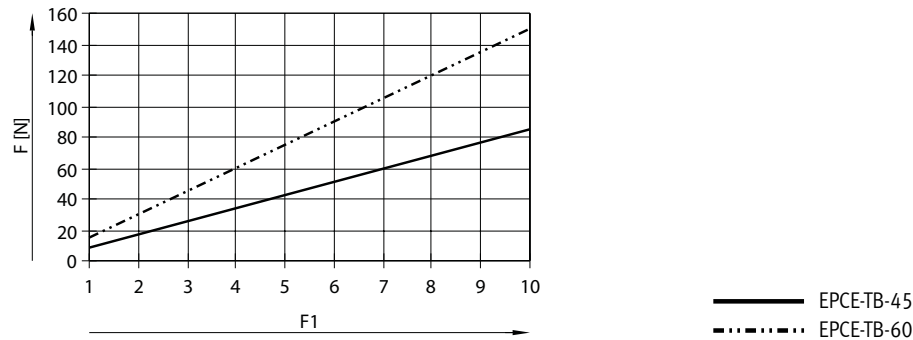
EPCE-60



Speed  $v$  as a function of speed level  $v$



Feed force  $F$  as a function of force level  $F1$

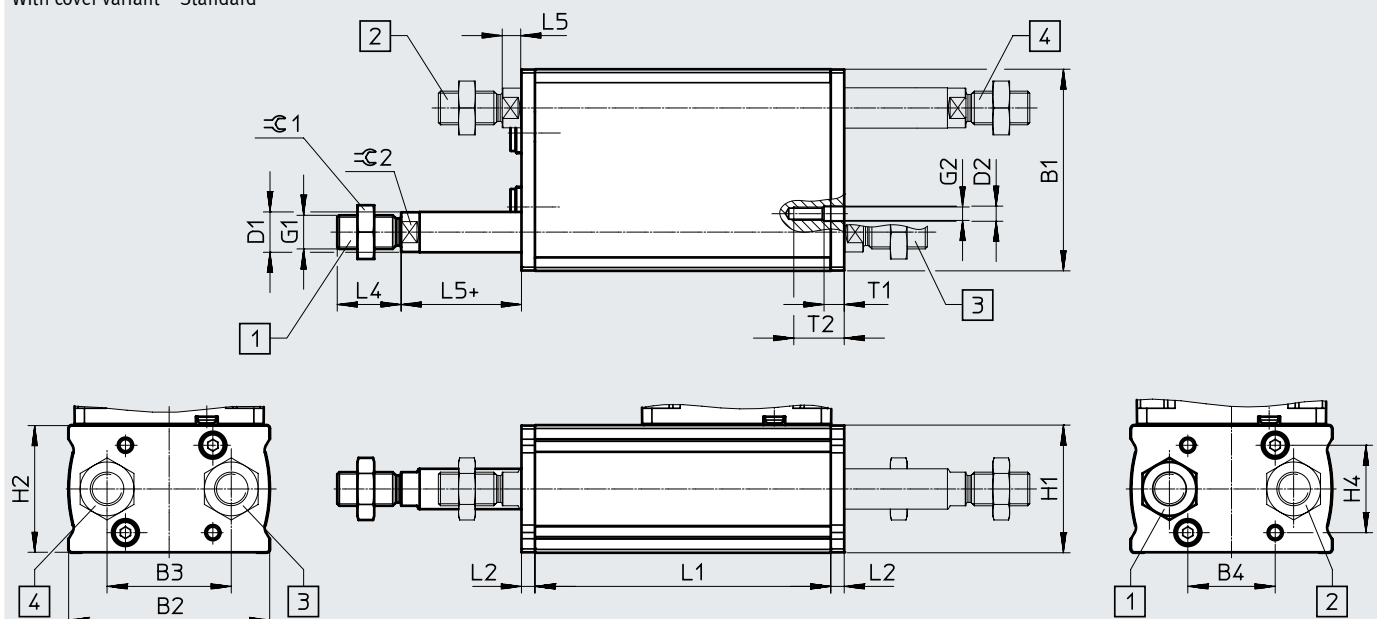


## Data sheet

## Dimensions

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

With cover variant – Standard



+ = plus stroke length

[1] EPCE-TB-...-FL

[2] EPCE-TB-...-FR

[3] EPCE-TB-...-BL

[4] EPCE-TB-...-BR

Size	B1	B2	B3	B4	D1 Ø h8	D2 Ø H13	G1	G2	H1
	+0.4	±0.1							+0.3/-0.1
45	45	44.8	28	20	8	4.5	M6	M4	34
60	60	59.8	37	26	12	4.5	M10x1.25	M4	38

Size	H2	H4	L2	L4	L5	T1	T2	≈C1	≈C2
	±0.1		±0.1						
45	33.7	22.5	4	12	4.7+0.2/-1.2	6	15	10	7
60	37.7	26	4	19	6+0.2/-1.3	6	15	17	10

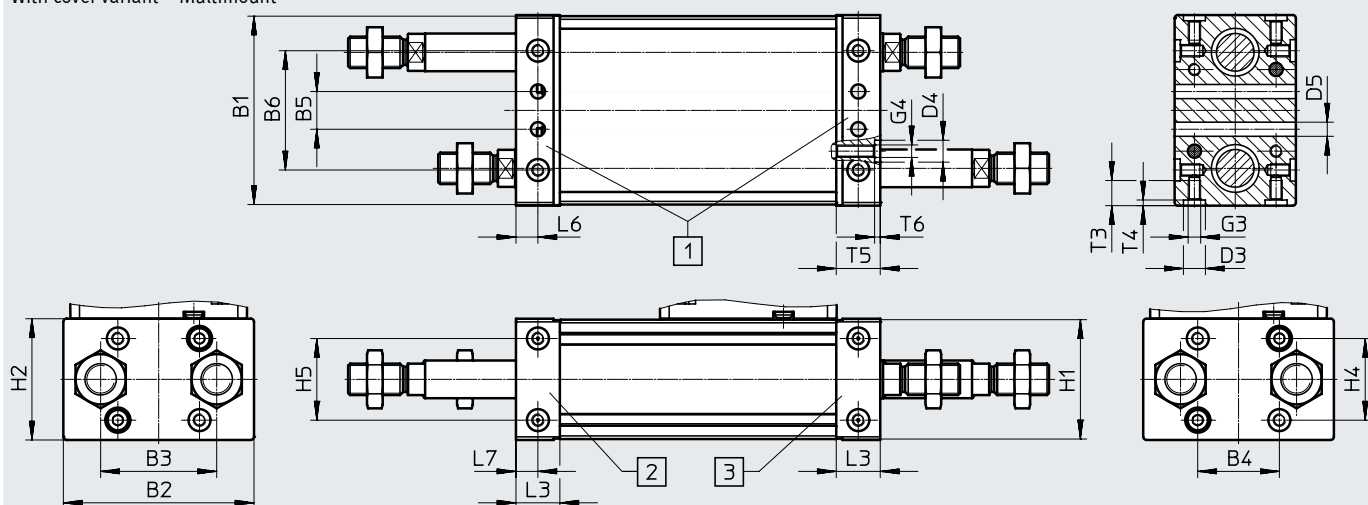
Size	Stroke [mm]	L1 ±0.1
45	5	59.5
	10	59.5
	15	69.5
	20	69.5
	25	79.5
	30	79.5
	35	89.5
	40	89.5
	45	99.5
	50	99.5
Size	Stroke [mm]	L1 ±0.1
60	5	68
	10	68
	15	78
	20	78
	25	88
	30	88
	35	98
	40	98
	45	108
	50	108
	60	118
	80	138

## Data sheet

## Dimensions

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

With cover variant – Multimount



[1] EPCE-TB-...-MD

[2] EPCE-TB-...-MF

[3] EPCE-TB-...-M

Size	B1	B2	B3	B4	B5	B6	D3 Ø H7	D4 Ø H7	D5 Ø H13	G3	G4
45	45 +0.4	45.7 ±0.1	28	20	10	32.5	7	7	4.5	M4	M4
60	60	60.7	37	26	12	38	7	7	4.5	M4	M4

Size	H1	H2	H4	H5	L3	L6	L7	T3	T4	T5	T6
	+0.3/-0.1	±0.1			±0.1				-0.1		-0.1
45	34	34.6	22.5	16	14	7	7	8	1.8	14	1.8
60	38	38.6	26	26	14	7	7	8	1.8	14	1.8

 Note

For size 60, the through-holes cannot be used with the following combinations:

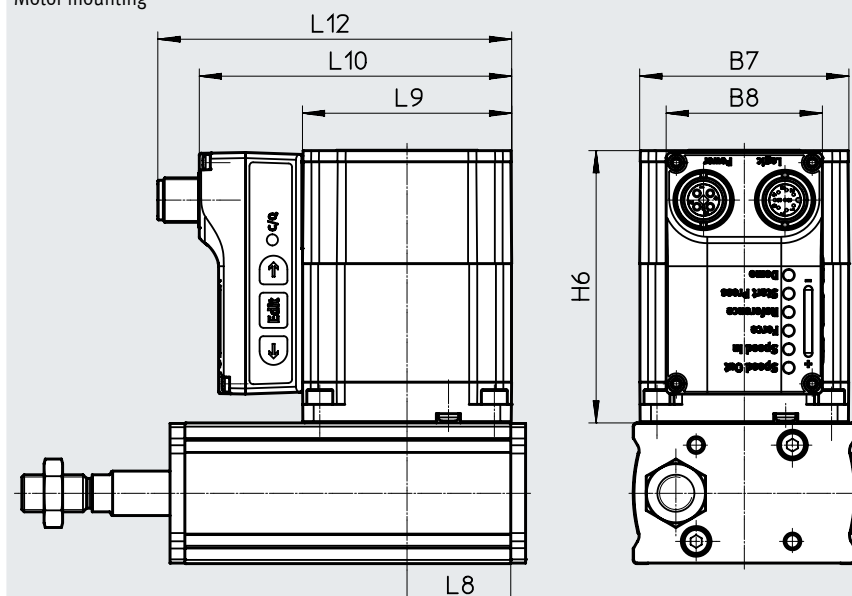
- Through-hole at the front: not in combination with stroke 5 or 10 mm and motor mounting variant "Standard" (at front)
- Through-hole at the rear: not in combination with motor mounting variant "Rear"

## Data sheet

## Dimensions

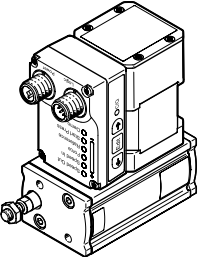
Download CAD data → [www.festo.com](http://www.festo.com)

Motor mounting



Size	B7	B8	H6	L8	L9	L10	L12
	±0.3	±0.25			±0.3	±0.6	±0.8
45	42.3	42.2	65±1.1	21	42.3	70.1	81.3
60	56.6	42.2	73.5±0.9	28	56.6	84.5	95.6

## Data sheet

Ordering data				
	Size	Stroke	Part no.	Type
	45	Cover variant: Standard		
		10	8101539	EPCE-TB-45-10-FL-ST-M-H1-PLK-AA
		20	8101540	EPCE-TB-45-20-FL-ST-M-H1-PLK-AA
		30	8101541	EPCE-TB-45-30-FL-ST-M-H1-PLK-AA
		50	8101542	EPCE-TB-45-50-FL-ST-M-H1-PLK-AA
		Cover variant: Multimount, front		
		20	8101544	EPCE-TB-45-20-FL-MF-ST-M-H1-PLK-AA
		30	8101545	EPCE-TB-45-30-FL-MF-ST-M-H1-PLK-AA
		50	8101546	EPCE-TB-45-50-FL-MF-ST-M-H1-PLK-AA
	60	Cover variant: Standard		
		10	8102163	EPCE-TB-60-10-FL-ST-M-H1-PLK-AA
		20	8102162	EPCE-TB-60-20-FL-ST-M-H1-PLK-AA
		30	8102164	EPCE-TB-60-30-FL-ST-M-H1-PLK-AA
		50	8102170	EPCE-TB-60-50-FL-ST-M-H1-PLK-AA
		80	8102167	EPCE-TB-60-80-FL-ST-M-H1-PLK-AA
		Cover variant: Multimount, front		
		10	8102166	EPCE-TB-60-10-FL-MF-ST-M-H1-PLK-AA
		20	8102169	EPCE-TB-60-20-FL-MF-ST-M-H1-PLK-AA
		30	8102168	EPCE-TB-60-30-FL-MF-ST-M-H1-PLK-AA
		50	8102165	EPCE-TB-60-50-FL-MF-ST-M-H1-PLK-AA
		80	8102171	EPCE-TB-60-80-FL-MF-ST-M-H1-PLK-AA

## Data sheet

Ordering table					
Size	45	60	Conditions	Code	Enter code
Module no.	8103354	8103355			
Series	EPCE			EPCE	EPCE
Drive type	Toothed belt			-TB	-TB
Size	45	60		-...	
Stroke [mm]	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 60, 80		-...	
Piston rod, front left	None		[1]		
	Piston rod with male thread			-FL	
Piston rod, rear left	None		[1]		
	Piston rod with male thread			-BL	
Piston rod, front right	None		[1]		
	Piston rod with male thread			-FR	
Piston rod, rear right	None		[1]		
	Piston rod with male thread			-BR	
Cover variant	Standard				
	Multimount, rear		[3]	-MB	
	Multimount, both ends		[2], [3]	-MD	
	Multimount, front		[2]	-MF	
Motor type	Stepper motor ST			-ST	-ST
Controller	Integrated			-M	-M
Control panel	Integrated			-H1	-H1
Bus protocol/actuation	NPN and IO-Link			-NLK	
	PNP and IO-Link			-PLK	
End-position detection	With integrated end-position sensing			-AA	-AA
Cable outlet direction	Standard		[2]		
	Rear		[3]	-B	
	Left			-L	
	Right			-R	
Electrical accessories	None				
	Adapter for operation as IO device			+L1	
Operating instructions	With operating instructions				
	Without operating instructions			DN	

[1] At least one piston rod must be selected.

[2] For size 45 with stroke 5 mm or 10 mm and cover variant -MF or -MD, not in combination with cable outlet direction "Standard".

[3] For size 45 and cover variant -MB or -MD, not in combination with cable outlet direction "Rear"

**Note**

For size 60, the through-holes cannot be used with the following combinations:

- Through-hole at the front: not in combination with stroke 5 or 10 mm and motor mounting variant "Standard" (at front)
- Through-hole at the rear: not in combination with motor mounting variant "Rear"

## Accessories

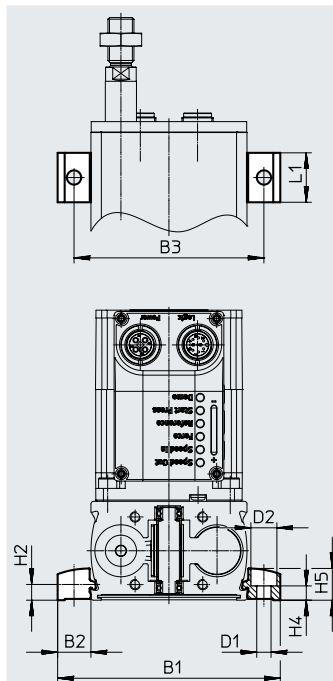
### Profile mounting EAHF-L2-...-P-S

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 Ø H13	D2 Ø H13	H2
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
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

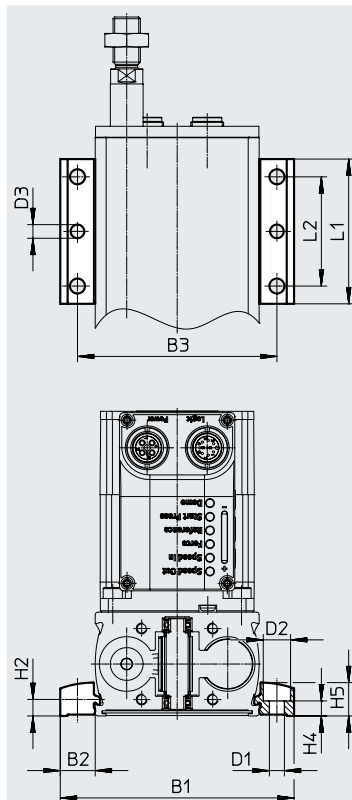
### Profile mounting EAHF-L2-...-P

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



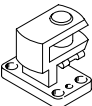
#### Dimensions and ordering data

For size	B1	B2	B3	D1 Ø H13	D2 Ø H13	D3 Ø	H2
45	70.6	12.8	58	5.5	10	5	6.1
60	85.6	12.8	73	5.5	10	5	6.1

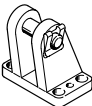
For size	H4 ±0.1	H5	L1	L2	Weight [g]	Part no.	Type
45	5.5	12.2	53	40	35	4835728	EAHF-L2-45-P
60	5.5	12.2	53	40	35	4835728	EAHF-L2-45-P

## Accessories



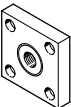
## Ordering data – Mounting components

Designation	For size	Part no.	Type
Right angle clevis foot LQG			
	60	<b>31768</b>	<b>LQG-32</b>



Data sheets → Internet: clevis foot

Designation	For size	Part no.	Type
Clevis foot LBG			
	60	<b>31761</b>	<b>LBG-32</b>

## Ordering data – Piston rod attachments

Designation	For size	Part no.	Type
Rod eye SGS			
	45	<b>9254</b>	<b>SGS-M6</b>
	60	<b>9261</b>	<b>SGS-M10x1.25</b>
Self-aligning rod coupler FK			
	45	<b>2061</b>	<b>FK-M6</b>
	60	<b>6140</b>	<b>FK-M10x1.25</b>
Coupling piece KSG			
	60	<b>32963</b>	<b>KSG-M10x1.25</b>

Data sheets → Internet: piston rod attachment


Designation	For size	Part no.	Type
Rod clevis SG			
	45	<b>3110</b>	<b>SG-M6</b>
	60	<b>6144</b>	<b>SG-M10x1.25</b>
Rod clevis SGA			
	60	<b>32954</b>	<b>SGA-M10x1.25</b>


## Ordering data – Centring sleeves


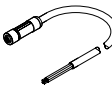
	Description	Part no.	Type	PU <sup>1)</sup>
	<ul style="list-style-type: none"> <li>For centring the electric cylinder unit in combination with multimount cover (EPCE-TB-...-MF / -MB / -MD)</li> </ul>	<b>186717</b>	<b>ZBH-7</b>	10

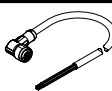
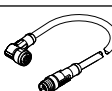
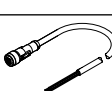
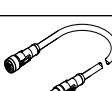
1) Packaging unit

## Accessories

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

Ordering data – Adapter					Data sheets → 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					Data sheets → Internet: nebl
	Electrical connection, left	Electrical connection, right	Cable length [m]	Part no.	Type
	Angled socket, M12x1, 4-pin	Cable, open end, 4-wire	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-wire	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					Data sheets → Internet: nebc
	Electrical connection, left	Electrical connection, right	Cable length [m]	Part no.	Type
	Angled socket, M12x1, 8-pin	Cable, open end, 8-wire	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 socket, M12x1, 8-pin	Straight plug, M12x1, 8-pin	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-wire	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 socket, M12x1, 8-pin	Straight plug, M12x1, 8-pin	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 angled cables are positioned at a 45° angle to the axis.

