

Electric slides EGSK



# Electromechanical drives

Selection aid

## Overview of toothed belt and spindle axes

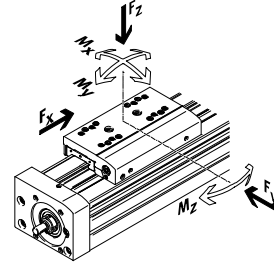
### Toothed belt axes

- Speeds of up to 10 m/s
- Acceleration of up to 50 m/s<sup>2</sup>
- Repetition accuracy of up to ±0.08 mm
- Strokes of up to 8500 mm (longer strokes on request)
- Flexible motor mountings

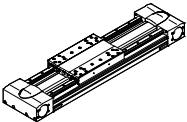
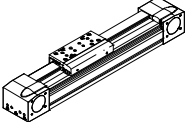
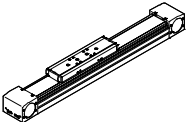
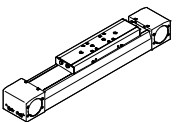
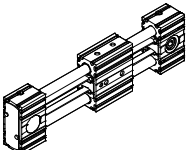
### Spindle axes

- Speeds of up to 2 m/s
- Acceleration of up to 20 m/s<sup>2</sup>
- Repetition accuracy of up to ±0.003 mm
- Strokes of up to 3000 mm

### Coordinate system



## Toothed belt axes

Type	$F_x$ [N]	$v$ [m/s]	$M_x$ [Nm]	$M_y$ [Nm]	$M_z$ [Nm]	Characteristics
<b>Heavy duty recirculating ball bearing guide</b>						
<b>EGC-HD-TB</b>						
	450 1000 1800	3 5 5	140 300 900	275 500 1450	275 500 1450	<ul style="list-style-type: none"> <li>• Flat drive unit with rigid, closed profile</li> <li>• Precision DUO guide rail with high load capacity</li> <li>• Ideal as a base axis for linear gantries and cantilever axes</li> </ul>
<b>Recirculating ball bearing guide</b>						
<b>EGC-TB-KF</b>						
	50 100 350 800 2500	3 5 5 5 5	3.5 16 36 144 529	10 132 228 680 1820	10 132 228 680 1820	<ul style="list-style-type: none"> <li>• Rigid, closed profile</li> <li>• Precision guide rail with high load capacity</li> <li>• Small drive pinions reduce required driving torque</li> <li>• Space-saving position sensing</li> </ul>
<b>ELGA-TB-KF</b>						
	350 800 1300 2000	5 5 5 5	16 36 104 167	132 228 680 1150	132 228 680 1150	<ul style="list-style-type: none"> <li>• Internal guide and toothed belt</li> <li>• Precision guide rail with high load capacity</li> <li>• Guide and toothed belt protected by cover strip</li> <li>• High feed forces</li> </ul>
<b>ELGA-TB-KF-F1</b>						
	260 600 1000	5 5 5	16 36 104	132 228 680	132 228 680	<ul style="list-style-type: none"> <li>• Suitable for use in the food area</li> <li>• "Clean look": smooth, easy-to-clean surfaces</li> <li>• Internal guide and toothed belt</li> <li>• Precision guide rail with high load capacity</li> <li>• Guide and toothed belt protected by cover strip</li> </ul>
<b>ELGR-TB</b>						
	50 100 350	3 3 3	2.5 5 15	20 40 124	20 40 124	<ul style="list-style-type: none"> <li>• Cost-optimised rod guide</li> <li>• Ready-to-install unit</li> <li>• Linear bushings with high load capacity for dynamic operation</li> </ul>

# Electromechanical drives

Selection aid

## Overview of toothed belt and spindle axes

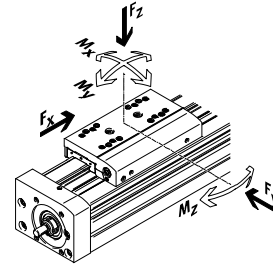
### Toothed belt axes

- Speeds of up to 10 m/s
- Acceleration of up to 50 m/s<sup>2</sup>
- Repetition accuracy of up to ±0.08 mm
- Strokes of up to 8500 mm (longer strokes on request)
- Flexible motor mountings

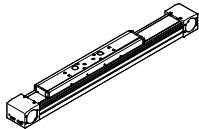
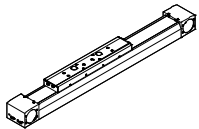
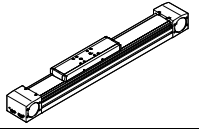
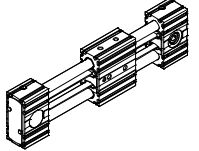
### Spindle axes

- Speeds of up to 2 m/s
- Acceleration of up to 20 m/s<sup>2</sup>
- Repetition accuracy of up to ±0.003 mm
- Strokes of up to 3000 mm

### Coordinate system



## Toothed belt axes

Type	$F_x$ [N]	$v$ [m/s]	$M_x$ [Nm]	$M_y$ [Nm]	$M_z$ [Nm]	Characteristics
<b>Roller bearing guide</b>						
<b>ELGA-TB-RF</b>						
	350 800 1300	10 10 10	11 30 100	40 180 640	40 180 640	<ul style="list-style-type: none"> <li>• Heavy-duty roller bearing guide</li> <li>• Guide and toothed belt protected by cover strip</li> <li>• Speeds of up to 10 m/s</li> <li>• Lower weight than axes with guide rails</li> </ul>
<b>ELGA-TB-RF-F1</b>						
	260 600 1000	10 10 10	8.8 24 80	32 144 512	32 144 512	<ul style="list-style-type: none"> <li>• Suitable for use in the food area</li> <li>• "Clean look": smooth, easy-to-clean surfaces</li> <li>• Heavy-duty roller bearing guide</li> <li>• Guide and toothed belt protected by cover strip</li> <li>• Lower weight than axes with guide rails</li> </ul>
<b>Plain bearing guide</b>						
<b>ELGA-TB-G</b>						
	350 800 1300	5 5 5	5 10 120	30 60 120	10 20 40	<ul style="list-style-type: none"> <li>• Guide and toothed belt protected by cover strip</li> <li>• For simple handling tasks</li> <li>• As a drive component for external guides</li> <li>• Insensitive to harsh ambient conditions</li> </ul>
<b>ELGR-TB-GF</b>						
	50 100 350	1 1 1	1 2.5 1	10 20 40	10 20 40	<ul style="list-style-type: none"> <li>• Cost-optimised rod guide</li> <li>• Ready-to-install unit</li> <li>• Heavy-duty plain bearings for use in harsh ambient conditions</li> </ul>

# Electromechanical drives

Selection aid

## Overview of toothed belt and spindle axes

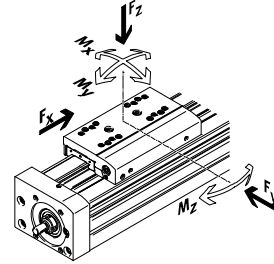
### Toothed belt axes

- Speeds of up to 10 m/s
- Acceleration of up to 50 m/s<sup>2</sup>
- Repetition accuracy of up to ±0.08 mm
- Strokes of up to 8500 mm (longer strokes on request)
- Flexible motor mountings

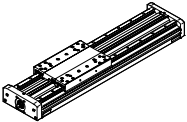
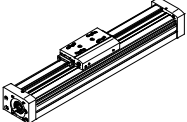
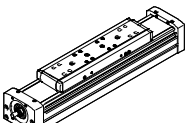
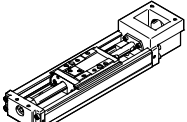
### Spindle axes

- Speeds of up to 2 m/s
- Acceleration of up to 20 m/s<sup>2</sup>
- Repetition accuracy of up to ±0.003 mm
- Strokes of up to 3000 mm

### Coordinate system



## Spindle axes

Type	$F_x$ [N]	$v$ [m/s]	$M_x$ [Nm]	$M_y$ [Nm]	$M_z$ [Nm]	Characteristics
<b>Heavy-duty recirculating ball bearing guide</b>						
EGC-HD-BS						
	300 600 1300	0.5 1.0 1.5	140 300 900	275 500 1450	275 500 1450	<ul style="list-style-type: none"> <li>• Flat drive unit with rigid, closed profile</li> <li>• Precision DUO guide rail with high load capacity</li> <li>• Ideal as a base axis for linear gantries and cantilever axes</li> </ul>
<b>Recirculating ball bearing guide</b>						
EGC-BS-KF						
	300 600 1300 3000	0.5 1.0 1.5 2.0	16 36 144 529	132 228 680 1820	132 228 680 1820	<ul style="list-style-type: none"> <li>• Rigid, closed profile</li> <li>• Precision guide rail with high load capacity</li> <li>• For the highest requirements in terms of feed force and accuracy</li> <li>• Space-saving position sensing</li> </ul>
ELGA-BS-KF						
	300 600 1300 3000	0.5 1.0 1.5 2.0	16 36 104 167	132 228 680 1150	132 228 680 1150	<ul style="list-style-type: none"> <li>• Internal guide and ball screw drive</li> <li>• Precision guide rail with high load capacity</li> <li>• For the highest requirements in terms of feed force and accuracy</li> <li>• Guide and ball screw drive protected by cover strip</li> <li>• Space-saving position sensing</li> </ul>
EGSK						
	57 133 184 239 392	0.33 1.10 0.83 1.10 1.48	13 28.7 60 79.5 231	3.7 9.2 20.4 26 77.3	3.7 9.2 20.4 26 77.3	<ul style="list-style-type: none"> <li>• Spindle axes with maximum precision, compactness and rigidity</li> <li>• Recirculating ball bearing guide and ball screw drive without caged ball bearings</li> <li>• Standard designs in stock</li> </ul>

# Electric slides EGSK

## Key features

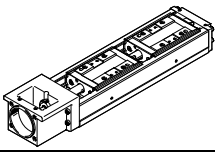
### At a glance

- The electric slide EGSK impresses with its repetition accuracy and rigidity.
- The U-shaped steel housing serves simultaneously as a guide rail. The slide combines linear guide elements and the spindle nut of the ball screw drive in one component, thus avoiding the accumulation of manufacturing tolerances.
- Recirculating ball bearing guide and ball screw drive
- Three accuracy classes
- Optionally available with additional slide
- Sizes 33 and 46 also available in a short slide design
- Standard designs available ex-stock

### Characteristic values of the axes

The specifications shown in the table are maximum values.

The precise values for each of the variants can be found in the relevant technical data in the catalogue.

Version	Size	Working stroke [mm]	Speed [m/s]	Repetition accuracy [μm]	Feed force [N]	Guide characteristics				
						Forces and torques				
						Fy [N]	Fz [N]	Mx [Nm]	My [Nm]	Mz [Nm]
Electric slides EGSK <span style="float: right;">→ page 8</span>										
	15	25 ... 100	0.33	±3	57	1185	1185	13	3.7	3.7
	20	25 ... 125	1.10	±3	133	2204	2204	28.7	9.2	9.2
	26	50 ... 200	0.83	±3	184	3528	3528	60	20.4	20.4
	33	100 ... 630	1.10	±3	239	3920	3920	79.5	26	26
	46	200 ... 840	1.48	±3	392	7809	7809	231	77.3	77.3

### Complete system comprising electric slide, motor, motor controller and motor mounting kit

#### Motor

#### Motor controller

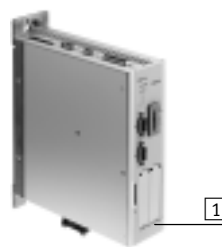
→ page 24



1



2



1



2

1 Servo motor EMME-AS, EMMS-AS

2 Stepper motor EMMS-ST

1 Servo motor controller CMMP-AS

2 Stepper motor controller CMMS-ST

#### Motor mounting kit

→ page 24

##### Axial kit



Kit comprising:

- Motor flange
- Coupling
- Screws



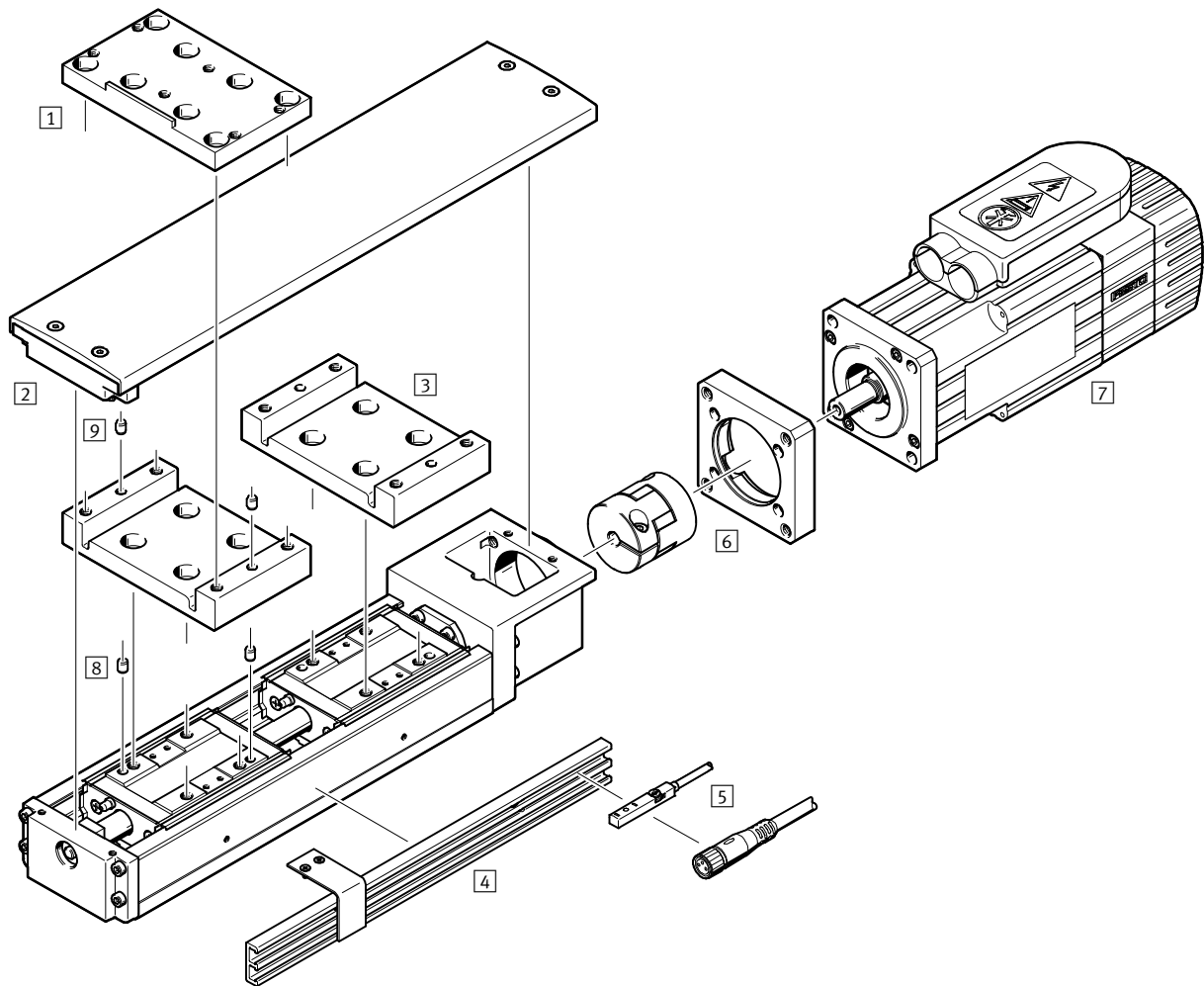
Note

A range of specially matched complete solutions is available for the electric slide EGSK and the motors.

# Electric slides EGSK

Peripherals overview

FESTO



# Electric slides EGSK

Peripherals overview

Accessories		
Type	Description	→ Page/Internet
1 Cross connecting kit EHAM-S1	For mounting an assembly axis EGSK at right angles on the slide of a basic axis EGSK. The assembly axis is one size smaller than the basic axis.	27
2 Cover kit EASC-S1	For covering the axis profile that is open at the top. The kit includes a slide adapter EASA-S1.	29
3 Slide adapter EASA-S1	Required to mount the payload in combination with the cover kit for axis variants with additional slide	28
4 Sensor rail EAPR-S1-S	<ul style="list-style-type: none"> <li>For mounting the inductive proximity sensor SIES-8M on the electric slide</li> <li>Switch lugs are included in the scope of delivery</li> </ul>	31
5 Proximity sensor SIES-8M	Inductive proximity sensor, for T-slot	32
6 Axial kit EAMM	For axial motor mounting (comprises: coupling and motor flange)	24
7 Motor EMME, EMMS	Motors specially matched to the axis, with or without brake	24
8 Centring pin ZBS	For centring loads and attachments on the slide	32
9 Centring pin ZBS	For centring loads and attachments on the slide adapter	32

# Electric slides EGSK

Type code

		EGSK	-	20	-	125	-	6P	-	H	-		-	Z
<b>Type</b>														
EGSK	Electric slide													
<b>Size</b>														
<b>Stroke [mm]</b>														
<b>Spindle pitch</b>														
<b>Accuracy</b>														
-	Standard													
H	High accuracy													
P	Precision design													
<b>Slide design</b>														
-	Standard slide													
S	Short slide													
<b>Additional slide</b>														
-	No additional slide													
Z	Additional slide													

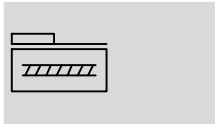




# Electric slides EGSK

Technical data

FESTO

Function



-  Size  
15 ... 46
-  Stroke length  
25 ... 840 mm



General technical data													
Size		15 <sup>2)</sup>		20		26		33		46			
Spindle pitch		1	2	1	6	2	6	6	10	10	20		
		Code <sup>1)</sup>											
Design		Electromechanical linear axis with ball screw drive											
Guide		Recirculating ball bearing guide											
Mounting position		Any											
Type of mounting for payload		Female thread											
		Centring sleeve				Dowel pin							
Working stroke <sup>3)</sup>	-	[mm]		25 ... 100		25 ... 125		50 ... 200		100 ... 600		200 ... 800	
	S	[mm]		-		-		-		130 ... 630		240 ... 840	
Max. feed force	-/H <sup>4)</sup>	[N]		36	19	69	72	116	116	150	148	264	192
F <sub>x,max</sub>	P <sup>5)</sup>	[N]		57	31	110	133	184	184	239	183	392	343
Max. driving torque	-/H <sup>4)</sup>	[Ncm]		0.6	0.6	1.1	6.9	3.7	11	14	24	42	61
M <sub>driving,max</sub>	P <sup>5)</sup>	[Ncm]		0.9	1.0	1.8	13	5.9	18	23	29	62	109
No-load torque	-/H	[Ncm]		0.4	0.4	0.5	0.5	1.5	1.5	7	7	10	10
M <sub>no-load</sub>	P	[Ncm]		0.8	0.8	1.2	1.2	4.0	4.0	15	15	17	17
Max. rotational speed <sup>6)</sup>		[rpm]		9600	9900	11400	7900	8400	5900	4700	4700	3100	3100
Max. speed <sup>6)</sup>	-/H	[m/s]		0.16	0.33	0.19	0.79	0.28	0.59	0.47	0.79	0.52	1.05
	P	[m/s]		0.16	0.33	0.19	1.10	0.28	0.83	0.66	1.10	0.74	1.48
Max. acceleration		[m/s <sup>2</sup> ]		10		10		10		20		20	
Homing		Inductive proximity sensor SIES-8M											

- 1) Variant code → page 8
- 2) Size 15 is only available in the accuracy classes H and P
- 3) Maximum travel distance → page 17  
In combination with an additional slide, the working stroke is reduced by the length of the additional slide and the distance between the two slides.
- 4) Loads are based on a specified service life of 5 x 10<sup>8</sup> rotations
- 5) Loads are based on a specified service life of 1.25 x 10<sup>8</sup> rotations
- 6) Reduced speeds with sizes 33 and 46 with long strokes → page 11

Operating and environmental conditions		
Ambient temperature	[°C]	0 ... +40
Relative humidity	[%]	0 ... 95 (non-condensing)

Weights [kg]											
Size		15		20		26		33		46	
		Code <sup>1)</sup>									
Basic weight with 0 mm stroke <sup>2)</sup>	-			0.16	0.38	0.78		1.38		5.17	
	S			-	-	-		1.28		4.77	
Additional weight per 100 mm stroke	-			0.12	0.27	0.42		0.63		1.27	
Moving mass	-			0.04	0.07	0.15		0.31		0.91	
	S			-	-	-		0.17		0.57	
Additional slide Z	-			0.04	0.07	0.15		0.31		0.91	
	S			-	-	-		0.17		0.57	

- 1) Variant code → page 8
- 2) Including slide, without additional slide

# Electric slides EGSK

Technical data

FESTO

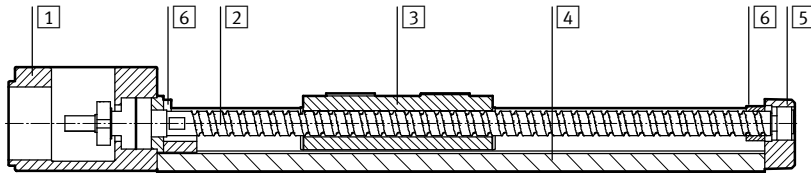
Accuracy data [μm]			15		20		26		33		46	
Size	Stroke	Code <sup>1)</sup>										
Repetition accuracy <sup>2)</sup>		–	–	–	±10	±10	±10	±10	±10	±10	±10	±10
		H	±4	±5	±5	±5	±5	±5	±5	±5	±5	±5
		P	±3	±3	±3	±3	±3	±3	±3	±3	±3	±3
Running parallelism	25 ... 340	H	20	25	25	25	25	25	25	25	25	35
	400 ... 540	H	–	–	–	–	–	–	–	–	–	35
	600 ... 640	H	–	–	–	–	–	–	–	–	–	40
	800 ... 840	H	–	–	–	–	–	–	–	–	–	50
	25 ... 340	P	10	10	10	10	10	10	10	10	10	15
	400 ... 540	P	–	–	–	–	–	–	–	–	–	15
	600 ... 640	P	–	–	–	–	–	–	–	–	–	20
Max. reversing backlash		–	–	–	20	20	20	20	20	20	20	20
		H	10	10	10	10	10	10	10	10	10	20
		P	2	3	3	3	3	3	3	3	3	3

1) Variant code → page 8

2) The repetition accuracy that can be achieved with a motor/axis system is also influenced by the angle resolution of the motor and the chosen control parameters. The specified repetition accuracy cannot, therefore, be achieved with all motors.

## Materials

Sectional view



Electric slide

1	Drive cover	Coated die-cast aluminium
2	Spindle	Steel
3	Slide	Steel
4	Profile	High-alloy steel
5	End cap	Coated die-cast aluminium
6	Buffer	Ethylene vinyl acetate copolymer
Note on materials		RoHS-compliant
		Contains PWIS (paint-wetting impairment substances)

## Mass moment of inertia

Size		15		20		26		33		46	
Spindle pitch		1	2	1	6	2	6	6	10	10	20
		Code <sup>1)</sup>									
$J_0$	[kg mm <sup>2</sup> ]	0.030	0.033	0.087	0.144	0.357	0.481	1.15	1.66	8.47	15.4
	S [kg mm <sup>2</sup> ]	–	–	–	–	–	–	0.795	1.07	6.04	10.4
$J_S$ per 100 mm stroke	[kg mm <sup>2</sup> /100 mm]	0.048		0.100		0.316		0.771		3.902	
$J_L$ per kg payload	[kg mm <sup>2</sup> /kg]	0.03	0.10	0.03	0.91	0.10	0.91	0.91	2.53	2.53	10.13
$J_W$ per additional slide	[kg mm <sup>2</sup> ]	0.001	0.004	0.002	0.058	0.016	0.14	0.28	0.79	2.31	9.22
	S [kg mm <sup>2</sup> ]	–	–	–	–	–	–	0.16	0.43	1.44	5.78

1) Variant code → page 8

The mass moment of inertia  $J_A$  of the entire axis is calculated as follows:

$$J_A = J_0 + J_W + J_S \times \text{working stroke} + J_L \times m_{\text{payload}}$$

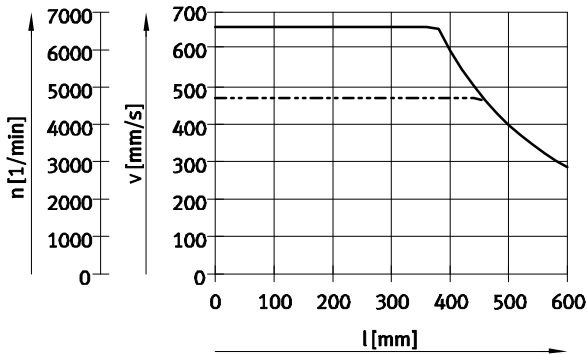
# Electric slides EGSK

Technical data

FESTO

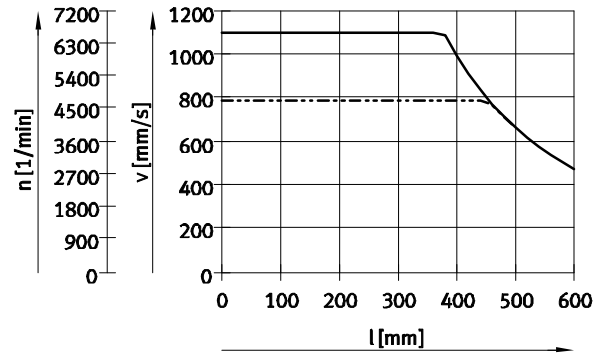
## Speed v, rotational speed n as a function of working stroke l

EGSK-33-...-6P



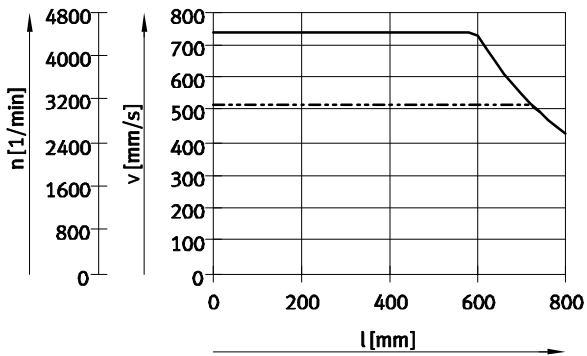
— EGSK-33-...-6P-P  
 - - - EGSK-33-...-6P, EGSK-33-...-6P-H

EGSK-33-...-10P



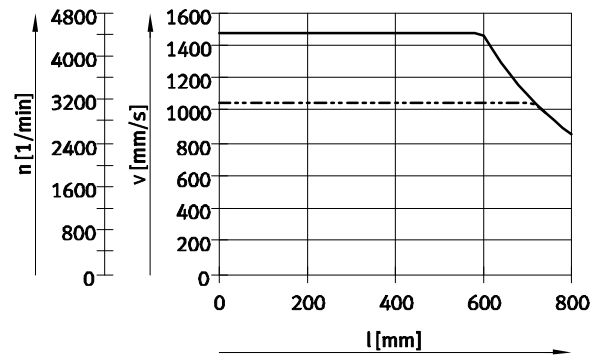
— EGSK-33-...-10P-P  
 - - - EGSK-33-...-10P, EGSK-33-...-10P-H

EGSK-46-...-10P



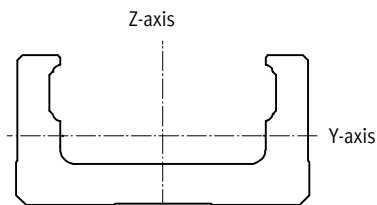
— EGSK-46-...-10P-P  
 - - - EGSK-46-...-10P, EGSK-46-...-10P-H

EGSK-46-...-20P



— EGSK-46-...-20P-P  
 - - - EGSK-46-...-20P, EGSK-46-...-20P-H

## Second moment of area



Size		15	20	26	33	46
ly	[mm <sup>4</sup> ]	908	6100	17000	62000	240000
lz	[mm <sup>4</sup> ]	14200	62000	150000	380000	1500000

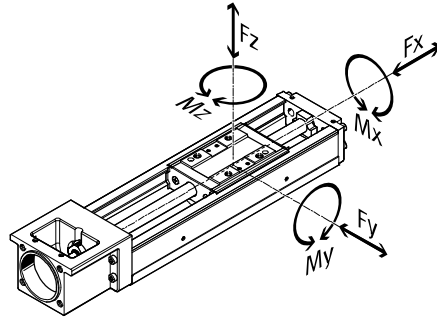
# Electric slides EGSK

Technical data



## Characteristic load values

The indicated forces and torques refer to the centre axis of the spindle. The coordinate zero point is the point where the centre of the guide and the longitudinal centre of the slide intersect.



Note  
Engineering software  
PositioningDrives  
www.festo.com

## Permissible dynamic forces and torques<sup>1)</sup>

Size			15 <sup>3)</sup>		20		26		33		46		
Spindle pitch			1	2	1	6	2	6	6	10	10	20	
	Code <sup>2)</sup>												
F <sub>y</sub> max., F <sub>z</sub> max.	-/H <sup>4)</sup>	-	[N]	747	593	1389	764	2223	1541	2469	2083	4919	3904
	P <sup>5)</sup>	-	[N]	1185	941	2204	1213	3528	2446	3920	3306	7809	6198
	-/H <sup>4)</sup>	S	[N]	-	-	-	-	-	-	1043	880	2514	1995
	P <sup>5)</sup>	S	[N]	-	-	-	-	-	-	1656	1396	3990	3167
M <sub>x</sub> max.	-/H <sup>4)</sup>	-	[Nm]	8.2	6.5	18.1	9.9	37.8	26.2	50.1	42.2	145	115
	P <sup>5)</sup>	-	[Nm]	13	10.3	28.7	15.8	60	41.6	79.5	67.1	231	183
	-/H <sup>4)</sup>	S	[Nm]	-	-	-	-	-	-	21.2	17.8	74.4	59
	P <sup>5)</sup>	S	[Nm]	-	-	-	-	-	-	33.6	28.3	118	93.7
M <sub>y</sub> max., M <sub>z</sub> max.	-/H <sup>4)</sup>	-	[Nm]	2.3	1.9	5.8	3.2	12.9	8.9	16.4	13.8	48.7	38.7
	P <sup>5)</sup>	-	[Nm]	3.7	2.9	9.2	5.1	20.4	14.1	26	21.9	77.3	61.4
	-/H <sup>4)</sup>	S	[Nm]	-	-	-	-	-	-	3.8	3.2	13.6	10.8
	P <sup>5)</sup>	S	[Nm]	-	-	-	-	-	-	6	5	21.6	17.1

- 1) Calculated with a speed-dependent load factor  $f_w$  of 1.2
- 2) Variant code → page 8
- 3) Size 15 is only available in the accuracy classes H and P
- 4) Loads are based on a specified service life of  $5 \times 10^8$  rotations and load factor  $f_w=1.2$
- 5) Loads are based on a specified service life of  $1.25 \times 10^9$  rotations and load factor  $f_w=1.2$

## Basic load ratings

Size			15 <sup>2)</sup>		20		26		33		46	
Spindle pitch			1	2	1	6	2	6	6	10	10	20
	Code <sup>1)</sup>											
Ball screw drive												
Static C <sub>0</sub> BSD	-/H	[N]	660	410	1170	1450	4020	3510	4900	2840	6760	7150
	P	[N]	660	410	1170	1600	4020	3900	2740	1570	3720	5290
Dynamic C <sub>dyn</sub> BSD	-/H <sup>3)</sup>	[N]	340	230	660	860	2350	1950	2840	1760	3140	3040
	P <sup>3)</sup>	[N]	340	230	660	1060	2350	2390	2250	1370	2940	3430
Fixed bearing												
Static C <sub>0</sub> bearing		[N]	290		1240		1760		2590		3240	
Dynamic C <sub>dyn</sub> bearing <sup>3)</sup>		[N]	590		1000		1380		1790		6660	

- 1) Variant code → page 8
- 2) Size 15 is only available in the accuracy classes H and P
- 3) Dynamic basic load ratings are based on a basic service life of  $10^6$  rotations

# Electric slides EGSK

Technical data

Basic load ratings											
Size		15 <sup>2)</sup>		20		26		33		46	
Spindle pitch		1	2	1	6	2	6	6	10	10	20
Code <sup>1)</sup>											
Linear guide											
Static C <sub>0,guide</sub>	-	[N]	3450	6300	12150	20200	45500				
	S	[N]	-	-	-	10000	22700				
Dynamic C <sub>dyn,guide</sub> <sup>3)</sup>	-	[N]	1532	2849	5746	9207	21747				
	S	[N]	-	-	-	3889	11112				
Torque equivalence factors											
k <sub>x</sub>	-	[1/m]	90.9	76.9	58.8	49.3	33.8				
	S	[1/m]	-	-	-	49.3	33.8				
k <sub>y</sub> , k <sub>z</sub>	-	[1/m]	319.9	238.7	172.9	151	101				
	S	[1/m]	-	-	-	277.1	185				

- 1) Variant code → page 8
- 2) Size 15 is only available in the accuracy classes H and P
- 3) Dynamic basic load ratings are based on a basic service life of 100 km

## Speed-dependent load factor f<sub>w</sub>

- f<sub>w</sub> = 1.0 ... 1.2 (v ≤ 0.25 m/s)
- f<sub>w</sub> = 1.2 ... 1.5 (0.25 m/s ≤ v ≤ 1.0 m/s)
- f<sub>w</sub> = 1.5 ... 2.0 (1.0 m/s ≤ v ≤ 2.0 m/s)
- f<sub>w</sub> = 2.0 ... 3.5 (v ≥ 2.0 m/s)

## Calculation of the maximum feed force F<sub>x</sub>

$$F_{x,max} = \frac{1}{f_w} \times \frac{\text{Min}[C_{dyn,KGT}; C_{dyn,bearing}]}{\sqrt[3]{\frac{l_{ref,rot}}{10^6}}}$$

## Calculation of the maximum forces F<sub>y/z</sub> and torques M<sub>x/y/z</sub>

$$F_{y/z,max} = \frac{1}{f_w} \times \frac{C_{dyn,guide}}{\sqrt[3]{\frac{l_{ref,km}}{100km}}}$$

$$M_{x/y/z,max} = \frac{1}{k_{x/y/z}} \times \frac{1}{f_w} \times \frac{C_{dyn,guide}}{\sqrt[3]{\frac{l_{ref,km}}{100km}}}$$

# Electric slides EGSK

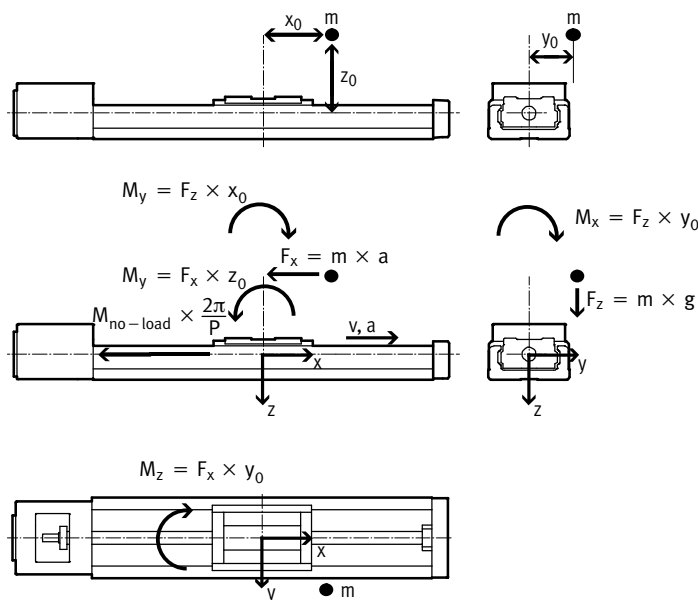
Technical data



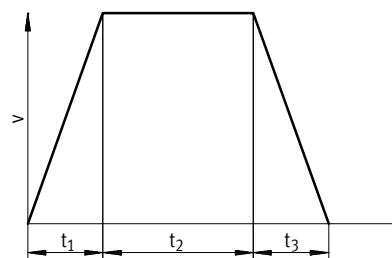
Calculating the service life											
Size	15		20		26		33		46		
Spindle pitch P	1	2	1	6	2	6	6	10	10	20	
	Code <sup>1)</sup>										
Reference service life	-/H	5 x 10 <sup>8</sup>									
in rotations, L <sub>ref,rot</sub>	P	1.25 x 10 <sup>8</sup>									
Reference service life	-/H [km]	500	1000	500	3000	1000	3000	3000	5000	5000	10000
in kilometres, L <sub>ref,km</sub>	P [km]	125	250	125	750	250	750	750	1250	1250	2500

1) Variant code → page 8

## 1 Representation of the loads



## 2 Determination of the loads over the travel cycle



$$q_1 = \frac{t_1}{t_{tot}} \quad q_2 = \frac{t_2}{t_{tot}} \quad q_3 = \frac{t_3}{t_{tot}}$$

$$t_{tot} = t_1 + t_2 + t_3$$

v	Speed
t <sub>1</sub>	Acceleration time
t <sub>2</sub>	Constant travel time
t <sub>3</sub>	Deceleration time
q <sub>1/2/3</sub>	Relative time of the cycle phases
t <sub>tot</sub>	Cycle time

## Ball screw drive

For t<sub>1</sub>:  $F_{x1} = - (m \times a) - (M_{no-load} \times \frac{2\pi}{P})$

For t<sub>2</sub>:  $F_{x2} = - (M_{no-load} \times \frac{2\pi}{P})$

For t<sub>3</sub>:  $F_{x3} = m \times a - (M_{no-load} \times \frac{2\pi}{P})$

$$F_{x,dyn} = \sqrt[3]{q_1 \times |F_{x1}|^3 + q_2 \times |F_{x2}|^3 + q_3 \times |F_{x3}|^3}$$

F <sub>x1/2/3</sub>	Calculated force load per cycle phase
F <sub>x,dyn</sub>	Calculated average force load
m	Payload (centre of gravity)
a	Acceleration
M <sub>no-load</sub>	No-load torque → page 9
P	Spindle pitch → page 9
q <sub>1/2/3</sub>	Relative time of the cycle phases

# Electric slides EGSK

Technical data

## 2 Determination of the loads over the travel cycle

### Linear guide

For  $t_1$ :  $a \rightarrow, v \rightarrow$

$$F_{y1} = 0$$

$$F_{z1} = m \times g$$

$$M_{x1} = F_z \times y_0 = m \times g \times y_0$$

$$M_{y1} = -F_z \times x_0 + F_x \times z_0 = -m \times g \times x_0 + m \times a \times z_0$$

$$M_{z1} = F_x \times y_0 = m \times a \times y_0$$

For  $t_2$ :  $a = 0, v \rightarrow$

$$F_{y2} = 0$$

$$F_{z2} = m \times g$$

$$M_{x2} = F_z \times y_0 = m \times g \times y_0$$

$$M_{y2} = -F_z \times x_0 = -m \times g \times x_0$$

$$M_{z2} = 0$$

For  $t_3$ :  $a \leftarrow, v \rightarrow$

$$F_{y3} = 0$$

$$F_{z3} = m \times g$$

$$M_{x3} = F_z \times y_0 = m \times g \times y_0$$

$$M_{y3} = -F_z \times x_0 - F_x \times z_0 = -m \times g \times x_0 - m \times a \times z_0$$

$$M_{z3} = -F_x \times y_0 = -m \times a \times y_0$$

$$F_{y,dyn} = \sqrt[3]{q_1 \times |F_{y1}|^3 + q_2 \times |F_{y2}|^3 + q_3 \times |F_{y3}|^3}$$

$$F_{z,dyn} = \sqrt[3]{q_1 \times |F_{z1}|^3 + q_2 \times |F_{z2}|^3 + q_3 \times |F_{z3}|^3}$$

$$M_{x,dyn} = \sqrt[3]{q_1 \times |M_{x1}|^3 + q_2 \times |M_{x2}|^3 + q_3 \times |M_{x3}|^3}$$

$$M_{y,dyn} = \sqrt[3]{q_1 \times |M_{y1}|^3 + q_2 \times |M_{y2}|^3 + q_3 \times |M_{y3}|^3}$$

$$M_{z,dyn} = \sqrt[3]{q_1 \times |M_{z1}|^3 + q_2 \times |M_{z2}|^3 + q_3 \times |M_{z3}|^3}$$

## 3 Total load

### Ball screw drive

$$\frac{|F_{x,dyn}|}{F_{x,max}} \leq f_v$$

$F_{x,dyn}$	Calculated average force load
$F_{x,max}$	Max. permissible force load → page 9
$f_v$	Load comparison factor → page 16

### Linear guide

$$\frac{|F_{y,dyn}|}{F_{y,max}} + \frac{|F_{z,dyn}|}{F_{z,max}} + \frac{|M_{x,dyn}|}{M_{x,max}} + \frac{|M_{y,dyn}|}{M_{y,max}} + \frac{|M_{z,dyn}|}{M_{z,max}} \leq f_v$$

$F_{y/z,dyn}$	Calculated average force load
$F_{y/z,max}$	Max. permissible force load → page 12
$M_{x/y/z,dyn}$	Calculated average torque load
$M_{x/y/z,max}$	Max. permissible torque load → page 12
$f_v$	Load comparison factor → page 16

# Electric slides EGSK

Technical data



## 4 Determination of the load comparison factor $f_v$

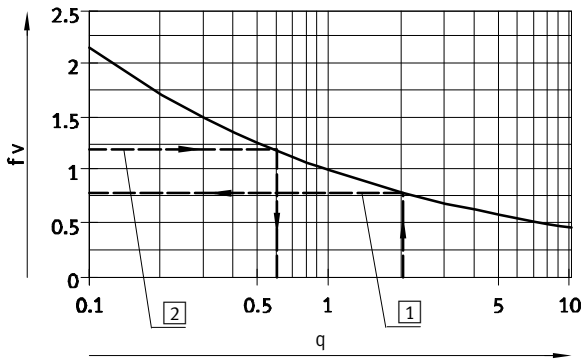
$$f_v = \frac{1}{\sqrt[3]{q}} \quad \text{with} \quad q = \frac{L_{\text{calc,km}}}{L_{\text{ref,km}}} = \frac{L_{\text{calc,rot}}}{L_{\text{ref,rot}}}$$

for  $q = 1$ :

Calculated service life (here desired service life)  $L_{\text{calc,km}} = 1 \times$  reference service life  $L_{\text{ref,km}}$  gives  $f_v = 1$

for  $q \neq 1$ :

Calculated service life (here desired service life)  $L_{\text{calc,km}} = q \times$  reference service life  $L_{\text{ref,km}}$  read off (→ graph) or calculate  $f_v$



1 → Example 1

2 → Example 2

$f_v$	Load comparison factor
$q$	Quotient of desired service life divided by reference service life
$L_{\text{calc, km}}$	Calculated service life in km
$L_{\text{ref, km}}$	Reference service life in km → page 14
$L_{\text{calc, rot}}$	Calculated service life in rotations
$L_{\text{ref, rot}}$	Reference service life in rotations → page 14

## 5 Calculation examples

Example 1:

EGSK-26-...-2P-H-...

$L_{\text{ref,km}} = 1000 \text{ km}$

$L_{\text{calc,km}} = 2000 \text{ km}$

$$q = \frac{2000\text{km}}{1000\text{km}} = 2.0$$

$$f_v = \frac{1}{\sqrt[3]{q}} = 0.79$$

Result:

A desired service life of 200% of the reference service life means that the permissible total load must be 21% lower.

Example 2:

If the total load calculation gives a load comparison factor  $f_v$  of 1.2, the mathematical service life is only approx. 60% ( $x = 0.6$  → graph) of the reference service life.

$$q = \frac{1}{f_v^3} = 0.58$$

## 6 Static sizing

Ball screw drive

$$F_{x,\text{stat}} = \text{Max}[F_{x1}, F_{x2}, F_{x3}] \leq \frac{C_{0,\text{KGT}}}{f_s}$$

$F_{x,\text{stat}}$  Maximum value of the calculated force load per cycle phase

$C_{0,\text{BSD}}$  Static basic load rating of ball screw drive → page 12

$F_{x1/2/3}$  Calculated force load per cycle phase

$f_s$  Safety factor against static overload  
 $f_s = 1.0 \dots 3.0$

### Linear guide

$$F_{y,\text{stat}} = \text{Max}[F_{y1}, F_{y2}, F_{y3}] \leq \frac{C_{0,\text{guide}}}{f_s}$$

$F_{y/z,\text{stat}}$  Maximum value of the calculated force load per cycle phase

$M_{x1/2/3},$   
 $M_{y1/2/3},$   
 $M_{z1/2/3}$  Calculated torque load per cycle phase

$$F_{z,\text{stat}} = \text{Max}[F_{z1}, F_{z2}, F_{z3}] \leq \frac{C_{0,\text{guide}}}{f_s}$$

$M_{x/y/z,\text{stat}}$  Maximum value of the calculated torque load per cycle phase

$C_{0,\text{guide}}$  Static basic load rating of ball screw drive → page 13

$$M_{x,\text{stat}} = \text{Max}[M_{x1}, M_{x2}, M_{x3}] \leq \frac{1}{k_x} \times \frac{C_{0,\text{guide}}}{f_s}$$

$F_{y1/2/3},$   
 $F_{z1/2/3}$  Calculated force load per cycle phase

$k_{x/y/z}$  Torque equivalence factors → page 13

$$M_{y,\text{stat}} = \text{Max}[M_{y1}, M_{y2}, M_{y3}] \leq \frac{1}{k_y} \times \frac{C_{0,\text{guide}}}{f_s}$$

$$M_{z,\text{stat}} = \text{Max}[M_{z1}, M_{z2}, M_{z3}] \leq \frac{1}{k_z} \times \frac{C_{0,\text{guide}}}{f_s}$$

$f_s$  Safety factor against static overload  
 $f_s = 1.0 \dots 3.0$



# Electric slides EGSK

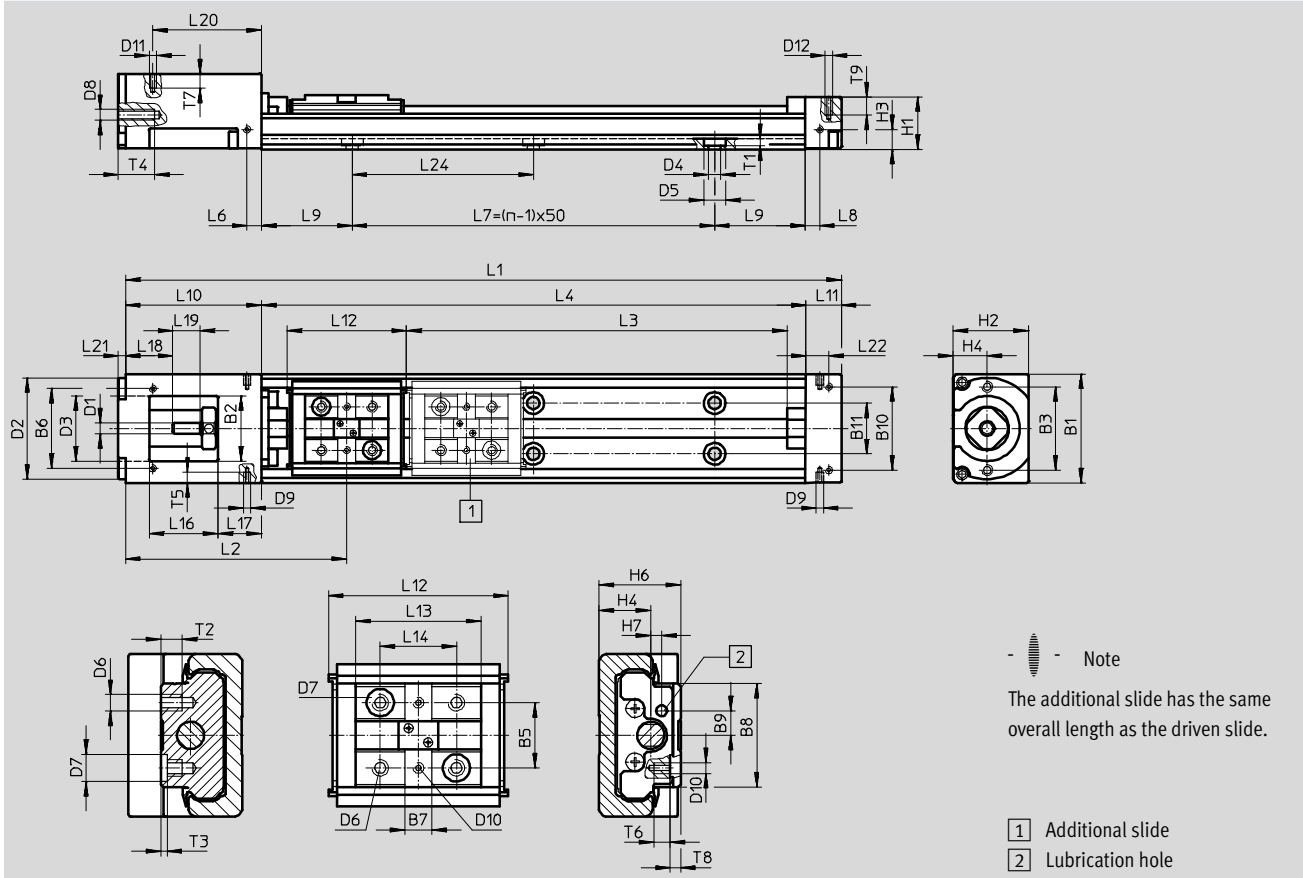
Technical data



## Dimensions

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

EGSK-15



Size	Stroke	L1	L3 +4	L4	L7	L9	n
15	25	122.5	30	75	50	12.5	2
	50	147.5	55	100	50	25	2
	75	172.5	80	125	100	12.5	3
	100	197.5	105	150	100	25	3

Size	B1	B2	B3	B5	B6	B7	B8	B9	B10	B11	D1	D2	D3	D4	D5	D6	D7	D8
			±0.1	±0.02	±0.1				±0.1		∅ h6	∅ g7	∅	∅	∅		∅ H7	
15	30	18	23	12	22	5	19	4.5	23	14	3	28	18	3.4	6	M3	5	M3

Size	D9	D10	D11	D12	H1	H2	H3	H4	H6	H7	L2	L6	L8	L10	L11	L12	L13	L14	
																			±0.02
15	M2	M2	M2	M2	14.5	20.9	5.5	9.5	15	2	60.3	4	4	37.5	10	33	23	14	

Size	L16	L17	L18	L19	L20	L21	L22	L24	T1	T2	T3	T4	T5	T6	T7	T8	T9
					±0.1		±0.1										
15	19	12	13	7.5	30	2	6.5	50	2	4	1.2	10	3	3	4	1.9	5

# Electric slides EGSK

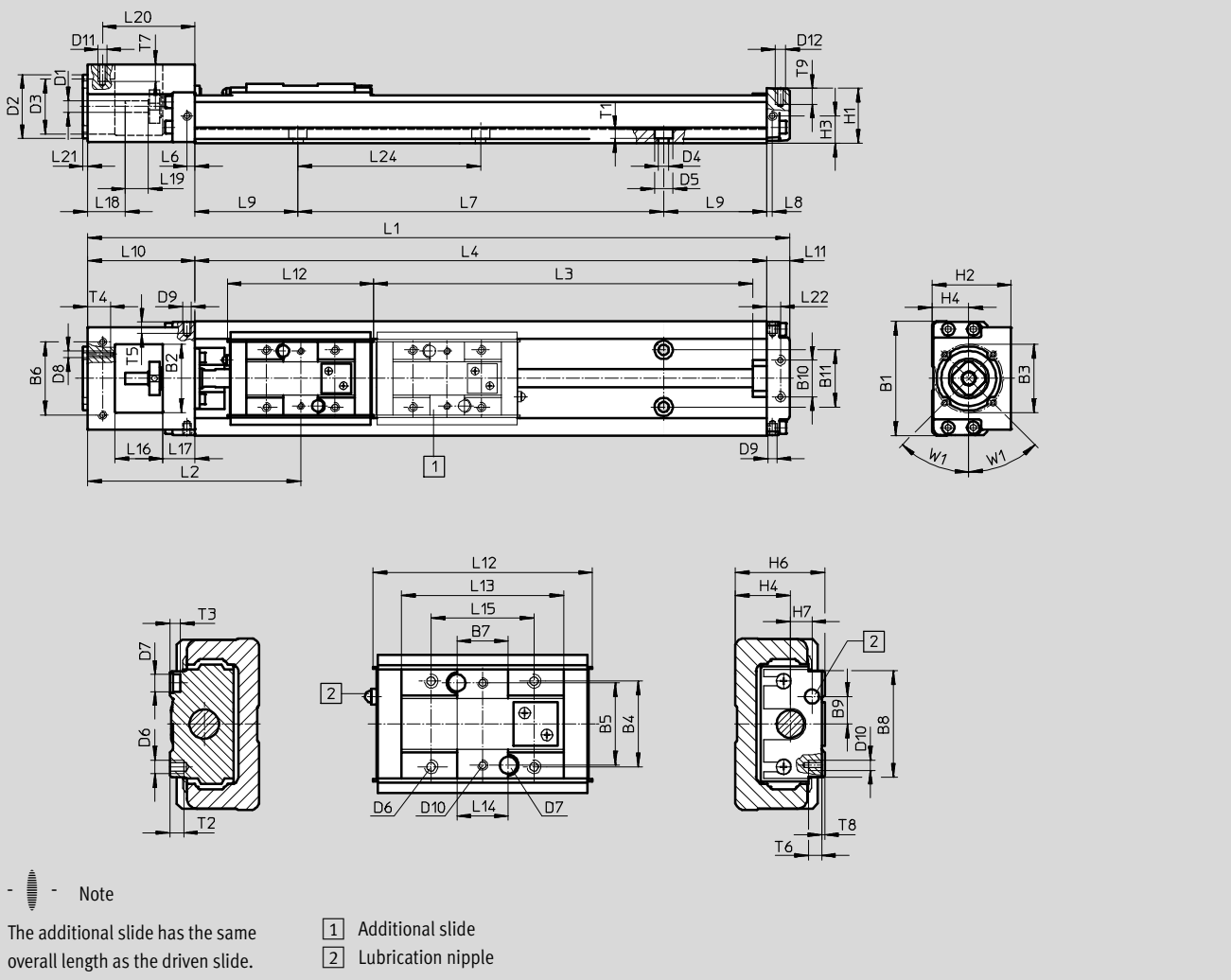
Technical data



## Dimensions

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

EGSK-20/26



Size	Stroke	L1	L3 +4	L4	L7= (n-1)x60	L9	n	Size	Stroke	L1	L3 +4	L4	L7= (n-1)x80	L9	n
20	25	152	40	100	60	20	2	26	50	207	67	150	80	35	2
	75	202	90	150	120	15	3		100	257	117	200	160	20	3
	125	252	140	200	120	40	3		150	307	167	250	160	45	3
									200	357	217	300	240	30	4

# Electric slides EGSK

Technical data

Size	B1	B2	B3 ∅	B4	B5 ±0.02	B6 ±0.1	B7	B8	B9	B10 ±0.1	B11	D1 ∅ h7	D2 ∅ g7	D3 ∅
20	40	22	30	18	18	29	10	23	5	18	18	4	28	22
26	50	30	30	25	24	32	15	31	8	16	25	5	28	24

Size	D4 ∅	D5 ∅	D6	D7 ∅ H7	D8	D9	D10	D11	D12	H1	H2	H3	H4	H6
20	3.4	6.5	M3	2	M3	M2.6	M2	M2.5	M2.5	19	28	10	13	20
26	4.5	8	M4	5	M3	M2.6	M3	M2.5	M3	24	34.5	12	16	26

Size	H7	L2	L6	L8	L10	L11	L12	L13	L14 <sup>1)</sup> ±0.02	L15	L16	L17	L18	L19
20	3.4	72.5	3.5	2.5	42	10	46	33.2	10	20	18	12	16	8
26	6	91	3.5	2.5	47	10	64	47.4	15	30	21	14	16.5	10

Size	L20 ±0.1	L21	L22 ±0.1	L24	T1	T2	T3	T4	T5	T6	T7	T8	T9	W1
20	34.5	2	6.5	60	3	4.5	3	10	4	5	5	0.9	5	45°
26	40.5	2	6	80	4	6.5	3	10	4	6	5	0.9	6	45°

1) Distance between the locating holes

# Electric slides EGSK

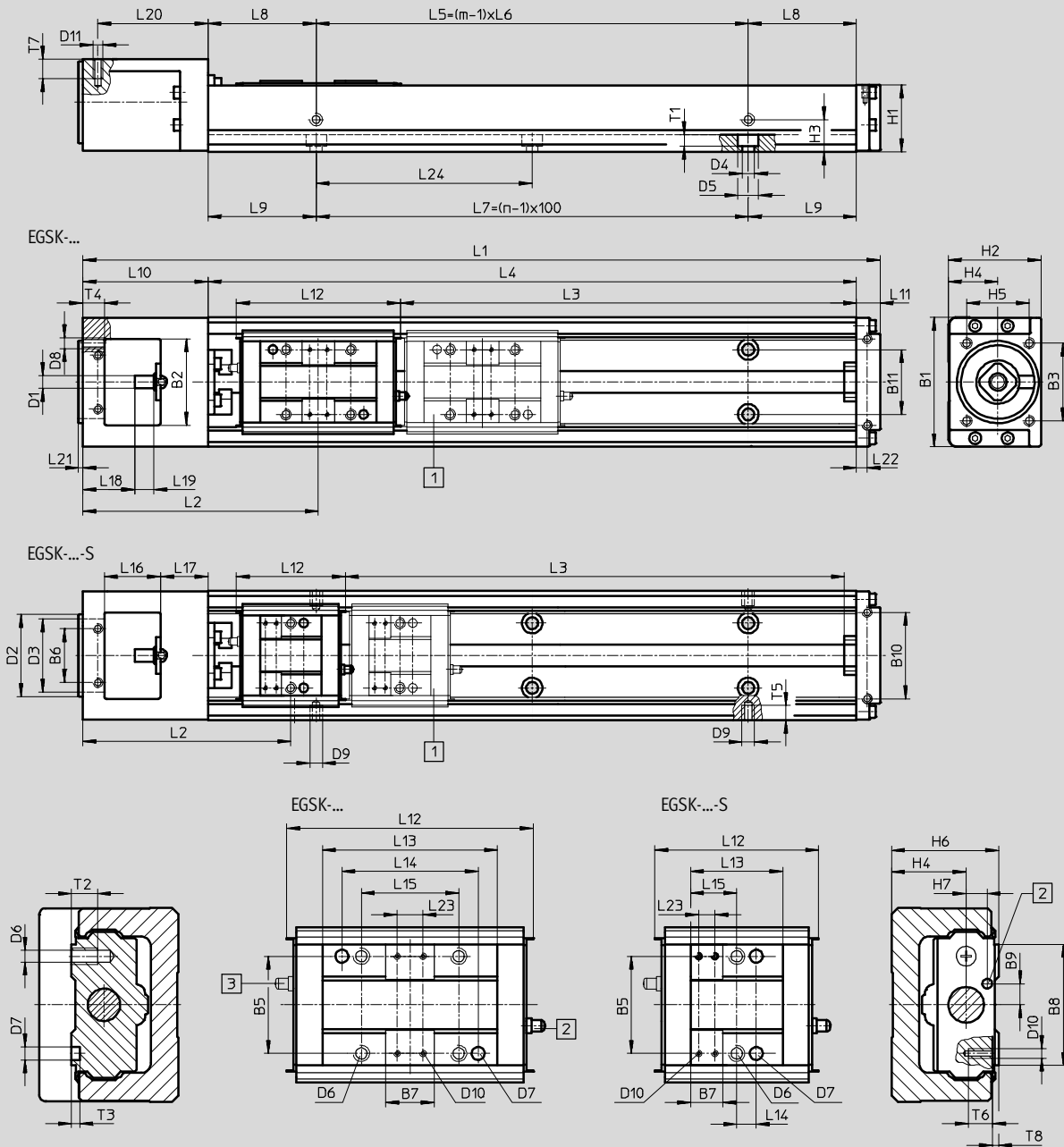
Technical data

FESTO

## Dimensions

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

EGSK-33/46



Note

The additional slide has the same overall length as the driven slide.

- 1 Additional slide
- 2 Lubrication nipple

- 3 The lubrication nipple is in the direction of the drive cover on the version with additional slide (EGSK-...-Z).

# Electric slides EGSK

Technical data



Size	Stroke	L1	L3 +4		L4	L5	L6	L7	L8	m	n
				S							
33	100	269	110	135	200	100	100	100	50	2	2
	200	369	210	235	300	200	200	200	50	2	3
	300	469	310	335	400	200	200	300	100	2	4
	400	569	410	435	500	400	200	400	50	3	5
	500	669	510	535	600	400	200	500	100	3	6
	600	769	610	635	700	600	200	600	50	4	7

Size	Stroke	L1	L3 +4		L4	L5	L6	L7	L8	m	n
				S							
46	200	425.5	206	244	340	200	200	200	70	2	3
	300	525.5	306	344	440	400	200	300	20	3	4
	400	625.5	406	444	540	400	200	400	70	3	5
	500	725.5	506	544	640	600	200	500	20	4	6
	600	825.5	606	644	740	600	200	600	70	4	7
	800	1025.5	806	844	940	800	200	800	70	5	9

Size	B1	B2	B3 ±0.1	B5 ±0.04	B6 ±0.1	B7	B8	B9	B10 ±0.1	B11	D1 ∅ h7	D2 ∅ g7	D3 ∅	D4 ∅	D5 ∅
33	60	40	36	30	25	15	37.4	6.5	40	30	6	38	34	5.5	9.5
46	86	48	36	46	42	15	54.4	10	58	46	8	38	34	6.6	11

Size	D6	D7 ∅ H7	D8	D9	D10	D11	H1	H2	H3	H4	H5 ±0.1	H6	H7	L2	
															S
33	M5	4	M5	M2.6	M2	M3	31	43	15	23	29	33	6.5	105	92.3
46	M6	5	M5	M2.6	M2	M4	43.5	60	28	32	29	46	9	142.5	123.8

Size	L9	L10	L11	L12		L13		L14		L15		L16	L17	L18	L19
					S		S	±0.04	±0.1		S				
33	50	58	11	76	50.5	54	28.5	42	6	30	14.25	26	22	24	9
46	70	72.5	13	110	72.5	81	43.5	28	11	46	21.75	33.5	25	21.5	18

Size	L20 ±0.1	L21	L22 ±0.1	L23		L24	T1	T2	T3	T4	T5	T6	T7	T8
					S									
33	51	2	5	8	5	100	5.4	8	2.5	10	4	5	6	1
46	65.5	2	3.5	8	8	100	6.5	12	2.5	10	4	5	8	1

# Electric slides EGSK

Technical data

Ordering data – Electric slide with standard slide					
Size	Stroke [mm]	Part no.	Type	Part no.	Type
		Spindle pitch 1 mm		Spindle pitch 6 mm	
20	25	562758	EGSK-20-25-1P	562761	EGSK-20-25-6P
	75	562759	EGSK-20-75-1P	562762	EGSK-20-75-6P
	125	562760	EGSK-20-125-1P	562763	EGSK-20-125-6P

Size	Stroke [mm]	Part no.	Type	Part no.	Type
		Spindle pitch 2 mm		Spindle pitch 6 mm	
26	50	562764	EGSK-26-50-2P	562768	EGSK-26-50-6P
	100	562765	EGSK-26-100-2P	562769	EGSK-26-100-6P
	150	562766	EGSK-26-150-2P	562770	EGSK-26-150-6P
	200	562767	EGSK-26-200-2P	562771	EGSK-26-200-6P

Size	Stroke [mm]	Part no.	Type	Part no.	Type
		Spindle pitch 6 mm		Spindle pitch 10 mm	
33	100	562772	EGSK-33-100-6P	562778	EGSK-33-100-10P
	200	562773	EGSK-33-200-6P	562779	EGSK-33-200-10P
	300	562774	EGSK-33-300-6P	562780	EGSK-33-300-10P
	400	562775	EGSK-33-400-6P	562781	EGSK-33-400-10P
	500	562776	EGSK-33-500-6P	562782	EGSK-33-500-10P
	600	562777	EGSK-33-600-6P	562783	EGSK-33-600-10P

Size	Stroke [mm]	Part no.	Type	Part no.	Type
		Spindle pitch 10 mm		Spindle pitch 20 mm	
46	200	562784	EGSK-46-200-10P	562790	EGSK-46-200-20P
	300	562785	EGSK-46-300-10P	562791	EGSK-46-300-20P
	400	562786	EGSK-46-400-10P	562792	EGSK-46-400-20P
	500	562787	EGSK-46-500-10P	562793	EGSK-46-500-20P
	600	562788	EGSK-46-600-10P	562794	EGSK-46-600-20P
	800	562789	EGSK-46-800-10P	562795	EGSK-46-800-20P

# Electric slides EGSK

Ordering data – Modular product system



Ordering table									
Size	15	20	26	33	46	Condi- tions	Code	Enter code	
<b>M</b> Module no.	<b>562749</b>	<b>562750</b>	<b>562751</b>	<b>562752</b>	<b>562753</b>				
Drive function	Electric slide drive							<b>EGSK</b>	EGSK
Size	15	20	26	33	46		-...	-...	
Standard stroke for standard slide [mm]	25	-		33	46		-25	-...	
	50	-	50	-			-50	-...	
	75	-					-75	-...	
	100	-	100	-			-100	-...	
	-	125	-				-125	-...	
	-		150	-			-150	-...	
	-		200	-			-200	-...	
	-			300	-		-300	-...	
	-			400	-		-400	-...	
	-			500	-		-500	-...	
	-			600	-		-600	-...	
	-				800	-	-800	-...	
	Standard stroke for short slide [mm]	-			130	-		-130	-...
-				230	-		-230	-...	
-					240	-	-240	-...	
-				330	-		-330	-...	
-					340	-	-340	-...	
-				430	-		-430	-...	
-					440	-	-440	-...	
-				530	-		-530	-...	
-					540	-	-540	-...	
-				630	-		-630	-...	
Spindle pitch [mm]	1	-					-1P	-...	
	2	-	2	-			-2P	-...	
	-	6	-				-6P	-...	
	-	-	-	10	-		-10P	-...	
	-				20	-	-20P	-...	
<b>O</b> Accuracy	-	Standard accuracy						-	-...
		Higher accuracy						-H	-...
		Precision accuracy					<b>1</b>	-P	-...
Slide design	Standard slide						-	-...	
	-			Short slide			-S	-...	
Additional slide	No additional slide						-	-...	
	Additional slide (additional slide Z in combination with slide design S also results in a short slide)					<b>2</b>	-Z	-...	

- 1** > With size 33 not in combination with stroke for standard slide 600 and stroke for short slide 630  
With size 46 not in combination with stroke for standard slide 800 and stroke for short slide 840
- 2** **Z** With size 15 not in combination with stroke for standard slide 25 and stroke for standard slide 50  
With size 20 not in combination with stroke for standard slide 25  
With size 26 not in combination with stroke for standard slide 50  
With size 33 not in combination with stroke for standard slide 100

**M** Mandatory data

**O** Options

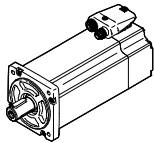
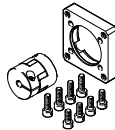
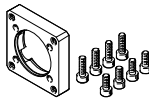
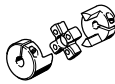
Transfer order code

**EGSK** -  -  -  -  -  -  -  -

# Electric slides EGSK

Accessories

FESTO

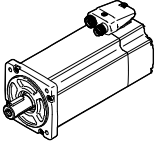

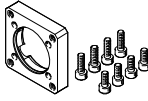
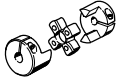
Permissible axis/motor combinations with axial kit – Without gear unit				Technical data → Internet: eamm-a
Motor	Axial kit	Axial kit comprises:		
		Motor flange	Coupling	
				
Type	Part no. Type	Part no. Type	Part no. Type	
<b>EGSK-15</b>				
With servo motor				
EMME-AS-40-...	1982886 EAMM-A-P3-28D-40P	1982014 EAMF-A-28D-40P	2310368 EAMC-16-20-3-8	
With stepper motor				
EMMS-ST-28-...	1703478 EAMM-A-P3-28D-28A	1087613 EAMF-A-28D-28A	562672 EAMC-16-20-3-5	
<b>EGSK-20</b>				
With servo motor				
EMME-AS-40-...	1983071 EAMM-A-P4-28B-40P	1976704 EAMF-A-28B-40P	562675 EAMC-16-20-4-8	
EMMS-AS-40-...	562637 EAMM-A-P4-28B-40A	552163 EAMF-A-28B-40A	562673 EAMC-16-20-4-6	
With stepper motor				
EMMS-ST-28-...	1731466 EAMM-A-P4-28B-28A	1704476 EAMF-A-28B-28A	562674 EAMC-16-20-4-5	
EMMS-ST-42-...	562636 EAMM-A-P4-28B-42A	552164 EAMF-A-28B-42A	562674 EAMC-16-20-4-5	
<b>EGSK-26</b>				
With servo motor				
EMME-AS-40-...	1983122 EAMM-A-P5-28B-40P	1976704 EAMF-A-28B-40P	562677 EAMC-16-20-5-8	
EMMS-AS-40-...	562641 EAMM-A-P5-28B-40A	552163 EAMF-A-28B-40A	543419 EAMC-16-20-5-6	
With stepper motor				
EMMS-ST-28-...	1731474 EAMM-A-P5-28B-28A	1704476 EAMF-A-28B-28A	562676 EAMC-16-20-5-5	
EMMS-ST-42-...	562640 EAMM-A-P5-28B-42A	552164 EAMF-A-28B-42A	562676 EAMC-16-20-5-5	
<b>EGSK-33</b>				
With servo motor				
EMME-AS-40-...	1983450 EAMM-A-P6-38A-40P	1984478 EAMF-A-38A-40P	533708 EAMC-30-32-6-8	
EMMS-AS-40-...	562646 EAMM-A-P6-38A-40A	562667 EAMF-A-38A-40A	558312 EAMC-30-32-6-6	
EMMS-AS-55-...	562647 EAMM-A-P6-38A-55A	558176 EAMF-A-38A-55A	551003 EAMC-30-32-6-9	
EMME-AS-60-...	2264375 EAMM-A-P6-38A-60P	1987412 EAMF-A-38A-60P	1233256 EAMC-30-32-6-14	
With stepper motor				
EMMS-ST-42-...	562644 EAMM-A-P6-38A-42A	562668 EAMF-A-38A-42A	561333 EAMC-30-32-5-6	
EMMS-ST-57-...	562645 EAMM-A-P6-38A-57A	560692 EAMF-A-38A-57A	551002 EAMC-30-32-6-6.35	
With integrated drive				
EMCA-EC-67-...	2297641 EAMM-A-P6-38A-67A	1490100 EAMF-A-38A-67A	551003 EAMC-30-32-6-9	



# Electric slides EGSK

Accessories

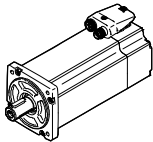
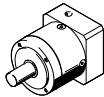

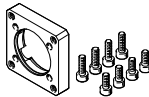
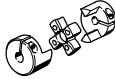
FESTO

Permissible axis/motor combinations with axial kit – Without gear unit			Technical data → Internet: eamm-a
Motor	Axial kit	Axial kit comprises:	
		Motor flange	Coupling
			
Type	Part no. Type	Part no. Type	Part no. Type
<b>EGSK-46</b>			
With servo motor			
<b>EMME-AS-40-...</b>	<b>1986292</b> EAMM-A-P8-38A-40P	<b>1984478</b> EAMF-A-38A-40P	<b>543422</b> EAMC-30-32-8-8
<b>EMMS-AS-40-...</b>	<b>562652</b> EAMM-A-P8-38A-40A	<b>562667</b> EAMF-A-38A-40A	<b>533708</b> EAMC-30-32-6-8
<b>EMMS-AS-55-...</b>	<b>562653</b> EAMM-A-P8-38A-55A	<b>558176</b> EAMF-A-38A-55A	<b>543423</b> EAMC-30-32-8-9
<b>EMME-AS-60-...</b>	<b>1987308</b> EAMM-A-P8-38A-60P	<b>1987412</b> EAMF-A-38A-60P	<b>562682</b> EAMC-30-32-8-14
<b>EMMS-AS-70-...</b>	<b>564996</b> EAMM-A-P8-38A-70A	<b>558018</b> EAMF-A-38A-70A	<b>551004</b> EAMC-30-32-8-11
With stepper motor			
<b>EMMS-ST-42-...</b>	<b>562650</b> EAMM-A-P8-38A-42A	<b>562668</b> EAMF-A-38A-42A	<b>562678</b> EAMC-30-32-5-8
<b>EMMS-ST-57-...</b>	<b>562651</b> EAMM-A-P8-38A-57A	<b>560692</b> EAMF-A-38A-57A	<b>543421</b> EAMC-30-32-6.35-8
<b>EMMS-ST-87-...</b>	<b>564998</b> EAMM-A-P8-38A-87A	<b>560693</b> EAMF-A-38A-87A	<b>551004</b> EAMC-30-32-8-11
With integrated drive			
<b>EMCA-EC-67-...</b>	<b>2297643</b> EAMM-A-P8-38A-67A	<b>1490100</b> EAMF-A-38A-67A	<b>543423</b> EAMC-30-32-8-9

# Electric slides EGSK

Accessories

FESTO

Permissible axis/motor combinations with axial kit – With gear unit				Technical data → Internet: eamm-a	
Motor	Gear unit	Axial kit	Axial kit comprises:		
			Motor flange	Coupling	
					
Type		Part no. Type	Part no. Type	Part no. Type	
<b>EGSK-33</b>					
With servo motor					
EMME-AS-40-...	EMGA-40-P-G...-EAS-40	2297645 EAMM-A-P6-38A-40G	1460097 EAMF-A-38A-40G	562681 EAMC-30-32-6-10	
EMMS-AS-40-...	EMGA-40-P-G...-SAS-40	2297645 EAMM-A-P6-38A-40G	1460097 EAMF-A-38A-40G	562681 EAMC-30-32-6-10	
With stepper motor					
EMMS-ST-42-...	EMGA-40-P-G...-SST-42	2297645 EAMM-A-P6-38A-40G	1460097 EAMF-A-38A-40G	562681 EAMC-30-32-6-10	
With integrated drive					
EMCA-EC-67-...	EMGC-40-...	2297645 EAMM-A-P6-38A-40G	1460097 EAMF-A-38A-40G	562681 EAMC-30-32-6-10	
<b>EGSK-46</b>					
With servo motor					
EMME-AS-40-...	EMGA-40-P-G...-EAS-40	2297646 EAMM-A-P8-38A-40G	1460097 EAMF-A-38A-40G	558029 EAMC-30-32-8-10	
EMMS-AS-40-...	EMGA-40-P-G...-SAS-40	2297646 EAMM-A-P8-38A-40G	1460097 EAMF-A-38A-40G	558029 EAMC-30-32-8-10	
With stepper motor					
EMMS-ST-42-...	EMGA-40-P-G...-SST-42	2297646 EAMM-A-P8-38A-40G	1460097 EAMF-A-38A-40G	558029 EAMC-30-32-8-10	
With integrated drive					
EMCA-EC-67-...	EMGC-40-...	2297646 EAMM-A-P8-38A-40G	1460097 EAMF-A-38A-40G	558029 EAMC-30-32-8-10	

# Electric slides EGSK

Accessories

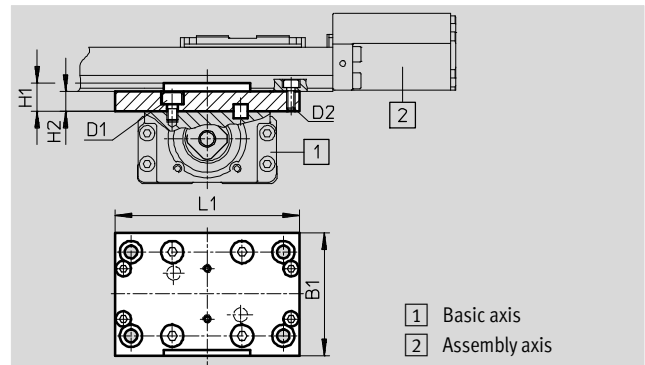
## Cross connecting kit EHAM

Materials:

Adapter plate: anodised aluminium

Screws, dowel pins: steel

RoHS-compliant



Dimensions and ordering data										
For size		B1	D1	D2	H1	H2	L1	Weight [g]	Part no.	Type
Basic axis 1	Assembly axis 2	±0.2					±0.2			
20	15	33.2	M3	M3	7	5	56	27	563747	EHAM-S1-20-15
26	20	44	M4	M3	10	7	66	59	563748	EHAM-S1-26-20
33	26	54	M5	M4	12	9	86	124	563749	EHAM-S1-33-26
46	33	65	M6	M5	15	10	112	216	563750	EHAM-S1-46-33

# Electric slides EGSK

Accessories



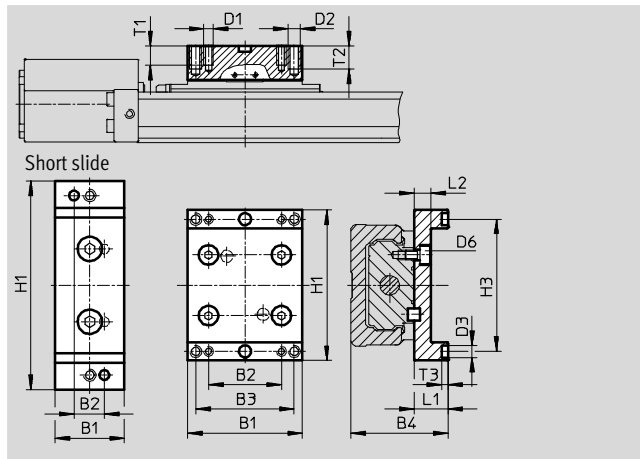
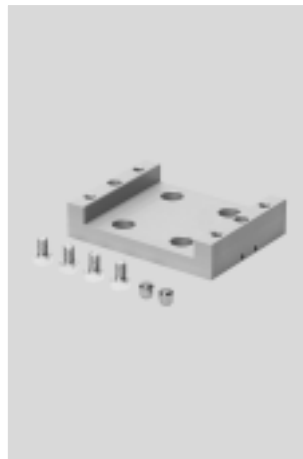
## Slide adapter EASA

Materials:

Adapter plate: anodised aluminium

Screws, dowel pins: steel

RoHS-compliant



Dimensions and ordering data										
For size	B1	B2	B3	B4	D1	D2	D3	D6	H1	H3
	±0.2						∅ H7		±0.2	+0.04
With standard slide										
15	23	14	–	25	M3	–	4	M3	44	38
20	33.2	23	–	32	M3	–	2	M3	52	44.5
26	47.4	30	–	40	M4	–	5	M4	62	54.5
33	54	40	–	48	M5	–	4	M5	86	74
46	81	30	48	68	M5	M6	5	M6	112	100
With short slide										
33	28.5	12.5	–	48	M5	–	4	M5	86	74
46	48	22	–	68	M6	–	5	M6	112	100

For size	L1	L2	T1	T2	T3	Weight [g]	Part no.	Type
	+0.05				+0.1			
With standard slide								
15	10	5.4	6	–	2.5	20	562742	EASA-S1-15
20	12	6	6	–	2.5	38	562743	EASA-S1-20
26	14	7	8	–	2.5	74	562744	EASA-S1-26
33	15	9	15	–	2.6	130	562745	EASA-S1-33
46	22	10	10	12	2.6	310	562746	EASA-S1-46
With short slide								
33	15	9	15	–	2.6	70	562747	EASA-S1-33-S
46	22	10	12	–	2.6	180	562748	EASA-S1-46-S

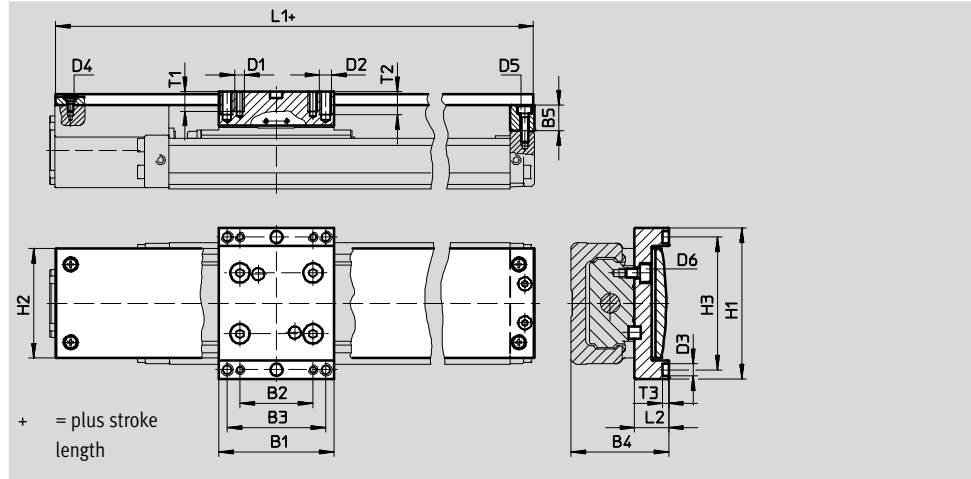
# Electric slides EGSK

Accessories



**Cover kit EASC**  
for standard slide

Materials:  
Cover profile, adapter plate, adapter:  
anodised wrought aluminium alloy  
Screws, dowel pins: steel  
RoHS-compliant



Dimensions										
For size	B1	B2	B3	B4	B5	D1	D2	D3 Ø H7	D4	D5
15	±0.2	14	-	25	6.5	M3	-	4	M2	M2
20	33.2	23		32	9	M3		2	M2.5	M2.5
26	47.4	30		40	10.5	M4		5	M2.5	M3
33	54	40		48	7	M5		4	M3	M3
46	81	30	48	68	10	M5	M6	5	M4	M4

For size	D6	H1	H2	H3	L1	L2	T1	T2	T3
		±0.2	±0.2	±0.04	-0.3				+0.1
15	M3	44	30	38	96.7	10	6	-	2.5
20	M3	52	35.6	44.5	126.2	12	6		2.5
26	M4	62	45	54.5	156.2	14	8		2.5
33	M5	86	62.5	74	168.2	15	15		2.6
46	M6	112	82.4	100	224.7	22	10	12	2.6

Ordering data					Ordering data					
For size	Stroke [mm]	Weight [g]	Part no.	Type	For size	Stroke [mm]	Weight [g]	Part no.	Type	
15	25	51	562707	EASC-S1-15-25	33	100	327	562718	EASC-S1-33-100	
	50	57	562708	EASC-S1-15-50		200	391	562719	EASC-S1-33-200	
	75	62	562709	EASC-S1-15-75		300	454	562720	EASC-S1-33-300	
	100	67	562710	EASC-S1-15-100		400	518	562721	EASC-S1-33-400	
20	25	92	562711	EASC-S1-20-25		500	581	562722	EASC-S1-33-500	
	75	107	562712	EASC-S1-20-75		600	645	562723	EASC-S1-33-600	
	125	121	562713	EASC-S1-20-125		46	200	850	562724	EASC-S1-46-200
26	50	187	562714	EASC-S1-26-50			300	965	562725	EASC-S1-46-300
	100	211	562715	EASC-S1-26-100			400	1080	562726	EASC-S1-46-400
	150	234	562716	EASC-S1-26-150			500	1200	562727	EASC-S1-46-500
	200	258	562717	EASC-S1-26-200	600		1310	562728	EASC-S1-46-600	
					800		1540	562729	EASC-S1-46-800	

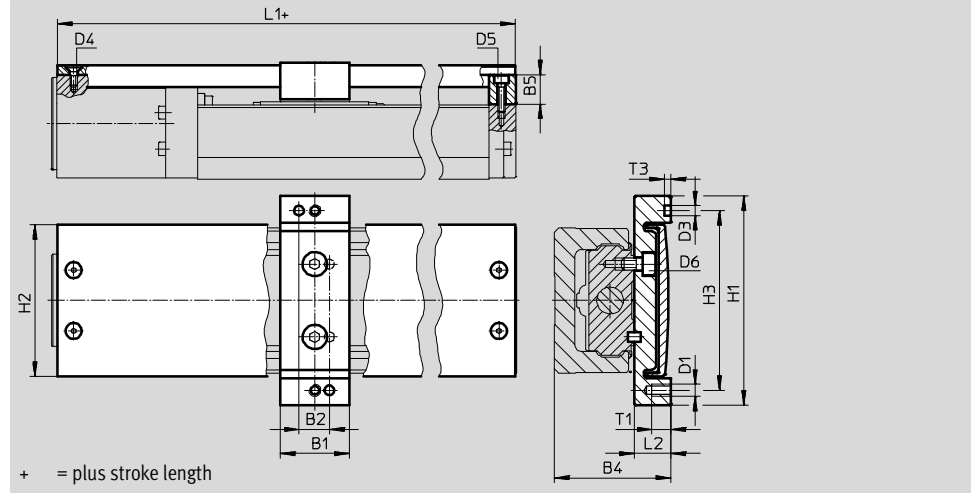
# Electric slides EGSK

Accessories



**Cover kit EASC**  
for short slide

Materials:  
Cover profile, adapter plate, adapter:  
anodised aluminium  
Screws, dowel pins: steel  
RoHS-compliant



Dimensions								
For size	B1	B2	B4	B5	D1	D3	D4	D5
	±0.2	±0.04				∅ H7		
33	28.5	12.5	48	7	M5	4	M3	M3
46	48	22	68	10	M6	5	M4	M4

For size	D6	H1	H2	H3	L1	L2	T1	T3
		±0.2	±0.2	±0.04	-0.3			+0.1
33	M5	86	62.5	74	138.2	15	15	2.6
46	M6	112	82.4	100	184.7	22	12	2.6

Ordering data				
For size	Stroke [mm]	Weight [g]	Part no.	Type
33	130	263	562730	EASC-S1-33-130-S
	230	328	562731	EASC-S1-33-230-S
	330	391	562732	EASC-S1-33-330-S
	430	454	562733	EASC-S1-33-430-S
	530	518	562734	EASC-S1-33-530-S
	630	581	562735	EASC-S1-33-630-S
46	240	724	562736	EASC-S1-46-240-S
	340	840	562737	EASC-S1-46-340-S
	440	955	562738	EASC-S1-46-440-S
	540	1070	562739	EASC-S1-46-540-S
	640	1190	562740	EASC-S1-46-640-S
	840	1420	562741	EASC-S1-46-840-S

# Electric slides EGSK

Accessories



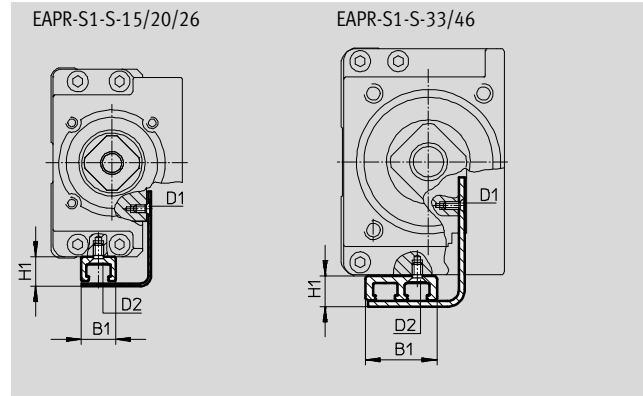
## Sensor rail EAPR

Materials:

Sensor bracket: anodised aluminium

Switch lug, screws: galvanised steel

RoHS-compliant




Dimensions				
For size	B1	H1	D1	D2
With standard slide				
15	9	8.5	M2	M2
20	9	7.75	M2	M2.5
26	9	7.75	M3	M2.5
33	19	7.75	M2	M2.5
46				
With short slide				
33	19	7.5	M2	M2.5
46		8.5	M2	M2.5

Ordering data				
For size	Stroke	Weight	Part no.	Type
For type	[mm]	[g]		
With standard slide				
15	25	10	562611	EAPR-S1-S-15-25
	50	12	562612	EAPR-S1-S-15-50
	75	14	562613	EAPR-S1-S-15-75
	100	16	562614	EAPR-S1-S-15-100
20	25	14	562615	EAPR-S1-S-20-25
	75	18	562616	EAPR-S1-S-20-75
	125	22	562617	EAPR-S1-S-20-125
26	50	24	562618	EAPR-S1-S-26-50
	100	28	562619	EAPR-S1-S-26-100
	150	32	562620	EAPR-S1-S-26-150
	200	37	562621	EAPR-S1-S-26-200
With standard slide or short slide				
33	100/130-S	51	562622	EAPR-S1-S-33-100/130-S
	200/230-S	69	562623	EAPR-S1-S-33-200/230-S
	300/330-S	88	562624	EAPR-S1-S-33-300/330-S
	400/430-S	106	562625	EAPR-S1-S-33-400/430-S
	500/530-S	125	562626	EAPR-S1-S-33-500/530-S
	600/630-S	144	562627	EAPR-S1-S-33-600/630-S
46	200/240-S	78	562628	EAPR-S1-S-46-200/240-S
	300/340-S	97	562629	EAPR-S1-S-46-300/340-S
	400/440-S	115	562630	EAPR-S1-S-46-400/440-S
	500/540-S	134	562631	EAPR-S1-S-46-500/540-S
	600/640-S	153	562632	EAPR-S1-S-46-600/640-S
	800/840-S	190	562633	EAPR-S1-S-46-800/840-S

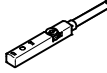
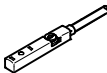
# Electric slides EGSK



Accessories

FESTO

Ordering data – Centring pins, centring sleeves					
	For size	Comment	Part no.	Type	PU <sup>1)</sup>
	15	For slide	<b>189652</b>	<b>ZBH-5</b>	10
	20		<b>525273</b>	<b>ZBS-2</b>	
	26, 46		<b>150928</b>	<b>ZBS-5</b>	
	33		<b>562959</b>	<b>ZBS-4</b>	
	15, 33	For slide adapter	<b>562959</b>	<b>ZBS-4</b>	
	20		<b>525273</b>	<b>ZBS-2</b>	
	26, 46		<b>150928</b>	<b>ZBS-5</b>	

1) Packaging unit quantity

Ordering data – Proximity sensors for T-slot, inductive					Technical data → Internet: sies	
	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part no.	Type
N/O contact						
	Insertable in the slot from above, flush with the sensor rail	PNP	Cable, 3-wire	7.5	<b>551386</b>	<b>SIES-8M-PS-24V-K-7,5-OE</b>
			Plug M8x1, 3-pin	0.3	<b>551387</b>	<b>SIES-8M-PS-24V-K-0,3-M8D</b>
		NPN	Cable, 3-wire	7.5	<b>551396</b>	<b>SIES-8M-NS-24V-K-7,5-OE</b>
			Plug M8x1, 3-pin	0.3	<b>551397</b>	<b>SIES-8M-NS-24V-K-0,3-M8D</b>
N/C contact						
	Insertable in the slot from above, flush with the sensor rail	PNP	Cable, 3-wire	7.5	<b>551391</b>	<b>SIES-8M-PO-24V-K-7,5-OE</b>
			Plug M8x1, 3-pin	0.3	<b>551392</b>	<b>SIES-8M-PO-24V-K-0,3-M8D</b>
		NPN	Cable, 3-wire	7.5	<b>551401</b>	<b>SIES-8M-NO-24V-K-7,5-OE</b>
			Plug M8x1, 3-pin	0.3	<b>551402</b>	<b>SIES-8M-NO-24V-K-0,3-M8D</b>

Ordering data – Connecting cables				Technical data → Internet: nebu	
	Electrical connection, left	Electrical connection, right	Cable length [m]	Part no.	Type
	Straight socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	<b>541333</b>	<b>NEBU-M8G3-K-2.5-LE3</b>
			5	<b>541334</b>	<b>NEBU-M8G3-K-5-LE3</b>
	Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	<b>541338</b>	<b>NEBU-M8W3-K-2.5-LE3</b>
			5	<b>541341</b>	<b>NEBU-M8W3-K-5-LE3</b>