Toothed belt axes ELGR

FESTO

New

Toothed belt axes ELGR

Key features

At a glance

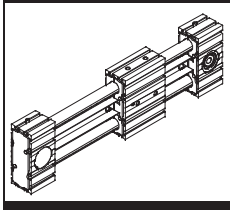
- Ideal price/performance ratio
- Ready-to-install unit for quick and easy configuration
- Excellent reliability thanks to tested service life of 5,000 km
- Motor assembly possible on 4 sides with identical mounting accessories
- Complete kit for simple and space-saving solution for end-position sensing
- Plain-bearing guide
  - For small loads
  - Operating behaviour with torque load = Average
  - Guide backlash = 0.05 mm (on delivery)
- Recirculating ball bearing guide
  - For medium loads
  - Operating behaviour under torque load = Very good
  - Backlash-free guide (preloaded guide elements)

Applications

- Pick & Place with effective loads of up to 15 kg
- Positioning and handling with low process forces
- Actuation of guard doors in processing machines

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.

Version	Size	Working stroke [mm]	Speed [m/s]	Repetition accuracy [mm]	Feed force [N]	Guide characteristics				
						Forces and torques				
						Fy [N]	Fz [N]	Mx [Nm]	My [Nm]	Mz [Nm]
	35	50 ... 800	3	±0.1	50	50	50	2.5	20	20
	45	50 ... 1,000	3	±0.1	100	100	100	5	40	40
	55	50 ... 1,500	3	±0.1	350	300	300	15	124	124

Note

PositioningDrives sizing software
www.festo.com

Toothed belt axes ELGR

Key features

Complete system comprising toothed belt axis, motor, motor controller and motor mounting kit

Toothed belt axis with recirculating ball bearing or plain-bearing guide

Motor

➔ 18

1 Servo motor EMMS-AS
2 Stepper motor EMMS-ST

Note

A range of specially adapted complete solutions is available for the toothed belt axis ELGR and the motors.

Motor controller

Technical data ➔ Internet: motor controller

1 Servo motor controller CMMP-AS, CMMS-AS
2 Stepper motor controller CMMS-ST

Motor mounting kit

➔ 18

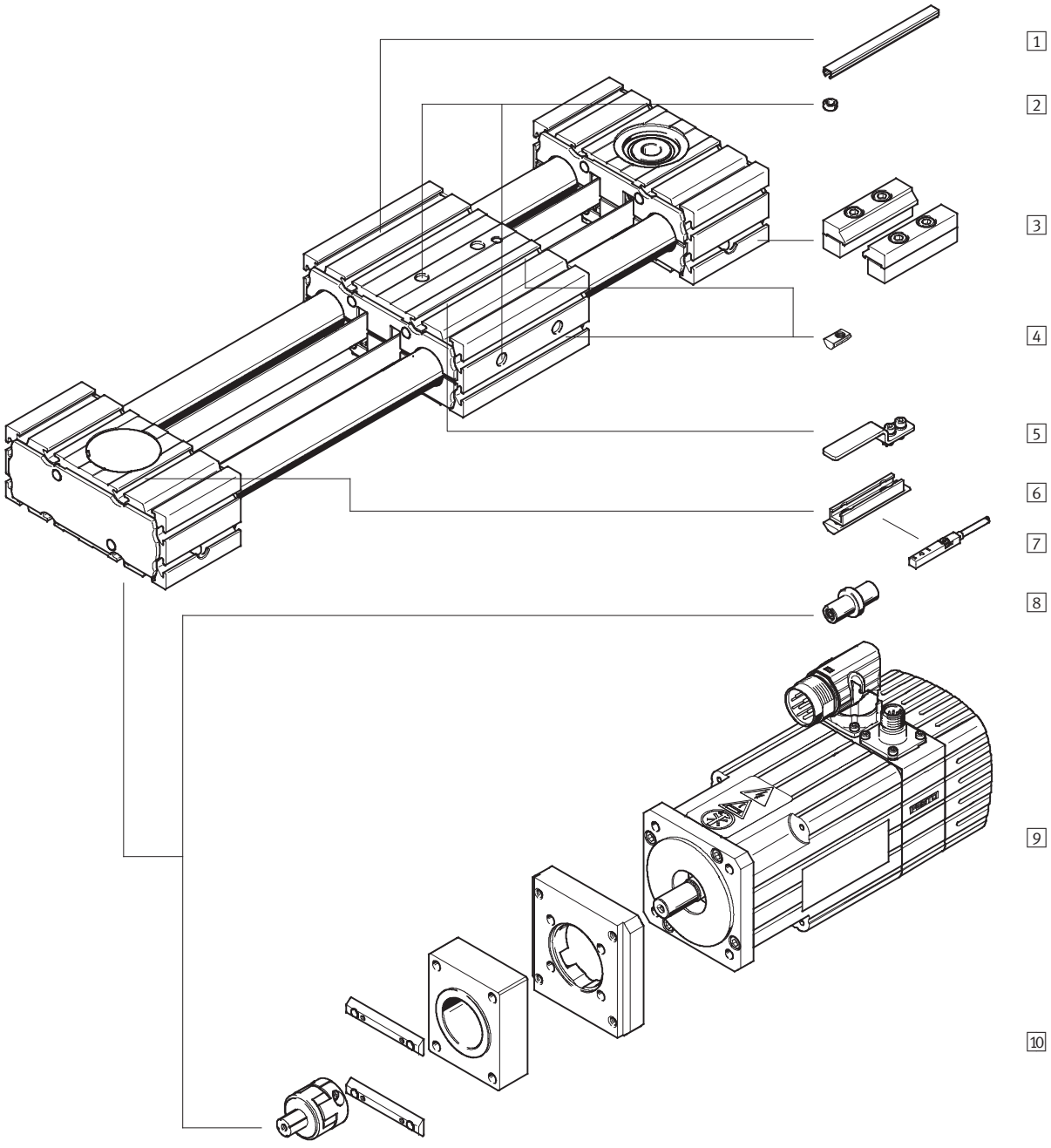
Axial kit

Kit comprising:

- Motor flange
- Coupling housing
- Coupling
- Screws
- Slot nuts

Toothed belt axes ELGR

Peripherals overview



Toothed belt axes ELGR

Peripherals overview

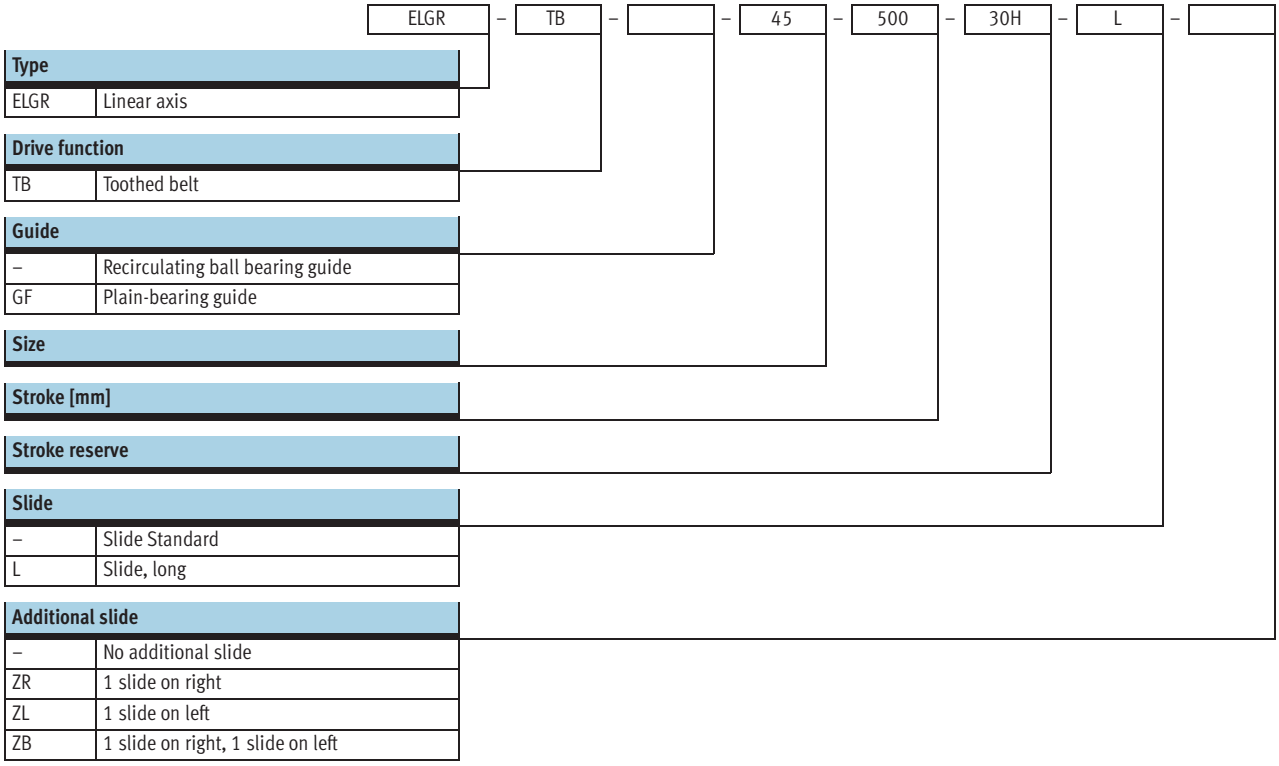
FESTO

Variants and accessories			
	Type	Brief description	➔ Page/Internet
1	Slot cover NC	• For protecting against ingress of dirt	21
2	Centring sleeve ZBH	• For centring loads and attachments on the slide • 6 centring sleeves included in the scope of delivery of the axis	21
3	Profile mounting MA	For mounting the axis on the bearing cap	20
4	Slot nut NM	For mounting attachments	21
5	Switching lug SA, SB	For sensing the slide position	20
6	Sensor bracket SA, SB	Adapter for mounting the inductive proximity sensors on the axis	20
7	Proximity sensor, slot type 8 SA, SB	• Inductive proximity sensor, for slot type 8 • The order code SA, SB includes 1 switching lug and 1 sensor bracket in the scope of delivery	21
8	Drive shaft EA	• Can be used as an alternative interface if required • The axis/motor combinations ➔ 18 do not require a drive shaft	21
9	Motor EMMS	Motors specially matched to the axis, with or without brake	18
10	Axial kit EAMM	For axial motor mounting (comprising: coupling, coupling housing and motor flange)	18
–	Connecting cable NEBU	For proximity sensor (order code SA and SB)	21

Toothed belt axes ELGR

FESTO

Type codes



Type	
ELGR	Linear axis

Drive function	
TB	Toothed belt

Guide	
–	Recirculating ball bearing guide
GF	Plain-bearing guide

Size	

Stroke [mm]	

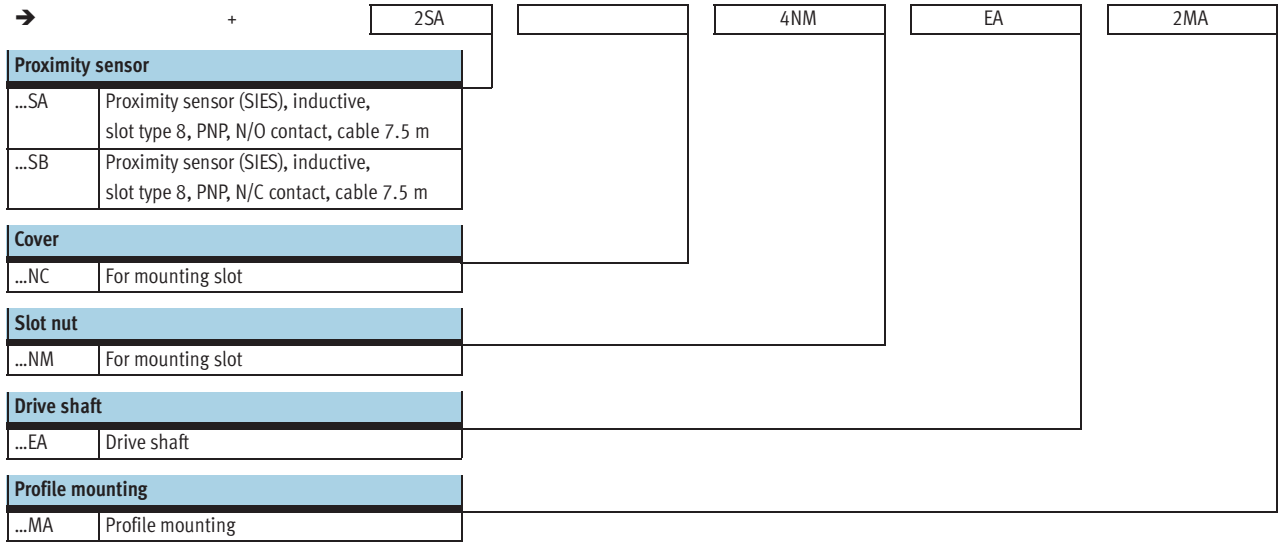
Stroke reserve	

Slide	
–	Slide Standard
L	Slide, long

Additional slide	
–	No additional slide
ZR	1 slide on right
ZL	1 slide on left
ZB	1 slide on right, 1 slide on left

Toothed belt axes ELGR

Type codes



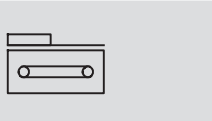
New

Toothed belt axes ELGR

Technical data

FESTO

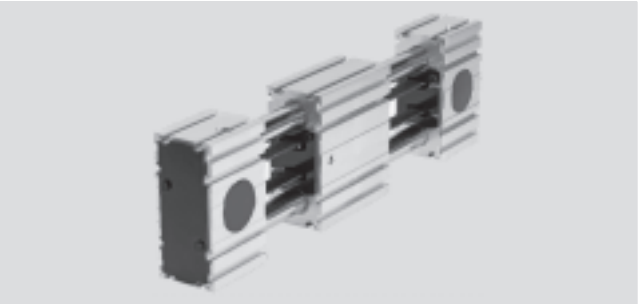
Function



Size
35 ... 55

Stroke length
50 ... 1,500 mm

www.festo.com



General technical data				
Size		35	45	55
Constructional design		Electromechanical linear axis with toothed belt		
Guide		Recirculating ball bearing guide		
		Plain-bearing guide		
Mounting position		Any		
Working stroke	[mm]	50 ... 800	50 ... 1,000	50 ... 1,500
Max. feed force F_x	[N]	50	100	350
Max. no-load torque	[Nm]	0.1	0.2	0.4
Max. driving torque	[Nm]	0.46	1.24	5
Max. no-load resistance to displacement	[N]	10.8	16.1	27.9
Max. speed				
Recirculating ball bearing guide	[m/s]	3		
Plain-bearing guide	[m/s]	1		
Max. acceleration[1)]	[m/s^2]	50		
Repetition accuracy	[mm]	±0.1		

1) The max. acceleration is dependent on the moving load, the driving torque and the max. feed force

Operating and environmental conditions		
Ambient temperature		
Recirculating ball bearing guide	[°C]	–10 ... +50
Plain-bearing guide	[°C]	0 ... +40
Degree of protection		IP20
Duty cycle	[%]	100

Weight [kg]			
Size	35	45	55
Recirculating ball bearing guide			
Basic weight with 0 mm stroke[1)]			
Slide standard	1.5	3.2	5.4
Slide long	1.9	4.3	7.4
Additional weight per 1,000 mm stroke	2.5	5.0	7.8
Moving load	0.5	1.1	1.9
Slide			
Slide standard	0.5	1.0	1.8
Slide long	0.8	1.7	3.0
Additional slide	0.4	0.9	1.7

1) Incl. slide

Toothed belt axes ELGR

FESTO

Technical data

Weight [kg]			
Size	35	45	55
Plain-bearing guide			
Basic weight with 0 mm stroke[1)]			
Slide standard	1.4	3.1	5.1
Slide long	1.9	4.3	7.3
Additional weight per 1,000 mm stroke	2.5	5.0	7.8
Moving load	0.4	0.9	1.5
Slide			
Slide standard	0.4	0.9	1.5
Slide long	0.7	1.6	2.8
Additional slide	0.3	0.7	1.3

1) Incl. slide

Toothed belt				
Size		35	45	55
Pitch	[mm]	2	3	3
Tensile stress	[%]	0.094	0.08	0.21
Width	[mm]	10	15	19.3
Effective diameter	[mm]	18.46	24.83	28.65
Feed constant	[mm/rev.]	58	78	90

Mass moment of inertia				
Size		35	45	55
J_O				
Slide standard	[kg mm^2]	40.26	155.13	360.48
Slide long	[kg mm^2]	66.50	271.52	638.74
J_S per metre stroke	[kg mm^2/m]	0.26	1.06	1.88
J_L per kg working load	[kg mm^2/kg]	85.19	154.13	205.21
J_W Additional slide	[kg mm^2]	36.75	136.55	301.92

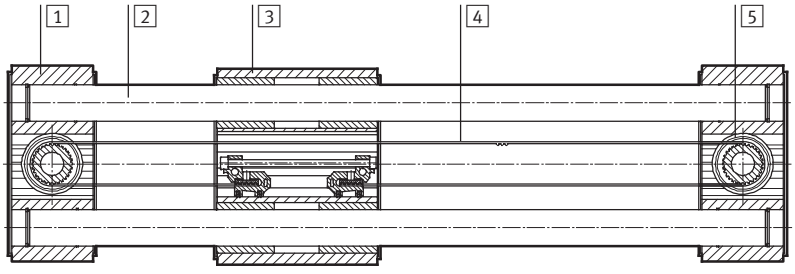
The mass moment of inertia J_A of the entire axis is calculated as follows:

$J_A = J_O + K \times J_W + J_S \times \text{working stroke [m]} + J_L \times m_{\text{effective load}}$ [kg]

K = Number of additional slides

Materials

Sectional view



Axis	
1 Bearing cap, profile	Wrought aluminium alloy, anodised
2 Guide rods	Steel
3 Slide, profile	Wrought aluminium alloy, anodised
4 Toothed belt	Polychloroprene with glass cord and nylon coating
5 Belt pulley	High-alloy stainless steel
Note on materials	RoHS-compliant
	Contains PWIS (paint-wetting impairment substances)

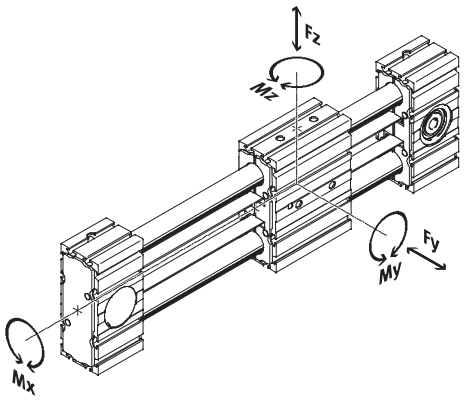
Toothed belt axes ELGR

Technical data

FESTO

Characteristic load values

The indicated forces and torques refer to the centre of the guide. The point of application of force is the point where the centre of the guide and the longitudinal centre of the slide intersect. These values must not be exceeded during dynamic operation. Special attention must be paid to the cushioning phase.



If the axis is subjected to more than two of the indicated forces and torques simultaneously, the following equation must be satisfied in addition to the indicated maximum loads:

Calculating the load comparison factor:

$$f_v = \frac{|F_{y,dyn}|}{Fy_{max.}} + \frac{|F_{z,dyn}|}{Fz_{max.}} + \frac{|M_{x,dyn}|}{Mx_{max.}} + \frac{|M_{y,dyn}|}{My_{max.}} + \frac{|M_{z,dyn}|}{Mz_{max.}} \leq 1$$

Permissible forces and torques for a service life of 5,000 km

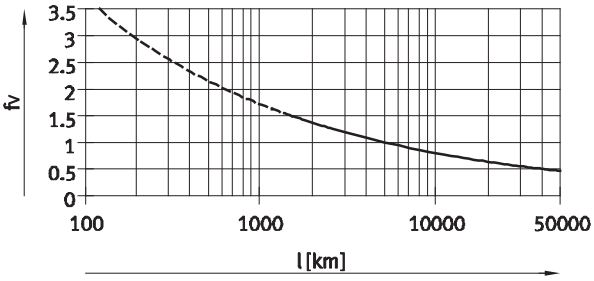
Guide		Plain-bearing guide			Recirculating ball bearing guide		
Size		35	45	55	35	45	55
$Fy_{max.}$, Fz_{max}	[N]	50	100	300	50	100	300
Slide standard							
$Mx_{max.}$	[Nm]	1	2.5	5	2.5	5	15
$My_{max.}$	[Nm]	4	8	16	8	16	48
$Mz_{max.}$	[Nm]	4	8	16	8	16	48
Slide long							
$Mx_{max.}$	[Nm]	1	2.5	5	2.5	5	15
$My_{max.}$	[Nm]	10	20	40	20	40	124
$Mz_{max.}$	[Nm]	10	20	40	20	40	124

Service life

The service life of the guide depends on the load. To provide a rough indication of the service life of the guide, the graph below plots the load comparison factor f_v against the service life.

This graph only shows theoretical values. Consultation with your local contact person at Festo is mandatory for load comparison factors f_v greater than 1.5.

Load comparison factor f_c as a function of service life



Example:
A user wants to move an X kg load. Using the above calculation gives a value of 1.5 for the load comparison factor f_v. According to the graph, the guide would have a service life of approx. 1,500 km. Reducing the acceleration reduces the Mz and My values. A load comparison factor of 1 now gives a service life of 5,000 km.

Note

PositioningDrives sizing software
www.festo.com

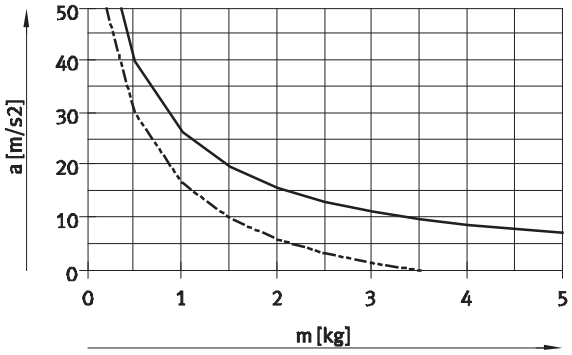
Toothed belt axes ELGR

Technical data

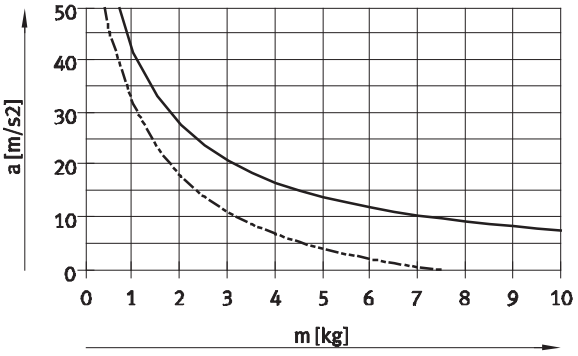
FESTO

Maximum acceleration a as a function of applied load m

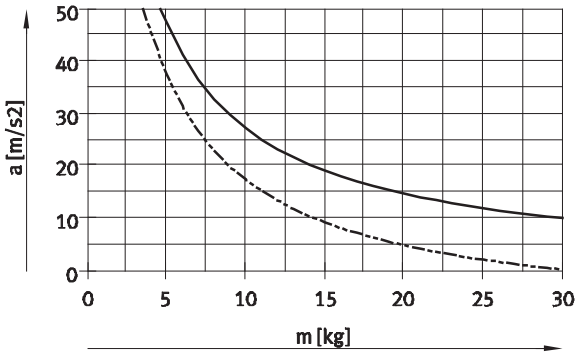
ELGR-35



ELGR-45



ELGR-55

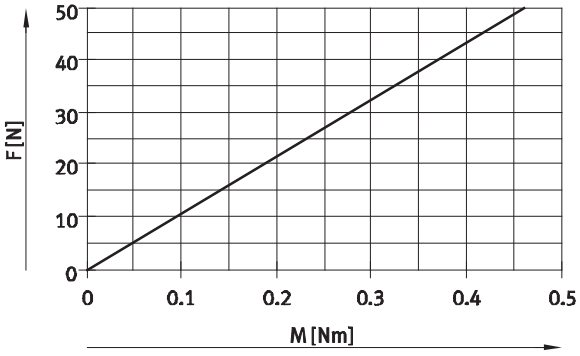


Horizontal

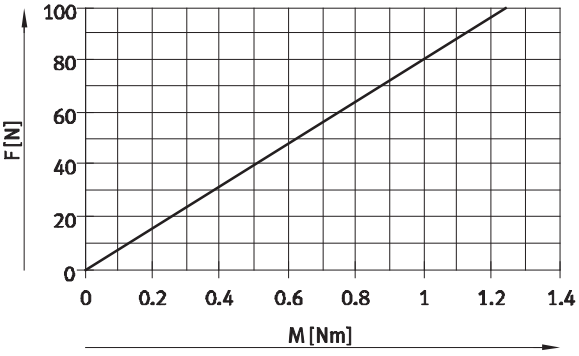
Vertical

Feed force F_x as a function of input torque M

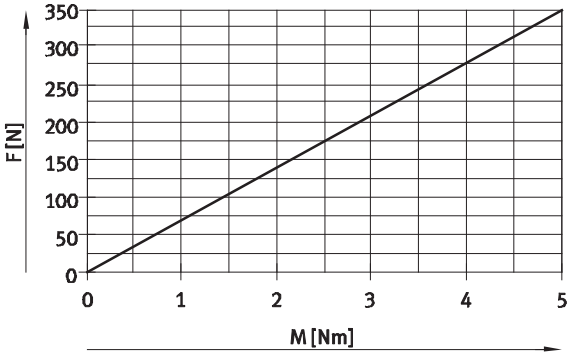
ELGR-35



ELGR-45



ELGR-55

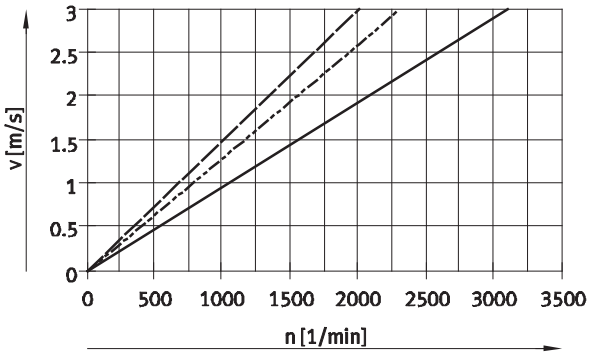


Toothed belt axes ELGR

Technical data

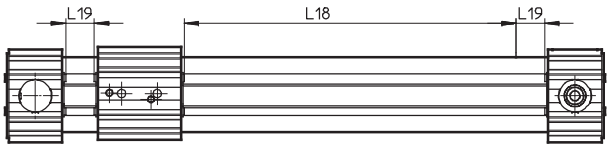
FESTO

Speed v as a function of rotational speed n



ELGR-TB-35
ELGR-TB-45
ELGR-TB-55

Stroke reserve



L18 = Nominal stroke
L19 = Stroke reserve

- The stroke reserve is a safety distance available on both sides of the axis in addition to the nominal stroke
- The sum of the stroke length and 2x the stroke reserve must not exceed the maximum working stroke
- The stroke reserve length can be freely selected
- The stroke reserve is defined in the modular product system using the “Stroke reserve” feature.

Example:

Type ELGR-TB-45-500-20H-...

Nominal stroke	= 500 mm
2x stroke reserve	= 40 mm
Total stroke	= 540 mm

(540 mm = 500 mm + 2x 20 mm)

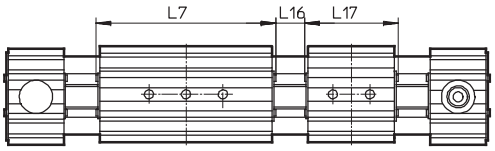
Toothed belt axes ELGR

Technical data

FESTO

Working stroke reduction

With standard slide or extra-long slide L with additional slide ZR/ZL/ZB



L7 = Slide length
L16 = Distance between both slides
L17 = Additional slide length

- For a toothed belt axis with additional slide, the working stroke is reduced by the length of the additional slide and the distance between both slides
- When ordering the extra-long slide L variant, the additional slide is not extended

Example:

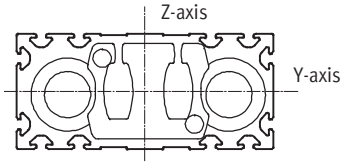
Type ELGR-TB-35-500-...-ZR
Working stroke without additional slide = 500 mm
L16 = 10 mm
L7, L17 = 76 mm

Working stroke with additional slide = 414 mm
(500 mm – 10 mm – 76 mm)

Dimensions – Additional slide

Size		35	45	55
Length L17	[mm]	76	96	116
Distance between the slides L16	[mm]	≥ 0		

2nd moment of area



Size		35	45	55
Iy	[mm^4]	$3.77x10^3$	$1.57x10^4$	$3.83x10^4$
Iz	[mm^4]	$1.89x10^5$	$8.08x10^5$	$1.85x10^6$

Recommended deflection limits

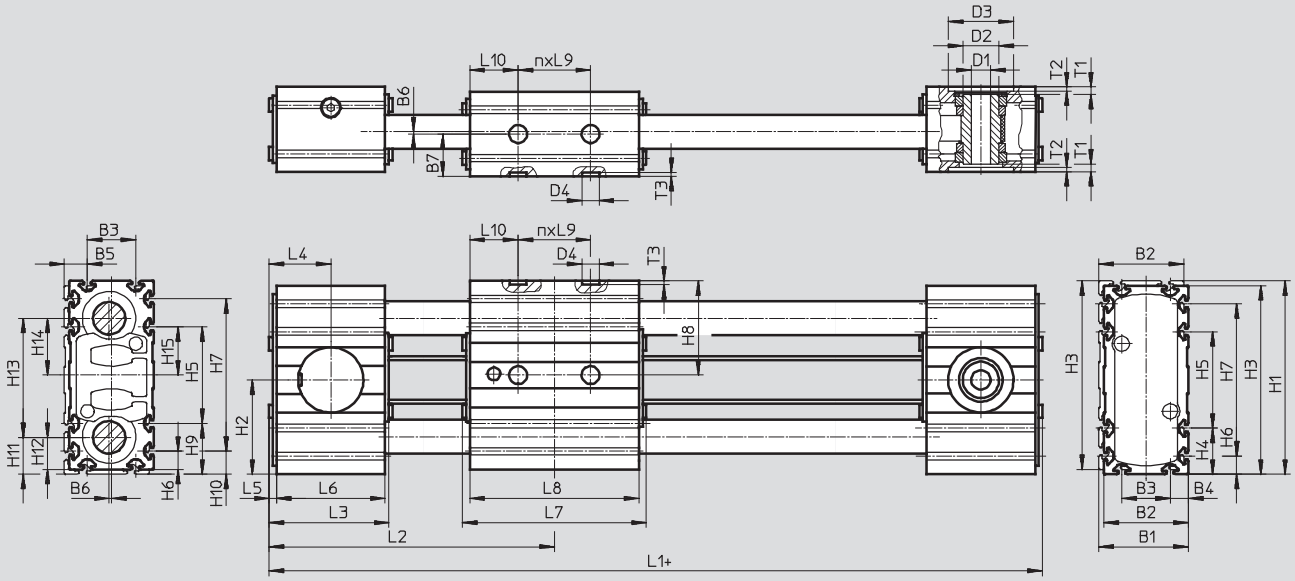
Adherence to a maximum deflection of 0.5 mm is recommended so as not to impair the functional performance of the axes. Greater deformation can result in increased friction, greater wear and reduced service life.

Toothed belt axes ELGR

Technical data

FESTO

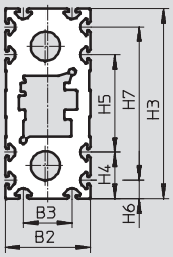
Dimensions Download CAD data ➔ **www.festo.com**



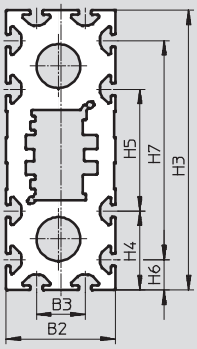
\+ plus stroke + 2x stroke reserve

Profile

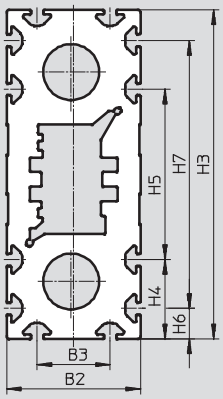
ELGR-35



ELGR-45



ELGR-55



Toothed belt axes ELGR

Technical data

Size	B1	B2	B3	B4	B5	B6	B7	D1 ∅ H7	D2 ∅	D3 ∅ H7	D4 ∅ H7	H1	H2	H3	H4	H5	H6	H7	H8	H9
ELGR-35	37	35	20	7.5	9.5	1	17.5	8	15	27	7	80	39	78	19	40	7.5	63	39	21
ELGR-35-L																				
ELGR-45	47	45	20	12.5	14.5		22.5	10	20	38		117	57.5	115	32.5	50	12.5	90	57.5	34.5
ELGR-45-L																				
ELGR-55	57	55	30	12.5	14.5		27.5	16	25	48		137	67.5	135	32.5	70	12.5	110	67.5	34.5
ELGR-55-L																				

Size	H10	H11	H12	H13	H14	H15	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	n	T1	T2	T3 +0.1
ELGR-35	9.5	15.5	13.5	49	23.5	20	178	89	51	25.5	3	45	76	70	30	20	1	3.1	1.6	1.6
ELGR-35-L							248	124					146	140		40	2			
ELGR-45	14.5	23	21	71	34.5	25	219	108	60	30		54	96	90	40	25	1	3	1.7	
ELGR-45-L							309	153					186	180		50	2			
ELGR-55	14.5	25.5	23.5	86	42	35	243	120	62	31		56	116	110	40	35	1	4.5	2	
ELGR-55-L							353	175					226	220		70	2			

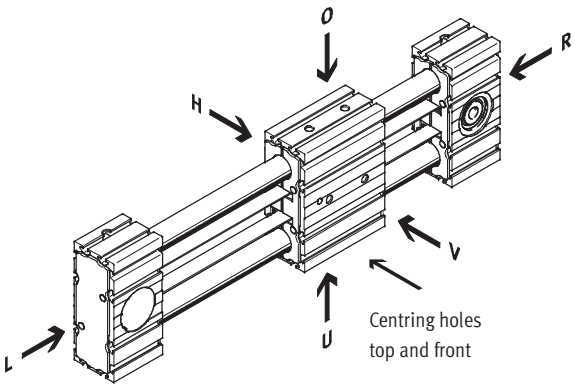
Toothed belt axes ELGR

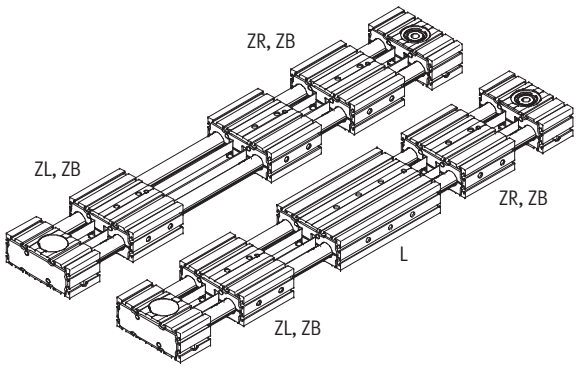
Ordering data – Modular products

FESTO

Order code

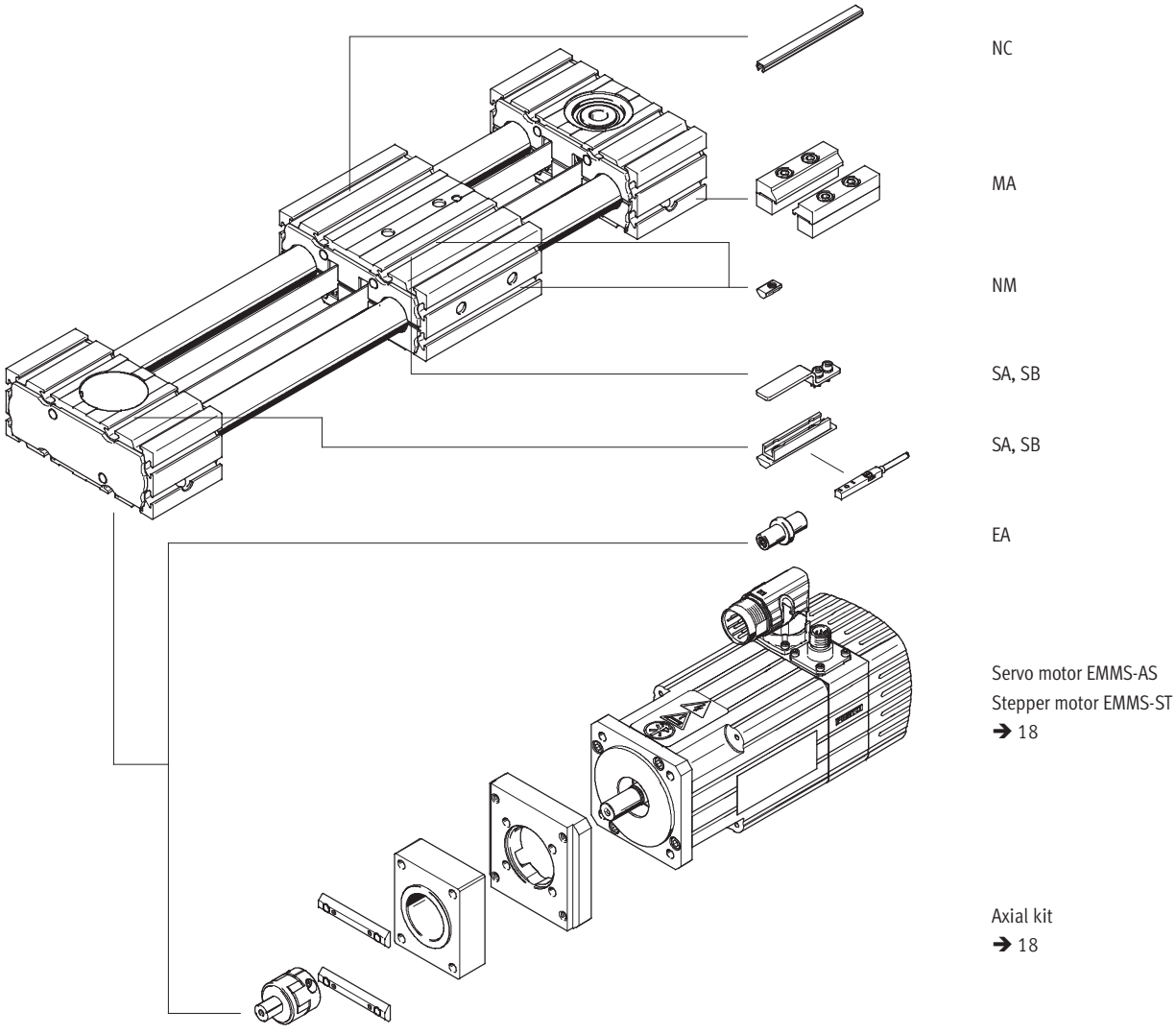
Mandatory data





O	top	L	left
U	underneath	V	front
R	right	H	rear

Accessories



NC

MA

NM

SA, SB

SA, SB

EA

Servo motor EMMS-AS
Stepper motor EMMS-ST
➔ 18

Axial kit
➔ 18

Toothed belt axes ELGR

FESTO

Ordering data – Modular products

Ordering table

	Size		35	45	55	Condi-tions	Code		Enter code
M	Module No.		**560505**	**560506**	**560507**				
	Design		Linear axis				**ELGR**		ELGR
	Drive type		Toothed belt				**-TB**		-TB
O	Guide		Recirculating ball bearing guide						
			Plain-bearing guide				**-GF**		
M	Sizes		35	45	55		**-...**		
	Stroke length	[mm]	50 ... 800	50 ... 1,000	50 ... 1,500	1	**-...**		
	Stroke reserve	[mm]	0 ...999 (0 = no stroke reserve)			1	**-...H**		
O	Slide design		Standard slide						
			Slide, long				**-L**		
	Additional slide		No additional slide						
			1 slide on right			2	**-ZR**		
			1 slide on left			2	**-ZL**		
			1 slide on right, 1 slide on left			2	**-ZB**		
	Accessories		Accessories enclosed separately				**+**		+
	Proximity sensor (SIES), inductive, slot type 8, PNP, N/O contact, cable 7.5 m, incl. switching lug and sensor bracket		1 ... 6				**...SA**		
	Proximity sensor (SIES), inductive, slot type 8, PNP, N/C contact, cable 7.5 m, incl. switching lug and sensor bracket		1 ... 6				**... SB**		
	Mounting slot cover		–	1 ... 50 (1=2 pieces, 500 mm in length)			**...NC**		
	Slot nut for mounting slot		1 ... 99				**...NM**		
	Drive shaft		1 ... 4				**...EA**		
	Profile mounting		1 ... 2				**...MA**		

1 **-...** The sum of the stroke length and 2x the stroke reserve in mm must not exceed the maximum stroke length

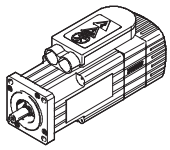
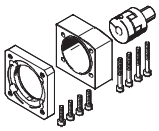
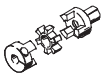
2 **ZR, ZL, ZB** Working stroke reduction ➔ 13

Transfer order code

	ELGR	–	TB	–		–		–		–		+						

Toothed belt axes ELGR

Accessories

Permissible axis/motor combinations with axial kit – Without gear unit				
Motor	Axial kit	Axial kit comprising:		
		Motor flange	Coupling	Coupling housing
				
Type	Part No. Type	Part No. Type	Part No. Type	Part No. Type
ELGR-35				
With servo motor				
EMMS-AS-55-S-...	**1133400** **EAMM-A-R27-55A**	**558176** **EAMF-A-38A-55A**	**557999** **EAMD-19-15-9-8X10**	**1133397** **EAMK-A-R27-38A**
With stepper motor				
EMMS-ST-57-M-...	**1133403** **EAMM-A-R27-57A**	**560692** **EAMF-A-38A-57A**	**561292** **EAMD-16-15-6.35-8X10**	**1133397** **EAMK-A-R27-38A**
ELGR-45				
With servo motor				
EMMS-AS-70-M-...	**1133401** **EAMM-A-R38-70A**	**558018** **EAMF-A-38A-70A**	**558000** **EAMD-25-22-11-10X12**	**1133398** **EAMK-A-R38-38A**
With stepper motor				
EMMS-ST-87-S-... **EMMS-ST-87-M-...**	**1133404** **EAMM-A-R38-87A**	**560693** **EAMF-A-38A-87A**	**558000** **EAMD-25-22-11-10X12**	**1133398** **EAMK-A-R38-38A**
ELGR-55				
With servo motor				
EMMS-AS-100-S-...	**1133402** **EAMM-A-R48-100A**	**558020** **EAMF-A-48A-100A**	**558002** **EAMD-42-40-19-16X25**	**1133399** **EAMK-A-R48-48A**
With stepper motor				
EMMS-ST-87-L-...	**1133405** **EAMM-A-R48-87A**	**560695** **EAMF-A-48A-87A**	**558001** **EAMD-32-32-11-16X20**	**1133399** **EAMK-A-R48-48A**

Toothed belt axes ELGR

Accessories

FESTO

Axial kit EAMM-A-...

Material:
Coupling housing, coupling hubs, motor flange: Aluminium
Screws: Galvanised steel

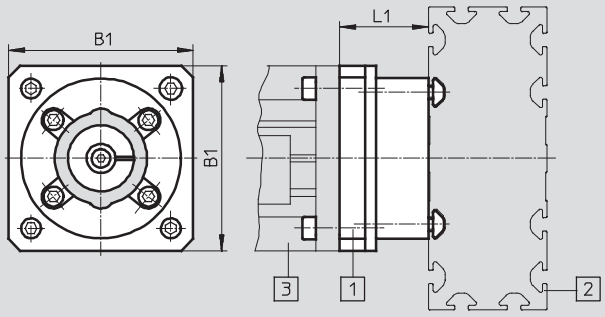


Diagram:
1 Axial kit
2 Toothed belt axis
3 Motor

General technical data							
EAMM-A-...		R27-		R38-		R48-	
		55A	57A	70A	87A	87A	100A
Transferable torque	[Nm]	2	1.6	4.4	4.4	12.5	17
Mass moment of inertia	[kgmm^2]	0.445	0.355	3.2	3.2	14.5	39
Max. rotational speed	[rpm]	10,000	10,000	8,000	8,000	8,000	6,000
Mounting position		Any					

Operating and environmental conditions		
Ambient temperature	[°C]	–10 ... +60
Storage temperature	[°C]	–25 ... +60
Protection class[1)]		IP40
Relative air humidity	[%]	0 ... 95

1) Only with combined attachment of motor and axis

Dimensions and ordering data					
Type	B1	L1	Weight [g]	Part No.	Type
EAMM-A-R27-55A	55	26	170	**1133400**	**EAMM-A-R27-55A**
EAMM-A-R27-57A	56	26	170	**1133403**	**EAMM-A-R27-57A**
EAMM-A-R38-70A	70	33.75	350	**1133401**	**EAMM-A-R38-70A**
EAMM-A-R38-87A	85.8	38	530	**1133404**	**EAMM-A-R38-87A**
EAMM-A-R48-87A	85.8	44	590	**1133405**	**EAMM-A-R48-87A**
EAMM-A-R48-100A	100.5	59	970	**1133402**	**EAMM-A-R48-100A**

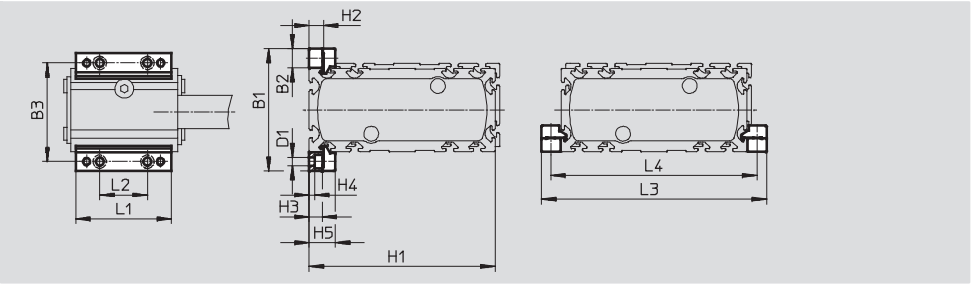
Toothed belt axes ELGR

Accessories

FESTO

Profile mounting MUE
(order code: MA)

Material:
Anodised aluminium
RoHS-compliant

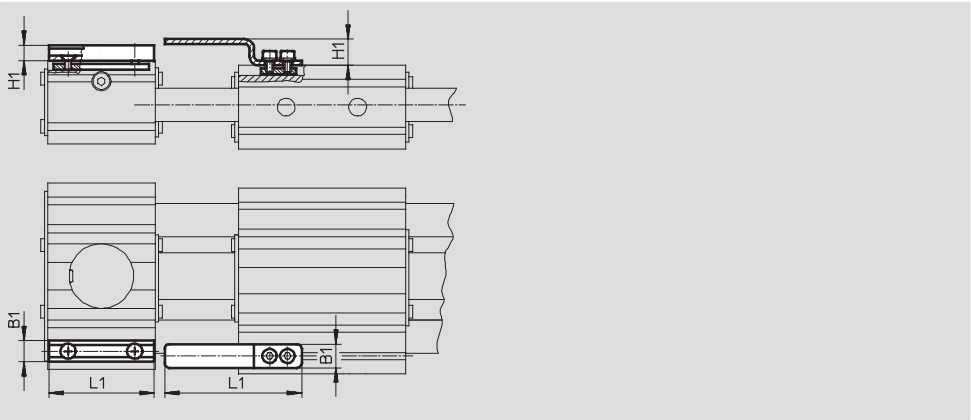


Dimensions and ordering data								
For size	B1	B2	B3	D1 ∅	H1	H2	H3	H4
35	51	8	43	3.4	78	6	5.5	2.3
45	69	12	57	5.5	115	10	9	3.2
55	79	12	67	5.5	135	10	9	3.2

For size	H5	L1	L2	L3	L4	Weight [g]	Part No.	Type
35	11	40	20	94	86	20	**558042**	**MUE-50**
45	17.5	52	40	139	127	32	**562238**	**MUE-45**
55	17.5	52	40	159	147	32	**562238**	**MUE-45**

Sensor bracket EAPM-...-SHS, switching lug EAPM-...-SLS
(order code SA/SB)

Material:
Switching lug: Galvanised steel
Sensor bracket: Wrought aluminium alloy, anodised
RoHS-compliant

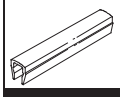


Dimensions and ordering data						
For size	B1	H1	L1	Weight [g]	Part No.	Type
Sensor bracket						
35, 45, 55	9	6.5	44	20	**567537**	**EAPM-L4-SHS**
Switching lug						
35, 45, 55	10	11	57.5	15	**567538**	**EAPM-L4-SLS**

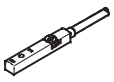
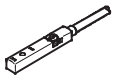
Toothed belt axes ELGR

Accessories

FESTO

Ordering data	For size	Comment	Order code	Part No.	Type	PU[1]
Drive shaft EAMB						
	35	Alternative interface	EA	558034	EAMB-16-7-8X15-8X10	1
	45			558035	EAMB-18-9-8X16-10X12	
	55			558036	EAMB-24-6-15X21-16X20	
Slot nut NST						
	35	For mounting slot	NM	558045	NST-3-M3	1
	45, 55			150914	NST-5-M5	1
Centring sleeve ZBH[2]						
	35, 45, 55	For slide	–	186717	ZBH-7	10
Slot cover ABP						
	45, 55	For mounting slot every 0.5 m	NC	151681	ABP-5	2

1) Packaging unit quantity
2) 6 centring sleeves included in the scope of delivery of the axis

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

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

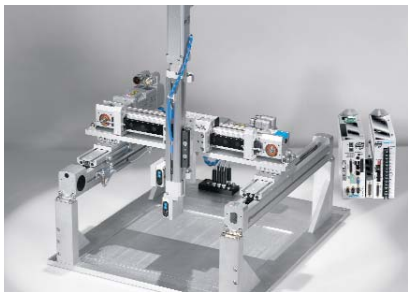
Product Range and Company Overview

A Complete Suite of Automation Services

Our experienced engineers provide complete support at every stage of your development process, including: conceptualization, analysis, engineering, design, assembly, documentation, validation, and production.

Custom Automation Components
Complete custom engineered solutions

Custom Control Cabinets
Comprehensive engineering support and on-site services



Complete Systems
Shipment, stocking and storage services

The Broadest Range of Automation Components

With a comprehensive line of more than 30,000 automation components, Festo is capable of solving the most complex automation requirements.

Electromechanical
Electromechanical actuators, motors, controllers & drives

Pneumatics
Pneumatic linear and rotary actuators, valves, and air supply

PLCs and I/O Devices
PLC's, operator interfaces, sensors and I/O devices

Supporting Advanced Automation... As No One Else Can!

Festo is a leading global manufacturer of pneumatic and electromechanical systems, components and controls for industrial automation, with more than 12,000 employees in 56 national headquarters serving more than 180 countries. For more than 80 years, Festo has continuously elevated the state of manufacturing with innovations and optimized motion control solutions that deliver higher performing, more profitable automated manufacturing and processing equipment. Our dedication to the advancement of automation extends beyond technology to the education and development of current and future automation and robotics designers with simulation tools, teaching programs, and on-site services.

Quality Assurance, ISO 9001 and ISO 14001 Certifications

Festo Corporation is committed to supply all Festo products and services that will meet or exceed our customers' requirements in product quality, delivery, customer service and satisfaction.

To meet this commitment, we strive to ensure a consistent, integrated, and systematic approach to management that will meet or exceed the requirements of the ISO 9001 standard for Quality Management and the ISO 14001 standard for Environmental Management.

FSC Printed on recycled paper at New Horizon Graphic, Inc., FSC certified as an environmentally friendly printing plant.

Festo North America

Festo Regional Contact Center

5300 Explorer Drive
Mississauga, Ontario L4W 5G4
Canada

USA Customers:

For ordering assistance,
Call: 1.800.99.FESTO (1.800.993.3786)
Fax: 1.800.96.FESTO (1.800.963.3786)
Email: customer.service@us.festo.com

For technical support,
Call: 1.866.GO.FESTO (1.866.463.3786)
Fax: 1.800.96.FESTO (1.800.963.3786)
Email: product.support@us.festo.com

Canadian Customers:

Call: 1.877.GO.FESTO (1.877.463.3786)
Fax: 1.877.FX.FESTO (1.877.393.3786)
Email: festo.canada@ca.festo.com

USA Headquarters

Festo Corporation
395 Moreland Road
P.O. Box 18023
Hauppauge, NY 11788, USA
www.festo.com/us

USA Sales Offices

Appleton
North 922 Tower View Drive, Suite N
Greenville, WI 54942, USA

Boston
120 Presidential Way, Suite 330
Woburn, MA 01801, USA

Chicago
1441 East Business Center Drive
Mt. Prospect, IL 60056, USA

Dallas
1825 Lakeway Drive, Suite 600
Lewisville, TX 75057, USA

Detroit – Automotive Engineering Center
2601 Cambridge Court, Suite 320
Auburn Hills, MI 48326, USA

New York
395 Moreland Road
Hauppauge, NY 11788, USA

Silicon Valley
4935 Southfront Road, Suite F
Livermore, CA 94550, USA

United States

USA Headquarters, East: Festo Corp., 395 Moreland Road, Hauppauge, NY 11788
Phone: 1.631.435.0800; Fax: 1.631.435.8026;
Email: info@festo-usa.com **www.festo.com/us**

Canada

Headquarters: Festo Inc., 5300 Explorer Drive, Mississauga, Ontario L4W 5G4
Phone: 1.905.624.9000; Fax: 1.905.624.9001;
Email: festo.canada@ca.festo.com **www.festo.ca**

Mexico

Headquarters: Festo Pneumatic, S.A., Av. Ceylán 3, Col. Tequesquinahuac,
54020 Tlalnepantla, Edo. de México
Phone: 011 52 [55] 53 21 66 00; Fax: 011 52 [55] 53 21 66 65;
Email: festo.mexico@mx.festo.com **www.festo.com/mx**

Central USA
Festo Corporation
1441 East Business
Center Drive
Mt. Prospect, IL 60056, USA
Phone: 1.847.759.2600
Fax: 1.847.768.9480

Western USA
Festo Corporation
4935 Southfront Road,
Suite F
Livermore, CA 94550, USA
Phone: 1.925.371.1099
Fax: 1.925.245.1286

Festo Worldwide

Argentina Australia Austria Belarus Belgium Brazil Bulgaria Canada Chile China Colombia Croatia Czech Republic Denmark Estonia Finland France Germany Great Britain Greece Hong Kong Hungary India Indonesia Iran Ireland Israel Italy Japan Latvia Lithuania Malaysia Mexico Netherlands New Zealand Norway Peru Philippines Poland Romania Russia Serbia Singapore Slovakia Slovenia South Africa South Korea Spain Sweden Switzerland Taiwan Thailand Turkey Ukraine United States Venezuela

www.festo.com