Toothed belt axes EGC-TB-KF, with recirculating ball bearing guide

FESTO

Electromechanical drives

Selection aid

FESTO

Overview of toothed belt and spindle axes

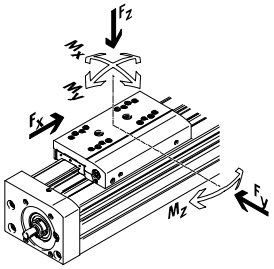
Toothed belt axes

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

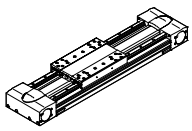
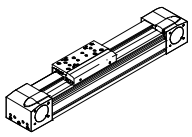
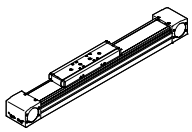
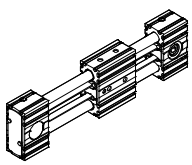
Spindle axes

- Speeds of up to 2 m/s
- Acceleration of up to 20 m/s^2
- 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]	Mx [Nm]	My [Nm]	Mz [Nm]	Properties
Heavy-duty recirculating ball bearing guide						
EGC-HD-TB						
	450 1000 1800	3 5 5	140 300 900	275 500 1450	275 500 1450	• Flat drive unit with rigid, closed profile • Precision, resilient DUO guide rail • Ideal as a basic axis for linear gantries and cantilever axes
Recirculating ball bearing guide						
EGC-TB-KF						
	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	• Rigid, closed profile • Precision, resilient guide rail • Small drive pinions reduce necessary driving torque • Space-saving position sensing
ELGA-TB-KF						
	350 800 1300 2000	5 5 5 5	16 36 104 167	132 228 680 1150	132 228 680 1150	• Internal guide and toothed belt • Precision, resilient guide rail • Guide and toothed belt protected by cover strip • High feed forces
ELGR-TB						
	50 100 350	3 3 3	2.5 5 15	20 40 124	20 40 124	• Cost-optimised rod guide • Ready-to-install unit • Resilient ball bearings for dynamic operation

Electromechanical drives

Selection aid

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Overview of toothed belt and spindle axes

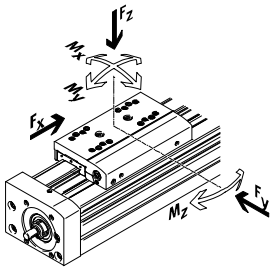
Toothed belt axes

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

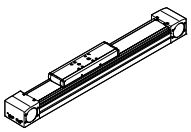
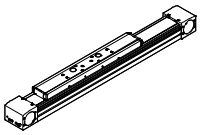
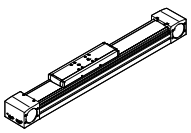
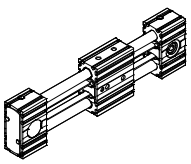
Spindle axes

- Speeds of up to 2 m/s
- Acceleration of up to 20 m/s^2
- 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]	Mx [Nm]	My [Nm]	Mz [Nm]	Properties
Roller bearing guide						
ELGA-TB-RF						
	350 800 1300	10 10 10	11 30 100	40 180 640	40 180 640	• Sturdy roller bearing guide • Guide and toothed belt protected by cover strip • Speeds of up to 10 m/s • Lower weight than axes with guide rails
ELGA-TB-RF-F1						
	260 600 1000	10 10 10	8.8 24 80	32 144 512	32 144 512	• Suitable for use in the food zone • Sturdy roller bearing guide • Guide and toothed belt protected by cover strip • Speeds of up to 10 m/s • Lower weight than axes with guide rails
Plain-bearing guide						
ELGA-TB-G						
	350 800 1300	5 5 5	5 10 120	30 60 120	10 20 40	• Guide and toothed belt protected by cover strip • For simple handling tasks • As an actuator for external guides • Insensitive to harsh environmental conditions
ELGR-TB-GF						
	50 100 350	1 1 1	1 2.5 1	10 20 40	10 20 40	• Cost-optimised rod guide • Ready-to-install unit • Heavy-duty plain bearings for use in harsh environmental conditions

Electromechanical drives

Selection aid

Overview of toothed belt and spindle axes

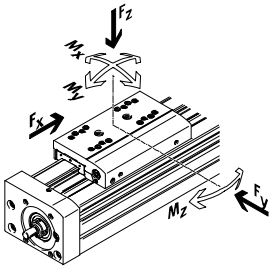
Toothed belt axes

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

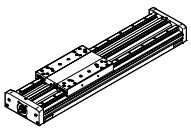
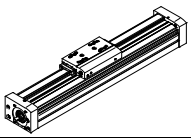
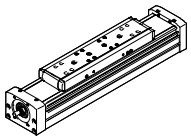
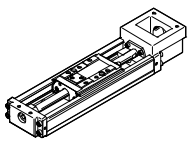
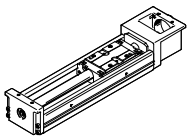
Spindle axes

- Speeds of up to 2 m/s
- Acceleration of up to 20 m/s^2
- 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]	Mx [Nm]	My [Nm]	Mz [Nm]	Properties
Heavy-duty recirculating ball bearing guide						
EGC-HD-BS						
	300 600 1300	0.5 1.0 1.5	140 300 900	275 500 1450	275 500 1450	• Flat drive unit with rigid, closed profile • Precision, resilient DUO guide rail • Ideal as a basic axis for linear gantries and cantilever axes
Recirculating ball bearing guide						
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	• Rigid, closed profile • Precision, resilient guide rail • For extremely high requirements for speed force and precision • Space-saving position sensing
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	• Internal guide and ball screw • Precision guide rail with high load capacity • For the highest requirements for feed force and precision • Guide and ball screw protected by cover strip • Space-saving position sensing
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	• Spindle axes with maximum precision, compactness and rigidity • Recirculating ball bearing guide and ball screw without caged ball bearings • Standard designs in stock
EGSP						
	112 212 466 460	0.6 0.6 2.0 2.0	36.3 81.5 90.3 258	12.5 31.6 32.1 94	12.5 31.6 32.1 94	• Spindle axes with maximum precision, compactness and rigidity • Recirculating ball bearing guide with caged ball bearings • Ball screw sizes 33, 46 with caged ball bearings

Toothed belt axes EGC-TB-KF, with recirculating ball bearing guide

Key features

At a glance

Powerful

- Generously sized profiles with an optimised cross section afford maximum rigidity and load capacity
- Speed, acceleration and torque resistance set a new standard

Economical

- In addition to its technical data, the toothed belt axis also offers an excellent price/performance ratio
- Due to the EGC's high performance it is often possible to use a smaller size

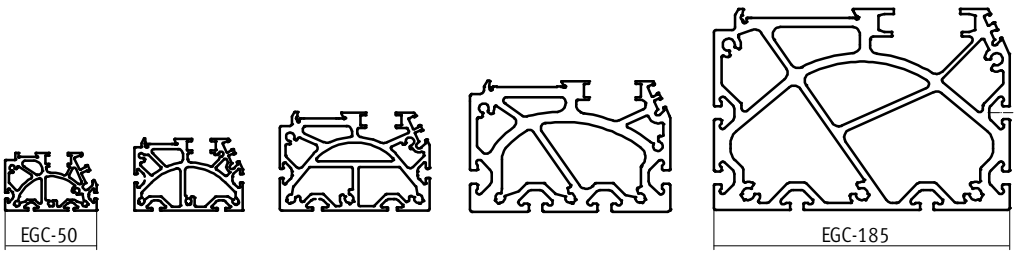
Versatile

- Numerous sizes and variants such as protected guides open up a broad range of applications
- Space-saving position sensing with proximity sensors in the profile slot is possible
- Wide range of options for mounting on drives
- Comprehensive range of mounting accessories for multi-axis combinations

Flexible motor attachment

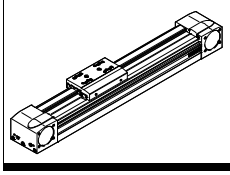
The motor position can be freely selected on four sides and can be changed at any time.

Comprehensive range for the most varied load conditions



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	Speed	Repetition accuracy	Feed force	Guide characteristics				
						Forces and torques				
						Fy	Fz	Mx	My	Mz
		[mm]	[m/s]	[mm]	[N]	[N]	[N]	[Nm]	[Nm]	[Nm]
Recirculating ball bearing guide										
	50	50 ... 1900	3	±0.08	50	650	650	3.5	10	10
	70	50 ... 5000	5	±0.08	100	1850	1850	16	132	132
	80	50 ... 8500	5	±0.08	350	3050	3050	36	228	228
	120	50 ... 8500	5	±0.08	800	6890	6890	144	680	680
	185	50 ... 8500	5	±0.1	2500	15200	15200	529	1820	1820

Note

PositioningDrives sizing software
www.festo.com

Toothed belt axes EGC-TB-KF, with recirculating ball bearing guide

Key features

Slide variants

Standard slide

Extended slide

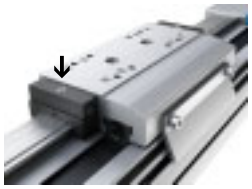
Additional slide

Guide options

Protected version

- The protected guide cleans the guide rail and protects the recirculating ball bearing guide with the aid of an additional wiper

With central lubrication ➔ 23

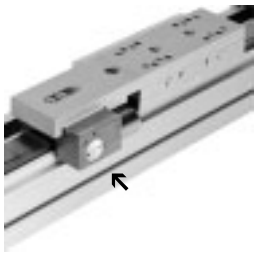


- The lubrication adapter enables the guide to be permanently lubricated using semi or fully automatic relubrication devices
- The adapters are suitable for oils and greases
- Both lubrication adapters must be connected

Displacement encoder ➔ 14

- The position of the slide can be sensed directly when using the incremental displacement encoder. This means that all elasticities of the drive train can be detected and can be corrected by the motor controller

Clamping unit ➔ 15



- 1 or 2-channel design, for holding loads
- Reliable holding is guaranteed since the forces act directly on the slide
- A limited number of emergency braking operations are permissible with the sizes 120 and 185

Toothed belt axes EGC-TB-KF, with recirculating ball bearing guide

Key features

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

Toothed belt axis with recirculating ball bearing guide

Motor ➔46

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

- Note

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

Motorcontroller Technical data ➔ Internet: motorcotroller

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

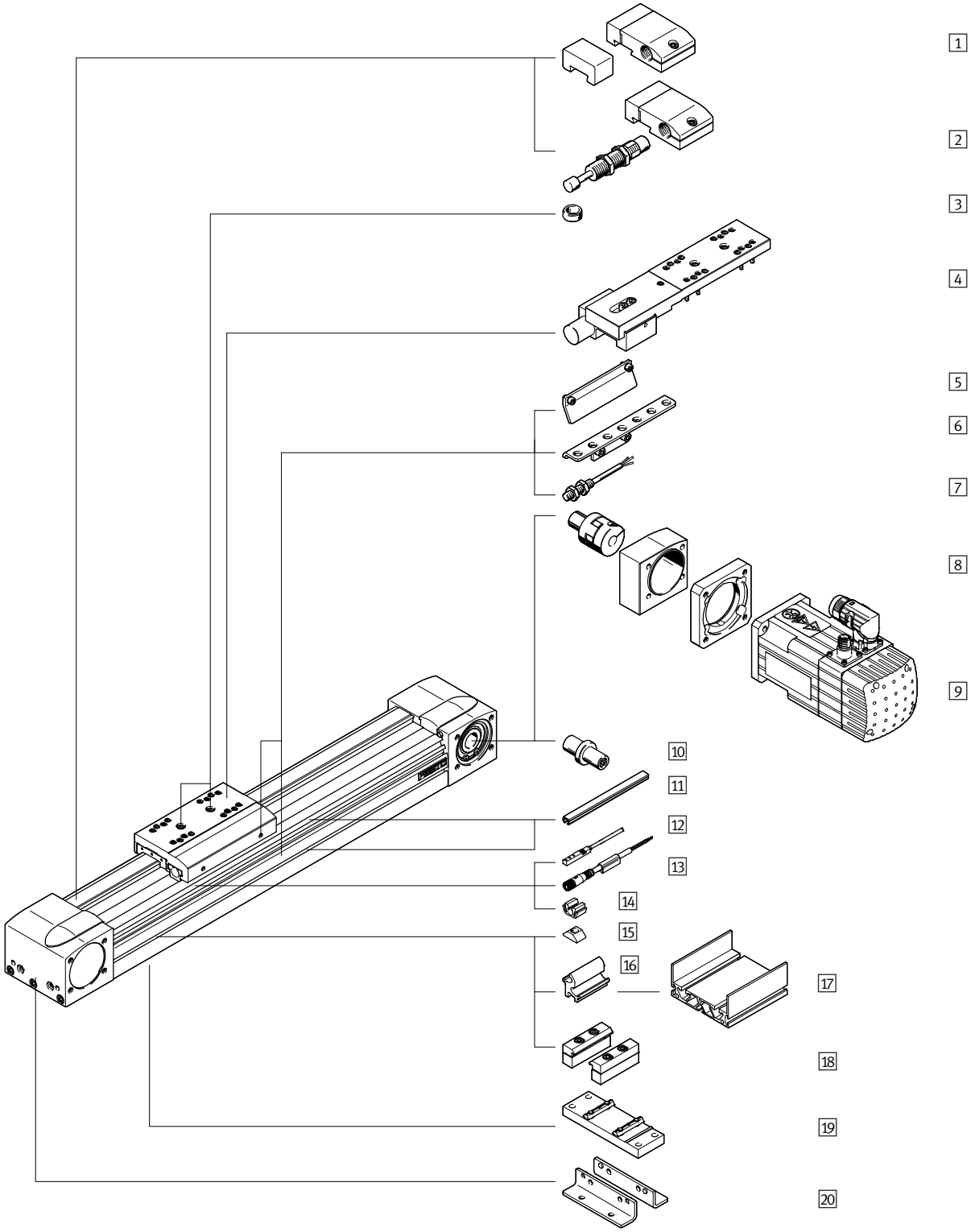
Motor mounting kit ➔46

Axial kit

Kit comprising:
- Motor flange
- Coupling housing
- Coupling
- Screws

Toothed belt axes EGC-TB-KF, with recirculating ball bearing guide

Peripherals overview



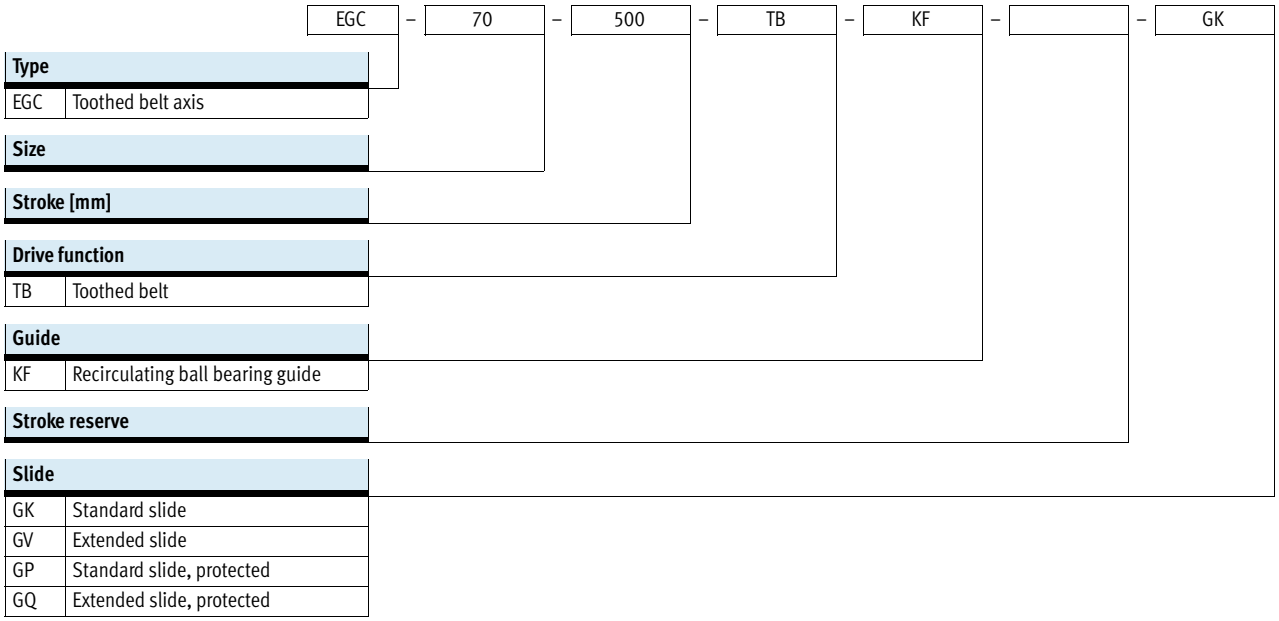
Toothed belt axes EGC-TB-KF, with recirculating ball bearing guide

Peripherals overview

Variants and accessories			
	Type	Description	➔ Page/Internet
1	Emergency buffer with retainer A	For avoiding damage at the end stop in the event of malfunction	53
2	Shock absorber with retainer C	For avoiding damage at the end stop in the event of malfunction	53
3	Centring pin/sleeve ZBS, ZBH	• For centring loads and attachments on the slide • 2 centring pins/sleeves included in the scope of delivery of the axis	56
4	Clamping unit 1H...-PN, 2H-PN	For holding loads	15
5	Switch lug X, Z, O, P, W, R	For sensing the slide position	53
6	Sensor bracket O, P, W, R	Adapter for mounting the inductive proximity sensors (round design) on the axis	54
7	Proximity sensor, M8 O, P, W, R	• Inductive proximity sensor, round design • The order code O, P, W, R includes 1 switch lug and max. 2 sensor brackets in the scope of delivery	58
8	Axial kit EAMM_A	For axial motor mounting (consisting of: coupling, coupling housing and motor flange)	46
9	Motor EMME, EMMS	Motors specially matched to the axis, with or without gear unit, with or without brake	46
10	Drive shaft K	• Can, if required, be used as an alternative interface • No drive shaft is required for the axis/motor combinations ➔ from 46	55
11	Slot cover B, S	• For protecting against ingress of dirt	56
12	Proximity sensor, T-slot X, Z	• Inductive proximity sensor, for T-slot • The order code X, Z includes 1 switch lug in the scope of delivery	57
13	Connecting cable V	For proximity sensor (order code W and R)	58
14	Clip CL	For mounting the proximity sensor cable in the slot	56
15	Slot nut Y	For mounting attachments	56
16	Adapter kit DHAM	For mounting the support profile on the axis	57
17	Support profile HMIA	For mounting and guiding an energy chain	57
18	Profile mounting M	For mounting the axis on the side of the profile	51
19	Central support EAHF EAHF-L5	For mounting the axis from underneath on the profile	52
20	Foot mounting F	For mounting the axis on the end cap	50
–	Passive guide axis EGC-FA	Axis without drive	egc-fa
–	Connecting shaft KSK	For connecting two toothed belt axes EGC-TB in three-dimensional gantries	ksk

Toothed belt axes EGC-TB-KF, with recirculating ball bearing guide

Type codes



Type	
EGC	Toothed belt axis

Size	

Stroke [mm]	

Drive function	
TB	Toothed belt

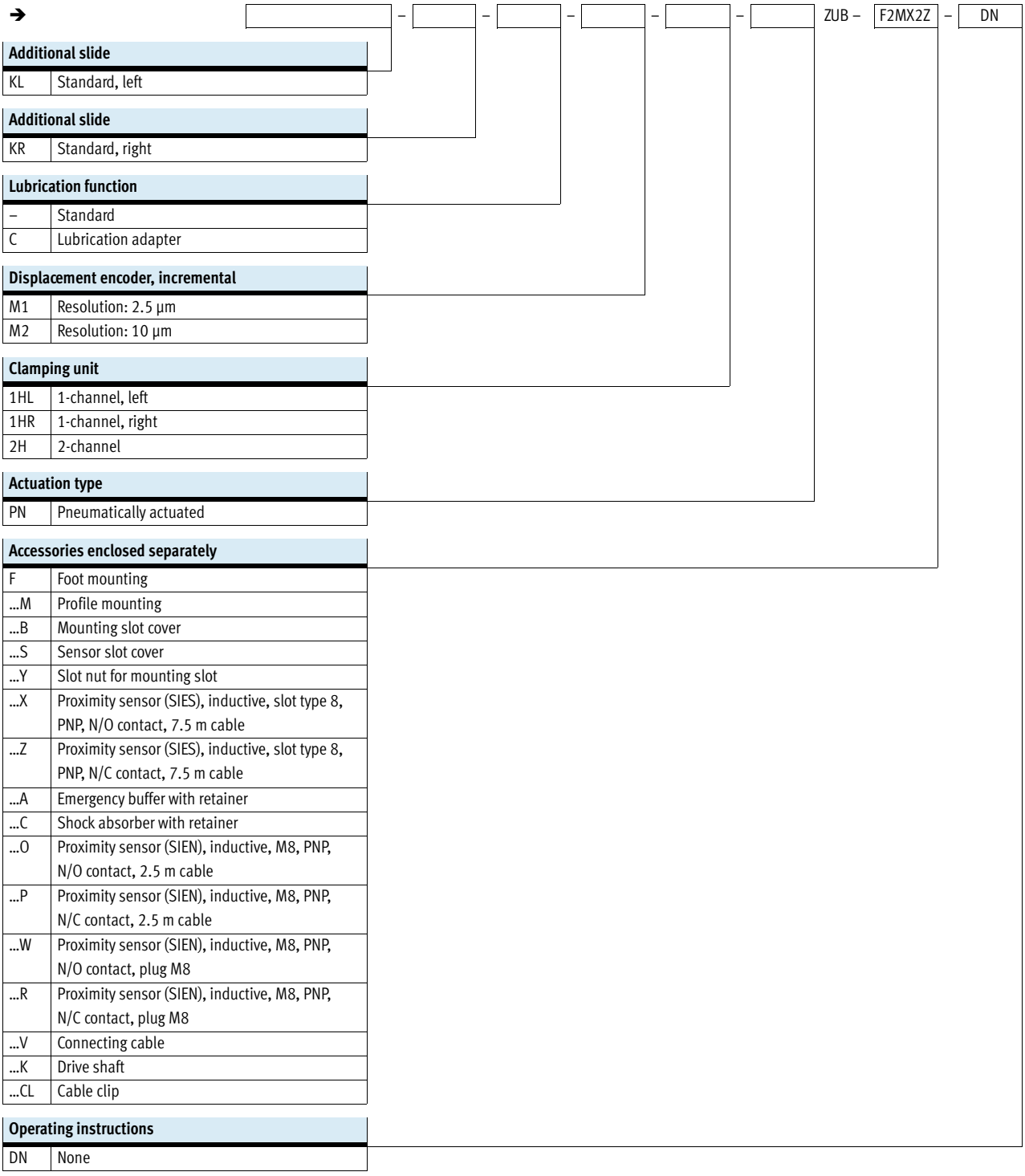
Guide	
KF	Recirculating ball bearing guide

Stroke reserve	

Slide	
GK	Standard slide
GV	Extended slide
GP	Standard slide, protected
GQ	Extended slide, protected

Toothed belt axes EGC-TB-KF, with recirculating ball bearing guide

Type codes



Additional slide	
KL	Standard, left

Additional slide	
KR	Standard, right

Lubrication function	
–	Standard
C	Lubrication adapter

Displacement encoder, incremental	
M1	Resolution: 2.5 µm
M2	Resolution: 10 µm

Clamping unit	
1HL	1-channel, left
1HR	1-channel, right
2H	2-channel

Actuation type	
PN	Pneumatically actuated

Accessories enclosed separately	
F	Foot mounting
...M	Profile mounting
...B	Mounting slot cover
...S	Sensor slot cover
...Y	Slot nut for mounting slot
...X	Proximity sensor (SIES), inductive, slot type 8, PNP, N/O contact, 7.5 m cable
...Z	Proximity sensor (SIES), inductive, slot type 8, PNP, N/C contact, 7.5 m cable
...A	Emergency buffer with retainer
...C	Shock absorber with retainer
...O	Proximity sensor (SIEN), inductive, M8, PNP, N/O contact, 2.5 m cable
...P	Proximity sensor (SIEN), inductive, M8, PNP, N/C contact, 2.5 m cable
...W	Proximity sensor (SIEN), inductive, M8, PNP, N/O contact, plug M8
...R	Proximity sensor (SIEN), inductive, M8, PNP, N/C contact, plug M8
...V	Connecting cable
...K	Drive shaft
...CL	Cable clip

Operating instructions	
DN	None

Toothed belt axes EGC-TB-KF, with recirculating ball bearing guide

Technical data

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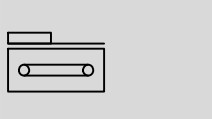
Function



Size
50 ... 185

Stroke length
50 ... 8500 mm

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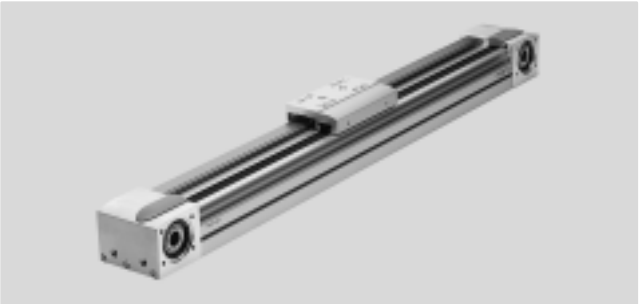


General technical data						
Size		50	70	80	120	185
Design		Electromechanical axis with toothed belt				
Guide		Recirculating ball bearing guide				
Mounting position		Any				
Working stroke						
EGC-...-GK/-GP	[mm]	50 ... 1900	50 ... 5000	50 ... 8500	50 ... 8500	50 ... 8500
EGC-...-GV/-GQ	[mm]	50 ... 1900	50 ... 5000	50 ... 8500	50 ... 8400	50 ... 8400
Max. feed force F_x	[N]	50	100	350	800	2500
Max. no-load torque[1)]	[Nm]	0.072	0.18	0.4	1.4	4.05
Max. no-load resistance to shifting[1)]	[N]	8	14.5	28	70	110
Max. driving torque	[Nm]	0.46	1.24	5	16	93
Max. speed	[m/s]	3	5			
Max. acceleration	[m/s^2]	50				
Repetition accuracy	[mm]	±0.08				±0.1

1) At 0.2m/s, with variant GK or GV

Operating and environmental conditions		
Ambient temperature	[°C]	–10 ... +60
Protection class		IP40
Duty cycle	[%]	100

Toothed belt axes EGC-TB-KF, with recirculating ball bearing guide

Technical data

Weight [g]						
Size		50	70	80	120	185
Basic weight with 0 mm stroke[1]						
EGC-...-GK/-GP		620	1850	3000	10500	32600
EGC-...-GV/-GQ		–	2470	3900	12600	36800
Additional weight per 10 mm stroke		19	44	62	150	300
Moving load						
EGC-...-GK/-GP		130	370	620	2180	6500
EGC-...-GV/-GQ		–	550	900	2730	7720
Additional slide						
EGC-...-KL/-KR		80	300	550	2000	6000
Clamping unit						
EGC-...-1H...-PN		–	–	700	2300	4900
EGC-...-2H-PN		–	–	1300	4000	8300

1) Incl. slide

Toothed belt						
Size		50	70	80	120	185
Pitch	[mm]	2	3	3	5	8
Expansion[1]	[%]	0.094	0.08	0.24	0.13	0.29
Width	[mm]	10	15	19.3	30.3	50.5
Effective diameter	[mm]	18.46	24.83	28.65	39.79	73.85
Feed constant	[mm/rev.]	58	78	90	125	232

1) At max. feed force

Mass moment of inertia						
Size		50	70	80	120	185
J_O						
EGC-...-GK	[kg mm^2]	16.94	83.34	205.9	1241	17976
EGC-...-GV	[kg mm^2]	–	110	265	1465	19690
J_H per metre stroke	[kg mm^2/m]	2.6	10.6	18.8	93	760
J_L per kg effective load	[kg mm^2/kg]	85	154	205	396	1363.5
J_W Additional slide	[kg mm^2]	3.56	56.32	126.73	861	8846
J_F Clamping unit						
EGC-...-1H...-PN	[kg mm^2]	–	–	143.5	911	6681
EGC-...-2H-PN	[kg mm^2]	–	–	266.5	1584	11317

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

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

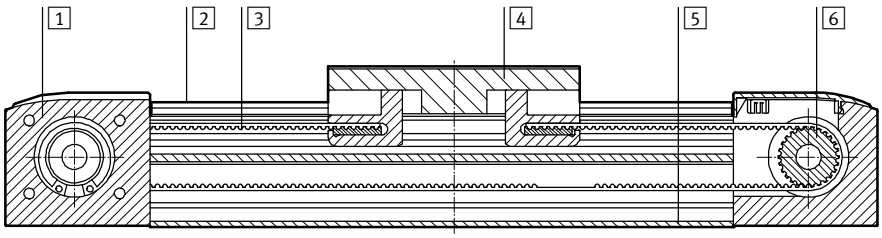
K= Number of additional slides

Toothed belt axes EGC-TB-KF, with recirculating ball bearing guide

Technical data

Materials

Sectional view



Axis	
1 Drive cover	Anodised wrought aluminium alloy
2 Guide rail	High-alloy steel
3 Toothed belt	Polychloroprene with glass cord and nylon coating
4 Slide	Anodised wrought aluminium alloy
5 Profile	Anodised wrought aluminium alloy
6 Toothed belt disc	High-alloy stainless steel
Note on materials	RoHS-compliant
	Contains PWIS (paint-wetting impairment substances)

Technical data – Displacement encoder			Dimensions ➔ 40
Order code		EGC-...-M1	EGC-...-M2
Resolution	[µm]	2.5	10
Max. travel speed with motor controller CMMP-AS-...	[m/s]	4	4
Encoder signal		5 V TTL; A/A, B/B without zero pulse	
Signal output		Line Driver, push-pull, proof against continuous short circuits	
Electrical connection		8-pin plug, round design, M12	
Cable length	[mm]	160	

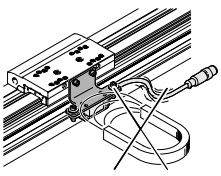
Operating and environmental conditions – Displacement encoder		
Ambient temperature	[°C]	–10 ... +70
Protection class		IP64
CE marking (see declaration of conformity)		To EU EMC Directive[1)]

1) For information about the applicability of the component see the manufacturer's EC declaration of conformity at: www.festo.com/sp ➔ User documentation.
If the component is subject to restrictions on usage in residential, office or commercial environments or small businesses, further measures to reduce the emitted interference may be necessary.

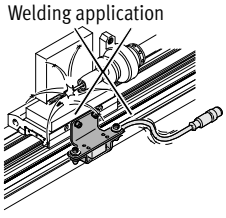
Instructions for use

The toothed belt axis with displacement encoder is not designed for the following sample applications:

- Magnetic field



- Welding application



Technical data – Clamping unit				Dimensions ➔ 36
Size		80	120	185
Pneumatic connection		M5	M5	M5
Clamping type		Clamping via spring force, released via compressed air		
Static holding force				
EGC-...-1H...-PN	[N]	320	1200	1500
EGC-...-2H-PN	[N]	640	2400	3000
Max. number of emergency braking operations[1] at reference energy	[Nm]	–	750 35	750 70
Number of clamping operations under nominal load	[million switching cycles]	0.45	0.05	> 1.4

1) Emergency braking refers to braking the effective load if the drive axis loses power.

Operating and environmental conditions – Clamping unit		
Operating medium		Compressed air according to ISO 8573-1:2010 [7:4:4]
Operating pressure		
Clamping unit opened	[bar]	4.5 ... 8
Clamping unit closed	[bar]	Pressureless
Ambient temperature	[°C]	–10 ... +60

Note

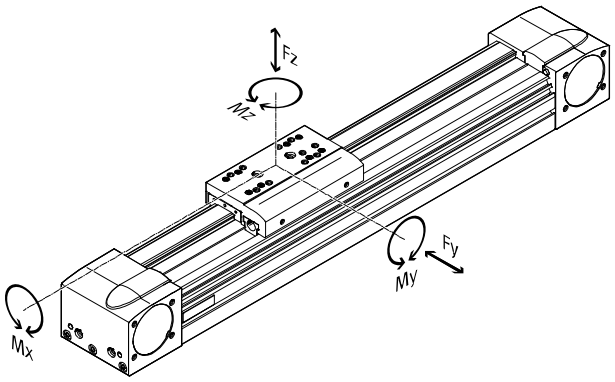
The axis can only be relubricated with the lubrication adapter when used in combination with the clamping unit (EGC-...-C).

Toothed belt axes EGC-TB-KF, with recirculating ball bearing guide

Technical data

Characteristic load values

The indicated forces and torques refer to the slide surface. 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.



Max. permissible forces and torques for a service life of 5000 km						
Size		50	70	80	120	185
$Fy_{max.}$	[N]	650	1850	3050	6890	15200
Fz_{max}	[N]	650	1850	3050	6890	15200
$Mx_{max.}$	[Nm]	3.5	16	36	144	529
$My_{max.}/Mz_{max.}$						
EGC-...-GK/-GP	[Nm]	10	51	97	380	1157
$My_{max.}/Mz_{max.}$						
EGC-...-GV/-GQ	[Nm]	–	132	228	680	1820

Note

For a service life of 5000 km for the guide system, the load comparison factor must have a value of fv < 1, based on the maximum permissible forces and torques for a service life of 5000 km.

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

Calculating the load comparison factor:

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

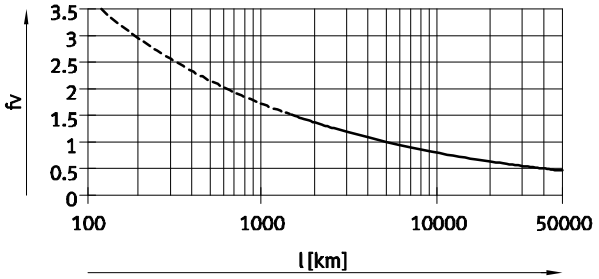
Calculating service life

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.

These values are only theoretical. You must consult your local contact person at Festo for load comparison factors f_v greater than 1.5.

Load comparison factor f_v as a function of service life

Example:
A user wants to move an X kg load. Using the formula ➔ 16 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. 1500 km. Reducing the acceleration reduces the Mz and My values. A load comparison factor f_v of 1 now gives a service life of 5000 km.



Note

PositioningDrives sizing software www.festo.com

The guide workload for a service life of 5000 km can be calculated with the help of the sizing software.

f_v > 1.5 are only theoretical comparison values for the recirculating ball bearing guide.

Comparison of the characteristic load values for 5000 km with dynamic forces and torques of recirculating ball bearing guides

The characteristic load values of roller bearing guides are standardised to ISO and JIS using dynamic and static forces and torques. These forces and torques are based on an expected service life for the guide system of 100 km to ISO or 50 km to JIS.

As the characteristic load values are dependent on the service life, the max. permissible forces and torques for a service life of 5000 km cannot be compared with the dynamic forces and torques of roller bearing guides to ISO/JIS.

To make it easier to compare the guide capacity of linear axes EGC with roller bearing guides, the table below lists the theoretically permissible forces and torques for a calculated service life of 100 km. This corresponds to the dynamic forces and torques to ISO.

These 100 km values have been calculated mathematically and are only to be used for comparing with dynamic forces and torques to ISO. The drives must not be loaded with these characteristic values as this could damage them.

Max. permissible forces and torques for a theoretical service life of 100 km (from a guide perspective only)

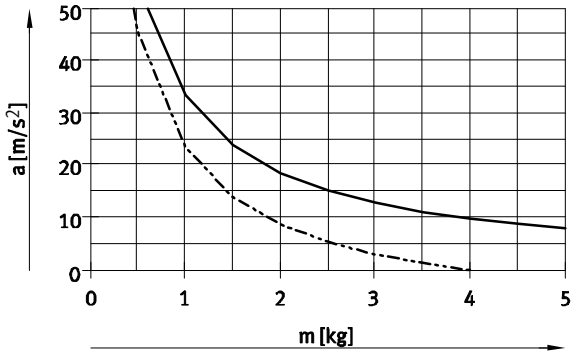
Size		50	70	80	120	185
$Fy_{max.}$	[N]	2395	6815	11236	25383	55997
$Fz_{max.}$	[N]	2395	6815	11236	25383	55997
$Mx_{max.}$	[Nm]	13	59	133	531	1949
$My_{max.}/Mz_{max.}$						
EGC-...-GK/-GP	[Nm]	37	188	357	1400	4262
$My_{max.}/Mz_{max.}$						
EGC-...-GV/-GQ	[Nm]	–	486	840	2505	6705

Toothed belt axes EGC-TB-KF, with recirculating ball bearing guide

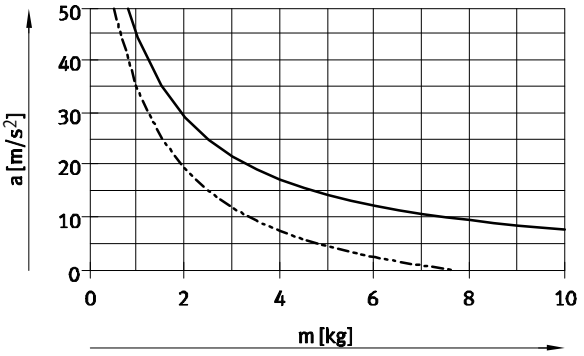
Technical data

Maximum acceleration a as a function of applied load m

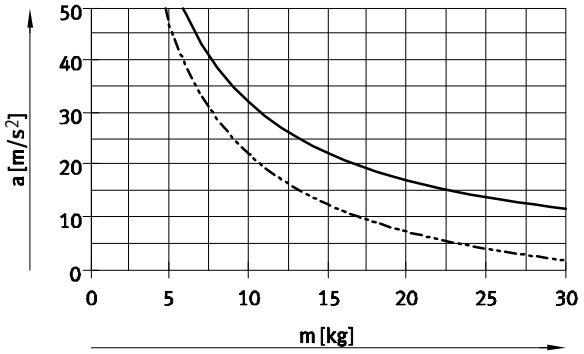
EGC-50



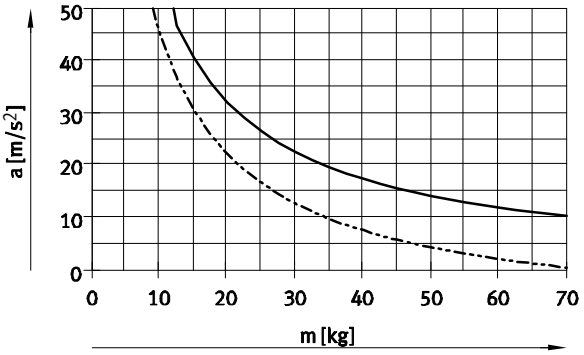
EGC-70



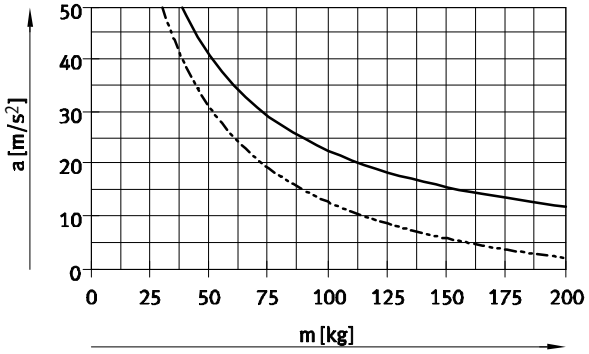
EGC-80



EGC-120



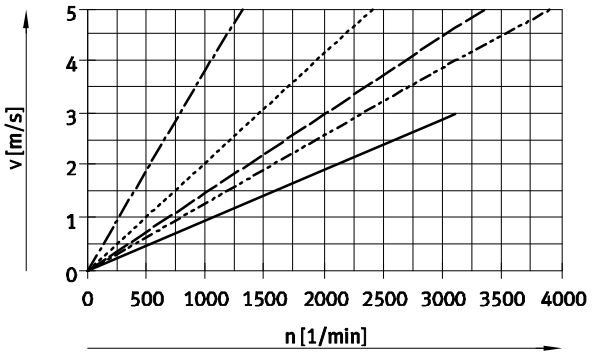
EGC-185



Horizontal mounting position

Vertical mounting position

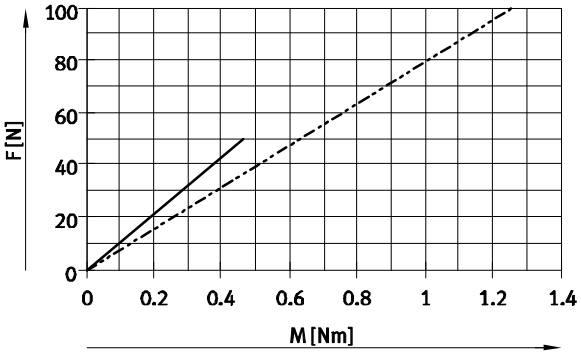
Speed v as a function of rotational speed n



EGC-50
EGC-70
EGC-80
EGC-120
EGC-185

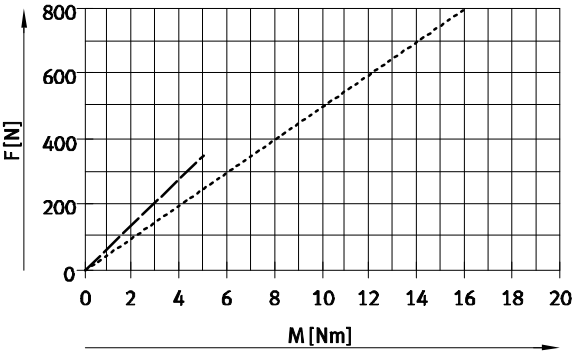
Theoretical feed force F as a function of input torque M

EGC-50/-70



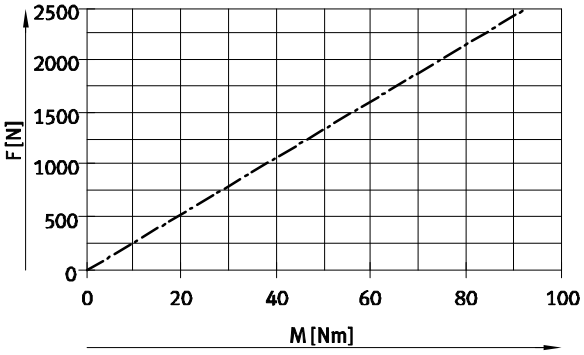
EGC-50
EGC-70

EGC-80/-120



EGC-80
EGC-120

EGC-185



EGC-185

Toothed belt axes EGC-TB-KF, with recirculating ball bearing guide

Technical data

FESTO

Stroke reserve

Stroke length — Stroke reserve

The selected stroke corresponds in principle to the required working stroke. The variants GK/GV do not have a wiper seal on the guide. These variants therefore additionally have a safety distance between the drive cap and slide that is not designated as part of the working stroke.

A safety distance (similar to GK/GV) between the drive cap and slide can be defined for the variants GP/GQ and GK-C/GV-C using the modular product system via the "stroke reserve" feature. With the variants GK/GV, the stroke reserve and safety distance are added for each end position.

- The stroke reserve length can be freely selected
- The sum of the stroke length and 2x stroke reserve must not exceed the maximum working stroke

Example:

EGC-70-500-TB-KF-20H-...

Working stroke = 500 mm

2x stroke reserve = 40 mm

Total stroke = 540 mm

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

Size		50	70	80	120	185
L9 = safety distance with GK/GV (per end position)	[mm]	–	10.5	13	18	21

Working stroke reduction

With standard slide GK/GP / extended slide GV/GQ with additional slide KL/KR

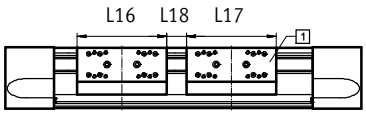
- With a toothed belt axis with additional slide, the working stroke is reduced by the length of the additional slide and the distance between both slides
- If the variant GP/GQ is ordered, the additional slide is also protected
- If the variant GV/GQ is ordered, the additional slide is not extended
- If the variant GK-C/GV-C is ordered, the additional slide is also supplied with lubrication adapters

L16 = Slide length

L17 = Additional slide length

L18 = Distance between both slides

1 Additional slide



Example:

Type EGC-70-500-TB-...-GK-KR

Working stroke without additional slide = 500 mm

L18 = 20 mm

L16, L17 = 100 mm

Working stroke with additional slide = 380 mm

(500 mm – 20 mm – 100 mm)

Dimensions – Additional slide										
Size		50	70		80		120		185	
Variant		GK/GV	GK/GV	GP/GQ	GK/GV	GP/GQ or GK-C/GV-C	GK/GV	GP/GQ or GK-C/GV-C	GK/GV	GK-C/GV-C
Length L17	[mm]	65	100	121	120	146	203.3	236	282.8	322
Min. distance between the slides L18	[mm]	–	–	21	–	26	–	36	–	42

Working stroke reduction per side

With integrated emergency buffer NPE/shock absorber YSRW with shock absorber retainer KYE

- The working stroke is reduced by the total dimension of the emergency buffer/shock absorber and shock absorber retainer.
- The rubber buffer in the cap must be removed.
- Shock absorbers must not be used in combination with lubrication adapters.

Size		50	70	80	120	185
With emergency buffer	[mm]	30	43	68	98	133
With shock absorber	[mm]	26	42	63	84	107

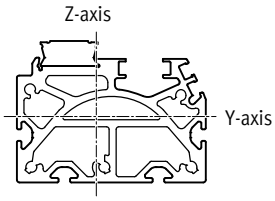
Working stroke reduction

With integrated clamping unit

- The working stroke is reduced by the length of the clamping unit.
- With 1-channel clamping units, the stroke is reduced on one side with respect to the mounting surface.
- With 2-channel clamping units, the stroke is reduced symmetrically with respect to the mounting surface of the load.
- Shock absorbers must not be used in combination with the clamping unit.

Size		80	120	185
EGC-...-1H...-PN	[mm]	87	124	131
EGC-...-2H-PN	[mm]	174	248	262

Second moment of area

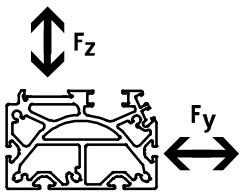


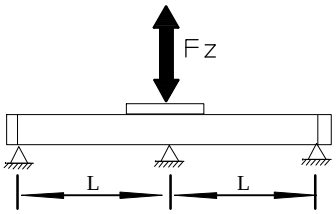
Size		50	70	80	120	185
Iy	[mm^4]	$8.4x10^4$	$3.95x10^5$	$8.44x10^5$	$4.62x10^6$	$2.34x10^7$
Iz	[mm^4]	$1.14x10^5$	$5.77x10^5$	$1.16x10^6$	$5.65x10^6$	$2.74x10^7$

Maximum permissible support span L (without profile mounting MUE/central support EAHF) as a function of force F

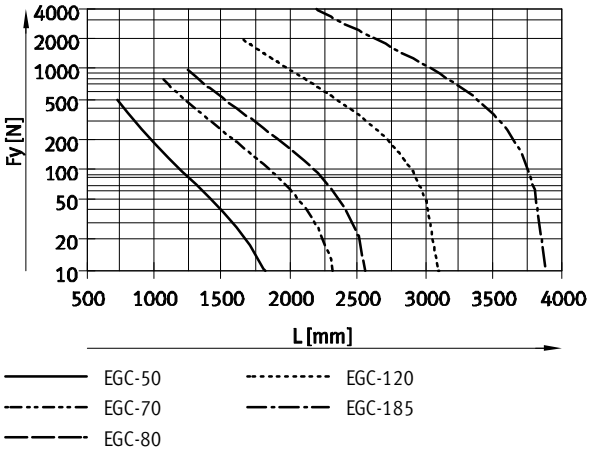
In order to limit deflection in the case of large strokes, the axis may need to be supported.

The following graphs can be used to determine the maximum permissible support span l as a function of force F acting on the axis. The deflection is f = 0.5 mm.



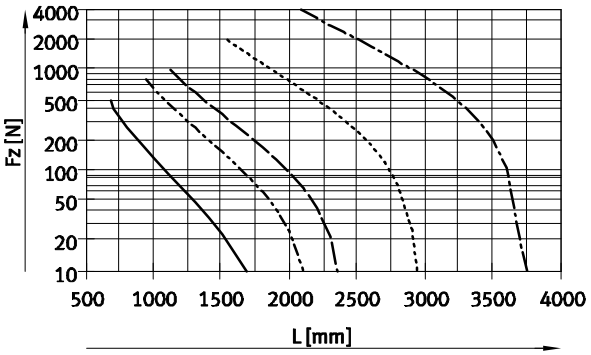


Force Fy



EGC-50
EGC-70
EGC-80
EGC-120
EGC-185

Force Fz



Recommended deflection limits

Adherence to the following deflection limits 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.

Size	Dyn. deflection (load moving)	Stat. deflection (load stationary)
50 ... 185	0.05% of the axis length, max. 0.5 mm	0.1% of the axis length

Toothed belt axes EGC-TB-KF, with recirculating ball bearing guide

Technical data

Central lubrication

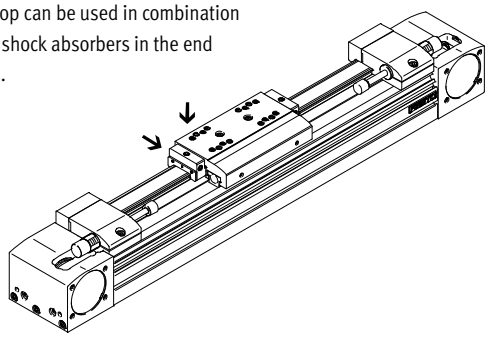
The lubrication adapter enables the guide of the toothed belt axis EGC-TB to be permanently lubricated in applications in humid or wet ambient conditions using semi or fully automatic relubrication devices.

- For size 80, 120, 185
- The modules are suitable for oils and greases
- The dimensions of the toothed belt axis EGC-TB are the same with and without central lubrication modules
- Both lubrication adapters must be connected
- There are three connection options on each side
- Can be used in combination with:
  - Standard slide GK
  - Additional slide KL, KR
- Cannot be used in combination with:
  - Protected recirculating ball bearing guide GP

Slide dimensions
➔ 31
Order code C in the modular product system ➔ 44

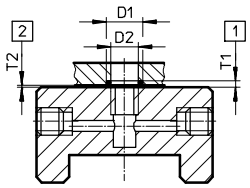
Connection options

Only the connection at the rear or on the top can be used in combination with shock absorbers in the end caps.



Connection option for customer design

The drawing opposite shows the connection option on the top lubrication interface using a customer design.



D1 $8^{+0.2}$ mm
D2 6 mm
T1 $0.6_{-0.05}$ mm
T2 $0.1^{+0.2}$ mm
O-ring ∅ 6x1 mm (DIN3771)

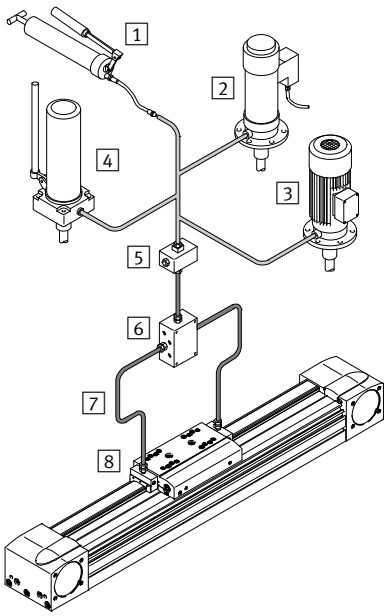
1 Slot depth for O-ring
2 Required air gap

Additional dimensions ➔ 31

Structure of a central lubrication system

A central lubrication system requires various additional components. The illustration shows different options (using a hand pump, pneumatic container pump or electric container pump) required as a minimum for designing a central lubrication system. Festo does not sell these additional components, however they can be obtained from the following companies:
- Lincoln
- Bielomatik
- SKF (Vogel)

Festo recommends these companies because they can supply all the necessary components.

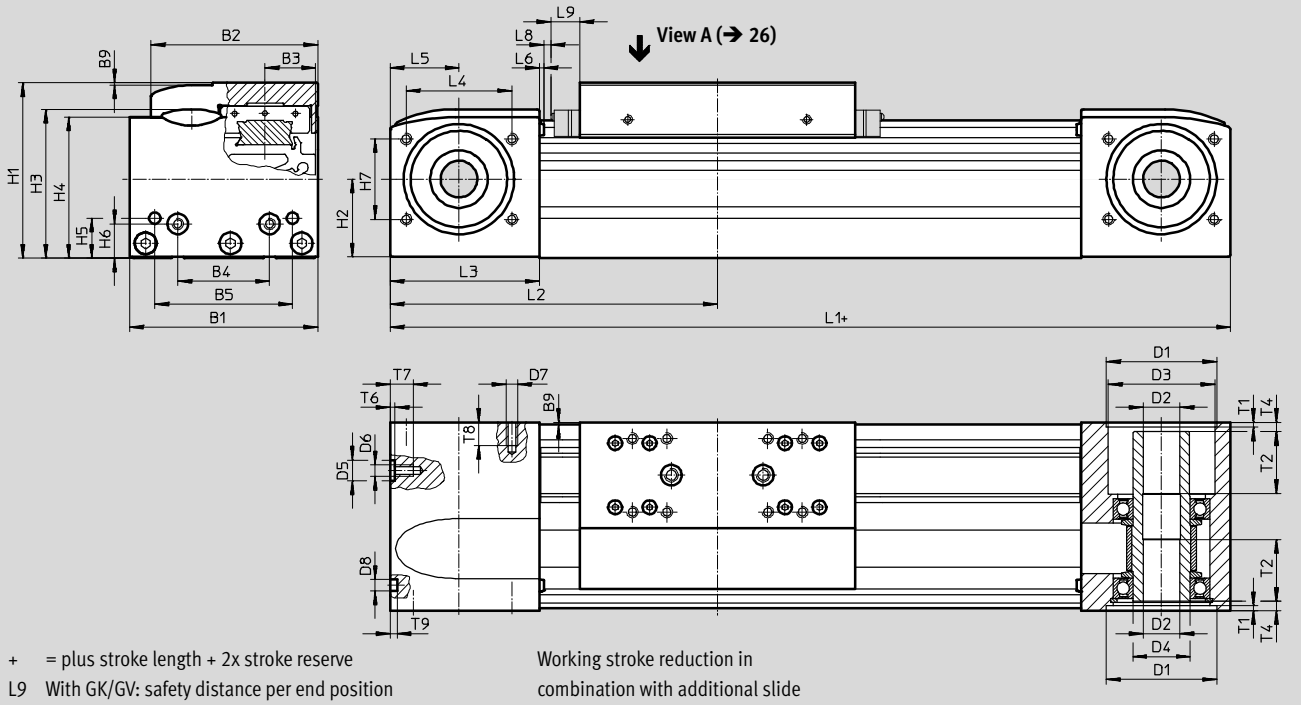


1 Hand pump
2 Pneumatic container pump
3 Electric container pump
4 Manually operated container pump
5 Nipple block
6 Distributor block
7 Tubing or piping
8 Fittings

Toothed belt axes EGC-TB-KF, with recirculating ball bearing guide

Technical data

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



\+ = plus stroke length + 2x stroke reserve

L9 With GK/GV: safety distance per end position
With GP/GQ: dimension for wiper seal ➔ 20
With GK-C/GV-C: dimension for adapter ➔ 31

Working stroke reduction in combination with additional slide ➔ 20

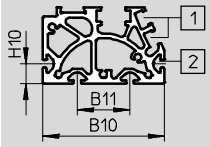
Size	B1	B2	B3	B4	B5	B9	D1 H7	D2 ∅ H7	D3 ∅	D4 ∅	D5 ∅ H7	D6
50	48	39	11.5	20	35	1	27	8	20	15	–	M4
70	69	58.6	16.5	30	45	1	38	10	28	20	–	M5
80	82	72.6	22	40	60	1	48	16	46.5	25	9	M5
120	120	107	33	80	40	1	62	23	59	35	–	M8
185	186	169	53	120	80	1	95	32	90	60	–	M10

Size	D7	D8 ∅ H7	H1	H2	H3	H4	H5	H6	H7	L1		L2	
										GK	GV	GK	GV
50	M3	5	42.5	16.5	37.6	35.5	10.5	10.5	18	155	–	77.5	–
70	M5	5	64	28	53.7	50.8	13	13	29	246	346	123	173
80	M5	5	76.5	34.5	65	61.5	17.5	15	35	286	386	143	193
120	M6	9	111.5	51.6	95.9	91.1	22	22	54	446	546	223	273
185	M8	9	172.5	80.5	152.6	143	25	25	80	612	712	306	356

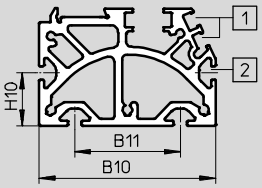
Size	L3	L4	L5	L6	L8	L9	T1	T2	T4	T6	T7	T8	T9
50	40	26	20	1.8	3	–	1.5	–	5.9	–	7	8	3.1
70	57.5	36	27.5	1.8	3	10.5	2.1	18	7.15	–	10	12	3.1
80	65	46	30	2	3	13	2.1	27	4	2.1	10	10	3.1
120	100	64	50	2	3	18	3.1	29.5	4	–	16	14	2.1
185	140	80	70	2	3	21	2.8	34.5	4	–	20	17	2.1

Profile

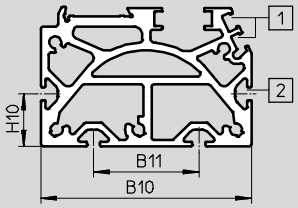
Size 50



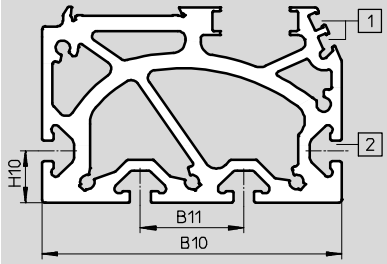
Size 70



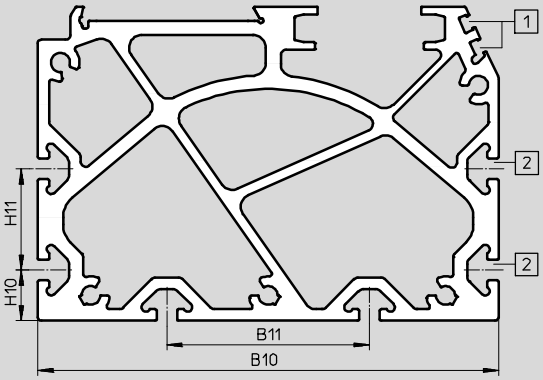
Size 80



Size 120



Size 185



1 Sensor slot for proximity sensor
2 Mounting slot for slot nut

Size	B10	B11	H10	H11
50	46	20	7.5	–
70	67	40	20	–
80	80	40	20	–
120	116	40	20	–
185	182	80	20	40

Note

Flatness of the bearing surface and the attachments. The use in parallel constructions. ➔ www.festo.com

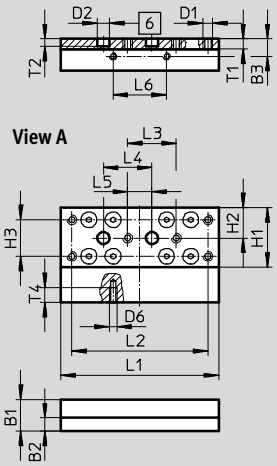
Toothed belt axes EGC-TB-KF, with recirculating ball bearing guide

Technical data

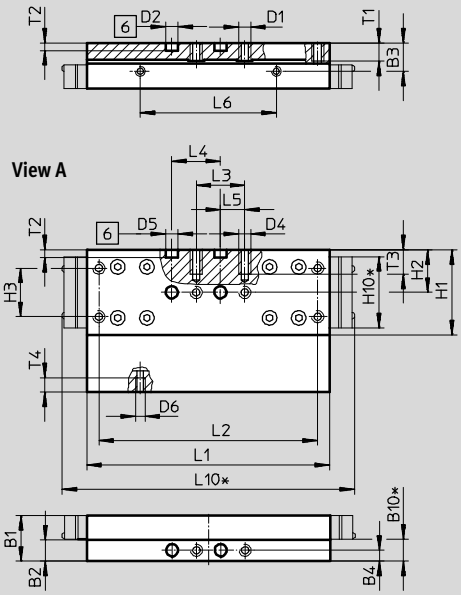
Dimensions Download CAD data ➔ **www.festo.com**

GK – Standard slide/GP – Standard slide, protected

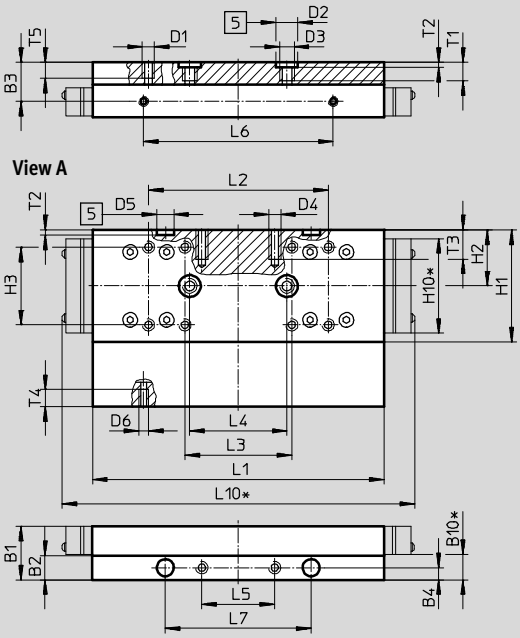
Size 50



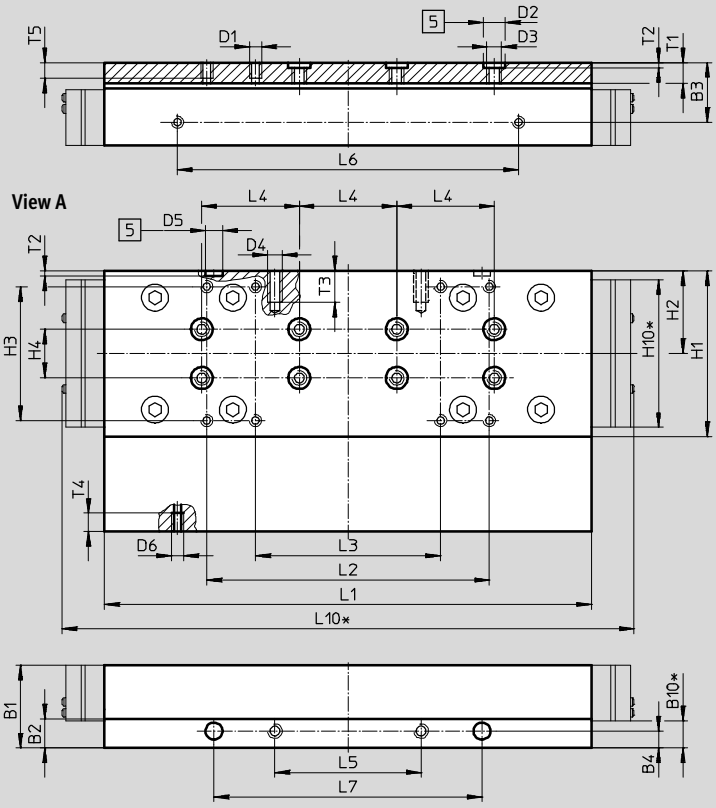
Size 70



Size 80



Size 120



5 Hole for centring sleeve

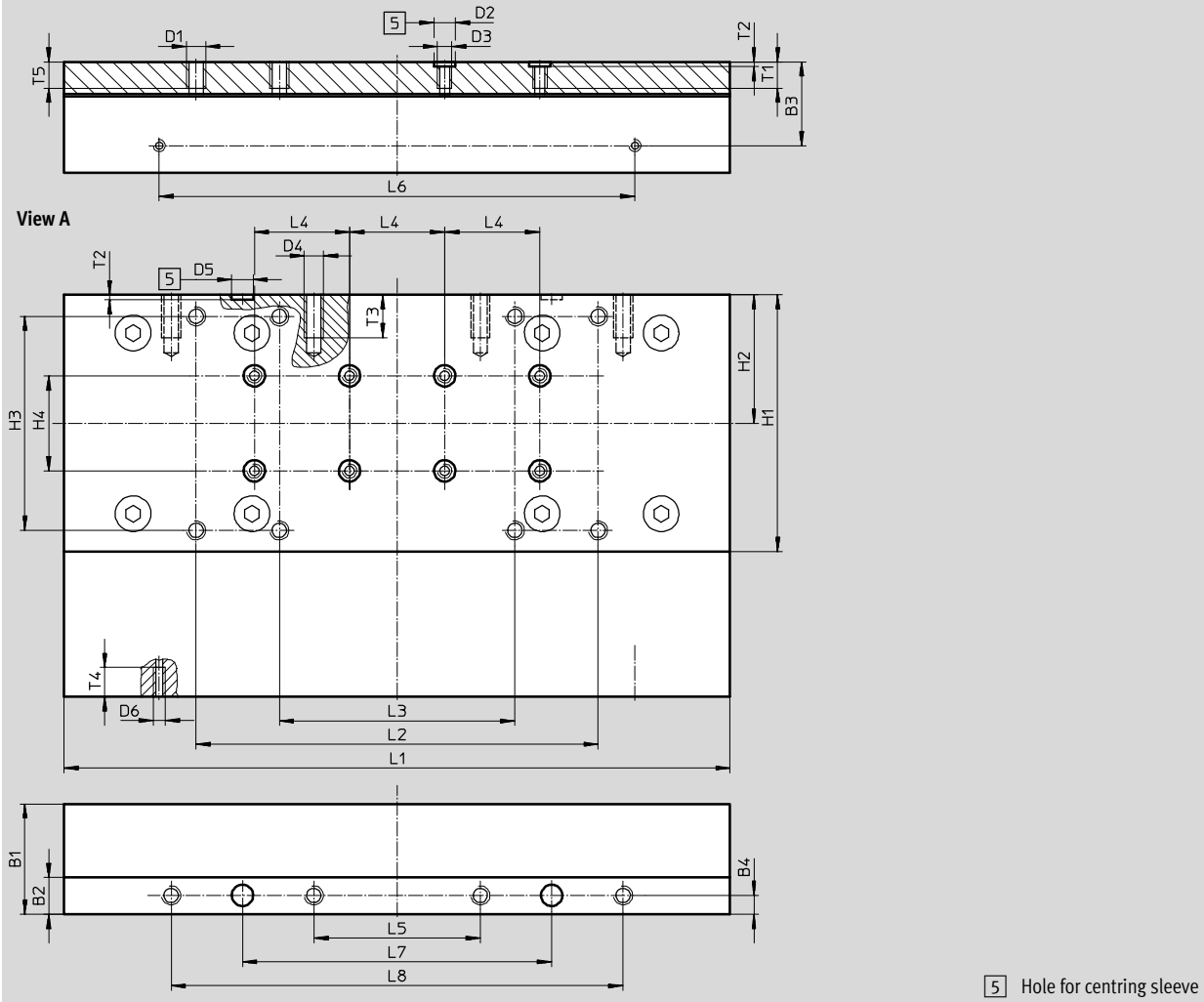
6 Hole for centring pin

* Protected version

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

GK – Standard slide

Size 185



5 Hole for centring sleeve

Size	B1	B2	B3	B4	B10*	D1	D2 ∅ H7	D3	D4	D5 ∅ H7	D6	H1	H2	H3	H4 ±0.03
50	13	5.5	7.2	–	–	M4	5	–	–	–	M3	24.5	12.5	15 ±0.1	–
70	18.7	8.7	11.7	4.5	9	M5	5	–	M5	5	M4	35	17.5	20 ±0.1	–
80	22	10	16	5	10.4	M5	9	M6	M5	7	M4	46	23	32 ±0.2	–
120	34	12	24.5	7	11.2	M5	9	M6	M6	7	M5	68	34	55 ±0.2	20
185	46.5	15.5	35.2	8	–	M8	9	M6	M8	9	M5	108	54	90 ±0.2	40

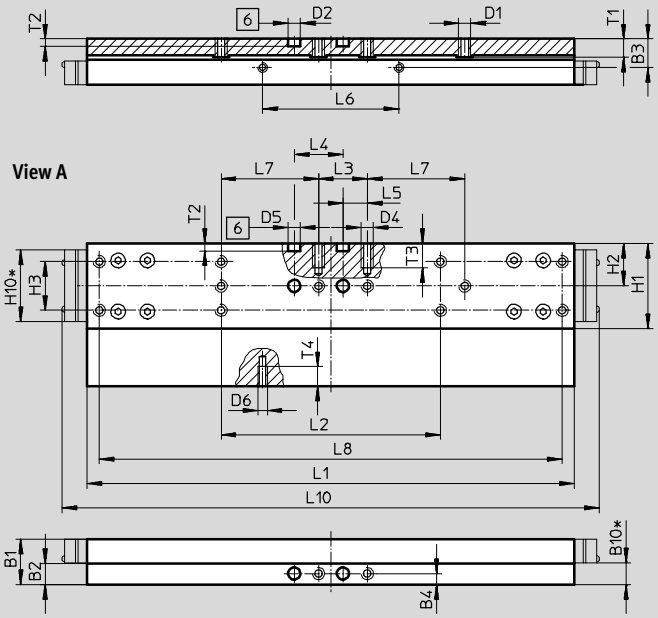
Size	H10*	L1 ±0.1	L2	L3	L4 ±0.03	L5	L6 ±0.1	L7 ±0.05	L8 ±0.2	L10*	T1	T2 +0.1	T3	T4	T5
50	–	65	56 ±0.1	20 ±0.1	20	10 ±0.1	22	–	–	–	4.2	3.1	–	6	–
70	29.4	100	90 ±0.1	20 ±0.1	20	10 ±0.1	56	–	–	121	7.5	3.1	10	6	–
80	39	120	74 ±0.2	44 ±0.2	40	30 ±0.1	78	60	–	145	8.6	2.1	12	7	7.5
120	60.6	203.3	116 ±0.2	76 ±0.2	40	60 ±0.1	140	110	–	235	8.6	2.1	13	7.5	7.5
185	–	282.8	169 ±0.2	99 ±0.2	40	70 ±0.2	200	130	190	–	11	2.1	18	12.3	12

* Protected version

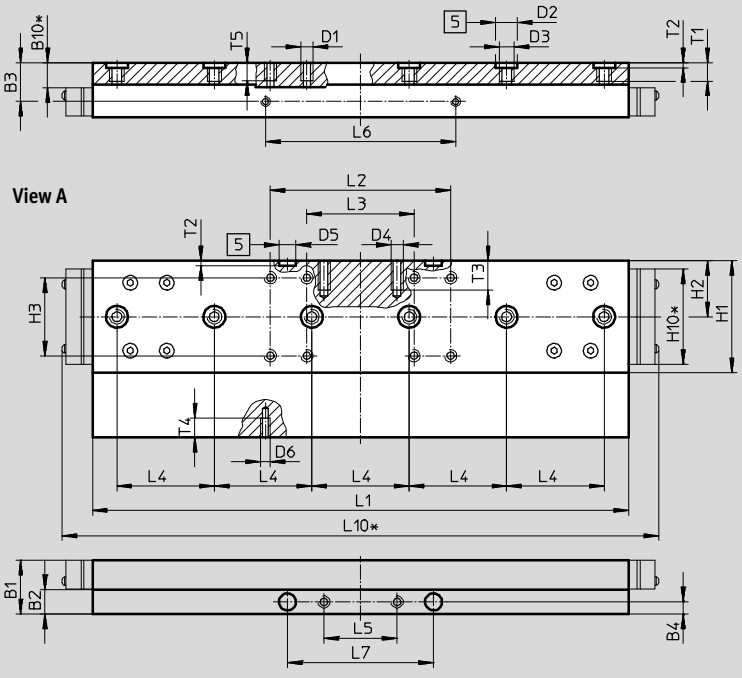
Dimensions Download CAD data ➔ **www.festo.com**

GV – Extended slide/GQ – Extended slide, protected

Size 70



Size 80



5 Hole for centring sleeve

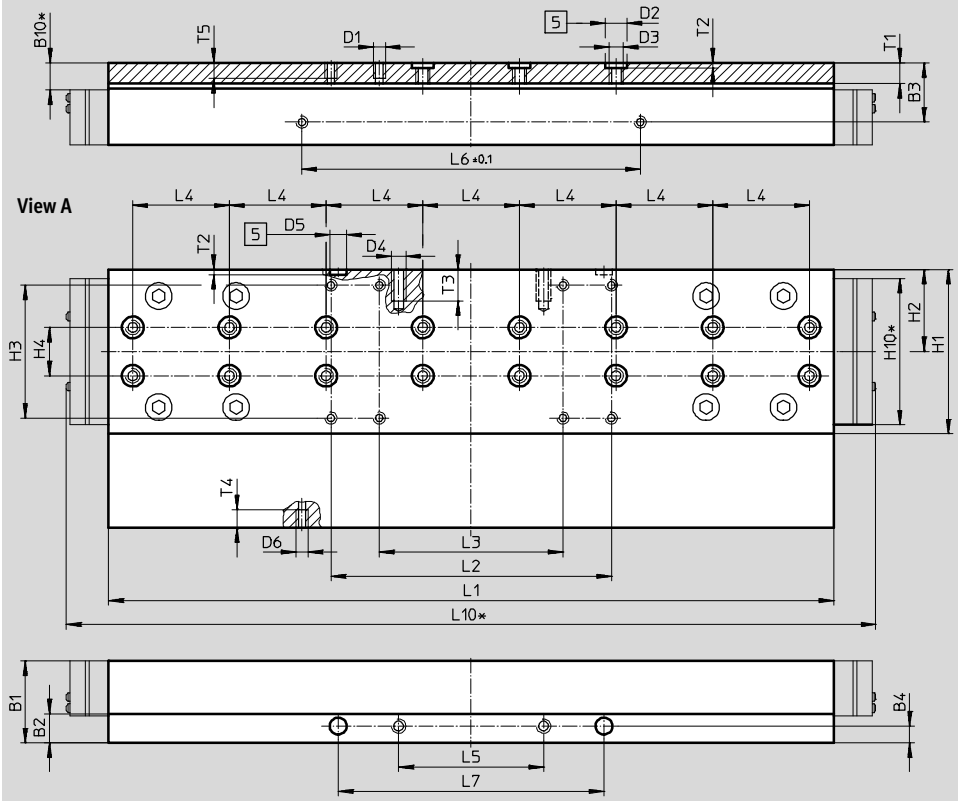
6 Hole for centring pin

* Protected version

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

GV – Extended slide/GQ – Extended slide, protected

Size 120



5 Hole for centring sleeve

* Protected version

Size	B1	B2	B3	B4	B10*	D1	D2 ∅ H7	D3	D4	D5 ∅ H7
70	18.7	8.7	11.7	4.5	9	M5	5	–	M5	5
80	22	10	16	5	10.4	M5	9	M6	M5	7
120	34	12	24.5	7	11.2	M5	9	M6	M6	7

Size	D6	H1	H2	H3	H4 ±0.03	H10*	L1 ±0.1	L2	L3	L4 ±0.03
70	M4	35	17.5	20 ±0.1	–	29.4	200	90 ±0.1	20 ±0.1	20
80	M4	46	23	32 ±0.2	–	39	220	74 ±0.2	44 ±0.2	40
120	M5	68	34	55 ±0.2	20	60.6	303.3	116 ±0.2	76 ±0.2	40

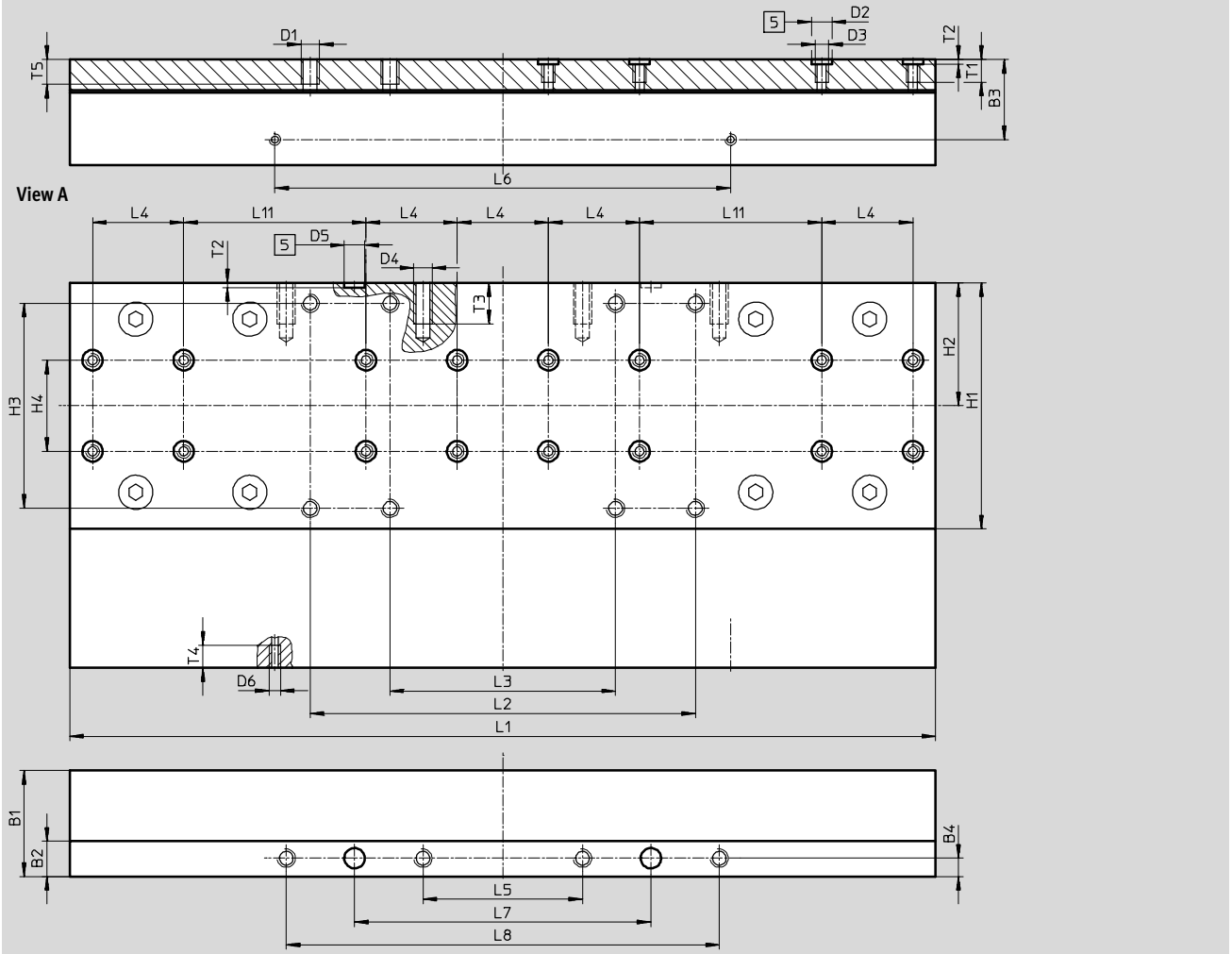
Size	L5 ±0.1	L6 ±0.1	L7	L8 ±0.2	L10*	T1	T2 +0.1	T3	T4	T5
70	10	56	40 ±0.1	190	221	7.5	3.1	10	6	–
80	30	78	60 ±0.05	–	245	8.6	2.1	12	7	7.5
120	60	140	110±0.05	–	335	8.6	2.1	13	7.5	7.5

* Protected version

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

GV – Extended slide

Size 185



5 Hole for centring sleeve

Size	B1	B2	B3	B4	D1	D2 ∅ H7	D3	D4	D5 ∅ H7
185	46.5	15.5	35.2	8	M8	9	M6	M8	9

Size	D6	H1	H2	H3 ±0.2	H4 ±0.03	L1 ±0.1	L2 ±0.2	L3 ±0.2	L4 ±0.03
185	M5	108	54	90	40	382.8	169	99	40

Size	L5 ±0.2	L6 ±0.1	L7 ±0.05	L8 ±0.2	L11 ±0.03	T1	T2 +0.1	T3	T4	T5
185	70	200	130	190	80	11	2.1	18	10	12

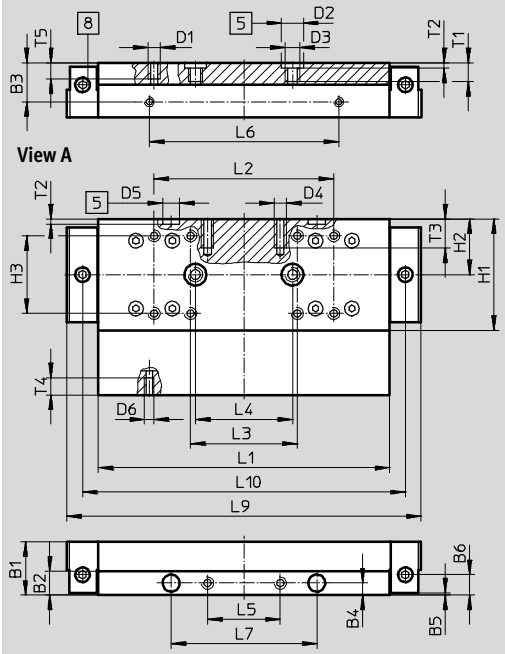
Toothed belt axes EGC-TB-KF, with recirculating ball bearing guide

Technical data

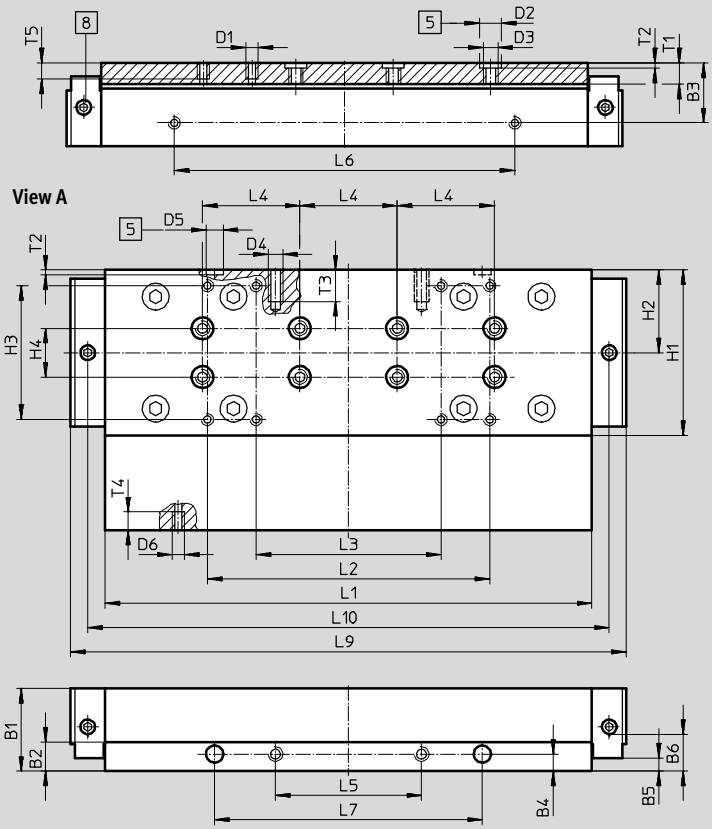
Dimensions Download CAD data ➔ **www.festo.com**

GK-C – Standard slide with lubrication adapter

Size 80



Size 120



5 Hole for centring sleeve

8 Lubricating hole for lubrication adapter
M6 threaded connection, 6 mm deep

Size	B1	B2	B3	B4	B5 ±0.1	B6	D1	D2 ∅ H7	D3	D4
80	22	10	16	5	1	8.5	M5	9	M6	M5
120	34	12	24.5	7	5.5	18.2	M5	9	M6	M6

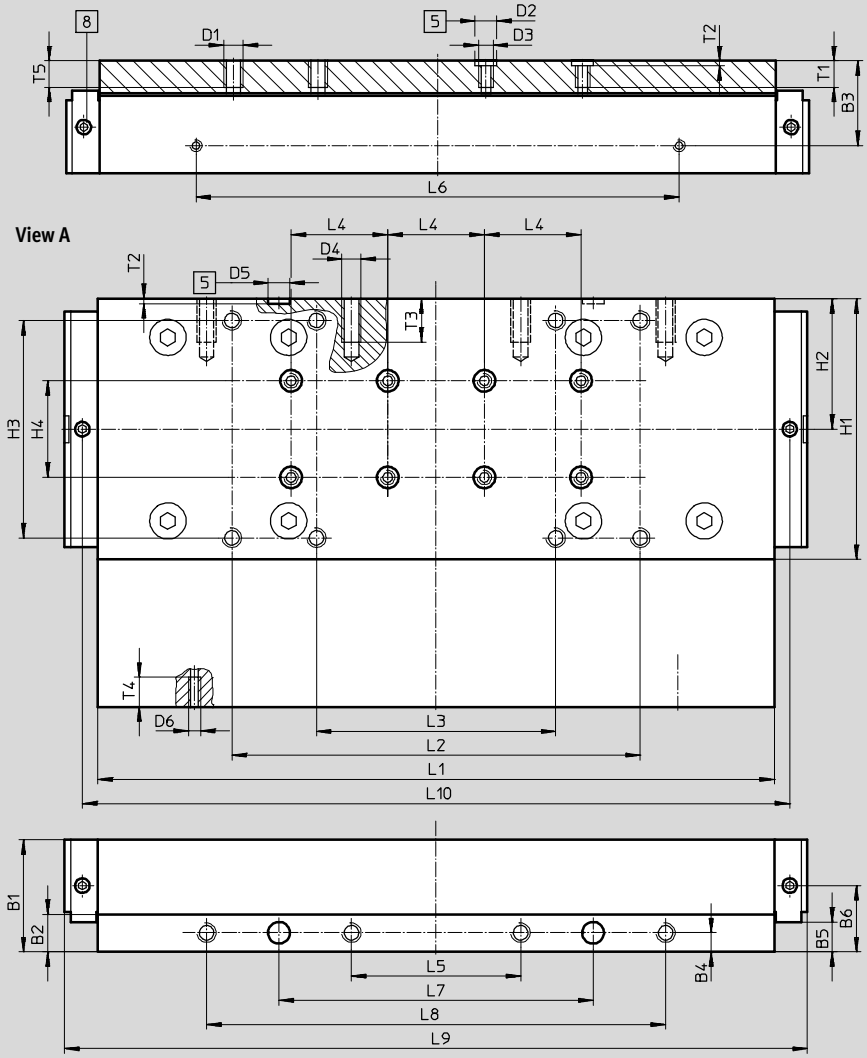
Size	D5 ∅ H7	D6	H1	H2	H3 ±0.2	H4 ±0.03	L1 ±0.1	L2 ±0.2	L3 ±0.2	L4 ±0.03
80	7	M4	46	23	32	–	120	74	44	40
120	7	M5	68	34	55	20	203.3	116	76	40

Size	L5 ±0.1	L6 ±0.1	L7 ±0.05	L9	L10	T1	T2 +0.1	T3	T4	T5
80	30	78	60	146	133	8.6	2.1	12	7	7.5
120	60	140	110	226.9	214.3	8.6	2.1	13	7.5	7.5

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

GK-C – Standard slide with lubrication adapter

Size 185



5 Hole for centring sleeve
8 Lubricating hole for lubrication adapter
M6 threaded connection, 6 mm deep

Size	B1	B2	B3	B4	B5 ±0.1	B6	D1	D2 ∅ H7	D3	D4
185	46.5	15.5	35.2	8	12.5	27.5	M8	9	M6	M8

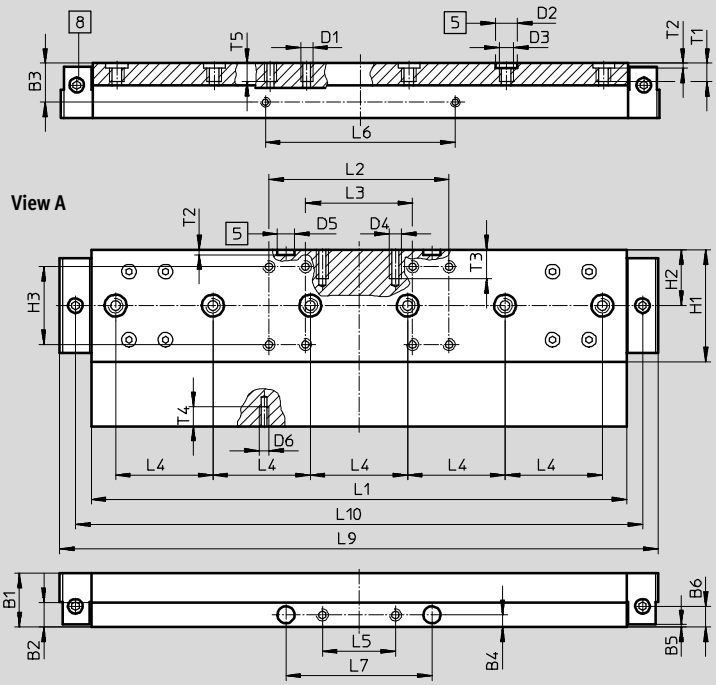
Size	D5 ∅ H7	D6	H1	H2	H3 ±0.2	H4 ±0.03	L1 ±0.1	L2 ±0.2	L3 ±0.2	L4 ±0.03
185	9	M5	108	54	90	40	282.8	169	99	40

Size	L5 ±0.2	L6 ±0.1	L7 ±0.05	L8 ±0.2	L9	L10	T1	T2 +0.1	T3	T4	T5
185	70	200	130	190	307.4	292.8	11	2.1	18	12.3	12

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

GV-C – Extended slide with lubrication adapter

Size 80



5 Hole for centring sleeve
8 Lubricating hole for lubrication adapter
M6 threaded connection, 6 mm deep

Size	B1	B2	B3	B4	B5 ±0.1	B6	D1	D2 ∅ H7	D3	D4
80	22	10	16	5	1	8.5	M5	9	M6	M5

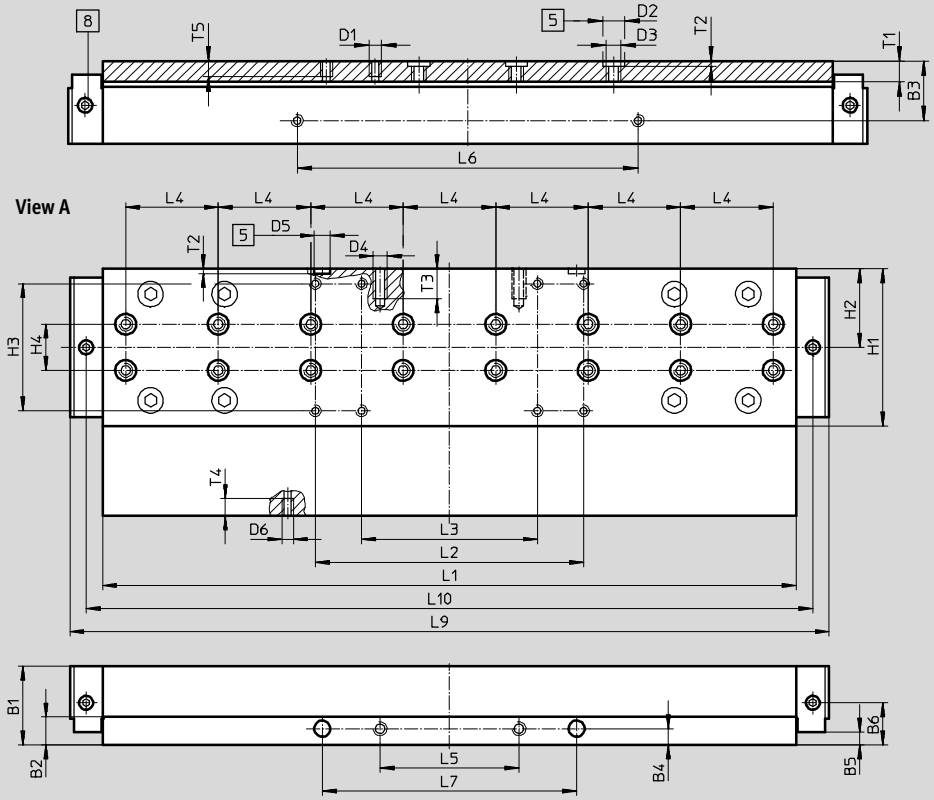
Size	D5 ∅ H7	D6	H1	H2	H3 ±0.2	L1 ±0.1	L2 ±0.2	L3 ±0.2	L4 ±0.03	L5 ±0.1
80	7	M4	46	23	32	220	74	44	40	30

Size	L6 ±0.1	L7 ±0.05	L9	L10	T1	T2 +0.1	T3	T4	T5
80	78	60	246	233	8.6	2.1	12	7	7.5

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

GV-C – Extended slide with lubrication adapter

Size 120



5 Hole for centring sleeve
8 Lubricating hole for lubrication adapter
M6 threaded connection, 6 mm deep

Size	B1	B2	B3	B4	B5 ±0.1	B6	D1	D2 ∅ H7	D3	D4
120	34	12	24.5	7	5.5	18.2	M5	9	M6	M6

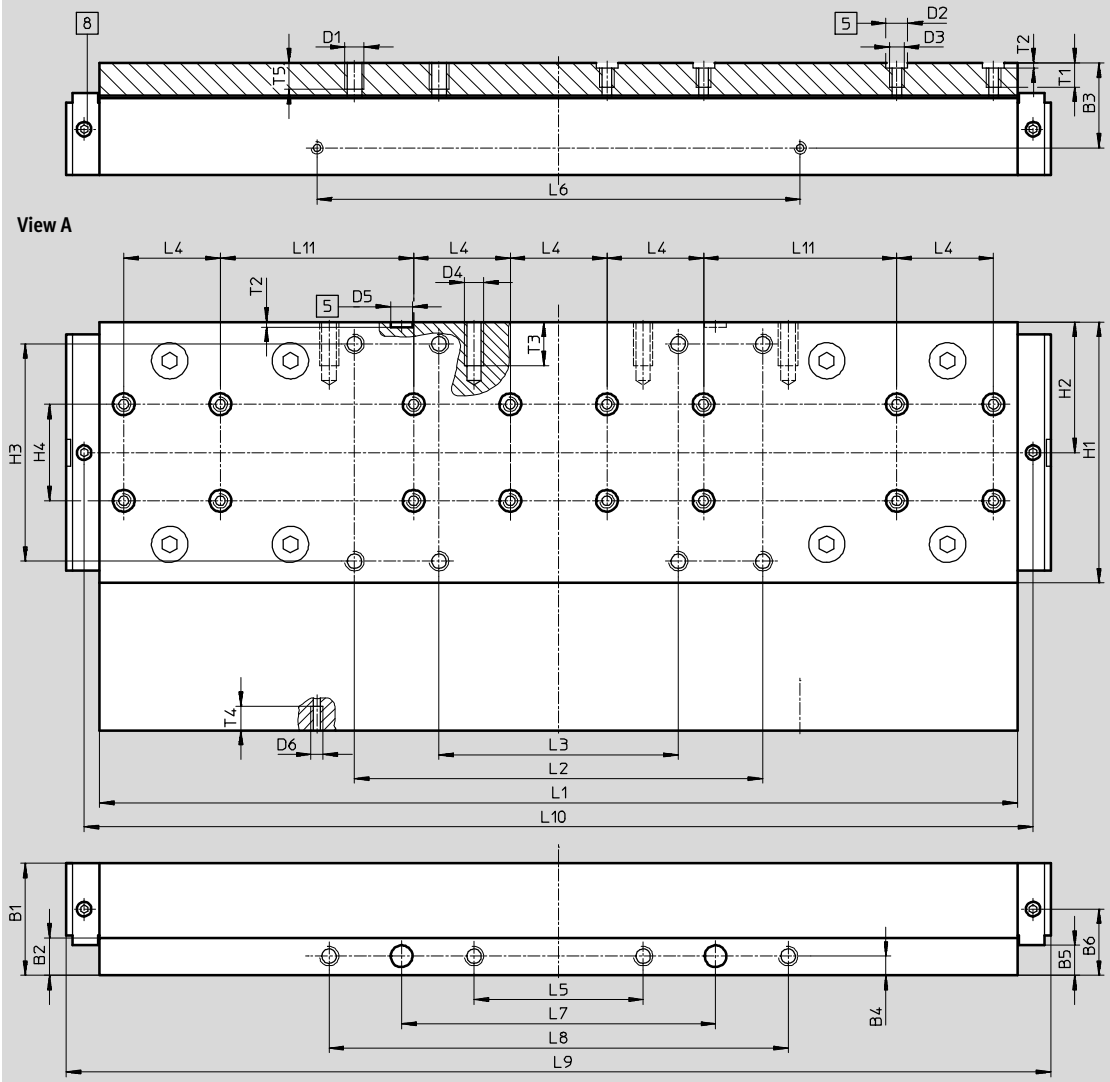
Size	D5 ∅ H7	D6	H1	H2	H3 ±0.2	H4 ±0.03	L1 ±0.1	L2 ±0.2	L3 ±0.2	L4 ±0.03
120	7	M5	68	34	55	20	303.3	116	76	40

Size	L5 ±0.1	L6 ±0.1	L7 ±0.05	L9	L10	T1	T2 ±0.1	T3	T4	T5
120	60	140	110	326.9	314.3	8.6	2.1	13	7.5	7.5

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

GV-C – Extended slide with lubrication adapter

Size 185



5 Hole for centring sleeve

8 Lubricating hole for lubrication adapter
M6 threaded connection, 6 mm deep

Size	B1	B2	B3	B4	B5 ±0.1	B6	D1	D2 ∅ H7	D3	D4
185	46.5	15.5	35.2	8	12.5	27.5	M8	9	M6	M8

Size	D5 ∅ H7	D6	H1	H2	H3 ±0.2	H4 ±0.03	L1 ±0.1	L2 ±0.2	L3 ±0.2	L4 ±0.03	L5 ±0.2
185	9	M5	108	54	90	40	382.8	169	99	40	70

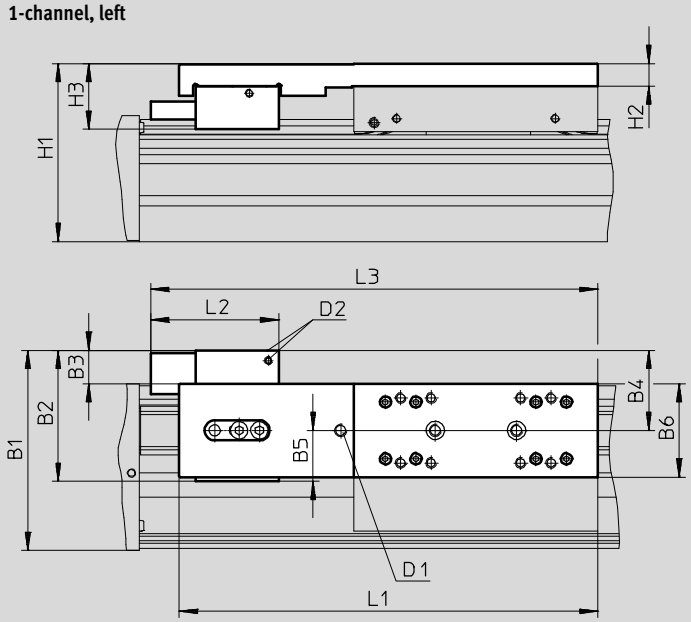
Size	L6 ±0.1	L7 ±0.05	L8 ±0.2	L9	L10	L11 ±0.03	T1	T2 +0.1	T3	T4	T5
185	200	130	190	407.4	392.8	80	11	2.1	18	10	12

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

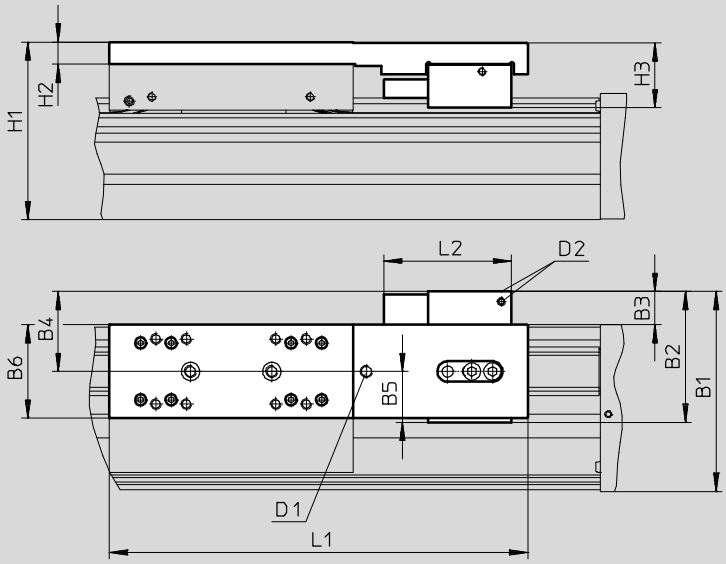
1HL/1HR – With clamping unit

Size 80

1-channel, left



1-channel, right



D2 Compressed air supply

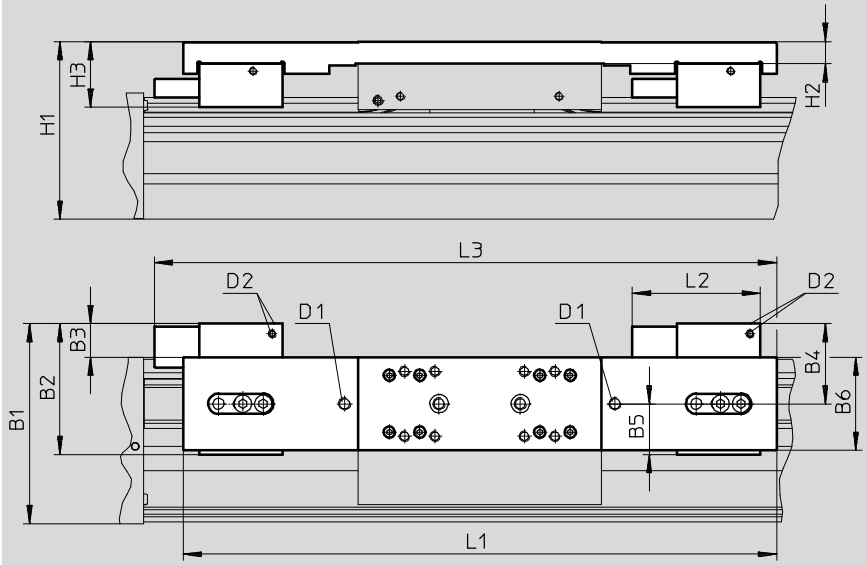
Working stroke reduction in combination with additional slide
➔ 21

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

2H – With clamping unit

Size 80

2-channel



D2 Compressed air supply

Working stroke reduction in combination with additional slide
➔ 21

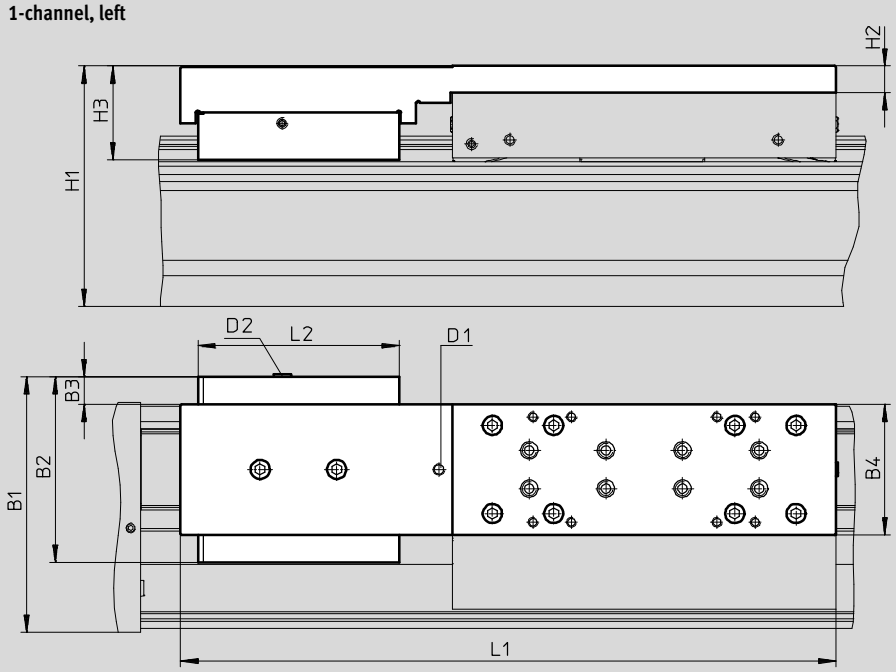
Type	B1	B2	B3	B4	B5	B6	H1	H2	H3	D1	D2	L1	L2	L3
EGC-80-...-1HL-PN	98.4	64.4	17.4	39.4	25	46	87.5	11	32.4	M6	M5	206	63	220
EGC-80-...-1HR-PN														–
EGC-80-...-C-1HL-PN														220
EGC-80-...-C-1HR-PN														–
EGC-80-...-2H-PN												292		306
EGC-80-...-C-2H-PN														

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

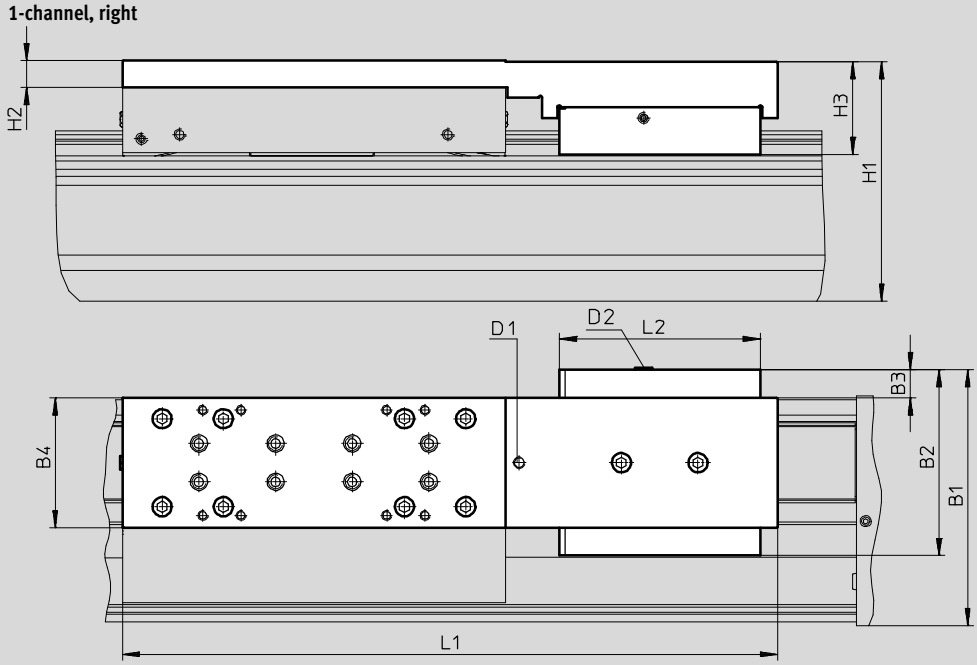
1HL/1HR – With clamping unit

Size 120/185

1-channel, left



1-channel, right



D2 Compressed air supply

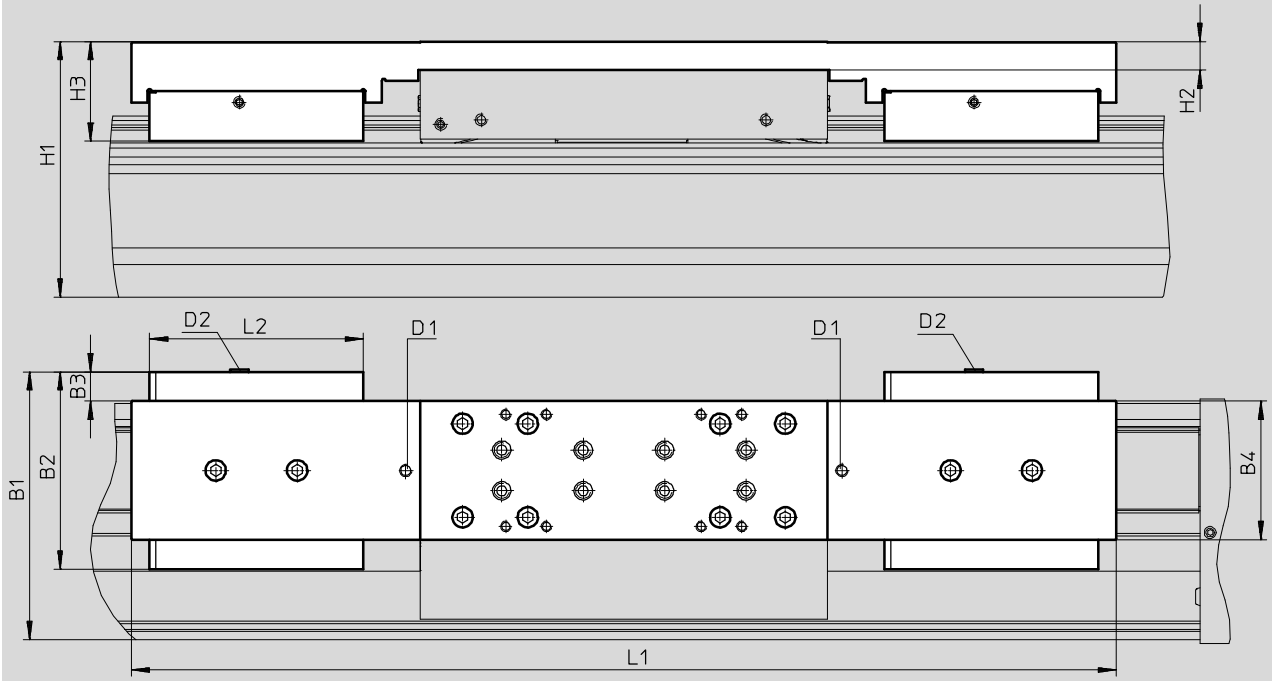
Working stroke reduction in combination with additional slide ➔ 21

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

2H – With clamping unit

Size 120/185

2-channel



D2 Compressed air supply

Working stroke reduction in combination with additional slide ➔ 21

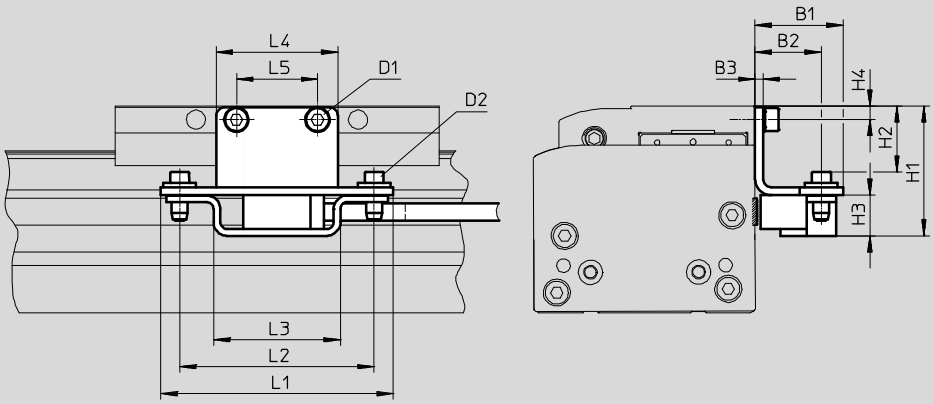
Type	B1	B2	B3	B4	H1	H2	H3	D1	D2	L1	L2
Size 120											
EGC-120-...-1HL-PN	133.5	97	15.5	68	125.5	14	48.9	M6	M5	342	105
EGC-120-...-1HR-PN											
EGC-120-...-C-1HL-PN											
EGC-120-...-C-1HR-PN											
EGC-120-...-2H-PN										484	
EGC-120-...-C-2H-PN											
Size 185											
EGC-185-...-1HL-PN	196.5	131	12.5	108	189.5	17	64.1	M6	M5	432	109
EGC-185-...-1HR-PN											
EGC-185-...-C-1HL-PN											
EGC-185-...-C-1HR-PN											
EGC-185-...-2H-PN										584	
EGC-185-...-C-2H-PN											

Toothed belt axes EGC-TB-KF, with recirculating ball bearing guide

Technical data

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

M1/M2 – With incremental displacement encoder



Encoder cable (connection to the motor controller/safety system)
➔ 58

Type	B1	B2	B3	H1	H2	H3	H4
EGC-70-...-M1	32.5	24.5	3	39	18.4	15	4.5
EGC-70-...-M2				39	18.4		4.5
EGC-80-...-M1				48	24.4		5
EGC-80-...-M2				48	24.4		5
EGC-120-...-M1				60	36.4		7
EGC-120-...-M2				60	36.4		7
EGC-185-...-M1				78.5	54.9		8
EGC-185-...-M2				78.5	54.9		8

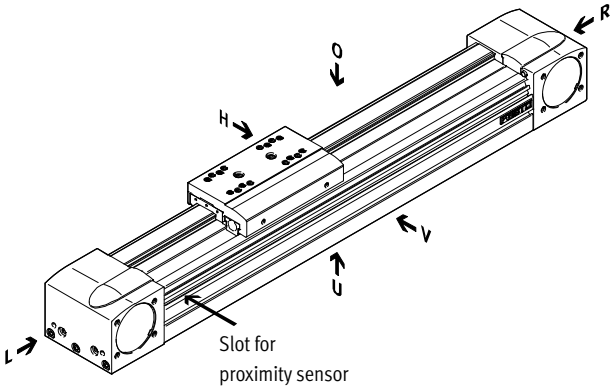
Type	D1	D2	L1	L2	L3	L4	L5
EGC-70-...-M1	M5x8	M4x14	86	72	47	35	20
EGC-70-...-M2	M5x8					35	20
EGC-80-...-M1	M5x8					45	30
EGC-80-...-M2	M5x8					45	30
EGC-120-...-M1	M6x10					86	60
EGC-120-...-M2	M6x10					86	60
EGC-185-...-M1	M8x12					86	70
EGC-185-...-M2	M8x12					86	70

Ordering data – Stock items

Features:
- Stroke reserve: 0 mm
- Standard slide

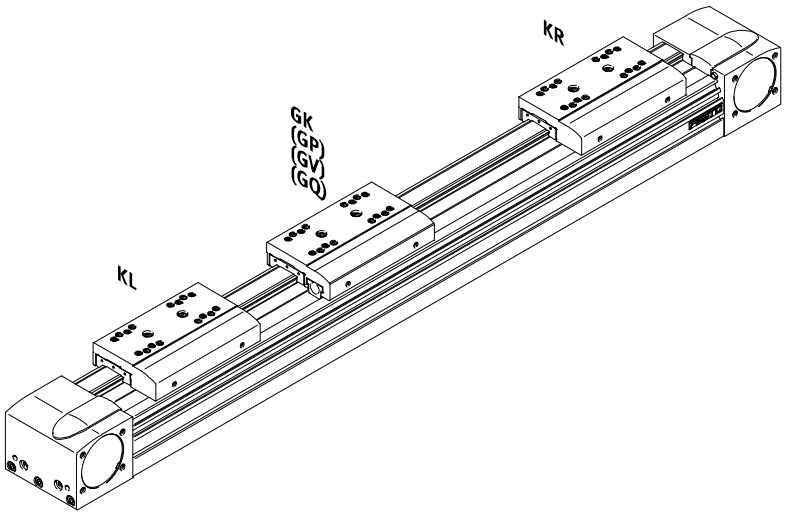
Size	Stroke [mm]	Part No.	Type
70	300	**3012492**	**EGC-70-300-TB-KF-0H-GK**
	400	**3012493**	**EGC-70-400-TB-KF-0H-GK**
	500	**3012494**	**EGC-70-500-TB-KF-0H-GK**
	600	**3012495**	**EGC-70-600-TB-KF-0H-GK**
	800	**3012496**	**EGC-70-800-TB-KF-0H-GK**
	1000	**3012497**	**EGC-70-1000-TB-KF-0H-GK**
	1200	**3012498**	**EGC-70-1200-TB-KF-0H-GK**
80	400	**575832**	**EGC-80-400-TB-KF-0H-GK**
	500	**3013354**	**EGC-80-500-TB-KF-0H-GK**
	600	**3013355**	**EGC-80-600-TB-KF-0H-GK**
	800	**3013356**	**EGC-80-800-TB-KF-0H-GK**
	1000	**3013357**	**EGC-80-1000-TB-KF-0H-GK**
	1200	**3013359**	**EGC-80-1200-TB-KF-0H-GK**
120	400	**3013364**	**EGC-120-400-TB-KF-0H-GK**
	500	**3013365**	**EGC-120-500-TB-KF-0H-GK**
	600	**3013366**	**EGC-120-600-TB-KF-0H-GK**
	800	**3013367**	**EGC-120-800-TB-KF-0H-GK**
	1000	**3013368**	**EGC-120-1000-TB-KF-0H-GK**
	1200	**3013369**	**EGC-120-1200-TB-KF-0H-GK**
	1500	**3013370**	**EGC-120-1500-TB-KF-0H-GK**

Order code
Mandatory data

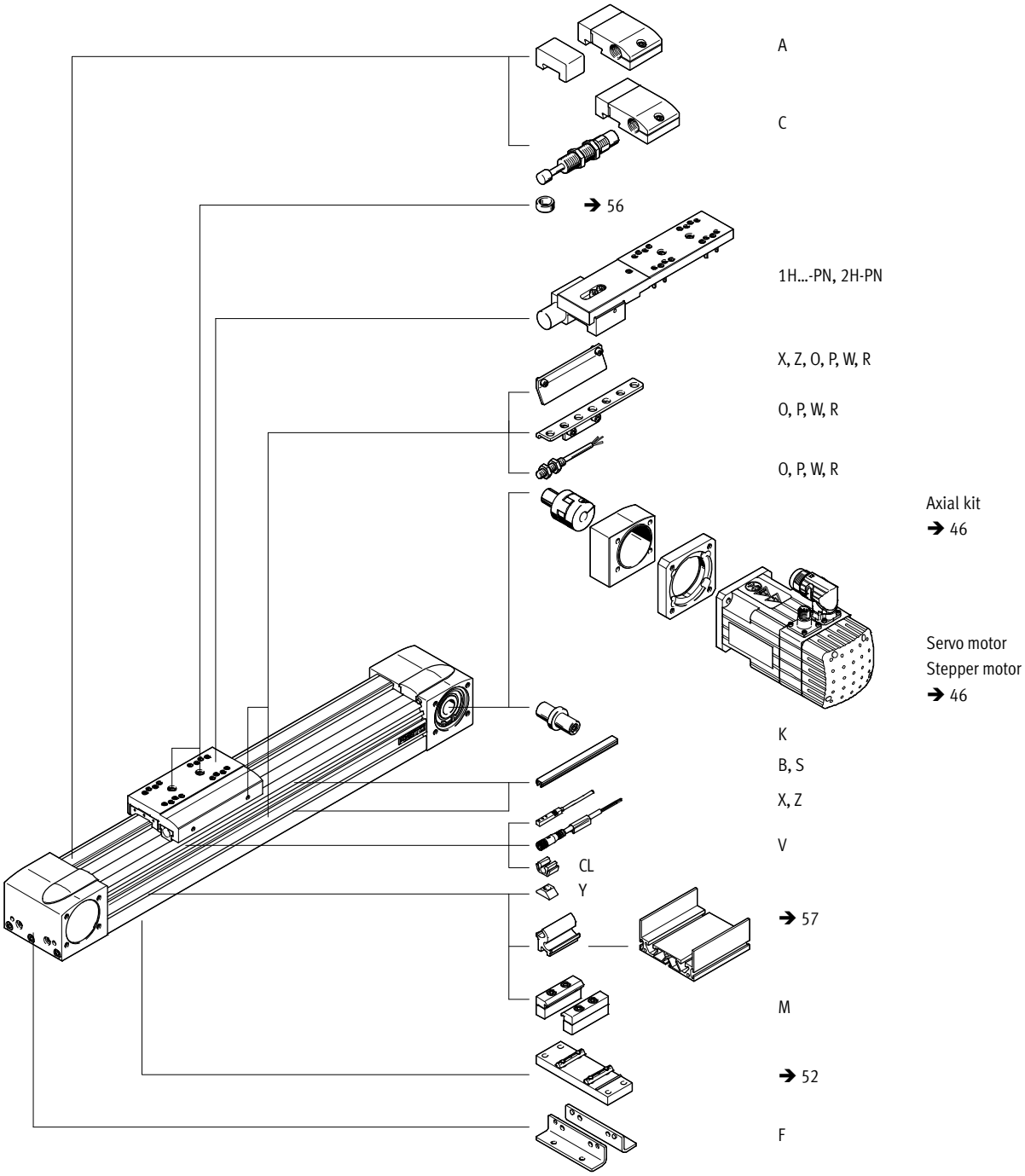


Slot for
proximity sensor

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



Order code
Accessories



Toothed belt axes EGC-TB-KF, with recirculating ball bearing guide

Ordering data – Modular products

Ordering table

	Size		50	70	80	120	185	Condi-tions	Code		Enter code
M	Module No.		**556812**	**556813**	**556814**	**556815**	**556817**				
	Design		Linear axis						**EGC**		EGC
	Size		50	70	80	120	185		**-...**		-...
	Stroke length	[mm]	50 ... 1900	50 ... 5000	50 ... 8500	50 ... 8500 (50 ... 8400 with GV, GQ)	50 ... 8500 (50 ... 8400 with GV, GQ)	1	**-...**		-...
	Function		Toothed belt						**-TB**		-TB
	Guide		Recirculating ball bearing guide						**-KF**		-KF
	Stroke reserve	[mm]	0 ... 999 (0 = no stroke reserve)					1	**-...H**		
	Slide		Standard slide						**-GK**		
			–	Extended slide, protected			–		**-GQ**		
			–	Standard slide, protected			–		**-GP**		
			–	Extended slide					**-GV**		
O	Additional slide	Left	Additional slide, standard, on left					2	**-KL**		
↓		Right	Additional slide, standard, on right					2	**-KR**		
	Lubrication function		Standard								
			–		Lubrication adapter				**-C**		
	Displacement encoder, incremental		–	Resolution: 2.5 µm					**-M1**		
			–	Resolution: 10 µm					**-M2**		
	Clamping unit		–		1-channel, left			3	**-1HL**		
			–		1-channel, right			3	**-1HR**		
			–		2-channel			3	**-2H**		
	Actuation type		–		Pneumatic				**-PN**		

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

2 **KL, KR** If the protected slide variant (GQ, GP) is selected, then the additional slide (KL, KR) is also protected
If the extended slide variant (GQ, GV) is selected, then the additional slide (KL, KR) is not extended
If the slide with lubrication adapter (GK-C) is selected, the additional slide (KL, KR) is also supplied with lubrication adapter
Working stroke reduction in combination with additional slide (KL, KR) → 20

3 **1HL, 1HR, 2H** Not with slide GQ, GV as well as additional slide KL, KR
Only with PN
Working stroke reduction in combination with clamping unit (1HL, 1HR, 2H) → 21

M Mandatory data
O Options

Order code

	EGC	–		–		–	TB	–	KF	–		–		–		–		–		–		–		–	

Toothed belt axes EGC-TB-KF, with recirculating ball bearing guide

Ordering data – Modular products

Ordering table

Size			50	70	80	120	185	Condi-tions	Code		Enter code
↓	Accessories		Accessories enclosed separately						**ZUB-**		ZUB-
O	Foot mounting		1						**F**		
	Profile mounting		1 … 50						**…M**		
	Cover	Mounting slot	–	1 … 50 (1 = 2 units, 500 mm)					**…B**		
		Sensor slot	1 … 50 (1 = 2 units, 500 mm)						**…S**		
	Slot nut for mounting slot		1 … 99						**…Y**		
	Proximity sensor (SIES), inductive, slot type 8, PNP, incl. switch lug	N/O contact, 7.5 m cable	1 … 6						**…X**		
		N/C contact, 7.5 m cable	1 … 6						**…Z**		
	Emergency buffer with retainer		–	1 … 2				4	**…A**		
	Shock absorber with retainer		1 … 2					5	**…C**		
	Proximity sensor (SIEN), inductive, M8, PNP, incl. switch lug with sensor bracket	N/O contact, 2.5 m cable	–	1 … 99					**…O**		
		N/C contact, 2.5 m cable	–	1 … 99					**…P**		
		N/O contact, plug M8	–	1 … 99					**…W**		
		N/C contact, plug M8	–	1 … 99					**…R**		
	Connecting cable 2.5 m, M8, 3-wire		1 … 99						**…V**		
	Drive shaft		1 … 4					6	**…K**		
	Cable clip		10, 20, 30, 40, 50, 60, 70, 80, 90						**…CL**		
	Operating instructions		Express waiver - no operating instructions to be included (already available) (operating instructions in pdf format are available free of charge on the Internet at www.festo.com)						**-DN**		

4 **…A** Emergency buffer with retainer A cannot be combined with slide GP, GQ, GK-C, GV-C, shock absorber with retainer C and clamping unit 1H…-PN, 2H-PN

5 **… C** Shock absorber with retainer C cannot be combined with slide GP, GQ, GK-C, GV-C, emergency buffer with retainer A and clamping unit 1H…-PN, 2H-PN

6 **… K** No drive shaft is required for the axis/motor combinations ➔ from 46.

Note

The code X, Z includes a switch lug in the scope of delivery.
The code O, P, W, R includes one switch lug and max. two sensor brackets in the scope of delivery.

M Mandatory data
O Options

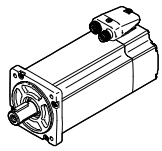
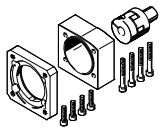
Transfer order code

ZUB	–															–	

- Note

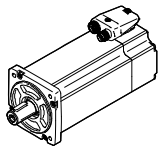
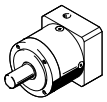
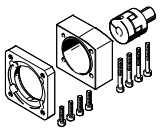
Depending on the combination of motor and drive, it may not be possible to reach the maximum feed force of the drive.

Permissible axis/motor combinations with axial kit – Without gear unit Technical data → Internet: eamm-a

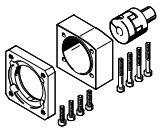
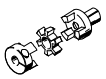
Motor[1]	Axial kit	
		
Type	Part No.	Type
EGC-50		
With servo motor		
EMMS-AS-55-...	**557975**	**EAMM-A-L27-55A**
With stepper motor		
EMMS-ST-57-...	**560678**	**EAMM-A-L27-57A**
EGC-70		
With servo motor		
EMME-AS-60-...	**2037246**	**EAMM-A-L38-60P**
EMMS-AS-70-...	**557979**	**EAMM-A-L38-70A**
With stepper motor		
EMMS-ST-57-...	**560679**	**EAMM-A-L38-57A**
EMMS-ST-87-...	**560680**	**EAMM-A-L38-87A**
EGC-80		
With servo motor		
EMMS-AS-70-...	**557982**	**EAMM-A-L48-70A**
EMME-AS-80-...	**2042616**	**EAMM-A-L48-80P**
EMMS-AS-100-...	**557984**	**EAMM-A-L48-100A**
With stepper motor		
EMMS-ST-87-...	**560683**	**EAMM-A-L48-87A**
EGC-120		
With servo motor		
EMME-AS-100-...	**557988**	**EAMM-A-L62-100A**
EMMS-AS-100-...	**557988**	**EAMM-A-L62-100A**
EMMS-AS-140-...	**557990**	**EAMM-A-L62-140A**
EGC-185		
With servo motor		
EMMS-AS-140-...	**3657226**	**EAMM-A-L95-140A-G2**
EMMS-AS-190-...	**3659562**	**EAMM-A-L95-190A-G2**

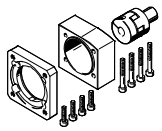
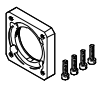
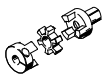
1) The input torque must not exceed the maximum permissible transferable torque of the axial kit.

Permissible axis/motor combinations with axial kit – With gear unit Technical data ➔ Internet: eamm-a

Motor[1]	Gear units	Axial kit	
			
Type	Type	Part No.	Type
EGC-50			
With servo motor			
EMME-AS-40-...	**EMGA-40-P-G...-EAS-40**	**557974**	**EAMM-A-L27-40G**
EMMS-AS-40-...	**EMGA-40-P-G...-SAS-40**	**557974**	**EAMM-A-L27-40G**
With stepper motor			
EMMS-ST-42-...	**EMGA-40-P-G...-SST-42**	**557974**	**EAMM-A-L27-40G**
EGC-70			
With servo motor			
EMMS-AS-55-...	**EMGA-60-P-G...-SAS-55**	**557978**	**EAMM-A-L38-60G**
EMMS-AS-70-...	**EMGA-60-P-G...-SAS-70**	**557978**	**EAMM-A-L38-60G**
With stepper motor			
EMMS-ST-57-...	**EMGA-60-P-G...-SST-57**	**557978**	**EAMM-A-L38-60G**
EGC-80			
With servo motor			
EMMS-AS-55-...	**EMGA-60-P-G...-SAS-55**	**557983**	**EAMM-A-L48-60G**
EMMS-AS-70-...	**EMGA-60-P-G...-SAS-70**	**557983**	**EAMM-A-L48-60G**
With stepper motor			
EMMS-ST-57-...	**EMGA-60-P-G...-SST-57**	**557983**	**EAMM-A-L48-60G**
EGC-120			
With servo motor			
EMMS-AS-70-...	**EMGA-80-P-G...-SAS-70**	**557989**	**EAMM-A-L62-80G**
EMME-AS-80-...	**EMGA-80-P-G...-EAS-80**	**557989**	**EAMM-A-L62-80G**
EMME-AS-100-...	**EMGA-80-P-G...-SAS-100**	**557989**	**EAMM-A-L62-80G**
EMMS-AS-100-...	**EMGA-80-P-G...-SAS-100**	**557989**	**EAMM-A-L62-80G**
With stepper motor			
EMMS-ST-87-...	**EMGA-80-P-G...-SST-87**	**557989**	**EAMM-A-L62-80G**
EGC-185			
With servo motor			
EMME-AS-100-...	**EMGA-120-P-G...-SAS-100**	**3659941**	**EAMM-A-L95-120G-G2**
EMMS-AS-100-...	**EMGA-120-P-G...-SAS-100**	**3659941**	**EAMM-A-L95-120G-G2**
EMMS-AS-140-...	**EMGA-120-P-G...-SAS-140**	**3659941**	**EAMM-A-L95-120G-G2**

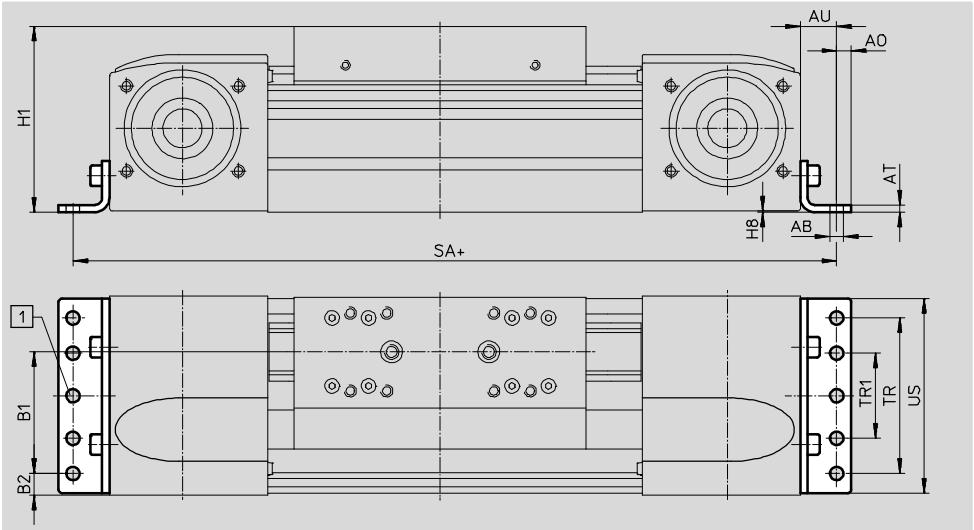
1) The input torque must not exceed the maximum permissible transferable torque of the axial kit.

Component parts of the axial kit – Without gear unit				
Axial kit	Comprises:			
	Motor flange	Coupling	Coupling housing	Screw set
				
Part No. Type	Part No. Type	Part No. Type	Part No. Type	Part No. Type
EGC-50				
557975 **EAMM-A-L27-55A**	**558016** **EAMF-A-L27-55A**	**557999** **EAMD-19-15-9-8X10**	**–**	**–**
560678 **EAMM-A-L27-57A**	**560690** **EAMF-A-L27-57A**	**561292** **EAMD-16-15-6,35-8X10**	**–**	**–**
EGC-70				
2037246 **EAMM-A-L38-60P**	**1987412** **EAMF-A-38A-60P**	**1453861** **EAMD-28-22-14-10X12**	**558011** **EAMK-A-L38-38A**	**567485** **EAHM-L2-M5-35**
557979 **EAMM-A-L38-70A**	**558018** **EAMF-A-38A-70A**	**558000** **EAMD-25-22-11-10X12**	**558011** **EAMK-A-L38-38A**	**567484** **EAHM-L2-M5-30**
560679 **EAMM-A-L38-57A**	**560692** **EAMF-A-38A-57A**	**561293** **EAMD-25-22-6,35-10X12**	**558011** **EAMK-A-L38-38A**	**567484** **EAHM-L2-M5-30**
560680 **EAMM-A-L38-87A**	**560693** **EAMF-A-38A-87A**	**558000** **EAMD-25-22-11-10X12**	**558011** **EAMK-A-L38-38A**	**567485** **EAHM-L2-M5-35**
EGC-80				
2042616 **EAMM-A-L48-80P**	**2043427** **EAMF-A-48A-80P**	**558002** **EAMD-42-40-19-16X25**	**558012** **EAMK-A-L48-48A**	**567489** **EAHM-L2-M5-55**
557982 **EAMM-A-L48-70A**	**558025** **EAMF-A-48A-70A**	**558001** **EAMD-32-32-11-16X20**	**558012** **EAMK-A-L48-48A**	**567486** **EAHM-L2-M5-40**
557984 **EAMM-A-L48-100A**	**558020** **EAMF-A-48A-100A**	**558002** **EAMD-42-40-19-16X25**	**558012** **EAMK-A-L48-48A**	**567489** **EAHM-L2-M5-55**
560683 **EAMM-A-L48-87A**	**560695** **EAMF-A-48A-87A**	**558001** **EAMD-32-32-11-16X20**	**558012** **EAMK-A-L48-48A**	**567487** **EAHM-L2-M5-45**
EGC-120				
557988 **EAMM-A-L62-100A**	**558026** **EAMF-A-62A-100A**	**558003** **EAMD-56-46-19-23X27**	**558013** **EAMK-A-L62-62A**	**567491** **EAHM-L2-M6-65**
557990 **EAMM-A-L62-140A**	**558022** **EAMF-A-62A-140A**	**558005** **EAMD-56-46-24-23X27**	**558013** **EAMK-A-L62-62A**	**567493** **EAHM-L2-M6-70**
EGC-185				
3657226 **EAMM-A-L95-140A-G2**	**558023** **EAMF-A-95A-140A**	**558008** **EAMD-67-51-24-32X32-U**	**3712650** **EAMK-A-L95-95A/B-G2**	**567497** **EAHM-L2-M8-80**
3659562 **EAMM-A-L95-190A-G2**	**1378473** **EAMF-A-95A-190A**	**1379269** **EAMD-67-51-32-32X32-U**	**3712650** **EAMK-A-L95-95A/B-G2**	**567497** **EAHM-L2-M8-80**

Component parts of the axial kit – With gear unit				
Axial kit	Comprises:			
	Motor flange	Coupling	Coupling housing	Screw set
				
Part No. Type	Part No. Type	Part No. Type	Part No. Type	Part No. Type
EGC-50				
557974 **EAMM-A-L27-40G**	**558015** **EAMF-A-L27-40G**	**557998** **EAMD-19-15-10-8X10**	**–**	**–**
EGC-70				
557978 **EAMM-A-L38-60G**	**558017** **EAMF-A-38A-60G/H**	**558000** **EAMD-25-22-11-10X12**	**558011** **EAMK-A-L38-38A**	**567485** **EAHM-L2-M5-35**
EGC-80				
557983 **EAMM-A-L48-60G**	**558019** **EAMF-A-48A-60G/H**	**558001** **EAMD-32-32-11-16X20**	**558012** **EAMK-A-L48-48A**	**567486** **EAHM-L2-M5-40**
EGC-120				
557989 **EAMM-A-L62-80G**	**558021** **EAMF-A-62A-80G**	**558004** **EAMD-56-46-20-23X27**	**558013** **EAMK-A-L62-62A**	**567492** **EAHM-L2-M6-65-L**
EGC-185				
3659941 **EAMM-A-L95-120G-G2**	**3659724** **EAMF-A-95A-120G-G2**	**558006** **EAMD-67-51-25-32X32-U**	**3712650** **EAMK-A-L95-95A/B-G2**	**567496** **EAHM-L2-M8-70**

Foot mounting HPE
(order code F)

Materials:
Galvanised steel
RoHS-compliant



1 Hole in HPE-120
\+ = plus stroke length + 2x stroke reserve

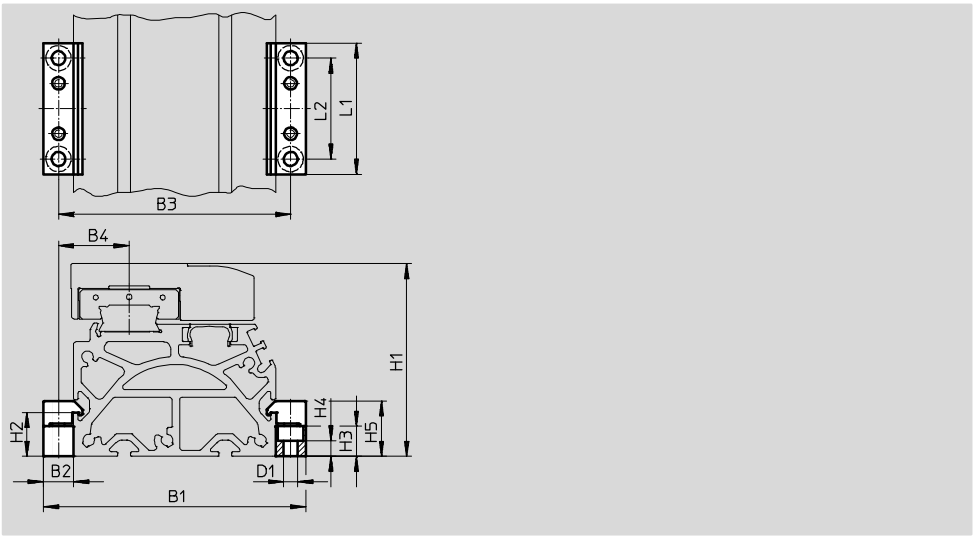
Dimensions and ordering data

For size	AB ∅	A0	AT	AU	B1	B2	H1	H8
50	4.5	4.5	2	10.5	21.5	14	42.5	0.5
70	5.5	6	3	13	37	14.5	64	0.5
80	5.5	6	3	15	38	21	76.5	0.5
120	9	8	6	22	65	20	111.5	0.6
185	9	12	8	25	118	13	172.5	0.5

For size	SA		TR	TR1	US	Weight [g]	Part No.	Type
	EGC-...-GK	EGC-...-GV						
50	176	–	20	–	46	44	**558320**	**HPE-50**
70	272	372	40	–	67	115	**558321**	**HPE-70**
80	316	416	40	–	80	150	**558322**	**HPE-80**
120	490	590	80	–	116	578	**558323**	**HPE-120**
185	662	762	160	80	182	1438	**558325**	**HPE-185**

Profile mounting MUE
(order code M)

Materials:
Anodised aluminium
RoHS-compliant



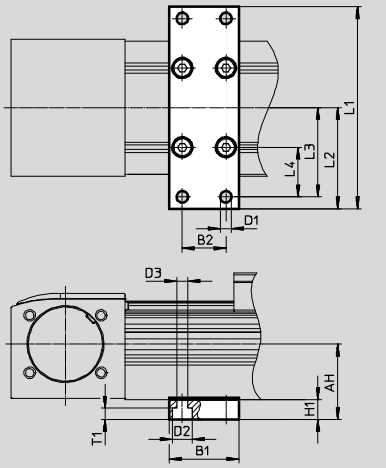
Dimensions and ordering data

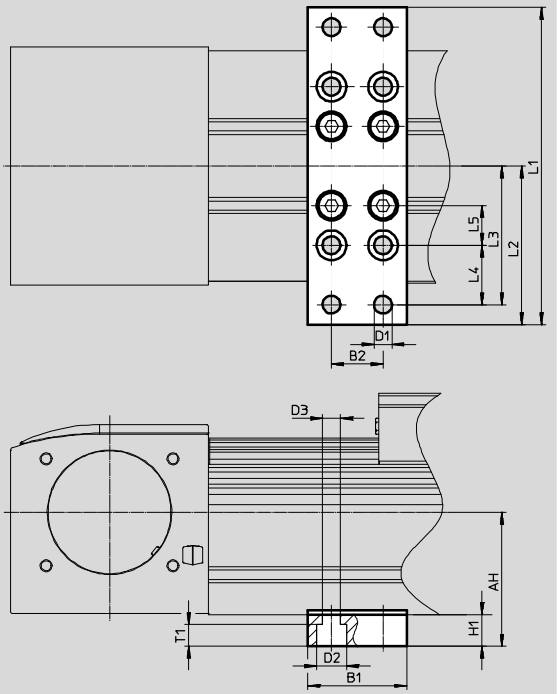
For size	B1	B2	B3	B4	D1 ∅	H1	H2	H3
50	62	8	54	15.5	3.4	42.5	6	5.5
70	91	12	79	22.5	5.5	64	17.5	12
80	104	12	92	28	5.5	76.5	17.5	12
120	154	19	135	42.5	9	111.5	16	14
185	220	19	201	62.5	9	172.5	16	14

For size	H4	H5	L1	L2	Weight [g]	Part No.	Type
50	2.3	11	40	20	20	**558042**	**MUE-50**
70	6.2	22	52	40	80	**558043**	**MUE-70/80**
80	6.2	22	52	40	80	**558043**	**MUE-70/80**
120	5.5	29.5	90	40	290	**558044**	**MUE-120/185**
185	5.5	29.5	90	40	290	**558044**	**MUE-120/185**

Central support EAHF

Materials:
Anodised aluminium
RoHS-compliant





Dimensions and ordering data

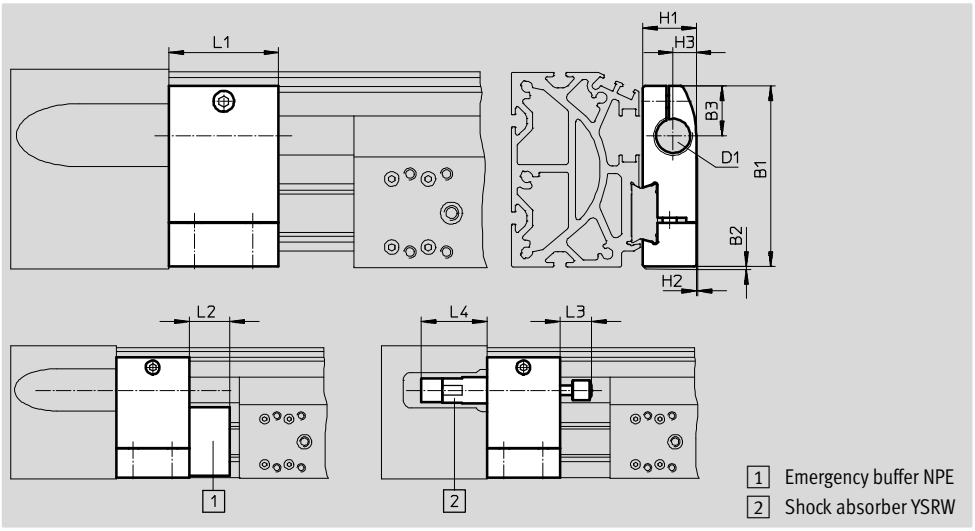
For size	AH	B1	B2	D1 ∅	D2 ∅	D3 ∅	H1	L1
70	38	35	22	5.8	10	5.8	10	102
80	44.5							112
120	67.6	50	26	9	15	9	16	160

For size	L2	L3	L4	L5	T1	Weight [g]	Part No.	Type
70	51	45	25	–	5.7	113	**2349256**	**EAHF-L5-70-P**
80	56	50	30			123	**3535188**	**EAHF-L5-80-P**
120	80	70	30	20	11	384	**2410274**	**EAHF-L5-120-P**

Shock absorber retainer KYE
Emergency buffer NPE ➔ 56
Shock absorber YSRW ➔ 56
(order code A or C)

Materials:
Anodised aluminium
RoHS-compliant

Cannot be used in combination with the variants GP and GQ or GK-C and GV-C and 1H...-PN, 2H-PN.



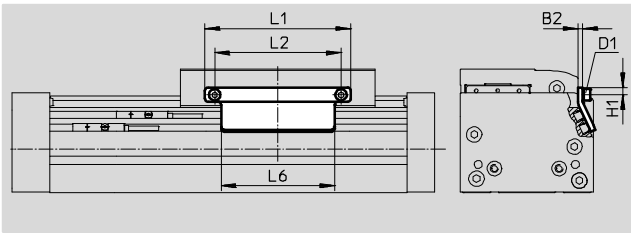
Dimensions and ordering data

For size	B1	B2	B3	D1	H1	H2	H3	L1	L2	L3	L4 Min.	Weight [g]	Part No.	Type
50	38	1	13.5	M8x1	12	0.4	5	20	12	8	20	20	**557583**	**KYE-50**
70	57.5	1	16.5	M12x1	18.2	0.5	7.5	30	15	14	32	75	**557584**	**KYE-70**
80	74.2	1	20.5	M16x1	22	0.5	9.5	45	25	20	41	170	**557585**	**KYE-80**
120	108.5	1	26	M22x1.5	31	1	14	60	40	26	48.5	680	**557586**	**KYE-120**
185	168	1	37	M26x1.5	42	4	18	75	60	34	58.5	1075	**557587**	**KYE-185**

Switch lug SF-EGC-1
For sensing via proximity sensor SIES-8M
(order code X or Z)

Materials:
Galvanised steel
RoHS-compliant

- With size 50, max. 3 proximity sensors can be supported when sensing both end positions. For additional proximity sensors, a stroke reserve of 25 mm is required.



Dimensions and ordering data

For size	B2	D1	H1	L1	L2	L6	Weight [g]	Part No.	Type
50	2	M3	3.5	45	22	45	20	**558046**	**SF-EGC-1-50**
70	3	M4	4.65	70	56	50	50	**558047**	**SF-EGC-1-70**
80	3	M4	4.65	90	78	70	63	**558048**	**SF-EGC-1-80**
120	3	M5	8	170	140	170	147	**558049**	**SF-EGC-1-120**
185	3	M5	10	230	200	230	246	**558051**	**SF-EGC-1-185**

Toothed belt axes EGC-TB-KF, with recirculating ball bearing guide

Accessories

Switch lug SF-EGC-2
For sensing via proximity sensor SIEN-M8B (order code O, P, W or R) or SIES-8M (order code X or Z)

Materials:
Galvanised steel
RoHS-compliant

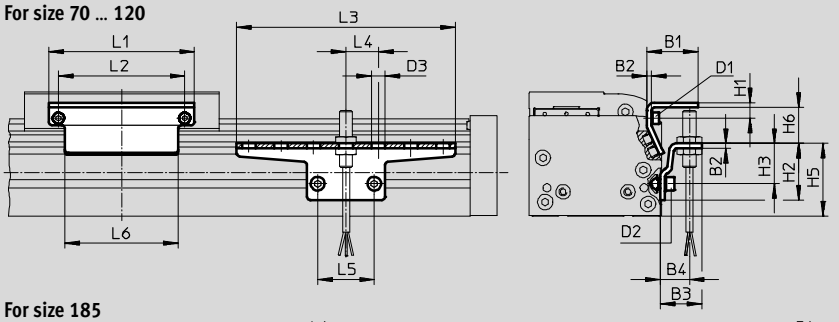
Sensor bracket HWS-EGC
For proximity sensor SIEN-M8B (order code O, P, W or R)

Materials:
Galvanised steel
RoHS-compliant

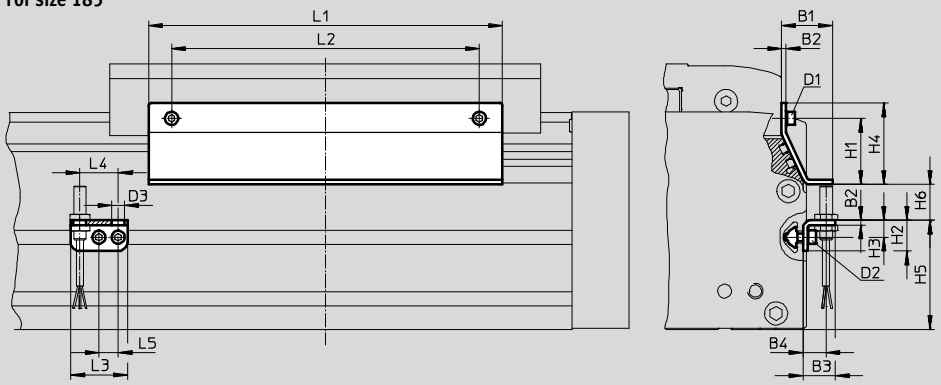
Switch lug SF-EGC-2

Sensor bracket HWS-EGC

For size 70 ... 120



For size 185



Dimensions and ordering data

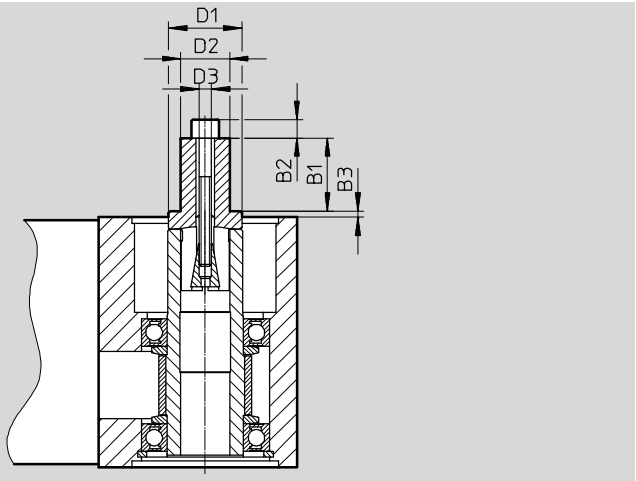
For size	B1	B2	B3	B4	D1	D2	D3 ∅	H1	H2
70	31.5	3	25.5	18	M4	M5	8.4	9.5	35
80	31.5	3	25.5	18	M4	M5	8.4	9.5	35
120	32	3	25.5	18	M5	M5	8.4	13.2	65
185	33	3	25.5	15	M5	M5	8.4	43	20

For size	H3	H4	H5	H6 Max.	L1	L2	L3	L4	L5	L6
70	25	–	45	13.5	70	56	135	20	35	50
80	25	–	45	23.5	90	78	135	20	35	70
120	55	–	75	24	170	140	215	20	35	170
185	11	53	71	25.5	230	200	37	25	12.5	230

For size	Weight [g]	Part No.	Type
	Switch lug		
70	100	**558052**	**SF-EGC-2-70**
80	130	**558053**	**SF-EGC-2-80**
120	277	**558054**	**SF-EGC-2-120**
185	390	**558056**	**SF-EGC-2-185**

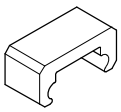
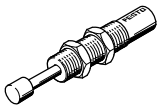
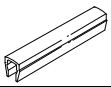
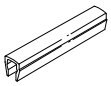
For size	Weight [g]	Part No.	Type
	Sensor bracket		
70	110	**558057**	**HWS-EGC-M5**
80	110	**558057**	**HWS-EGC-M5**
120	217	**570365**	**HWS-EGC-M8-B**
185	58	**560517**	**HWS-EGC-M8:KURZ**

Drive shaft EAMB
Alternative interface
(order code K)



Dimensions and ordering data

For size	B1	B2	B3	D1 ∅	D2 ∅	D3	Weight [g]	Part No.	Type
50	12	3	1.1	16	8	M4	20	**558034**	**EAMB-16-7-8X15-8X10**
70	12	4	1.85	18	8	M5	29	**558035**	**EAMB-18-9-8X16-10X12**
80	21	–	2	24	15	M6	70	**558036**	**EAMB-24-6-15X21-16X20**
120	26	–	2	34	25	M10	201	**558037**	**EAMB-34-6-25X26-23X27**
185	30	–	3	44	35	M10	463	**558038**	**EAMB-44-7-35X30-32X32**

Ordering data						
	For size	Comment	Order code	Part No.	Type	PU[1]
Emergency buffer NPE						
	50	For use in combination with shock absorber retainer KYE	A	**564897**	**NPE-50**	1
	70			**562581**	**NPE-70**	
	80			**562582**	**NPE-80**	
	120			**562583**	**NPE-120**	
	185			**562584**	**NPE-185**	
Shock absorber YSRW					Technical data ➔ Internet: ysrw	
	50	For use in combination with shock absorber retainer KYE	C	**191192**	**YSRW-5-8**	1
	70			**191194**	**YSRW-8-14**	
	80			**191196**	**YSRW-12-20**	
	120			**191197**	**YSRW-16-26**	
	185			**191198**	**YSRW-20-34**	
Slot nut NST						
	50	For mounting slot	Y	**558045**	**NST-3-M3**	1
	70, 80			**150914**	**NST-5-M5**	
	120, 185			**150915**	**NST-8-M6**	
Centring pin/sleeve ZBS/ZBH[2]						
	50, 70	For slide	–	**150928**	**ZBS-5**	10
	80, 120, 185			**150927**	**ZBH-9**	
Slot cover ABP						
	70, 80	For mounting slot Every 0.5 m	B	**151681**	**ABP-5**	2
	120, 185			**151682**	**ABP-8**	
Slot cover ABP-S						
	50 ... 185	For sensor slot Every 0.5 m	S	**563360**	**ABP-5-S1**	2
Clip SMBK						
	50 ... 185	For sensor slot, for attaching the proximity sensor cables	CL	**534254**	**SMBK-8**	10

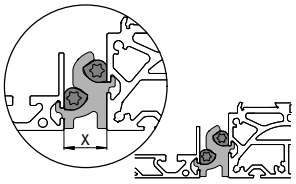
1) Packaging unit quantity
2) 2 centring pins/sleeves included in the scope of delivery of the axis

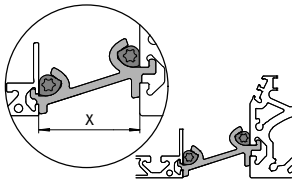
Mounting options between axis and support profile

Depending on the adapter kit, the spacing between the axis and the support profile is:
x = 20 mm or 50 mm

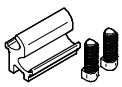
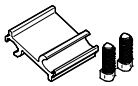
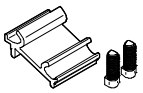
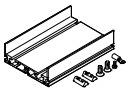
The support profile must be mounted using at least 2 adapter kits. For longer strokes, an adapter kit must be used every 500 mm.

Example:



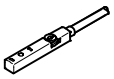
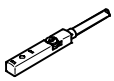


Ordering data

	For size	Comment	Part No.	Type	PU[1]
Adapter kit DHAM					
	70, 80	• For mounting the support profile on the axis • Spacing between axis and profile is 20 mm	**562241**	**DHAM-ME-N1-CL**	1
	120, 185		**562242**	**DHAM-ME-N2-CL**	
	70, 80	• For mounting the support profile on the axis • Spacing between axis and profile is 50 mm	**574560**	**DHAM-ME-N1-50-CL**	
	120, 185		**574561**	**DHAM-ME-N2-50-CL**	
Support profile HMIA					
	70 ... 185	• For guiding an energy chain	**539379**	**HMIA-E07-**	1

1) Packaging unit quantity

Ordering data – Proximity sensors for T-slot, inductive Technical data ➔ Internet: sies

	Type of mounting	Electrical connection	Switching output	Cable length [m]	Order code	Part No.	Type
N/O contact							
	Insertable in the slot from above, flush with the cylinder profile	Cable, 3-wire	PNP	7.5	X	**551386**	**SIES-8M-PS-24V-K-7,5-OE**
		Plug connector 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 connector M8x1, 3-pin		0.3	–	**551397**	**SIES-8M-NS-24V-K-0,3-M8D**
N/C contact							
	Insertable in the slot from above, flush with the cylinder profile	Cable, 3-wire	PNP	7.5	Z	**551391**	**SIES-8M-PO-24V-K-7,5-OE**
		Plug connector 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 connector M8x1, 3-pin		0.3	–	**551402**	**SIES-8M-NO-24V-K-0,3-M8D**

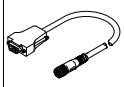
Ordering data – Proximity sensor M8 (round design), inductive — Technical data ➔ Internet: sien

	Electrical connection	LED	Switching output	Cable length [m]	Order code	Part No.	Type
N/O contact							
	Cable, 3-wire	■	PNP	2.5	O	**150386**	**SIEN-M8B-PS-K-L**
	Plug connector M8x1, 3-pin	■	PNP	–	W	**150387**	**SIEN-M8B-PS-S-L**
N/C contact							
	Cable, 3-wire	■	PNP	2.5	P	**150390**	**SIEN-M8B-PO-K-L**
	Plug connector M8x1, 3-pin	■	PNP	–	R	**150391**	**SIEN-M8B-PO-S-L**

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	**159420**	**SIM-M8-3GD-2,5-PU**
			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**

Ordering data – Encoder cables for displacement encoder EGC-...-M1/-M2 — Technical data ➔ Internet: nebm

	Electrical connection, left	Electrical connection, right	Cable length [m]	Part No.	Type
	Displacement encoder EGC-...-M1/-M2	Motor controller CMMP-AS-...	5	**1599105**	**NEBM-M12G8-E-5-S1G9-V3**
			10	**1599106**	**NEBM-M12G8-E-10-S1G9-V3**
			15	**1599107**	**NEBM-M12G8-E-15-S1G9-V3**
			X[1]	**1599108**	**NEBM-M12G8-E-...-S1G9-V3**

1) Max. cable length 25 m.