Cantilever axes DGEA, with toothed belt drive

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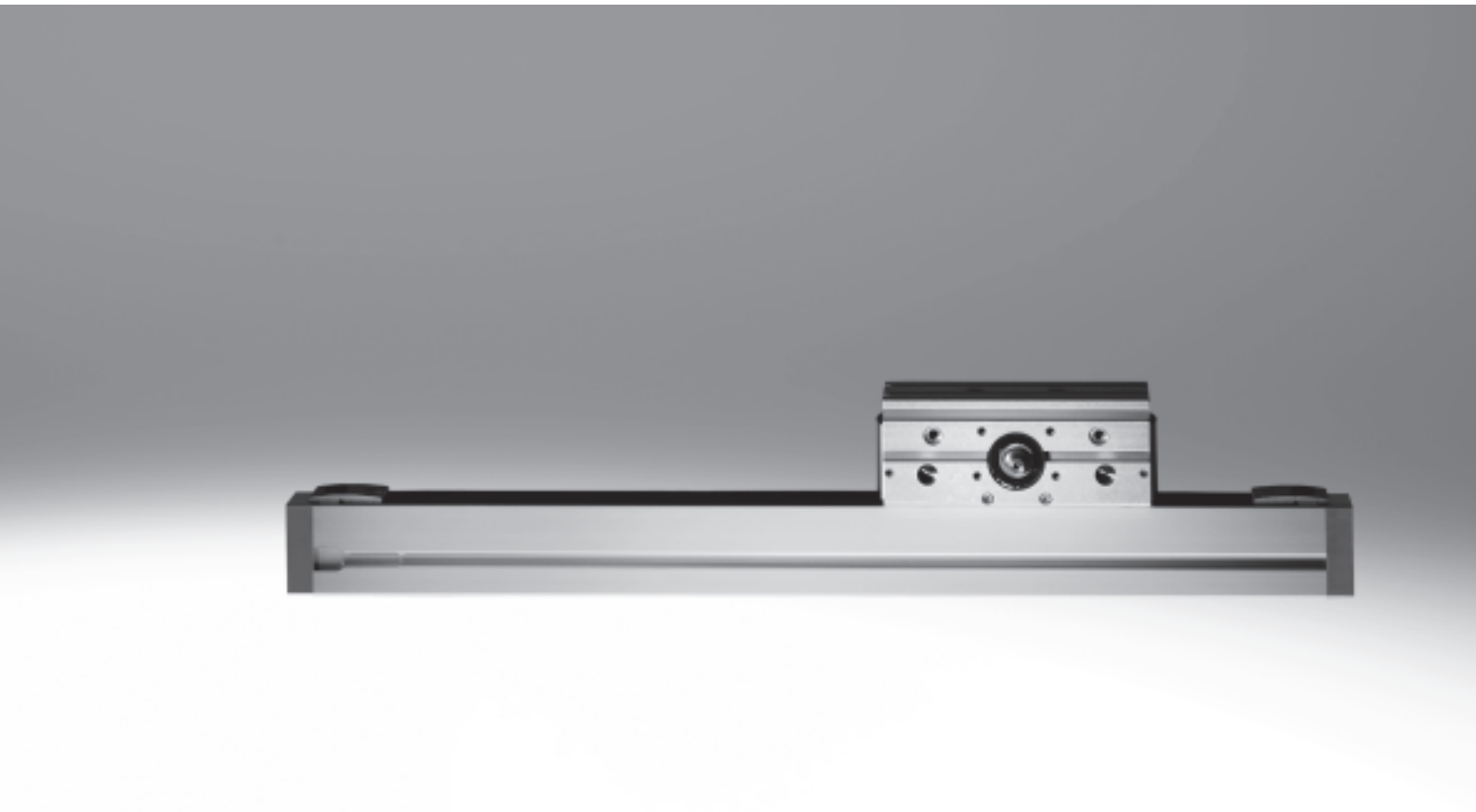


Cantilever axes DGEA, with toothed belt drive

Features

Key features at a glance

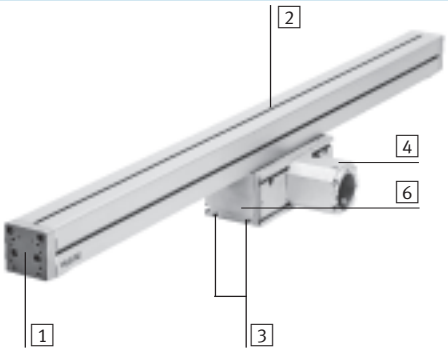
- Super flat Ω drive head enabling high mechanical torques.

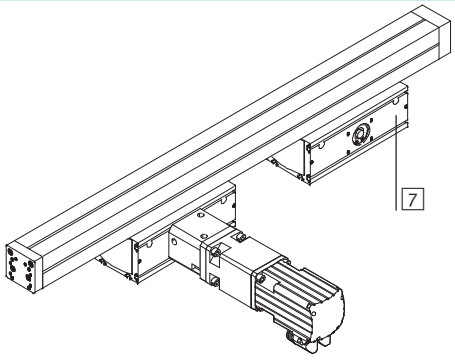
- High-quality guide as for DGE-KF/DGP-KF axis.
- Improved dynamics compared to toothed belt axis DGE-ZR in cantilever operation, as the motor, gear unit and drive head are securely mounted and thus the moving load (profile barrel) is considerably reduced.
- Tried and tested motor-controller packages can be utilised.
- Mounting options adapted to the new multi-axis modular system.

Size		18	25	40
Max. working stroke	[mm]	800	900	1000
Max. working load	[kg]	7	18	27
Max. speed	[m/s]	3	3	3
Max. feed force	[N]	230	400	1000

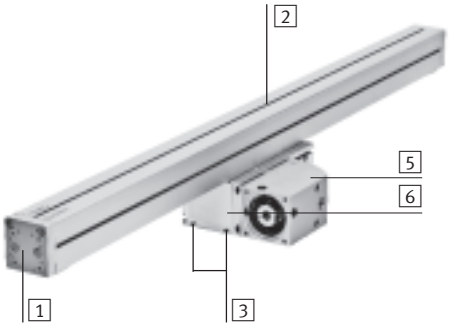
Variants

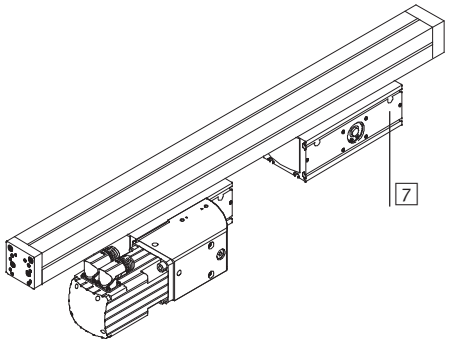
Basic design





With angled gear unit





1 Mounting interface for working load: thread, centring holes and hole pattern are identical to the end caps on the DGE axes. Both caps can be machined as desired or removed and replaced by others.

2 Profile barrel: 3 sides with slots for external mounting – clearance for tubing and electrical cable throughfeed

3 Mounting interface for cantilever application (matched to DGE-...-KF slide)

4 Coupling housing

5 Coupling housing with integrated angled gear unit

6 Drive head

7 Optional:
Additional drive head without drive shaft for increasing mechanical torque resistance

Cantilever axes DGEA, with toothed belt drive

Features

System selection for electromechanical drives

Cantilever axis

Note

For the cantilever axes and the motors there are matching complete solutions.

Motor kit ➔22

Axial kit

Axial kit consisting of:
- Motor flange
- Coupling housing
- Coupling
- Screws

Motor ➔22

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

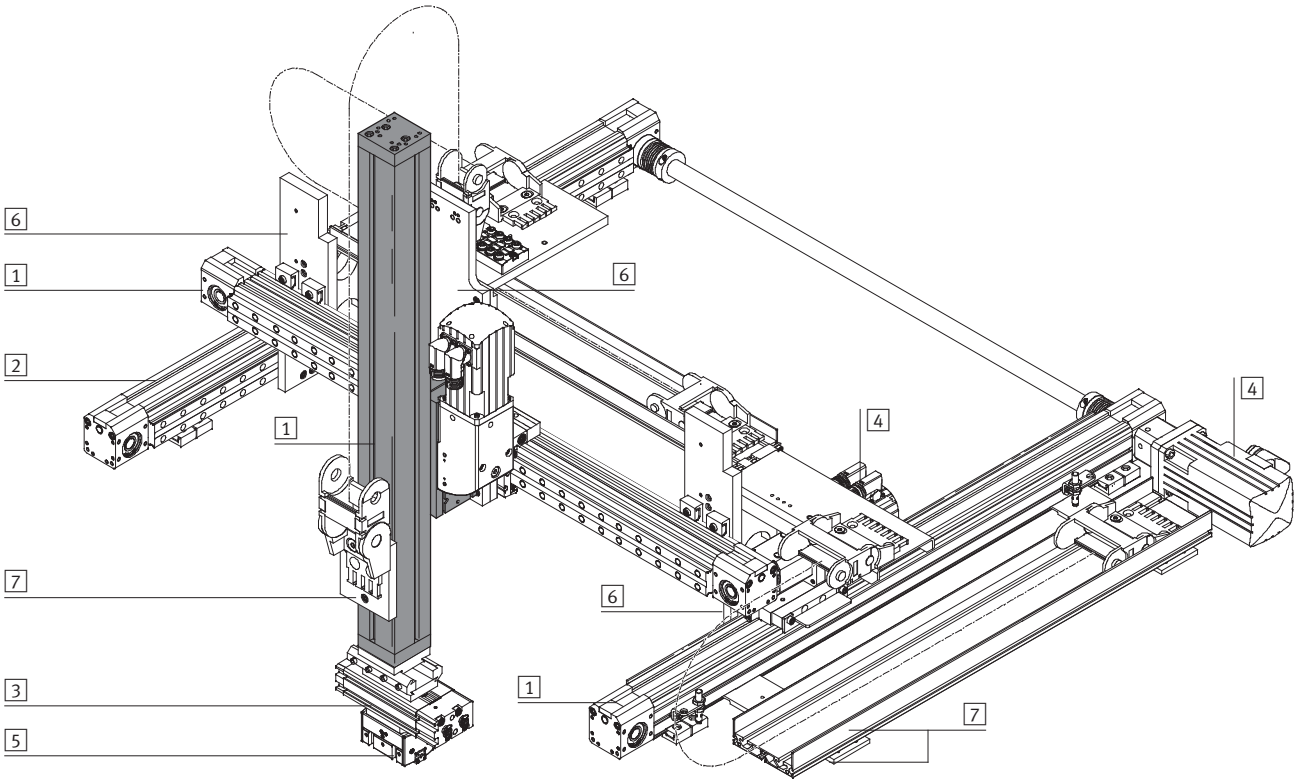
Motor controller Technical data ➔ Internet: motor controller

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

Cantilever axes DGEA, with toothed belt drive

System example

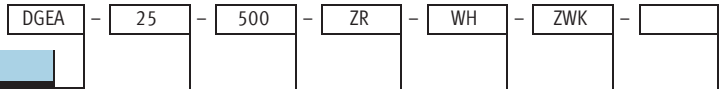
System product for handling and assembly technology



System elements and accessories			
		Brief description	**➔ Page/Internet**
1	Axes	Wide range of combination options within handling and assembly technology	axes
2	Passive guide axis	To increase force and torque capacity in multi-axis applications	guide axes
3	Drive units	Wide range of combination options within handling and assembly technology	drive
4	Motors	Servo and stepper motors, with or without gearing	motor
5	Grippers	Wide range of variation options within handling and assembly technology	gripper
6	Adapters	For drive/drive and drive/gripper combinations	adapter kit
7	Installation components	For achieving a clear-cut, safe layout for electrical cables and tubing	installation component

Cantilever axes DGEA, with toothed belt drive

Type codes



Type	
DGEA	Cantilever axis

Size	

Stroke [mm]	

Drive function	
ZR	Toothed belt

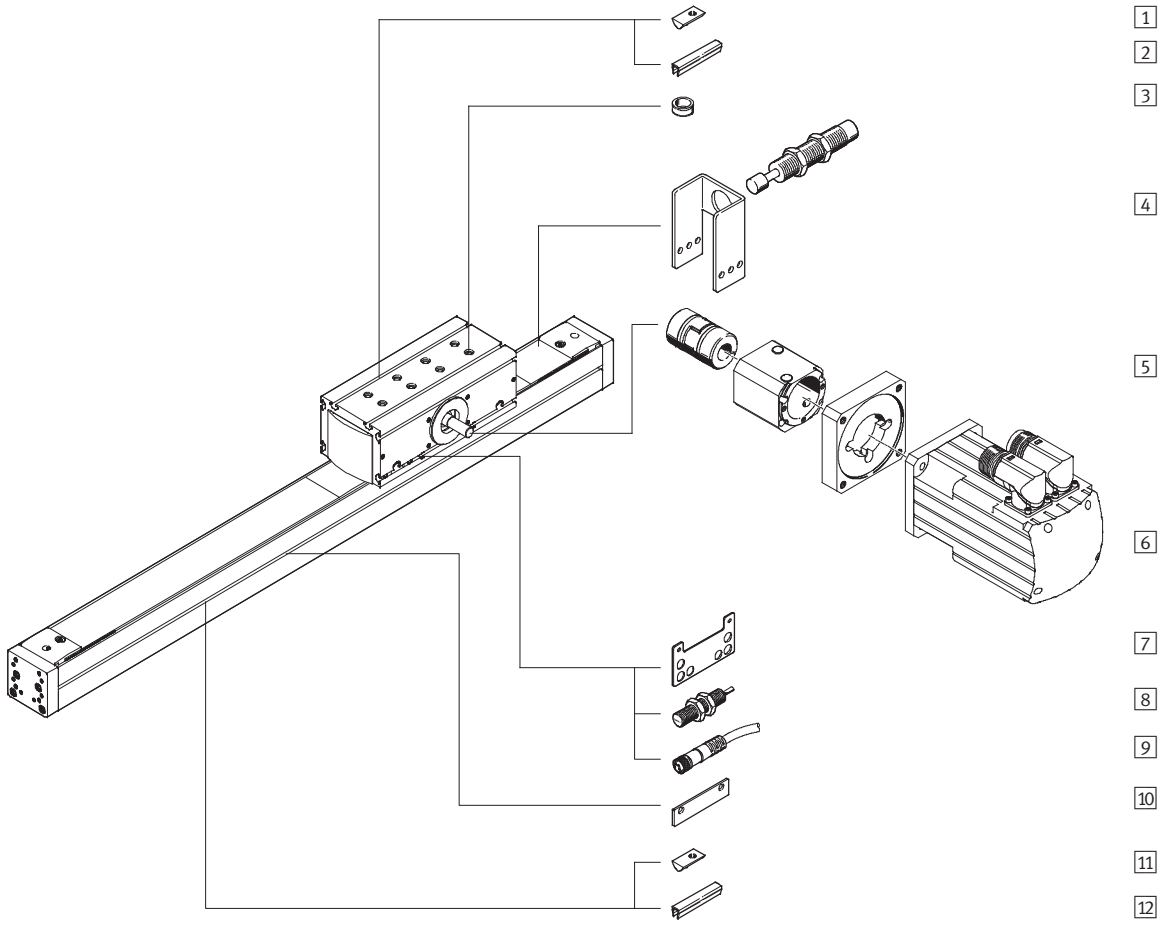
Drive head	
WH	Drive shaft at rear
WV	Drive shaft at front
WB	Drive shaft at both ends
GVL	Integrated angled gear unit/motor at front left
GVR	Integrated angled gear unit/motor at front right
GHL	Integrated angled gear unit/motor at rear left
GHR	Integrated angled gear unit/motor at rear right

Additional drive head	
ZWK	Without drive shaft

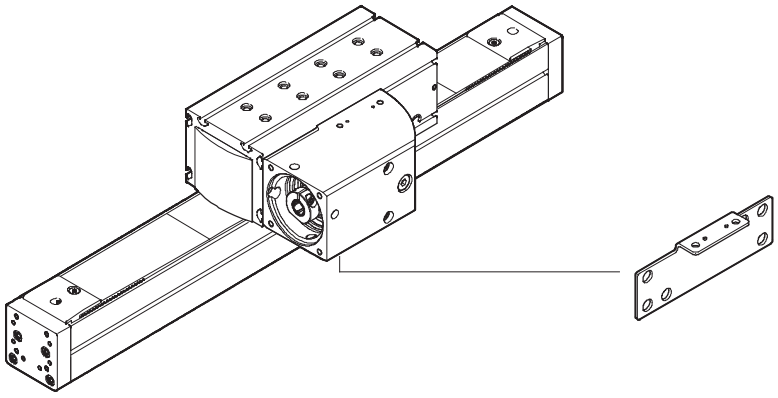
Accessories supplied separately	
...S	Slot cover for profile slot
...B	Slot cover for drive head
...Y	Slot nut for profile slot
...X	Slot nut for drive head
...C	Shock absorber with retainer
...Z	Centring sleeve
L	Mounting kit for proximity sensor
...O	Proximity sensor with cable (normally open contact)
...P	Proximity sensor with cable (normally closed contact)
...W	Proximity sensor with plug (normally open contact)
...R	Proximity sensor with plug (normally closed contact)
...V	Cable with socket, 2.5 m

Cantilever axes DGEA, with toothed belt drive

Peripherals overview



With angled gear unit



Cantilever axes DGEA, with toothed belt drive

Peripherals overview

Variants and accessories					
	Type	Brief description	Basic design	Angled gear unit	→ Page/Internet
1	Slot nut for drive head X	For mounting the axis	■	■	27
2	Slot cover for drive head B	For protecting against ingress of dirt	■	■	27
3	Centring sleeve Z	To centre the axis	■	■	27
4	Shock absorber with retainer C	Prevents damage to the axis in the event of a power failure (in vertical operation), if the axis is driven into the end position by the load	■	■	26
5	Axial kit EAMM-A	For axial motor attachment (consisting of: coupling housing, clamping component, motor flange)	■	–	22
5	Coupling housing KG	Adapter for mounting the motor on the axis	■	integrated	22
5	Coupling KSE	Connecting element between axis and motor	■	integrated	22
5	Motor flange EAMF	Connecting element between coupling housing and motor	■	integrated	22
6	Motor EMMS	Motors specially matched to the axis, with or without gearing	■	■	22
7	Mounting plate L	Adapter for mounting the SIEN proximity sensor on the axis (basic design)	■	–	24
8	Proximity sensor O/P/W/R	For providing a proximity signal or safety check	■	■	27
9	Cable with socket V	Via proximity sensor	■	■	27
10	Switching lug L	For sensing the slide position	■	■	24
11	Slot nut for profile slot Y	For mounting attachments	■	■	27
12	Slot cover for profile slot S	For protecting against ingress of dirt	■	■	27
13	Mounting plate L	Adapter for mounting the SIEN proximity sensor on the axis with angled gear unit	–	■	25

Cantilever axes DGEA, with toothed belt drive

Technical data

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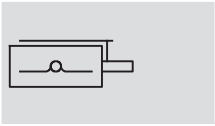
Function



-N- Size
18, 25, 40

-T- Stroke length
100 ... 1000 mm

DGEA... DGEA-...G-...

General technical data				
Size		18	25	40
Constructional design		Cantilever axis with toothed belt drive		
Guide		Recirculating ball bearing guide		
Mounting position		Any		
Max. working stroke[1]	[mm]	1 ... 800	1 ... 900	1 ... 1000
Max. working (effective) load, horizontal[2]	[kg]	6	15	40
Max. working load, vertical	[kg]	10	20	50
Max. feed force F_x	[N]	230	400	1000
Max. speed	[m/s]	3		
Max. acceleration	[m/s^2]	50		
Repetition accuracy	[mm]	< ±0.05		
Basic design				
Max. driving torque	[Nm]	3	5.2	19
Max. no-load driving torque[3]	[Nm]	0.4	0.4	1
Maximum drive speed	[rpm]	2222	2222	1500
With angled gear unit				
Max. driving torque	[Nm]	1.4	2.2	7.3
Max. no-load driving torque[3]	[Nm]	0.3	0.6	1.3
Maximum drive speed	[rpm]	6666	6666	4500
Gearing type		Crown gear unit		
Gearing		Straight		
Gear ratio		3		

1) Total stroke = working stroke + 2x stroke reserve, longer strokes on request
2) At 500 mm stroke and with a centred working load in the middle of the guide. Further values ➔ 12
3) Measured at a speed of 0.2m/s

Operating and environmental conditions				
Size		18	25	40
Ambient temperature	[°C]	–10 ... +60		
Protection class		IP20		

Cantilever axes DGEA, with toothed belt drive

Technical data

Weights [kg]								
Size			18		25		40	
Number of drive heads			1	2	1	2	1	2
Basic design								
Overall weight	at 0 mm stroke[1]		2.8	4.7	4.9	8.5	14.3	23.2
	Additional weight Per 100 mm stroke[1]		0.35	0.35	0.47	0.47	1	1
Moving load	at 0 mm stroke		1.5	2	2.4	3.3	6.2	8.6
With angled gear unit								
Overall weight	at 0 mm stroke[1]		3.6	5	6.6	9.3	19.5	26
	Additional weight Per 100 mm stroke[1]		0.35	0.35	0.47	0.47	1	1
Moving load	at 0 mm stroke[1]		1.5	2	2.4	3.3	6.2	8.6

1) Without motor, coupling, coupling housing and accessories

Mass moment of inertia								
Size			18		25		40	
Number of drive heads			1	2	1	2	1	2
J_O		[kg cm²]	2.87	4.08	4.45	6.40	28	41.5
J_H	per metre stroke	[kg cm²/m]	6		8		36.5	
J_L	per kg working load	[kg cm²/kg]	1.66		1.66		3.65	
J_G	angled gear unit	[kg cm²/m]	0.14		0.26		2.02	
i	gear ratio		3		3		3	

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

Basic design

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

With angled gear unit

$$J_A = J_G + \frac{J_O + J_H \times \text{working stroke [m]} + J_L \times m_{\text{working load}}\ [\text{kg}]}{i^2}$$

Toothed belt				
Size		18	25	40
Expansion[1]	[%]	0.037	0.053	0.056
Pitch	[mm]	3	3	5
Effective radius; effective diameter	[mm]	25.78	25.78	38.2
Feed constant	[mm/rev.]	81	81	120
Feed constant with integrated angled gear unit	[mm/rev.]	27	27	40

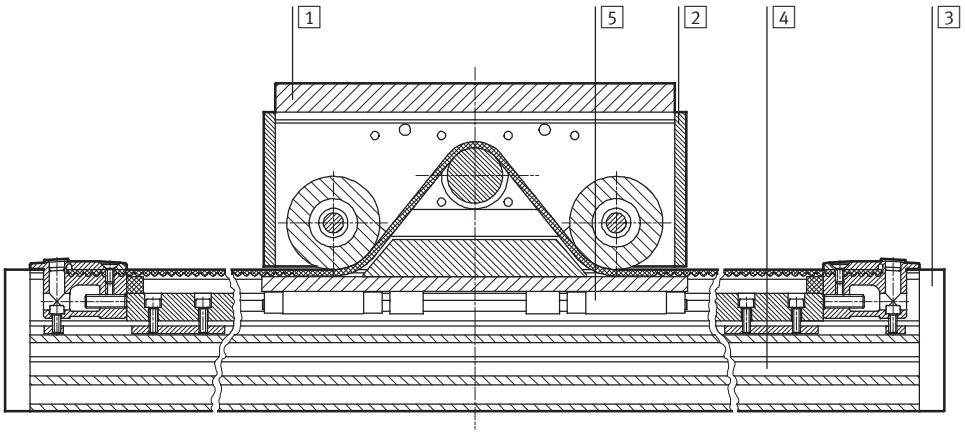
1) At max. feed force

Cantilever axes DGEA, with toothed belt drive

Technical data

Materials

Sectional view



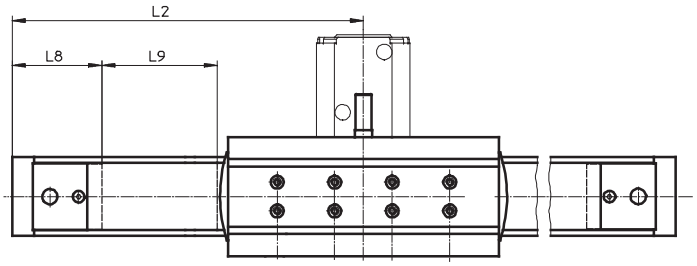
Axis		
1	Drive head interface	Galvanised steel
2	Drive head - Housing	Anodised aluminium
3	End cap	Anodised aluminium
4	Profile	Anodised aluminium
5	Guide rail	Rolled steel, corrotec coated
–	Gearing housing	Anodised aluminium
–	Pinion	Steel
–	Crown gear	Steel

Stroke reserve

L2 Drive head in the end position of the working stroke

L8 Distance between mechanical stop and external dimension of the axis

L9 The stroke reserve is a safety distance available on both sides of the axis in addition to the stroke



Example:
Type DGEA-25-500-ZR

Working stroke = 500 mm
Stroke reserve = (2x 81 mm)
= 162 mm
Total stroke = 500 mm + 126 mm
= 662 mm

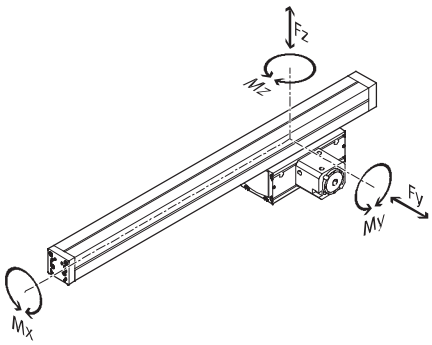
Size		18	25	40
L9 per end position	[mm]	81	81	120

Cantilever axes DGEA, with toothed belt drive

Technical data

Characteristic load values of the guide

The indicated forces and torques refer to the centre of the guide rail.
They must not be exceeded in the dynamic range. Special attention must be paid to the cushioning phase.



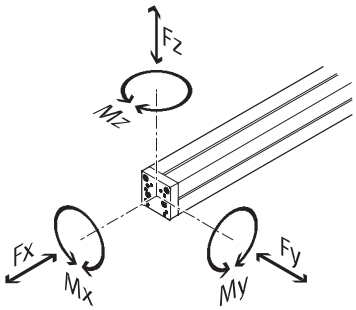
If the cantilever axis is simultaneously subjected to several of the forces and torques listed below, the following equation must be satisfied in addition to the indicated maximum loads.

$$\left|\frac{Fy}{Fy_{max.}}\right| + \left|\frac{Fz}{Fz_{max.}}\right| + \left|\frac{Mx}{Mx_{max.}}\right| + \left|\frac{My}{My_{max.}}\right| + \left|\frac{Mz}{Mz_{max.}}\right| \leq 1$$

Permissible forces and torques				
Size		18	25	40
$Fy_{max.}$	[N]	2000	3080	7300
$Fz_{max.}$	[N]	2000	3080	7300
$Mx_{max.}$	[Nm]	19	28	133
$My_{max.}$	[Nm]	94	230	665
$Mz_{max.}$	[Nm]	65	160	460

Characteristic load values of the interface for mounting the effective load

The forces and torques specified refer to the interface for mounting the effective load.
They must not be exceeded in the dynamic range. Special attention must be paid to the cushioning phase.



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

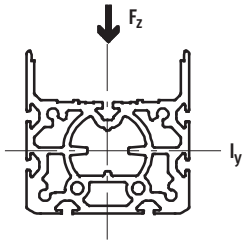
$$\left|\frac{Fx}{Fx_{max.}}\right| + \left|\frac{Fy}{Fy_{max.}}\right| + \left|\frac{Fz}{Fz_{max.}}\right| + \left|\frac{Mx}{Mx_{max.}}\right| + \left|\frac{My}{My_{max.}}\right| + \left|\frac{Mz}{Mz_{max.}}\right| \leq 1$$

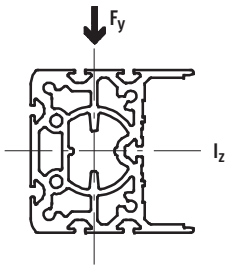
Permissible forces and torques				
Size		18	25	40
$Fx_{max.}$	[N]	6000	6000	8400
$Fy_{max.}$	[N]	2240	2240	3200
$Fz_{max.}$	[N]	2240	2240	3200
$Mx_{max.}$	[Nm]	30	50	118
$My_{max.}$	[Nm]	125	230	407
$Mz_{max.}$	[Nm]	185	273	580

Note

Sizing software
PositioningDrives
➔www.festo.com

2nd moment of area[1)]

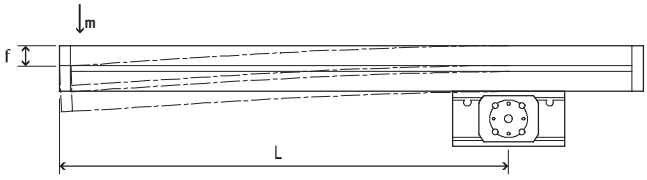




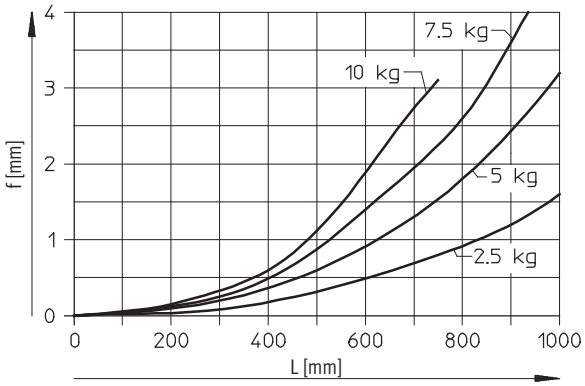
Size		18	25	40
Iy	[mm^4]	173x10^3	432x10^3	1759x10^3
Iz	[mm^4]	135x10^3	438x10^3	1894x10^3

1) After machining or replacing the end cap, the values become invalid.

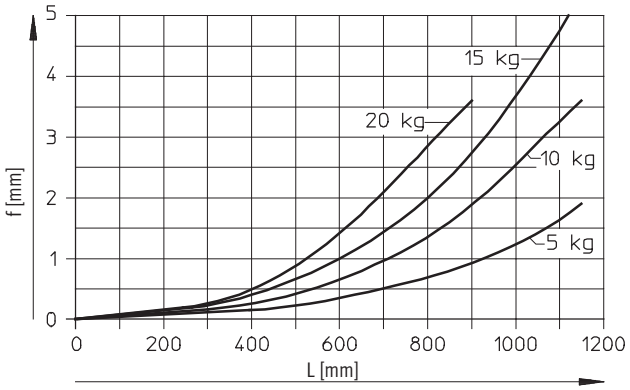
Deflection f of the profile as a function of the distance L and the effective load m



DGEA-18

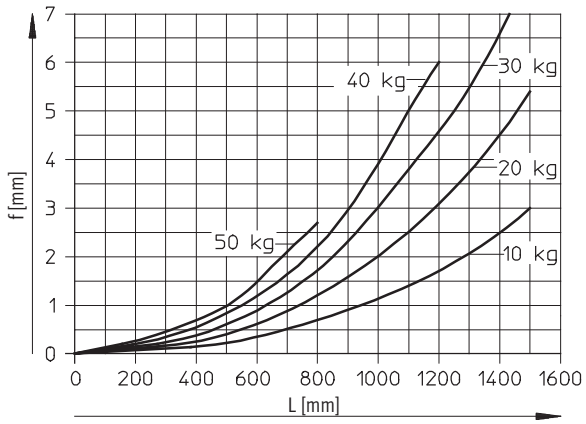


DGEA-25



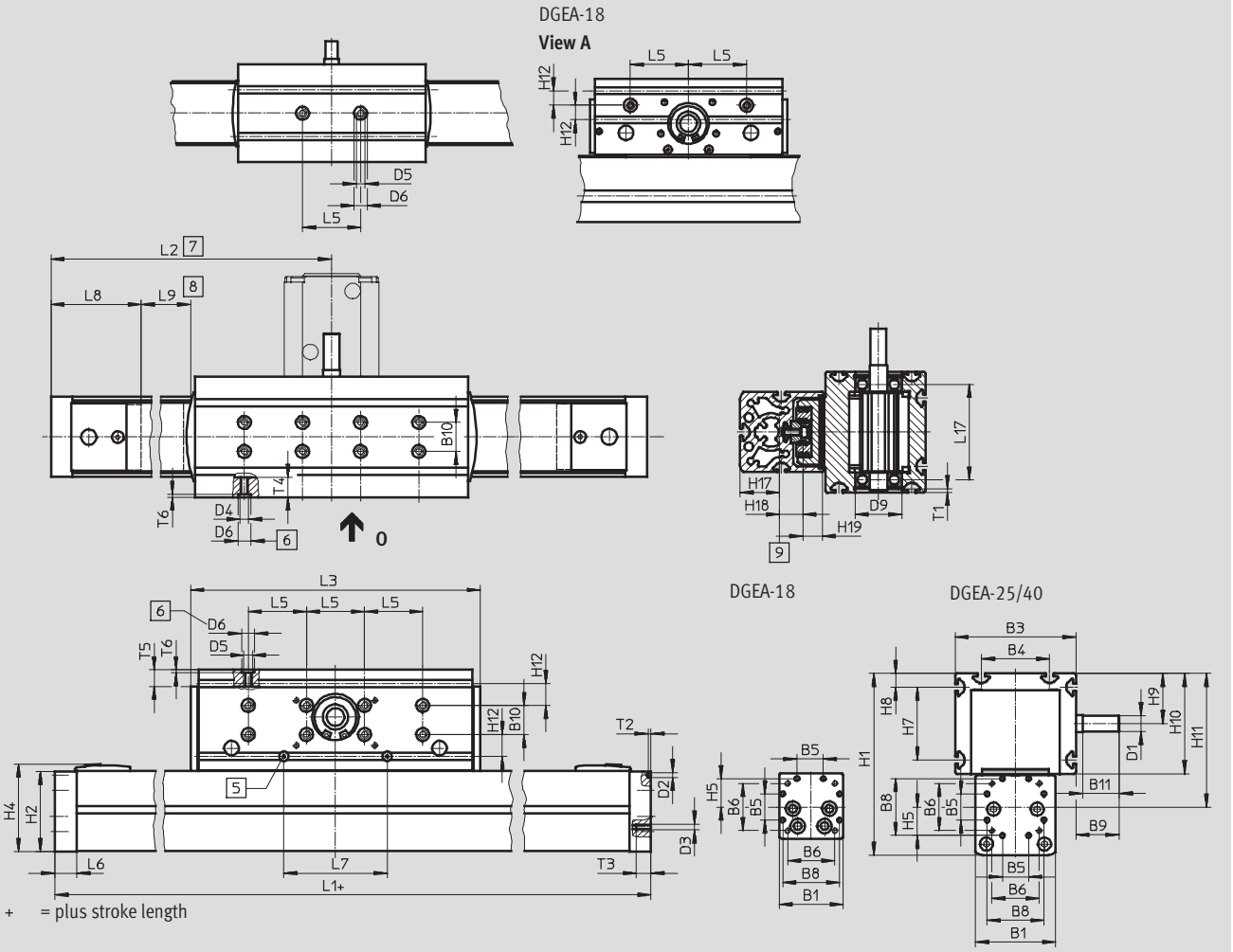
Deflection f of the profile as a function of the distance L and the effective load m

DGEA-40



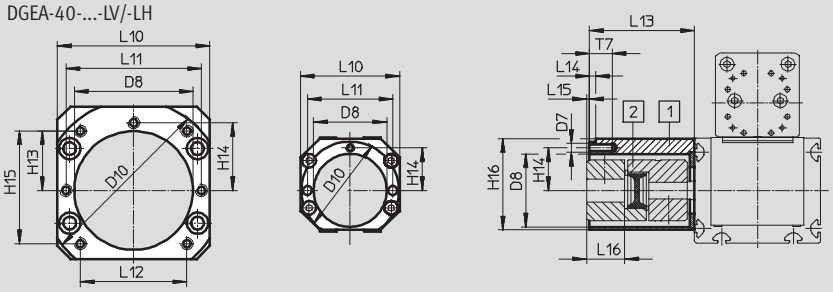
Dimensions Download CAD Data ➔ **www.festo.com/us/cad**

Basic design



Coupling housing

DGEA-40-...-LV/-LH



1 Coupling housing
2 Coupling
5 Lubrication nipple
6 Hole for centring sleeve ZBH-9
7 Slide in end position of the working stroke
8 Stroke reserve (Available safety distance from mechanical end position at both ends)
9 Centre of gravity of the moving intrinsic load

Cantilever axes DGEA, with toothed belt drive

Technical data

Size	Variant	B1	B3	B4	B5 ±0.1	B6	B8	B9	B10	B11	D1 ∅ h6	D2 ∅	D3
18	KV/KH	44	67	32	18	32.5	39.1	16	–	12	8	3.3	M4
25	KV/KH	55	83	47	18	32.5	39.1	29.8	20	25	11	3.3	M4
40	KV/KH	80	111.8	72	28	49	53	30.1	40	25	15	4	M5
	LV/LH												

Size	Variant	D4	D5	D6 ∅ H7	D7	D8 ∅	D9 ∅ H7	D10 ∅ g7	H1	H2	H4	H5	H7
18	KV/KH	M6	M6	9	M4	32	28	44	99	45	50.8	19.55	20
25	KV/KH	M6	M6	9	M6	48	32	64	128	57.7	63.1	19.55	50
40	KV/KH	M6	M6	9	M6	48	40	64	197	85	91.3	26.5	72
	LV/LH				M8	78		118					

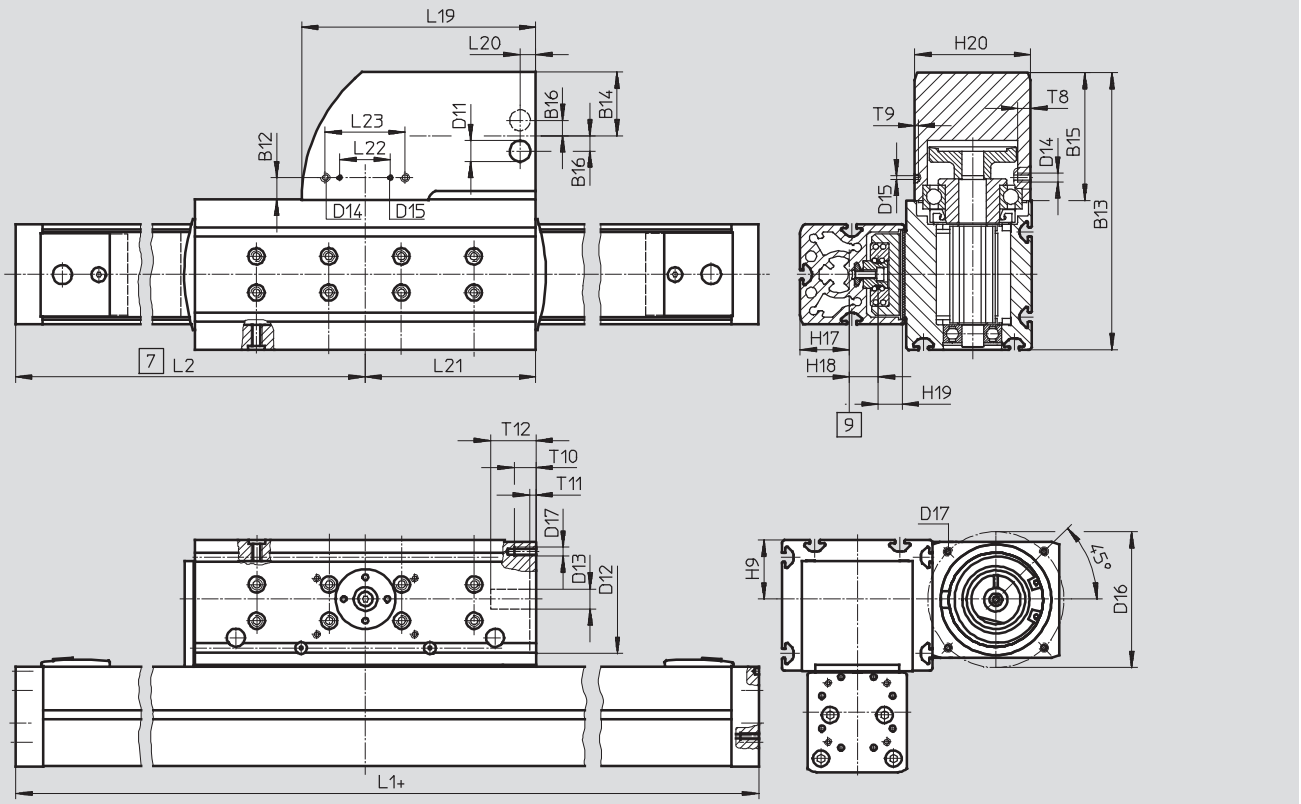
Size	Variant	H8	H9	H10	H11	H12	H13	H14 ±0.1	H15	H16	H17	H18	H19
18	KV/KH	8	30.5	52	77	10	–	19	–	45	19.6	10	14.3
25	KV/KH	9.5	32.5	69	95	15	–	28	–	60	27.1	16	13.3
40	KV/KH	15.5	55.5	110	153	16	–	28	–	60	42.8	21.5	18
	LV/LH						39	44.5	74	100			

Size	Variant	L1	L2	L3	L5	L6	L7	L8	L9	L10	L11	L12	L13
18	KV/KH	419.5	210	138	40	13	28	58	81	45	38	–	40
25	KV/KH	487.5	244	202	40	15	71	60	81	65	56	–	65
40	KV/KH	662	331	256	40	15	94	81	120	65	56	–	65
	LV/LH									100	89	70	96

Size	Variant	L14	L15	L16	L17	T1	T2	T3	T4 min.	T5 min.	T6	T7
18	KV/KH	3.2	–3.6	14.6	53	1.6	2	9	11	11	2.1	10
25	KV/KH	4	2.2	22.8	65.6	2.3	2	10	11	11	2.1	13
40	KV/KH	4	2.2	22.8	90	2.8	3	10	11	11	2.1	13
	LV/LH	5	–0.9	35.9								18

Dimensions Download CAD Data ➔ **www.festo.com/us/cad**

With angled gear unit



\+ = plus stroke length

7 Slide in end position of the nominal stroke

9 Centre of gravity of the moving intrinsic load

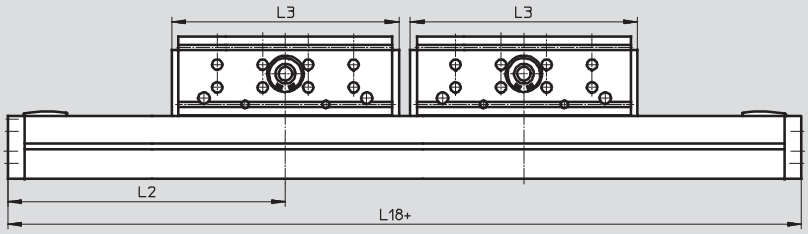
Size	B12	B13	B14	B15	B16	D11 ∅	D12 ∅ +0.05/+0.08	D13 ∅	D14	D15 ∅ ±0.05
18	11	122	27.5	55	9	11.5	40	9	M4	2
25	12	153	35	70	9	11.5	60	11	M5	2
40	16	211.8	50	100	17	11.9	95	19	M5	3

Size	D16 ∅	D17	H9	H17	H18	H19	H20	L1	L2	L19
18	63	M5	30.5	19.6	10	14.3	55	419.5	210	97
25	75	M5	32.5	27.1	16	13.3	64	487.5	244	129
40	115	M8	55.5	42.8	21.5	18	100	662	331	173

Size	L20	L21	L22 ±0.1	L23 ±0.1	T8	T9	T10	T11	T12
18	8.5	64.5	18	34	5	2	12	3.5	24
25	8.5	94	28	44	7	2	12	3.5	25
40	11.5	120	44	68	5	2	12	3.5	40

Dimensions Download CAD Data ➔ **www.festo.com/us/cad**

with additional drive head



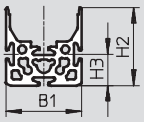
\+ = plus stroke length

Note

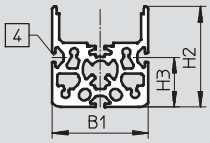
When using an integrated right-angle gear unit with motor interface on the right (-GVR / -GHR) combined with an additional drive head (-ZWK), a minimum distance between the two drive heads must be observed. When using Festo servo motors, this distance corresponds to at least the overall length of the motor.

Profile barrel

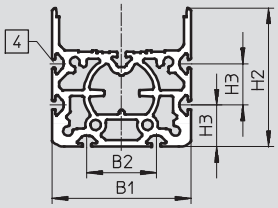
Size 18



Size 25



Size 40



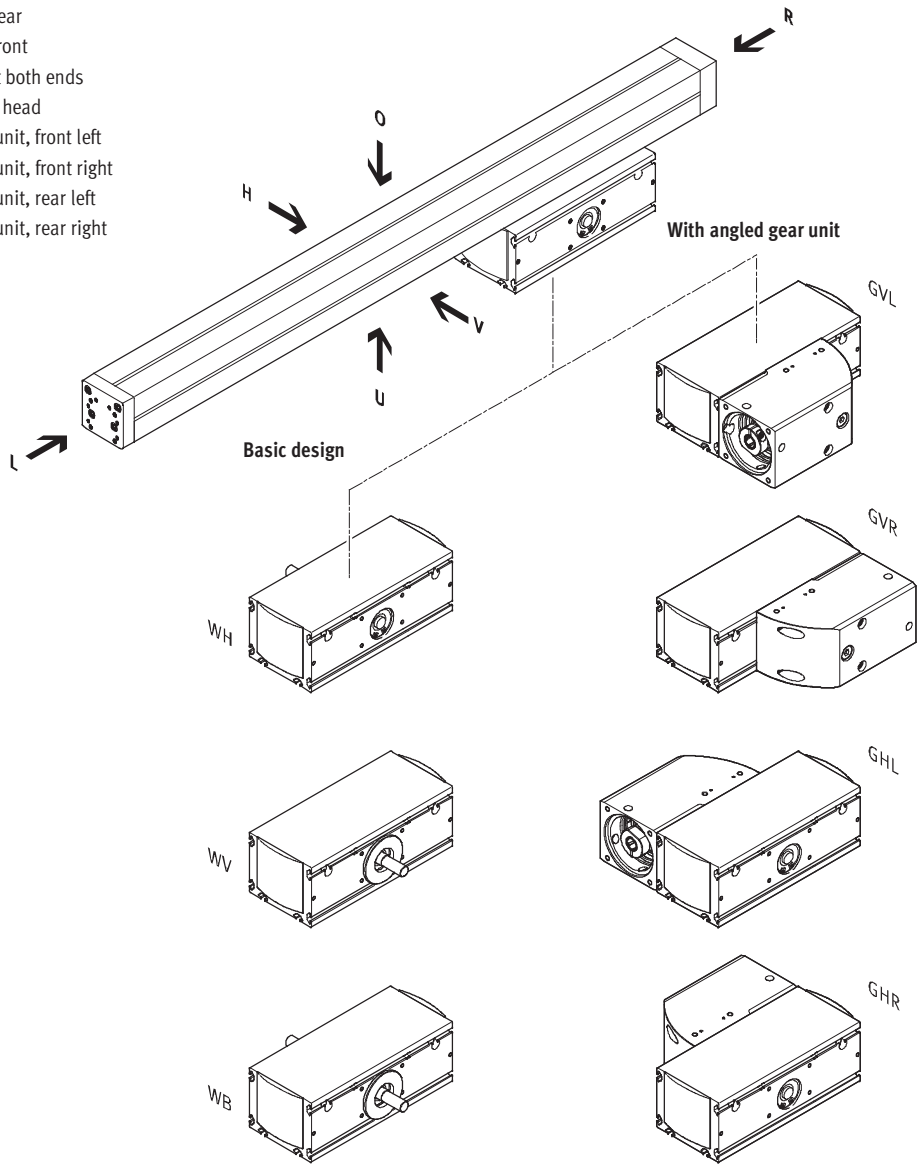
4 Mounting slot for slot nut NST

Size	B1	B2	H2	H3	L2	L3	L18
18	44	–	45	18	210	138	569.5
25	55	–	57.7	28.4	244	202	697.5
40	80	40	85	24	331	256	926

Cantilever axes DGEA, with toothed belt drive

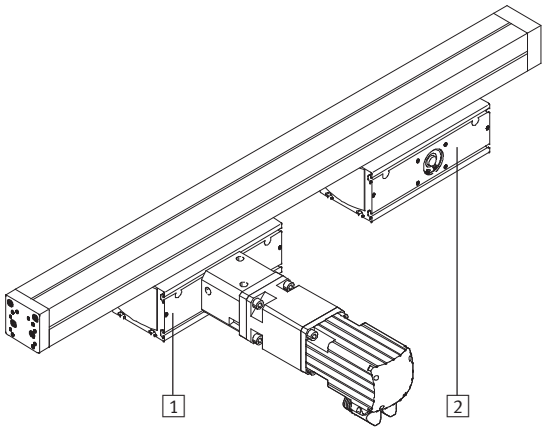
Ordering data – Modules

Order code	
Mandatory data/options	
WH	Drive shaft, rear
WV	Drive shaft, front
WB	Drive shaft at both ends
ZWK	Second drive head
GVL	Angled gear unit, front left
GVR	Angled gear unit, front right
GHL	Angled gear unit, rear left
GHR	Angled gear unit, rear right

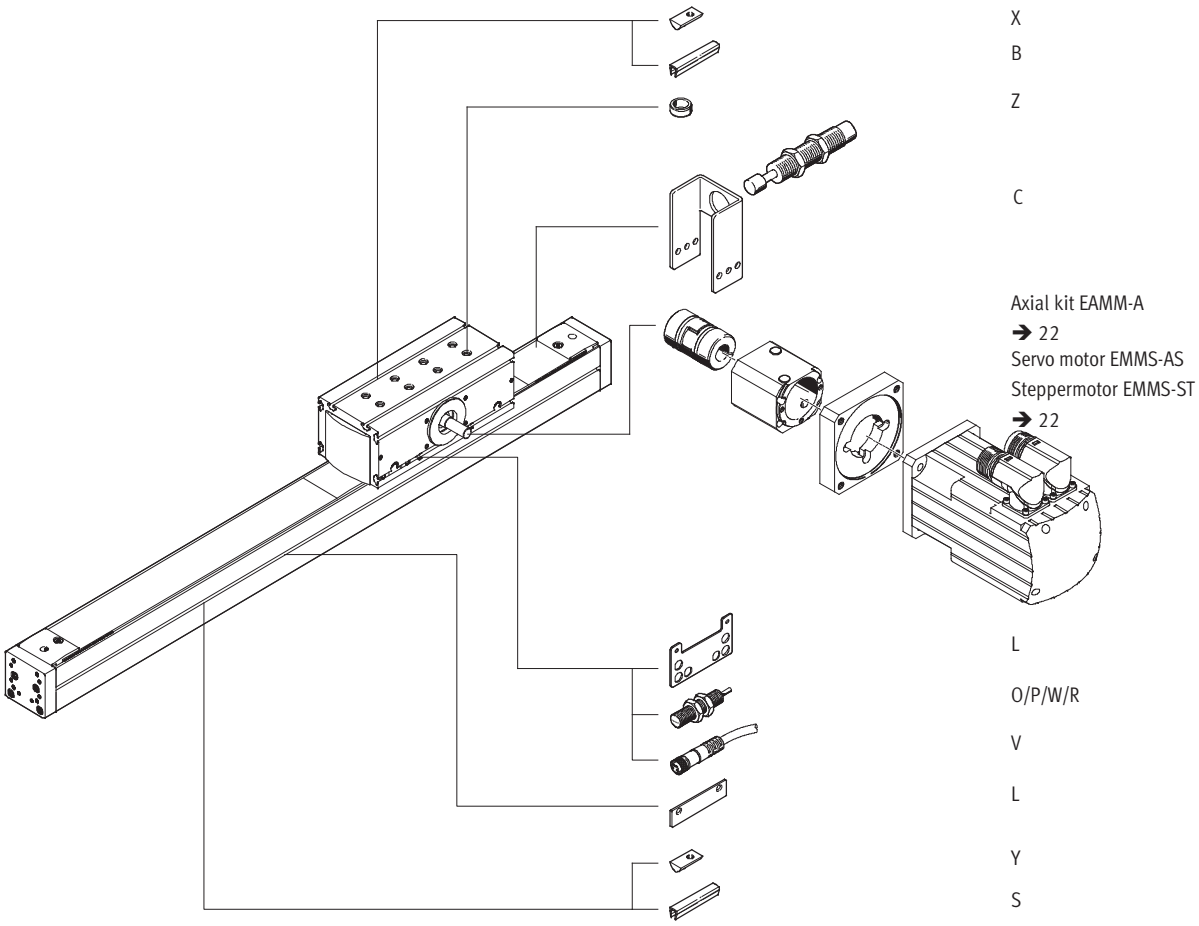


O = top
U = underneath
R = right
L = left
V = front
H = rear

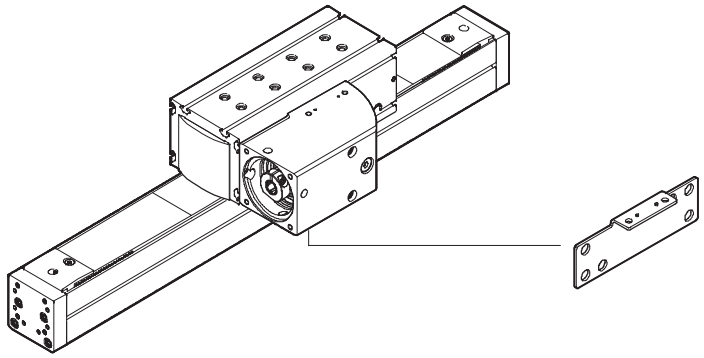
1 Drive head
2 Optionally:
Additional drive head
(to increase the mechanical torque resistance)



Order code
Options



With angled gear unit



Cantilever axes DGEA, with toothed belt drive

Ordering data – Modules

FESTO

M Mandatory data						O Options →
Module No.	**Construction**	**Size**	**Stroke**	**Drive function**	**Drive head**	**Additional drive head**
195 611 195 612 195 613	DGEA	18 25 40	1 ... 1000	ZR	WH WV WB GVL GVR GHL GHR	ZWK
Ordering example						
195 612	**DGEA**	**25**	**850**	**ZR**	**WV**	

Ordering table

Size		18	25	40	Conditions	Code		Enter code
M	Module No.	**195 611**	**195 612**	**195 613**				
	Construction	Cantilever axis with toothed belt drive				**DGEA**		DGEA
	Size	18	25	40		**-...**		
	Stroke [mm]	1 ... 800	1 ... 900	1 ... 1000		**-...**		
	Drive function	Electromechanical drive with toothed belt drive				**-ZR**		-ZR
	Drive head	Drive shaft at rear				**-WH**		
		Drive shaft at front				**-WV**		
		Drive shaft at both ends				**-WB**		
		Integrated angled gear unit for arrangement of motor at front left				**-GVL**		
		Integrated angled gear unit for arrangement of motor at front right				**-GVR**		
		Integrated angled gear unit for arrangement of motor at rear left				**-GHL**		
		Integrated angled gear unit for arrangement of motor at rear right				**-GHR**		
	Additional drive head	Without drive shaft				**-ZWK**		

Note

When using an integrated right-angle gear unit with motor interface on the right (-GVR / -GHR) combined with an additional drive head (-ZWK), a minimum distance between the two drive heads must be observed. When using Festo servo motors, this distance corresponds to at least the overall length of the motor.

Transfer order code

	DGEA	–		–		–	**ZR**	–		–		–

[O] Options

Accessories	Slot cover	Slot nut	Shock absorber with retainer	Centring sleeve	Retaining plate for proximity sensor	Inductive proximity sensor	Cable with socket
ZUB	...S ...B	...Y ...X	...C	...Z	L	...O ...P ...W ...R	...V
ZUB	– **2B**		**2C**	**10Z**	**L**	**2P2W**	**2V**

Ordering table

Size		18	25	40	Conditions	Code		Enter code
↓	Accessories	Supplied separately				**ZUB-**		ZUB-
[O]	Slot cover for profile slot	1 ... 10				**...S**		
	Slot cover for drive head	1 ... 10				**...B**		
	Slot nut for profile slot	1 ... 10				**...Y**		
	Slot nut for drive head	1 ... 10				**...X**		
	Shock absorber with retainer	1 ... 2				**...C**		
	Centring sleeve	10, 20, 30, 40, 50, 60, 70, 80, 90				**...Z**		
	Retaining plate for inductive proximity switch, incl. 2 switching lugs	1				**L**		
	Inductive proximity sensor NO contact, cable	1 ... 5				**...O**		
	Inductive proximity sensor NC contact, cable	1 ... 5				**...P**		
	Inductive proximity sensor NO contact, plug	1 ... 5				**...W**		
	Inductive proximity sensor NC contact, plug	1 ... 5				**...R**		
	Cable with socket	1 ... 10				**...V**		

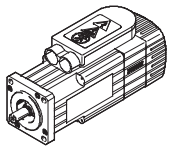
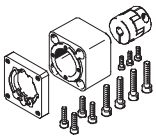
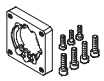
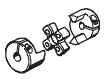
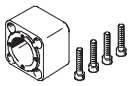
Note

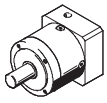
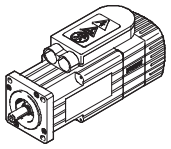
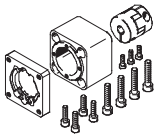
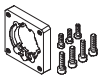
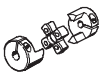
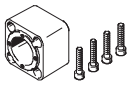
Cantilever axes DGEA offer the same mounting options (on the end cap of the profile and drive head) as the electromechanical axes DGE-...-ZR-KF/-SP-KF

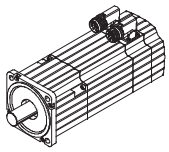
Note however that there is no 1:1 conformity with regard to size.
Example:
Profile dimension DGEA-18 corresponds to DGE-25.

Transfer order code

ZUB	–							

Permissible combinations with axial kit – Basic design without gear unit				
Motor	Axial kit	Axial kit consisting of:		
		Motor flange	Coupling	Coupling housing
				
Type	Part No. Type	Part No. Type	Part No. Type	Part No. Type
DGEA-18				
With stepper motor				
EMMS-ST-57-...	**550 956** **EAMM-A-F28-57A**	**530 081** **EAMF-A-44A/B-57A**	**530 088** **EAMC-30-35-6.35-8**	**530 468** **EAMK-A-F28-44A**
EMMS-ST-87-...	**550 958** **EAMM-A-F28-87A**	**530 082** **EAMF-A-44A/B-87A**	**123 042** **EAMC-30-35-8-11**	**530 468** **EAMK-A-F28-44A**
DGEA-25				
With stepper motor				
EMMS-ST-87-...	**550 960** **EAMM-A-F32-87A**	**533 140** **EAMF-A-64A/B-87A**	**530 090** **EAMC-40-66-11-11**	**530 469** **EAMK-A-F32-64A**

Permissible combinations with axial kit – Basic design with gear unit					
Gear unit	Motor	Axial kit	Axial kit consisting of:		
			Motor flange	Coupling	Coupling housing
					
Type	Type	Part No. Type	Part No. Type	Part No. Type	Part No. Type
DGEA-18					
With servo motor					
EMGA-60-P-G...-SAS-55	**EMMS-AS-55-...**	**550 957** **EAMM-A-F28-60G**	**529 944** **EAMF-A-44A/B-60G**	**123 042** **EAMC-30-35-8-11**	**530 468** **EAMK-A-F28-44A**
With stepper motor					
EMGA-60-P-G...-SST-57	**EMMS-ST-57-...**	**550 957** **EAMM-A-F28-60G**	**529 944** **EAMF-A-44A/B-60G**	**123 042** **EAMC-30-35-8-11**	**530 468** **EAMK-A-F28-44A**
DGEA-25					
With servo motor					
EMGA-60-P-G...-SAS-70	**EMMS-AS-70-...**	**550 959** **EAMM-A-F32-60G**	**550 987** **EAMF-A-64A/B-60G**	**530 090** **EAMC-40-66-11-11**	**530 469** **EAMK-A-F32-64A**
DGEA-40					
With servo motor					
EMGA-80-P-G...-SAS-100	**EMMS-AS-100-...**	**550 935** **EAMM-A-F40-80G**	**533 139** **EAMF-A-64A/C-80G**	**123 845** **EAMC-40-66-15-20**	**124 629** **EAMK-A-F40-64A**
With stepper motor					
EMGA-80-P-G...-SST-87	**EMMS-ST-87-...**	**550 935** **EAMM-A-F40-80G**	**533 139** **EAMF-A-64A/C-80G**	**123 845** **EAMC-40-66-15-20**	**124 629** **EAMK-A-F40-64A**

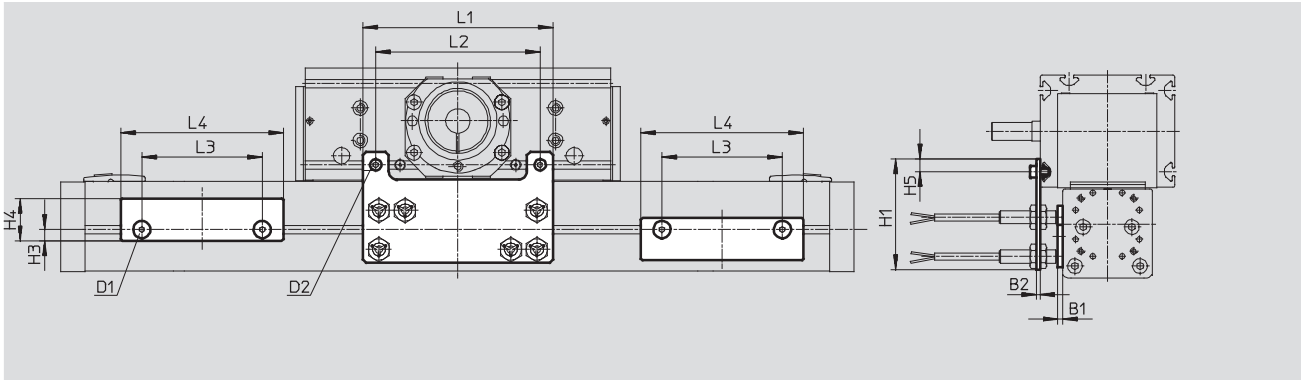
Permissible combinations with angled gear unit
Motor

Type
DGEA-18
With servo motor
EMMS-AS-55-...
DGEA-25
With servo motor
EMMS-AS-70-...
DGEA-40
With servo motor
EMMS-AS-100-...

Note

The basic design of the gear units facilitates a reduction of 4 : 1 and that of the angled gear unit a reduction ratio of 3: 1.

Mounting kit for proximity sensor (DGEA in basic design)
DGEA-...-SIE-M8
(Order code: L)

Material:
Galvanised steel



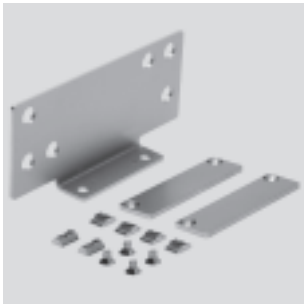
Dimensions and ordering data

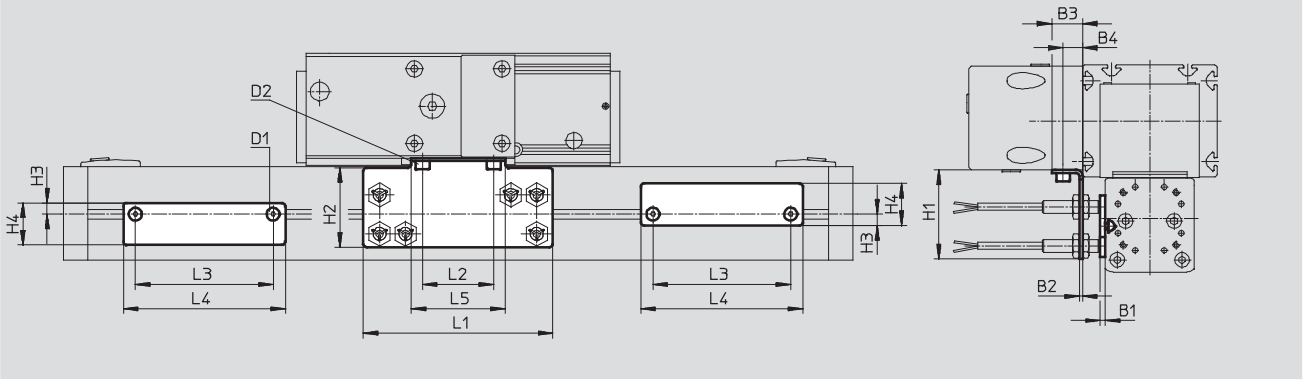
For size	B1	B2	D1	D2	H1	H3	H4
18	3	2	M4	M4	77	5	21
25	3	2	M4	M5	68	7	26
40	3	7	M4	M5	92	7	26

For size	H5	L1	L2	L3	L4	Weights [g]	Part No.	Type
18	7.5	114	90	74	84	200	**525 868**	**DGEA-18-SIE-M8**
25	8	117	101	85	100	250	**525 869**	**DGEA-25-SIE-M8**
40	10	190	133	124.5	145	600	**525 870**	**DGEA-40-SIE-M8**

Mounting kit for proximity sensor (DGEA with angled gear unit) DGEA-...-G...-SIE-M8
(Order code: L)

Material:
Galvanised steel





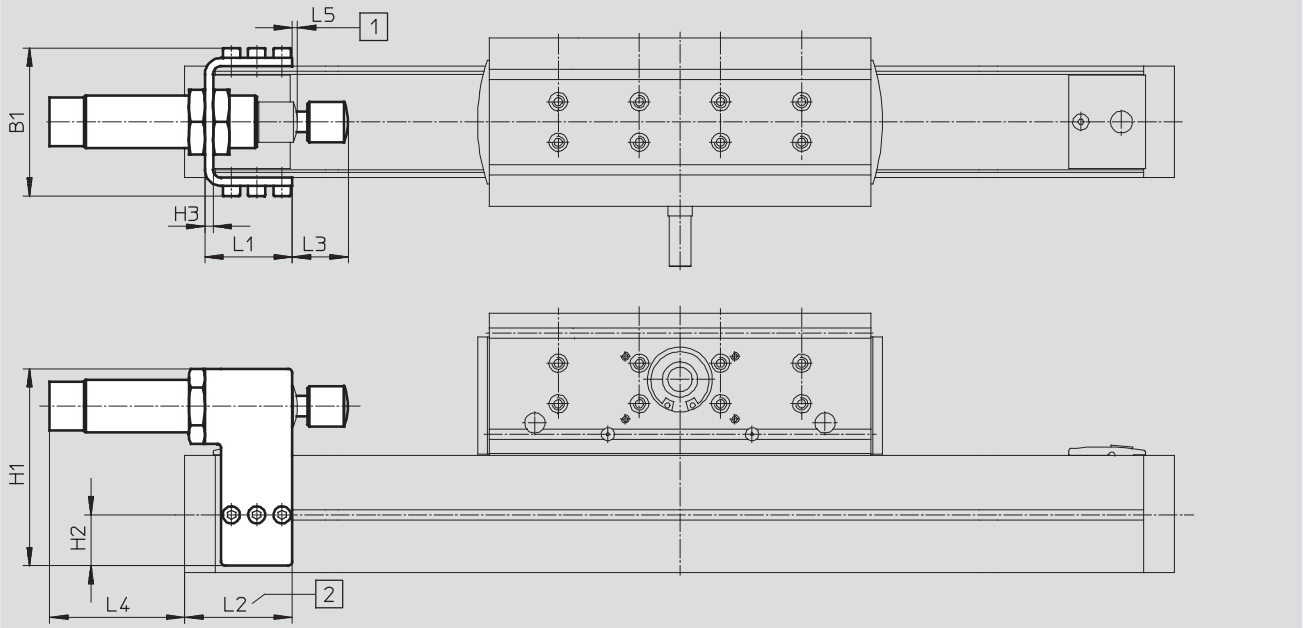
Dimensions and ordering data

For size	B1	B2	B3	B4	D1	D2	H1	H2	H3
18	3	2	17	11	M4	M4	40	34	5
25	3	2	19	12	M4	M5	55	49	7
40	3	4	23	16	M4	M5	64	52	7

For size	H4	L1	L2	L3	L4	L5	Weights [g]	Part No.	Type
18	21	114	34	74	84	46	170	**539 935**	**DGEA-18-G...-SIE-M8**
25	26	117	44	85	100	58	250	**539 936**	**DGEA-25-G...-SIE-M8**
40	26	153	68	124.5	145	82	520	**539 937**	**DGEA-40-G...-SIE-M8**

Shock absorber kit
DGEA-...-YSR
(Order code: C)

Material:
Galvanised steel
Copper, PTFE and silicone-free



1 Adjusted during assembly

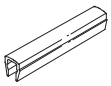
2 Minimum distance to axis end, otherwise end position not protected

Dimensions and ordering data

For size	B1	H1	H2	H3	L1	L2 +1	L3	L4	L5 +1	Weights [g]	Part No.	Type
18	59	80	15	3	44	67	1)	1)	2	390	**525 865**	**DGEA-18-YSR**
25	73	97	25	4	43	60	1)	1)	2	630	**525 866**	**DGEA-25-YSR**
40	98	122	14	4	70.5	81	1)	1)	2	1200	**525 867**	**DGEA-40-YSR**

1) Dimension is related to the size of the shock absorber and the mounting position of the shock absorber kit

Ordering data — Technical data ➔ Internet: mounting attachment

	For size	Remarks	Order code	Part No.	Type	PU[1]
Slot nut NST						
	18	for profile slot	Y	**526 091**	**NST-HMV-M4**	1
	25, 40			**150 914**	**NST-5-M5**	1
	18, 25, 40	for drive head	X	**150 914**	**NST-5-M5**	1
Centring sleeve ZBH						
	18, 25, 40	for drive head	Z	**150 927**	**ZBH-9**	10
Slot cover ABP/ABP-S						
	18	for profile slot every 0.5 m	S	**151 680**	**ABP-5-S**	2
	25, 40			**151 681**	**ABP-5**	2
	18, 25, 40	for drive head every 0.5 m	B	**151 681**	**ABP-5**	2

1) Packaging unit quantity

Ordering data – Inductive proximity sensors M8 — Technical data ➔ Internet: sien

	Electrical connection		Switch output	LED	Cable length [m]	Part No.	Type
	Cables	M8 plug					
NO contact							
	3-core	–	PNP	■	2.5	**150 386**	**SIEN-M8B-PS-K-L**
	–	3-pin	PNP	■	–	**150 387**	**SIEN-M8B-PS-S-L**
NC contact							
	3-core	–	PNP	■	2.5	**150 390**	**SIEN-M8B-PO-K-L**
	–	3-pin	PNP	■	–	**150 391**	**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	**541 333**	**NEBU-M8G3-K-2.5-LE3**
			5	**541 334**	**NEBU-M8G3-K-5-LE3**
	Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	2.5	**541 338**	**NEBU-M8W3-K-2.5-LE3**
			5	**541 341**	**NEBU-M8W3-K-5-LE3**

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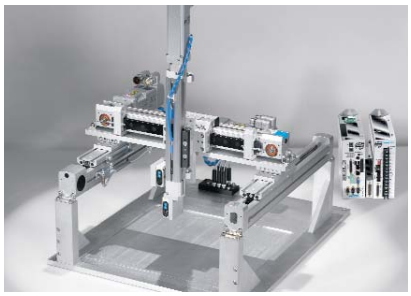
Complete custom engineered solutions

Custom Control Cabinets
Comprehensive engineering support and on-site services



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Electromechanical actuators, motors, controllers & drives

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

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