

# Linear drives DGC-K

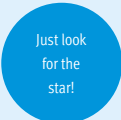


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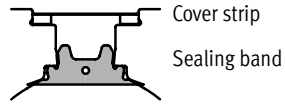


## Characteristics

### At a glance

- Without external guide, for simple drive functions
- Compact – installation length relative to stroke
- Fully interchangeable with the linear drive DGP
- Easy assembly and installation
- Choice of:
  - Standard piston
  - Extended piston
- Optional: NSF-H1 lubricant for the food area

Sealing system:



- Advantages of the sealing system
- Long strokes with no restrictions
  - Virtually no leakage

The linear drive is of limited suitability for the food area.  
Additional information: [www.festo.com/sp](http://www.festo.com/sp) → Certificates

### Guide variants

#### Compact design DGC-K



- Piston diameter 18 ... 80 mm
- Stroke lengths from 1 ... 8500 mm
- 30% narrower than the DGC-G
- Low moving dead weight
- Symmetrical design

#### Basic design DGC-G



- Piston diameter 8 ... 63 mm
- Stroke lengths from 1 ... 8500 mm
- Guide backlash = 0.2 mm
- For small loads
- Operating behaviour under torque load = average

#### Plain-bearing guide DGC-GF



- Piston diameter 18 ... 63 mm
- Stroke lengths from 1 ... 8500 mm
- Guide backlash = 0.05 mm
- For small and medium loads
- Operating behaviour under torque load = average

#### Recirculating ball bearing guide DGC-KF



- Piston diameter 8 ... 63 mm
- Stroke lengths from 1 ... 8500 mm
- Guide backlash = 0 mm
- For medium and large loads
- Precision mounting interface with stainless steel slide
- Operating behaviour under torque load = very good

#### Heavy-duty guide DGC-HD



- Piston diameter 18, 25, 40 mm
- Stroke lengths from 10 ... 5000 mm
- Guide backlash = 0 mm
- For large loads
- Operating behaviour under torque load = very good

#### Guide axis DGC-FA



- Without drive
- Piston diameter 8 ... 63 mm
- Stroke lengths from 1 ... 8500 mm
- Guide backlash = 0 mm
- Precision guide, suitable for DGC-KF. Can be used as machine component or as twin guide with DGC-KF

#### D2 – Compressed air supply port at both ends

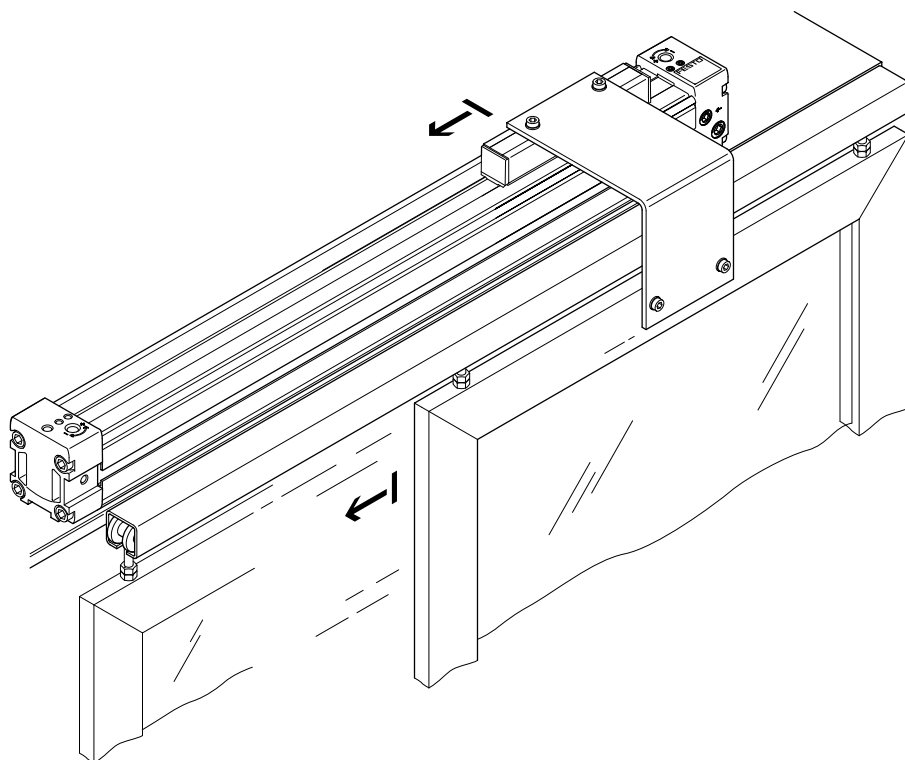


The compressed air supply ports on the linear drive DGC-K are located on a connection cap as standard.  
The linear drive is actuated at both ends by specifying order code D2 in the modular product system. Actuation at one end is then no longer possible.

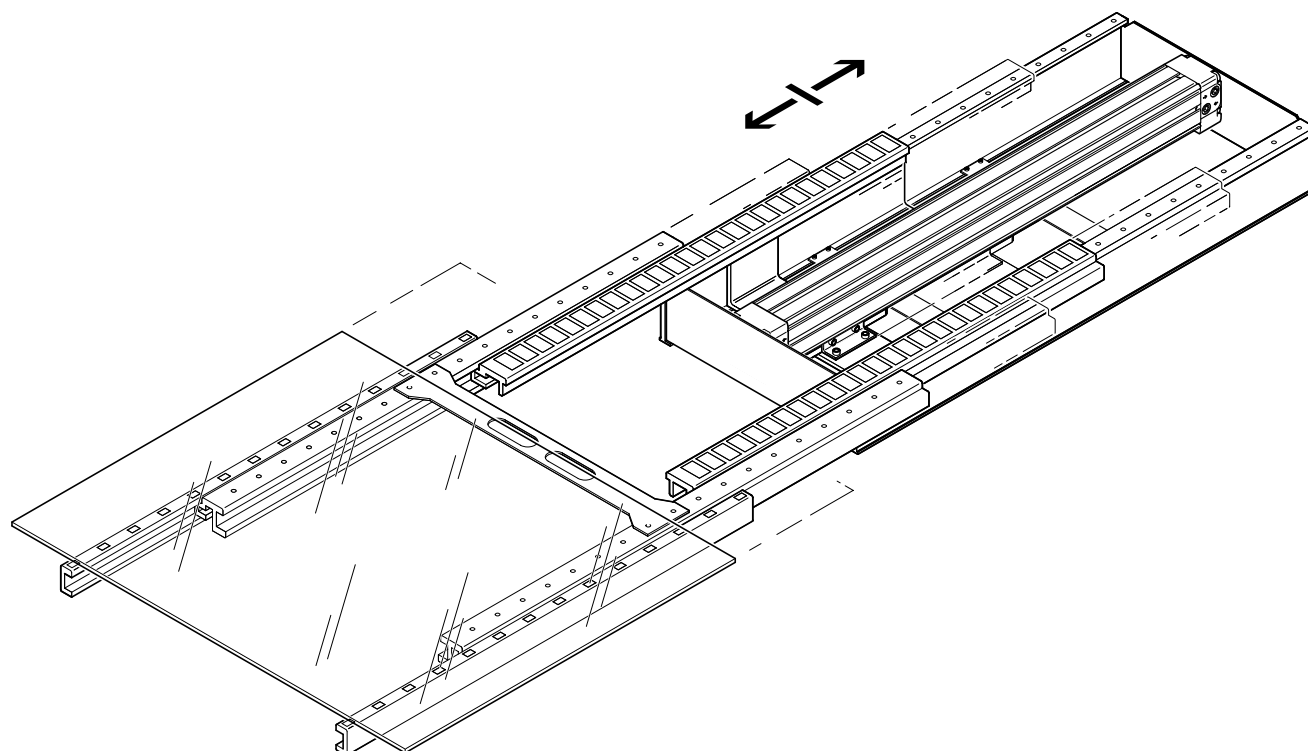
## Characteristics

### Application examples

For opening and closing doors

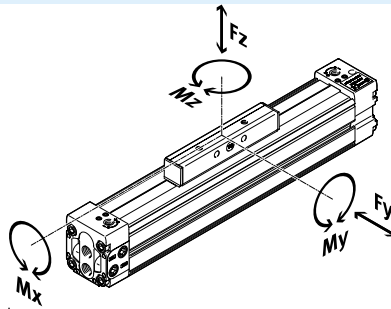


For transporting glass plates



Product range overview

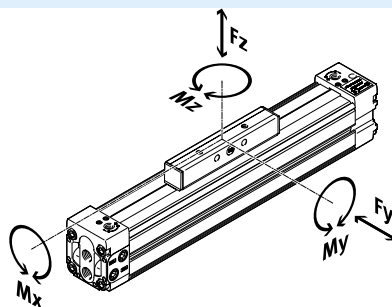
Product variants





	Piston diameter [mm]	Theoretical force at 0.6 MPa (6 bar, 87 psi) [N]	Guide characteristics					→ Page/ Internet
			$F_y$ [N]	$F_z$ [N]	$M_x$ [Nm]	$M_y$ [Nm]	$M_z$ [Nm]	
<b>Compact design DGC-K</b>								
	18	153	–	120	0.8	11	1	6
	25	295	–	330	1.2	20	3	
	32	483	–	480	1.9	40	5	
	40	754	–	800	3.8	60	8	
	50	1178	–	1200	6	120	15	
	63	1870	–	1600	5.7	150	24	
	80	3016	–	2500	30.6	400	100	
<b>Basic design DGC-G</b>								
	8	30	150	150	0.5	2	2	dgc
	12	68	300	300	1.3	5	5	
	18	153	70	340	1.9	12	4	
	25	295	180	540	4	20	5	
	32	483	250	800	9	40	12	
	40	754	370	1100	12	60	25	
	50	1178	480	1600	20	150	37	
63	1870	650	2000	26	150	48		
<b>Plain-bearing guide DGC-GF</b>								
	18	153	440	540	3.4	20	8.5	dgc
	25	295	640	1300	8.5	40	20	
	32	483	900	1800	15	70	33	
	40	754	1380	2000	28	110	54	
	50	1178	1500	2870	54	270	103	
	63	1870	2300	4460	96	450	187	

## Product range overview

### Product variants



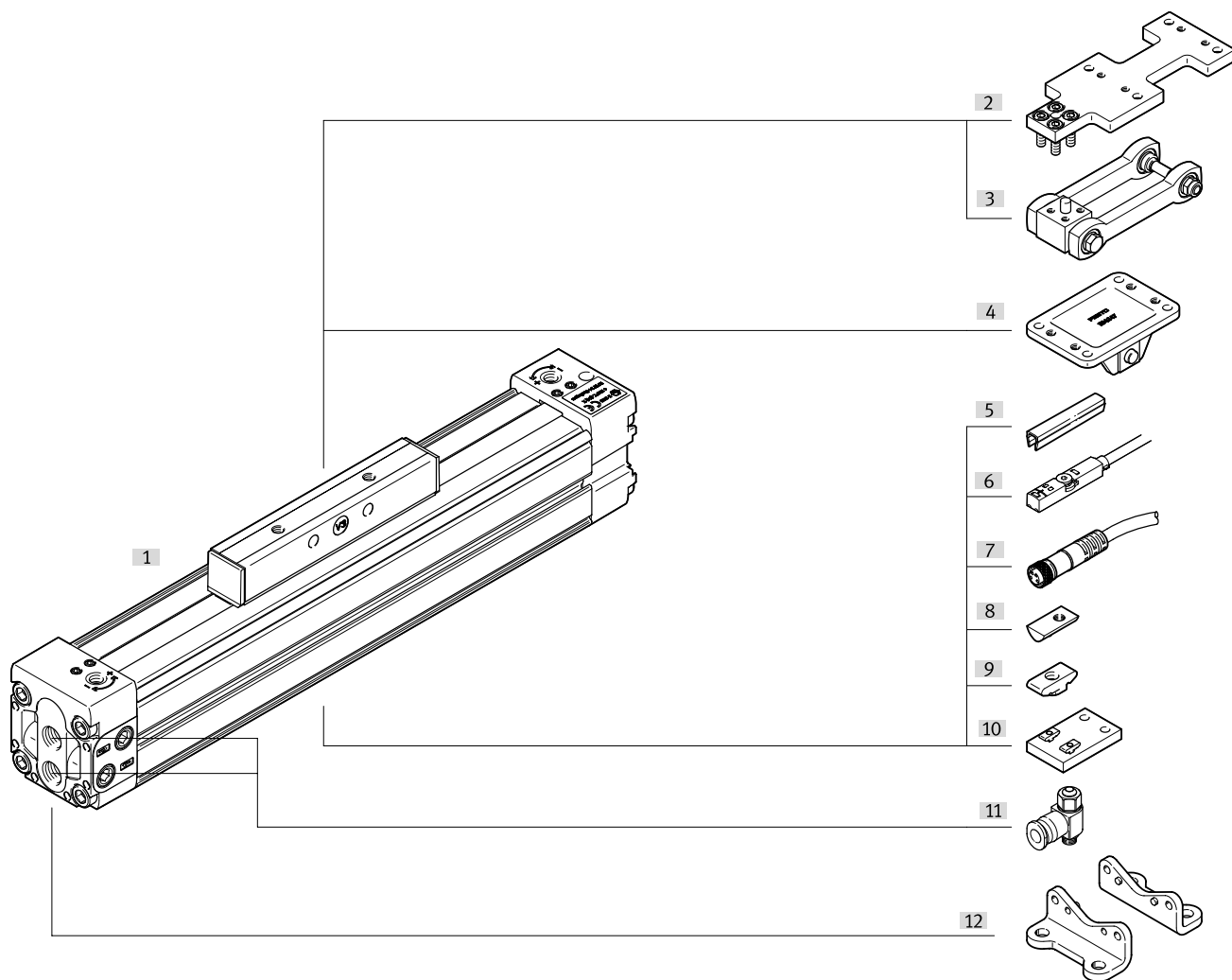
	Piston diameter [mm]	Theoretical force at 0.6 MPa (6 bar, 87 psi) [N]	Guide characteristics					→ Page/ Internet
			Fy [N]	Fz [N]	Mx [Nm]	My [Nm]	Mz [Nm]	
<b>Recirculating ball bearing guide DGC-KF</b>								
	8	30	300	300	1.7	4.5	4.5	dgc
	12	68	650	650	3.5	10	10	
	18	153	1850	1850	16	51	51	
	25	295	3050	3050	36	97	97	
	32	483	3310	3310	54	150	150	
	40	754	6890	6890	144	380	380	
	50	1178	6890	6890	144	634	634	
63	1870	15200	15200	529	1157	1157		
<b>Heavy-duty guide DGC-HD</b>								
	18	153	3650	3650	140	275	275	dgc-hd
	25	295	5600	5600	300	500	500	
	40	754	13000	13000	900	1450	1450	

## Type codes

<b>001</b>	<b>Series</b>	
<b>DGC</b>	Linear drive	
<b>002</b>	<b>Guide</b>	
<b>K</b>	Compact	
<b>003</b>	<b>Piston diameter</b>	
<b>18</b>	18	
<b>25</b>	25	
<b>32</b>	32	
<b>40</b>	40	
<b>50</b>	50	
<b>63</b>	63	
<b>80</b>	80	
<b>004</b>	<b>Stroke</b>	
<b>...</b>	1 ... 8500	
<b>005</b>	<b>Cushioning</b>	
<b>PPV</b>	Pneumatic cushioning, adjustable at both ends	
<b>006</b>	<b>Position sensing</b>	
<b>A</b>	For proximity sensor	
<b>007</b>	<b>Basic version</b>	
<b>GK</b>	Piston/slide standard	
<b>GV</b>	Extended piston/slide	
<b>008</b>	<b>Compressed air connection</b>	
	At one end	
<b>D2</b>	Both sides	
<b>009</b>	<b>Lubrication</b>	
	Standard	
<b>H1</b>	Food-safe lubrication	
<b>010</b>	<b>Moment compensator</b>	
	None	
<b>FK</b>	Moment compensator	
<b>011</b>	<b>EU certification</b>	
	None	
<b>EX2</b>	II 3GD	
<b>EX3</b>	II 2G	

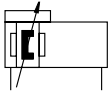
<b>012</b>	<b>Accessories</b>	
	None	
<b>ZUB</b>	Accessories supplied loose	
<b>013</b>	<b>Foot mounting</b>	
	None	
<b>F</b>	1 record	
<b>014</b>	<b>Central support</b>	
	None	
<b>...M</b>	1 ... 10 pieces	
<b>015</b>	<b>Slot nut, mounting slot</b>	
	None	
<b>...Y</b>	1 ... 10 pieces	
<b>016</b>	<b>Slot cover for mounting slot</b>	
	None	
<b>...B</b>	1...10 pieces	
<b>017</b>	<b>Proximity sensor, cable 2.5 m</b>	
	None	
<b>...G</b>	1 ... 10 pieces	
<b>018</b>	<b>Proximity sensor, plug M8</b>	
	None	
<b>...H</b>	1 ... 10 pieces	
<b>019</b>	<b>Proximity sensor, contactless, cable 2.5 m</b>	
	None	
<b>...I</b>	1 ... 10 pieces	
<b>020</b>	<b>Proximity sensor, contactless, plug M8</b>	
	None	
<b>...J</b>	1 ... 10 pieces	
<b>021</b>	<b>Proximity sensor, N/C contact, cable 2.5 m</b>	
	None	
<b>...N</b>	1 ... 10 pieces	
<b>022</b>	<b>Connecting cable 2.5 m, plug M8</b>	
	None	
<b>...V</b>	1 ... 10 pieces	
<b>023</b>	<b>Slot cover, sensor slot</b>	
	None	
<b>...S</b>	1 ... 10 pieces	

Peripherals overview

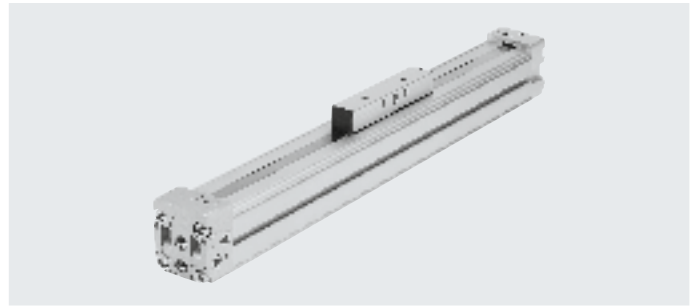


Accessories			
Type/order code	Description		→ Page/Internet
[1] Linear drive DGC-K	Linear drive without accessories, basic design		8
[2] Adapter plate DAMF	Has the same interface as the moment compensator FKP for the linear drive DGP		30
[3] Moment compensator DARD-...-M	For compensating misalignments when using external guides		28
[4] Moment compensator FK (type: DARD-...-S)	For compensating misalignments when using external guides. Has the same interface as the moment compensator FKP for the linear drive DGP		26
[5] Slot cover B/S	For protecting against contamination and securing the proximity sensor cable in place		32
[6] Proximity sensor G/H/I/J/N	For sensing the position of the moment compensator		32
[7] Connecting cable V	For proximity sensor		33
[8] Slot nut for mounting slot Y (type: NST)	For mounting attachments In the case of piston diameter 18 and 25, cannot be used with DGC-...-D2 (compressed air supply port at both ends)		32
[9] Slot nut for mounting slot Y (type: ABAN)	For mounting attachments In the case of piston diameter 18 and 25, possible with all combinations		32
[10] Central support M	For mounting the axis, particularly for long stroke lengths		25
[11] One-way flow control valve GRLA	For regulating speed		32
[12] Foot mounting F	For mounting the axis		24

Data sheet



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- Diameter  
18 ... 80 mm
- Stroke length  
1 ... 8500 mm

General technical data		18	25	32	40	50	63	80	
Piston diameter		18	25	32	40	50	63	80	
Design	Pneumatic linear drive with slide								
Guide	Slotted cylinder barrel								
Mode of operation	Double-acting								
Stroke	[mm]	1 ... 3000	1 ... 8500			1 ... 6000	1 ... 5000	1 ... 3000 <sup>1)</sup>	
Pneumatic connection		M5	G1/8		G1/4		G3/8	G1/2	
Cushioning	[PPV]	Adjustable at both ends							
Cushioning length	[mm]	16	18	20	30	30	30	83	
Max. speed									
With adjust. pneum. cushioning PPV	[m/s]	2							
With external cushioning	[m/s]	3							
Position sensing		Via proximity sensor							
Type of mounting		Via accessories							
Mounting position		Any							

1) Additional strokes on request.

Operating and environmental conditions		18	25	32	40	50	63	80	
Piston diameter		18	25	32	40	50	63	80	
Operating pressure	[MPa]	0.2 ... 0.8					0.15 ... 0.8		
	[bar]	2 ... 8					1.5 ... 8		
	[psi]	29 ... 116					21.75 ... 116		
Operating medium		Compressed air to ISO 8573-1:2010 [7:-:-]							
Note on operating/pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)							
Ambient temperature <sup>1)</sup>	[°C]	-10 ... +60							
Food-safe <sup>2)</sup>		→ supplementary information on materials							
Corrosion resistance class CRC <sup>3)</sup>		1							

1) Note operating range of proximity sensors.

2) Additional information: [www.festo.com/sp](http://www.festo.com/sp) → Certificates.

3) Corrosion resistance class CRC 1 to Festo standard FN 940070

Low corrosion stress. Dry indoor application or transport and storage protection. Also applies to parts behind coverings, in the non-visible interior area, and parts which are covered in the application (e.g. drive trunnions).

ATEX <sup>1)</sup>	
Explosion-proof ambient temperature	-10°C ≤ Ta ≤ +60°C
CE marking (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)
EX2 certification	
ATEX category for gas	II 3G
Type of ignition protection for gas	Ex h IIC T4 Gc X
ATEX category for dust	II 3D
Type of ignition protection for dust	Ex h IIIC T120°C Dc X
EX3 certification	
ATEX category for gas	II 2G
Type of ignition protection for gas	Ex h IIC T4 Gb X

1) Note the ATEX certification of the accessories.



## Data sheet

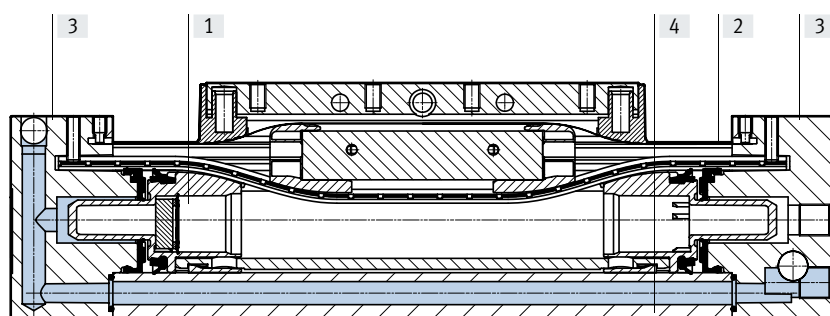
Forces [N] and impact energy [J]							
Piston diameter	18	25	32	40	50	63	80
Theoretical force at 0.6 MPa (6 bar, 87 psi)	153	295	483	754	1178	1870	3016
Max. impact energy at the end positions <sup>1)</sup>	0.04	0.05	0.12	0.25	0.5	0.5	3

1) Permissible residual impact energy following adjustable pneumatic cushioning PPV.

Weight [g]							
Piston diameter	18	25	32	40	50	63	80
Basic weight with 0 mm stroke							
DGC...-GK	370	933	1319	2450	5438	8620	16775
DGC...-GV	630	1343	1999	3620	8073	13000	–
Additional weight per 10 mm stroke							
DGC...-GK	18	29	37	53	100	137	157
DGC...-GV	18	29	37	53	100	137	–
Moving mass							
DGC...-GK	64	136	227	360	1095	1782	5000
DGC...-GV	130	261	427	700	1713	2704	–

## Materials

Sectional view



Linear drives	
[1] Slide	Anodised aluminium
[2] Sealing band/cover strip	Polyurethane/steel
[3] Cover	Painted aluminium
[4] Cylinder barrel	Anodised aluminium
– Piston seal	Polyurethane
– Slide elements	Polyacetal
Note on materials	RoHS-compliant

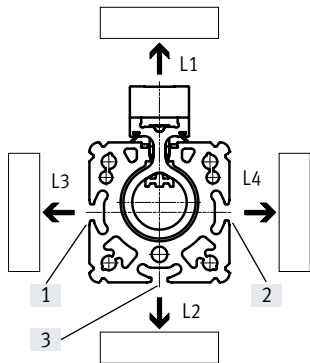
## Data sheet

### Influence of ferritic materials on proximity sensors

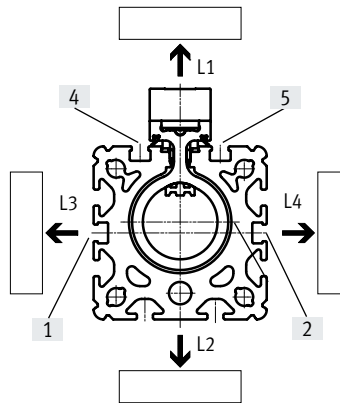
Ferritic materials (steel parts or sheet metal) in the immediate vicinity of the proximity sensors can cause sensing malfunctions. The following safety distances must be observed.

The distance depends on the position of the proximity sensor (see [1] and [2]).

Piston diameter 18/25



Piston diameter 32 ... 80



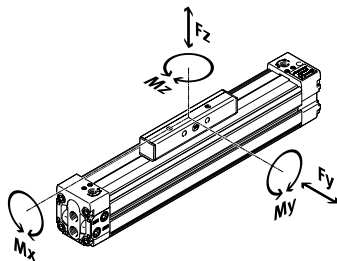
Position		L1	L2	L3	L4
<b>Piston diameter 18</b>					
[1]	[mm]	0	10	30	0
[2]	[mm]	0	10	0	30
[3]	[mm]	0	30	10	10
<b>Piston diameter 25</b>					
[1]	[mm]	0	0	10	0
[2]	[mm]	0	0	0	10
[3]	[mm]	0	10	0	0

Position		L1	L2	L3	L4
<b>Piston diameter 32</b>					
[1]	[mm]	0	0	10	0
[2]	[mm]	0	0	0	10
[4] and [5]	[mm]	10	0	0	0
<b>Piston diameter 40</b>					
[1]	[mm]	0	0	30	0
[2]	[mm]	0	0	0	30
[4] and [5]	[mm]	30	0	0	0
<b>Piston diameter 50</b>					
[1]	[mm]	0	0	10	0
[2]	[mm]	0	0	0	10
[4] and [5]	[mm]	10	0	0	0
<b>Piston diameter 63</b>					
[1]	[mm]	0	0	20	0
[2]	[mm]	0	0	0	20
[4] and [5]	[mm]	20	0	0	0
<b>Piston diameter 80</b>					
[1]	[mm]	0	0	10	0
[2]	[mm]	0	0	0	10
[4] and [5]	[mm]	10	0	0	0

## Data sheet

### Characteristic load values

The indicated forces and torques refer to the surface of the slide. These values must not be exceeded during dynamic operation. Special attention must be paid to the deceleration phase.



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

$$0,4 \cdot \frac{F_{z1}}{F_{z2}} + \frac{M_{x1}}{M_{x2}} + \frac{M_{y1}}{M_{y2}} + 0,2 \cdot \frac{M_{z1}}{M_{z2}} \leq 1$$

$$\frac{F_{z1}}{F_{z2}} \leq 1 \quad \frac{M_{z1}}{M_{z2}} \leq 1$$

F1/M1 = dynamic value

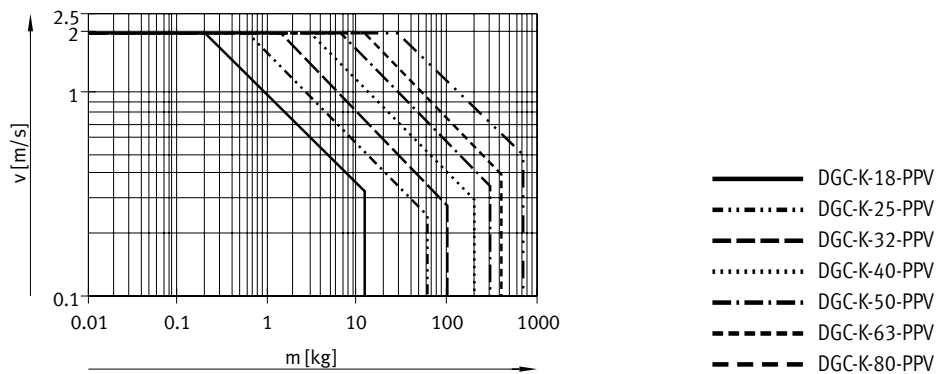
F2/M2 = maximum value

Permissible forces and torques		18	25	32	40	50	63	80
Piston diameter		18	25	32	40	50	63	80
Fz <sub>max.</sub>								
DGC...-GK	[N]	120	330	480	800	1200	1600	2500
DGC...-GV	[N]	120	330	480	800	1200	1600	–
Mx <sub>max.</sub>								
DGC...-GK	[Nm]	0.8	1.2	1.9	3.8	6	5.7	30.6
DGC...-GV	[Nm]	1.6	2.4	3.8	7.6	12	11.4	–
My <sub>max.</sub>								
DGC...-GK	[Nm]	11	20	40	60	120	150	400
DGC...-GV	[Nm]	22	40	80	120	240	300	–
Mz <sub>max.</sub>								
DGC...-GK	[Nm]	1	3	5	8	15	24	100
DGC...-GV	[Nm]	2	6	10	16	30	48	–

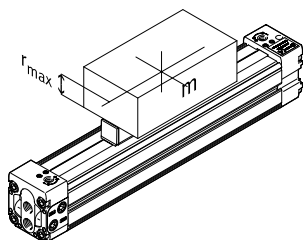
## Data sheet

### Maximum permissible piston speed $v$ as a function of payload $m$ and distance $r_{max}$ from the centre of mass

These specifications represent the maximum values that can be achieved. In practice, these values can fluctuate relative to the position of the payload and mounting position.



### Operating range of the cushioning



The end-position cushioning must be adjusted to ensure jerk-free operation. If the operating conditions are outside the permissible range, the moving mass must be cushioned using suitable equipment (external shock absorbers), preferably at the centre of mass.

Piston diameter	18	25	32	40	50	63	80
Distance $r_{max}$ [mm]	14	40	40	40	40	40	40

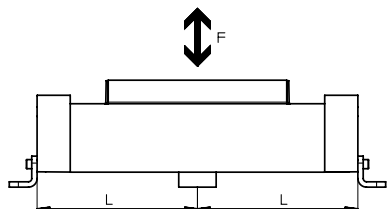
## Data sheet

### Number of central supports MUP as a function of weight force F and distance l between supports

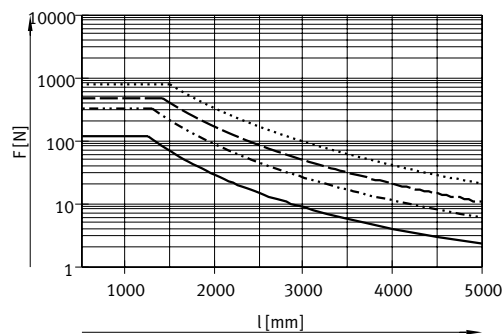
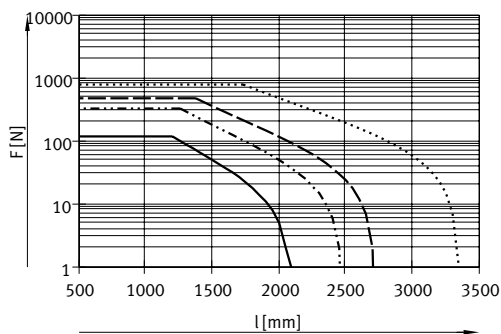
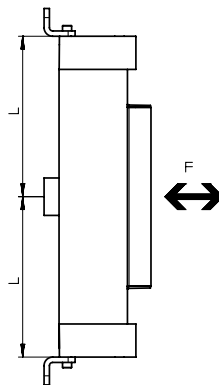
The drive may need to be supported to limit the deflection in the case of large strokes. The following graphs are provided to determine the maximum permissible distance between supports as a function of the mounting position and the applied weight and normal forces.

#### Mounting position

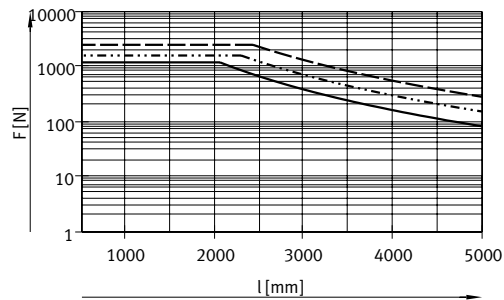
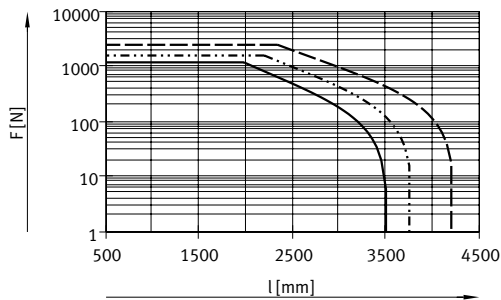
Horizontal



Vertical



- DGC-K-18
- · - · - · DGC-K-25
- - - - - DGC-K-32
- · · · · DGC-K-40



- DGC-K-50
- · - · - · DGC-K-63
- - - - - DGC-K-80

#### Example:

The drive DGC-K-25-1500 is subjected to a force of 200 N in a horizontal mounting position.

The drive has an overall length of:  
 $l = \text{stroke length} + L1$  (see dimensions)  
 $= 1500 \text{ mm} + 200 \text{ mm}$   
 $= 1700 \text{ mm}$

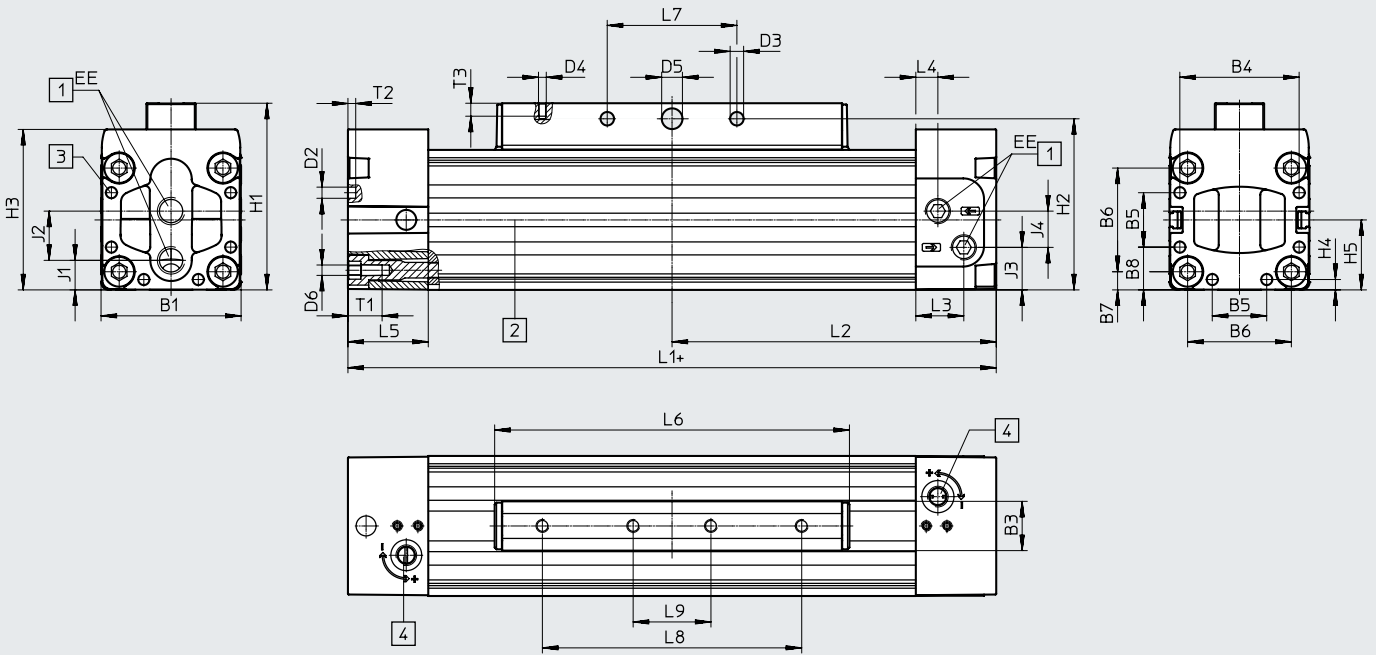
According to the graph, the max. distance between supports for the drive DGC-K-25 with a force of 200 N is 1450 mm.

In this example, central supports are required as the max. distance between supports (1450 mm) is smaller than the overall length of the drive (1700 mm).

Data sheet

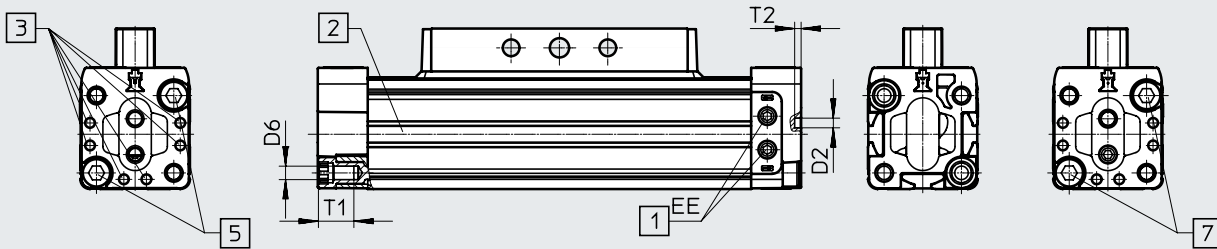
Dimensions

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

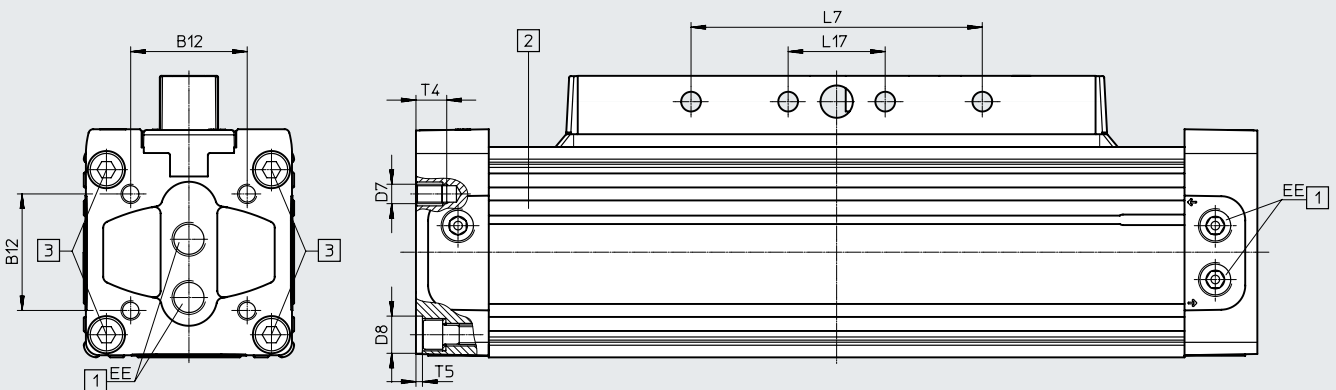


∅ 18

DGC...-D2



∅ 80



+ plus stroke length

- [1] Compressed air supply port options on 3 sides
- [2] Sensor slot for proximity sensor
- [3] Mounting holes for foot mounting HP
- [4] Adjusting screw for adjustable end-position cushioning
- [5] No mounting thread here with ∅ 18
- [7] No mounting thread here with ∅ 18, in combination with variant D2

## Data sheet

∅ [mm]	B1	B3 ±0.2	B4	B5	B6	B7	B8	B12	D2 ∅	D3 ∅ +0.2
18	34 <sup>+0.2/-0.05</sup>	12	28	7	24	5	13.5	–	3	5.2
25	45 <sup>+0.4</sup>	19	39.1	18	32.5	6.3	13.5	–	3.3	5.2
32	54 <sup>+0.4</sup>	19	46	21	40	7	16.5	–	4.3	5.2
40	64 <sup>+0.4</sup>	21	53	28	49	7.5	18	–	4.3	6.5
50	90 <sup>+0.4</sup>	24	76	44	72	9	23	–	6.3	8.5
63	106 <sup>+0.4</sup>	24	89	44	83	11.5	31	–	6.3	8.5
80	130 <sup>+0.8</sup>	36	–	–	102	14	29	72	–	12.2

∅ [mm]	D4	D5 ∅	D6	D7	D8 ∅	EE	H1	H2	H3	H4	H5
18	M5	6 <sup>H7</sup>	M5	–	–	M5	49.8	43.8	37.6	3	17
25	M5	8 <sup>H7</sup>	M4	–	–	G1/8	63	57	51	3	22.5
32	M5	8 <sup>H7</sup>	M5	–	–	G1/8	72	66	61.8	4	27
40	M6	10 <sup>H7</sup>	M5	–	–	G1/4	86	78	71.8	5.5	32
50	M8	12 <sup>H7</sup>	M6	–	–	G1/4	115	106	99	7	45
63	M8	12 <sup>H7</sup>	M8	–	–	G3/8	131	122	115	8.5	53
80	M12	20 <sup>H10</sup>	–	M12	23	G1/2	174	158	140.5	–	85

∅ [mm]	J1	J2	J3	J4	L1		L2		L3	L4	L5
					GK	GV	GK	GV			
18	10.7	11.1	12.2	10.4	150	230	75	115	5	5	15.5
25	9	16.7	15.7	13	200	300	100	150	17	7	25
32	11.4	19	17.1	14	250	380	125	190	18.5	8.5	31
40	13.5	22	19.5	21	300	470	150	235	11.5	11.5	31
50	21	30.8	27	29.3	350	550	175	275	14	14	34
63	25	36	32	33	400	650	200	325	13.5	13.5	34
80	37	36	48.1	33.3	520	–	260	–	19	19	45

∅ [mm]	L6		L7	L8	L9	L17 ±0.15	T1	T2	T3	T4	T5
	GK	GV									
18	85	165	30±0.1	60±0.1	–	–	11	2	10	–	–
25	109	209	30±0.1	50±0.1	–	–	13	2	7.5	–	–
32	135	265	50±0.1	100±0.1	30±0.1	–	13.2	3	7.5	–	–
40	171	341	70±0.1	130±0.1	40±0.1	–	13.2	4	10.5	–	–
50	206	406	80±0.1	150±0.1	50±0.1	–	15.2	6	12.5	–	–
63	234	484	110±0.1	190±0.1	70±0.1	–	21.2	6	12.5	–	–
80	334	–	180±0.15	230±0.15	115±0.15	60	–	–	19	18	4

Length tolerance		≤ 1000	≤ 2000	≤ 3000	≤ 4000	≤ 5000	≤ 6000	≤ 7000	≤ 8000	≤ 9000
For stroke	[mm]									
L1	[mm]	±0.45	±0.55	±0.70	±0.75	±0.80	±0.85	±1.10	±1.15	±1.20

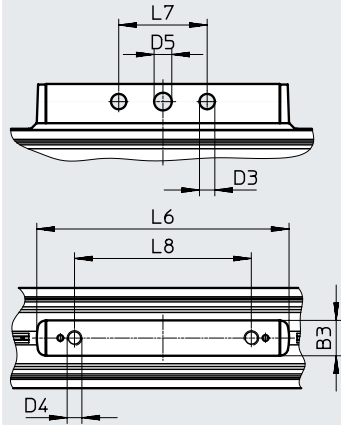
Data sheet

Dimensions

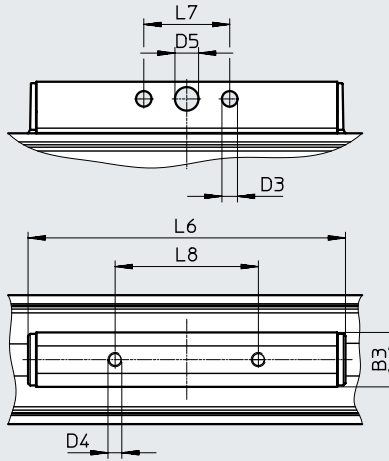
Download CAD data → [www.festo.com](http://www.festo.com)

GK – Standard piston

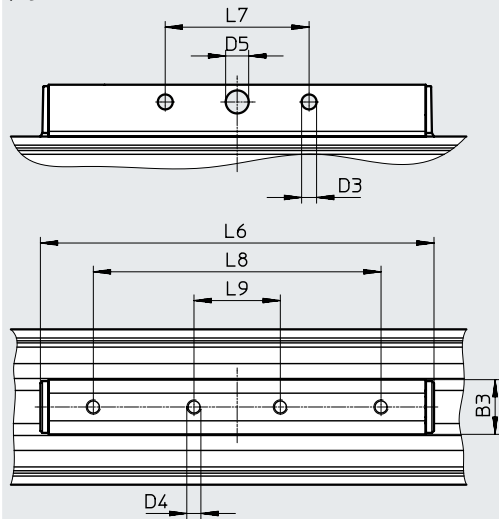
∅ 18



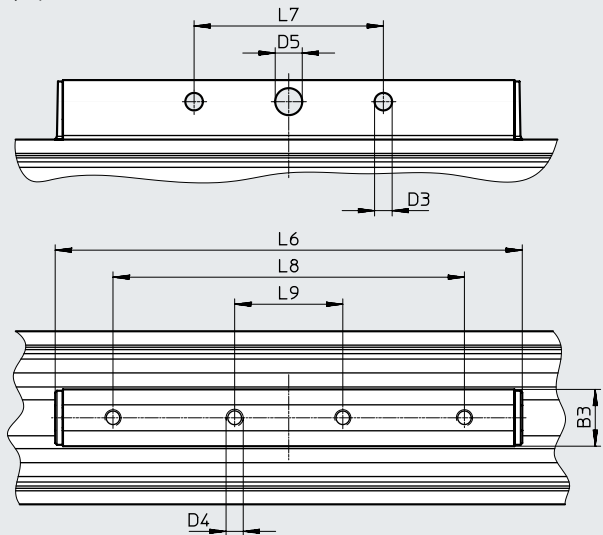
∅ 25



∅ 32



∅ 40



∅	B3	D3	D4	D5	L6	L7	L8	L9
[mm]	±0.2	∅ +0.2		∅ H7		±0.1	±0.1	±0.1
18	12	5.2	M5	6	85	30	60	–
25	19	5.2	M5	8	109	30	50	–
32	19	5.2	M5	8	135	50	100	30
40	21	6.5	M6	10	171	70	130	40



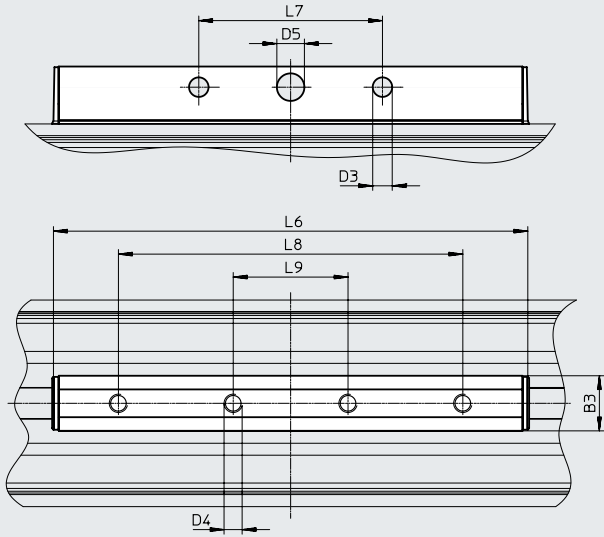
Data sheet

Dimensions

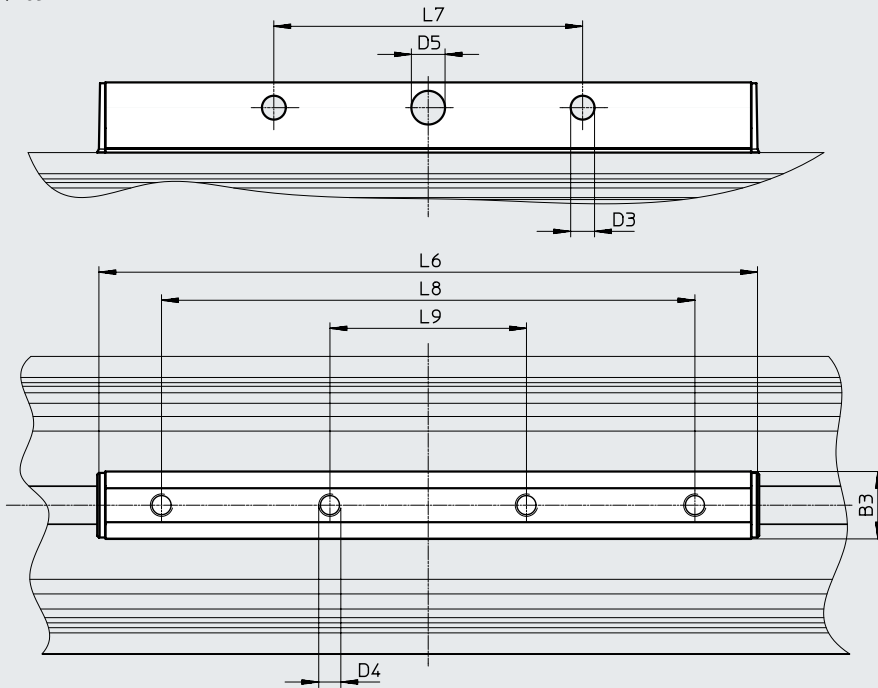
Download CAD data → [www.festo.com](http://www.festo.com)

GK – Standard piston

∅ 50



∅ 63



∅	B3	D3 ∅	D4	D5 ∅	L6	L7	L8	L9
[mm]	±0.2	+0.2		H7		±0.1	±0.1	±0.1
50	24	8.5	M8	12	206	80	150	50
63	24	8.5	M8	12	234	110	190	70

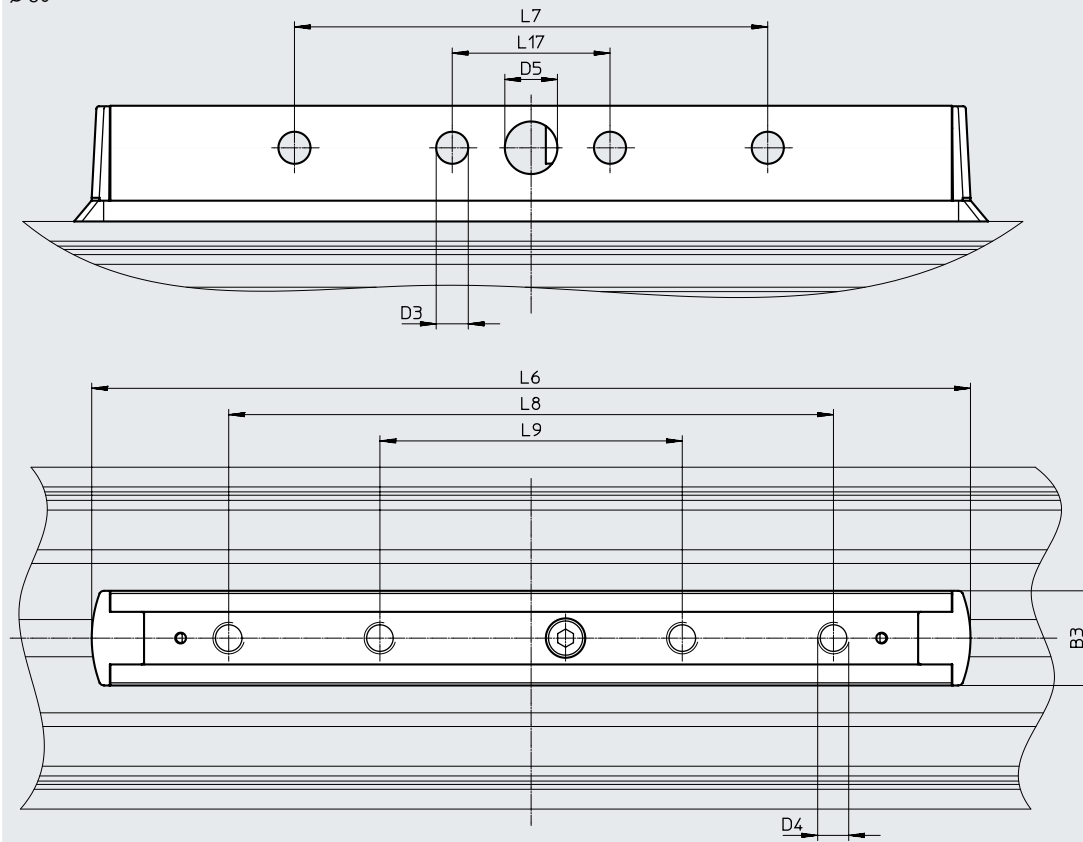
Data sheet

Dimensions

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

GK – Standard piston

∅ 80



∅	B3	D3 ∅	D4	D5	L6	L7	L8	L9	L17
[mm]	±0.2	+0.2		H10		±0.15	±0.15	±0.15	
80	36	12.2	M12	20	334	180	230	115	60

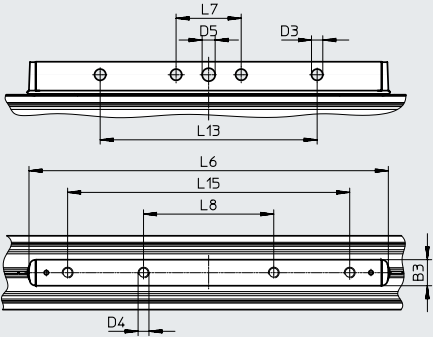
Data sheet

Dimensions

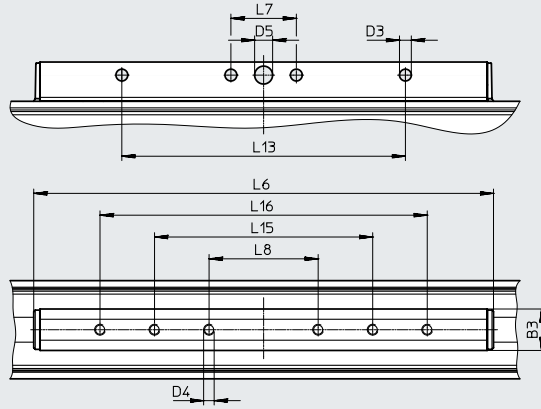
Download CAD data → [www.festo.com](http://www.festo.com)

GV – Extended piston

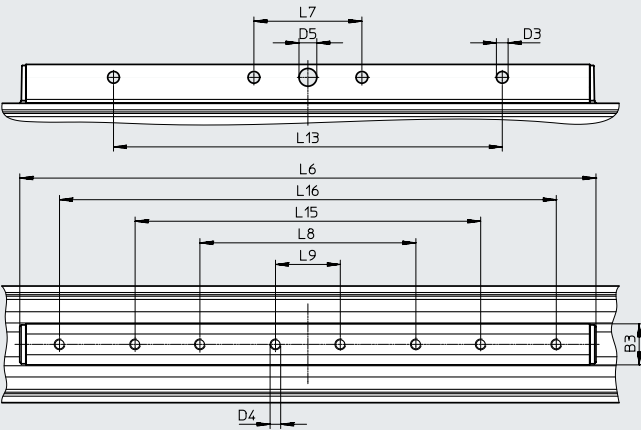
∅ 18



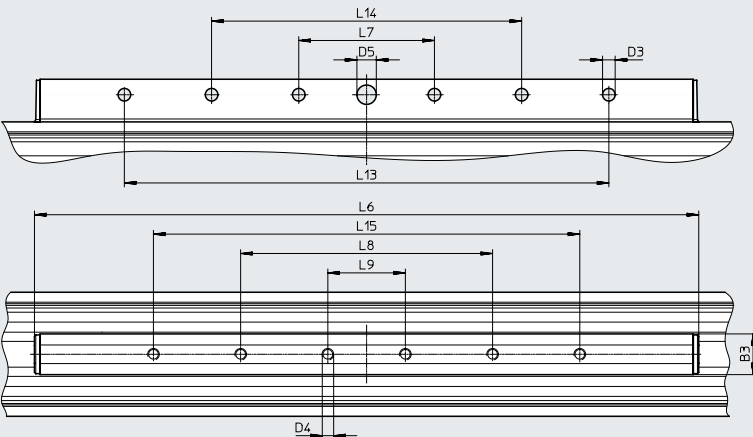
∅ 25



∅ 32



∅ 40



∅	B3	D3	D4	D5	L6	L7	L8	L9	L13	L14	L15	L16
[mm]	±0.2	∅ +0.2		∅ H7		±0.1	±0.1	±0.1	±0.1	±0.1	±0.1	±0.1
18	12	5.2	M5	6	165	30	60	–	100	–	130	–
25	19	5.2	M5	8	209	30	50	–	130	–	100	150
32	19	5.2	M5	8	265	50	100	30	180	–	160	230
40	21	6.5	M6	10	341	70	130	40	160	250	220	–

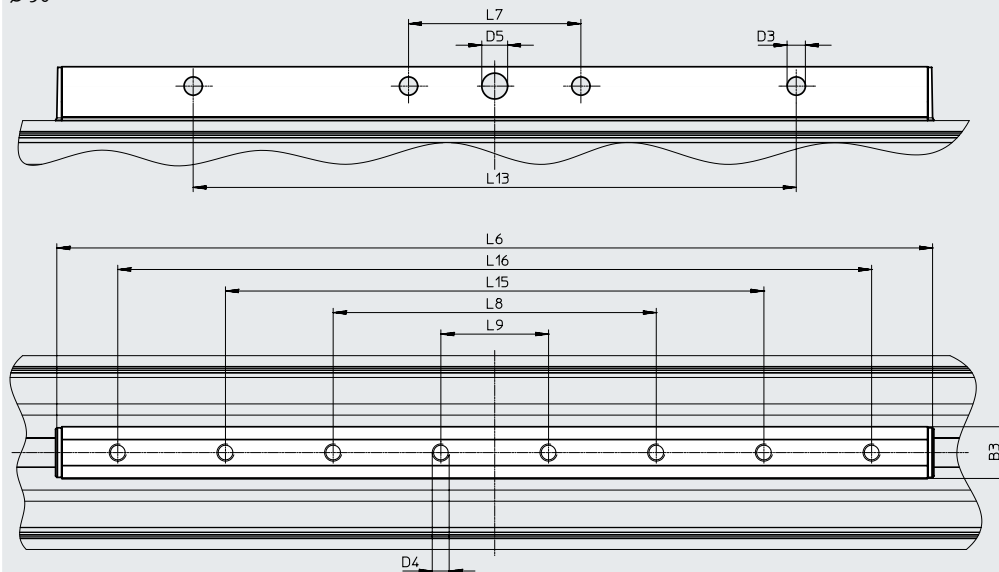
Data sheet

Dimensions

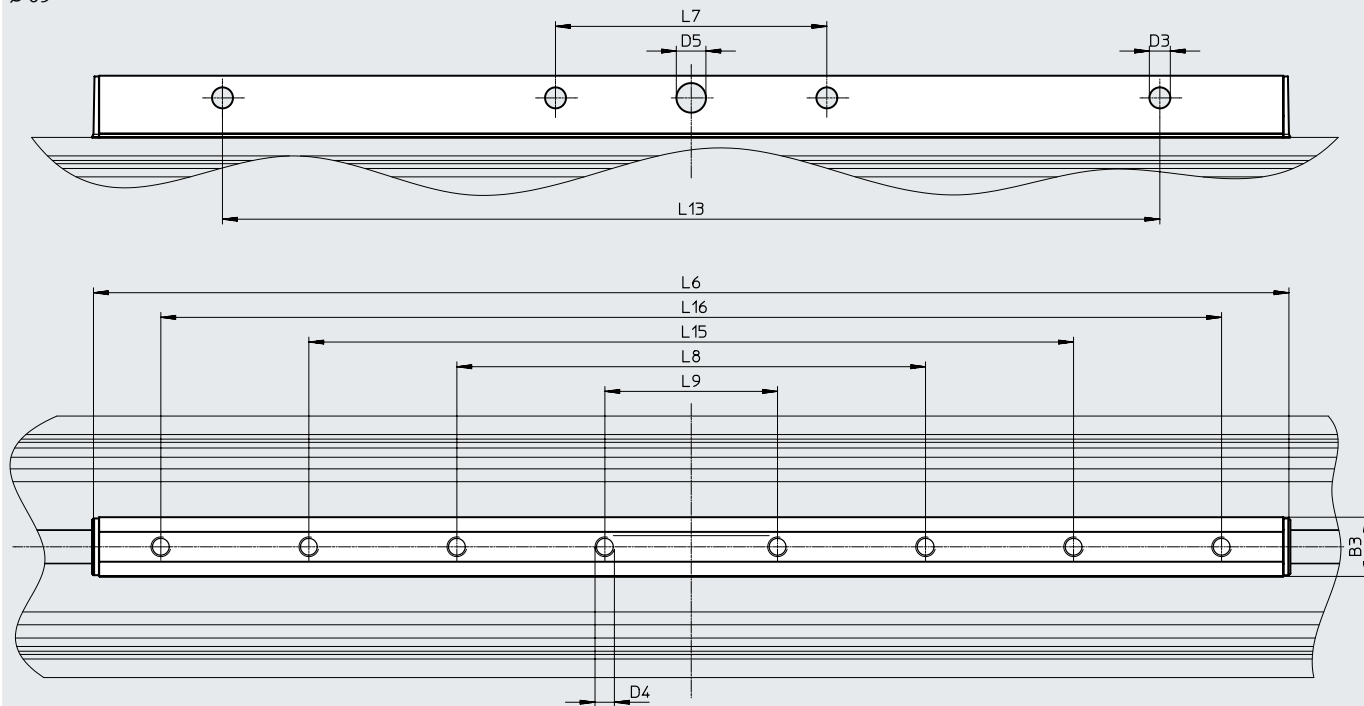
Download CAD data → [www.festo.com](http://www.festo.com)

GV – Extended piston

∅ 50



∅ 63



∅	B3	D3 ∅	D4	D5 ∅	L6	L7	L8	L9	L13	L15	L16
[mm]	±0.2	+0.2		H7		±0.1	±0.1	±0.1	±0.1	±0.1	±0.1
50	24	8.5	M8	12	406	80	150	50	280	250	350
63	24	8.5	M8	12	484	110	190	70	380	310	430

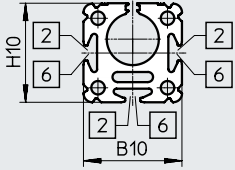
Data sheet

Dimensions

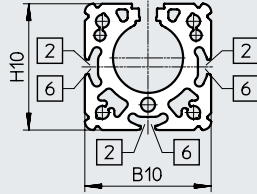
Profile barrel

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

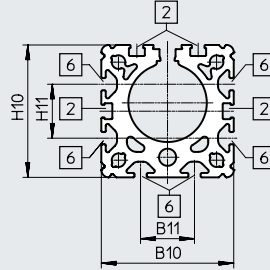
∅ 18



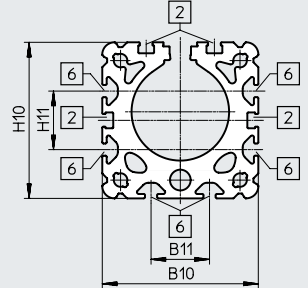
∅ 25



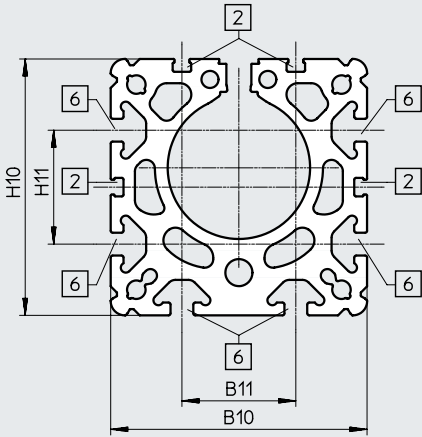
∅ 32



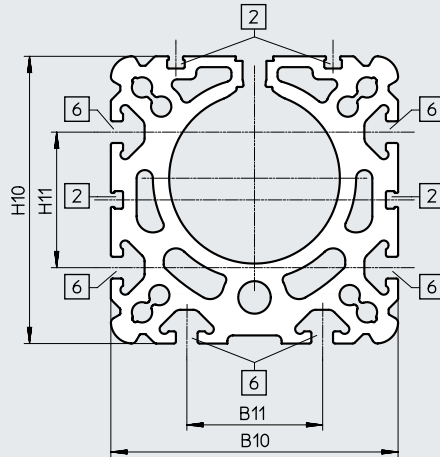
∅ 40



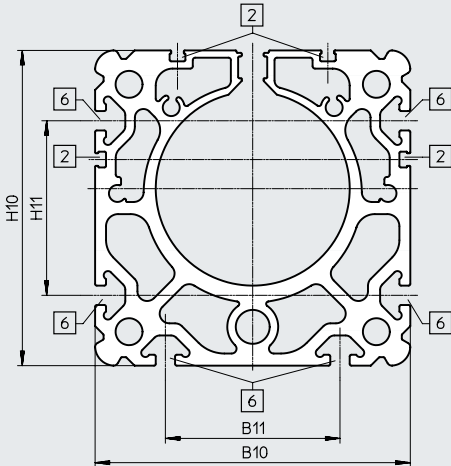
∅ 50



∅ 63



∅ 80



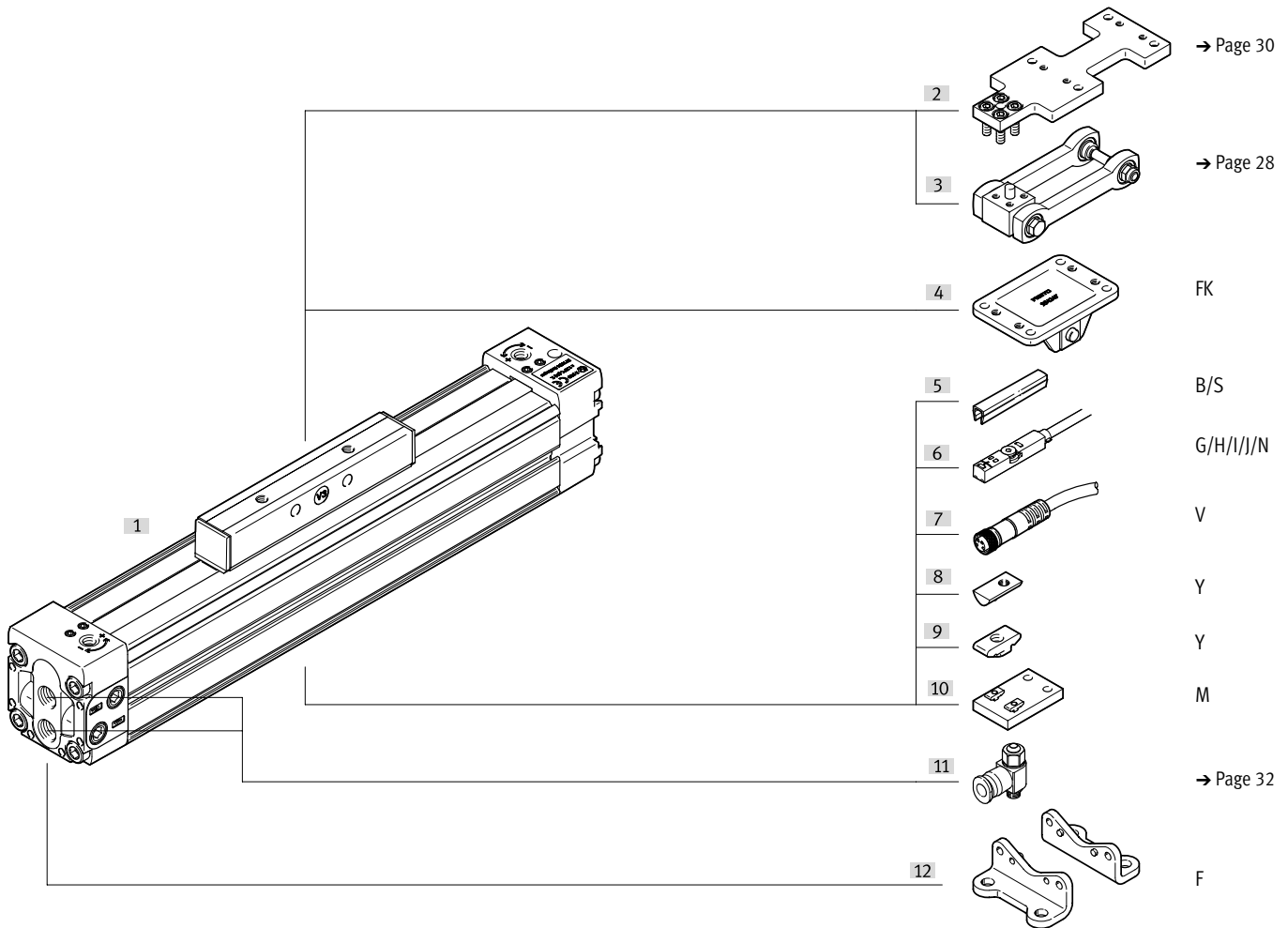
- [2] Sensor slot for proximity sensor
- [6] Mounting slot for slot nut

∅ [mm]	B10	B11	H10	H11
18	34	–	34	–
25	45	–	45	–
32	54	22	54	22
40	64	24	64	24
50	90	40	90	40
63	106	50	106	50
80	130	72	130	72

## Ordering data – Modular product system

### Order code

- ¶ - Note: The position numbers refer to the peripherals overviews → page 7



## Ordering data – Modular product system

Ordering table											
Size	18	25	32	40	50	63	80	Condi- tions	Code	Enter code	
Module no.	1312500	1312501	1312502	1312503	1312504	1312505	1312506				
Function	Linear drive								DGC	DGC	
Guide	Compact								★ -K	-K	
Piston diameter [mm]	18	25	32	40	50	63	80		★ -...		
Stroke [mm]	1 ... 3000	1 ... 8500			1 ... 6000	1 ... 5000	1 ... 3000		★ -...		
Cushioning	Pneumatic cushioning, adjustable at both ends								★ -PPV	-PPV	
Position sensing	Via proximity sensor								★ -A	-A	
Basic design	Standard piston								★ -GK		
	Extended piston								-	-GV	
Compressed air supply port	At one end								★		
	At both ends								[1]	-D2	
Lubrication	Standard								★		
	Lubrication approved for use in food applications									-H1	
Moment compensator	Without								★		
	Moment compensator coupling									★ -FK	
EU certification	Without								★		
	II 3GD								[2]	-EX2	
	II 2G								[2]	-EX3	
Accessories	Enclosed separately (can be retrofitted)									ZUB-	ZUB-
Foot mounting	1									F	
Central support	1 ... 10									...M	
Slot nut for mounting slot	1 ... 10								[3] [1]	...Y	
Slot cover for mounting slot	-	-	1 ... 10						...B		
	Proximity sensor, N/O contact	2.5 m cable	1 ... 10						...G		
Proximity sensor, N/O contact, contactless, PNP	2.5 m cable	1 ... 10						...H			
	Plug M8	1 ... 10						...I			
Proximity sensor, N/C contact	2.5 m cable	1 ... 10						...J			
	7.5 m cable	1 ... 10						...N			
Connecting cable	M8, 2.5 m	1 ... 10						...V			
Slot cover for sensor slot	1 ... 10									...S	

[1] Y + D2 The following applies to sizes 18 and 25: entry "1Y" = delivery quantity of 4 pieces

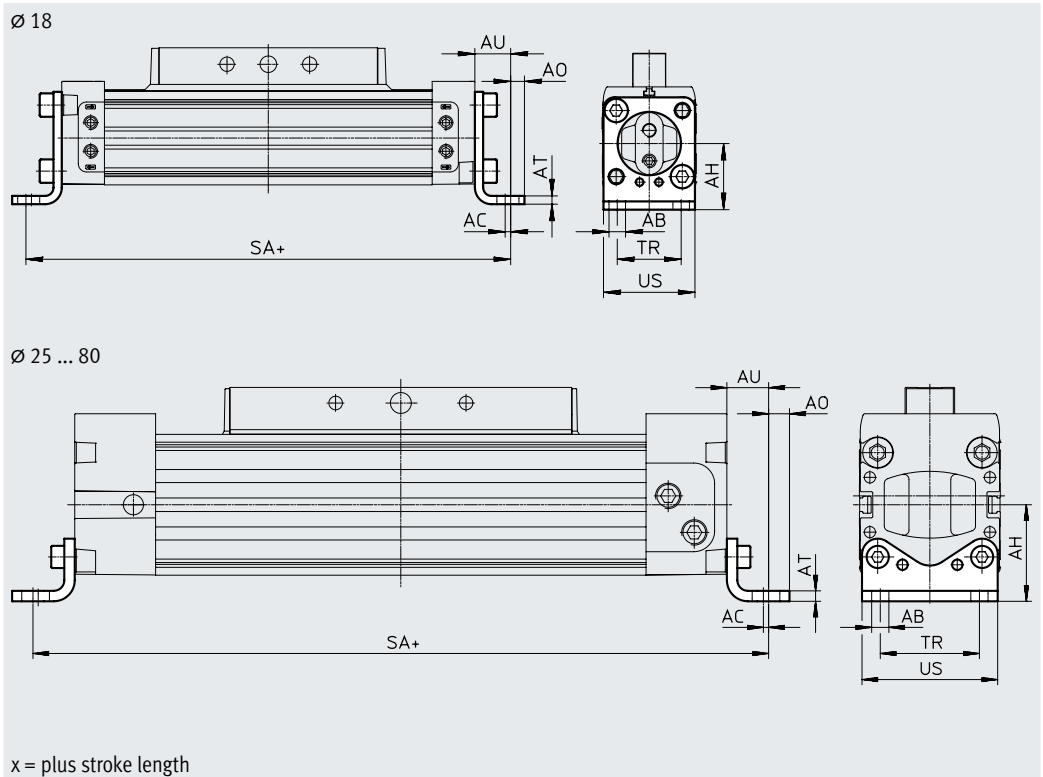
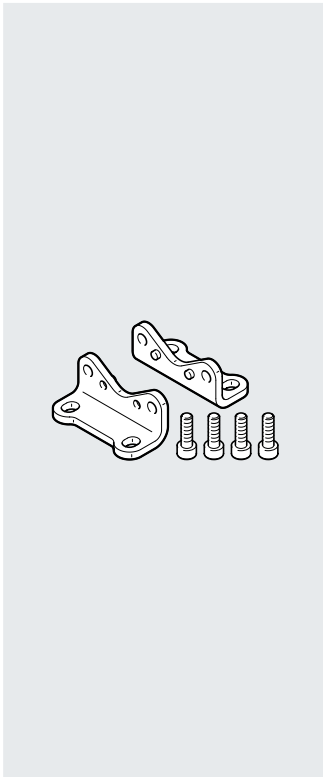
[2] EX2, EX3 Not with proximity sensor G, H, I, J, N or connecting cable V

[3] Y For sizes 18 and 25 there is just one slot for mounting and proximity sensor

Accessories

Foot mounting HP  
(order code: F)

Material:  
Galvanised steel  
Free of copper and PTFE



Dimensions and ordering data													
For ø [mm]	AB ø	AC	AH	AO	AT	AU	SA		TR	US	Weight [g]	Part no.	Type <sup>1)</sup>
							GK	GV					
18	5.5	2	24	4.7	3	13.3	176.6	256.6	24	33.2	59	158472	HP-18
25	5.5	2	29.5	6	3	13	226	326	32.5	44	61	150731	HP-25
32	6.6	2	37	7	4	17	284	414	38	52	117	150732	HP-32
40	6.6	2	46	8.5	5	17.5	335	505	45	62	188	150733	HP-40
50	9	3	61	11	6	25	400	600	65	87	243	150734	HP-50
63	11	3	69	13.5	6	28	456	706	75	102	305	150735	HP-63
80	13	3	85	12	8	28	576	-	72	128	620	158453	HP-80

1) Suitable for ATEX

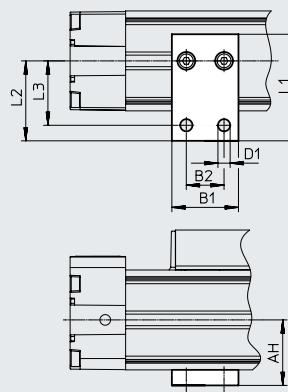
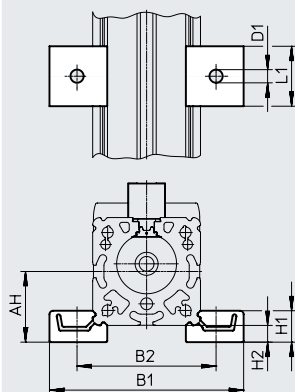


## Accessories

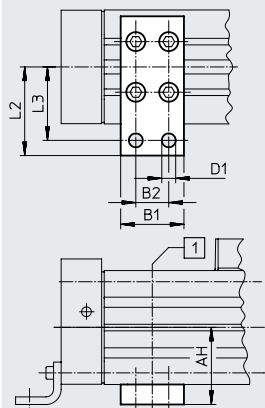
### Central support MUP (order code: M)

Material:  
Anodised aluminium  
Free of copper and PTFE  
Ø 18/25 with MUP-18/25

Ø 18/25 with MUP-18/25-P  
mounting only at one end



Ø 32 ... 80



[1] Position of the central support along the profile barrel is freely selectable

#### Dimensions and ordering data

For Ø	AH	B1	B2	D1 Ø	H1	H2	L1	L2	L3	Weight [g]	Part no.	Type <sup>2)</sup>
18	24	70.5	47	5.5	13	7	25	–	–	33	150736	MUP-18/25
	24	30	17	5.5	–	–	48	36	29	32	1711704	MUP-18/25-P <sup>1)</sup>
25	29.5	81	58	5.5	13	7	25	–	–	33	150736	MUP-18/25
	29.5	30	17	5.5	–	–	48	36	29	32	1711704	MUP-18/25-P <sup>1)</sup>
32	37	35	22	6.6	–	–	–	41.5	35	89	150737	MUP-32
40	46	35	22	6.6	–	–	–	47	40	126	150738	MUP-40
50	61	50	26	11	–	–	–	70	58	241	150739	MUP-50
63	69	50	26	11	–	–	–	77	65	340	150800	MUP-63
80	85	50	26	11	–	–	–	88	76	590	158455	MUP-80

1) This central support cannot be ordered using order code M in the modular product system.

2) Suitable for ATEX

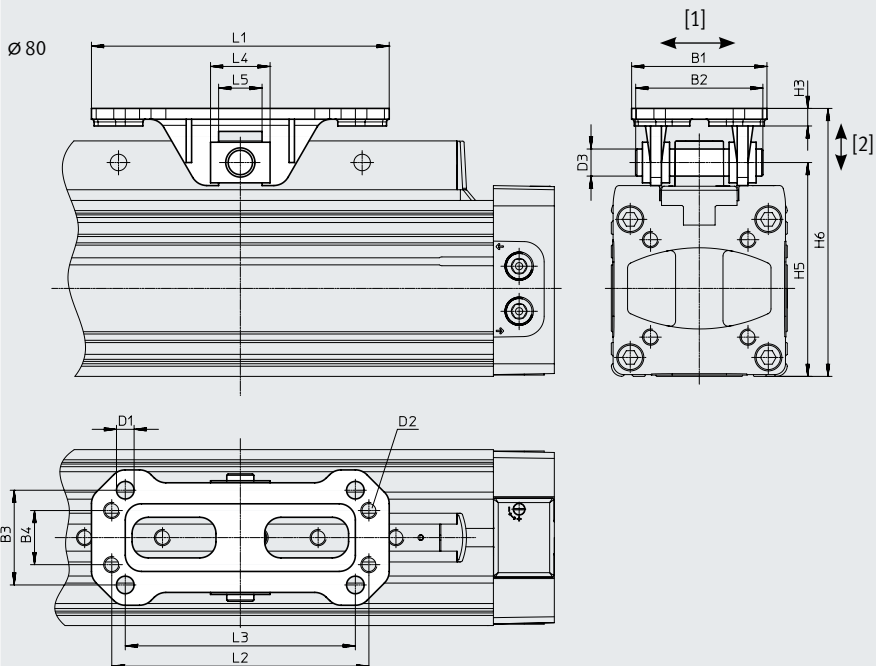
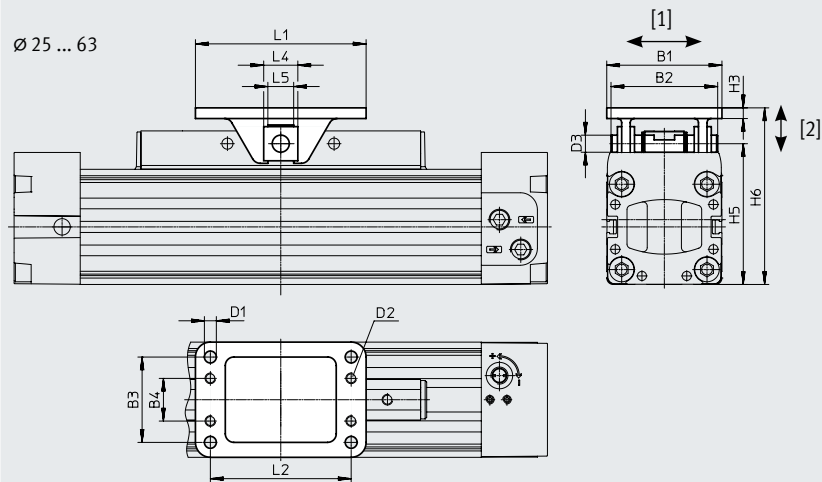
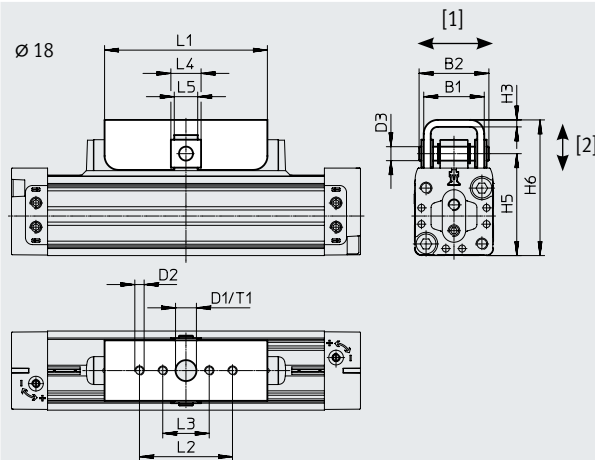
Accessories

**Moment compensator DARD-S**  
(order code: FK)

Materials:  
Bolt: high-alloy steel

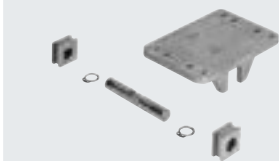
Clevis: high-alloy steel  
Sliding piece: brass

Retaining ring: spring steel



The moment compensator DARD-S has the same interface as the moment compensator FKP for the linear drive DGP. Use the moment compensator DARD-M in servo-pneumatic systems.

Note: Compensation possible in direction of arrow.



## Accessories

Technical data					
For $\varnothing$ [mm]	Max. offset between linear drive and external guide		Max. permissible load in direction of force [N]	Ambient temperature [°C]	Weight [g]
	[1] [mm]	[2]			
18	±1.8	±1.2	550	-20 ... +120	104
25	±2	±2	1100		231
32			1100		231
40			1800		362
50			2500		712
63			2500		712
80	±4	±4	7000		1955

Dimensions and ordering data										
For $\varnothing$ [mm]	B1	B2	B3	B4	D1 $\varnothing$	D2	D3 $\varnothing$	H3	H5	H6
18	26	30	–	–	9 <sup>H7</sup>	M4	6	3	43.8	57.8
25	54	50	40	20	5.5	M5	8	5	57	75
32									66	84
40	58	60	44	24	6.5	M6	10	6	78	99
50	71	63	51	23	9	M8	12	8	106	130
63									122	146
80	100	94	70	40	13	M12	20	13	158	194.5

For $\varnothing$ [mm]	L1	L2	L3	L4	L5	T1	Part no.	Type
18	70	40	20	13	10.1	2.1	<b>8001411</b>	<b>DARD-L1-18-S</b>
25	80	66	–	16	12.1	–	<b>8001412</b>	<b>DARD-L1-32-S</b>
32							<b>8001412</b>	<b>DARD-L1-32-S</b>
40	90	76	–	18	14.1	–	<b>8001413</b>	<b>DARD-L1-40-S</b>
50	122	102	–	22	16.1	–	<b>8001414</b>	<b>DARD-L1-63-S</b>
63							<b>8001414</b>	<b>DARD-L1-63-S</b>
80	220	190	170	44	32.1	–	<b>8001415</b>	<b>DARD-L1-80-S</b>

Accessories

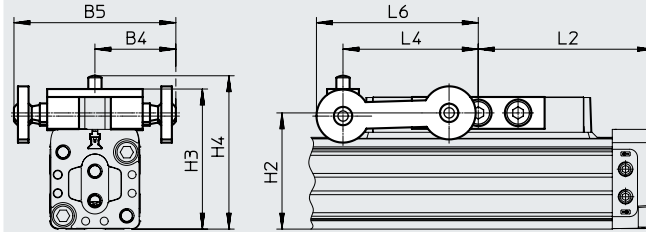
**Moment compensator DARD-M**

Almost backlash-free

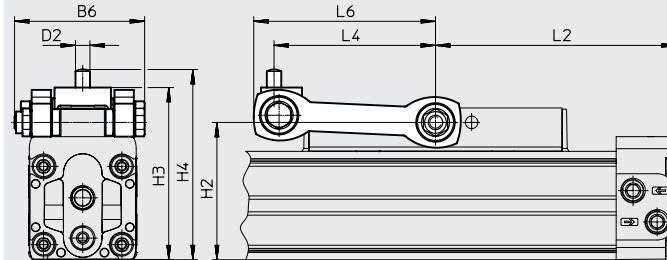
Material:  
Galvanised steel



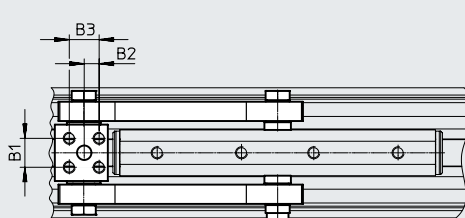
∅ 18



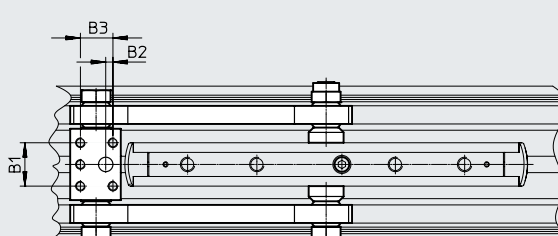
∅ 25 ... 80



∅ 32 ... 63



∅ 80



## Accessories

Technical data				
For $\varnothing$ [mm]	Max. offset between linear drive and external guide <sup>1)</sup> [mm]	Max. permissible load in direction of force [N]	Ambient temperature [°C]	Weight [g]
18	±2.5	400	-10 ... +60	94
25		800		240
32		1300		275
40		2000		580
50	±4	3150		960
63		5000		1000
80		7800		2815

1) Laterally and vertically.

Dimensions and ordering data									
For $\varnothing$ [mm]	B1	B2	B3	B4	B5	B6	D1 $\varnothing$	D2 $\varnothing$	H2
18	14	–	–	30.5±2.5	61	–	M3x6.2	5	43.8
25	11	8.4	–	25.7±2.5	51.4	54	M5x17	6	57
32	12	6.2	12.4	25.7±2.5	51.4	54	M5x13	6	66
40	18	11	17	36±2.5	72	75.3	M6x16	8	78
50	26	12.6	19	44±4	88	96.4	M8x18	10	106
63	26	12.6	19	44±4	88	96.4	M8x18	10	122
80	36	6	27	61.6±4	123.2	130	M8x26.6	12	158

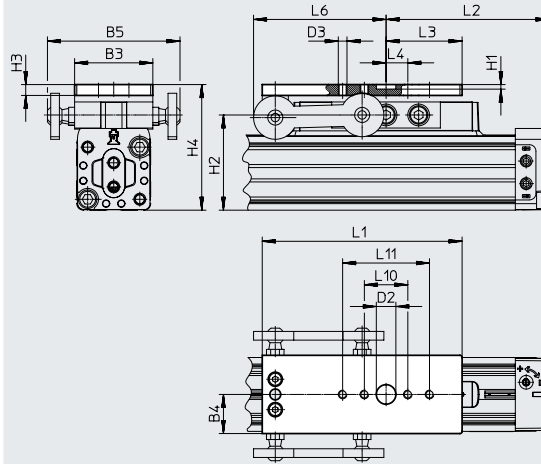
For $\varnothing$ [mm]	H3	H4	L2	L4	L6 max.	Part no.	Type
18	52.8±2.5	57.8±2.5	75	51	61	2349274	DARD-L1-18-M
25	71.5±2.5	79±2.5	100	67.1	75.5	2349275	DARD-L1-25-M
32	80.5±2.5	88±2.5	125	80.3	91	2349276	DARD-L1-32-M
40	94.5±2.5	104.5±2.5	150	104	117	2349277	DARD-L1-40-M
50	125.5±4	135.5±4	175	124	139	2349278	DARD-L1-50-M
63	142±4	152±4	200	138	153	2349279	DARD-L1-63-M
80	187.5±4	199.5±4	260	182.9	212.5	2349280	DARD-L1-80-M

Accessories

Adapter plate DAMF

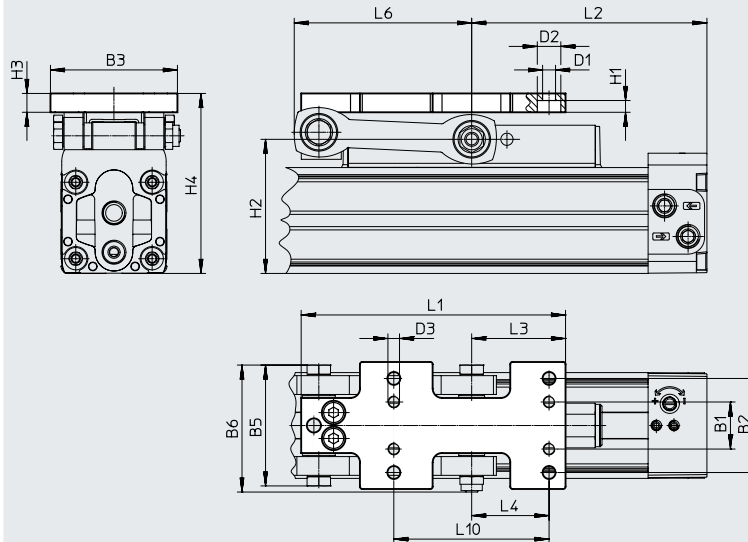
Material:  
Galvanised steel

∅ 18

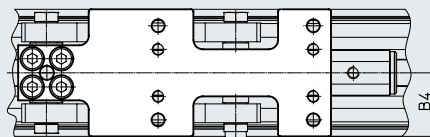


The adapter plate DAMF has the same interface as the moment compensator FKP for the linear drive DGP.

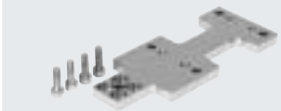
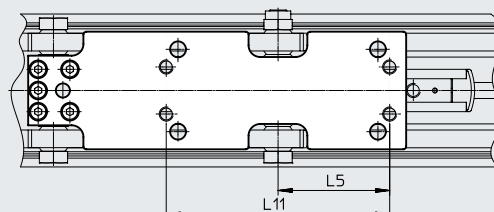
∅ 25 ... 80



∅ 32 ... 63



∅ 80



## Accessories

Dimensions and ordering data								
For $\varnothing$	B1	B2	B3	B4	B5	B6	D1 $\varnothing$	D2 $\varnothing$
[mm]				$\pm 2.5$				
18	–	–	36	18 $\pm 2.5$	61	–	–	9
25	20	40	54	27 $\pm 2.5$	51.4	54	5.5	10
32	20	40	54	27 $\pm 2.5$	51.4	54	5.5	10
40	24	44	58	29 $\pm 2.5$	72	75.3	6.6	11
50	23	51	71	35 $\pm 4$	88.1	96.4	9	15
63	23	51	71	35 $\pm 4$	88.1	96.4	9	15
80	40	70	100	50 $\pm 4$	123.2	130	13.5	20







  

For $\varnothing$	D3	H1	H2	H3	H4	L1	L2	L3
[mm]								
18	M4	2.1	43.8	5	57.8 $\pm 2.5$	92	75	35
25	M5	5	57	8	75 $\pm 2.5$	112.4	100	40
32	M5	5	66	8	84 $\pm 2.5$	133	125	40.5
40	M6	6	78	10	99 $\pm 2.5$	162	150	45
50	M8	8	106	10	130 $\pm 4$	200	175	61
63	M8	8	122	10	146 $\pm 4$	214	200	61
80	M12	9	158	12	194 $\pm 4$	322.4	260	109


  

For $\varnothing$	L4	L5	L6 max.	L10	L11	Weight	Part no.	Type
[mm]								
18	10	–	61	20	40	127	2349281	DAMF-18-FKP
25	33	–	75.5	66	–	265	2349282	DAMF-25-FKP
32	33	–	91	66	–	308	2349283	DAMF-32-FKP
40	38	–	117	76	–	593	2349284	DAMF-40-FKP
50	51	–	139	102	–	966	2349285	DAMF-50-FKP
63	51	–	153	102	–	1042	2349286	DAMF-63-FKP
80	85	95	212.5	170	190	2817	2349287	DAMF-80-FKP



Accessories

Ordering data		For ø	Description	Order code	Part no.	Type	PU <sup>1)</sup>
Slot nut ABAN/NST <sup>2)</sup> <span style="float: right;">Data sheets → Internet: hmbn</span>							
	18, 25	For mounting slot	<ul style="list-style-type: none"> <li>For mounting slot</li> <li>In the case of diameter 18 and 25, cannot be used with DGC-...-D2 (compressed air supply port at both ends)</li> </ul>	Y	8003032	ABAN-1M4-5	4
	18, 25				526091	NST-HMV-M4	10
	32, 40 50, 63, 80	For mounting slot			150914	NST-5-M5	1
					150915	NST-8-M6	
Slot cover ABP <sup>2)</sup> <span style="float: right;">Data sheets → Internet: abp</span>							
	32, 40 50, 63, 80	For mounting slot Each 0.5 m	B		151681	ABP-5	2
					151682	ABP-8	
	18, 25, 32, 40, 50, 63, 80	For sensor slot Each 0.5 m	S		563360	ABP-5-S1	2
One-way flow control valve GRLA <span style="float: right;">Data sheets → Internet: grla</span>							
	18 25, 32 40, 50 63 80	Metal design	-		★ 193137	GRLA-M5-QS-3-D	1
					★ 193138	GRLA-M5-QS-4-D	
					★ 193142	GRLA-1/8-QS-3-D	
					★ 193143	GRLA-1/8-QS-4-D	
					★ 193144	GRLA-1/8-QS-6-D	
					★ 193145	GRLA-1/8-QS-8-D	
					★ 193146	GRLA-1/4-QS-6-D	
					★ 193147	GRLA-1/4-QS-8-D	
					★ 193148	GRLA-1/4-QS-10-D	
					★ 193149	GRLA-3/8-QS-6-D1	
					★ 193150	GRLA-3/8-QS-8-D	
		★ 193151	GRLA-3/8-QS-10-D				
		★ 193152	GRLA-1/2-QS-12-D				

1) Packaging unit  
2) Suitable for ATEX



 Note


When using the variant DGC-K...-D2 (compressed air supply port at both ends), only to use proximity sensors that can be inserted in the slot from above can be used.


Ordering data – Proximity sensor for T-slot, magneto-resistive <span style="float: right;">Data sheets → Internet: smt</span>						
	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part no.	Type
<b>N/O contact</b>						
	Insertable in the slot from above, flush with the cylinder profile, short design	PNP	Cable, 3-wire	2.5	★ 574335	SMT-8M-A-PS-24V-E-2.5-OE
			Plug M8x1, 3-pin	0.3	★ 574334	SMT-8M-A-PS-24V-E-0.3-M8D
			Plug M12x1, 3-pin	0.3	★ 574337	SMT-8M-A-PS-24V-E-0.3-M12
		NPN	Cable, 3-wire	2.5	★ 574338	SMT-8M-A-NS-24V-E-2.5-OE
	Plug M8x1, 3-pin		0.3	★ 574339	SMT-8M-A-NS-24V-E-0.3-M8D	
<b>N/C contact</b>						
	Insertable in the slot from above, flush with the cylinder profile, short design	PNP	Cable, 3-wire	7.5	★ 574340	SMT-8M-A-PO-24V-E-7.5-OE





## Accessories

Ordering data – Proximity sensor for T-slot, magnetic reed							Data sheets → Internet: sme
	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part no.	Type	
<b>N/O contact</b>							
	Insertable in the slot from above, flush with the cylinder profile	Contacting	Cable, 3-wire	2.5	★ 543862	SME-8M-DS-24V-K-2.5-OE	
				5.0	★ 543863	SME-8M-DS-24V-K-5.0-OE	
			Cable, 2-wire	2.5	★ 543872	SME-8M-ZS-24V-K-2.5-OE	
			Plug M8x1, 3-pin	0.3	★ 543861	SME-8M-DS-24V-K-0.3-M8D	
<b>N/C contact</b>							
	Insertable in the slot from above, flush with the cylinder profile	Contacting	Cable, 3-wire	7.5	★ 546799	SME-8M-DO-24V-K-7.5-OE	

Ordering data – Proximity sensor for T-slot, NAMUR							Data sheets → Internet: sdbt
	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part no.	Type	
<b>N/O contact</b>							
	Insertable in the slot from above, flush with the cylinder profile	NAMUR	Cable, 2-wire	5	579071	SDBT-MS-20NL-ZN-E-5-LE-EX6	
				10	579072	SDBT-MS-20NL-ZN-E-10-LE-EX6	

Ordering data – Safety clip for ATEX zone				
	Description	For size	Part no.	Type
	<ul style="list-style-type: none"> <li>Protects "equipment that is not intrinsically safe" against simple disconnection, here the plug of the proximity sensor SMT and connecting cable NEBU</li> <li>ATEX category: gas: II 3G / dust: II 3D</li> </ul>	Plug M8x1	548067	NEAU-M8-GD

Ordering data – Connecting cables						Data sheets → 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	★ 541333	NEBU-M8G3-K-2.5-LE3	
			5	★ 541334	NEBU-M8G3-K-5-LE3	
	Straight socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	★ 541363	NEBU-M12G5-K-2.5-LE3	
			5	★ 541364	NEBU-M12G5-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	
	Angled socket, M12x1, 5-pin	Cable, open end, 3-wire	2.5	541367	NEBU-M12W5-K-2.5-LE3	
			5	541370	NEBU-M12W5-K-5-LE3	