Linear drives DGC

FESTO

Key features

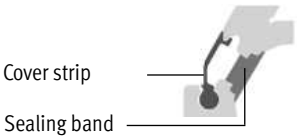
At a glance

- Compact – installation length relative to stroke
- Loads and devices can be directly mounted on the slide.
- There is a choice of three types of cushioning:
  - Elastic cushioning
  - Pneumatic cushioning
  - Hydraulic cushioning
- All settings accessible from one side:
  - Precision end-position adjustment
  - Position of proximity switches
  - Mounting of drive
  - Regulating speed
  - Pneumatic end-position cushioning
- Optional: NSF-H1 lubricant for the food zone

The linear drive is of limited suitability for the food zone.
More information:
www.festo.com/sp
➔ Certificates

Not approved for use in the food zone:
- DGC-...-GP (protected version)
- DGC-... with integrated shock absorbers

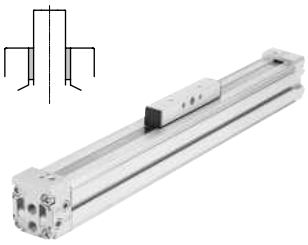
- Sealing system



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

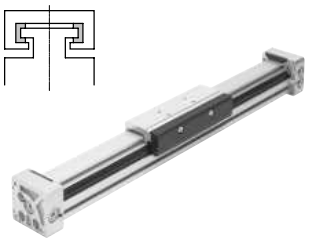
Guide variants

Compact design DGC-K



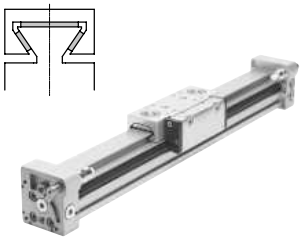
- Piston ⌀ 18 ... 80 mm
- Stroke lengths from 1 ... 8500 mm
- 30% narrower than the DGC-G
- Low moving dead weight
- Symmetrical design

Basic design DGC-G



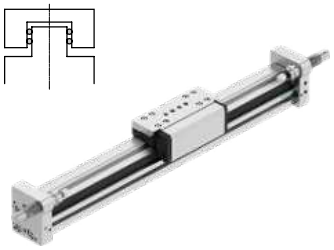
- Piston ⌀ 8 ... 63 mm
- Stroke lengths from 1 ... 8500 mm
- Guide backlash = 0.2 mm
- For small loads
- Operating behaviour under torque load = average

Plain-bearing guide DGC-GF



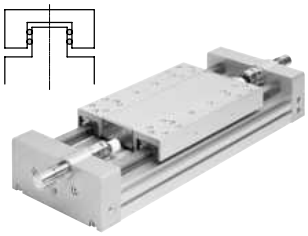
- Piston ⌀ 18 ... 63 mm
- Stroke lengths from 1 ... 8500 mm
- Guide backlash = 0.05 mm
- For small and medium loads
- Operating behaviour under torque load = average

Recirculating ball bearing guide DGC-KF



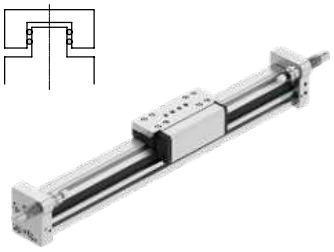
- Piston ⌀ 8 ... 63 mm
- Stroke lengths from 1 ... 8500 mm
- Guide backlash = 0 mm
- For medium and large loads
- Precise mounting interface with centring holes
- Operating behaviour under torque load = very good

Heavy-duty guide DGC-HD



- Piston ⌀ 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

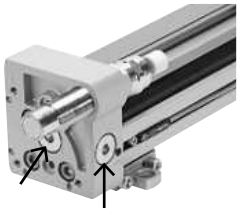


- Without drive
- Piston ⌀ 8 ... 63 mm
- Stroke lengths from 1 ... 8500 mm
- Guide backlash = 0 mm
- Precision guide, suitable for the DGC-KF. Can be used as machine component or as a twin guide with the DGC-KF

Key features

Versatility

Supply ports



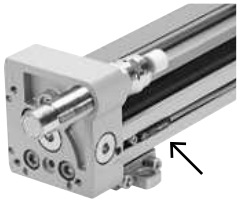
- Optionally on 2 sides (at the front or on the side)
- For DGC-G/DGC-GF/DGC-KF

DL – Compressed air connection on the left or on both sides

The linear drive is actuated on the right only or at both ends as standard. The linear drive can be actuated on the left or at both ends by specifying the order code DL in the modular product system.

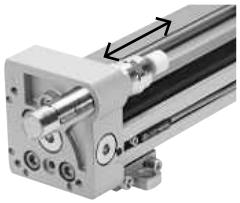
- For piston Ø 18, 25, 32, 40, 50, 63 mm
- For DGC-G, DGC-GF, DGC-KF

G/H/I/J – Proximity switch



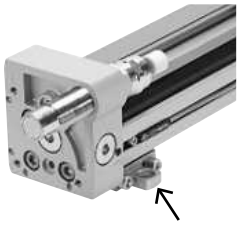
- Proximity switches can be integrated, which means there is no projection. The cable can be guided through the slot behind the second switch
- For DGC-G/DGC-GF/DGC-KF

Precision end-position adjustment



- Between 0 ...25 mm per side
- For DGC-GF/DGC-KF/DGC-FA

M – Profile mounting

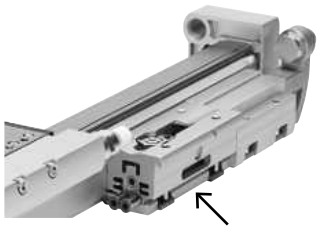


- The profile mounting remains on the base plate after the drive is dismantled. This means faster assembly and removal without repeat adjustment
- For DGC-G/DGC-GF/DGC-KF/DGC-FA

YWZ – Mechanical end-position limiter

- For variable stroke adjustment, e.g. for format adjustments
- The end stop can be mounted at any position along the stroke
- For DGC-GF/DGC-KF/DGC-FA

Z1/Z2/Z3 – Intermediate-position module



- Enables variable intermediate positions
- The intermediate-position module can be mounted at any place along the stroke
- Precision repetition accuracy (0.02 mm) with high dynamic response
- For DGC-KF

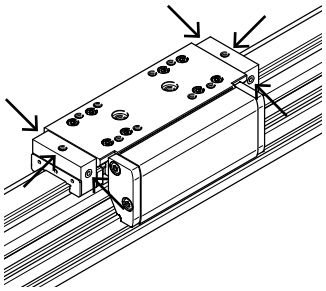
FK – Moment compensator

- Compensates for inaccuracies during mounting of the linear drive and external guide
- Max. offset 2.5 mm
- For DGC-G

Key features

Options

C – Central lubrication

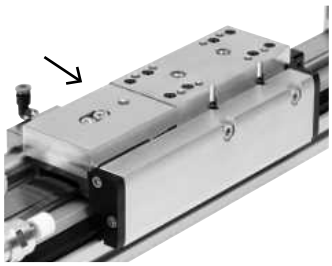


The lubrication adapters enable the guide of the linear drive DGC-KF to be permanently lubricated in applications in humid or wet ambient conditions using semi or fully automatic relubrication devices.
The adapters are suitable for oils and greases.

- For piston Ø 25, 32, 40, 63 mm
- For DGC-KF
- Connections:
  - On both sides of the slide
  - In three places (front, top, rear) on each side

Technical data ➔ page 48

1H-PN – Clamping unit



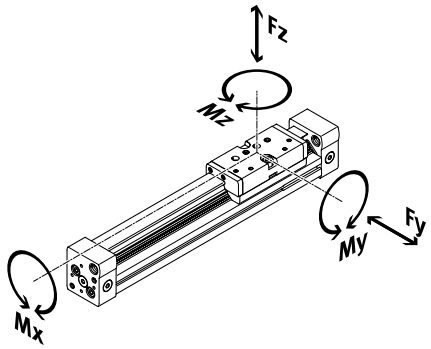
- Single-channel design, for holding loads
- Reliable holding is guaranteed since the forces act directly on the slide
- A limited number of emergency braking operations are permissible with sizes 40 and 50

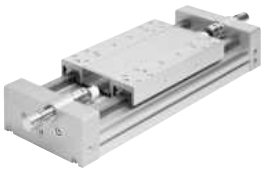
- For piston Ø 25, 32, 40, 50 mm
- For DGC-KF

Technical data ➔ page 45

Key features

Product variants



	Piston Ø [mm]	Theoretical force at 0.6 MPa (6 bar, 87 psi) [N]	Guide characteristics Fy [N]	Fz [N]	Mx [Nm]	My [Nm]	Mz [Nm]	→ Page/ Internet
Compact design DGC-K								
	18	153	–	120	0.8	11	1	dgc-k
	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	
Basic design DGC-G								
	8	30	150	150	0.5	2	2	8
	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	
Plain-bearing guide DGC-GF								
	18	153	440	540	3.4	20	8.5	22
	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	
Recirculating ball bearing guide DGC-KF								
	8	30	300	300	1.7	4.5	4.5	40
	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	
Heavy-duty guide DGC-HD								
	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

001	Series	
DGC	Linear drive	

002	Piston diameter	
8	8	
12	12	
18	18	
25	25	
32	32	
40	40	
50	50	
63	63	

003	Stroke	
...	1 ... 8500	

004	Guide	
G	Basic variant	
GF	Plain bearing	
KF	Recirculating ball bearing guide	
FA	Passive guide axis	

005	Cushioning	
P	Elastic cushioning rings/plates on both sides	
PPV	Pneumatic cushioning, adjustable at both ends	
YSR	Self-adjusting shock absorber	
YSRW	Shock absorber, self-adjusting, progressive	

006	Position sensing	
A	For proximity sensor	

007	Compressed air connection	
	At the right end or at both ends	
DL	At the left or at both ends	

008	Lubrication	
	Standard	
H1	Food-safe lubrication	

009	Slide	
	Standard	
GP	Protected recirculating ball bearing guide	

010	Lubrication function	
	None	
C	Lubrication adapter	

011	Additional slide left	
	None	
KL	Additional slide, standard, left	

012	Additional slide, right	
	None	
KR	Additional slide standard, right	

013	Clamping unit	
	None	
1H	Holding function, 1-channel	

014	Actuation type	
	None	
PN	Pneumatically actuated	

015	EU certification	
	None	
EX2	II 3GD	
EX3	II 2G	

016	Accessories	
	None	
ZUB	Accessories supplied loose	

017	Foot mounting	
	None	
F	1 record	

018	Profile mounting	
	None	
...M	1 ... 9 pieces	

019	Slot nut, mounting slot	
	Without	
...B	1 ... 9 pieces	

020	Moment compensator	
	None	
FK	Moment compensator	

021	Proximity switch, cable 2.5 m	
	None	
...G	1 ... 9 pieces	

022	Proximity switch, plug M8	
	None	
...H	1 ... 9 pieces	

023	Proximity switch, contactless, cable 2.5 m	
	None	
...I	1 ... 9 pieces	

024	Proximity switch, contactless, plug M8	
	None	
...J	1 ... 9 pieces	

025	Connecting cable, M8, 2.5 m	
	None	
...V	1 ... 9 pieces	

026	Slot cover, sensor slot	
	Without	
...L	1 ... 9 pieces	

027	Mechanical end position limitation	
	None	
YWZ1	Variable end position, one side	
YWZ2	Variable end position, both sides	

Type codes

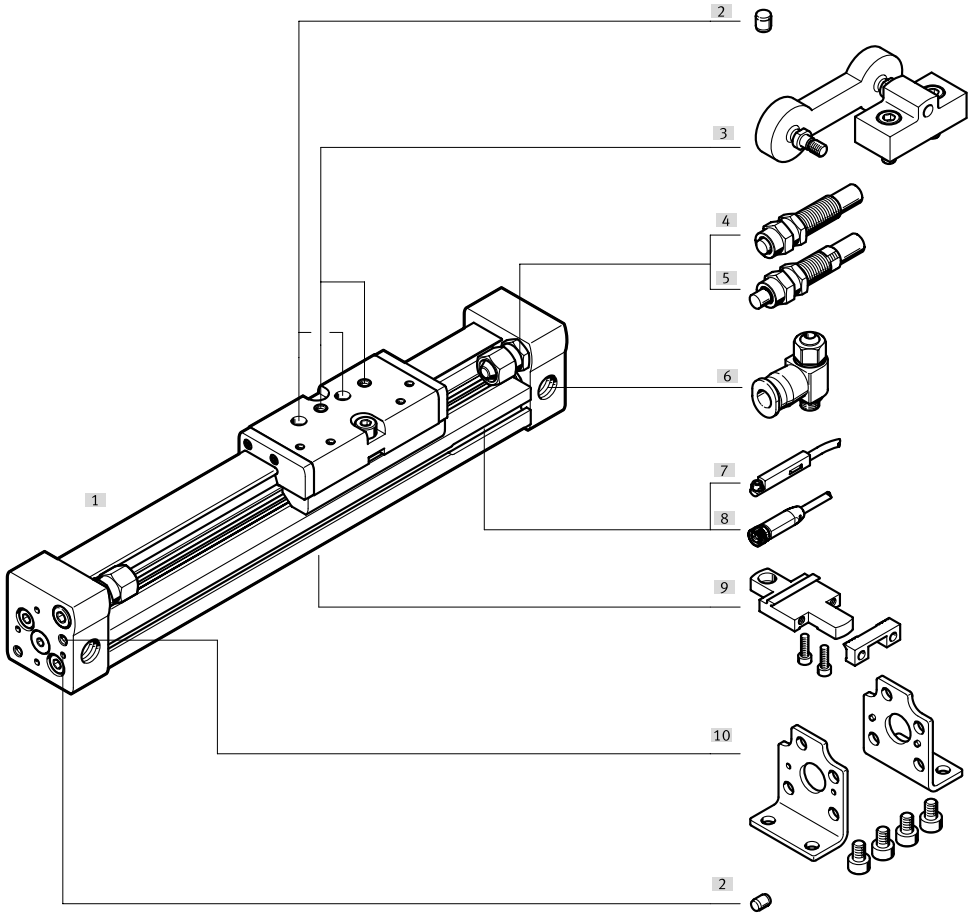
028	Intermediate position	
	None	
Z1	1 intermediate position	
Z2	2 intermediate positions	
Z3	3 intermediate positions	

029	Operating instructions	
	Standard	
O	Express waiver - no operating instructions to be included as already available (operating instructions in PDF format are available free of charge on our website at http://www.festo.com)	

Peripherals overview

DGC-8/-12

- - Note: Operation without cushioning components is not permitted.



Variants and accessories

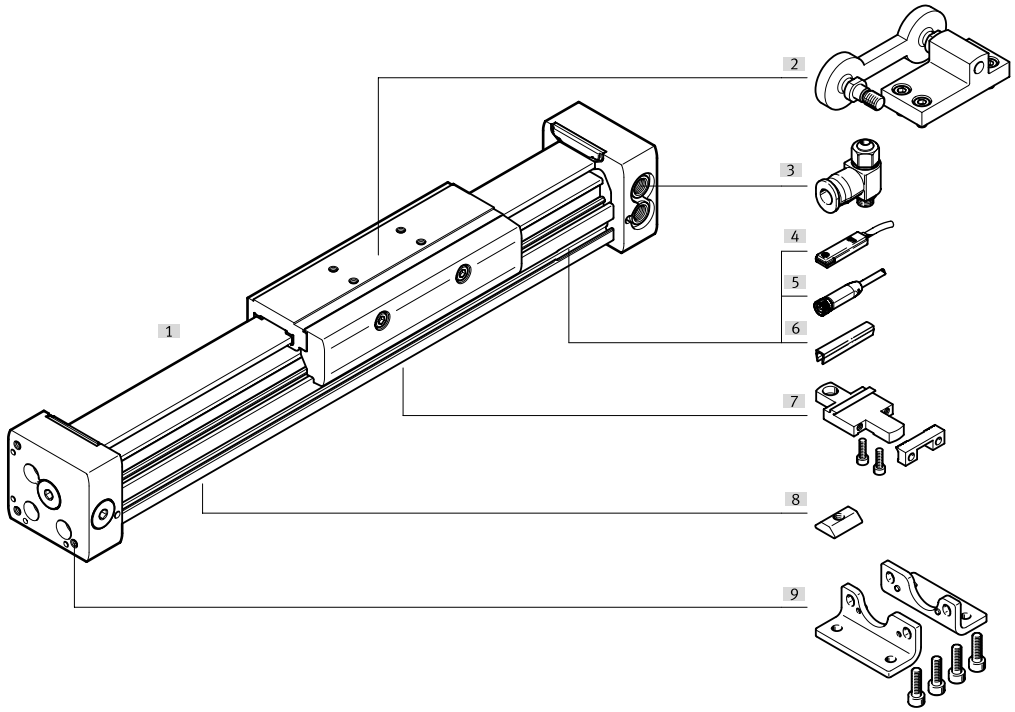
	Type/order code	For piston Ø	Description	→ Page/Internet
[1]	Linear drive DGC-G	8 ... 63	Linear drive without accessories, basic design	10
[2]	Centring pin1) ZBS	8, 12	For centring loads and attachments on the slide	86
	Centring pin/sleeve ZBS/ZBH	8, 12, 50, 63	For centring the drive without foot mountings (user-specific)	86
[3]	Moment compensator FK	8 ... 63	Compensates for inaccuracies during mounting of the linear drive and external guide	80
[4]	Shock absorber YSR	8, 12	Self-adjusting, hydraulic shock absorber with spring return and linear cushioning characteristics.	21
[5]	Shock absorber YSRW	8, 12	Self-adjusting hydraulic shock absorber with spring return and progressive cushioning characteristics	21
–	Distance sensor SOIA	8 ... 63	For monitoring the condition of the cushioning components	86
[6]	One-way flow control valve GRLA	8 ... 63	For regulating speed	87
[7]	Proximity switch G/H/I/J	8 ... 63	For sensing the slide position	87
[8]	Connecting cable V	8 ... 63	Via proximity switch	89
[9]	Profile mounting M	8 ... 63	Simple and precise mounting option via dovetail connection.	78
[10]	Foot mounting F	8 ... 63	For mounting on the end cap	76
–	Cushioning P	8, 12	Non-adjustable, elastic cushioning. Used only at low speeds.	21

1) Included in the scope of delivery of the drive

Peripherals overview

DGC-18 ... 63

- - Note: Operation without cushioning components is not permitted.



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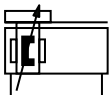
[3]	One-way flow control valve GRLA	8 ... 63	For regulating speed	87
[4}	Proximity switch G/H/I/J	8 ... 63	For sensing the slide position	87
[5]	Connecting cable V	8 ... 63	Via proximity switch	89
[6]	Slot cover L	18 ... 63	For protecting against contamination and securing the proximity switch cable	86
[7]	Profile mounting M	8 ... 63	Simple and precise mounting option via dovetail connection.	78
[8]	Slot nut B	25 ... 63	For mounting attachments	86
[9]	Foot mounting F	8 ... 63	For mounting on the end cap	76
–	Cushioning PPV	18 ... 63	Adjustable, pneumatic end-position cushioning. Used at medium speeds.	21

1) Included in the scope of delivery of the drive

Datasheet

Function



Diameter
8 ... 63 mm

Stroke length
1 ... 8500 mm

www.festo.com

Repair service

General technical data									
Piston ø		8	12	18	25	32	40	50	63
Design		Rodless actuator							
Driver principle		Slotted cylinder, mechanically coupled							
Guide		Basic design							
Operating mode		Double-acting							
Stroke	[mm]	1 ... 1500	1 ... 2000	1 ... 3000	1 ... 8500			1 ... 5000	
Pneumatic connection		M5			G1/8		G1/4		G3/8
Cushioning → page 12									
DGC-...-P		Not adjustable at either end		–					
DGC-...-PPV		–		Adjustable at both ends					
DGC-...-YSR...		Self-adjusting at both ends		–					
Cushioning length with cushioning PPV	[mm]	–		16.5	15.5	17.5	29.5	29.8	31.1
Max. speed	[m/s]	1	1.2	3					
Position sensing		Via proximity switch							
Type of mounting		Profile mounting							
		Foot mounting							
		Direct mounting							
Mounting position		Any							

Note

This product conforms to ISO 1179-1 and ISO 228-1.

Operating and environmental conditions									
Piston ø		8	12	18	25	32	40	50	63
Operating pressure	[MPa]	0.25 ... 0.8		0.2 ... 0.8			0.15 ... 0.8		
	[bar]	2.5 ... 8		2 ... 8			1.5 ... 8		
	[psi]	36.25 ... 116		29 ... 116			21.75 ... 116		
Operating medium		Compressed air to ISO 8573-1:2010 [7:–:–]							
Note on the operating/ pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)							
Ambient temperature1)	[°C]	+5 ... +60	–10 ... +60						
Food-safe2)		–		→ Further information on materials					
Corrosion resistance class CRC3)		2 - moderate corrosion stress							

1) Note operating range of proximity switches
2) More information: www.festo.com/sp
3) More information www.festo.com/x/topic/crc

Forces [N] and impact energy [J]									
Piston ø		8	12	18	25	32	40	50	63
Theoretical force at 0.6 MPa (6 bar, 87 psi)		30	68	153	295	483	754	1178	1870
Impact energy in the end positions		→ Page 12							

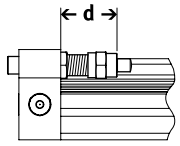
Datasheet

ATEX[1]		
Size	8	12 ... 63
Explosion-proof ambient temperature [°C]	+5°C ≤ Ta ≤ +60°C	–10°C ≤ Ta ≤ +60°C
CE marking (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)	
UKCA marking (see declaration of conformity)	To UK explosion regulations	
Explosion protection certification outside the EU	EPL Gc (GB)	
	EPL Dc (GB)	
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.

Weight [g]								
Piston ø	8	12	18	25	32	40	50	63
Basic weight with 0 mm stroke	170	290	546	1004	2126	4121	9050	14040
Additional weight per 10 mm stroke	9	12	22	34	54	77	116	150
Moving mass	36	65	178	287	508	1312	2850	4330

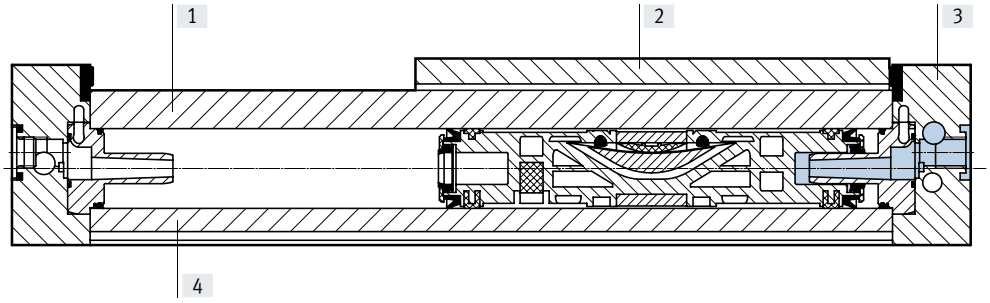
Adjustable end-position range d [mm]



Piston ø	8	12
Cushioning		
DGC-...-YSR/YSRW	12.8 ... 22.8	14 ... 24

Materials

Sectional view

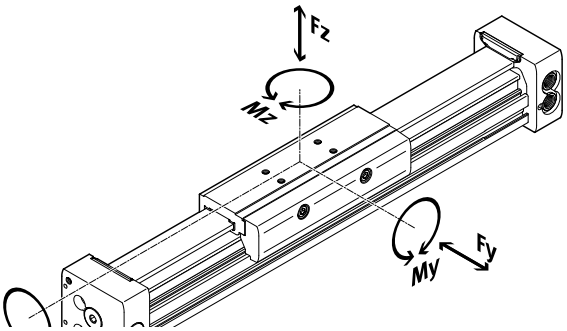


Linear drives		
[1]	Guide rail	Anodised aluminium
[2]	Slide	Anodised aluminium
[3]	End cap	Anodised aluminium
[4]	Cylinder barrel	Anodised aluminium
–	Piston seal	Polyurethane
	Sealing band/cover strip	Polyurethane
	Slide elements	Polyacetal
	Note on materials	RoHs-compliant
	Cleanroom suitability, measured according to ISO 14644-14	Class 6 according to ISO 14644-1

Datasheet

Load values

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



Note

To prevent the guide of the basic guide DGC-G from self-locking when used vertically and with a high torque load, the variant with recirculating ball bearing guide DGC-KF is recommended ➔ page 40.

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

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

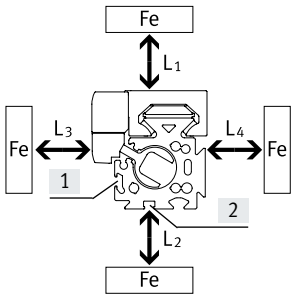
Permissible forces and torques

Piston ø		8	12	18	25	32	40	50	63
$Fy_{max.}$	[N]	150	300	70	180	250	370	480	650
$Fz_{max.}$	[N]	150	300	340	540	800	1100	1600	2000
$Mx_{max.}$	[Nm]	0.5	1.3	1.9	4	9	12	20	26
$My_{max.}$	[Nm]	2	5	12	20	40	60	150	150
$Mz_{max.}$	[Nm]	2	5	4	5	12	25	37	48

Influence of ferritic materials on proximity switches

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

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

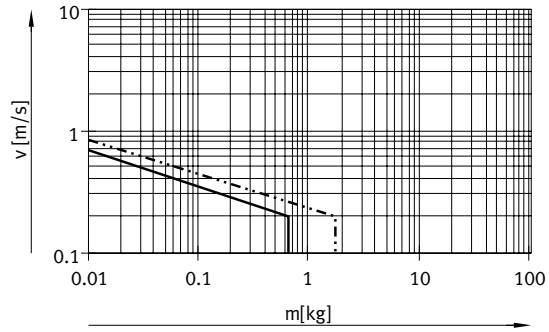


Piston ø			8	12	18	25	32	40	50	63
Distance L1	[1]	[mm]	0	0	0	0	0	0	0	0
	[2]	[mm]	–	–	0	0	0	0	0	0
Distance L2	[1]	[mm]	20	10	10	10	0	0	0	0
	[2]	[mm]	–	–	25	25	25	25	25	25
Distance L3	[1]	[mm]	30	25	25	25	25	25	25	25
	[2]	[mm]	–	–	10	10	0	0	0	0
Distance L4	[1]	[mm]	0	0	0	0	0	0	0	0
	[2]	[mm]	–	–	0	0	0	0	0	0

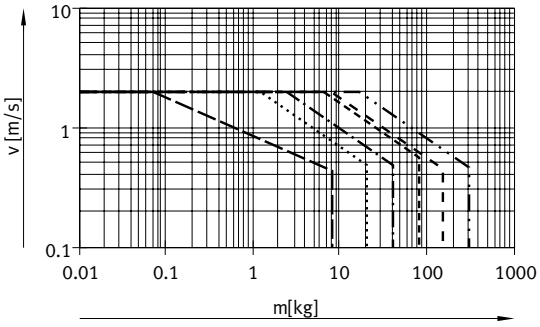
Datasheet

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

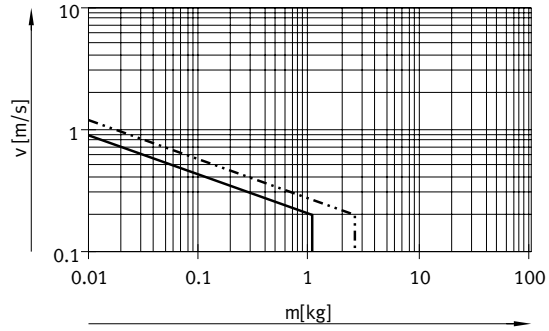
Piston Ø 8/12 with elastic cushioning P



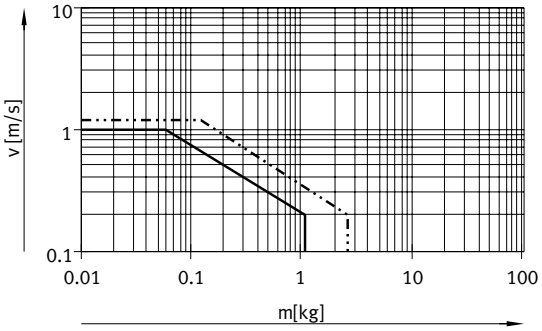
Piston Ø 18 ... 63 with cushioning PPV



Piston Ø 8/12 with cushioning YSR



Piston Ø 8/12 with cushioning YSRW



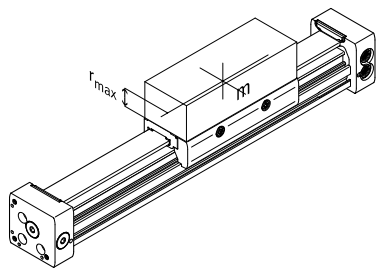
- Ø 8
- Ø 12
- Ø 18
- Ø 25
- Ø 32
- Ø 40
- Ø 50
- Ø 63

Note

These specifications represent the maximum values that can be achieved. In practice, these values can fluctuate dependent on 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.



Note

To avoid distortion in the slide, the bearing surfaces of the attachments must maintain a flatness of at least 0.03 mm.

Data for horizontal mounting position:

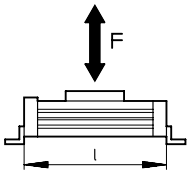
Piston Ø		8	12	18	25	32	40	50	63
Distance $r_{max.}$	[mm]	25	35	35	50	50	50	50	50

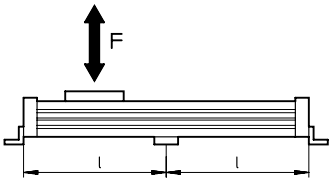
Datasheet

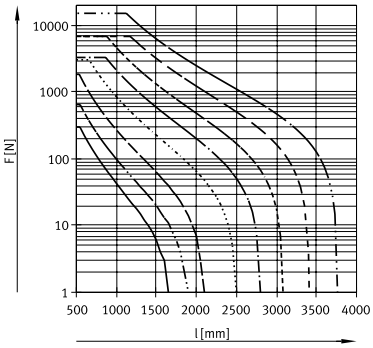
Number of profile mountings MUC as a function of weight force F and support spacing l

The drive may need to be supported to limit the deflection in the case of large strokes. The following graphs can be used to determine the maximum permissible support spacing as a function of the mounting position and the applied weight and normal forces.

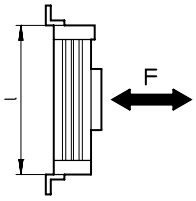
Horizontal mounting position

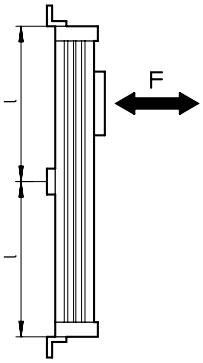


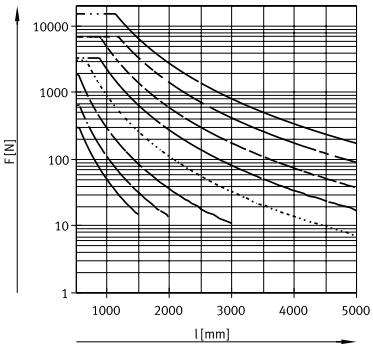




Vertical mounting position







Ø 8
Ø 12
Ø 18
Ø 25
Ø 32
Ø 40
Ø 50
Ø 63

Example:

The drive DGC-25-1500 is subjected to a force of 300 N in a horizontal mounting position.

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

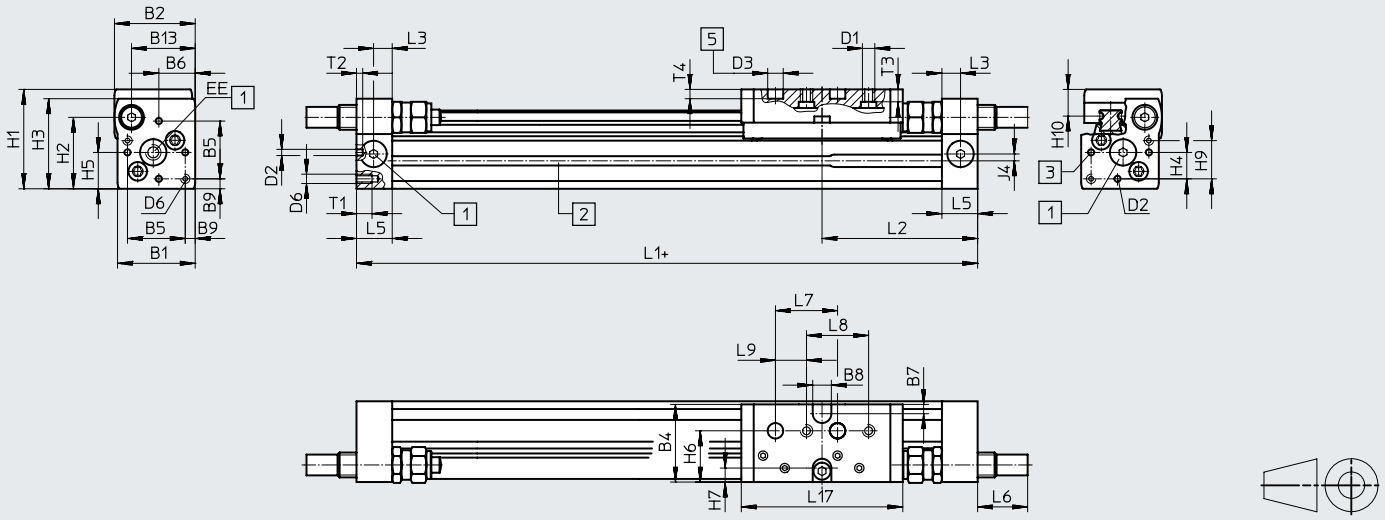
According to the graph, the max. support spacing for the drive DGC-25 with a force of 300 N is 1300 mm.

In this example, profile mountings are required as the max. support spacing (1300 mm) is smaller than the overall length of the drive (1700 mm).

Datasheet

Dimensions Download CAD data ➔ www.festo.com

Ø 8 and 12



+ = plus stroke length
[1] Compressed air supply port options on 3 sides
[2] Sensor slot for proximity switch
[3] Mounting hole for foot mounting or centring pin
[5] Drilled hole for centring pin ZBS

ø [mm]	B1	B2	B4	B5	B6	B7	B8 ±0.05	B9 ±0.1	B13	D1	D2 ø H8	D3 ø H7	D6
8	25	26	25.5	18.6	11.7	3	6	3.2	20.5	M4	2	5	M3
12	30.2	31	30.5	20.6	13.5	3	8	4.8	25	M4	2	5	M4

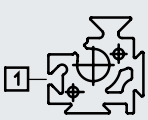
ø [mm]	EE	H1	H2	H3	H4	H5	H6	H7	H9	H10	J4	L1	L2
8	M5	32	23	29	8.5	11.7	16.5	4.5	12.3	8.7	2.2	100	50.1
12	M5	37.5	28.5	34.5	8.7	13.5	20.5	5	14.7	9.8	3	125	62.4

ø [mm]	L3	L5	L6 P	L6 YSR	L6 YSRW	L7 ±0.03	L8 ±0.1	L9 ±0.1	L17	T1	T2	T3	T4 +0.2	Stroke tolerance
8	6	11.4	0	16	16.2	20	20	10	52	5	2	4	3	0 ... 1.7
12	8	15.9	0	11.3	12.3	20	20	10	65	6	2	5	3	

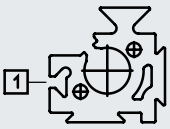
Length tolerance For stroke [mm]	≤ 1000	≤ 2000
L1 [mm]	+0.90	+1.10

Profile barrel

Ø 8



Ø 12

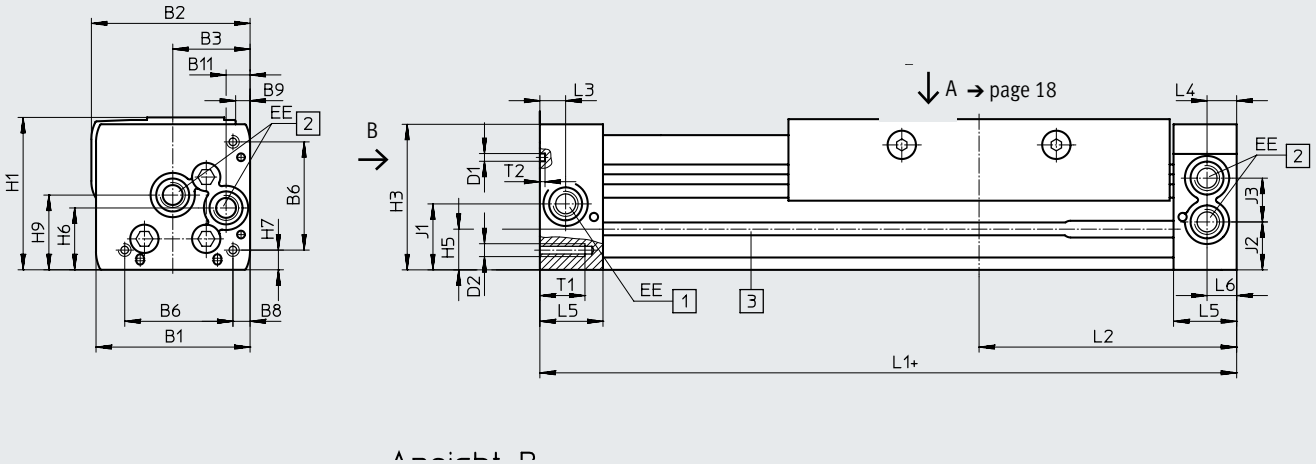


[1] Sensor slot for proximity switch

Datasheet

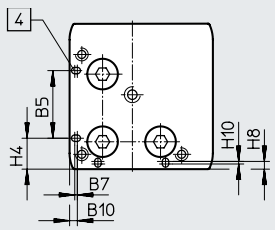
Dimensions Download CAD data ➔ www.festo.com

Ø 18 ... 40

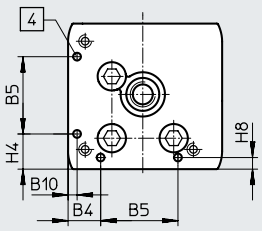


View B

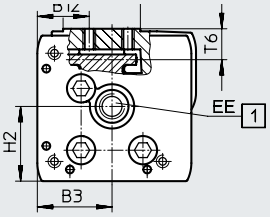
Ø 18

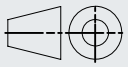


Ø 25 ... 40

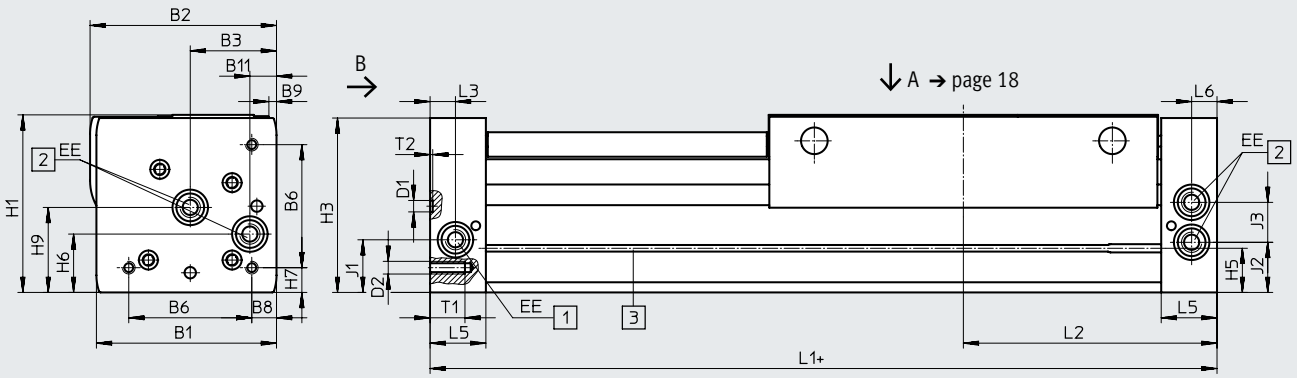


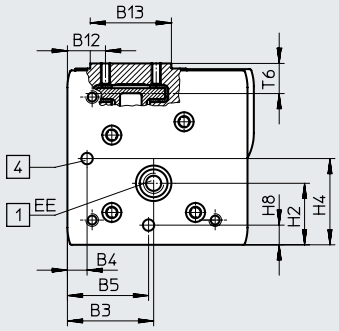
Ø 18 ... 40





Ø 50/63





+ = plus stroke length

[1] Compressed air supply port options on 2 sides

[2] Compressed air supply port options on 2 sides, for compressed air supply port at one end

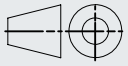
[3] Sensor slot for proximity switch

[4] Mounting hole for foot mounting HPC

Note

The linear drive is actuated on the right only or at both ends by default.

The linear drive can be actuated on the left or at both ends by specifying the order code DL in the modular product system.



Datasheet

ø [mm]	B1	B2	B3	B4	B5 ±0.05	B6	B7	B8	B9	B10
18	44.5	46.3	19.5	8.8	21	31	0.3	3.8	3.3	2.4
25	59.8	61.6	30	12.65	30	42		6.65	5.6	3.5
32	73	75.5	38.5	5.7	63.1	57.5		8.5	5	14
40	91	94.5	45	17.2	55	65		12.2	5.3	8
50	113	122	60	8	52.8	81.6	–	12	0	–
63	142	147	68	15.5	68	97	–	19.5	6	–

ø [mm]	B11	B12	B13	D1 ø	D2	EE	H1	H2	H3	H4 ±0.2
18	5.5	19.3	20	2±0.05	M4	M5	49.8	23.1	48.3	10.3
25	9.3	20.15	30	3±0.05	M5	G1/8	58.5	29	56.5	13
32	14.9	20.5	35	3±0.05	M6	G1/8	73	30	71.5	5.7
40	16.5	19.8	45	4±0.05	M6	G1/4	88	41.5	85	17.2
50	21	24	64	9^{H7}	M8	G1/4	120	38.5	116	52.8
63	21	30	64	9^{H7}	M10	G3/8	140	48.5	137.5	68

ø [mm]	H5	H6	H7	H8	H9	H10	J1	J2	J3	L1
18	13.4	20	5.3	2.4	25.2	0.4	20	16.5	11	150
25	15.8	24	7	3.5	29		26.1	18.6	17	200
32	17	27.7	8.5	14	35.2		30	22	18.5	250
40	25	36.5	12.2	8	44		35	26	26	300
50	29.3	36	12	8	53	–	30.5	30.5	28	350
63	34.8	46	19.5	15.5	67	–	41.5	39.5	31.5	400

ø [mm]	L2	L3	L4	L5	L6	T1	T2	T6	Stroke tolerance
18	74.5	5.7	5.8	15	5.5	9	2	10.7	0 ... 2.5
25	100	10.5	10.6	24.5	10.6	17.5	2	12	
32	124.8	14.5	14.5	30.5	14.5	15	2	13.8	
40	150	14.6	14.6	33.5	14.6	20	3	16.8	
50	175	17	–	41	17	24	$2.1^{+0.2}$	20.75	
63	200	20	–	44	20	27.5	$2.1^{+0.2}$	20.75	

Note

This product conforms to ISO 1179-1 and ISO 228-1.

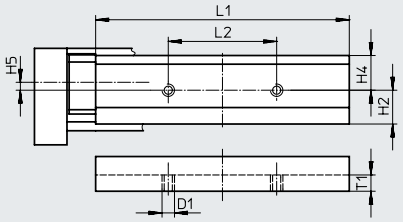
Length tolerance For stroke [mm]	≤ 1000	≤ 2000	≤ 3000	≤ 4000	≤ 5000	≤ 6000	≤ 7000	≤ 8000	≤ 9000
L1 [mm]	+0.90	+1.10	+1.40	+1.50	+1.60	+1.70	+2.20	+2.30	+2.40

Datasheet

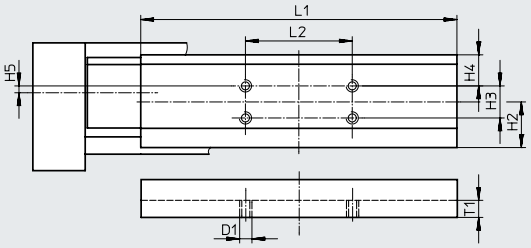
Dimensions Download CAD data ➔ www.festo.com

Slide – View A

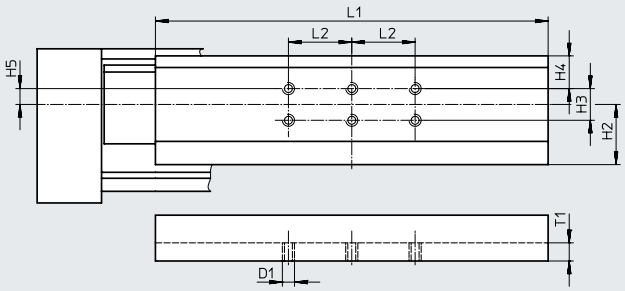
Ø 18



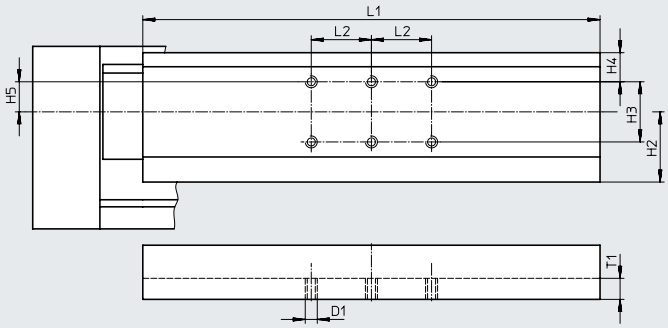
Ø 25



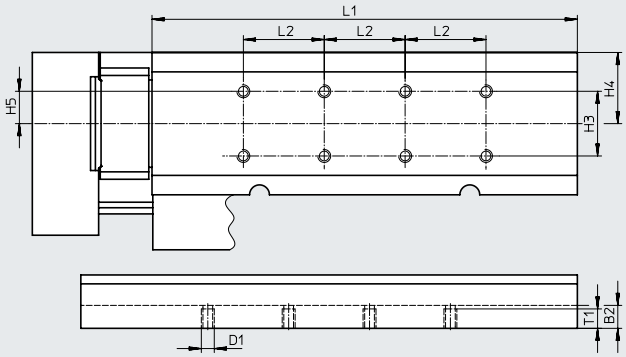
Ø 32



Ø 40



Ø 50

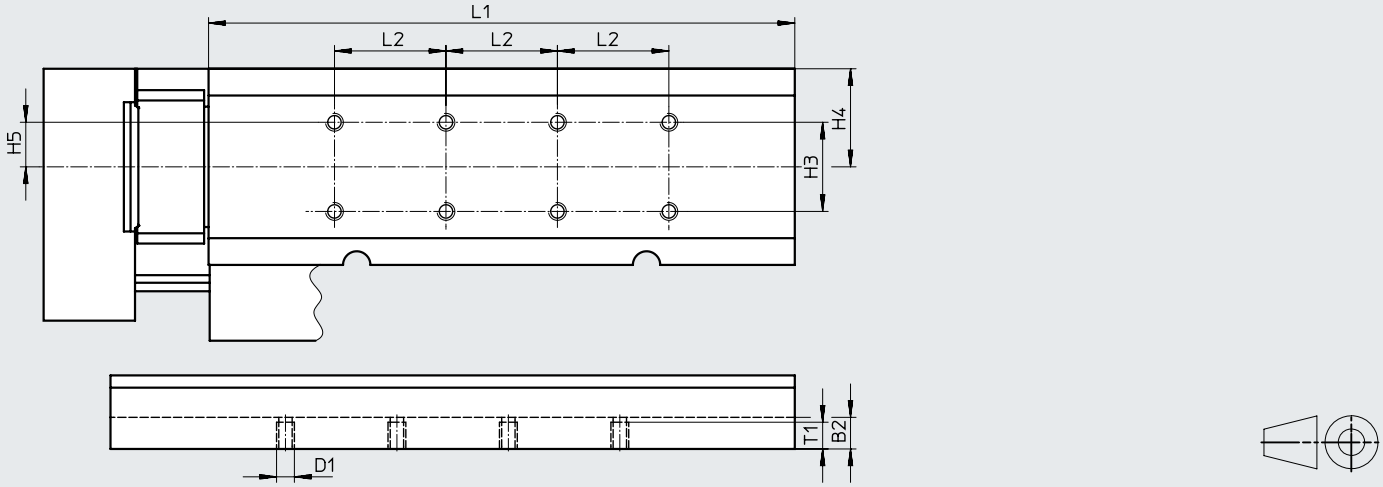


Datasheet

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

Slide – View A

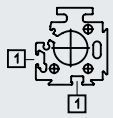
Ø 63



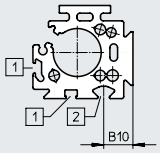
ø [mm]	B2	D1	H2 ±0.1	H3 ±0.1	H4	H5	L1	L2 ±0.1	T1
18	–	M5	15.6	–	16	2	117±0.05	50	7
25	–	M5	21.35	15	14.55	4.85	148±0.05	50	8
32	–	M5	28.5	15	15.5	7.5	186±0.05	30	8.6
40	–	M6	35	30	14.5	15	228±0.05	30	10.5
50	14	M8	–	40	44	20	263±0.1	50	13
63	14	M8	–	40	44	20	307±0.1	50	13

Profile barrel

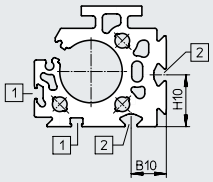
Ø 18



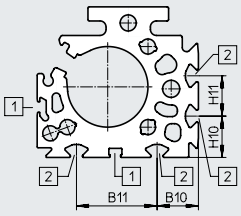
Ø 25



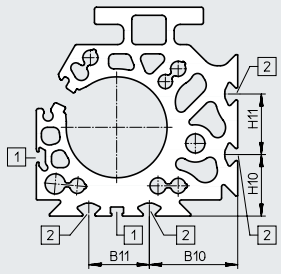
Ø 32



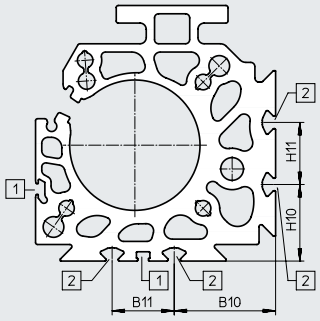
Ø 40



Ø 50



Ø 63



[1] Sensor slot for proximity switch
[2] Mounting slot for slot nut

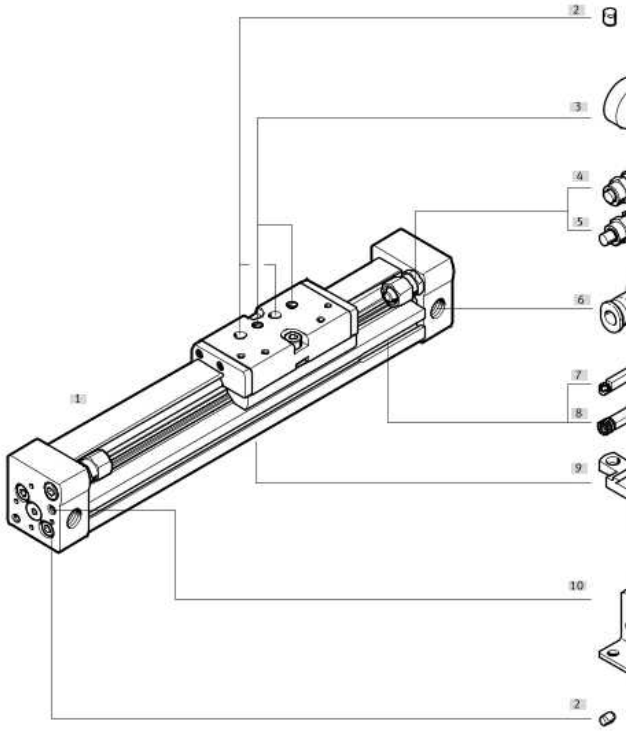
ø [mm]	B10	B11	H10	H11
25	15.23	–	–	–
32	18	–	26.5	–
40	20.5	40	20.5	20
50	43.8	30	30.5	30
63	49	30	37	30

Ordering data – Modular product system

Order code

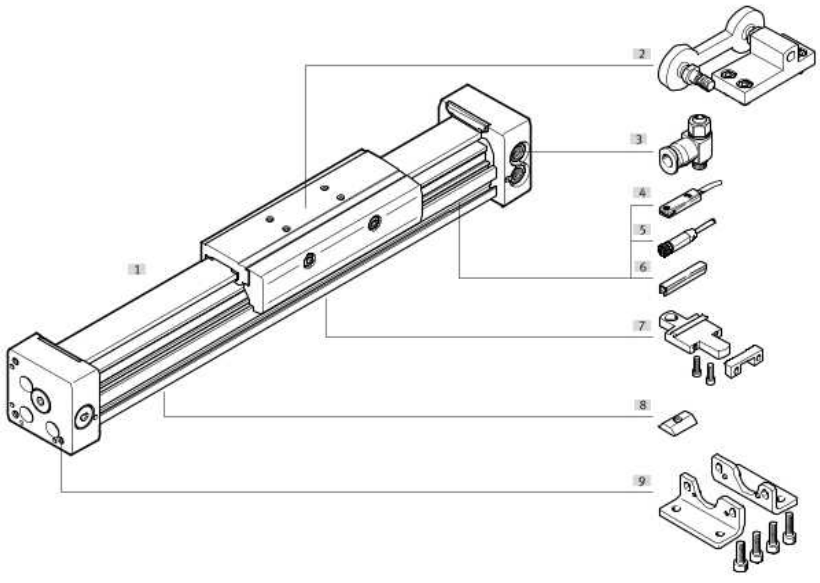
DGC-8/-12

- - Note: End stops or shock absorbers must not be removed.
- - The item numbers refer to the peripherals overviews ➔ Page 8/9



➔ page 86
FK
P/YSR
YSRW
➔ page 87
G/H/I/J
V
M
F
➔ page 86

DGC-18 ... 63



FK
➔ page 87
G/H/I/J
V
L
M
B
F

Ordering data – Modular product system

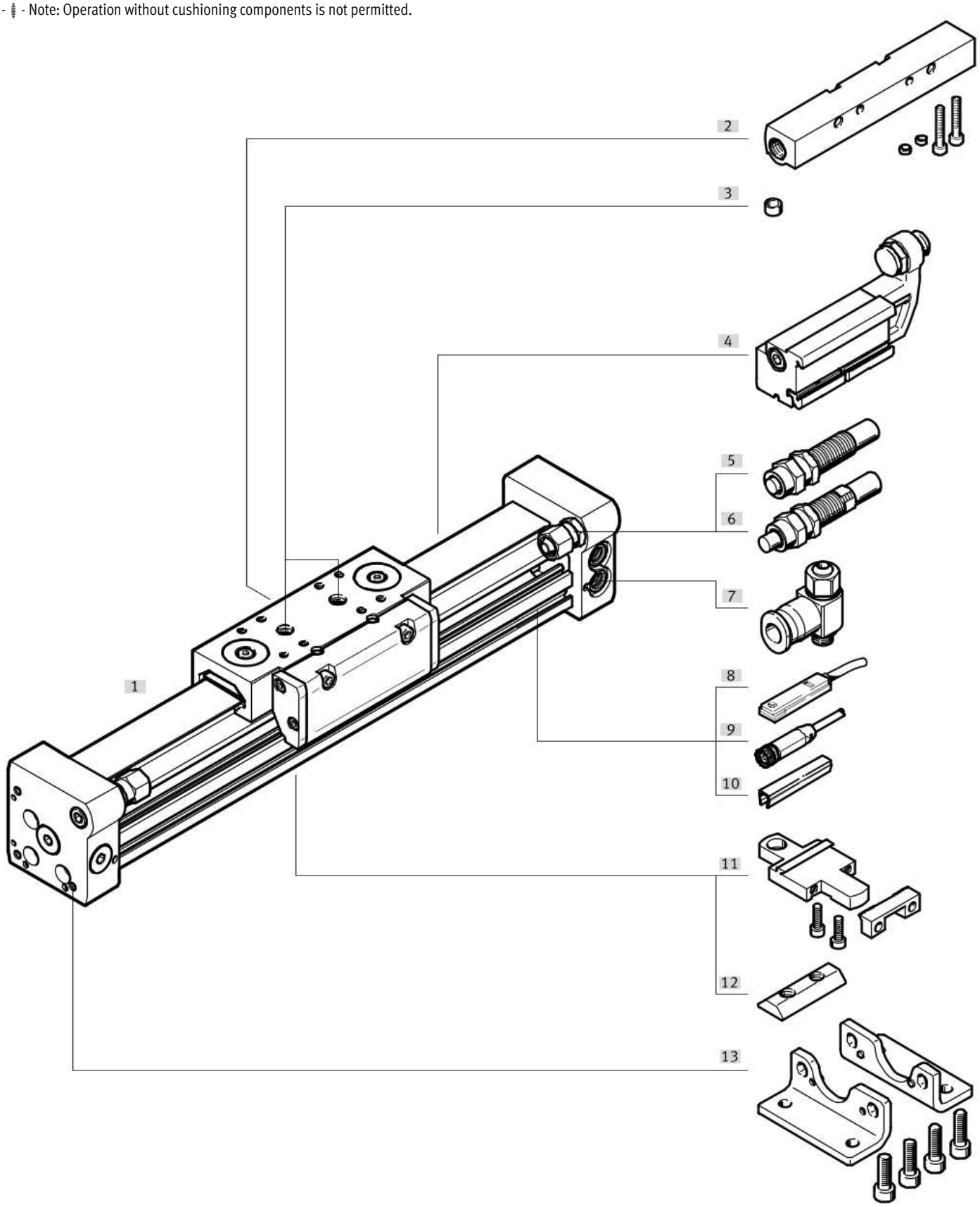
Ordering table

Size		8	12	18	25	32	40	50	63	Conditions	Code	Enter code
Module no.		**530906**	**530907**	**532446**	**532447**	**532448**	**532449**	**532450**	**532451**			
Function		Linear drive									**DGC**	DGC
Piston ø	[mm]	8	12	18	25	32	40	50	63		**-...**	
Stroke	[mm]	1 ... 1500	1 ... 2000	1 ... 3000	1 ... 8500			1 ... 5000			**-...**	
Guide		Basic design									**-G**	-G
Cushioning	At both ends	Elastic cushioning rings/ plates		–	–	–	–	–	–		**-P**	
	Adjustable at both ends	–	–	Pneumatic cushioning							**-PPV**	
	Self-adjusting	Shock absorber		–	–	–	–	–	–		**-YSR**	
		Shock absorber, progressive		–	–	–	–	–	–		**-YSRW**	
Position sensing		Via proximity switch									**-A**	-A
Compressed air supply port		On the right end or at both ends										
		–	–	On the left end or at both ends							**-DL**	
Lubrication		–	–	Standard								
		–	–	Food-safe lubrication							**-H1**	
EU certification		None										
		II 3GD								[1]	**-EX2**	
		II 2G								[1]	**-EX3**	
Accessories		Enclosed separately (can be retrofitted)									**ZUB-**	ZUB-
Foot mounting		1									**F**	
Profile mounting		1 ... 9									**...M**	
Moment compensator		None										
		Coupling for moment compensator									**FK**	
Slot nut for mounting slot		–	–	–	1 ... 9						**...B**	
Proximity switch	2.5 m cable	1 ... 9									**...G**	
	Plug M8	1 ... 9									**...H**	
Proximity switch, contactless, PNP	2.5 m cable	1 ... 9									**...I**	
	Plug M8	1 ... 9									**...J**	
Connecting cable	M8, 2.5 m	1 ... 9									**...V**	
Slot cover, sensor slot		–	–	1 ... 9							**...L**	
Operating manual		Express waiver – no operating instructions to be included (already available)									**-O**	

[1] EX2, EX3 Not with moment compensator FK, proximity switch G, H, I, J, connecting cable V

Peripherals overview

- ⚕ - Note: Operation without cushioning components is not permitted.



Peripherals overview

Variants and accessories

	Type/order code	For piston Ø	Description	→ Page/Internet
[1]	Linear drive DGC-GF	18 ... 63	Linear drive without accessories, plain-bearing guide	24
[2] [4]	Mechanical end-position limiter YWZ	18 ... 63	For variable end-position adjustment, e.g. for format adjustments	82
[3]	Centring pin/sleeve1) ZBS/ZBH	18 ... 63	For centring loads and attachments on the slide	86
	Centring sleeve ZBH	50, 63	For centring the drive without foot mountings (user-specific)	86
[5]	Shock absorber YSR	18 ... 63	Self-adjusting, hydraulic shock absorber with spring return and linear cushioning characteristics.	39
[6]	Shock absorber YSRW	18 ... 63	Self-adjusting hydraulic shock absorber with spring return and progressive cushioning characteristics	39
–	Distance sensor SOIA	18 ... 63	For monitoring the condition of the cushioning components	86
[7]	One-way flow control valve GRLA	18 ... 63	For regulating speed	87
[8]	Proximity switch G/H/I/J	18 ... 63	For sensing the slide position	87
[9]	Connecting cable V	18 ... 63	Via proximity switch	89
[10]	Slot cover L	18 ... 63	For protecting against contamination and securing the proximity switch cable	86
[11]	Profile mounting M	18 ... 63	Simple and precise mounting option via dovetail connection.	78
[12]	Slot nut B	25 ... 63	For mounting attachments	86
[13]	Foot mounting F	18 ... 63	For mounting on the end cap	76
–	Cushioning PPV	18 ... 63	Adjustable, pneumatic end-position cushioning. Used at medium speeds.	39

1) Included in the scope of delivery of the drive