

Linear drives DGC

FESTO



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for the
star!

Characteristics

At a glance

- Compact – installation length relative to stroke
- Loads and devices can be directly mounted on the slide.
- Three types of cushioning available:
 - Elastic cushioning
 - Pneumatic cushioning
 - Hydraulic cushioning

- All settings accessible from one side:
 - Precision end-position adjustment
 - Position of proximity sensors
 - Mounting of drive
 - Regulating speed
 - Pneumatic end-position cushioning

- Optional: NSF-H1 lubricant for the food area

The linear drive is of limited suitability for the food area.

Additional information:
www.festo.com/sp
 → Certificates

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

- Sealing system

Cover strip
 Sealing band

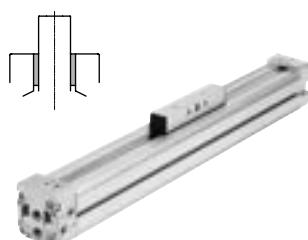
Advantages of the sealing system

- Long strokes with no restrictions
- Virtually no leakage



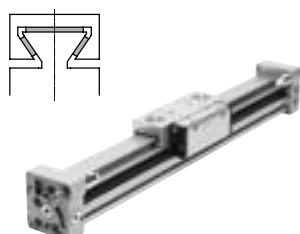
Guide variants

Compact design DGC-K



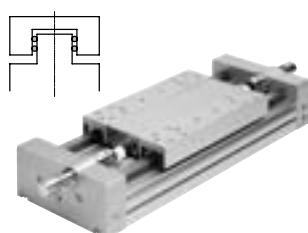
- Piston diameter 18 ... 80 mm
- Stroke lengths from 1 ... 8500 mm
- 30% narrower than the DGC-G
- Low moving dead weight
- Symmetrical design

Plain-bearing guide DGC-GF



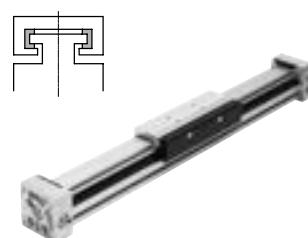
- Piston diameter 18 ... 63 mm
- Stroke lengths from 1 ... 8500 mm
- Guide backlash = 0.05 mm
- For small and medium loads
- Operating behaviour under torque load = average

Heavy-duty guide DGC-HD



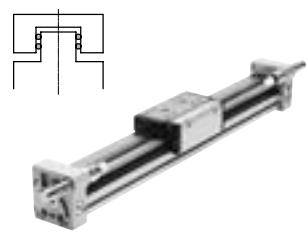
- Piston diameter 18, 25, 40 mm
- Stroke lengths from 10 ... 5000 mm
- Guide backlash = 0 mm
- For large loads
- Operating behaviour under torque load = very good

Basic design DGC-G



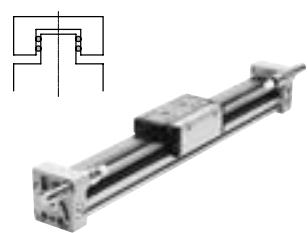
- Piston diameter 8 ... 63 mm
- Stroke lengths from 1 ... 8500 mm
- Guide backlash = 0.2 mm
- For small loads
- Operating behaviour under torque load = average

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

Guide axis DGC-FA

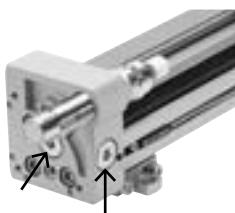


- Without drive
- Piston diameter 8 ... 63 mm
- Stroke lengths from 1 ... 8500 mm
- Guide backlash = 0 mm
- Precision guide, suitable for the DGC-KF. Can be used as machine component or as a twin guide with the DGC-KF

Characteristics

Versatility

[1] Compressed air supply ports



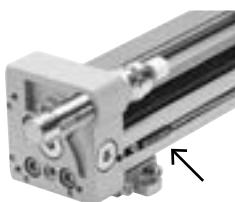
- Optionally on 2 sides (on the side or at the front)
- For DGC-G/DGC-GF/DGC-KF

DL – Compressed air supply port at the left end or at both ends

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

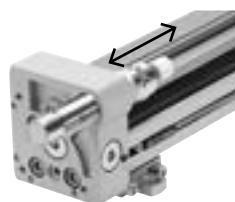
- For piston diameters 18, 25, 32, 40, 50, 63 mm
- For DGC-G, DGC-GF, DGC-KF

[2] G/H/I/J – Proximity sensors



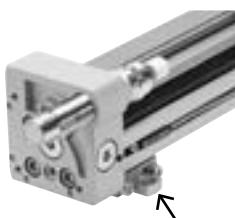
- Proximity sensors can be integrated, which means there is no projection. The cable can be guided through the slot behind the second sensor
- For DGC-G/DGC-GF/DGC-KF

[3] Precision end-position adjustment



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

[4] M – Profile mounting



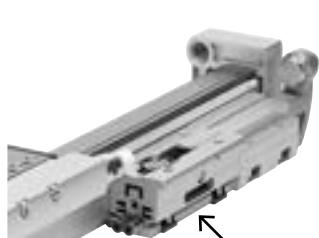
- Profile mounting remains on the base plate after the drive is dismantled. This means faster assembly and removal without repeat adjustment
- For DGC-G/DGC-GF/DGC-KF/DGC-FA

[5] 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

[6] Z1/Z2/Z3 – Intermediate-position module



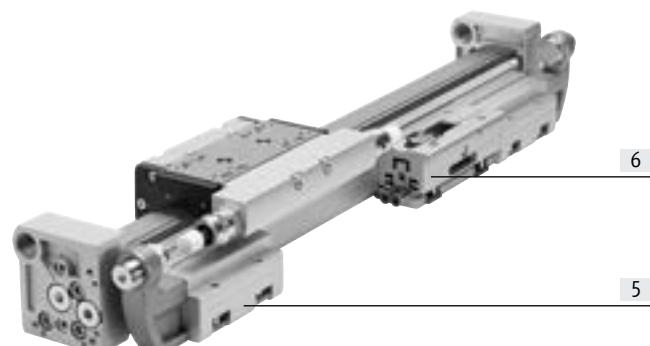
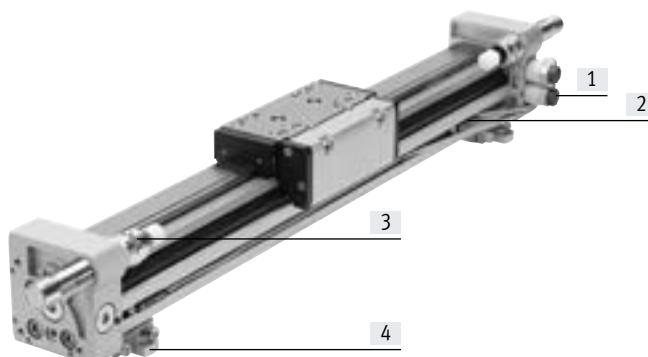
- Enables variable intermediate positions
- The intermediate-position module can be mounted at any place along the stroke
- Precision repetition accuracy (0.02 mm) with high dynamic response
- For DGC-KF

FK – Moment compensator



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

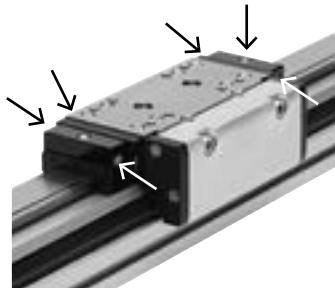
Example



Characteristics

Options

C – Central lubrication

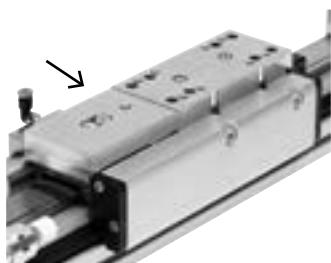


The lubrication adapters enable the guide of the linear drive DGC-KF to be permanently lubricated in applications in humid or wet ambient conditions using semi or fully automatic relubrication devices. The adapters are suitable for oils and greases.

- For piston diameters 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

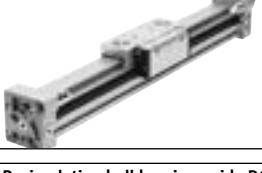


- 1-channel design, for holding loads
- Reliable holding is guaranteed since the forces act directly on the slide
- A limited number of emergency braking operations are permissible with the sizes 40 and 50

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

Technical data → page 45

Characteristics

Product variants								→ Page/ Internet
Piston diameter [mm]	Theoretical force at 6 bar [N]	Guide characteristics						
		Fy [N]	Fz [N]	Mx [Nm]	My [Nm]	Mz [Nm]		
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
0	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)

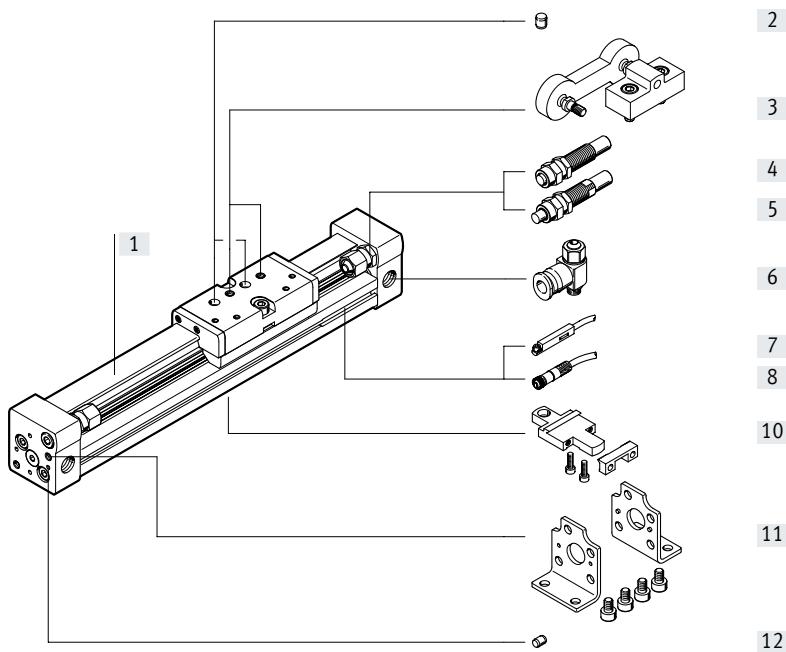
Peripherals overview



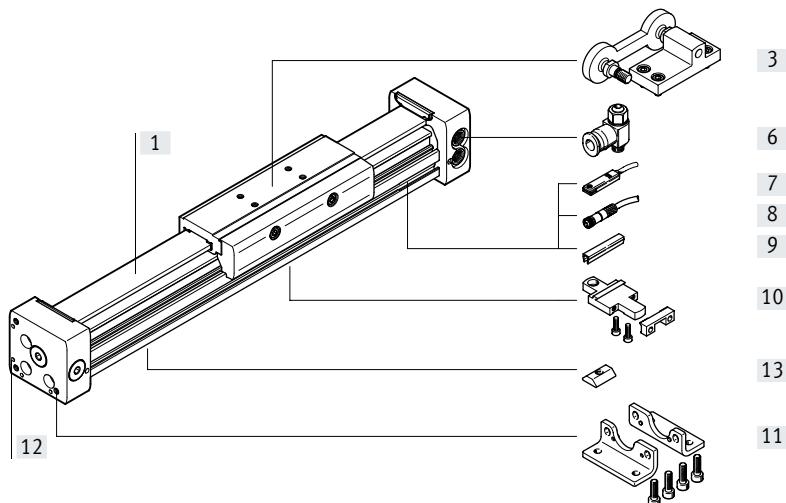
DGC-8/-12



Note
1) Operation without cushioning components is not permitted.



DGC-18 ... 63



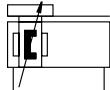
Peripherals overview

Variants and accessories			
Type/order code	For piston diam.	Description	→ Page/Internet
[1] Linear drive DGC-G	8 ... 63	Linear drive without accessories, basic design	10
[2] Centring pin ¹⁾ ZBS	8, 12	For centring loads and attachments on the slide	74
[3] Moment compensator FK	8 ... 63	Compensates for inaccuracies during mounting of the linear drive and external guide	68
- Cushioning P	8, 12	Non-adjustable, elastic cushioning. Used only at low speeds.	21
- Cushioning PPV	18 ... 63	Adjustable, pneumatic end-position cushioning. Used at medium speeds.	21
[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
[6] One-way flow control valve GRLA	8 ... 63	For regulating speed	75
[7] Proximity sensor G/H/I/J	8 ... 63	For sensing the slide position	75
[8] Connecting cable V	8 ... 63	For proximity sensor	76
[9] Slot cover L	18 ... 63	For protecting against contamination and securing the proximity sensor cable in place	74
[10] Profile mounting M	8 ... 63	Simple and precise mounting option via dovetail connection.	66
[11] Foot mounting F	8 ... 63	For mounting on the end cap	64
[12] Centring pin/sleeve ZBS/ZBH	8, 12, 50, 63	For centring the drive without foot mountings (user-specific)	74
[13] Slot nut B	25 ... 63	For mounting attachments	74

1) Included in the scope of delivery of the drive

Data sheet

Function



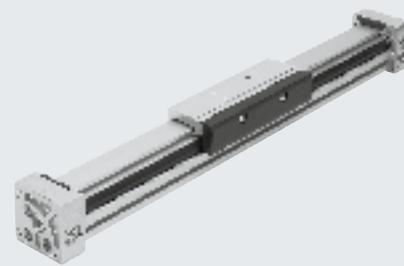
www.festo.com

- - Diameter

8 ... 63 mm

- - Stroke length

1 ... 8500 mm

**General technical data**

Piston diameter	8	12	18	25	32	40	50	63
Design	Rodless drive							
Moment compensator principle	Slotted cylinder, mechanically coupled							
Guide	Basic design							
Mode of operation	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 1								
DGC-...-P	Non-adjustable at both ends							
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 sensor							
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 diameter	8	12	18	25	32	40	50	63
Operating pressure [bar]	2.5 ... 8		2 ... 8			1.5 ... 8		
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 ¹⁾ [°C]	+5 ... +60	-10 ... +60						
Food-safe ²⁾	-		→ supplementary information on materials					
Corrosion resistance class CRC ³⁾	2							

1) Note operating range of proximity sensors

2) Additional information is available at www.festo.com/sp → Certificates.

3) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Forces [N] and impact energy [J]

Piston diameter	8	12	18	25	32	40	50	63
Theoretical force at 6 bar	30	68	153	295	483	754	1178	1870
Impact energy at the end positions	→ page 1							

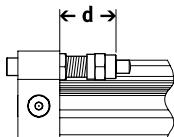
Data sheet

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)		
EX2 certification		
ATEX category for gas	II 3G	
Type of ignition protection for gas	Ex h IICT4 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 IICT4 Gb X	

1) Note the ATEX certification of the accessories.

Weight [g]								
Piston diameter	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

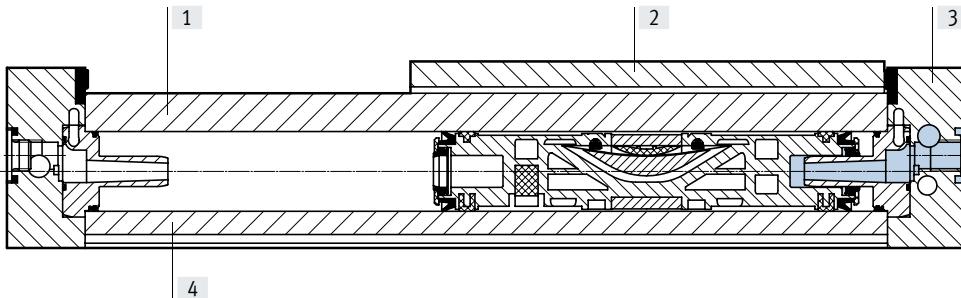
Adjustable end-position range d [mm]



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

Materials

Sectional view

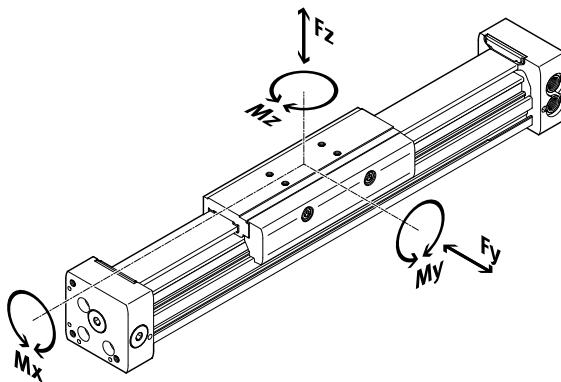


Linear drives	
[1] Guide rail	Anodised aluminium
[2] Slide	Anodised aluminium
[3] End cap	Anodised aluminium
[4] Cylinder barrel	Anodised aluminium
– Piston seal	Polyurethane
Sealing band/cover strip	Polyurethane
Slide elements	Polyacetal
Note on materials	RoHS-compliant

Data sheet

Characteristic 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 drive DGC-G from self-locking when used vertically and with a high torque load, the variant with the recirculating ball bearing guide DGC-KF → page 40 is recommended.

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

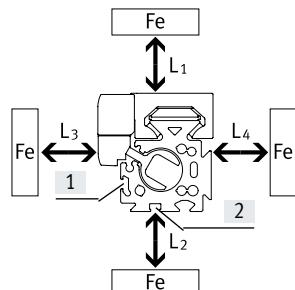
$$\frac{F_y}{F_{y\max.}} + \frac{F_z}{F_{z\max.}} + \frac{M_x}{M_{x\max.}} + \frac{M_y}{M_{y\max.}} + \frac{M_z}{M_{z\max.}} \leq 1$$

Permissible forces and torques

Piston diameter	8	12	18	25	32	40	50	63
F _y _{max.} [N]	150	300	70	180	250	370	480	650
F _z _{max.} [N]	150	300	340	540	800	1100	1600	2000
M _x _{max.} [Nm]	0.5	1.3	1.9	4	9	12	20	26
M _y _{max.} [Nm]	2	5	12	20	40	60	150	150
M _z _{max.} [Nm]	2	5	4	5	12	25	37	48

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.



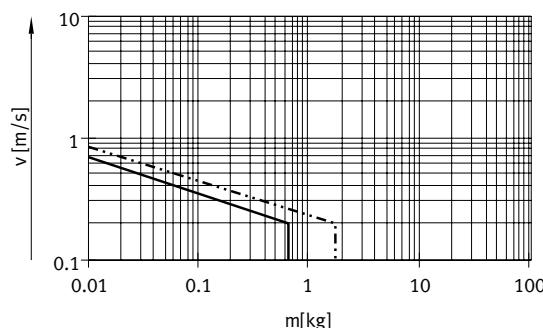
The distance depends on the position of the proximity sensor (see [1] and [2]).

Piston diameter	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

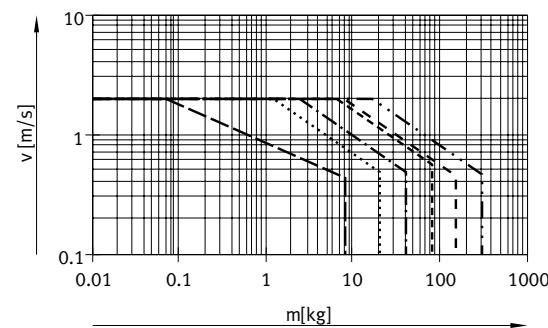
Data sheet

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

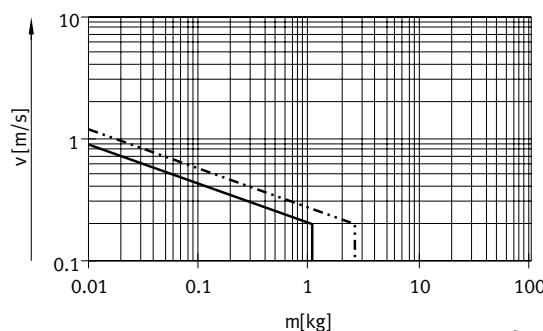
Piston diameter 8/12 with cushioning P



Piston diameter 18 ... 63 with cushioning PPV

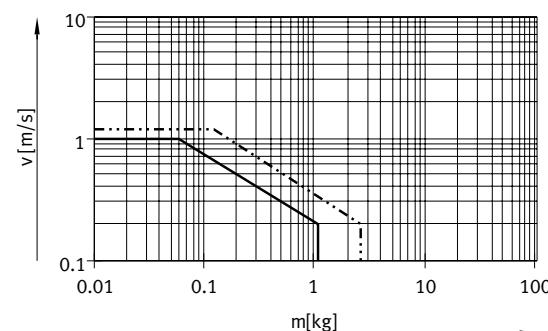


Piston diameter 8/12 with cushioning YSR



- $\varnothing 8$
- - - $\varnothing 12$
- - - - $\varnothing 18$
- $\varnothing 25$
- - - - $\varnothing 32$
- - - - - $\varnothing 40$
- - - - - - $\varnothing 50$
- - - - - - - $\varnothing 63$

Piston diameter 8/12 with cushioning YSRW

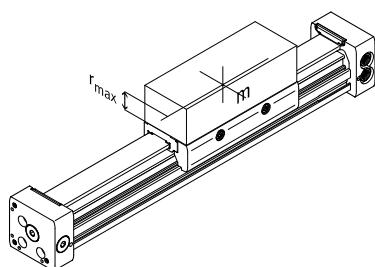


Note

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:

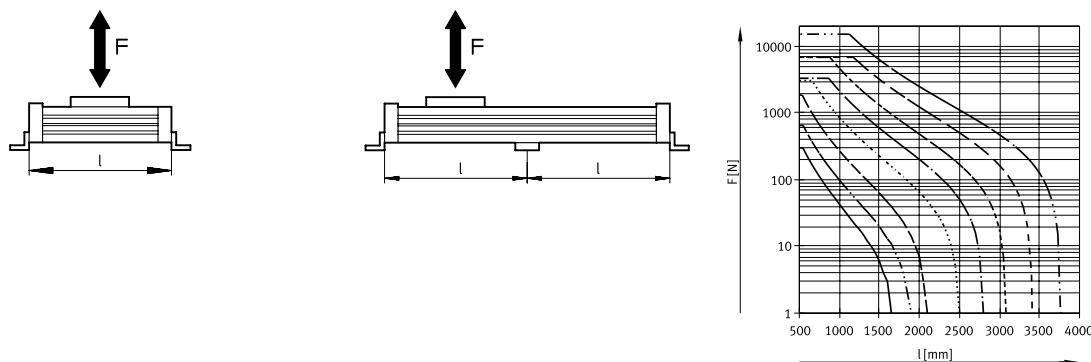
Piston diameter	8	12	18	25	32	40	50	63
Distance r_{\max} [mm]	25	35	35	50	50	50	50	50

Data sheet

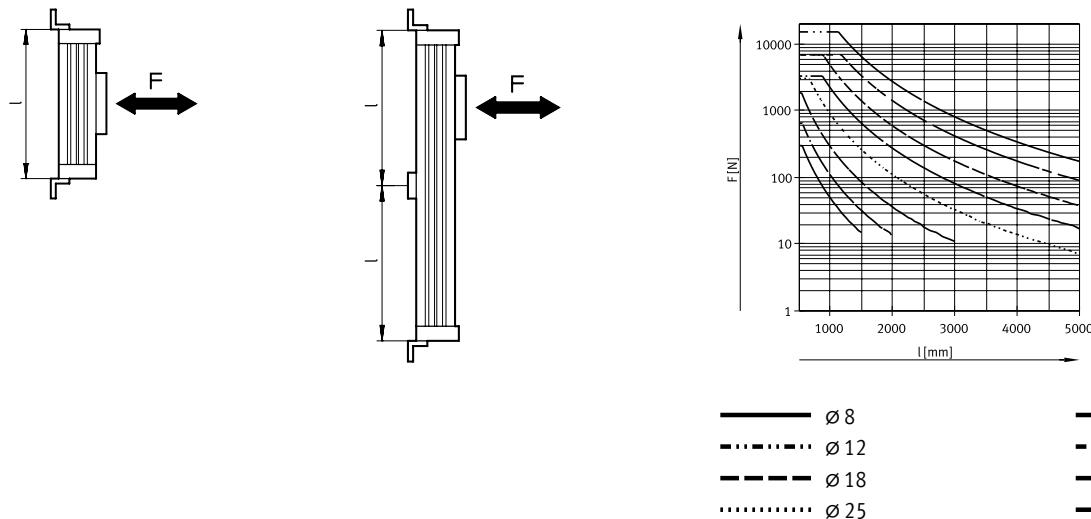
Number of profile mountings MUC as a function of weight force F and distance l between supports

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

Horizontal mounting position



Vertical mounting position



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:

$$\begin{aligned} l &= \text{stroke length} + L_1 \\ &\quad (\text{see dimensions}) \\ &= 1500 \text{ mm} + 200 \text{ mm} \\ &= 1700 \text{ mm} \end{aligned}$$

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

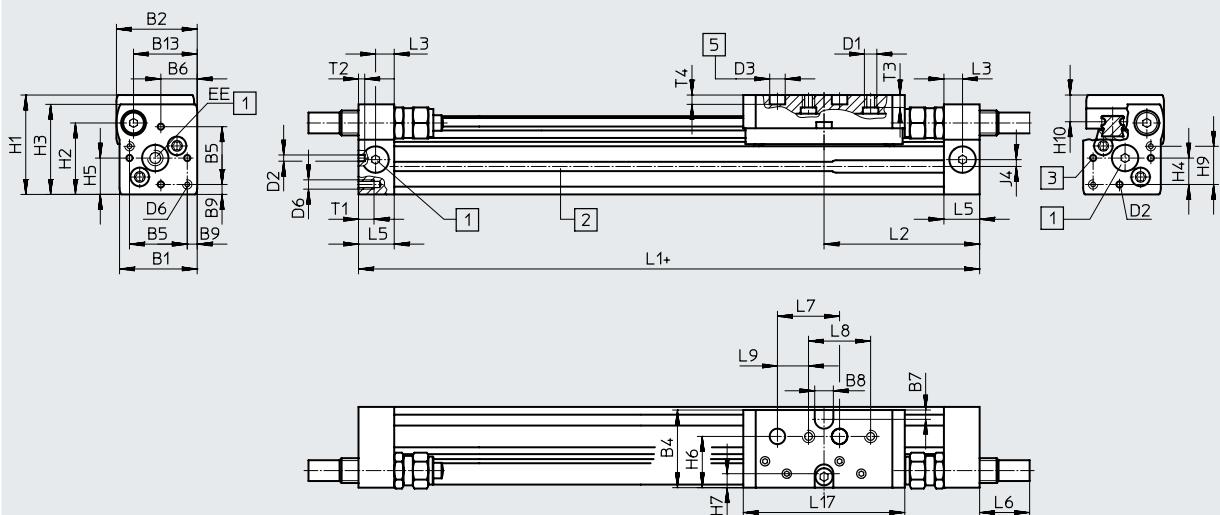
In this example, profile mountings are required as the max. distance between supports (1300 mm) is smaller than the overall length of the drive (1700 mm).

Data sheet

Dimensions

Download CAD data → www.festo.com

Ø 8 and 2



+ = plus stroke length

[1] Compressed air supply port options on 3 sides

[2] Sensor slot for proximity sensor

[3] Mounting hole for foot mounting or centring pin

[5] Drilled hole for centring pin ZBS

Ø	B1	B2	B4	B5	B6	B7	B8	B9	B13	D1	D2	D3	D6
[mm]							±0.05	±0.1		Ø H8	Ø H7	Ø H7	
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	EE	H1	H2	H3	H4	H5	H6	H7	H9	H10	J4	L1	L2
[mm]													
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

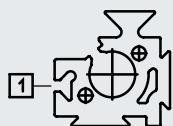
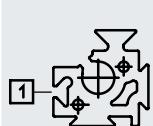
Ø	L3	L5	L6			L7	L8	L9	L17	T1	T2	T3	T4	Stroke tolerance
[mm]			P	YSR	YSRW	±0.03	±0.1	±0.1					+0.2	
8	6	11.4	0	16	16.2	20	20	10	52	5	2	4	3	0 ... 1.7
12	8	15.9	0	11.3	12.3	20	20	10	65	6	2	5	3	

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

Profile barrel

Ø 8

Ø 12



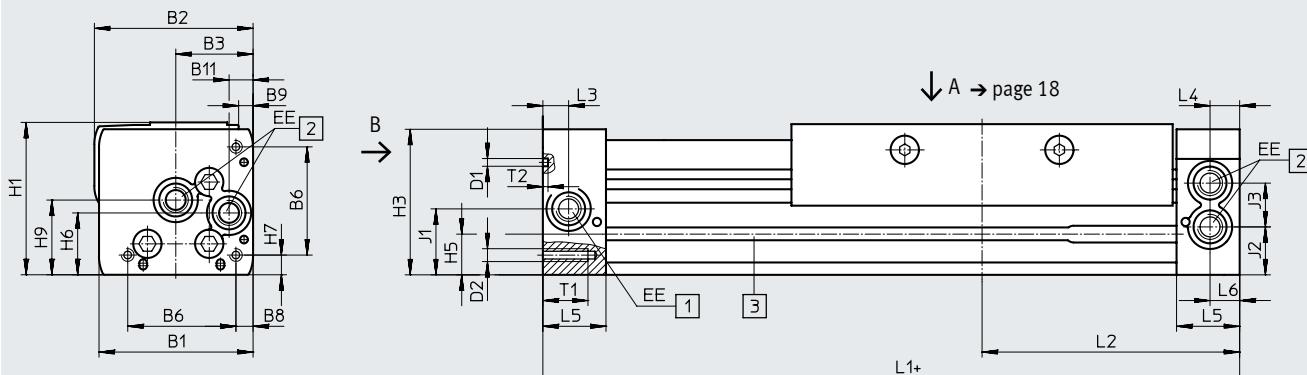
[1] Sensor slot for proximity sensor

Data sheet

Dimensions

Download CAD data → www.festo.com

Ø 18 ... 40

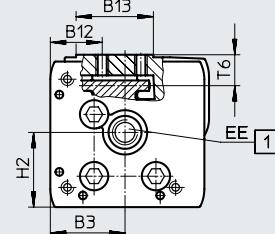
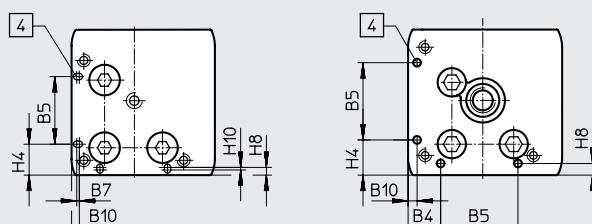


View B

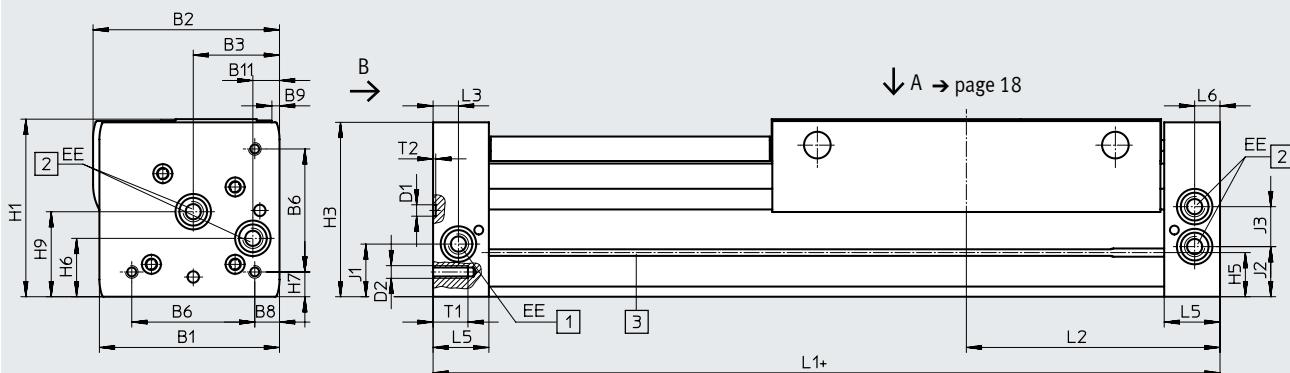
Ø 18

Ø 25 ... 40

Ø 18 ... 40



Ø 50/63



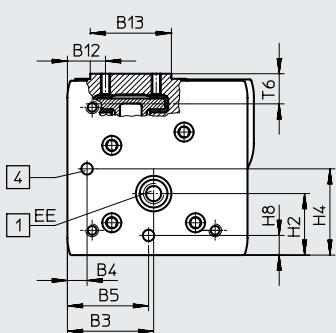
+ = plus stroke length

- [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 sensor
- [4] Mounting hole for foot mounting HPC

- - Note

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

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



Data sheet

\emptyset [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		-	0	-
63	142	147	68	15.5	68	97		-	19.5	6
\emptyset [mm]	B11	B12	B13	D1 \emptyset	D2	EE	H1	H2	H3	H4 ± 0.2
18	5.5	19.3	20	2 ± 0.05	M4	M5 G1/8 G1/8 G1/4 G1/4 G3/8	49.8	23.1	48.3	10.3
25	9.3	20.15	30	3 ± 0.05	M5		58.5	29	56.5	13
32	14.9	20.5	35	3 ± 0.05	M6		73	30	71.5	5.7
40	16.5	19.8	45	4 ± 0.05	M6		88	41.5	85	17.2
50	21	24	64	9^{+7}	M8		120	38.5	116	52.8
63	21	30	64	9^{+7}	M10		140	48.5	137.5	68
\emptyset [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	4.5	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
63	34.8	46	19.5	15.5	67		-	41.5	39.5	31.5
\emptyset [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

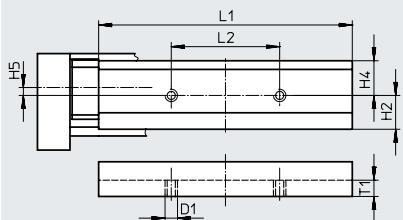
Data sheet

Dimensions

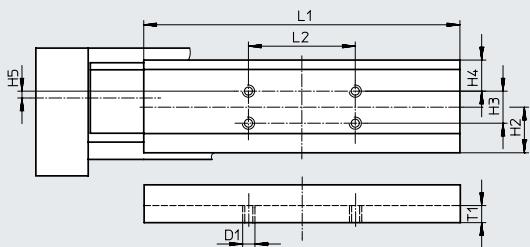
Slide – View A

Download CAD data → www.festo.com

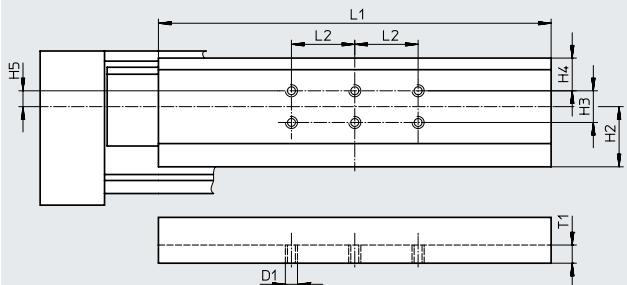
$\varnothing 18$



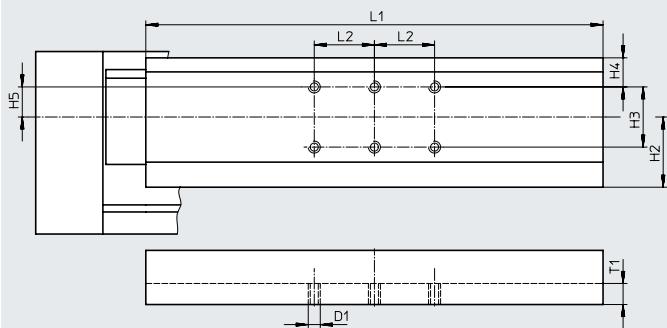
$\varnothing 25$



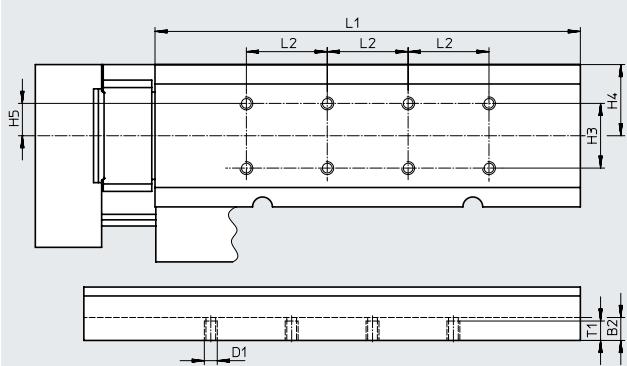
$\varnothing 32$



$\varnothing 40$



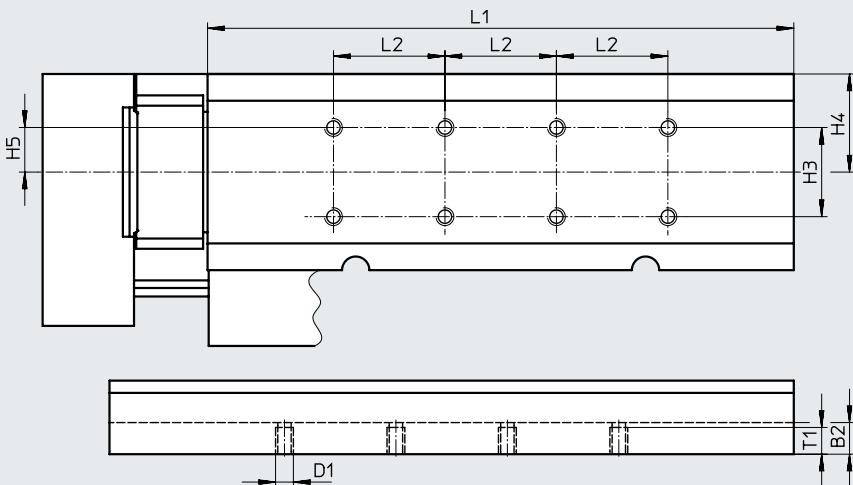
$\varnothing 50$



Data sheet

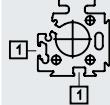
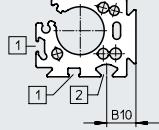
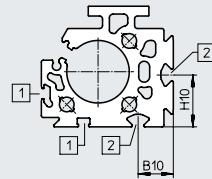
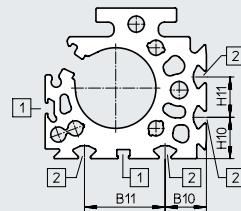
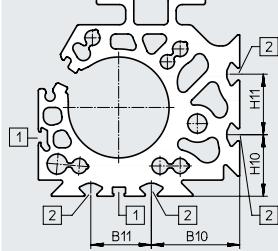
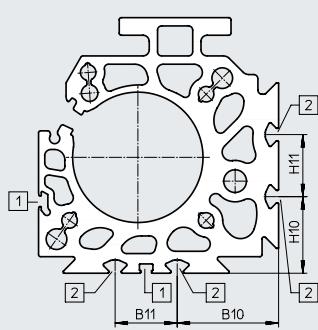
Dimensions

Slide – View A

 $\varnothing 63$ Download CAD data → www.festo.com

\varnothing [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

 $\varnothing 18$  $\varnothing 25$  $\varnothing 32$  $\varnothing 40$  $\varnothing 50$  $\varnothing 63$ 

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

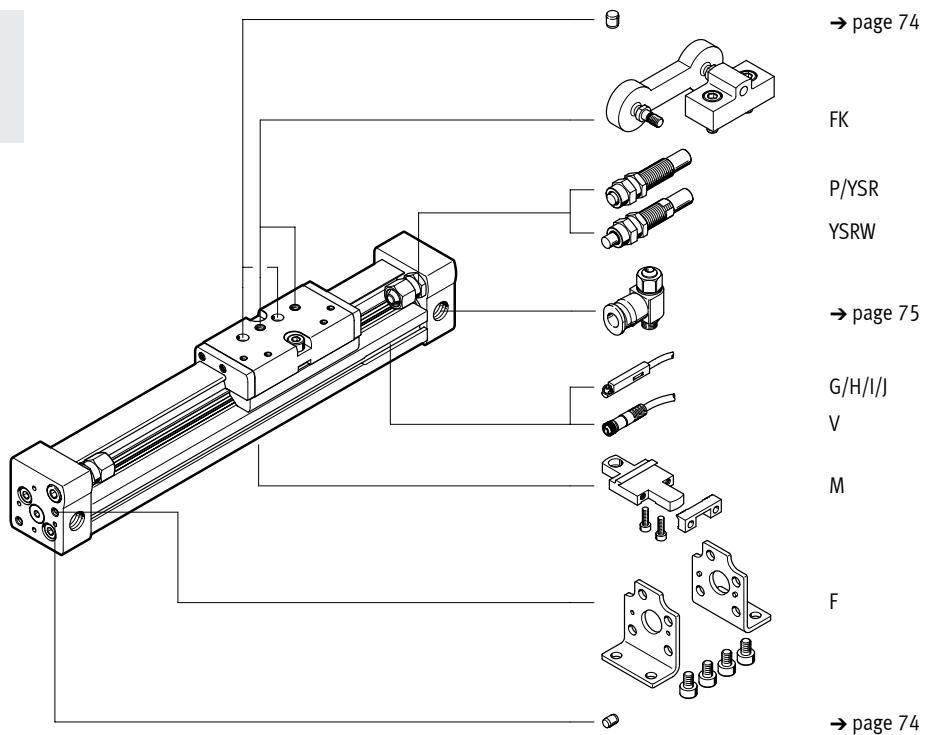
\varnothing [mm]	B10	B11	H10	H11
25	15.23	–	–	–
32	18	–	26.5	–
40	20.5	40	20.5	20
50	43.8	30	30.5	30
63	49	30	37	30

Ordering data – Modular product system

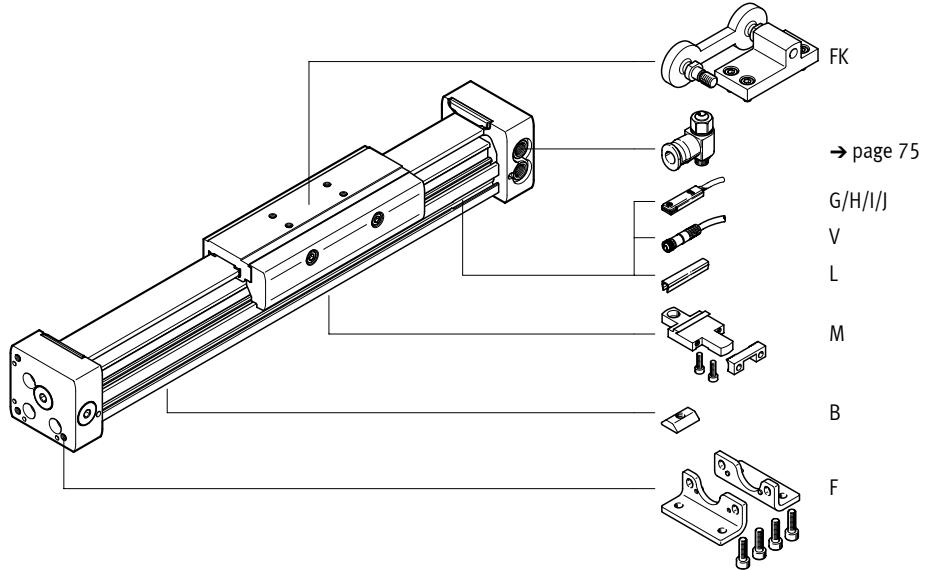
Order code
DGC-8/-12

-  - **Note**

1) End stops or shock absorbers must not be removed.



DGC-18 ... 63



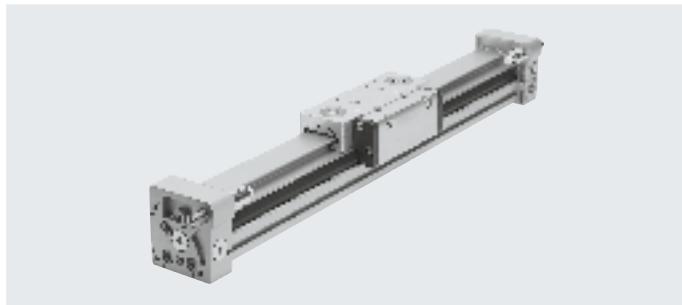
Ordering data – Modular product system

Ordering table		8	12	18	25	32	40	50	63	Conditions	Code	Enter code
Size												
Module no.		530906	530907	532446	532447	532448	532449	532450	532451			
Function	Linear drive									DGC		DGC
Piston diam. [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 sensor									★ -A		-A
Compressed air supply port	At the right end or at both ends									★		
	-	-	At the left end or at both ends								-DL	
Lubrication	-	-	Standard							★		
	-	-	Lubrication approved for use in food applications								-H1	
EU certification	Without									★		
	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	Without									FK		
	Moment compensator coupling											
Slot nut for mounting slot	-	-	-	1 ... 9							...B	
Proximity sensor	2.5 m cable	1 ... 9									...G	
	Plug M8	1 ... 9									...H	
Proximity sensor, 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 for sensor slot	-	-	1 ... 9								...L	
Operating instructions	Express waiver – no operating instructions to be included (already available)										-O	

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

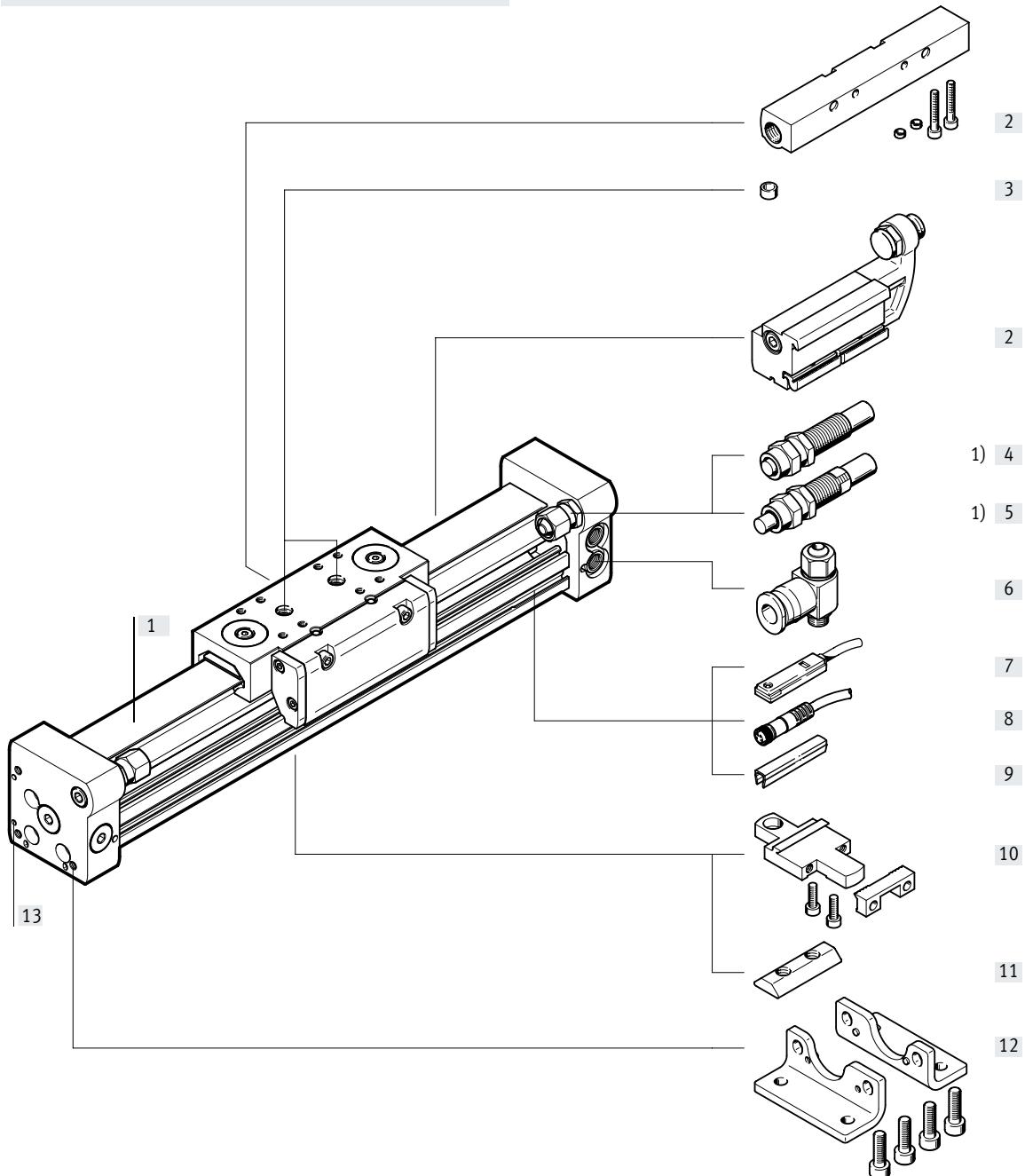


Peripherals overview



 **Note**

1) Operation without cushioning components is not permitted.



Peripherals overview

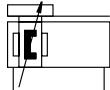
Variants and accessories			
Type/order code	For piston diam.	Description	→ Page/Internet
[1] Linear drive DGC-GF	18 ... 63	Linear drive without accessories, plain-bearing guide	24
[2] Mechanical end-position limiter YWZ	18 ... 63	For variable end-position adjustment, e.g. for format adjustments	70
[3] Centring pin/sleeve ¹⁾ ZBS/ZBH	18 ... 63	For centring loads and attachments on the slide	74
- Cushioning PPV	18 ... 63	Adjustable, pneumatic end-position cushioning. Used at medium speeds.	39
[4] Shock absorber YSR	18 ... 63	Self-adjusting, hydraulic shock absorber with spring return and linear cushioning characteristics.	39
[5] Shock absorber YSRW	18 ... 63	Self-adjusting, hydraulic shock absorber with spring return and progressive cushioning characteristics	39
[6] One-way flow control valve GRLA	18 ... 63	For regulating speed	75
[7] Proximity sensor G/H/I/J	18 ... 63	For sensing the slide position	75
[8] Connecting cable V	18 ... 63	For proximity sensor	76
[9] Slot cover L	18 ... 63	For protecting against contamination and securing the proximity sensor cable in place	74
[10] Profile mounting M	18 ... 63	Simple and precise mounting option via dovetail connection.	66
[11] Slot nut B	25 ... 63	For mounting attachments	74
[12] Foot mounting F	18 ... 63	For mounting on the end cap	64
[13] Centring sleeve ZBH	50, 63	For centring the drive without foot mountings (user-specific)	74

1) Included in the scope of delivery of the drive

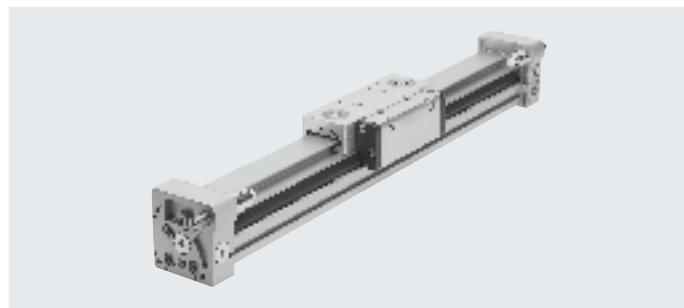
Linear drives DGC-GF, with plain-bearing guide

Data sheet

Function



www.festo.com



- - Diameter

18 ... 63 mm

- - Stroke length

1 ... 8500 mm

General technical data

Piston diameter	18	25	32	40	50	63
Design	Rodless drive					
Moment compensator principle	Slotted cylinder, mechanically coupled					
Guide	Plain-bearing guide					
Mode of operation	Double-acting					
Stroke [mm]	1 ... 3000	1 ... 8500			1 ... 5000	
Pneumatic connection	M5	G1/8		G1/4		G3/8
Cushioning → page 27						
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]	3					
Position sensing	Via proximity sensor					
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 diameter	18	25	32	40	50	63
Operating pressure [bar]	2 ... 8			1.5 ... 8		
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 ¹⁾ [°C]	-10 ... +60					
Food-safe ²⁾	→ supplementary information on materials					
Corrosion resistance class CRC ³⁾	2					

1) Note operating range of proximity sensors

2) Additional information is available at www.festo.com/sp → Certificates.

3) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Forces [N] and impact energy [J]

Piston diameter	18	25	32	40	50	63
Theoretical force at 6 bar	153	295	483	754	1178	1870
Impact energy at the end positions	→ page 27					

Data sheet

ATEX¹⁾

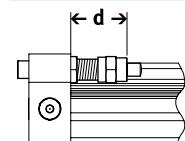
Explosion-proof ambient temperature [°C]	-10°C ≤ Ta ≤ +60°C
CE marking (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)
EX2 certification	
ATEX category for gas	II 3G
Type of ignition protection for gas	Ex h IIC T4 Gc X
ATEX category for dust	II 3D
Type of ignition protection 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.

Weight [g]

Piston diameter	18	25	32	40	50	63
Basic weight with 0 mm stroke	763	1609	2532	5252	10065	16308
Additional weight per 10 mm stroke	23	35	55	76	117	180
Moving mass	267	526	824	1725	3319	5226

Adjustable end-position range d [mm]



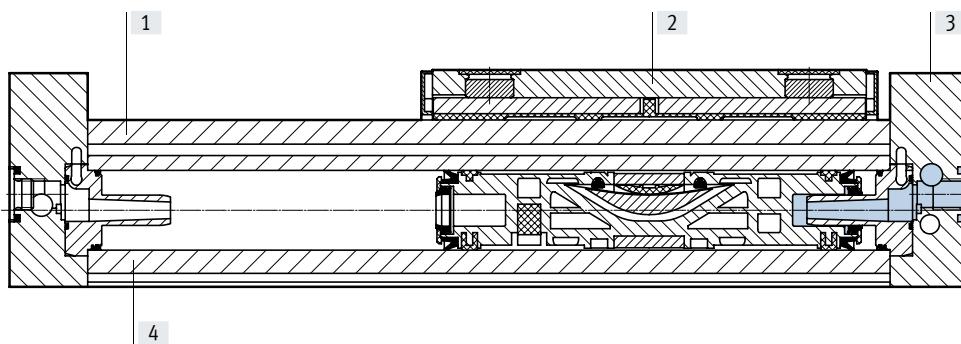
Note

The permissible kinetic energy decreases if the stroke is reduced with PPV adjustable cushioning at both ends.

Piston diameter	18	25	32	40	50	63
Cushioning						
DGC-...-PPV	13.8 ... 15.8	21.1 ... 25.1	25.2 ... 30.2	28.7 ... 33.7	28.7 ... 33.7	38.8 ... 43.8
DGC-...-YSR/YSRW	14.5 ... 24.5	22.5 ... 32.5	27.3 ... 37.3	31 ... 41	31 ... 56	41 ... 76

Materials

Sectional view



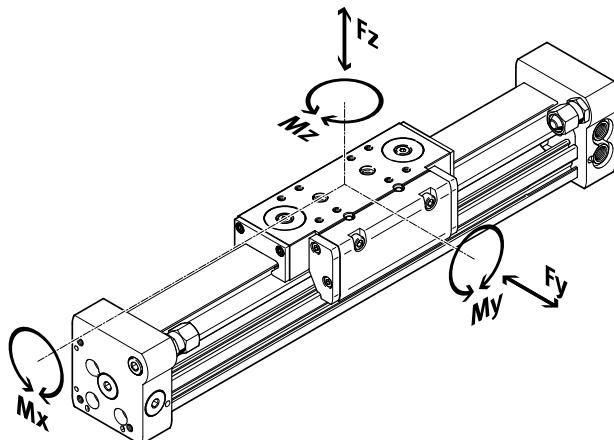
Linear drives

[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

Data sheet

Characteristic 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 drive with plain-bearing guide DGC-GF from self-locking when used vertically and with a high torque load, the variant with the recirculating ball bearing guide DGC-KF → page 40 is recommended.

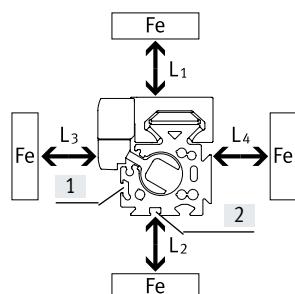
If the drive is subjected to two or more of the indicated forces and torques simultaneously, the following equation must be satisfied in addition to the indicated maximum loads:

$$\frac{F_y}{F_{y_{max.}}} + \frac{F_z}{F_{z_{max.}}} + \frac{M_x}{M_{x_{max.}}} + \frac{M_y}{M_{y_{max.}}} + \frac{M_z}{M_{z_{max.}}} \leq 1$$

Permissible forces and torques in relation to a travel speed of 0.2 m/s						
Piston diameter	18	25	32	40	50	63
F _y _{max.} [N]	440	640	900	1380	1500	2300
F _z _{max.} [N]	540	1300	1800	2000	2870	4460
M _x _{max.} [Nm]	3.4	8.5	15	28	54	96
M _y _{max.} [Nm]	20	40	70	110	270	450
M _z _{max.} [Nm]	8.5	20	33	54	103	187

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.

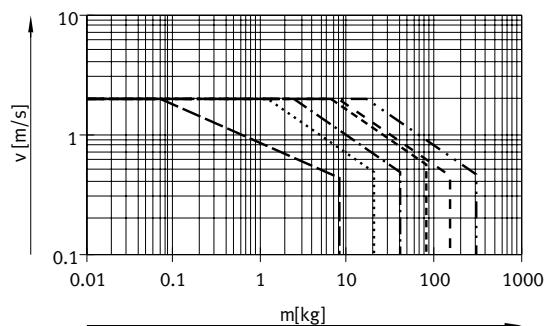


The distance depends on the position of the proximity sensor (see [1] and [2]).

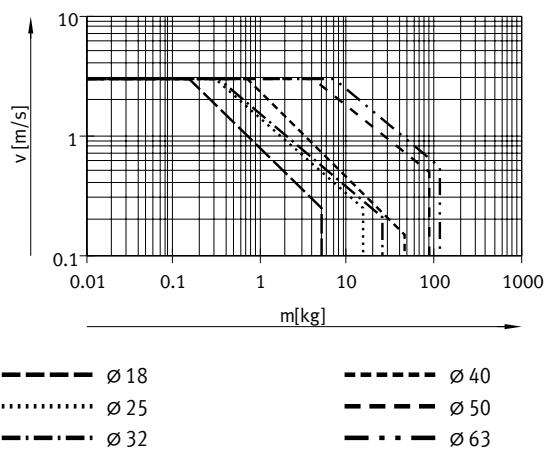
Piston diameter	8	12	18	25	32	40	50	63
Distance L1	[1] [mm]	0	0	0	0	0	0	0
	[2] [mm]	-	-	0	0	0	0	0
Distance L2	[1] [mm]	20	10	10	10	0	0	0
	[2] [mm]	-	-	25	25	25	25	25
Distance L3	[1] [mm]	30	25	25	25	25	25	25
	[2] [mm]	-	-	10	10	0	0	0
Distance L4	[1] [mm]	0	0	0	0	0	0	0
	[2] [mm]	-	-	0	0	0	0	0

Data sheet

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

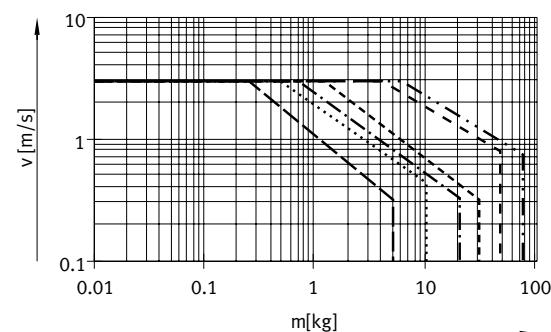


With cushioning YSR



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

With cushioning YSRW



Note

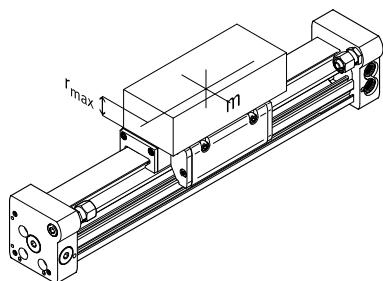
These specifications represent the maximum values that can be achieved. In practice, these values can fluctuate dependent on the position of the payload and mounting position.

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:

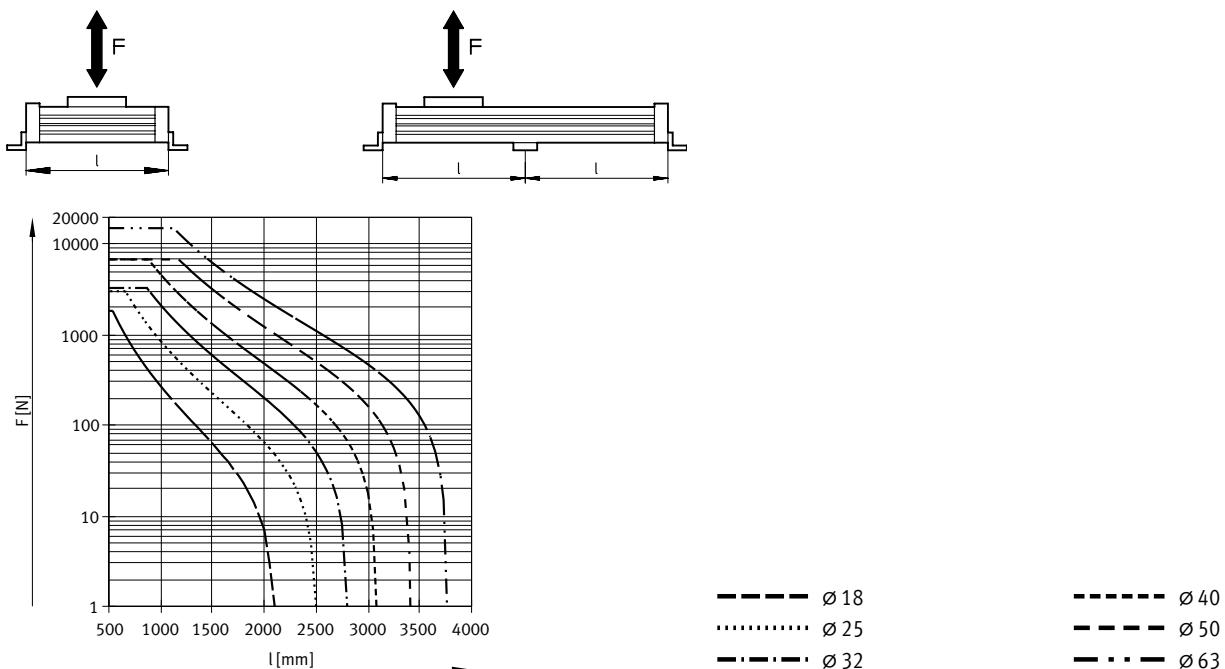
Piston diameter	8	12	18	25	32	40	50	63
Distance r_{\max} [mm]	25	35	35	50	50	50	50	50

Data sheet

Number of profile mountings MUC as a function of weight force F and distance l between supports

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

Horizontal mounting position

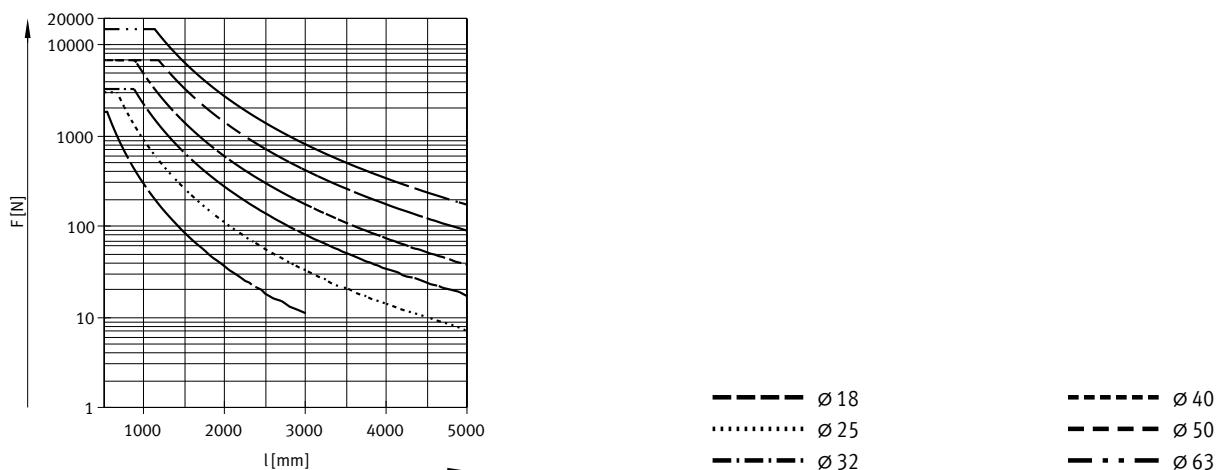
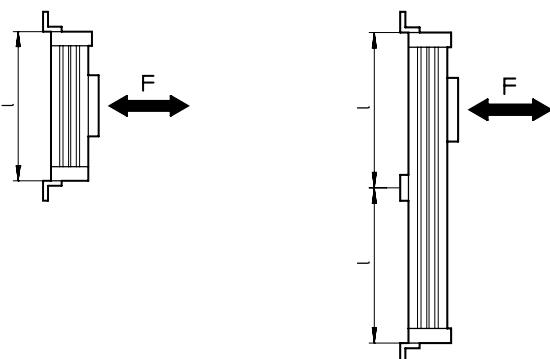


Data sheet

Number of profile mountings MUC as a function of weight force F and distance l between supports

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

Vertical mounting position



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:

$$l = \text{stroke length} + L_1$$

 (see dimensions)

$$= 1500 \text{ mm} + 200 \text{ mm}$$

$$= 1700 \text{ mm}$$

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

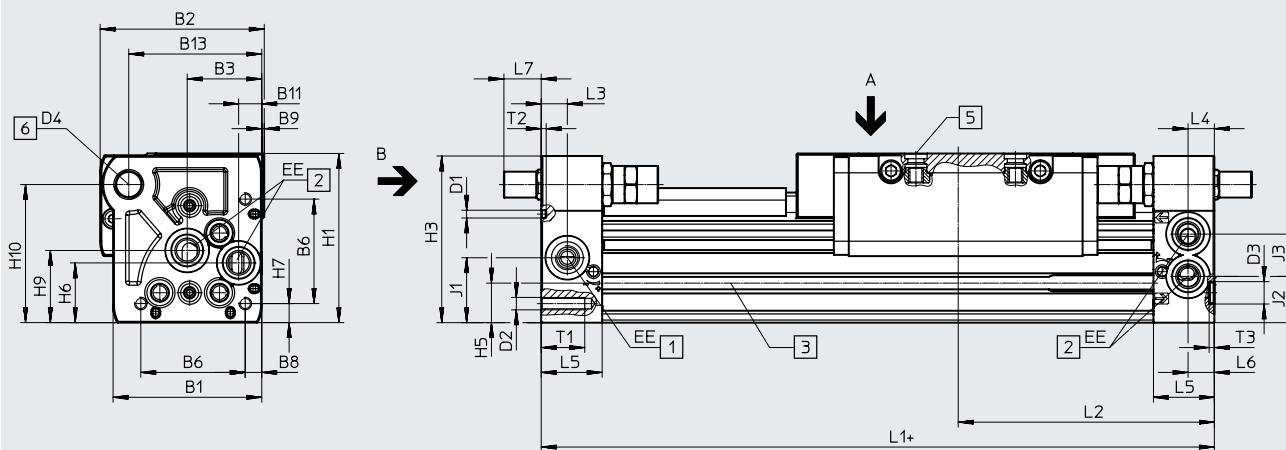
In this example, profile mountings are required as the max. distance between supports (1300 mm) is smaller than the overall length of the drive (1700 mm).

Data sheet

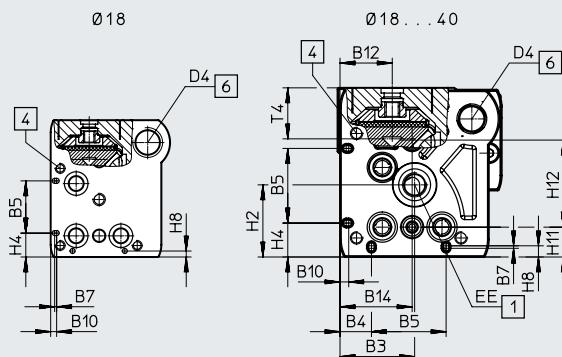
Dimensions

Download CAD data → www.festo.com

$\varnothing 18 \dots 40$



View B



Note

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

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

+ 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 sensor

[4] Mounting hole for foot mounting HPC

[5] Drilled hole for centring pin/sleeve

[6] Thread for end stop

Data sheet

\emptyset [mm]	B1	B2	B3	B4	B5 ± 0.05	B6	B7	B8	B9	B10	B11	B12	
18	44.5	49.9	19.5	8.8	21	31	0.8	3.8	1	2.4	5.5	15.5	
25	59.8	66	30	12.65	30	42	1	6.65	1	3.5	9.3	21	
32	73	79	38.5	5.7	63.1	57.5	—	8.5	1.5	14	14.9	18	
40	91	98.5	45	17.2	55	65	—	12.2	2	8	16.5	24.8	
\emptyset [mm]	B13	B14	D1 \emptyset ± 0.05	D2	D3 \emptyset H7	D4	EE	H1	H2	H3	H4	H5 ± 0.2	
18	39	19.5	2	M4	5	M12x1	M5	56.3	23.1	55	9.6	13.4	
25	53.5	30	3	M5	9	M12x1	G1/8	68	29	67	13.65	15.8	
32	66.5	38.5	3	M6	9	M14x1	G1/8	78.5	30	77	5.7	17	
40	80.5	45	4	M6	9	M16x1	G1/4	99.5	41.5	97.5	17.2	25	
\emptyset [mm]	H6	H7	H8	H9	H10 ± 0.15	H11 ± 0.05	H12	J1	J2	J3	L1	L2	L3
18	20	4.6	2.4	25.2	46	8.5	30	20	16.5	11	150	74.5	5.7
25	24	7.65	4.5	29	55.5	12	35	26.1	18.6	17	200	100	10.5
32	27.7	8.5	14	35.2	63.8	11.45	50	30	22	18.5	250	124.8	14.5
40	36.5	12.2	8	44	81.5	15	60	35	26	26	300	150	14.6
\emptyset [mm]	L4	L5	L6	L7			T1	T2	T3	T4	Stroke tolerance		
				PPV	YSR	YSRW				+0.2			
18	5.8	15	5.5	0	15.9	19.4	9	2	3.1	17.1	0 ... 2.5		
25	10.6	24.5	10.6	0	12.5	15	17.5	2	2.1	20.5			
32	14.5	30.5	14.5	0	8.5	15.5	15	2	2.1	21.3			
40	14.6	33.5	14.6	0	12.8	21	20	3	2.1	30.7			

 Note

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

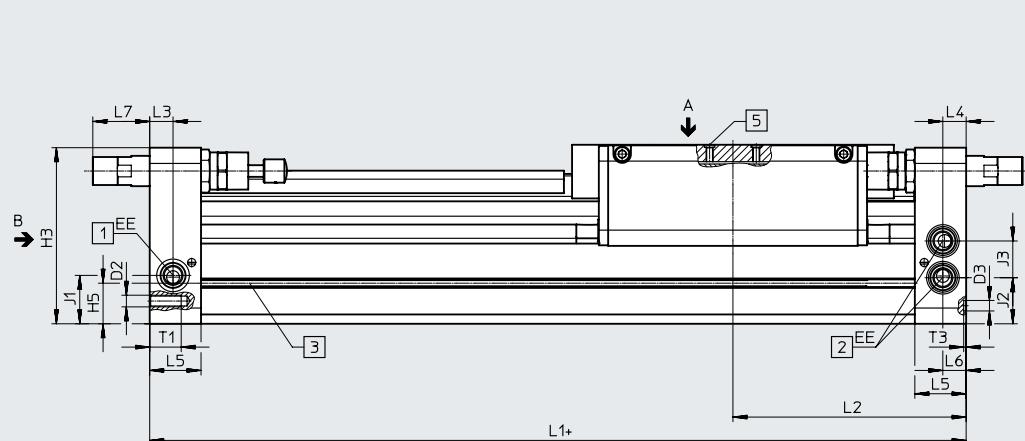
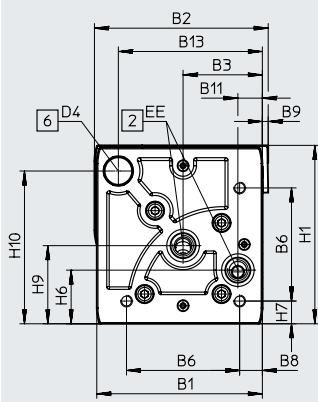
Length tolerance For stroke [mm]	≤ 1000	≤ 2000	≤ 3000	≤ 4000	≤ 5000	≤ 6000	≤ 7000	≤ 8000	≤ 9000
L1 [mm]	+0.90	+1.10	+1.40	+1.50	+1.60	+1.70	+2.20	+2.30	+2.40

Data sheet

Dimensions

Download CAD data → www.festo.com

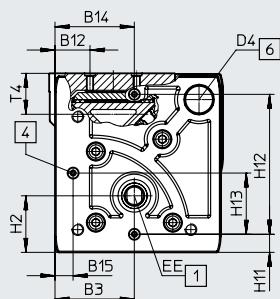
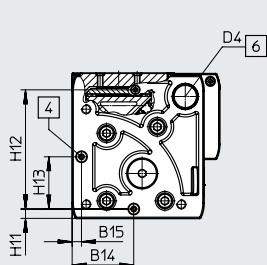
Ø 50/63



View B

050

050 . . . 63



Note

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

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

+ 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 sensor

[4] Mounting hole for foot mounting HPC

[5] Drilled hole for centring pin/sleeve

[6] Thread for end stop

Data sheet

\emptyset [mm]	B1	B2	B3	B6	B8	B9	B11	B12	B13	B14	B15	D2	D3 \emptyset H7	D4
50	113	126.5	60	81.6	12	—	21	24	97	52.8	8	M8	9	M22x1.5
63	142	149	68	97	19.5	5	21	30	123.5	68	15.5	M10	9	M26x1.5
\emptyset [mm]	EE	H1	H2	H3	H5	H6	H7	H9	H10	H11	H12	H13	J1	J2
50	G1/4	124.5	38.5	122.5	29.3	36	12	53	104.5	8	100	52.8	30.5	30.5
63	G3/8	153.5	48.5	151	34.8	46	19.5	67	131	15.5	120	68	41.5	39.5
\emptyset [mm]	J3	L1	L2	L3	L4	L5	L6	L7			T1	T3	T4	Stroke tolerance
50	28	350	175	17	17	41	17	0	31	36.3	24	2.1	30.4	0 ... 2.5
63	31.5	400	200	20	20	44	20	0	38.3	48.3	27.5	2.1	36.2	
PPV		YSR		YSRW				+0.2						

 Note

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

Length tolerance For stroke [mm]	≤ 1000	≤ 2000	≤ 3000	≤ 4000	≤ 5000
L1 [mm]	+0.90	+1.10	+1.40	+1.50	+1.60

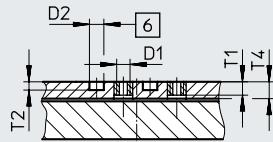
Data sheet

Dimensions

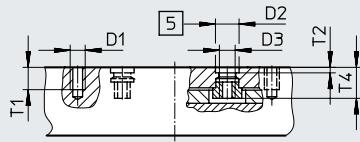
Download CAD data → www.festo.com

Slide

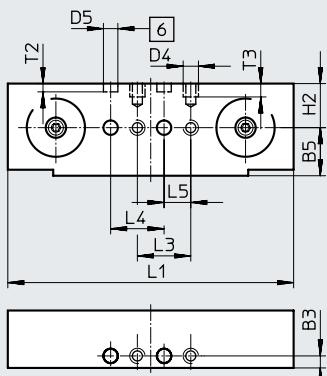
$\varnothing 18$



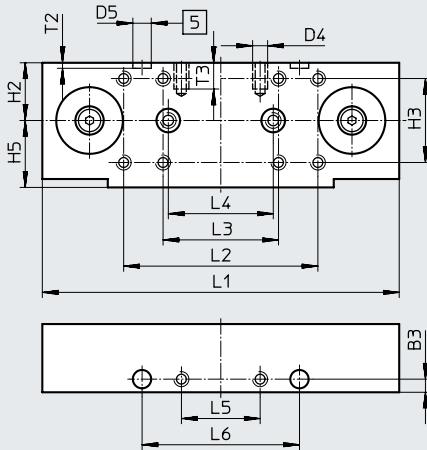
$\varnothing 25$



View A



View A



[5] Drilled hole for centring sleeve ZBH

[6] Drilled hole for centring pin ZBS

\varnothing [mm]	B3 ± 0.05	D1	D2 \varnothing H7	D3	D4	D5 \varnothing H7	H2	H3	H4 ± 0.03	H5 ± 0.1	L1 ± 0.1
18	4.5	M5	5	-	M5	5	16.5	-	-	18	107
25	5	M5	9	M6	M5	7	22	32±0.2	-	25.5	136

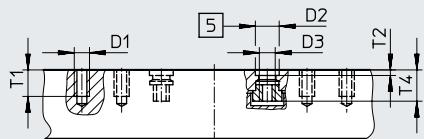
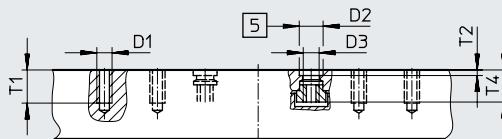
\varnothing [mm]	L2 ± 0.1	L3	L4	L5	L6	L7	T1	T2	T3	T4
18	-	20±0.1	20	10	-	-	5	3.1±0.1	5	6.3
25	74	44±0.2	40	30	60	-	8.5	2.1±0.2	10	11.8

Data sheet

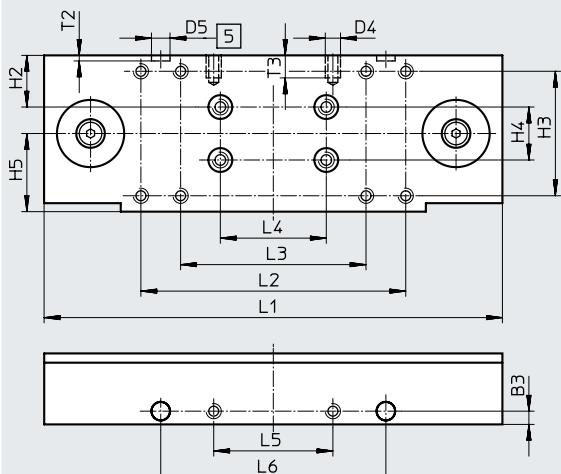
Dimensions

Download CAD data → www.festo.com

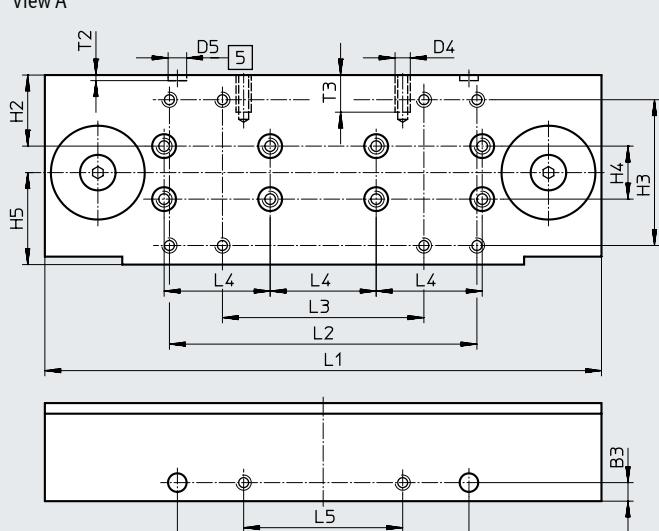
Slide

 $\varnothing 32$  $\varnothing 40$ 

View A



View A



[5] Drilled hole for centring sleeve ZBH

\varnothing [mm]	B3	D1	D2 \varnothing H7	D3	D4	D5 \varnothing H7	H2	H3	H4	H5	L1
32	5	M5	9	M6	M5	7	19.5	47±0.2	20	29.5	173
40	7	M5	9	M6	M6	7	26.8	55±0.2	20	34.7	210

\varnothing [mm]	L2	L3	L4	L5	L6	L7	T1	T2	T3	T4
32	100	70±0.2	40	45	85	-	10	2.1+0.2	8.5	11.8
40	116	76±0.2	40	60	110	-	12.5	2.1+0.2	14	12.1

Linear drives DGC-GF, with plain-bearing guide

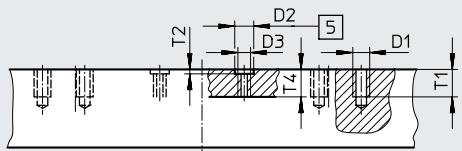
Data sheet

Dimensions

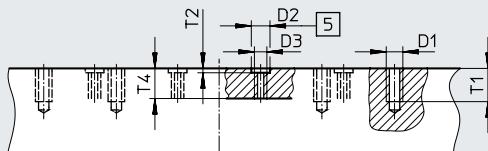
Download CAD data → www.festo.com

Slide

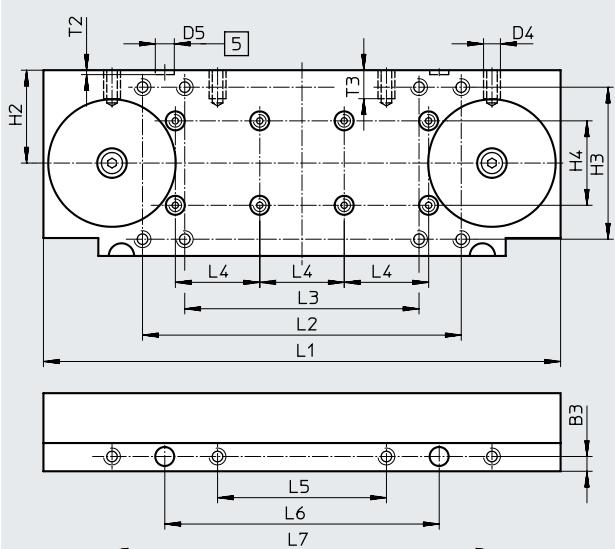
$\varnothing 50$



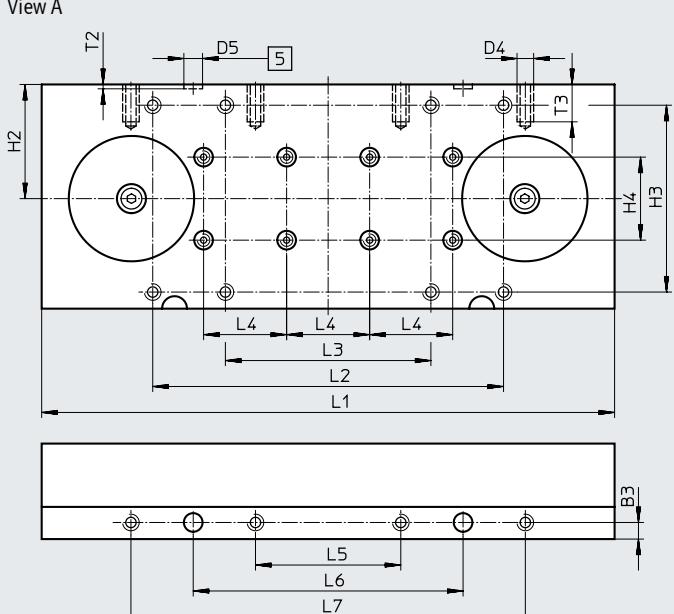
$\varnothing 63$



View A



View A



[5] Drilled hole for centring sleeve ZBH

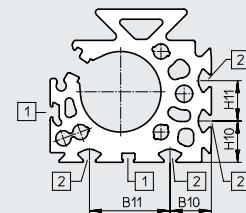
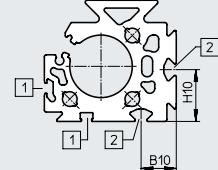
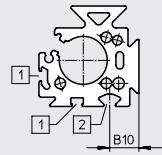
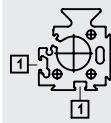
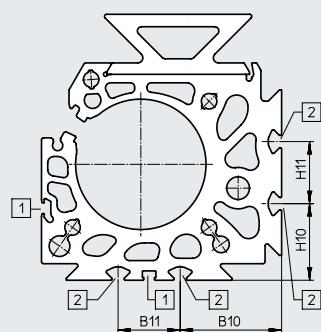
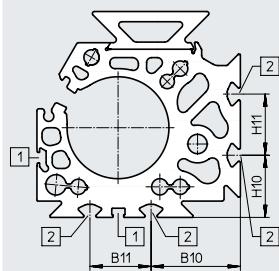
\varnothing [mm]	B3 ± 0.05	D1	D2 \varnothing H7	D3	D4	D5 \varnothing H7	H2	H3	H4 ± 0.03	H5 ± 0.1	L1 ± 0.1
50	7	M8	9	M6	M8	9	44	72 ± 0.3	40	-	245
63	8	M8	9	M6	M8	9	55	90 ± 0.3	40	-	276

\varnothing [mm]	L2 ± 0.1	L3	L4	L5 ± 0.03	L6 ± 0.1	L7 ± 0.05	T1	T2	T3	T4
50	151	111 ± 0.2	40	80	130	180	13	2.1 ± 0.2	13.5	13
63	169	99 ± 0.2	40	70	130	190	16	2.1 ± 0.2	18	14.5

Data sheet

Dimensions

Profile barrel

 $\varnothing 18$ $\varnothing 25$ $\varnothing 32$ $\varnothing 40$  $\varnothing 50$ $\varnothing 63$ 

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

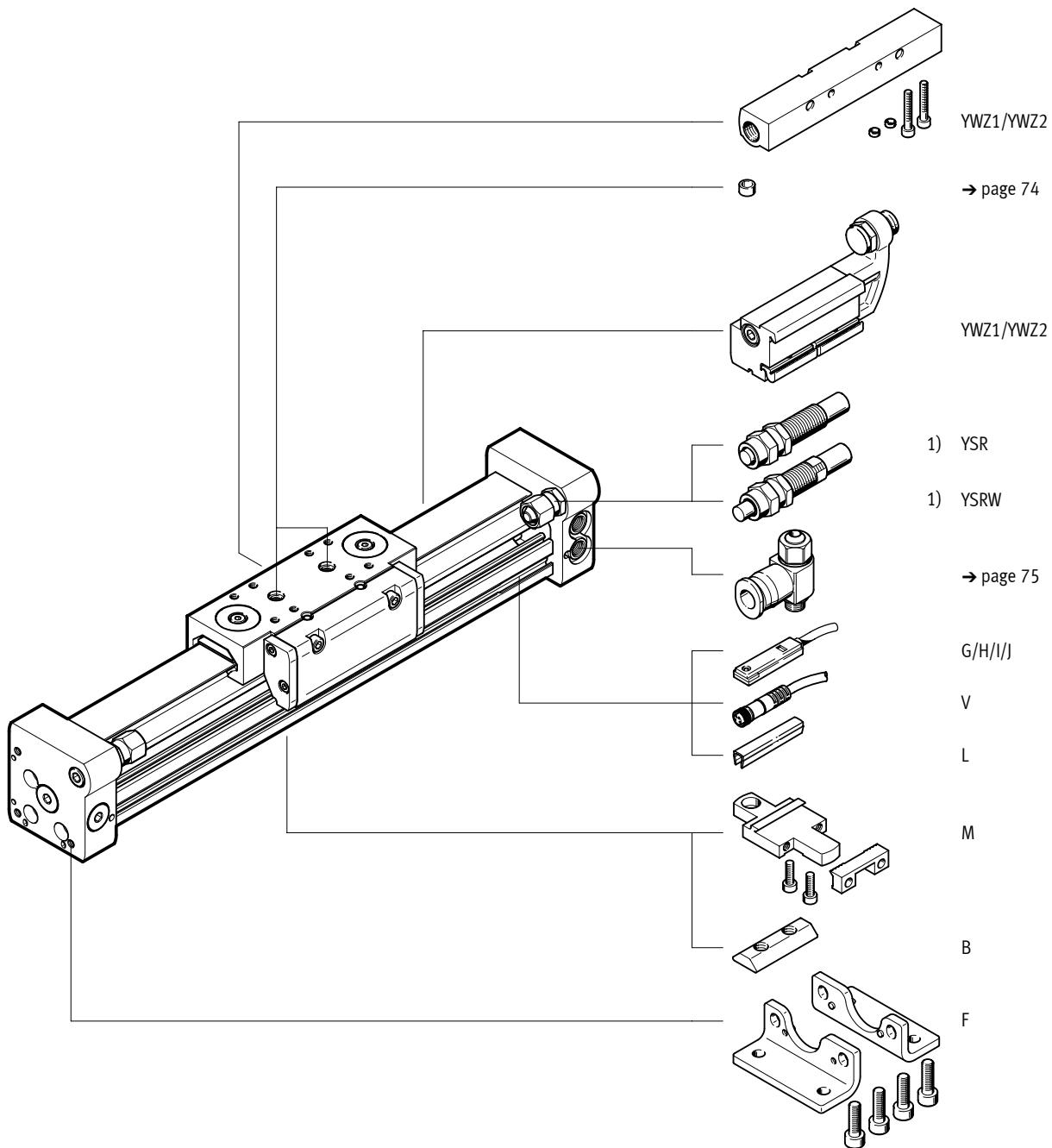
\varnothing	B10	B11	H10	H11
[mm]				
25	15.23	-	-	-
32	18	-	26.5	-
40	20.5	40	20.5	20
50	43.8	30	30.5	30
63	49	30	37	30

Ordering data – Modular product system

Order code



1) Operation without cushioning components is not permitted.



Ordering data – Modular product system

Ordering table		18	25	32	40	50	63	Conditions	Code	Enter code
Size										
Module no.	532446		532447	532448	532449	532450	532451			
Function	Linear drive								DGC	DGC
Piston diameter [mm]	18	25	32	40	50	63			☆ -...	-GF
Stroke [mm]	1 ... 3000	1 ... 8500			1 ... 5000				☆ -...	-A
Guide	Plain-bearing guide								☆ -GF	ZUB-
Cushioning	Pneumatic cushioning, adjustable at both ends								☆ -PPV	
	Shock absorber, self-adjusting								-YSR	
	Shock absorber, self-adjusting, progressive								☆ -YSRW	
Position sensing	Via proximity sensor								☆ -A	
Compressed air supply port	At the right end or at both ends								☆	
	At the left end or at both ends								-DL	
Lubrication	Standard								☆	
	Lubrication approved for use in food applications							[1]	-H1	
EU certification	Without								☆	
	II 3GD							[2]	-EX2	
	II 2G							[2]	-EX3	
Accessories	Enclosed separately (can be retrofitted)								ZUB-	
Foot mounting	1								F	
Profile mounting	1 ... 9								...M	
Slot nut for mounting slot	-	1 ... 9							...B	
Proximity sensor	2.5 m cable	1 ... 9							...G	
	Plug M8	1 ... 9							...H	
Proximity sensor, 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 for sensor slot		1 ... 9							...L	
Mechanical end-position limiter	Without									
	Variable end position, at one end							[3]	YWZ1	
	Variable end position, at both ends							[3]	YWZ2	
Operating instructions	Express waiver – no operating instructions to be included (already available)								-O	

[1] H1 Not with cushioning YSR, YSRW

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

[3] YWZ1, YWZ2 Only with cushioning YSR or YSRW

Festo core product range

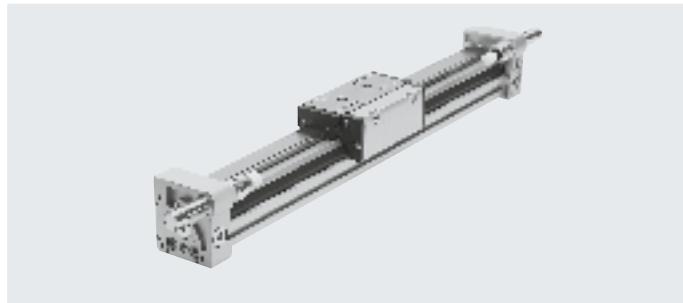


Generally ready for dispatch from the factory within 24 hours

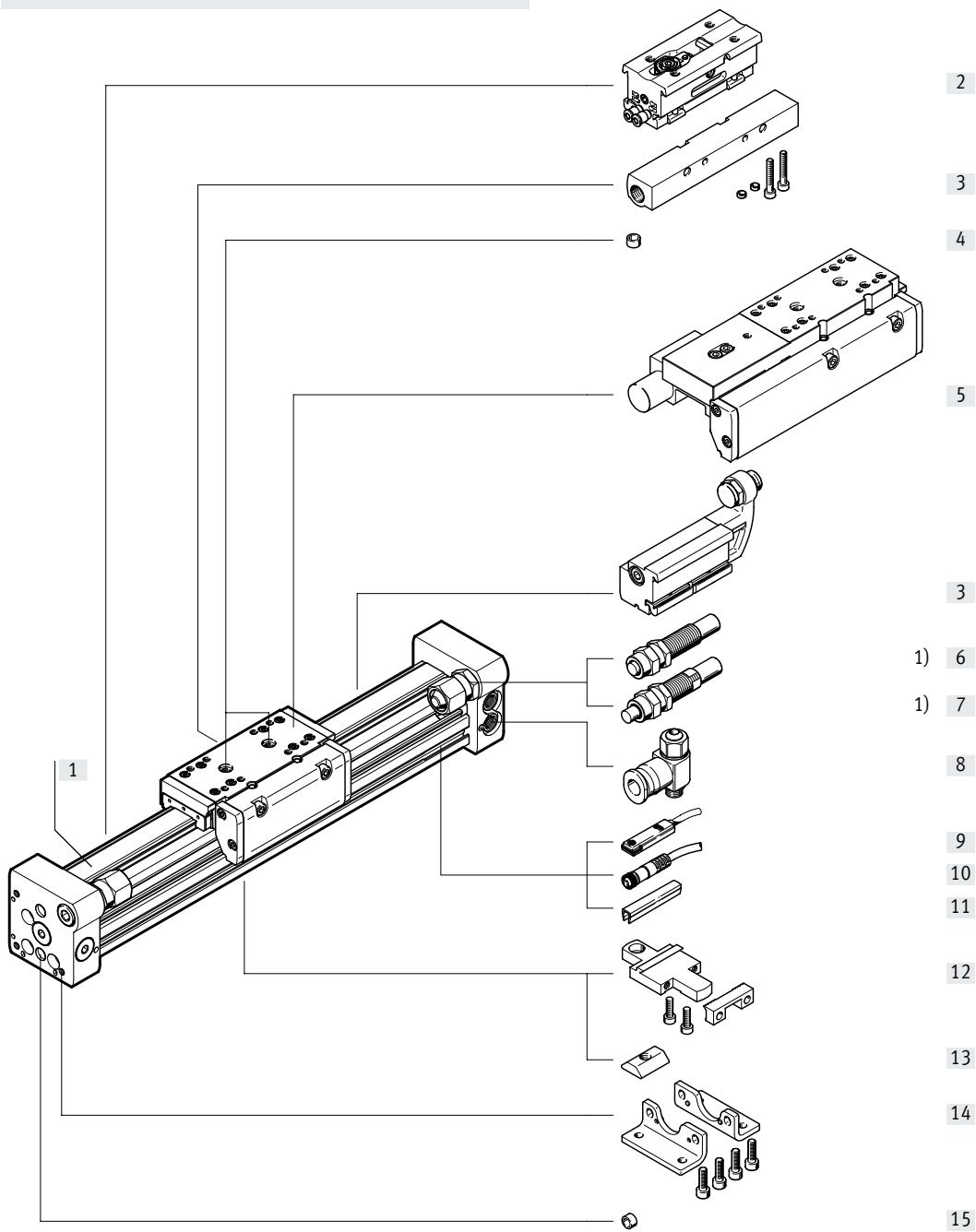


Generally ready for dispatch from the factory within 5 days

Peripherals overview



- - Note
1) Operation without cushioning components is not permitted.



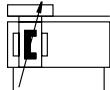
Peripherals overview

Variants and accessories			→ Page/Internet
Type/order code	For piston diam.	Description	
[1] Linear drive DGC-KF	8 ... 63	Linear drive without accessories, with recirculating ball bearing guide	42
[2] Intermediate-position module Z1/Z2/Z3	25, 32, 40	Enables up to three intermediate positions	72
[3] Mechanical end-position limiter YWN	18 ... 63	For variable end-position adjustment, e.g. for format adjustments	70
[4] Centring pin/sleeve ¹⁾ ZBS/ZBH	8 ... 63	For centring loads and attachments on the slide	74
[5] Clamping unit 1H-PN	25, 32, 40, 50	For holding loads	45
- Cushioning P	8, 12	Non-adjustable, elastic cushioning. Used only at low speeds.	62
- Cushioning PPV	18 ... 63	Adjustable, pneumatic end-position cushioning. Used at medium speeds.	62
[6] Shock absorber YSR	8 ... 63	Self-adjusting, hydraulic shock absorber with spring return and linear cushioning characteristics.	62
[7] Shock absorber YSRW	8 ... 63	Self-adjusting, hydraulic shock absorber with spring return and progressive cushioning characteristics	62
[8] One-way flow control valve GRLA	8 ... 63	For regulating speed	75
[9] Proximity sensor G/H/I/J	8 ... 63	For sensing the slide position	75
[10] Connecting cable V	8 ... 63	For proximity sensor	76
[11] Slot cover L	18 ... 63	For protecting against contamination and securing the proximity sensor cable in place	74
[12] Profile mounting M	8 ... 63	Simple and precise mounting option via dovetail connection.	66
[13] Slot nut B	25 ... 63	For mounting attachments	74
[14] Foot mounting F	8 ... 63	For mounting on the end cap	64
[15] Centring pin/sleeve ZBS/ZBH	8 ... 63	For centring the drive without foot mountings (user-specific)	74

1) Included in the scope of delivery of the drive

Data sheet

Function



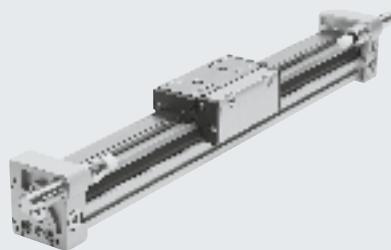
www.festo.com

- - Diameter

8 ... 63 mm

- - Stroke length

1 ... 8500 mm



General technical data

Piston diameter	8	12	18	25	32	40	50	63
Design	Rodless drive							
Moment compensator principle	Slotted cylinder, mechanically coupled							
Guide	External recirculating ball bearing guide							
Mode of operation	Double-acting							
Stroke [mm]	1 ... 1300	1 ... 1900	1 ... 3000	1 ... 8500			1 ... 5000	
Pneumatic connection	M5		G1/8		G1/4			G3/8
Cushioning → page 46								
DGC-...-P	Non-adjustable at both ends	–						
DGC-...-PPV	–	Adjustable at both ends						
DGC-...-YSR...	Self-adjusting at both ends							
Cushioning length [mm] with cushioning PPV	–	16.5	15.5	17.5	29.5	29.8	31.1	
Max. speed [m/s]	1	1.2	3					
Repetition accuracy [mm]	0.02 (with shock absorber YSR/YSRW)							
Position sensing	Via proximity sensor							
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 diameter	8	12	18	25	32	40	50	63
Operating pressure [bar]	2.5 ... 8		2 ... 8			1.5 ... 8		
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 ¹⁾ [°C]	-10 ... +60							
Food-safe ²⁾	–		→ supplementary information on materials					
Corrosion resistance class CRC ³⁾	1							

1) Note operating range of proximity sensors

2) Additional information is available at 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).

Data sheet

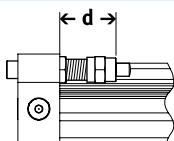
Forces [N]							
Piston diameter	8	12	18	25	32	40	50
Theoretical force at 6 bar	30	68	153	295	483	754	1178
Impact energy at the end positions	→ page 46						1870

ATEX¹⁾

Explosion-proof ambient temperature [°C]	-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 IICT4 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 IICT4 Gb X

1) Note the ATEX certification of the accessories.

Weight [g]							
Piston diameter	8	12	18	25	32	40	50
DGC-...							
Basic weight with 0 mm stroke	225	391	975	2113	2837	6996	13342
Additional weight per 10 mm stroke	11	16	31	49	74	117	153
Moving mass	77	149	331	732	1146	2330	4511
DGC-...-1H-PN – With clamping unit							
Basic weight with 0 mm stroke	-	-	-	3134	4272	12009	19394
Additional weight per 10 mm stroke	-	-	-	49	74	117	153
Moving mass	-	-	-	1405	2059	5494	8411

Adjustable end-position range d [mm]**Note**

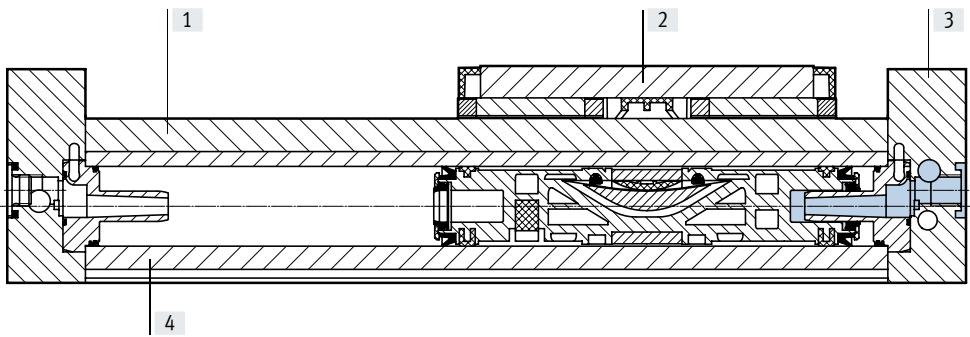
The permissible kinetic energy decreases if the stroke is reduced with PPV adjustable cushioning at both ends.

Piston diameter	8	12	18	25	32	40	50	63
Cushioning								
DGC-...-P/PPV	11.3 ... 16.3	12.7 ... 17.7	13.8 ... 15.8	21.1 ... 25.1	25.2 ... 30.2	28.7 ... 33.7	28.7 ... 33.7	38.8 ... 43.8
DGC-...-P/PPV-GP	-	-	16.9 ... 18.9	23.6 ... 27.6	25.2 ... 30.2	34.7 ... 39.7	-	-
DGC-...-YSR/YSRW	12.8 ... 22.8	14 ... 24	14.5 ... 34.5	22.5 ... 47.5	27.3 ... 52.3	31 ... 56	31 ... 56	41 ... 76

Data sheet

Materials

Sectional view

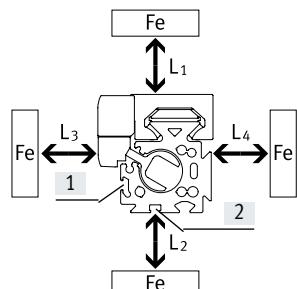


Linear drives

[1] Guide rail	High-alloy steel
[2] Slide	High-alloy steel
[3] End cap	Anodised aluminium
[4] Cylinder barrel	Anodised aluminium
- Piston seal	Polyurethane
- Sealing band/cover strip	Polyurethane
Note on materials	RoHS-compliant, free of copper and PTFE

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.



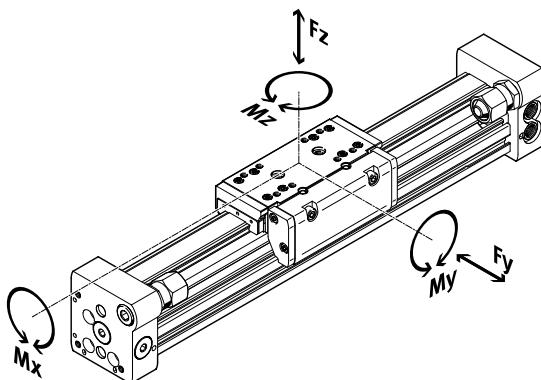
The distance depends on the position of the proximity sensor (see [1] and [2]).

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

Data sheet

Characteristic 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.



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

$$\frac{F_y}{F_{y_{max.}}} + \frac{F_z}{F_{z_{max.}}} + \frac{M_x}{M_{x_{max.}}} + \frac{M_y}{M_{y_{max.}}} + \frac{M_z}{M_{z_{max.}}} \leq 1$$

Permissible forces and torques								
Piston diameter	8	12	18	25	32	40	50	63
F _y _{max.} [N]	300	650	1850	3050	3310	6890	6890	15200
F _z _{max.} [N]	300	650	1850	3050	3310	6890	6890	15200
M _x _{max.} [Nm]	1.7	3.5	16	36	54	144	144	529
M _y _{max.} [Nm]	4.5	10	51	97	150	380	634	1157
M _z _{max.} [Nm]	4.5	10	51	97	150	380	634	1157

Technical data – Clamping unit					Dimensions → page 58
Size	25	32	40	50	
Pneumatic connection	M5	M5	M5	M5	
Clamping type	Clamping via spring force, compressed air to release				
Static holding force [N]	320	500	1200	1200	
Max. number of emergency braking operations ¹⁾ at reference energy [J]	–	–	750 35	750 35	
Number of clamping operations under rated load [millions of switching cycles]	0.45	0.55	0.05	0.05	

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

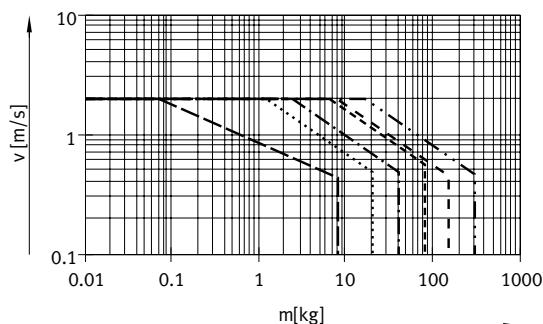
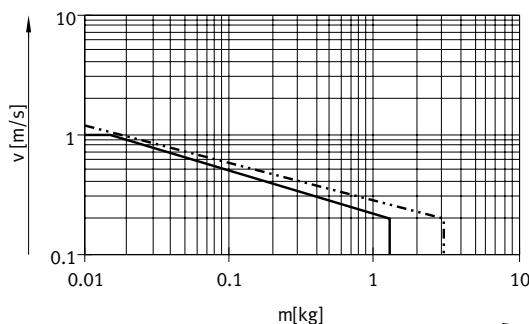
Operating and environmental conditions – Clamping unit		
Operating medium	Compressed air to ISO 8573-1:2010 [7:4:4]	
Operating pressure		
Clamping unit open [bar]	4.5 ... 8	
Clamping unit closed [bar]	Unpressurised	
Ambient temperature [°C]	–10 ... +60	

Data sheet

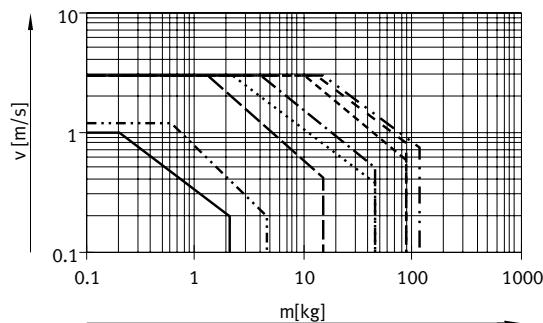
Maximum permissible piston speed v as a function of payload m and distance r_{\max} from the centre of mass

Piston diameter 8/12 with cushioning P

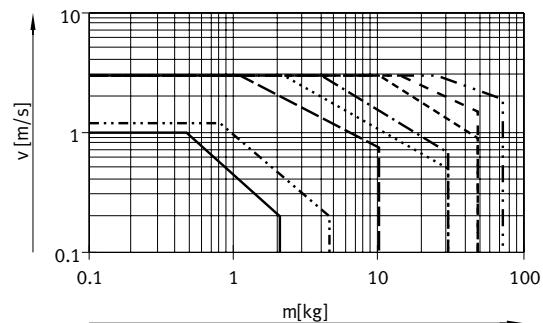
Piston diameter 18 ... 63 with cushioning PPV



Piston diameter 8 ... 63 with cushioning YSR



Piston diameter 8 ... 63 with cushioning YSRW



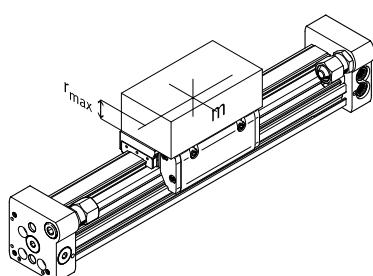
— ◊ 8	— ◊ 32
- - - ◊ 12	- - - ◊ 40
- - - ◊ 18	- - - ◊ 50
..... ◊ 25 ◊ 63

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 (shock absorbers, stops, etc.), 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 0.01 mm.

Data for horizontal mounting position:

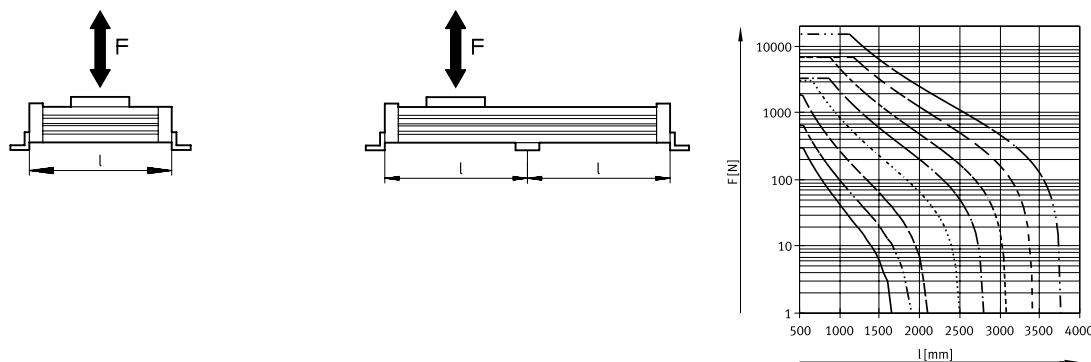
Piston diameter	8	12	18	25	32	40	50	63
Distance r_{\max} [mm]	25	35	35	50	50	50	50	50

Data sheet

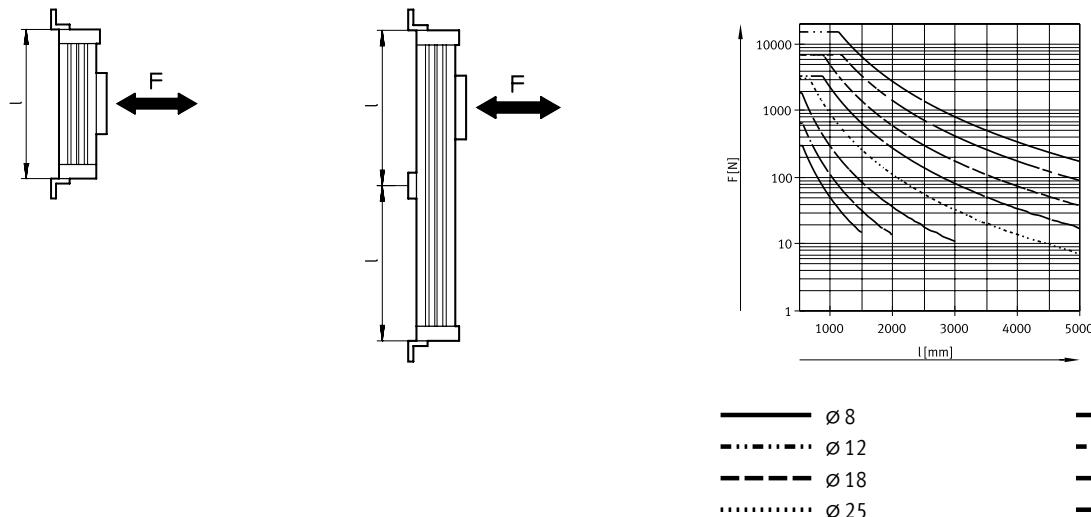
Number of profile mountings MUC as a function of weight force F and distance l between supports

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

Horizontal mounting position



Vertical mounting position



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:

$$\begin{aligned} l &= \text{stroke length} + L_1 \\ &\quad (\text{see dimensions}) \\ &= 1500 \text{ mm} + 200 \text{ mm} \\ &= 1700 \text{ mm} \end{aligned}$$

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

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

Data sheet

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.

- For piston diameters 25, 32, 40, 63
- The modules are suitable for oils and greases.
- The dimensions of the linear drive DGC-KF are the same with and without central lubrication modules.
- Both lubrication adapters must be connected
- There are three connection options on each side
- Can be used in combination with:
 - Standard slide GK
 - Additional slide KL, KR
- Cannot be used in combination with:
 - Protected recirculating ball bearing guide GP

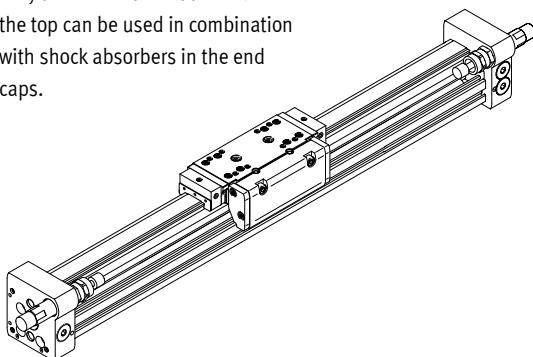
Slide dimensions

→ page 56

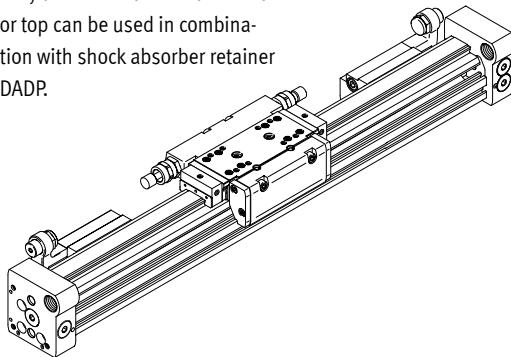
Order code C in the modular product system → page 63

Connection options

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

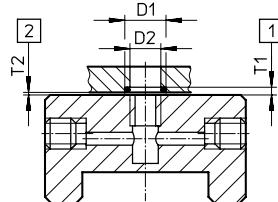


Only the connection on the front or top can be used in combination with shock absorber retainer DADP.



Connection option for customer design

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



D1 $8^{+0.2}$ mm
D2 6 mm
T1 $0.6_{-0.05}$ mm
T2 $0.1^{+0.2}$ mm
O-ring diameter 6x1 mm (DIN 3771)

[1] Slot depth for O-ring
[2] Required air gap

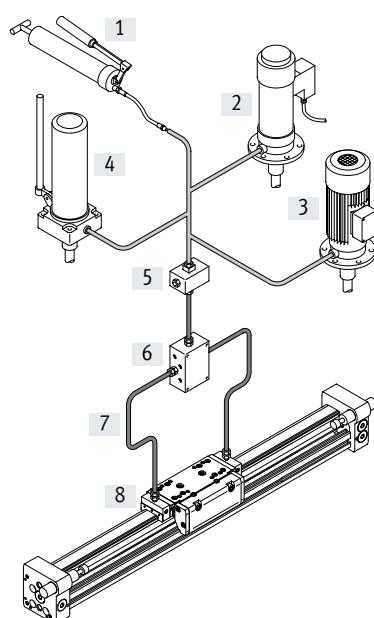
Additional dimensions → page 56

Structure of a central lubrication system

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

- Lincoln
- Bielomatik
- SKF (Vogel)

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



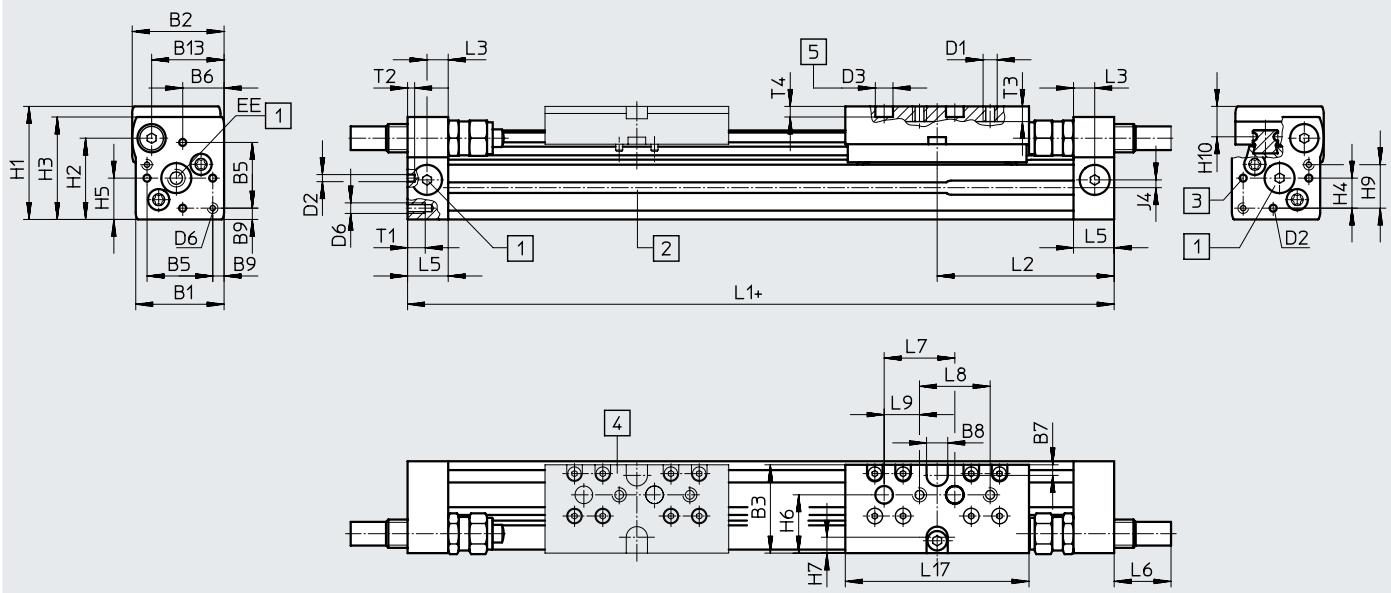
- [1] Hand pump
- [2] Pneumatic container pump
- [3] Electric container pump
- [4] Manually operated container pump
- [5] Nipple block
- [6] Distributor block
- [7] Tubing or piping
- [8] Fittings

Data sheet

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 sensor

[3] Mounting hole for foot

mounting or centring pin

[4] Additional slide KL

[5] Drilled hole for centring pin ZBS

Ø [mm]	B1	B2	B3	B5	B6	B7	B8 ±0.05	B9 ±0.1	B13	D1	D2 Ø H8	D3 Ø H7	D6
8	25	26	25	18.6	11.7	3	6	3.2	20.5	M4	2	5	M3
12	30.2	31	31	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

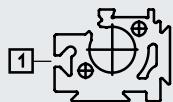
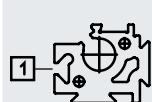
Ø [mm]	L3	L5	L6			L7 ±0.03	L8 ±0.1	L9 ±0.1	L17	T1	T2	T3	T4 +0.2	Stroke tolerance
			P	YSR	YSRW									
8	6	11.4	0	16	16.2	20	20	10	52	5	2	4.3	3	0 ... 1.7
12	8	15.9	0	11.3	12.3	20	20	10	65	6	2	5	3	

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

Profile barrel

Ø 8

Ø 12



[1] Sensor slot for proximity sensor

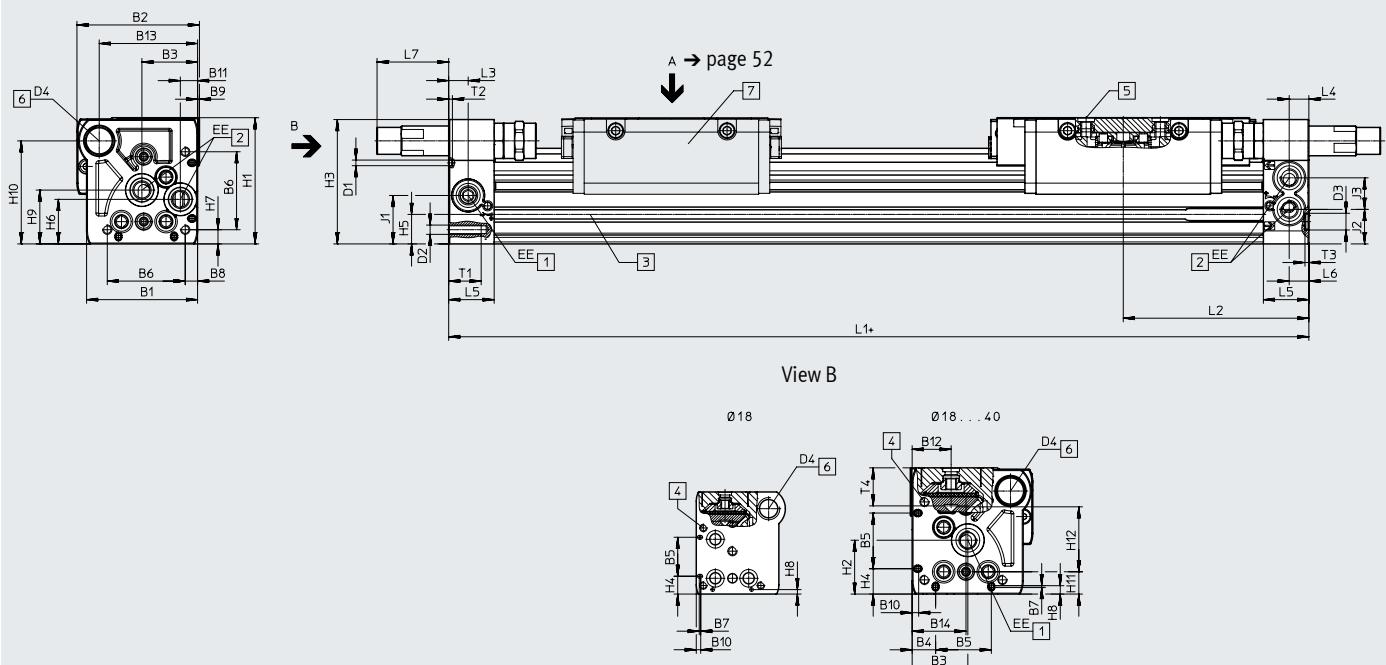
Linear drives DGC-KF, with recirculating ball bearing guide

Data sheet

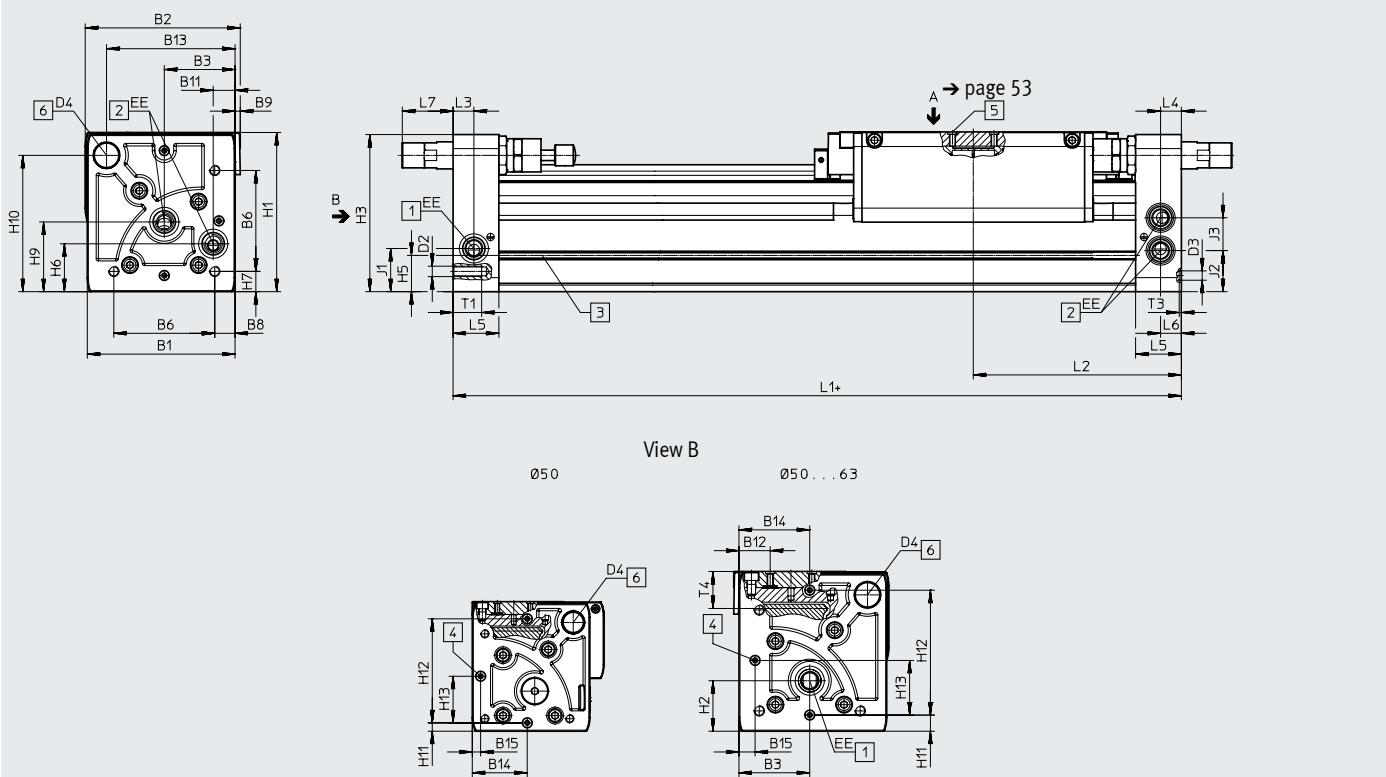
Dimensions

Download CAD data → www.festo.com

$\varnothing 18 \dots 40$



$\varnothing 50/63$



+ 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 sensor
- [4] Mounting hole for foot mounting HPC
- [5] Drilled hole for centring pin/sleeve
- [6] Thread for end stop
- [7] Additional slide

Note

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

Data sheet

\emptyset [mm]	B1	B2	B3 ± 0.05	B4 ± 0.1	B5 ± 0.05	B6	B7	B8 ± 0.1	B9	B10	B11
18	44.5	49.9	19.5	8.8	21	31	0.8	3.8	1	2.4	5.5
25	59.8	66	30	12.65	30	42	1	6.65	1	3.5	9.3
32	73	79	38.5	5.7	63.1	57.5	—	8.5	1.5	14	14.9
40	91	98.5	45	17.2	55	65	—	12.2	2	8	16.5
50	113	126.5	52.8	—	—	81.6	—	12	—	—	21
63	142	149	68	—	—	97	—	19.5	5	—	21

\emptyset [mm]	B12	B13	B14	B15	D1 \emptyset ± 0.05	D2	D3 \emptyset H7	D4	EE	H1	H2
18	15.5	39	19.5	—	2	M4	5	M12x1	M5	56.3	23.1
25	21	53	29	—	3	M5	9	M16x1	G1/8	68	29
32	18	65	38.5	—	3	M6	9	M16x1	G1/8	78.5	30
40	24.5	80.5	45	—	4	M6	9	M22x1.5	G1/4	99.5	41.5
50	24	97	60	8	—	M8	9	M22x1.5	G1/4	124.5	38.5
63	30	123.5	68	15.5	—	M10	9	M26x1.5	G3/8	153.5	48.5

\emptyset [mm]	H3	H4 ± 0.2	H5	H6	H7	H8	H9	H10	H11	H12	H13
18	55	9.6	13.4	20	4.6	2.4	25.2	46	8.5 ± 0.15	30	—
25	67	13.65	15.8	24	7.65	4.5	29	55.5	12 ± 0.15	35	—
32	77	13.65	17	27.7	8.5	14	35.2	63.8	11.45 ± 0.15	50	—
40	97.5	17.2	25	36.5	12.2	8	44	81.5	15 ± 0.15	60	—
50	122.5	—	29.3	36	12	—	53	104.5	8 ± 0.2	100 ± 0.05	52.8
63	151	—	34.8	46	19.5	—	67	131	15.5 ± 0.2	120 ± 0.05	68

\emptyset [mm]	J1	J2	J3	L1			KF	L2		L3	L4
				KF	KF-GP	1H-PN		KF-GP	1H-PN		
18	20	16.5	11	150	157	—	74.5	78	—	5.7	5.8
25	26.1	18.6	17	200	205	271	100	102.5	100	10.5	10.6
32	30	22	18.5	250	250	320.5	124.8	124.8	124.8	14.5	14.5
40	35	26	26	300	312	458	150	156	150	14.6	14.6
50	30.5	30.5	28	350	—	555.8	175	—	—	17	17
63	41.5	39.5	31.5	400	—	—	200	—	—	20	20

\emptyset [mm]	L5	L6	L7			T1	T2	T3	T6	Stroke tolerance
			PPV	YSR	YSRW					
18	15	5.5	0	29.9	32.4	9	2	3.1	15	0 ... 2.5
25	24.5	10.6	0	35.6	38.6	17.5	2	2.1	17.3	
32	30.5	14.5	0	19.5	28	15	2	2.1	20	
40	33.5	14.6	0	38.5	43.5	20	3	2.1	25.7	
50	41	17	0	31	36.3	24	—	2.1	28.75	
63	44	20	0	38.3	48.3	27.5	—	2.1	36.1	

-  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	
L1 [mm]	+0.90	+1.10	+1.40	+1.50	+1.60	+1.70	+2.20	+2.30	+2.40

Linear drives DGC-KF, with recirculating ball bearing guide

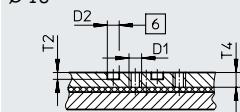
Data sheet

Dimensions

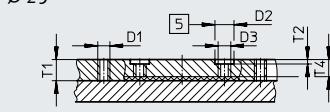
Download CAD data → www.festo.com

Slide

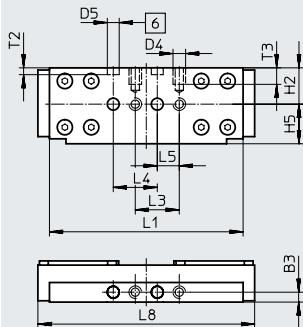
$\varnothing 18$



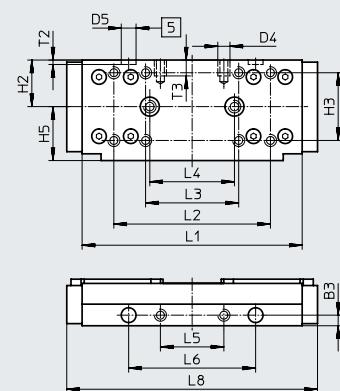
$\varnothing 25$



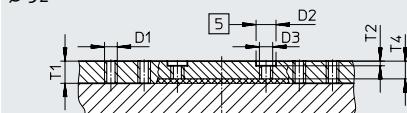
View A



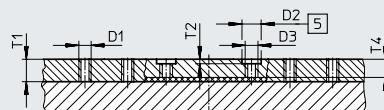
View A



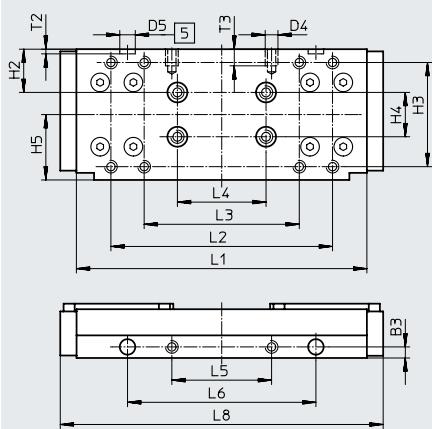
$\varnothing 32$



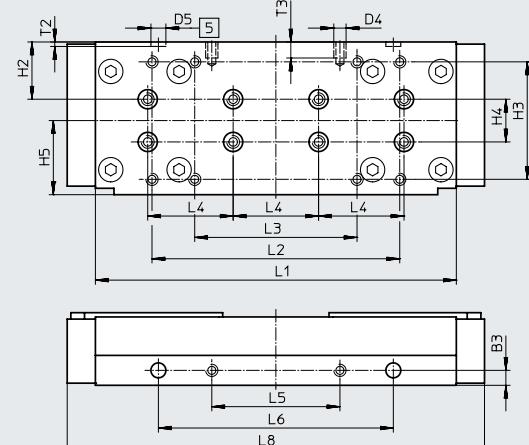
$\varnothing 40$



View A



View A



[5] Drilled hole for centring sleeve ZBH

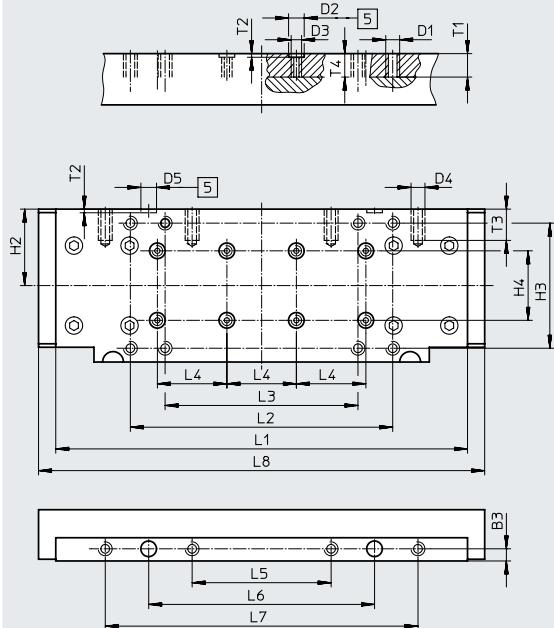
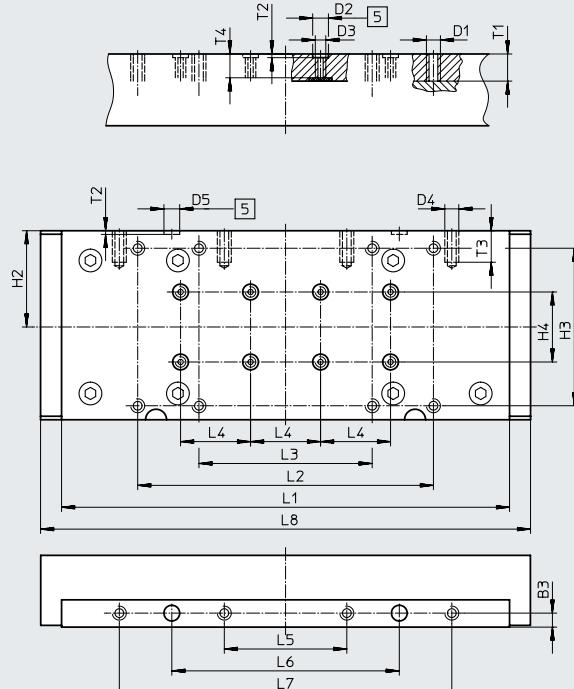
[6] Drilled hole for centring pin ZBS

Data sheet

Dimensions

Download CAD data → www.festo.com

Slide

 $\varnothing 50$  $\varnothing 63$ 

[5] Drilled hole for centring sleeve ZBH

\varnothing [mm]	B3 ± 0.05	D1 \varnothing H7	D2 \varnothing H7	D3	D4	D5 \varnothing H7	H2	H3	H4 ± 0.03	H5 ± 0.1	L1
18	4.5	M5	5	—	M5	5	16.5	—	—	18	88±0.1
25	5	M5	9	M6	M5	7	22	32±0.2	—	25.5	104±0.2
32	5	M5	9	M6	M5	7	19.5	47±0.2	20	29.5	131±0.2
40	7	M5	9	M6	M6	7	26.8	55±0.2	20	34.7	169±0.2
50	7	M8	9	M6	M8	9	44	72±0.3	40	—	237±0.1
63	8	M8	9	M6	M8	9	55	90±0.3	40	—	256±0.1

\varnothing [mm]	L2 ± 0.2	L3	L4	L5	L6	L7	L8	T1	T2	T3	T4
18	—	20±0.1	20	10	—	—	99	—	3.1±0.1	7.5	6.7
25	74	44±0.2	40	30	60	—	118.5	10	2.1±0.2	7.5	8
32	100	70±0.2	40	45	85	—	145.7	10	2.1±0.2	7.5	8
40	116	76±0.2	40	60	110	—	195.4	10.5	2.1±0.2	7.5	8.5
50	151	111±0.2	40	80	130	180	256.8	13.5	2.1±0.2	18	13.5
63	169	99±0.2	40	70	130	190	280	15.5	2.1±0.2	18	13.6

Linear drives DGC-KF, with recirculating ball bearing guide

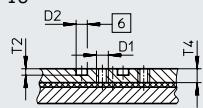
Data sheet

Dimensions

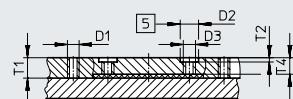
Download CAD data → www.festo.com

Slide, variant GP – Protected recirculating ball bearing guide

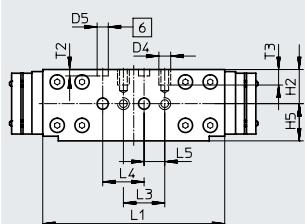
$\varnothing 18$



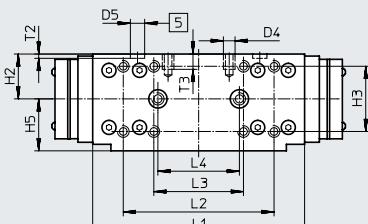
$\varnothing 25$



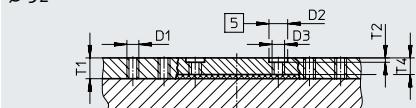
View A



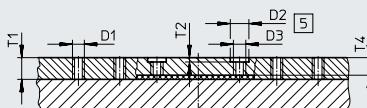
View A



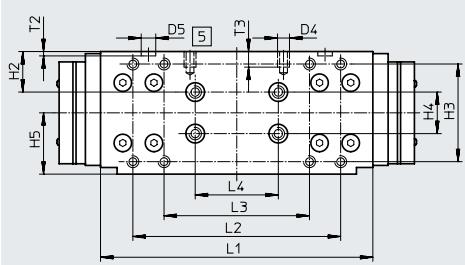
$\varnothing 32$



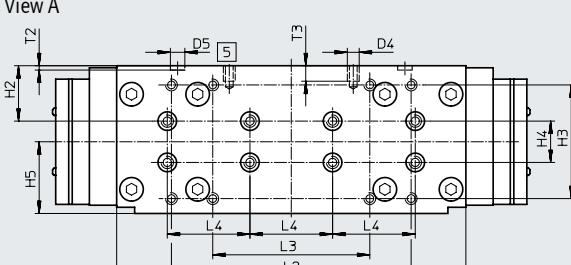
$\varnothing 40$



View A



View A



[5] Drilled hole for centring sleeve ZBH

[6] Drilled hole for centring pin ZBS

Data sheet

\emptyset [mm]	B3 ± 0.05	D1	D2 \emptyset H7	D3	D4	D5 \emptyset H7	H2	H3
18	4.5	M5	5	–	M5	5	16.5	–
25	5	M5	9	M6	M5	7	22	32 ± 0.2
32	5	M5	9	M6	M5	7	19.5	47 ± 0.2
40	7	M5	9	M6	M6	7	26.8	55 ± 0.2
\emptyset [mm]	H4 ± 0.03	H5 ± 0.1	L1	L2 ± 0.2	L3	L4 ± 0.03	L5 ± 0.1	L6 ± 0.05
18	–	18	88 ± 0.1	–	20 ± 0.1	20	10	–
25	–	25.5	104 ± 0.2	74	44 ± 0.2	40	30	60
32	20	29.5	131 ± 0.2	100	70 ± 0.2	40	45	85
40	20	34.7	169 ± 0.2	116	76 ± 0.2	40	60	110
\emptyset [mm]	L7 ± 0.1	L8	L9	T1	T2	T3	T4	
18	–	99	120	–	3.1 ± 0.1	7.5	6.7	
25	–	118.5	144	10	2.1 ± 0.2	7.5	8	
32	–	145.7	173	10	2.1 ± 0.2	7.5	8	
40	–	195.4	231	10.5	2.1 ± 0.2	7.5	8.5	

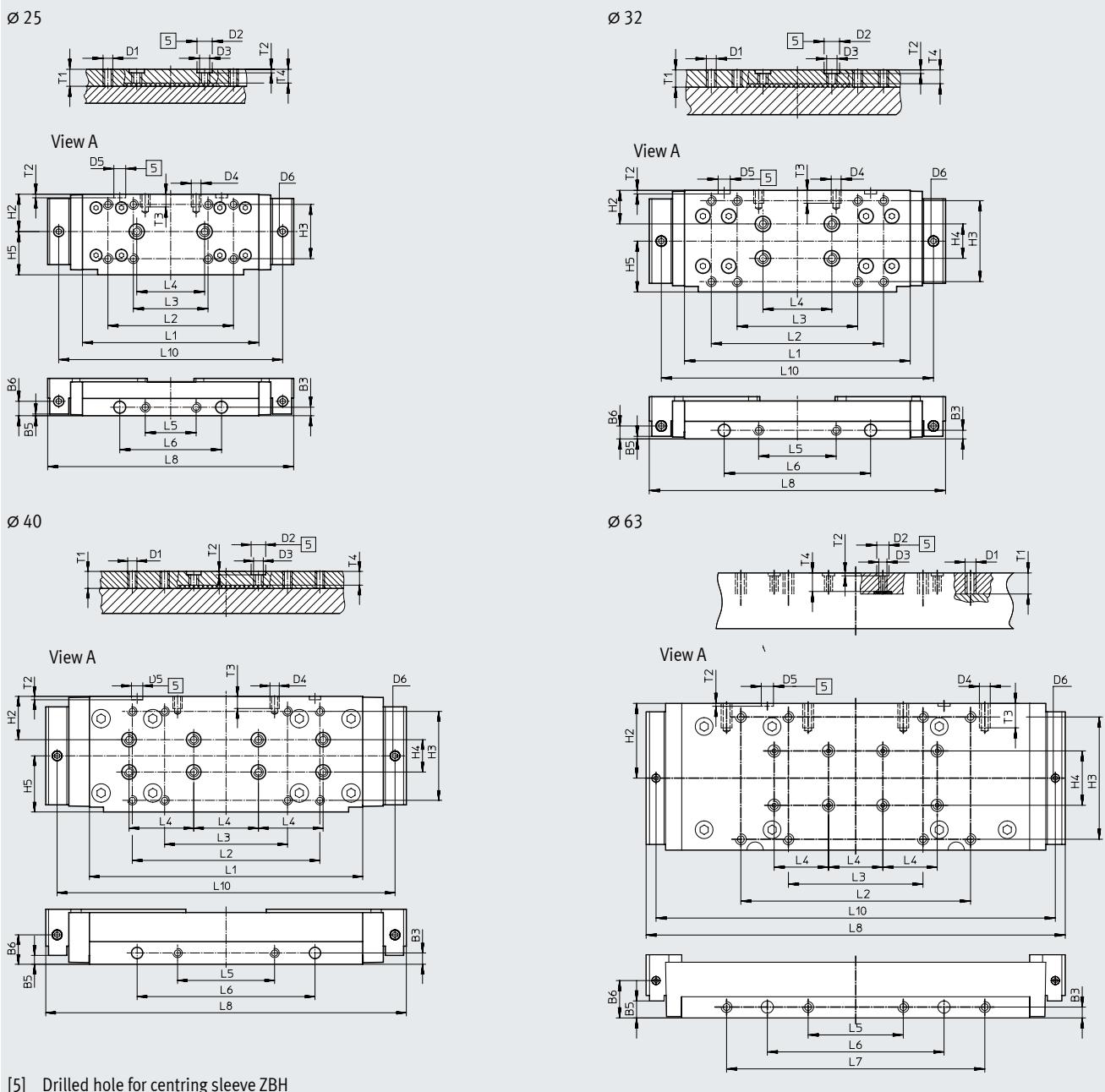
Linear drives DGC-KF, with recirculating ball bearing guide

Data sheet

Dimensions

Slide, variant C – Lubrication adapter

Download CAD data → www.festo.com



Data sheet

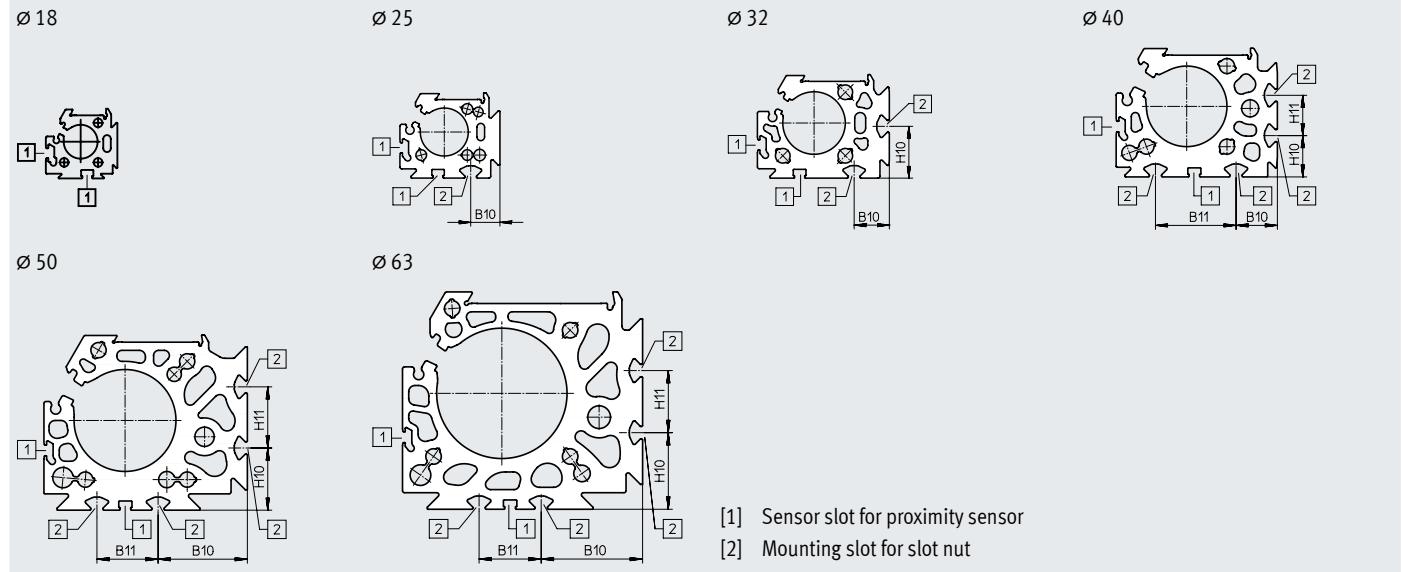
\emptyset [mm]	B3 ± 0.05	B5 ± 0.05	B6	D1	D2 \emptyset H7	D3	D4	D5 \emptyset H7	D6	H2	H3	H4	H5
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25	5	1	8.5	M5	9	M6	M5	7	M6x1	22	32 ± 0.2	-	25.5
32	5	1.5	7.5	M5	9	M6	M5	7	M6x1	19.5	47 ± 0.2	20	29.5
40	7	18.2	18.2	M5	9	M6	M6	7	M6x1	26.8	55 ± 0.2	20	34.7
63	8	12.5	27.5	M8	9	M6	M8	9	M6x1	55	90 ± 0.3	40	-

\emptyset [mm]	L1 ± 0.2	L2 ± 0.2	L3 ± 0.03	L4 ± 0.1	L5 ± 0.05	L6 ± 0.1	L7	L8	L10	T1	T2 ± 0.2	T3	T4
---------------------	-----------------	-----------------	------------------	-----------------	------------------	-----------------	----	----	-----	----	-----------------	----	----

25	104 ± 0.2	74	44	40	30	60	-	145	132	10	2.1	7.5	8
32	131 ± 0.2	100	70	40	45	85	-	172	158	10	2.1	7.5	8
40	169 ± 0.2	116	76	40	60	110	-	224.4	210.4	10.5	2.1	7.5	8.5
63	256 ± 0.1	169	99	40	70	130	190	308.4	293.8	15.5	2.1	18	13.6

Profile barrel



\emptyset [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

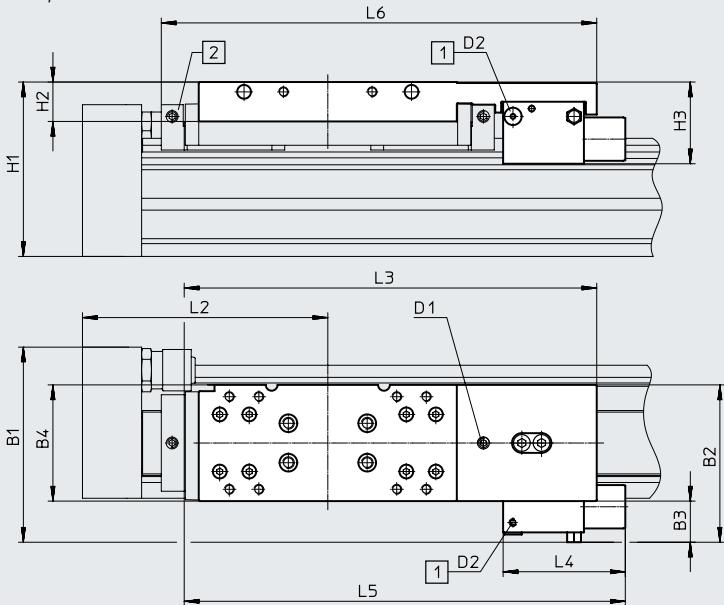
Data sheet

Dimensions

Download CAD data → www.festo.com

1H – With clamping unit

$\varnothing 25/32$



- - Note

Overall length L1 at stroke = 0 mm

→ page 50

[1] Compressed air supply port

[2] Lubrication adapter

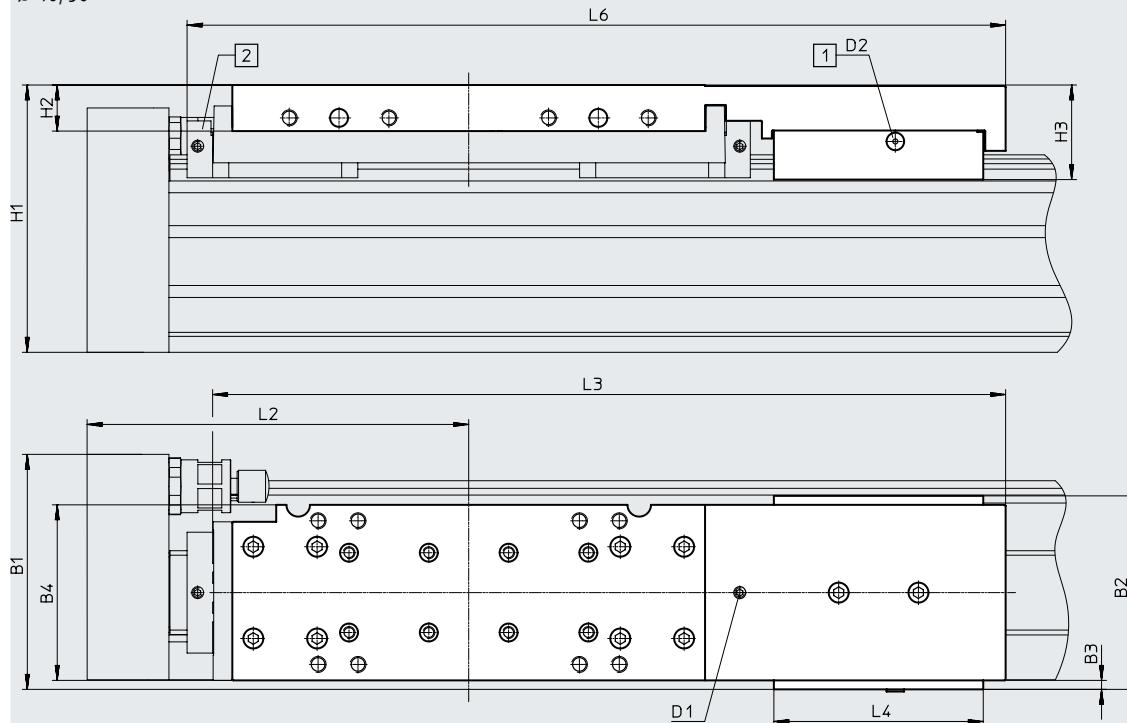
Type	B1	B2	B3	B4	H1	H2	H3	D1	D2	L2	L3	L4	L5	L6
DGC-25....-1H-PN	83.6	64.9	17.6	47.5	79	21	39.5	M6	M5	100	182.3	63	198	–
DGC-25....-C1H-PN														193.8
DGC-32....-1H-PN	99.9	79.9	20.9	59	88.5	20	41.5	M6	M5	124.8	209.4	62	223.9	–
DGC-32....-C1H-PN														221

Data sheet

Dimensions

Download CAD data → www.festo.com

1H – With clamping unit

 $\varnothing 40/50$ 

Note

Overall length L1 at stroke = 0 mm

→ page 50

[1] Compressed air supply port

[2] Lubrication adapter

Type	B1	B2	B3	B4	H1	H2	H3	D1	D2	L2	L3	L4	L6
DGC-40-...-1H-PN	109.9	97	11.7	69.4	113.5	28	48.9	M6	M5	150	331.2	105	-
DGC-40-...-C1H-PN													345.7
DGC-50-...-1H-PN	117.8	97	4.5	88	134	23	47.4	M6	M5	191.3	397.6	105	-
DGC-50-...-C1H-PN													412.1

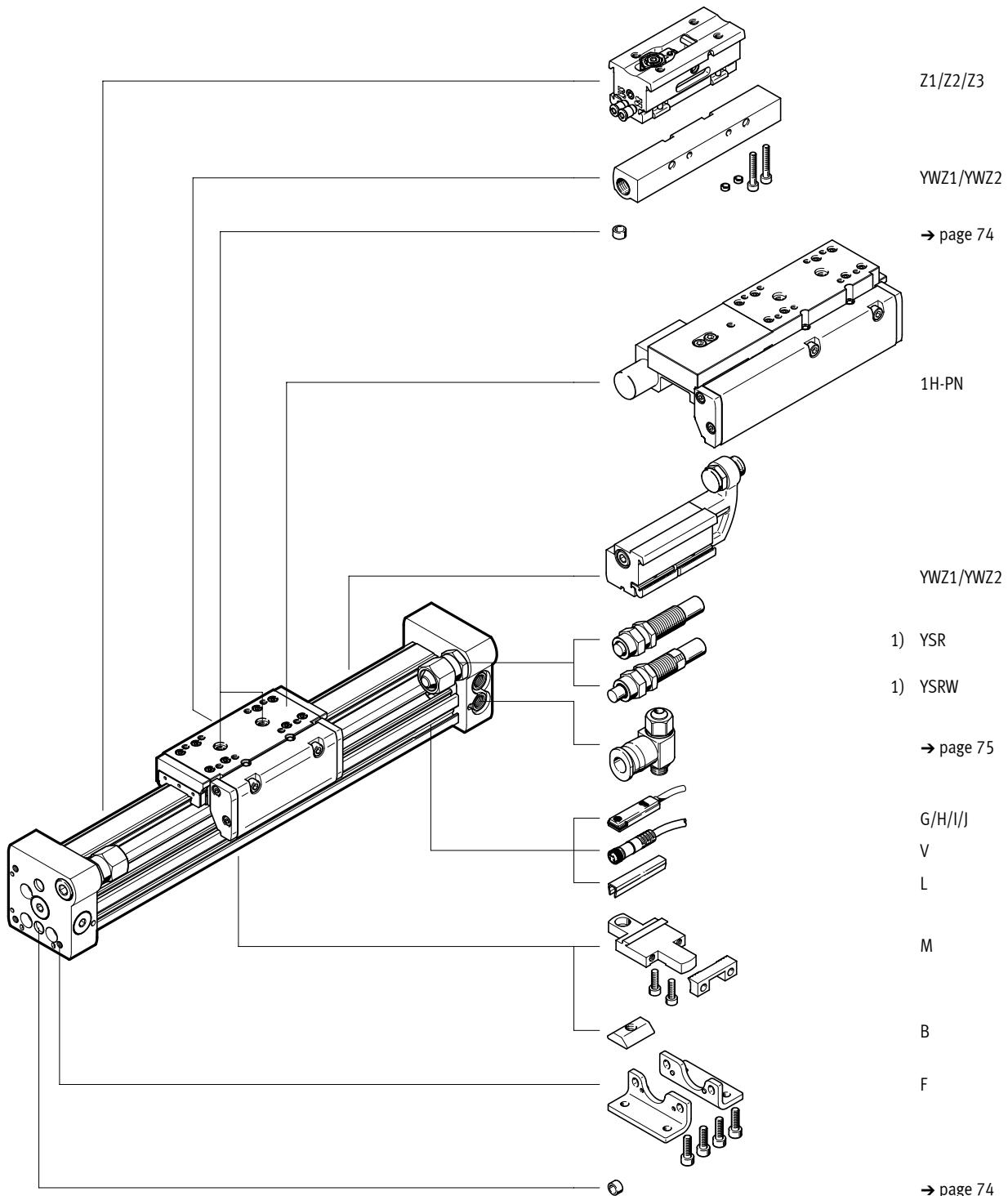
Ordering data – Modular product system

Order code



Note

1) End stops or shock absorbers must not be removed.

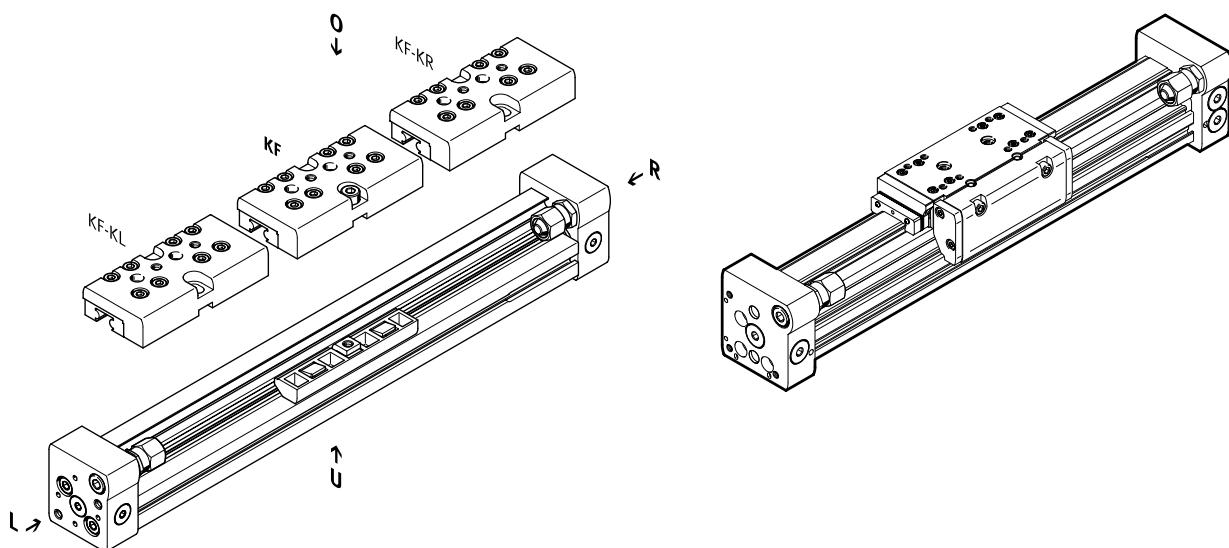


Ordering data – Modular product system

Order code

KL/KR – With additional slide

GP – With protected recirculating ball bearing guide



Working stroke reduction when ordering an additional slide KL or KR

For a linear drive DGC with additional slide, the working stroke is reduced by the length of the additional slide and the distance between both slides.

Assuming:

DGC-12-500...

L = 20 mm

L17 = 65 mm

\emptyset [mm]	8	12	18	25	32	40	50	63
L17	52	65	99	118.5	145.7	195.4	256.8	280

The working stroke is reduced to

$$415 \text{ mm} = 500 \text{ mm} - 20 \text{ mm} - 65 \text{ mm}$$

Linear drives DGC-KF, with recirculating ball bearing guide

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 diameter [mm]	8	12	18	25	32	40	50	63		★ -...		
Stroke [mm]	1 ... 1300	1 ... 1900	1 ... 3000	1 ... 8500			1 ... 5000			★ -...		
Guide	Recirculating ball bearing guide									★ -KF	-KF	
Cushioning	Elastic cushioning rings/plates at both ends	-	-	-	-	-	-	-		★ -P		
	-	-	Pneumatic cushioning, adjustable at both ends							★ -PPV		
	Shock absorber, self-adjusting									-YSR		
	Shock absorber, self-adjusting, progressive									★ -YSRW		
Position sensing	Via proximity sensor									★ -A	-A	
Compressed air supply port	At the right end or at both ends									★		
	-	-	At the left end or at both ends							-DL		
Slide	-	-	Protected recirculating ball bearing guide	-	-	-	[1]			-GP		
Lubrication	-	-	Standard							★		
	-	-	Lubrication approved for use in food applications				[2]			-H1		
Lubrication function	Standard									★		
	-	-	-	Lubrication adapter			[3]			-C		
Additional slide on left	Additional slide, standard, on left									[4]	-KL	
Additional slide on right	Additional slide, standard, on right									[4]	-KR	
Clamping unit	-	-	-	Without			-			★		
	-	-	-	1-channel			-	[5]		-1H		
Actuation type	-	-	-	Without			-			★		
	-	-	-	Pneumatic			-	[5]		-PN		
EU certification	Without									★		
	II 3GD							[6]		-EX2		
	II 2G							[6]		-EX3		

[1] GP Not with cushioning YSR, YSRW
Not with additional slide KL, KR

[2] H1 Not with protected version GP; cushioning YSR, YSRW or clamping unit 1H

[3] C Not with slide GP

For size 50, only with clamping unit 1H

[4] KL, KR For a linear drive DGC with additional slide, the working stroke is reduced by the length of the additional slide and the distance between both slides.
Not with cushioning PPV

[5] 1H, PN Not with intermediate-position module Z1, Z2, Z3; end-position limiter YWZ1, YWZ2; protected version GP; additional slide KL, KR or lubrication H1
Only with cushioning YSRW
1H only with PN

[6] EX2, EX3 Not with protected recirculating ball bearing guide GP, lubrication adapter C, clamping unit 1H-PN, proximity sensor G, H, I, J, connecting cable V, intermediate-position module Z1, Z2, Z3



Ordering data – Modular product system

Ordering table	Size	8	12	18	25	32	40	50	63	Conditions	Code	Enter code
Accessories		Enclosed separately (can be retrofitted)									ZUB-	ZUB-
Foot mounting		1									F	
Profile mounting		1 ... 9									...M	
Slot nut for mounting slot		-	-	-	1 ... 9						...B	
Proximity sensor	2.5 m cable	1 ... 9									...G	
	Plug M8	1 ... 9									...H	
Proximity sensor, 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 for sensor slot		-	-	1 ... 9							...L	
Mechanical end-position limiter		-	-	Variable end position, at one end				[7]			YWZ1	
		-	-	Variable end position, at both ends				[7]			YWZ2	
Intermediate-position module		-	-	-	1 intermediate position		-	-	[8]		-Z1	
		-	-	-	2 intermediate positions		-	-	[8]		-Z2	
		-	-	-	3 intermediate positions		-	-	[8]		-Z3	
Operating instructions		Express waiver – no operating instructions to be included (already available)									-O	

[7] YWZ1, YWZ2 Only with cushioning YSR or YSRW

[8] YWZ1, YWZ2 Only with cushioning YSR or YSRW and mechanical end-position limiter YWZ1 or YWZ2

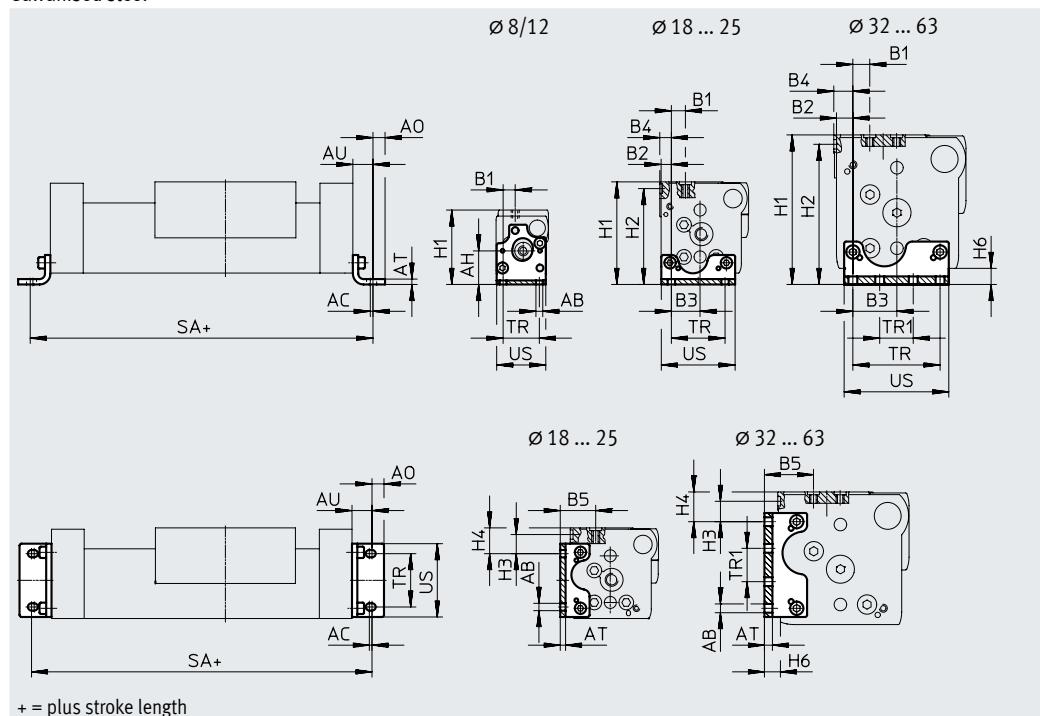
Accessories

Foot mounting HPC

(order code: F)

Material:

Galvanised steel



Dimensions and ordering data

For diam. [mm]	AB Ø	AC	AH	AO	AT	AU	B1		B2
							G	GF/KF	
8	3.4	1.5	16.7	3	2	9	6	6	-
12	4.5	2	18.5	4.5	2	11.5	5.4	5.4	-
18	5.5	2	-	6.75	3	13.25	15	11.2	4.3
25	5.5	2	-	9	4	15	12.5	13.35	7.65
32	6.6	2	-	10	5	19	11.5	9	9
40	6.6	2	-	10	6	20	7.6	12.6	12.2
50	9	3	-	11	8	25	12.5	12.5	11.5
63	11	3	-	13.5	8	28	17.5	17.5	12.5

For diam. [mm]	B3	B4		B5		H1	
		GF	KF	G	GF/KF	G	GF/KF
8	-	-	-	-	-	37	37
12	-	-	-	-	-	42.5	42.5
18	15.2	-	5.3	27	23.2	57.5	64
25	21.35	-	8.65	28.65	29.5	67	76.5
32	29.5	-	10.5	29.5	27	82	87.5
40	32.8	-	14.2	31.8	36.8	100	111.5
50	48.5	11.5	11.5	41	41	137	141.5
63	55.5	6.5	17.5	49	49	159	172.5

Accessories

Dimensions and ordering data							
For diam.	H2	H3	H4		H6	SA	
[mm]	GF/KF	GF/KF	G	GF/KF		G/GF/KF	KF-GP
8	–	–	–	–	5	118 _{-0.2}	–
12	–	–	–	–	5	148 _{-0.2}	–
18	59.5	16	14	21.2	7.7	176.5 _{-0.2}	183.5 _{-0.2}
25	71.5	14.35	9.85	19.35	8.5	230 _{-0.2}	235 _{-0.2}
32	82.5	8	7.5	13	9	288 _{-0.2}	288 _{-0.2}
40	104.5	15.3	10.8	22.3	12	340 _{-0.2}	352 _{-0.2}
50	134.5	23.4	25.9	30.4	17	400 _{-0.2}	–
63	164.5	22	24	30	19	456 _{-0.2}	–

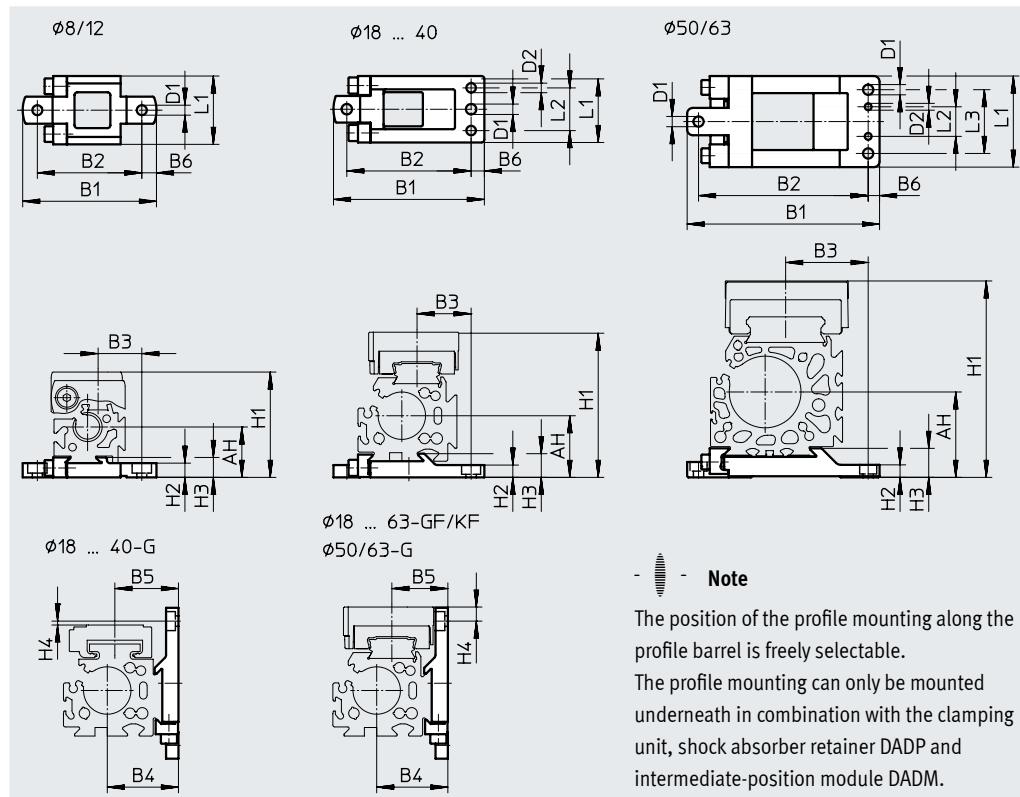
For diam.	TR	TR1	US	Weight	Part no.	Type ¹⁾
[mm]	±0.1	±0.1		[g]		
8	18	–	24.4	25	526385	HPC-8
12	20	–	29.6	41	526388	HPC-12
18	30	–	38.6	58	533667	HPC-18
25	40	–	55	131	533668	HPC-25
32	56.5	19.5	68	239	533669	HPC-32
40	65	25	78	348	533670	HPC-40
50	82.6	47.4	102	754	545236	HPC-50
63	111	39	133	1245	545237	HPC-63

1) Suitable for ATEX

Accessories

Profile mounting MUC
(order code: M)

Material:
High-alloy steel

**Note**

The position of the profile mounting along the profile barrel is freely selectable.
The profile mounting can only be mounted underneath in combination with the clamping unit, shock absorber retainer DADP and intermediate-position module DADM.

Dimensions and ordering data

For diam. [mm]	AH	B1	B2	B3		B4
				G	GF/KF	
8	17.7	47	36.7	15.35	15.35	–
12	18.5	52.5	42.2	16.5	16.5	–
18	27.2	67.8±0.2	56±0.15	30.5	28.7	27.2
25	32.5	79.5±0.2	65.5±0.15	32.5	28.5	37.5
32	37.5	94±0.2	80±0.15	35	35	47.5
40	47	110.5±0.2	96±0.15	43	43	57
50	61	145±0.5	125±0.2	56	56	77
63	75	169±0.5	149±0.2	72.5	72.5	87

For diam. [mm]	B5		B6	D1 Ø H13	D2 Ø H7	H1		
	G	GF/KF				G	GF/KF	1H-PN
8	–	–	5.1	3.5	–	37	37	–
12	–	–	5.1	3.5	–	42.5	42.5	–
18	25	23.2	5.7	5.5	5	57.5	64	–
25	33.5	29.5	7	5.5	5	67	76.5	87.5
32	37	37	7	5.5	5	82	87.5	97.5
40	46.8	46.8	7	6.5	6	100	111.5	125.5
50	61	61	7	9	6	137	141.5	151
63	69	69	10	9	6	159	172.5	–

Accessories

Dimensions and ordering data		H2	H3	H4		L1
For diam.	[mm]			G	GF/KF	
8	5	7	—	—	—	24
12	4.5	7	—	—	—	24
18	5.7 _{-0.2}	9.9±0.1	0.1	6.4	33±0.1	
25	6.5 _{-0.2}	12.5±0.1	2.07	7.43	35±0.1	
32	6.5 _{-0.2}	13±0.1	1.5	4	45±0.1	
40	8.5 _{-0.2}	16±0.1	0.2	11.3	60±0.1	
50	11	23.5	4.7	9.2	80±0.4	
63	11	25.5	1.5	15	80±0.4	

For diam.	L2	L3	Weight	Part no.	Type ¹⁾
[mm]	±0.05	±0.2	[g]		
8	—	—	28	526384	MUC-8
12	—	—	32	526387	MUC-12
18	20.5	—	78	531752	MUC-18
25	22.5	—	113	531753	MUC-25
32	30	—	174	531754	MUC-32
40	44	—	346	531755	MUC-40
50	26	56	874	531756	MUC-50
63	26	56	1080	531757	MUC-63

1) Suitable for ATEX

Accessories

Moment compensator FKC

(order code: FK)
for DGC-G

Materials:

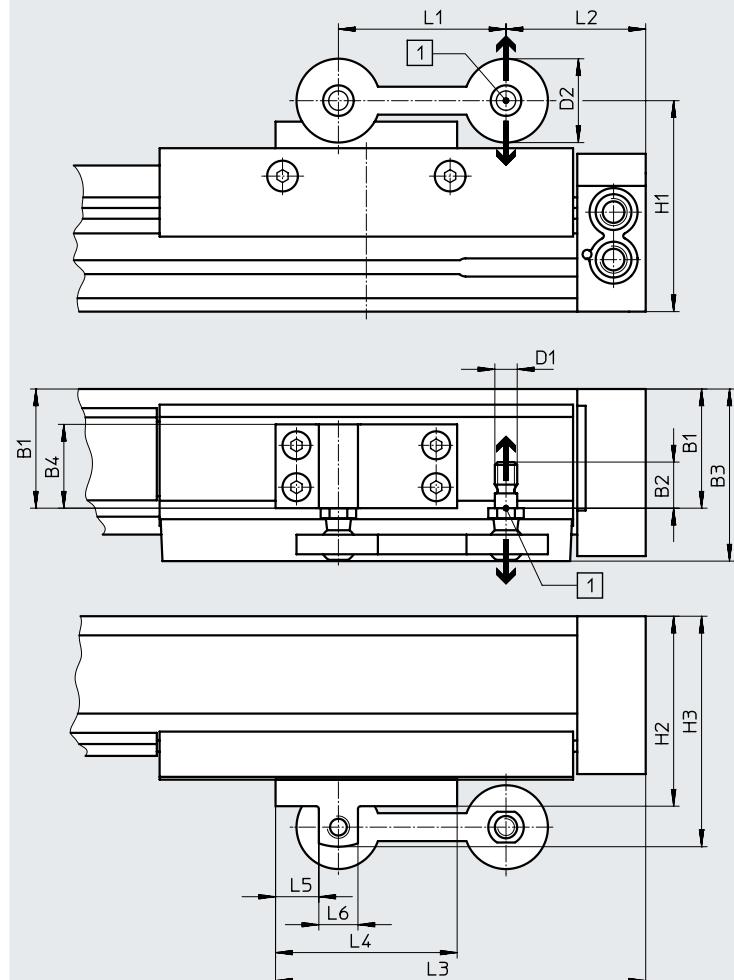
Plate: wrought aluminium alloy

Articulated joint: polyamide

Ball stud: high-alloy steel



For diam. 8 ... 40

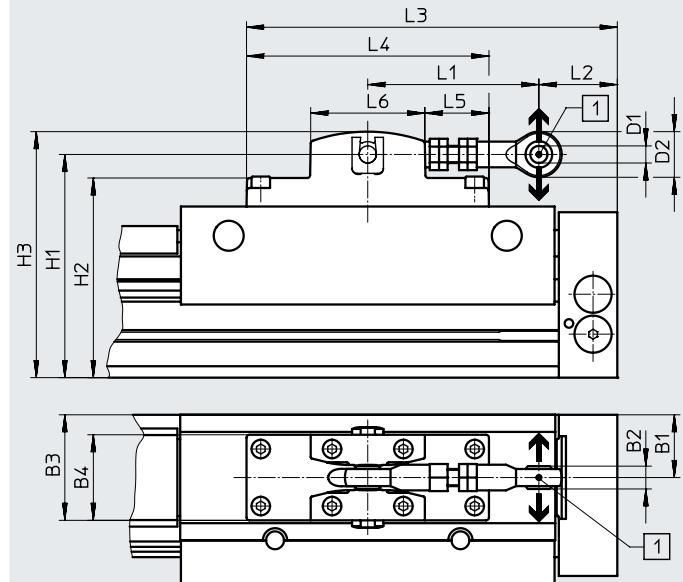


Note

Compensation possible
in direction of arrow.

[1] Max. offset:
With diam. 8 ... 40: ± 2.5 mm
With diam. 50/63: ± 4 mm

For diam. 50/63



Accessories

Dimensions and ordering data		Max. permissible load in direction of force				Ambient temperature				
For diam. [mm]	Max. offset between linear drive and external guide [mm]	[N]				[°C]				
8	± 2.5	550			Backlash-free	-10 ... +60				
12		550			Backlash-free					
18		1400			Backlash-free					
25		1400			Backlash-free					
32		1400			Backlash-free					
40		1400			Backlash-free					
50		5000			Low backlash					
63		5000			Low backlash					
For diam. [mm]	B1	B2	B3	B4	D1	D2	H1	H2	H3	L1
8	17.5	10.2	30	16	M5	20	43.5	42	48	40
12	18.5	10.2	31	16	M5	20	49	47.5	53.5	40
18	29.3	16.5	47.8	20	M8	30	66.8	59.8	73.8	60
25	42.65	16.5	61.15	30	M8	30	75.5	68	82.5	60
32	43	16.5	61.5	30	M8	30	90	82.5	97	60
40	57.3	16.5	75.8	45	M8	30	105	97.5	113	60
50	44	16	74	60	12 ^{H7}	32	156.5	140	172.4	120 ... 125
63	50	16	80	60	12 ^{H7}	32	176.5	161.5	192.4	120 ... 125
For diam. [mm]	L2	L3	L4	L5	L6	CRC ¹⁾	Weight	Part no.	Type	
							[g]			
8	5.1	62.6	35	13	9	1	29	529350	FKC-8/12	
12	17.1	74.6	35	13	9		29	529350	FKC-8/12	
18	24.5	107	65	15.5	14		97	538714	FKC-18	
25	50	132.5	65	15.5	14		119	538715	FKC-25	
32	77.5	162	75	17.5	14		122	538961	FKC-32	
40	103	187.5	75	17.5	14		180	538962	FKC-40	
50	50 ... 55	260	170	45	80		1200	545240	FKC-50/63	
63	75 ... 80	260	170	45	80		1200	545240	FKC-50/63	

1) 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).

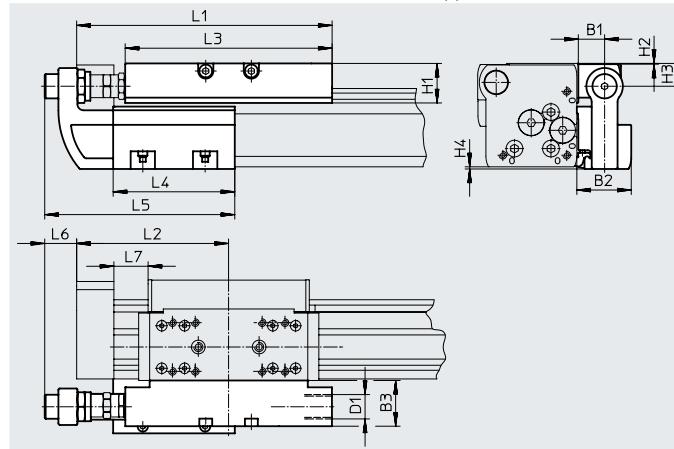
Accessories

Shock absorber retainer DADP-DGC**Stop KYC**(order code: YWZ1 or YWZ2)
for DGC-GF, DGC-KF, DGC-FA

Materials:

Shock absorber retainer, housing:
anodised aluminium
Free of copper and PTFE

Materials:

Stop, housing: anodised aluminium
Stop bracket: stainless steel casting
Clamp: high-alloy steel
Free of copper and PTFE**Note**

Shock absorbers are not included in the scope of delivery.
Existing shock absorbers can be removed from the end caps of the linear drive and installed in the shock absorber retainer.
Under no circumstances may the linear drive and the intermediate-position module be operated without a shock absorber.

Dimensions

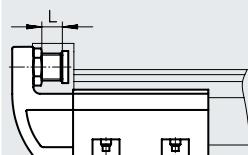
For diam. [mm]		B1	B2	B3	H1	H2	H3	H4
18	GF	16	34.5	29	20.7	0.2	12.5	0.7
	KF							
25	GF	16.5	35	28	25.5	0.5	15	1.4
	KF			30				
32	GF	16.5	35	28	25.5	0.5	15	1.7
	KF			30				
40	GF	16	35.7	29	32	0.5	21.5	1.6
	KF			35	37			
50	GF	25	50	41	40.5	0.5	24	0
	KF							
63	GF	25	50	40	51.5	1.5	33	0
	KF							

For diam. [mm]		L1	L2	L3	L4	L5	L6	L7 min.
18	GF	128	74.5	107	80	118.5	23.5	14.5
	KF							
25	GF	168	100	136	80	125	20.5	22.5
	KF							
32	GF	206.8	124.8	164	120	165	14.5	42.8
	KF							
40	GF	255	150	210	156	220.5	31	30.8
	KF							
50	GF	301	175	252	170	238	27	31
	KF							
63	GF	328	200	256	200	268	24	41
	KF							

Accessories

Technical data and ordering data

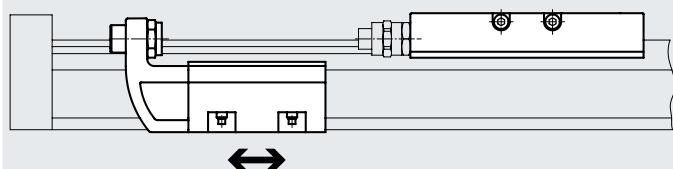
Precision adjustment



Note

The stop KYC can be used in both directions.

Mounting example



Note

The stop KYC can be mounted at any position along the stroke.

For diam. [mm]	Max. impact force [N]	Ambient temperature [°C]	CRC ¹⁾	Weight [g]	Part no.	Type ²⁾	
Shock absorber retainer							
18	GF	1100	-10 ... +80	2	140	541725	DADP-DGC-18-GF
	KF				130	541729	DADP-DGC-18-KF
25	GF	1400			205	541726	DADP-DGC-25-GF
	KF				180	541730	DADP-DGC-25-KF
32	GF	1700			225	541727	DADP-DGC-32-GF
	KF				215	541731	DADP-DGC-32-KF
40	GF	3500			380	541728	DADP-DGC-40-GF
	KF				460	541732	DADP-DGC-40-KF
50	GF	3500			890	545244	DADP-DGC-50
	KF				1080	545245	DADP-DGC-63

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

2) Suitable for ATEX

For diam. [mm]	Precision adjustment L [mm]	Ambient temperature [°C]	CRC ¹⁾	Weight [g]	Part no.	Type ²⁾
Stop						
18	10	-10 ... +80	2	400	541691	KYC-18
	10			560	541692	KYC-25
32	10			790	541693	KYC-32
	15			1525	541694	KYC-40
50	15			2270	545242	KYC-50
	15			2950	545243	KYC-63

1) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

2) Suitable for ATEX

Accessories

Intermediate-position module**DADM-DGC**

(order code: Z1, Z2 or Z3)

for DGC-KF



Materials:

Housing: anodised aluminium

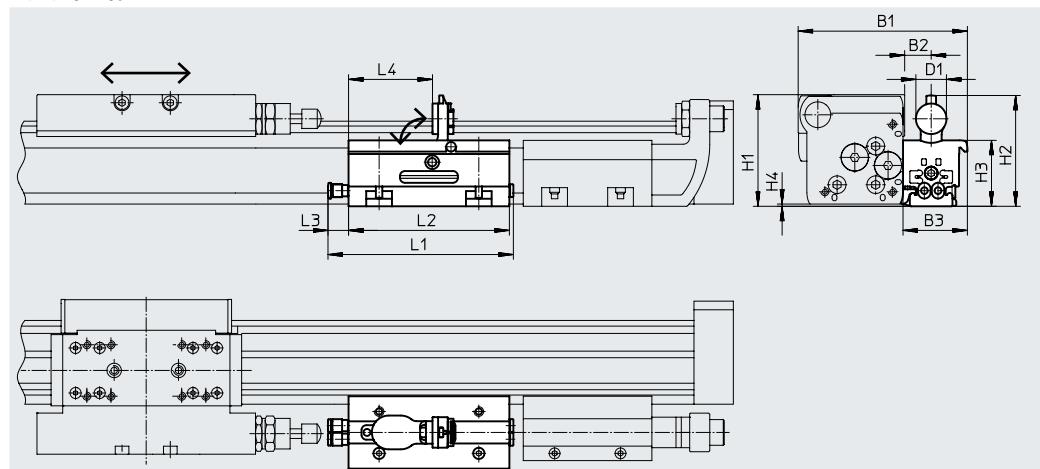
Stop screw, nut:

Galvanised steel

Clamp, lever:

High-alloy steel

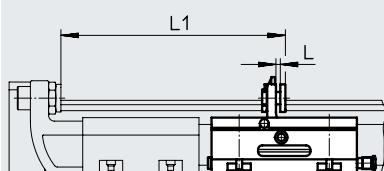
Free of copper and PTFE

**Dimensions**

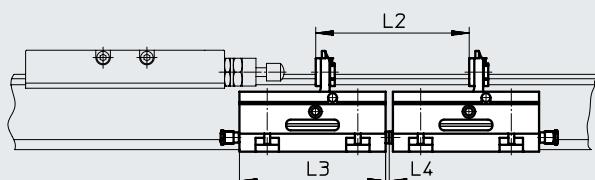
For diam. [mm]	B1	B2	B3	D1	H1	H2	H3	H4	L1	L2	L3	L4
25	105	16.5	40	19	69.4	68.6	41	1.4	116	100	13.4	52.2
32	117.5	16.5	40	19	80.2	79.7	52	1.7	116	100	13.4	52.2
40	137.5	16	41	27	101.6	101.1	63	2.1	186	170	13.4	76.5

Minimum distance

Between end stop and intermediate position



Between two intermediate positions



For diam. [mm]	L1
25	145.3
32	185.3
40	271.5

For diam. [mm]	L2	L3	L4
25	105	100	2.5
32	105	100	2.5
40	175	170	2.5

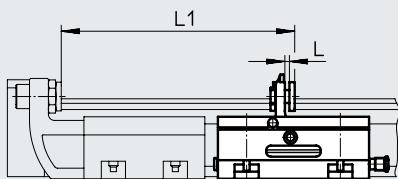
Note

- Shock absorbers are not included in the scope of delivery. Existing shock absorbers can be removed from the end caps of the linear drive and installed in the shock absorber retainer.
- Under no circumstances may the linear drive and the intermediate-position module be operated without a shock absorber.
- A shock absorber retainer DADP-DGC and a stop KYC are additionally required when using an intermediate-position module.

- The projection (dimension H4) must be observed when using the drive in combination with the intermediate-position module DADM-DGC. Mounting via foot mountings HP or profile mountings MUC is recommended in this case.
- The stop lever positions can be sensed via proximity sensors SME/SMT-10 → page 75.
- After reaching the intermediate position, the slide cannot directly travel further in the same direction. After an intermediate stop, the slide must first move back so that the stop lever of the intermediate-position module can swing in. The intermediate position can then be travelled through.

Accessories

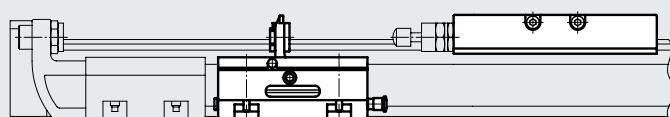
Precision adjustment L



Note

The intermediate-position module DADM-DGC can be used in both directions. A shock absorber retainer DADP-DGC and a stop KYC are additionally needed when using an intermediate-position module.

Mounting example



Note

The intermediate-position module DADM-DGC can be mounted at any place along the stroke.

Technical data

For diam.	[mm]	25	32	40
Pneumatic connection		QS-4		
Operating pressure	[bar]	2.5 ... 8		
Mounting position		Any		
Impact speed	[m/s]	→ page 46		
Swivel time	[ms]	≤100	≤100	≤300
Precision adjustment L	[mm]	2	2	4
Repetition accuracy	[mm]	0.02		
Position sensing		Via proximity sensors SME/SMT-10		
Weight	[g]	430	530	970
Ambient temperature	[°C]	-10 ... +60		
Corrosion resistance class CRC ¹⁾		2		
Note on materials		Free of copper and PTFE		-
		RoHS-compliant		

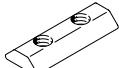
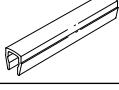
1) Corrosion resistance class CRC 2 to Festo standard FN 940070

Moderate corrosion stress. Indoor applications in which condensation can occur. External visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment.

Ordering data

	For diam. [mm]	Part no.	Type
	25	541700	DADM-DGC-25-A
	32	541701	DADM-DGC-32-A
	40	541702	DADM-DGC-40-A

Accessories

Ordering data		For diam.	Comment	Order code	Part no.	Type	PU ¹⁾	
Slot nut HMBN ²⁾							Data sheets → Internet: hmbn	
	25 ... 40	For mounting slot	B	547264	HMBN-5-1M5	10		
	50, 63			186566	HMBN-5-2M5			
Centring pin/sleeve ZBS/ZBH ²⁾							Data sheets → Internet: zbs, zbh	
	For DGC-G 8, 12 8, 12 50, 63 For DGC-GF 18 25 ... 63 50, 63 For DGC-KF 8, 12, 18 25 ... 63 8, 12 18 25 ... 63	For slide	-	150928	ZBS-5	10		
		For cap	-	525273	ZBS-2			
				150927	ZBH-9			
		For slide	-	150928	ZBS-5	10		
			-	150927	ZBH-9			
		For cap	-	150927	ZBH-9			
		For slide	-	150928	ZBS-5	10		
			-	150927	ZBH-9			
		For cap	-	525273	ZBS-2			
			-	150928	ZBS-5			
			-	150927	ZBH-9			
Slot cover ABP-S ²⁾							Data sheets → Internet: abp	
	18 ... 63	For sensor slot Each 0.5 m	L	151680	ABP-5-S	2		
Shock absorber YSRW ²⁾							Data sheets → Internet: ysrw	
	8 12 18 25 32 40 50 63 18 25 32 40, 50 63	For DGC basic design and recirculating ball bearing guide For DGC with plain-bearing guide	YSRW	540344	YSRW-DGC-8	1		
				540345	YSRW-DGC-12			
				540346	YSRW-DGC-18-GF			
				540348	YSRW-DGC-25-GF			
				540350	YSRW-DGC-32-GF			
				540352	YSRW-DGC-40-GF			
				1232870	YSRW-DGC-40/50-B			
				543069	YSRW-DGC-63			
		For DGC with recirculating ball bearing guide		540347	YSRW-DGC-18-KF			
				540349	YSRW-DGC-25-KF			
				540351	YSRW-DGC-32-KF			
				1232870	YSRW-DGC-40/50-B			
				543069	YSRW-DGC-63			

1) Packaging unit

2) Suitable for ATEX

Accessories

Ordering data		For diam.	Comment	Order code	Part no.	Type	PU ¹⁾
One-way flow control valve GRLA							
	8 ... 18	Metal design	-	★ 193137	GRLA-M5-QS-3-D		1
	25, 32			★ 193138	GRLA-M5-QS-4-D		
	40, 50			★ 193142	GRLA-1/8-QS-3-D		
	63			★ 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-D		
				★ 193150	GRLA-3/8-QS-8-D		
				★ 193151	GRLA-3/8-QS-10-D		

1) Packaging unit

Proximity sensors for piston diameter 8/12 and intermediate-position module DADM

Ordering data – Proximity sensors for C-slot, magneto-resistive		Data sheets → Internet: smt				
Type of mounting	Switching output	Electrical connection, outlet direction of connection	Cable length [m]	Part no.	Type	
N/O contact						
	Insertable in the slot from above	PNP	Plug M8x1, 3-pin, in-line	0.3	★ 551375	SMT-10M-PS-24V-E-0.3-L-M8D
			Cable, 3-wire, in-line	2.5	★ 551373	SMT-10M-PS-24V-E-2.5-L-OE
Ordering data – Proximity sensors for C-slot, magnetic reed						
Type of mounting	Switching output	Electrical connection, outlet direction of connection	Cable length [m]	Part no.	Type	
N/O contact						
	Insertable in the slot from above	Contacting	Plug M8x1, 3-pin, in-line	0.3	★ 551367	SME-10M-DS-24V-E-0.3-L-M8D
			Cable, 3-wire, in-line	2.5	★ 551365	SME-10M-DS-24V-E-2.5-L-OE
			Cable, 2-wire, in-line	2.5	★ 551369	SME-10M-ZS-24V-E-2.5-L-OE
	Insertable in the slot lengthwise	Contacting	Plug M8x1, 3-pin, in-line	0.3	173212	SME-10-SL-LED-24
			Cable, 3-wire, in-line	2.5	173210	SME-10-KL-LED-24

Proximity sensors for piston diameter 18 ... 63

Ordering data – Proximity sensors for T-slot, magneto-resistive		Data sheets → Internet: smt				
Type of mounting	Switching output	Electrical connection	Cable length [m]	Part no.	Type	
N/O contact						
	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
N/C contact						
	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

Festo core product range



Generally ready for dispatch from the factory within 24 hours



Generally ready for dispatch from the factory within 5 days

Accessories

Proximity sensors for piston diameter 18 ... 63

Ordering data – Proximity sensors for T-slot, magnetic reed

Data sheets → Internet: sme

	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part no.	Type	
N/O contact							
	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	
N/C contact							
	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, magneto-resistive, for ATEX zone

Data sheets → Internet: smt

Ordering data – Safety clip for ATEX zone

	Description	For size	Part no.	Type
	<ul style="list-style-type: none"> Protects "equipment that is not intrinsically safe" against simple disconnection, here the plug of the proximity sensor SMT and connecting cable NEBU ATEX category: gas: II 3G / dust: II 3D 	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

Festo core product range



Generally ready for dispatch from the factory within 24 hours



Generally ready for dispatch from the factory within 5 days