

Passive guide axes DGC-FA, without drive

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Passive guide axes DGC-FA, without drive

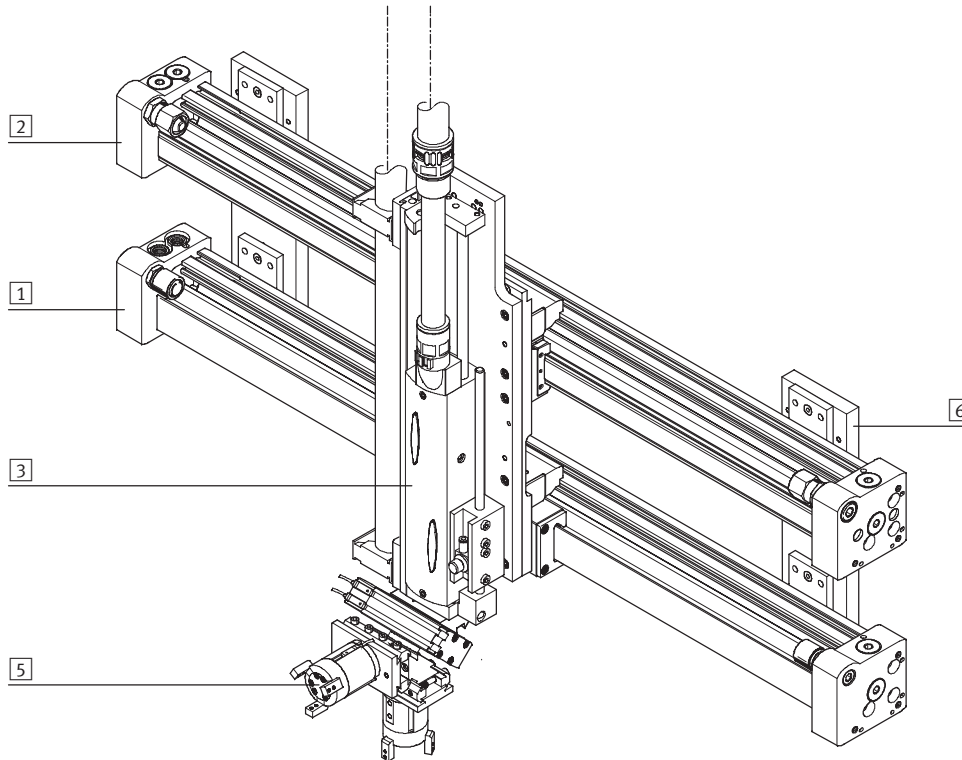
Key features

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At a glance

- Driveless linear guide unit with guide and freely movable slide
- The passive guide axis/heavy-duty guide is designed to increase force and torque capacities in multi-axis applications
- Higher torsional resistance
- Reduced vibrations with dynamic loads
- Drive axis and passive guide axis/heavy-duty guide can be arranged adjacent to or above one another

System product for handling and assembly technology



System components and accessories

	Brief description	→ Page/Internet
1 Axes	Wide range of combinations possible within handling and assembly technology	axis
2 Passive guide axes	For increasing force and torque capacity in multi-axis applications	guide axis
3 Drives	Wide range of combinations possible within handling and assembly technology	drive
5 Grippers	Wide range of variations possible within handling and assembly technology	gripper
6 Adapters	For drive/drive and drive/gripper combinations	adapter kit
– Motors	Servo and stepper motors, with or without gearing	motor

Passive guide axes DGC-FA, without drive

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Key features

Guide axes and the corresponding drives

Passive guide axis DGC-FA



- Can be combined with:
 - Linear drive DGC-KF
- For size 8 ... 63
- Load capacity to max. 6,890 N or 380 Nm

Passive guide axis EGC-FA



- Can be combined with:
 - Toothed belt axis EGC-TB
 - Spindle axis EGC-BS
- For size 70 ... 185
- Load capacity to max. 15,200 N or 1,820 Nm

Passive guide axis FDG-ZR-RF



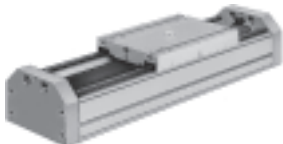
- Can be combined with:
 - Toothed belt axis DGE-ZR-RF
- For size 25 ... 63
- Load capacity to max. 1,500 N or 600 Nm

Passive guide axis FDG-P/-ZR/-SP



- Can be combined with:
 - Linear drive DGPL
 - Toothed belt axis DGE-ZR-KF
 - Spindle axis DGE-SP-KF
- For size 18 ... 63
- Load capacity to max. 14,050 N or 1,820 Nm

Heavy-duty guide HD



- Size HD8 ... HD40
- Stroke lengths of 10 ... 2,160 mm
- Load capacity to max. 5,600 N or 560 Nm

Passive guide axes DGC-FA, without drive

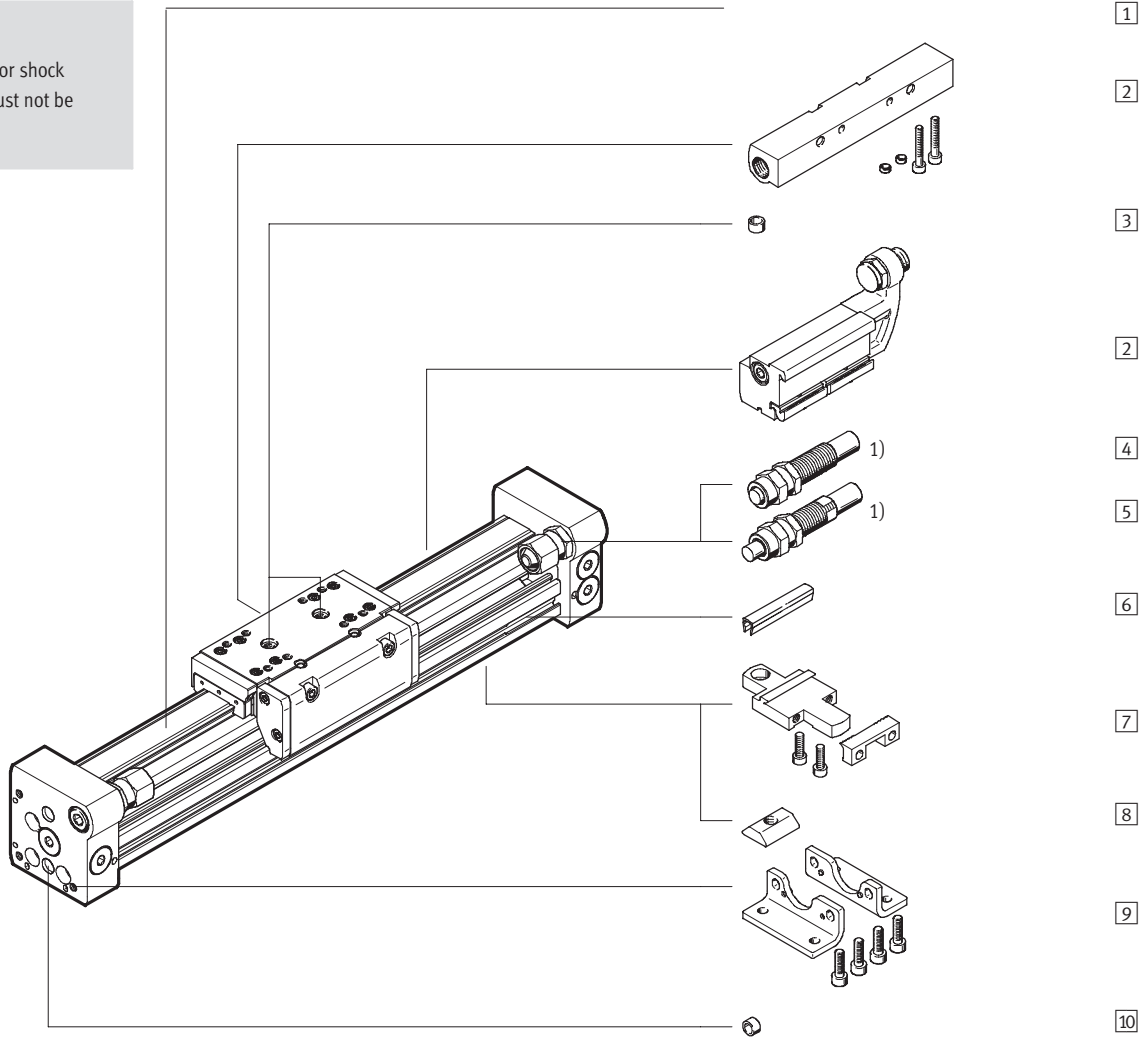
Peripherals overview

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Note

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



Passive guide axes DGC-FA, without drive

Peripherals overview



Variants and accessories		
Type	Brief description	→ Page/Internet
1 Passive guide axes DGC-FA	Passive guide axis without accessories	6
2 Mechanical end position limiter YWZ	For variable end position adjustment, e.g. for format adjustments	29
3 Centring pin/sleeve ¹⁾ ZBS/ZBH	For centring loads and attachments on the slide	31
– Cushioning P	Non-adjustable, flexible cushioning. Only used for low speeds	23
4 Shock absorber YSR	Self-adjusting hydraulic shock absorber with spring return and linear cushioning characteristic	23
5 Shock absorber YSRW	Self-adjusting hydraulic shock absorber with spring return and progressive cushioning characteristic	23
6 Slot cover L	For protecting against ingress of dirt and securing proximity sensor cables	31
7 Profile mounting M	Simple and precise mounting option via dovetail connection	28
8 Slot nut B	For mounting attachments	31
9 Foot mounting F	For mounting on end cap	24
10 Centring pin/sleeve ¹⁾ ZBS/ZBH	For centring the drive DGC without foot mountings (user-specific)	31

1) Included in the scope of delivery for the axis

Passive guide axes DGC-FA, without drive

Type codes

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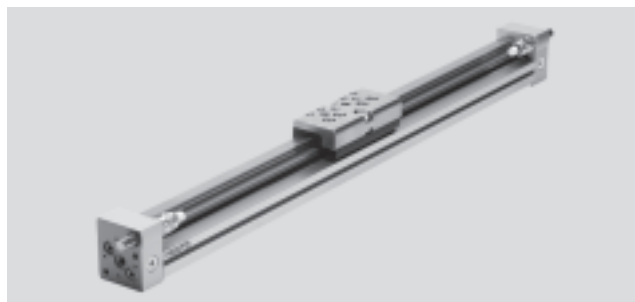
		DGC	–	25	–	500	–	FA	–	YSR	–		–		–		–	FL	–	
Type																				
DGC	Linear drive																			
Piston Ø [mm]																				
Stroke [mm]																				
Guide																				
FA	Passive guide axis																			
Cushioning																				
P	Elastic cushioning, non-adjustable																			
YSR	Linear shock absorber, self-adjusting																			
YSRW	Progressive shock absorber, self-adjusting																			
Slide																				
GP	Protected recirculating ball bearing guide																			
Lubrication function																				
	Standard																			
C	Lubrication adapter																			
Additional slide																				
K	Additional slide																			
Accessories																				
F	Foot mounting																			
... M	Profile mounting																			
... B	Slot nut for mounting slot																			
... L	Slot cover for sensor slot																			
YWZ1	Variable end position, at one end																			
YWZ2	Variable end position, at both ends																			
Manual																				
O	Express waiver – no operating instructions to be included																			

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Technical data

-  - Diameter
8 ... 63 mm
-  - Stroke length
1 ... 8,500 mm



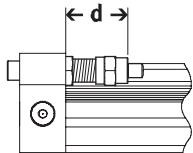
General technical data								
Piston Ø	8	12	18	25	32	40	50	63
Stroke [mm]	1 ... 1,300	1 ... 1,900	1 ... 3,000	1 ... 8,500			1 ... 5,000	
Guide	External recirculating ball bearing guide							
Mounting position	Any							
Cushioning	Non-adjustable at both ends							
→ 9	Self-adjusting at both ends							
Type of mounting	Profile mounting							
	Foot mounting							
	Direct mounting							
Max. speed [m/s]	1	1.2	3					
Repetition accuracy [mm]	0.02 (with shock absorber YSR/YSRW)							

Operating and environmental conditions								
Ambient temperature [°C]	-10 ... +60							
Corrosion resistance class CRC ¹⁾	1							

- 1) Corrosion resistance class 1 according to Festo standard 940 070
Components subject to low corrosion stress. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers.

Weight [g]								
Piston Ø	8	12	18	25	32	40	50	63
Basic weight per 0 mm stroke	225	391	975	2,113	2,837	6,996	13,342	22,220
Additional weight per 10 mm stroke	11	16	31	49	47	117	153	236
Moving load	77	149	331	732	1,146	2,330	4,511	8,225

Adjustable end-position range d [mm]



Piston Ø	8	12	18	25	32	40	50	63
Cushioning P	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
Protected guide with cushioning P	–	–	16.9 ... 18.9	23.6 ... 27.6	25.2 ... 30.2	34.7 ... 39.7	–	–
Cushioning YSR/YSRW	12.8 ... 22.8	14 ... 24	14.5 ... 34.5	22.5 ... 47.5	27.3 ... 37.3	31 ... 56	31 ... 56	41 ... 76

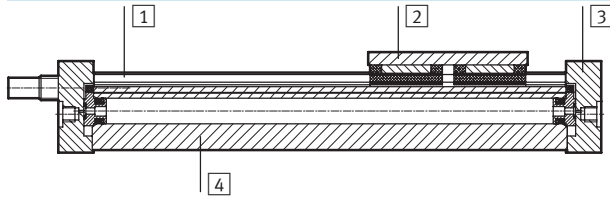
Passive guide axes DGC-FA, without drive

Technical data

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Materials

Sectional view

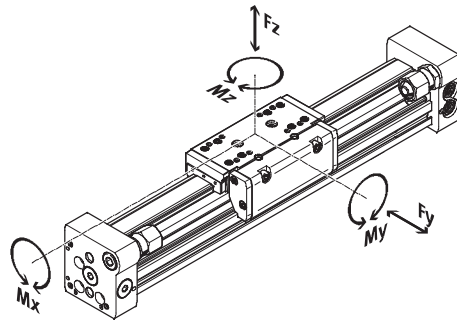


Guide axes		
1	Guide rail	High-alloy steel
2	Slide	High-alloy steel
3	End cap	Anodised aluminium
4	Cylinder barrel	Anodised aluminium
-	Sealing band	Polyurethane

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 cushioning phase.



If the drive is simultaneously subjected to several of the indicated forces and torques, 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 Ø	8	12	18	25	32	40	50	63
F _y _{max.} [N]	300	650	1,850	3,050	3,310	6,890	6,890	15,200
F _z _{max.} [N]	300	650	1,850	3,050	3,310	6,890	6,890	15,200
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	1,157
M _z _{max.} [Nm]	4.5	10	51	97	150	380	634	1,157

Note

ProDrive
sizing software
→ www.festo.com

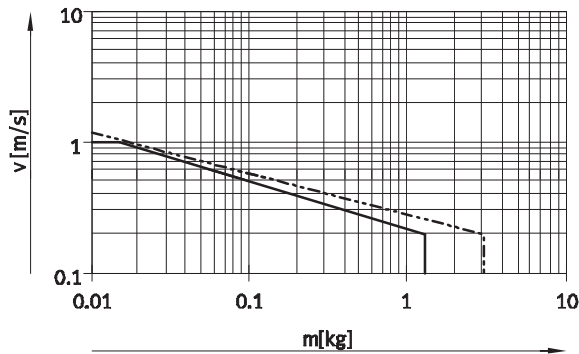
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Technical data

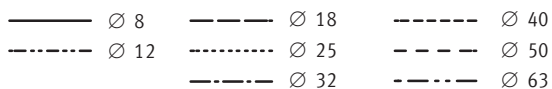
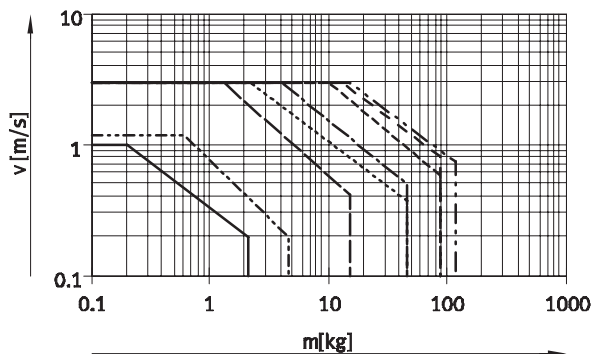
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Maximum permissible slide speed v as a function of effective load m

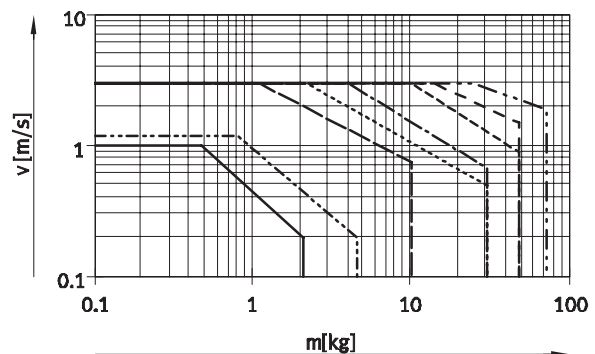
Piston $\varnothing$ 8/12 with P cushioning



Piston $\varnothing$ 8 ... 40 with YSR cushioning



Piston $\varnothing$ 8 ... 40 with YSRW cushioning



Note

This data represents the maximum values that can be achieved. Values fluctuate in practice relative to the position of the effective load and mounting position.

Operating range of cushioning

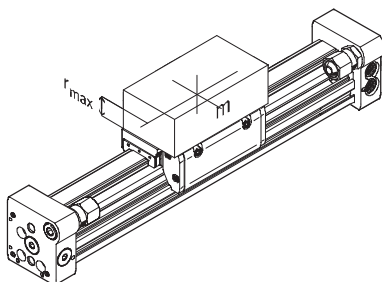
The end-position cushioning must be adjusted to ensure jerk-free operation. If the operating conditions are outside the permissible range, the load to be moved must be cushioned using suitable equipment (shock absorbers, stops, etc.), preferably at the centre of gravity of the load.

Note

To avoid distortion in the slide, the bearing surfaces of the attachments must maintain a flatness of 0.01 mm.

The specifications apply to a horizontal mounting position:

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



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Technical data

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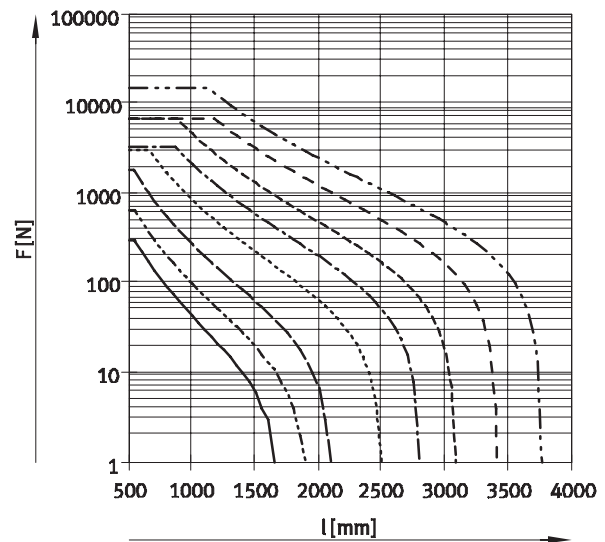
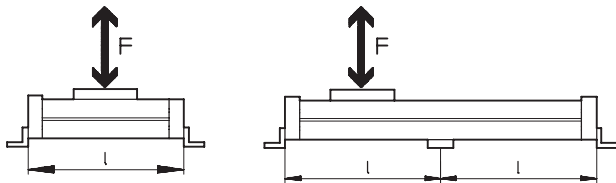
Number of profile mountings MUC as a function of force due to weight F and support span l

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

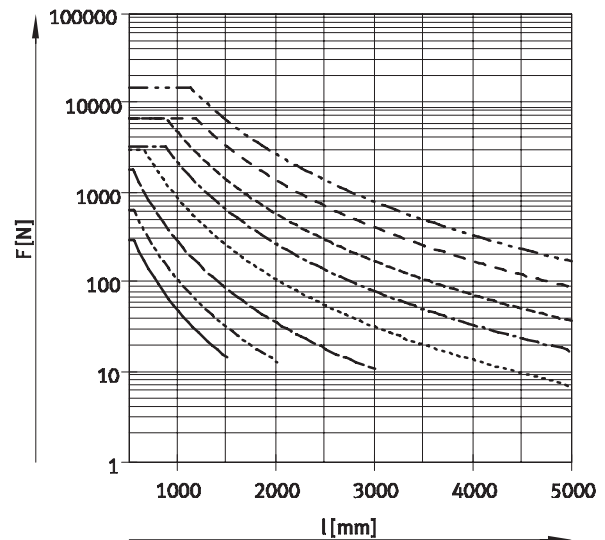
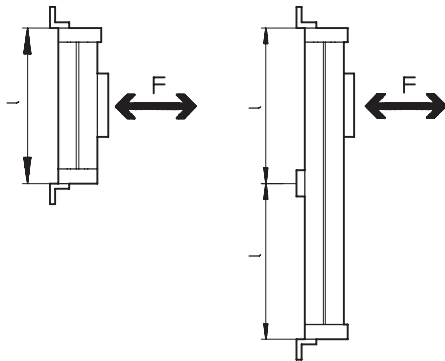
graphs help to determine the maximum permissible support span

as a function of mounting position, force due to weight and normal force.

Horizontal mounting position



Vertical mounting position



Example:

The guide axis DGC-25-1500 is subjected to a force of 300 N in the horizontal assembly position.

The axis has an overall length of:

$$\begin{aligned}
 l &= \text{stroke length} + L1 \\
 &= 1,500 \text{ mm} + 200 \text{ mm} \\
 &= 1,700 \text{ mm}
 \end{aligned}$$

According to the graph, the max. support span is 1,300 mm for the axis DGC-25 with a force of 300 N.

In this example, profile mountings are required as the max. support span (1,300 mm) is smaller than the overall length of the axis (1,700 mm).

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Technical data

Central lubrication system

The lubrication adapter enables the guide of the passive guide axis DGC-FA to be permanently lubricated in applications in humid or wet ambient conditions using semi or fully automatic relubrication devices.

- For piston $\varnothing$ 25, 32, 40, 63
- The modules are suitable for oils and greases
- The dimensions of the passive guide axis DGC-FA 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:
 - Additional slide K
- Cannot be used in combination with:
 - Protected recirculating ball bearing guide GP

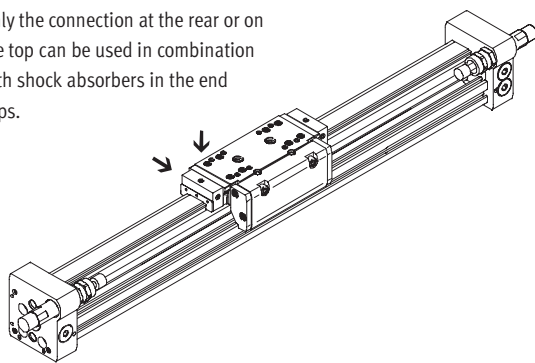
Slide dimensions

→ 20

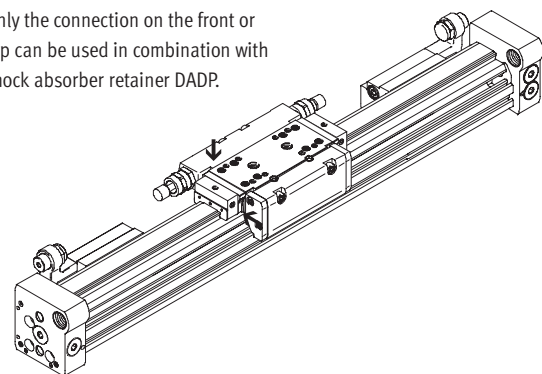
Order code C in the modular product system → 23

Connection options

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

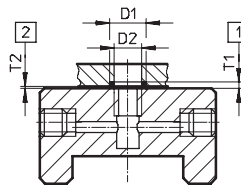


Only the connection on the front or top can be used in combination with shock absorber retainer DADP.



Connection option for customer design

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



D1 8^{+0.2} mm

D2 6 mm

T1 0.6^{-0.05} mm

T2 0.1^{+0.2} mm

O-ring $\varnothing$ 6x1 mm (DIN 3771)

1 Slot depth for O-ring

2 Required air gap

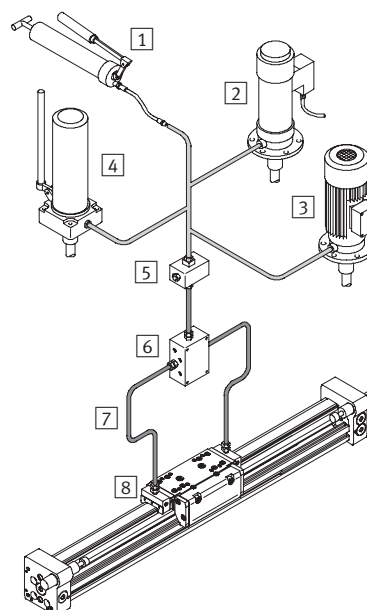
Additional dimensions → 20

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
- Bilomatik
- 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

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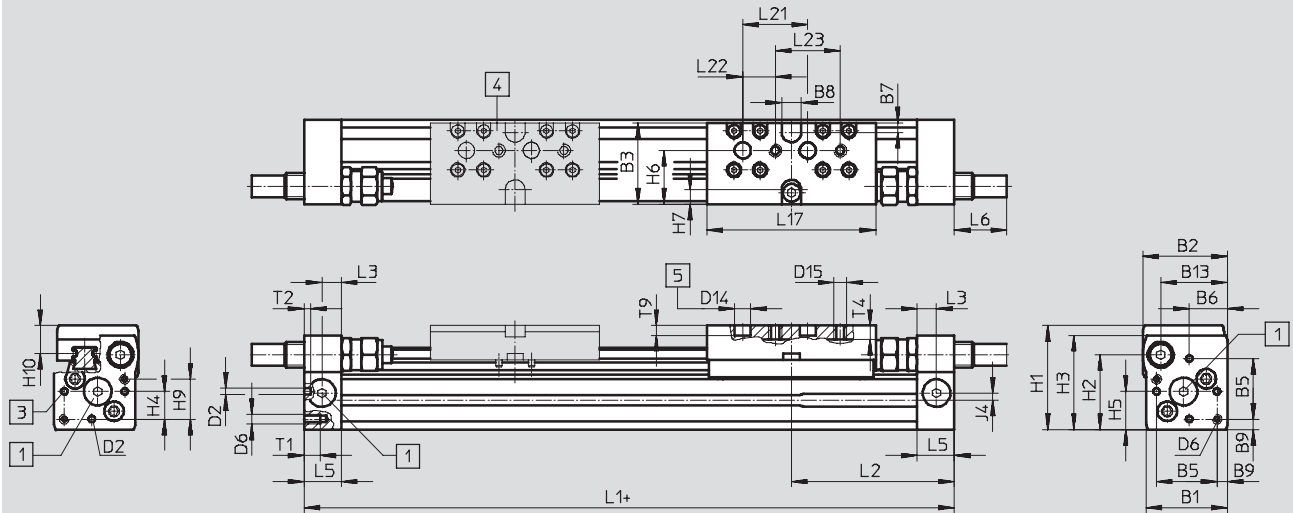
Technical data

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Dimensions

Download CAD Data → www.festo.com/us/cad

Ø 8 and 12



- + plus stroke length
- 1 The ports on the end caps are sealed with blanking plugs
- 3 Mounting hole for foot mounting or centring pin
- 4 Additional slide K
- 5 Hole for centring pin ZBS

Passive guide axes DGC-FA, without drive

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Technical data

Ø [mm]	B1	B2	B3	B5	B6	B7	B8 ±0.05	B9 ±0.1	B13	D2 Ø H8
8	25	26	25	18.6	11.7	3	6	3.2	20.5	2
12	30.2	31	31	20.6	13.5	3	8	4.8	25	2

Ø [mm]	D6	D14 Ø H7	D15	H1	H2	H3	H4	H5	H6	H7
8	M3	5	M4	32	23	29	8.5	11.7	16.5	4.5
12	M4	5	M4	37.5	28.5	34.5	8.7	13.5	20.5	5

Ø [mm]	H9	H10	J4	L1	L2	L3	L5	L6		
								P	YSR	YSRW
8	12.3	8.7	2.2	100	50.1	6	11.5	0	16	16.2
12	14.7	9.8	3	125	62.1	8	16	0	11.3	12.3

Ø [mm]	L17	L21 ±0.03	L22 ±0.1	L23 ±0.1	T1	T2	T4	T9 ±0.2	Stroke tolerance
8	52	20	10	20	5	2	4.3	3	0 ... 1.7
12	65	20	10	20	6	2	5	3	

Profile barrel

Ø 8

Ø 12



1 Sensor slot for proximity sensor

Passive guide axes DGC-FA, without drive

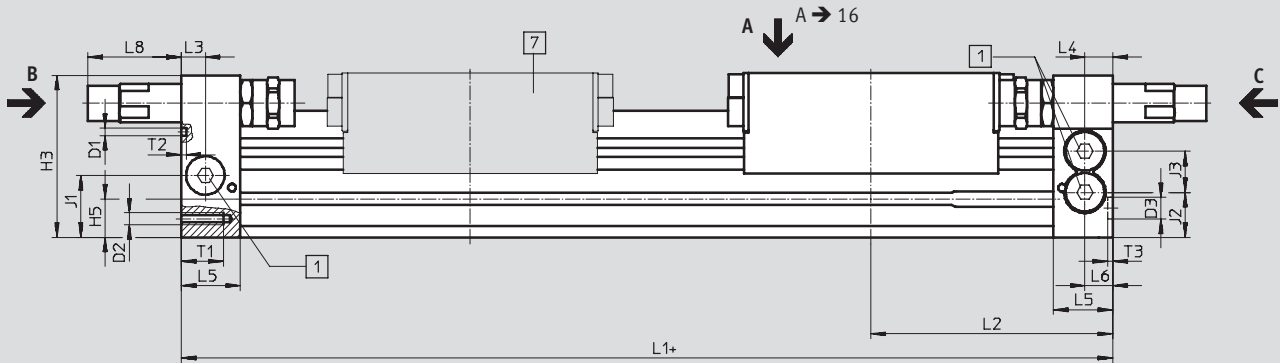
Technical data

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Dimensions

Download CAD Data → www.festo.com/us/cad

Ø 18 ... 40



View C

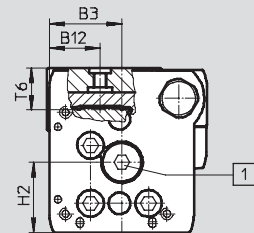
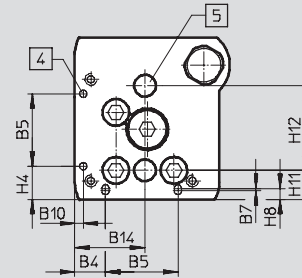
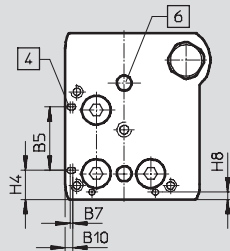
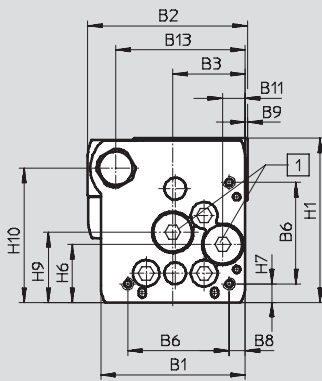
Ø 18 ... 40

View B

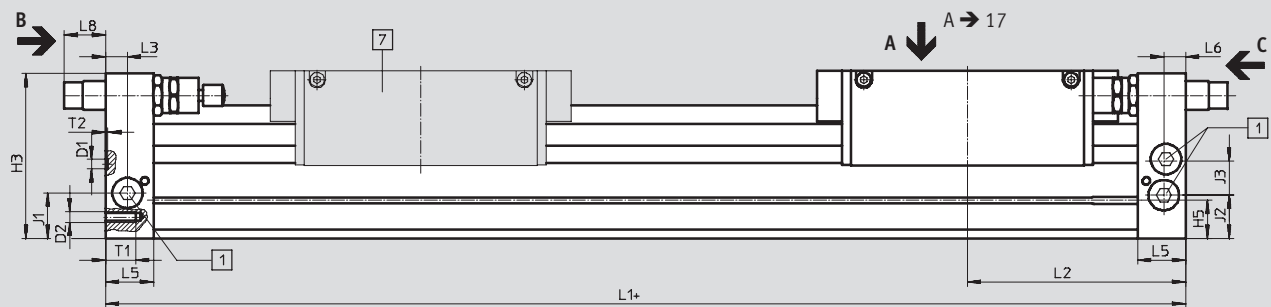
Ø 18

Ø 25 ... 40

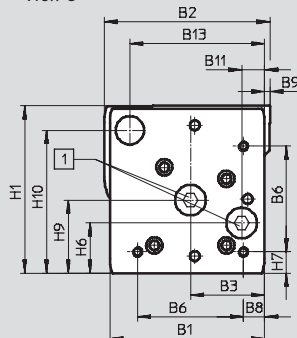
Ø 18 ... 40



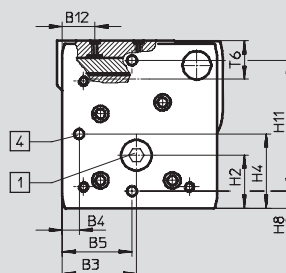
Ø 50/63



View C



View B



- + plus stroke length
- 1 The ports on the end caps are sealed with blanking plugs
- 4 Mounting hole for foot mounting HPC
- 5 Hole for centring sleeve ZBH
- 6 Hole for centring pin ZBS
- 7 Additional slide

Passive guide axes DGC-FA, without drive

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Technical data

Ø	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
[mm]												
18	44.5	49.9	19.5±0.05	8.8±0.1	21±0.05	31	0.8	3.8±0.1	1	2.4	5.5	15.5
25	59.8	66	30±0.05	12.65±0.1	30±0.05	42	1	6.65±0.1	1	3.5	9.3	21
32	73	79	38.5±0.05	5.7±0.1	63.1±0.05	57.5	–	8.5±0.1	1.5	14	14.9	18
40	91	98.5	45±0.05	17.2±0.1	55±0.05	65	–	12.2±0.1	2	8	16.5	24.8
50	113	126.5	60	8±0.2	52.8	81.6	–	12	0	–	21	24
63	142	149	68	15.5±0.2	68	97	–	19.5	5	–	21	30

Ø	B13	B14	D1 Ø	D2	D3 Ø H7	H1	H2	H3	H4 ±0.2	H5	H6
[mm]											
18	39	19.5	2±0.05	M4	5	56.3	23.1	55	9.6±0.2	13.4	20
25	53	29	3±0.05	M5	9	68	29	67	13.65±0.2	15.8	24
32	65	38.5	3±0.05	M6	9	78.5	30	77	5.7±0.2	17	27.7
40	80.5	45	4±0.05	M6	9	99.5	41.5	97.5	17.2±0.2	25	36.5
50	97	–	9H7	M8	–	124.5	38.5	122.5	52.8	29.3	36
63	123.5	–	9H7	M10	–	153.5	48.5	151	68	34.8	46

Ø	H7	H8	H9	H10	H11 ±0.15	H12 ±0.05	J1	J2	J3	L1	
[mm]										KF	KF-GP
18	4.6	2.4	25.2	46	8.5±0.15	30	20	16.5	11	150	157
25	7.65	4.5	29	55.5	12±0.15	35	26.1	18.6	17	200	205
32	8.5	14	35.2	63.8	11.45±0.15	50	30	22	18.5	250	250
40	12.2	8	44	81.5	15±0.15	60	35	26	26	300	312
50	12	8	53	104.5	100±0.05	–	30.5	30.5	28	350	–
63	19.5	15.5	67	131	120±0.05	–	41.5	39.5	31.5	400	–

Ø	L2		L3	L4	L5	L6	L8		T1	T2	T3 +0.2	T6	Stroke tolerance
[mm]	KF	KF-GP					YSR	YSRW					
18	74.5	78	5.7	5.8	15	5.5	29.9	32.4	9	2	3.1	15	0 ... 2.5
25	100	102.5	10.5	10.6	24.5	10.6	35.6	38.6	17.5	2	2.1	17.3	
32	124.8	124.8	14.5	14.5	30.5	14.5	19.5	28	15	2	2.1	20	
40	150	156	14.6	14.6	33.5	14.6	38.5	43.5	20	3	2.1	25.7	
50	175	–	17	–	41	17	31	36.3	24	2.1 ^{+0.2}	–	28.75	
63	200	–	20	–	44	20	38.3	48.3	27.5	2.1 ^{+0.2}	–	36.1	

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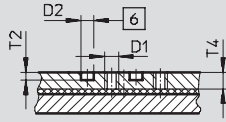
FESTO

Dimensions

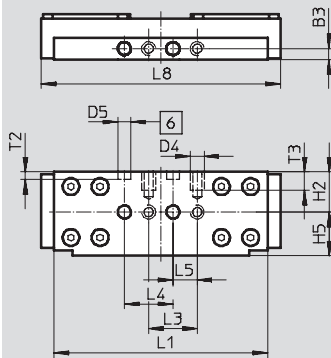
Download CAD Data → www.festo.com/us/cad

Slide

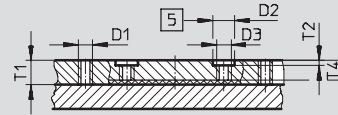
Ø 18



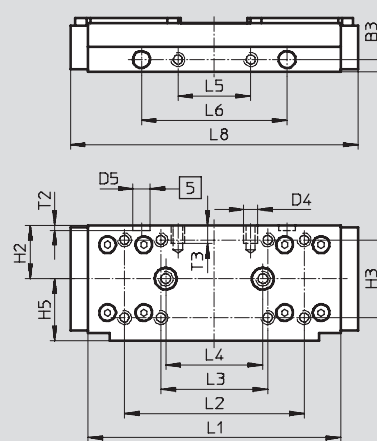
View A



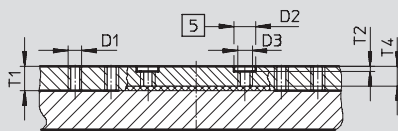
Ø 25



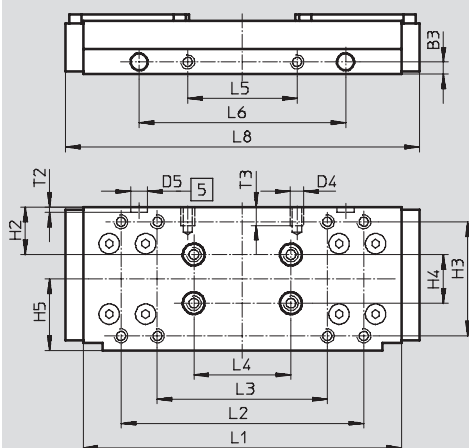
View A



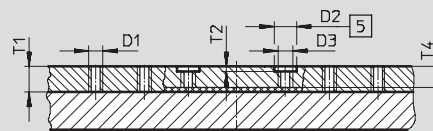
Ø 32



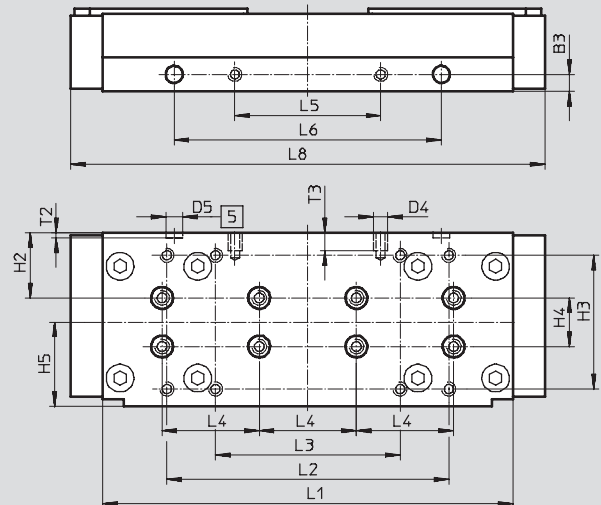
View A



Ø 40



View A



- [5] Hole for centring sleeve ZBH
- [6] Hole for centring pin ZBS

Passive guide axes DGC-FA, without drive

Technical data

FESTO

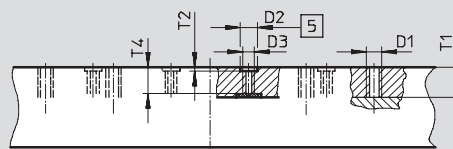
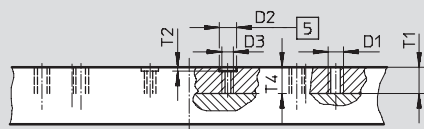
Dimensions

Download CAD Data → www.festo.com/us/cad

Slide

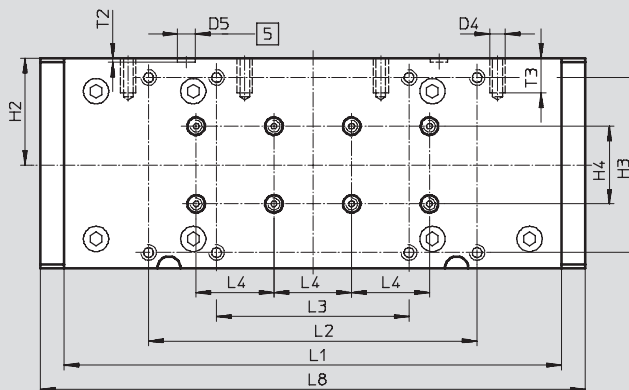
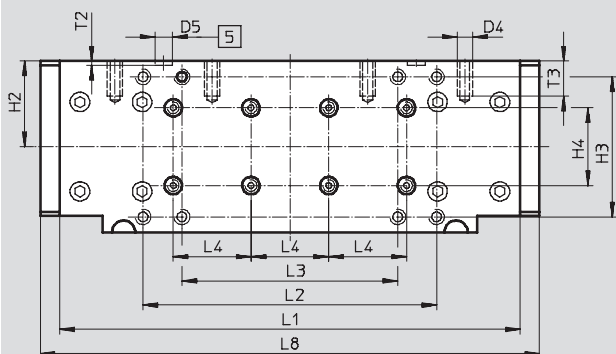
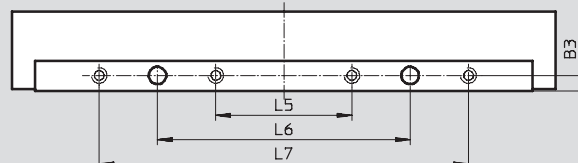
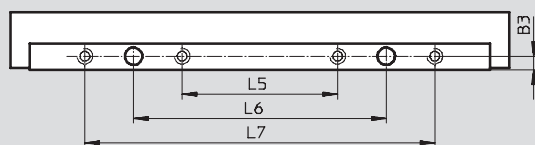
Ø 50

Ø 63



View A

View A



5 Hole for centring sleeve ZBH

6 Hole for centring pin ZBS

Ø	B3	D1	D2 Ø H7	D3	D4	D5 Ø H7	H2	H3	H4 ±0.03	H5 ±0.1	L1
[mm]	±0.05										
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

Ø	L2	L3	L4 ±0.03	L5 ±0.1	L6 ±0.05	L7 ±0.1	L8	T1	T2	T3	T4
[mm]											
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

Passive guide axes DGC-FA, without drive

Technical data

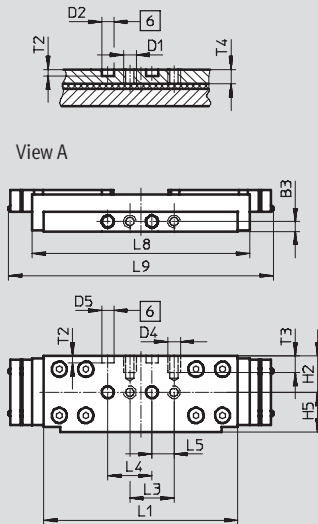
FESTO

Dimensions

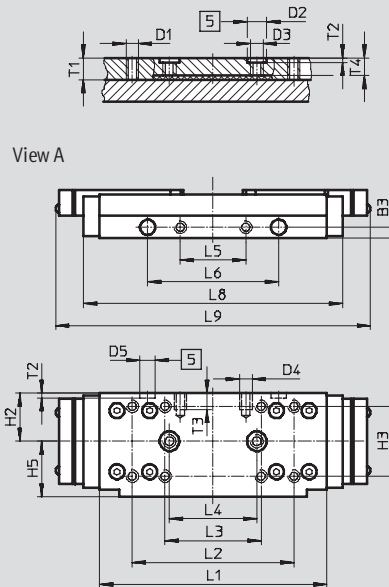
Download CAD Data → www.festo.com/us/cad

Slide, variant GP – Protected recirculating ball bearing guide

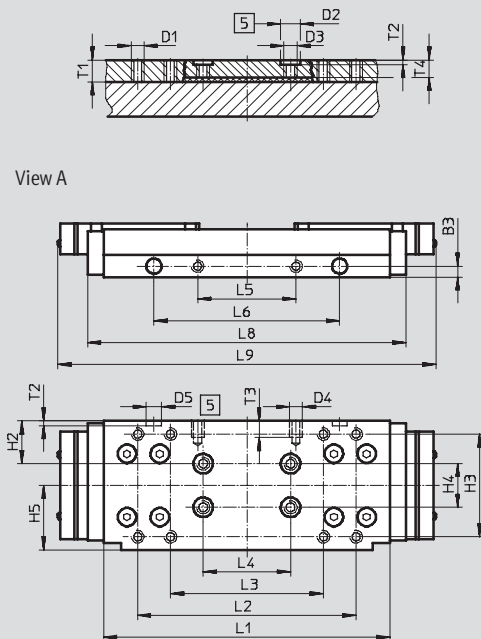
Ø 18



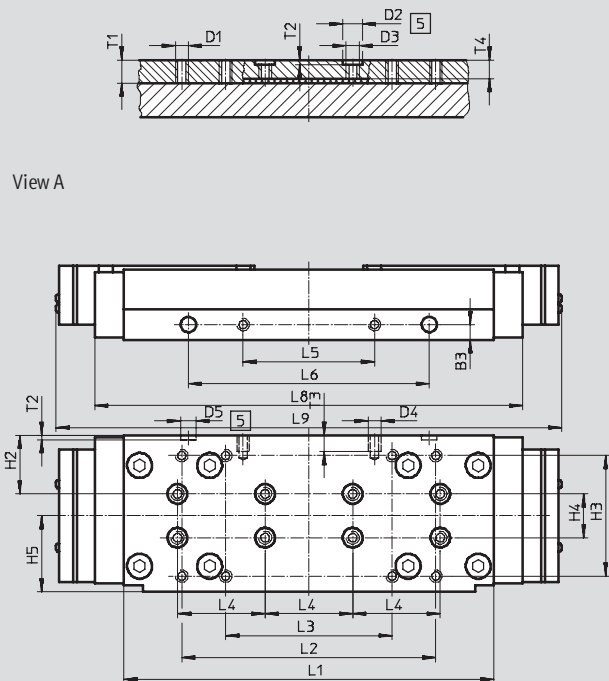
Ø 25



Ø 32



Ø 40



5 Hole for centring sleeve ZBH

6 Hole for centring pin ZBS

Passive guide axes DGC-FA, without drive

Technical data

FESTO

Ø [mm]	B3 ±0.05	D1	D2 Ø H7	D3	D4	D5 Ø 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
50	7	M8	9	M6	M8	9	44	72±0.3
63	8	M8	9	M6	M8	9	55	90±0.3

Ø [mm]	H4 ±0.03	H5 ±0.1	L1	L2	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
50	40	–	237±0.1	151	111±0.2	40	80	130
63	40	–	256±0.1	169	99±0.2	40	70	130

Ø [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
50	180	256.8	–	13.5	2.1±0.2	18	13.5
63	190	280	–	15.5	2.1±0.2	18	13.6

Passive guide axes DGC-FA, without drive

Technical data

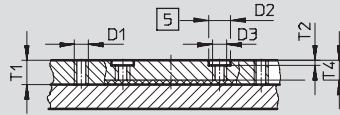
FESTO

Dimensions

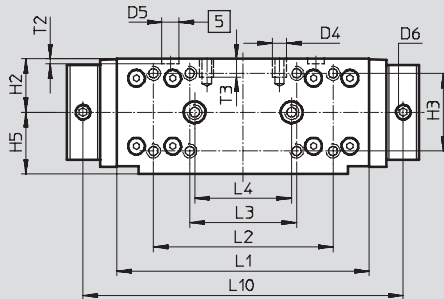
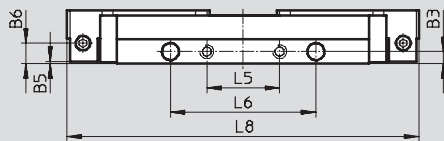
Download CAD Data → www.festo.com/us/cad

Slide, variant C – Lubrication adapter

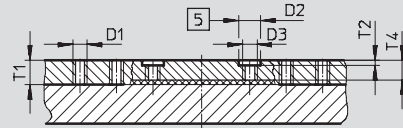
Ø 25



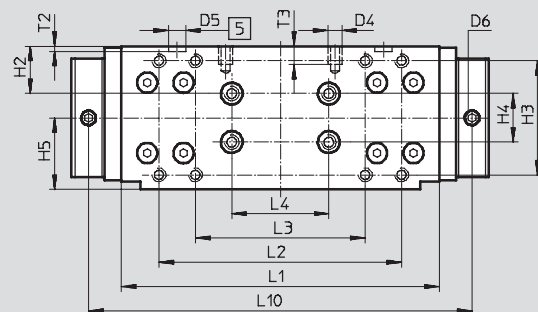
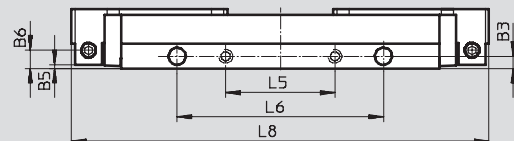
View A



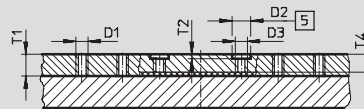
Ø 32



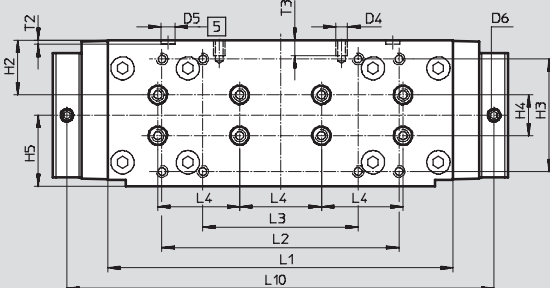
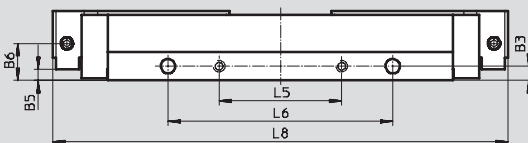
View A



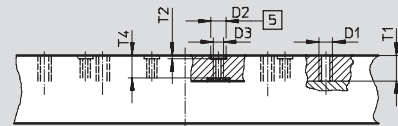
Ø 40



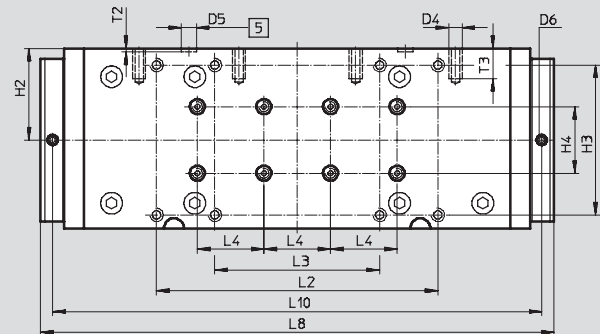
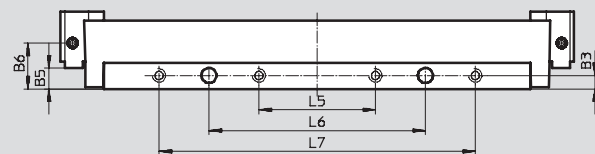
View A



Ø 63



View A



 Hole for centring sleeve ZBH

Passive guide axes DGC-FA, without drive

Technical data

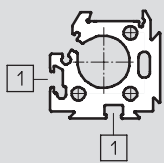
FESTO

Ø [mm]	B3 ±0.05	B5 ±0.05	B6	D1	D2 Ø H7	D3	D4	D5 Ø H7	D6	H2	H3	H4 ±0.03	H5 ±0.1
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	–

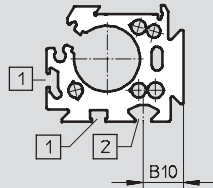
Ø [mm]	L1	L2	L3 ±0.2	L4 ±0.03	L5 ±0.1	L6 ±0.05	L7 ±0.1	L8	L10	T1	T2 ±0.2	T3	T4
25	104±0.2	74	44	40	30	60	–	145	132	10	2.1	7.5	8
32	131±0.2	100	70	40	45	85	–	172	158	10	2.1	7.5	8
40	169±0.2	116	76	40	60	110	–	223	209	10.5	2.1	7.5	8.5
63	256±0.1	169	99	40	70	130	190	308.4	293.8	15.5	2.1	18	13.6

Profile barrel

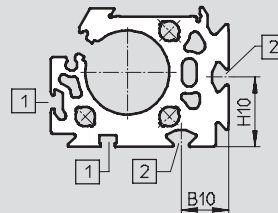
Ø 18



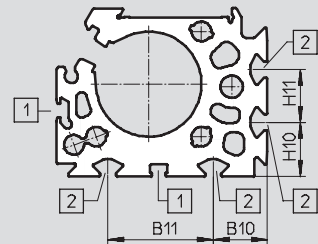
Ø 25



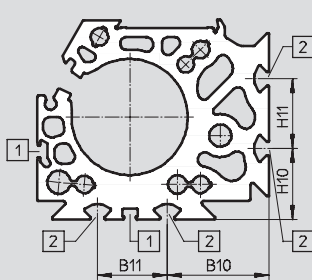
Ø 32



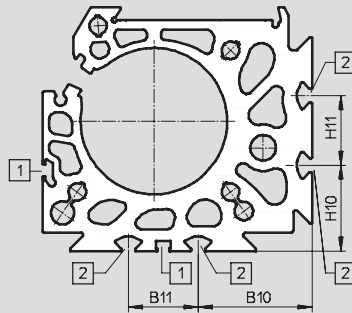
Ø 40



Ø 50



Ø 63



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

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

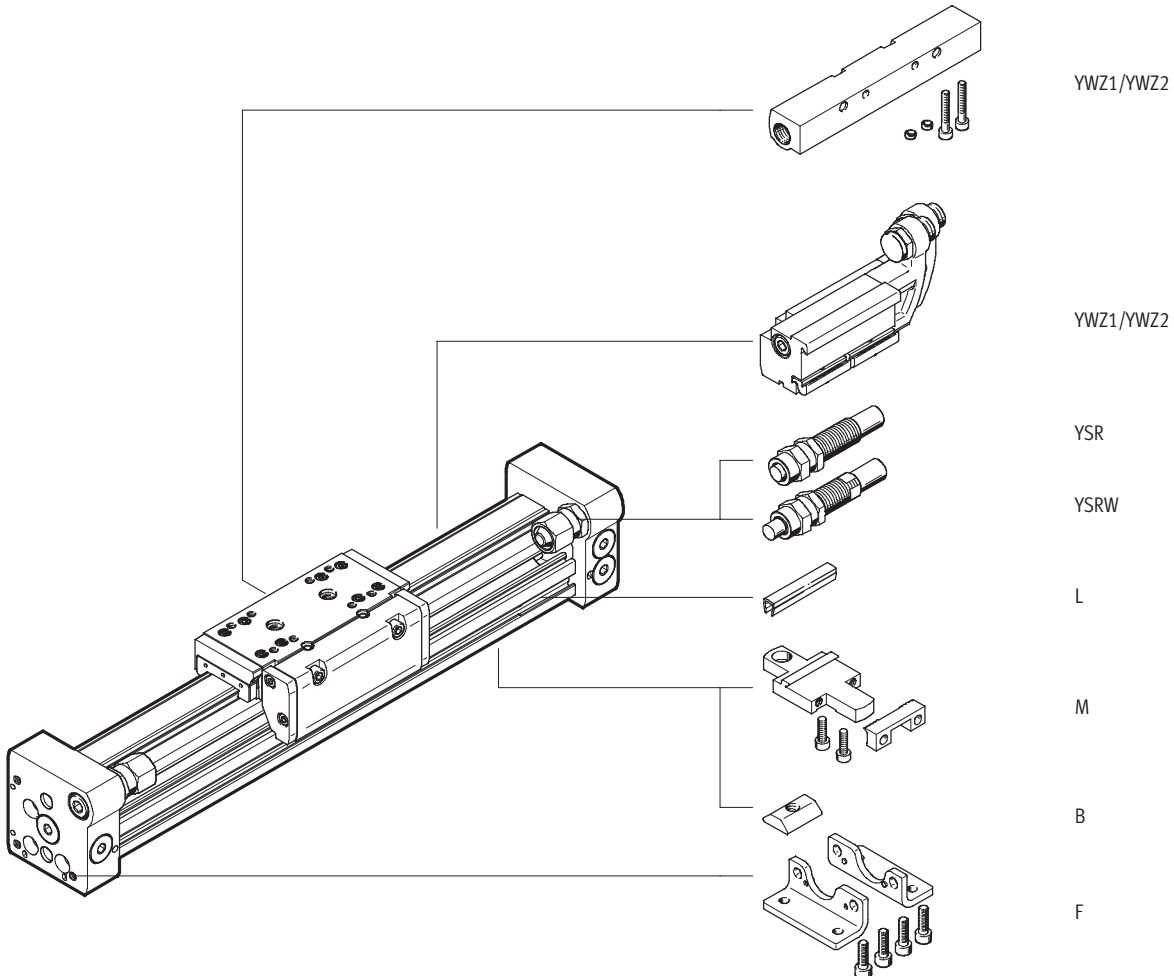
Passive guide axes DGC-FA, without drive

Ordering data – Modular products

FESTO

Order code

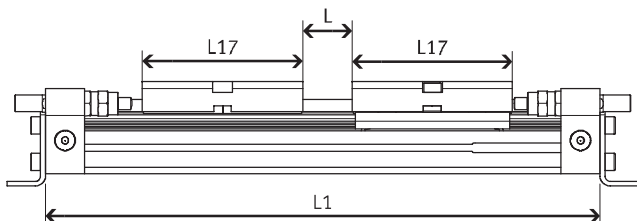
Mandatory data/options



Effective stroke reduction when ordering an additional slide K

With a guide axis DGC with additional slide, the effective stroke is reduced by the length of the additional slide and the distance between both slides.

Given:
DGC-12-500-...
L = 20 mm
L17 = 65 mm



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

The effective stroke is reduced to
415 mm = 500 mm – 20 mm – 65 mm

Passive guide axes DGC-FA, without drive

Ordering data – Modular products

FESTO

Ordering table											
Size	8	12	18	25	32	40	50	63	Conditions	Code	Enter code
[M]	Module No.	530906	530907	532446	532447	532448	532449	532450	532451		
	Function	Linear drive								DGC	DGC
	Piston Ø [mm]	8	12	18	25	32	40	50	63	-...	
	Stroke [mm]	1 ... 1,300	1 ... 1,900	1 ... 3,000	1 ... 5,000				[1]	-...	
	Guide	Passive guide axis								-FA	-FA
	Cushioning	Elastic cushioning rings/pads at both ends								-P	
		Shock absorber, self-adjusting								-YSR	
		Shock absorber, self-adjusting, progressive								-YSRW	
[O]	Slide	–	–	Protected recirculating ball bearing guide			–	–	[2]	-GP	
	Lubrication function	Standard									
		–	–	–	Lubrication adapter		–	Lubrication adapter	[5]	-C	
	Additional slide	1 ... 2							[3]	-...K	
	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		
	Slot cover for sensor slot	–	–	1 ... 9					...L		
	Mechanical end-position limiter	–	–	Variable end position, at one end					[4]	YWZ1	
		–	–	Variable end position, at both ends					[4]	YWZ2	
	Manual	Express waiver – no operating instructions to be included (already available)								-O	

- [1] Stroke** Size 25, 32, 40: strokes up to 8,500 mm on request
[2] GP Not with cushioning YSR and YSRW
 Not with additional slide K

- [3] K** For a guide axis DGC with additional slide, the effective stroke is reduced by the length of the additional slide and the distance between both slides
 Not with cushioning P
[4] YWZ1, YWZ2 Only with cushioning YSR or YSRW
[5] C Not with slide GP

Transfer order code

DGC - - - **FA** - - - - **ZUB** - -

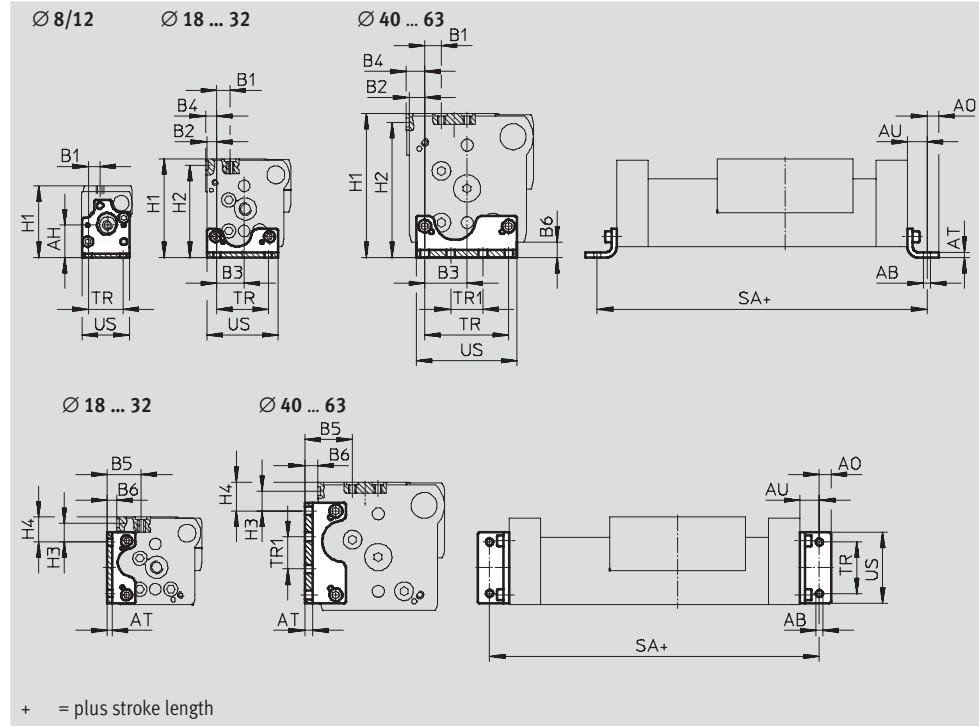
Passive guide axes DGC-FA, without drive

Accessories

FESTO

Foot mounting HPC
(order code: F)

Material:
Galvanised steel



Dimensions and ordering data												
For Ø	AB	AH	AO	AT	AU	B1	B2	B3	B4	B5	B6	H1
[mm]	Ø											
8	3.4	16.7	3	2	9	6	–	–	–	–	–	37
12	4.5	18.5	4.5	2	11.5	5.4	–	–	–	–	–	42.5
18	5.5	–	6.75	3	13.25	11.2	4.3	15.2	5.3	23.2	6.7	64
25	5.5	–	9	4	15	13.35	7.65	21.35	8.65	29.5	7.5	76.5
32	6.6	–	10	5	19	11.5	9	29.5	10.5	27	7.5	87.5
40	6.6	–	10	6	20	12.6	12.2	32.8	14.2	36.8	10	111.5
50	9	–	11	8	25	12.5	11.5	48.5	11.5	41	17	141.5
63	11	–	13.5	8	28	17.5	12.5	55.5	17.5	49	14	172.5

For Ø	H2	H3	H4	SA	TR	TR1	US	Weight	Part No.	Type
[mm]					±0.1	±0.1		[g]		
8	–	–	–	118	18	–	24.4	26	526 385	HPC-8
12	–	–	–	148	20	–	29.6	38	526 388	HPC-12
18	59.5	16.7	21.5	176	30	–	38.6	58	533 667	HPC-18
25	71.5	14.35	19.35	230	40	–	55	131	533 668	HPC-25
32	82.5	8	13	288	56.5	19.5	68	239	533 669	HPC-32
40	104.5	15.3	22.3	340	65	25	78	348	533 670	HPC-40
50	134.5	23.4	30.4	400	82.6	47.4	102	754	545 236	HPC-50
63	164.5	22	30	456	111	39	133	1,245	545 237	HPC-63

Passive guide axes DGC-FA, without drive

FESTO

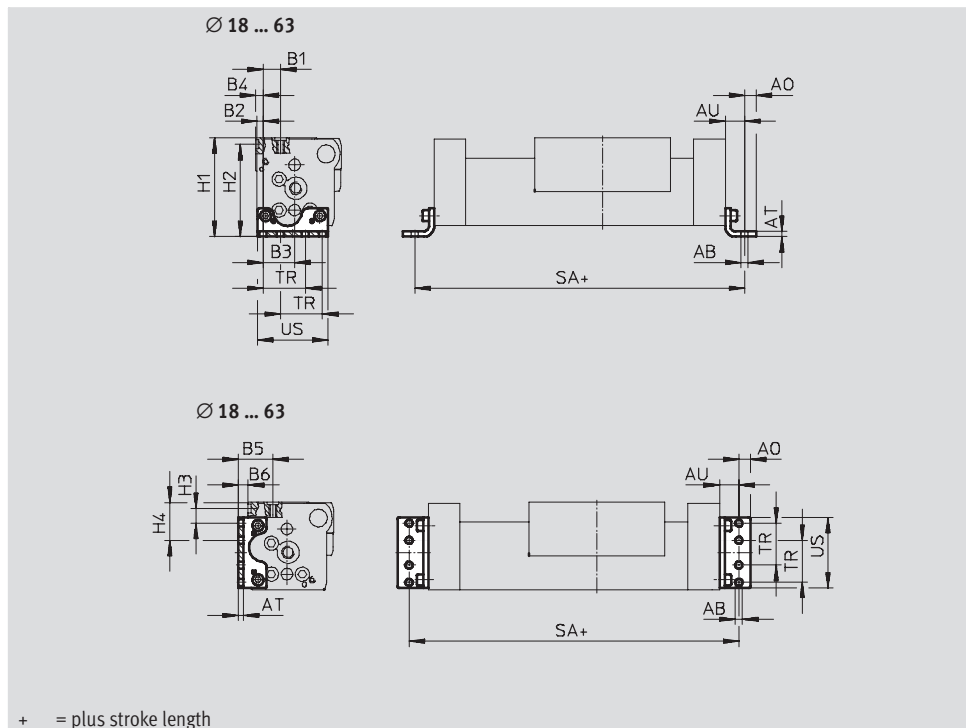
Accessories

Foot mounting HPC-S

(when replacing linear drive DGPL with linear drive DGC-GF/-KF)

Material:

Galvanised steel



Dimensions and ordering data										
For Ø	AB Ø	AO	AT	AU	B1	B2	B3	B4	B5	B6
[mm]										
18	5.5	4.75	3	13.25	12	3.5	15.6	4.5	24	7.5
25	5.5	6	3	13	16.25	4.75	24.25	5.75	29.5	7.5
32	6.6	7	4	17	9	9	29.5	10.5	27	7.5
50	9	11	8	25	12.5	11.5	48.5	11.5	38	14
63	11	13.5	8	28	17.5	12.5	55.5	17.5	37	2

For Ø	H1	H2	H3	H4	SA	TR	US	Weight	Part No.	Type
[mm]						±0.1		[g]		
18	64	59.5	16.7	28	176.5+0.9/-0.2	24	40	54.5	535 600	HPC-18-S
25	75.5	70.5	11.45	29.75	226+0.9/-0.2	32.5	55	89.5	535 601	HPC-25-S
32	87.5	82.5	8	31.5	284+0.9/-0.2	38	68	180	538 413	HPC-32-S
50	138.5	131.5	23.4	48	400+1.7/-0.2	65	102	754	545 238	HPC-50-S
63	160.5	152.5	22	66	456+1.7/-0.2	75	133	1,138	545 239	HPC-63-S

Passive guide axes DGC-FA, without drive

Accessories

FESTO

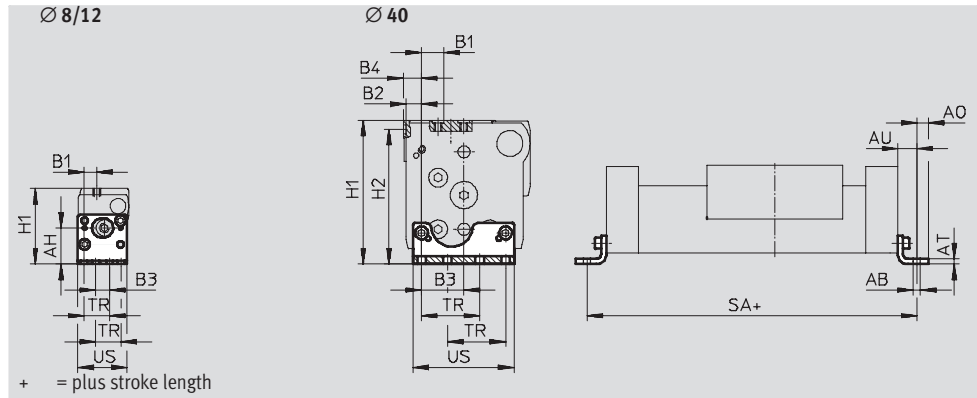
Foot mounting HPC-SO

(when replacing linear drive DGPL with linear drive DGC-GF/-KF)

Material:

Galvanised steel

HPC-12-SO



Dimensions and ordering data

For Ø	AB Ø	AH	A0	AT	AU	B1	B2	B3
[mm]								
8	3.4	18.7	3	2	9	6.5	–	7
12	3.4	23.5	3	2	9	9.3	–	9.4
40	6.6	–	8.5	5	17.5	12.5	12.3	32.7

For Ø	B4	H1	H2	SA	TR	US	Weight	Part No.	Type
[mm]					±0.1		[g]		
8	–	39	–	118	13	25.4	26	529 346	HPC-8-SO
12	–	47.5	–	143	18.6	33.8	42	529 348	HPC-12-SO
40	14.3	104.5	97.5	335	45	78	264	536 745	HPC-40-SO

Passive guide axes DGC-FA, without drive

FESTO

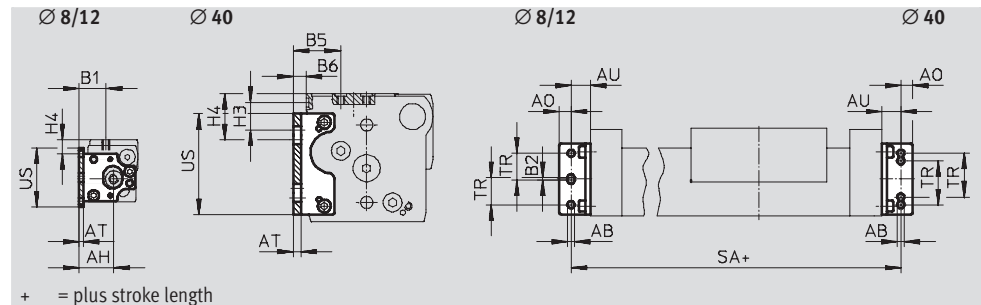
Accessories

Foot mounting HPC-SH

(when replacing linear drive DGPL with linear drive DGC-GF/-KF)

Material:

Galvanised steel



Dimensions and ordering data

For Ø	AB Ø	AH	AO	AT	AU	B1	B2	B5
[mm]								
8	3.4	17.8	3	2	9	13.8	1.5	–
12	3.4	21.1	3	2	9	16.5	1.4	–
40	6.6	–	8.5	5	17.5	–	–	36

For Ø	B6	H3	H4	SA	TR	US	Weight	Part No.	Type
[mm]					±0.1		[g]		
8	–	–	7.25	118	13	30.5	25	529 347	HPC-8-SH
12	–	–	4.5	143	18.6	41.8	41.5	529 349	HPC-12-SH
40	9.2	21.6	36	335	45	78	275	536 746	HPC-40-SH

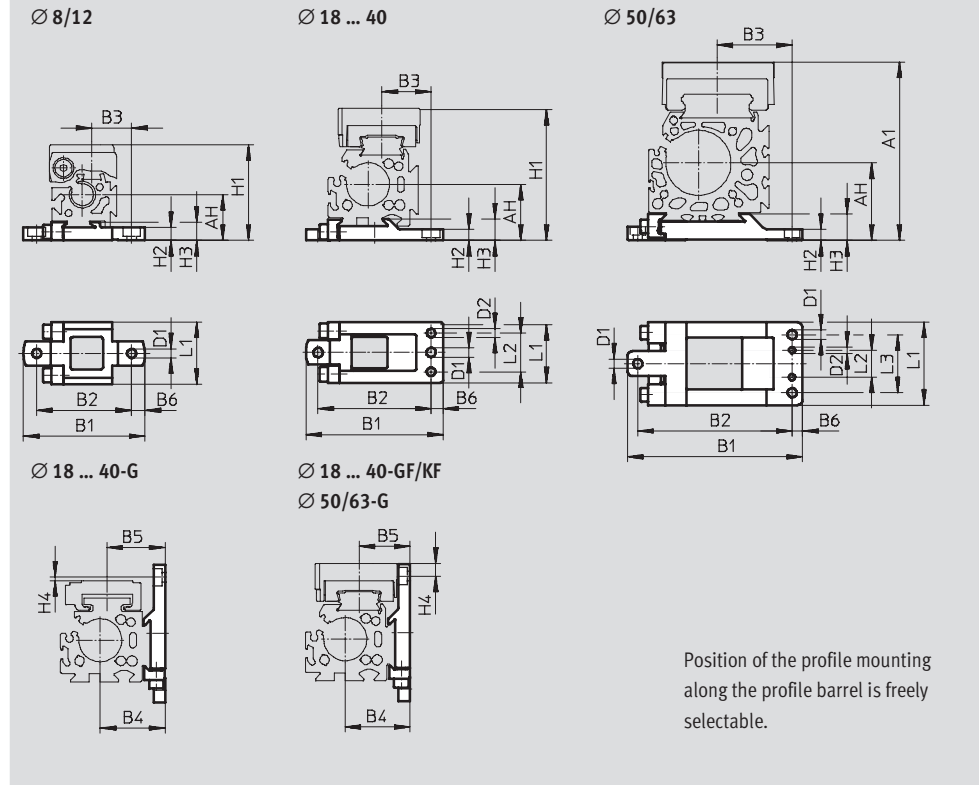
Passive guide axes DGC-FA, without drive

Accessories

FESTO

Profile mounting MUC
(order code: M)

Material:
High-alloy steel



Dimensions and ordering data									
For Ø	AH	B1	B2	B3	B4	B5	B6	D1	D2
[mm]			±0.2					Ø	Ø
8	17.7	47	36.7	15.35	–	–	5.1	3.5	–
12	18.5	52.5	42.2	16.5	–	–	5.1	3.5	–
18	27.2	67.8	56	28.7	27.2	28.7	5.7	5.5	5
25	32.5	79.5	65.5	28.5	37.5	29.5	7	5.5	5
32	37.5	94	80	35	47.5	37	7	5.5	5
40	47	110.5	96	43	57	46.8	7	6.5	6
50	61	145	125	56	77	61	7	9	6
63	75	169	149	72.5	87	69	10	9	6

For Ø	H1	H2	H3	H4	L1	L2	L3	Weight	Part No.	Type
[mm]								[g]		
8	37	5	7	–	24	–	–	28	526 384	MUC-8
12	42.5	4.5	7	–	24	–	–	32	526 387	MUC-12
18	64	5.7	9.9	6.4	33	20.5	–	78	531 752	MUC-18
25	76.5	6.5	12.5	7.43	35	22.5	–	113	531 753	MUC-25
32	87.5	6.5	13	4	45	30	–	174	531 754	MUC-32
40	111.5	8.5	16	11.3	60	44	–	346	531 755	MUC-40
50	159	11	23.5	9.2	80	26	56	874	531 756	MUC-50
63	172.5	11	23.5	15	80	26	56	1,080	531 757	MUC-63

Passive guide axes DGC-FA, without drive

Accessories

FESTO

Shock absorber retainer DADP

Stop KYC

(order code: YWZ1 or YWZ2)

Materials: Stop

Housing: Anodised aluminium

Stop bracket: Stainless steel casting

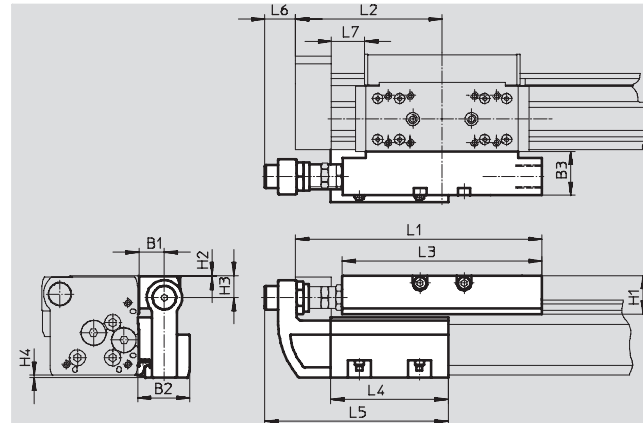
Clamp: High-alloy steel

Free of copper and PTFE

Materials: Shock absorber retainer

Housing: Anodised aluminium

Free of copper and PTFE



Note

Shock absorber not included in scope of delivery.
Existing shock absorbers can be removed from the end caps of the linear unit and installed in the shock absorber retainer.

Dimensions							
For Ø	B1	B2	B3	H1	H2	H3	H4
[mm]							
18	16	34.5	29	20.7	0.2	12.5	0.7
25	16.5	35	30	25.5	0.5	15	1.4
32	16.5	35	30	25.5	0.5	15	1.7
40	16	35.7	35	37	0.5	21.5	2
50	25	50	41	40.5	0.5	24	0
63	25	50	40	51.5	1.5	33	0

For Ø	L1	L2	L3	L4	L5	L6	L7
[mm]							min.
18	128	74.5	107	80	118.5	23.5	14.5
25	168	100	136	80	125	20.5	22.5
32	206.8	124.8	164	120	165	14.5	27.3
40	255	150	210	156	220.5	31	31
50	301	175	252	170	238	27	31
63	328	200	256	200	268	24	41

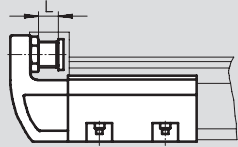
Passive guide axes DGC-FA, without drive

Accessories

FESTO

Technical data and ordering codes

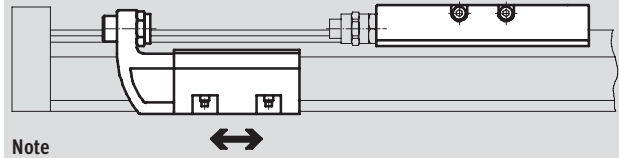
Precision adjustment



Note

The stop KYC can be used in both directions.

Installation example



Note

The end stop can be mounted at any position within the stroke.

For Ø	Precision adjustment L	Ambient temperature	CRC ¹⁾	Weight	Part No.	Type
[mm]	[mm]	[°C]		[g]		
Shock absorber retainer						
18	10	-10 ... +80	2	130	541 729	DADP-DGC-18-KF
25	10			180	541 730	DADP-DGC-25-KF
32	10			215	541 731	DADP-DGC-32-KF
40	15			460	541 732	DADP-DGC-40-KF
50	15			890	545 244	DADP-DGC-50
63	15			1,080	545 245	DADP-DGC-63
Stop						
18	10	-10 ... +80	2	400	541 691	KYC-18
25	10			560	541 692	KYC-25
32	10			790	541 693	KYC-32
40	15			1,525	541 694	KYC-40
50	15			2,270	545 242	KYC-50
63	15			2,950	545 243	KYC-63

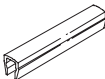
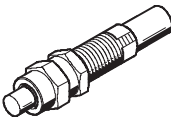
1) Corrosion resistance class 2 to Festo standard 940 070

Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents

Passive guide axes DGC-FA, without drive

FESTO

Accessories

Ordering data						
	For Ø	Remarks	Order code	Part No.	Type	PU ¹⁾
Slot nut NST				Technical data ➔ Internet: hmbn		
	25 ... 40	For mounting slot	B	547 264	HMBN-5-1M5	10
	50, 63			186 566	HMBN-5-2M5	
Centring pin/sleeve ZBS/ZBH				Technical data ➔ Internet: zbs, zbh		
	8 ... 18	For slide	–	150 928	ZBS-5	10
	25 ... 63			150 927	ZBH-9	
	8, 12	For end cap	–	525 273	ZBS-2	
	18			150 928	ZBS-5	
	25 ... 63			150 927	ZBH-9	
Slot cover ABP-S				Technical data ➔ Internet: abp		
	18 ... 63	For sensor slot each 0.5 m	L	151 680	ABP-5-S	2
Shock absorber				Technical data ➔ Internet: ysrw		
	18	For DGC-FA with recirculating ball bearing guide	YSRW	540 347	YSRW-DGC-18-KF	1
	25			540 349	YSRW-DGC-25-KF	
	32			540 351	YSRW-DGC-32-KF	
	40			540 353	YSRW-DGC-40-KF	
	50			1232870	YSRW-DGC-40/50-B	
	63			543 069	YSRW-DGC-63-GF/KF	

1) Packaging unit quantity

Product Range and Company Overview

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Complete custom engineered solutions



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With a comprehensive line of more than 30,000 automation components, Festo is capable of solving the most complex automation requirements.



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