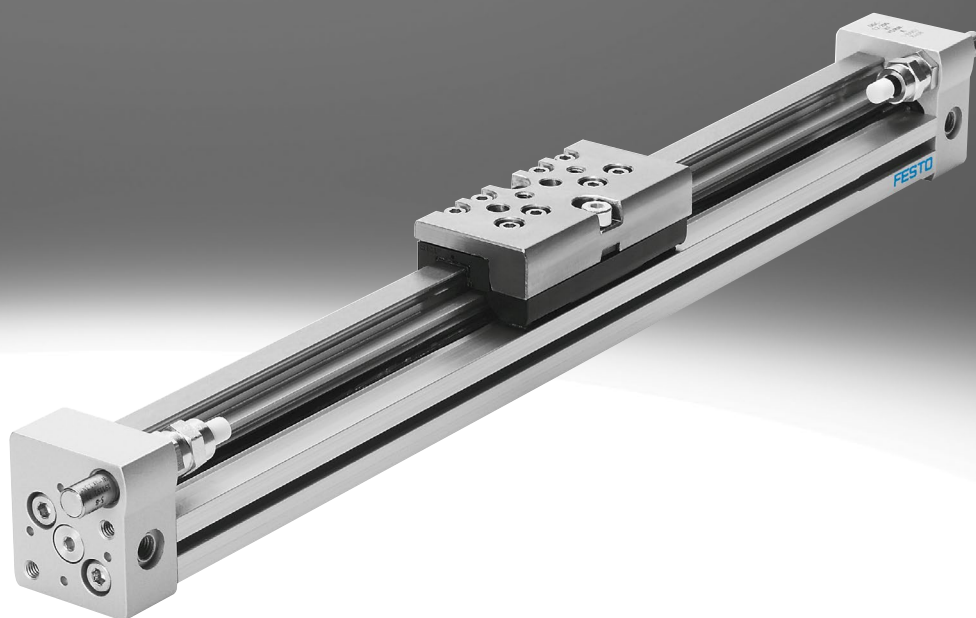


Guide axes DGC-FA, without drive

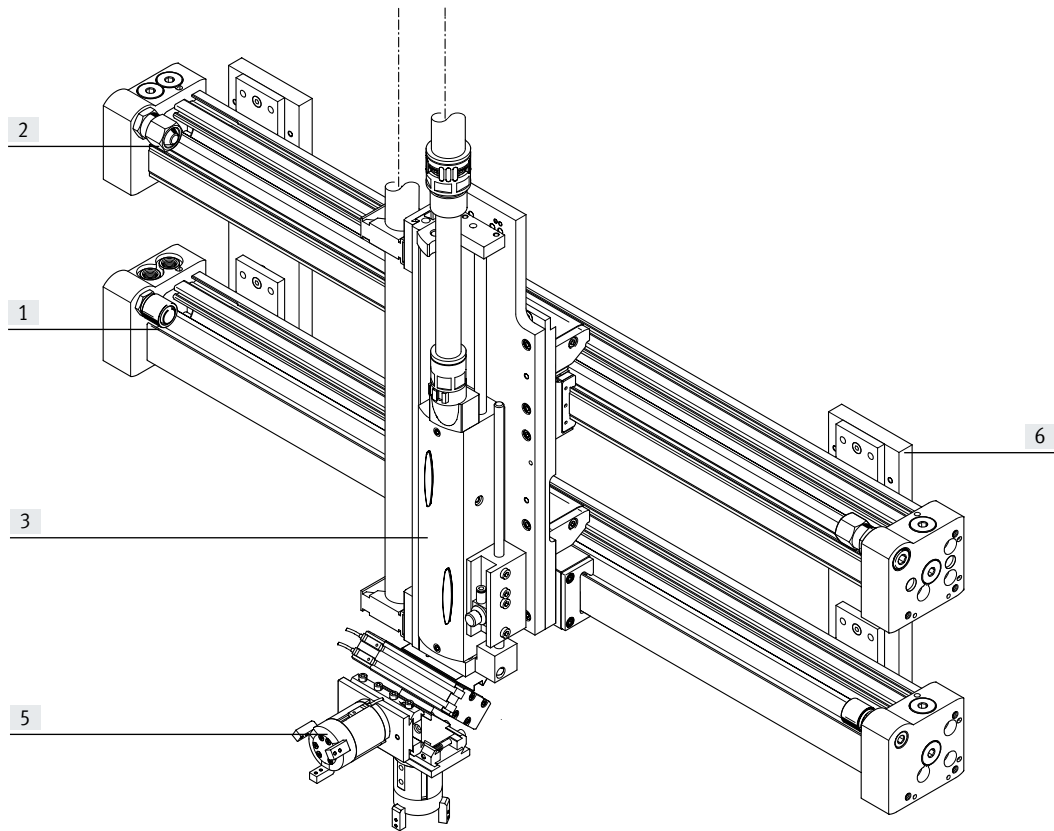
FESTO



Key features

- At a glance
- Driveless linear guide units with guide and freely movable slide
 - The guide axis is designed to support forces and torques in multi-axis applications
 - Increased torsional resistance
 - Reduced vibrations with dynamic loads
 - Drive axis and guide axis can be placed side by side or one above the other

System product for handling and assembly technology

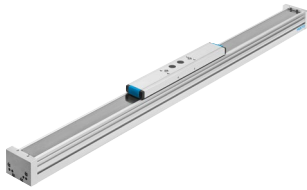


System components and accessories			
		Description	→ Page/Internet
[1]	Axes	Wide range of combinations possible within handling and assembly systems	axis
[2]	Guide axes	For absorbing forces and torques in multi-axis applications	guide axis
[3]	Drives	Wide range of combinations possible within handling and assembly systems	drive
[5]	Gripper	Wide range of variations possible within handling and assembly technology	gripper
[6]	Adapter	For drive/drive and drive/gripper connections	adapter kit
–	Motors	Servo and stepper motors, with or without gear unit	motor

Key features

Guide axes and the corresponding axes/drives

Guide axis ELFA-RF



- Can be combined with:
 - Toothed belt axis ELGA-TB-RF
- For size 70 and 80
- Load capacity up to max. 800 N or 180 Nm

Guide axis EGC-FA



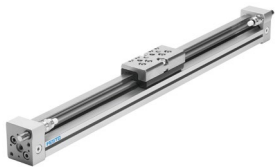
- Can be combined with:
 - Toothed belt axis EGC-TB
 - Ball screw axis EGC-BS
- For size 70 ... 185
- Load capacity up to max. 15 200 N or 1157 Nm

Guide axis DGC-FA



- Can be combined with:
 - Linear drive DGC-KF
- For size 8 ... 63
- Load capacity up to max. 15 200 N or 1157 Nm

Guide axis FDG-ZR-RF



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

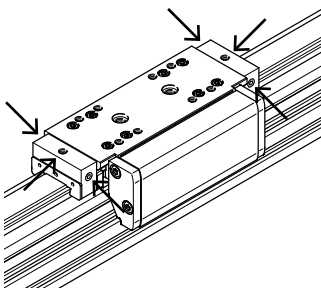
Guide axis FDG-ZR/SP



- Can be combined with:
 - Toothed belt axis DGE-ZR-KF
 - Ball screw axis DGE-SP-KF
- For size 18 ... 63
- Load capacity up to max. 14 050 N or 1820 Nm

Options

C – Central lubrication



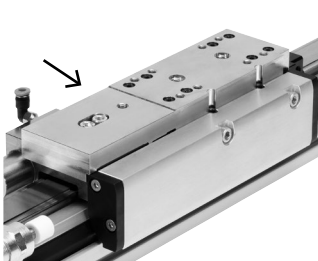
The lubrication adapter enables the guide of the guide axis DGC-FA to be permanently lubricated in applications in humid or wet ambient conditions using semi or fully automatic relubrication devices.

The adapters are suitable for oils and greases.

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

Technical data → page 12

Clamping unit – 1H-PN

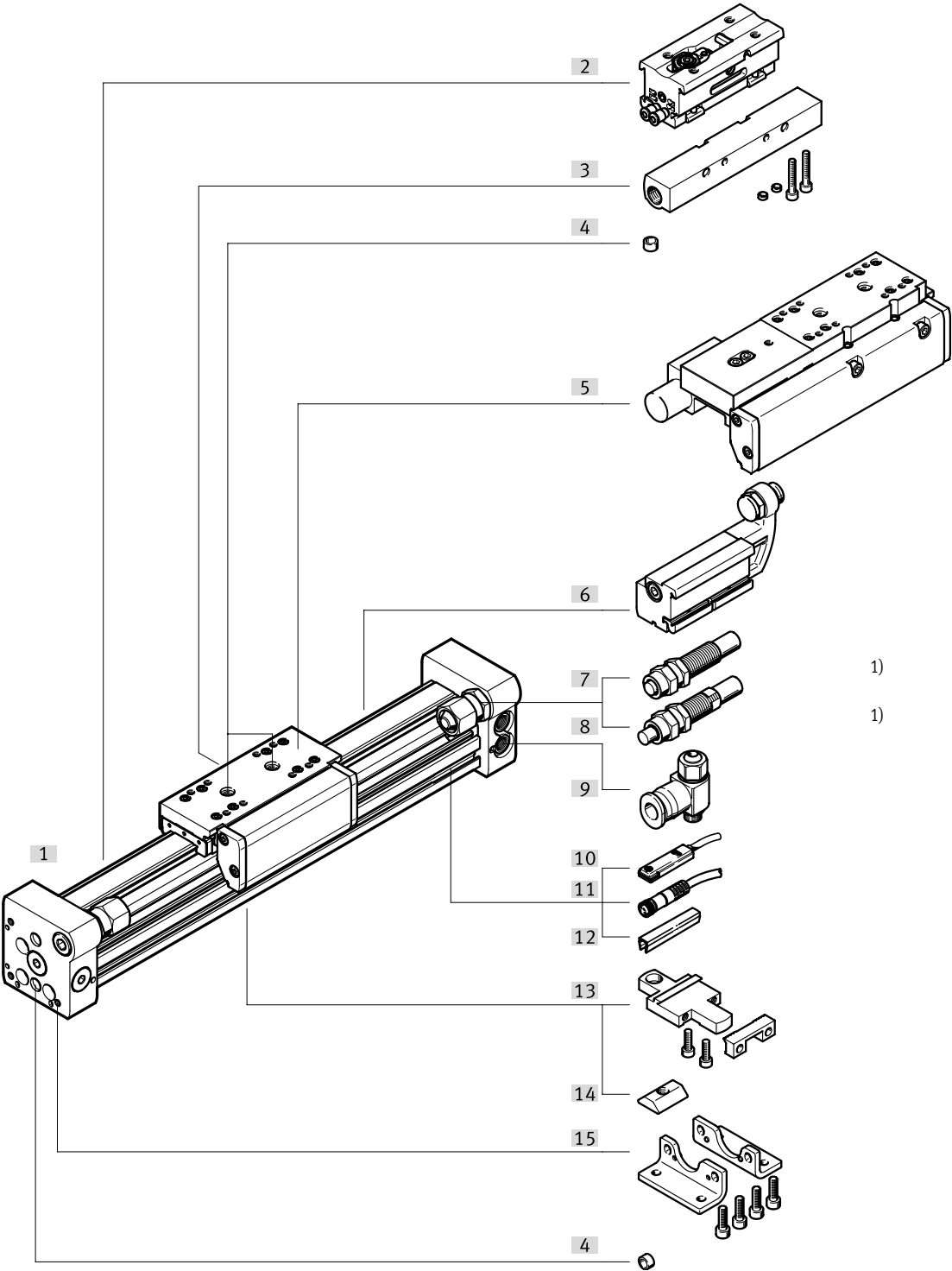


- Single-channel design, for holding loads
- Reliable holding is guaranteed since the forces act directly on the slide
- A limited number of emergency braking operations are permissible with sizes 40 and 50

- For piston Ø 25, 32, 40, 50 mm

Technical data → page 9

Peripherals overview



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

Peripherals overview

Variants and accessories			
	Type/order code	Description	→ Page/Internet
[1]	Guide axis DGC-FA	Guide axis without accessories	6
[2]	Intermediate position Z1/Z2/Z3	Enables up to three intermediate positions	dadm
[3] [6]	Mechanical end-position limiter YWZ	For variable end-position adjustment, e.g. for format adjustments	41
[4]	Centring pin/sleeve1) ZBS/ZBH	• For centring loads and attachments on the slide • For centring the drive DGC without foot mountings (user-specific)	43
[5]	Clamping unit 1H-PN	For holding loads	9
–	Cushioning P	Non-adjustable, elastic cushioning. Only used for low speeds.	38
[7]	Shock absorber YSR	Self-adjusting, hydraulic shock absorber with spring return and linear cushioning characteristics.	38
[8]	Shock absorber YSRW	Self-adjusting hydraulic shock absorber with spring return and progressive cushioning characteristics	38
–	Distance sensor SOIA	For monitoring the condition of the cushioning elements	43
[9]	One-way flow control valve GRLA	For regulating speed	grla
[10]	Proximity switch G/H/I/J	For sensing the slide position	dgc
[11]	Connecting cable V	Via proximity switch	dgc
[12]	Slot cover L	For protecting against contamination and securing the proximity switch cable	43
[13]	Profile mounting M	Simple and precise mounting option via dovetail connection.	40
[14]	Slot nut B	For mounting attachments	43
[15]	Foot mounting F	For mounting on the end cap	39

1) Included in the scope of delivery of the axis

Type codes

001	Series	
DGC	Linear drive	

002	System of units	
	Metric	
N	Imperial	

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

004	Stroke	
...	1 ... 8500	

005	Guide	
FA	Guide axis	

006	Cushioning	
P	Elastic cushioning rings/plates on both sides	
YSR	Shock absorber, self-adjusting	
YSRW	Shock absorber, self-adjusting, progressive	

007	Slide	
	Standard	
GP	Protected recirculating ball bearing guide	

008	Lubrication	
	Standard	
H1	Food-safe lubrication	

009	Lubrication function	
	None	
C	Lubrication adapter	

010	Additional slide	
...K	1 ... 2 pieces	

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

012	Actuation type	
	None	
PN	Pneumatically actuated	

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

015	Foot mounting	
	None	
F	1 record	

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

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

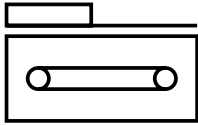
018	Slot cover, sensor slot	
	Without	
...L	1 ... 9 pieces	

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

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

Datasheet

Function



-  - Diameter
8 ... 63 mm
-  - Stroke length
1 ... 8500 mm



General technical data

Piston Ø	8	12	18	25	32	40	50	63
Stroke [mm]	1 ... 1300	1 ... 1900	1 ... 3000	1 ... 8500			1 ... 5000	
Guide	External recirculating ball bearing guide							
Mounting position	Any							
Cushioning → page 10								
DGC-...-P	Not adjustable at either end							
DGC-...-YSR...	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 CRC 1 to Festo standard FN 940070

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

ATEX¹⁾

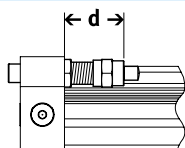
Size	8	12 ... 63
Explosion-proof ambient temperature [°C]	+5°C ≤ Ta ≤ +60°C	−10°C ≤ Ta ≤ +60°C
CE marking (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)	
EX2 certification		
ATEX category for gas	II 3G	
Type of ignition protection for gas	c T4 X	
ATEX category for dust	II 3D	
Type of ignition protection for dust	c T120°C X	
EX3 certification		
ATEX category for gas	II 2G	
Type of ignition protection for gas	c T4 X	

1) Note the ATEX certification of the accessories.

Datasheet

Weight [g]								
Piston Ø	8	12	18	25	32	40	50	63
DGC-...								
Basic weight with 0 mm stroke	225	391	975	2113	2837	6996	13342	22220
Additional weight per 10 mm stroke	11	16	31	49	74	117	153	236
Moving mass	77	149	331	732	1146	2330	4511	8225
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	–

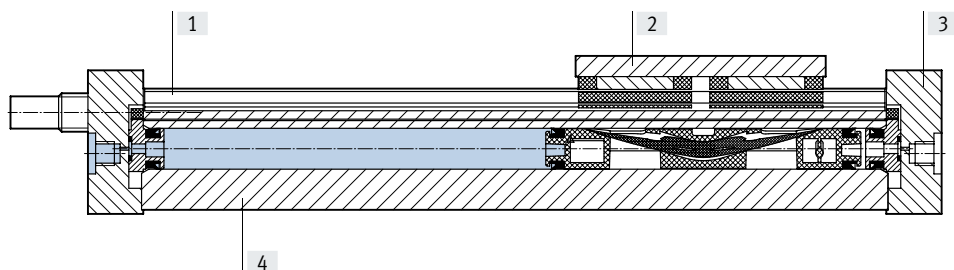
Adjustable end-position range d [mm]



Piston Ø	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

Materials

Sectional view



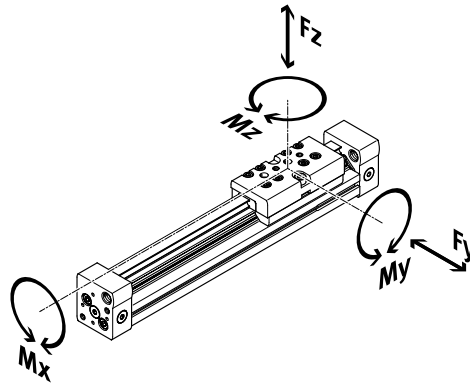
Guide axes		
[1]	Guide rail	High-alloy steel
[2]	Slide	
	Ø 8 ... 12	High-alloy steel
	Ø 18 ... 63	Anodised aluminium
[3]	End cap	Anodised aluminium
[4]	Cylinder barrel	Anodised aluminium
–	Sealing band	Polyurethane
	Note on materials	RoHS-compliant

Datasheet

Load values

The indicated forces and torques refer to the centre of the slide surface.

These values must not be exceeded during dynamic operation. Special attention must be paid to the deceleration phase.



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

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

Permissible forces and torques		Piston Ø	8	12	18	25	32	40	50	63
$F_{y_{max.}}$	[N]		300	650	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

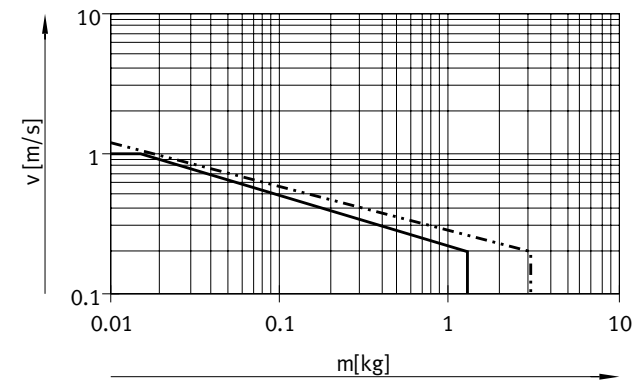
Technical data – Clamping unit		Dimensions → page 34			
Size		25	32	40	50
Pneumatic connection		M5	M5	M5	M5
Clamping type		Clamping via spring force, release via compressed air			
Static holding force	[N]	320	500	1200	1200
Max. number of emergency braking operations ¹⁾ at reference energy	[J]	–	–	750 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.

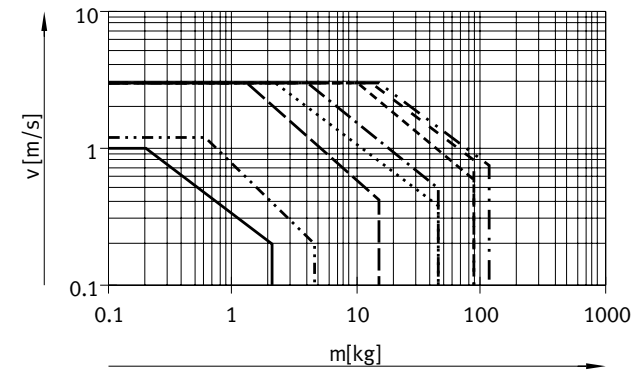
Operating and environmental conditions – Clamping unit		
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]
Operating pressure		
Clamping unit open	[bar]	4.5 ... 8
Clamping unit closed	[bar]	Unpressurised
Ambient temperature	[°C]	–10 ... +60

Datasheet

Maximum permissible piston speed v as a function of payload m and distance r_{max} from the centre of mass
Piston Ø 8/12 with elastic cushioning P



Piston Ø 8 ...40 with shock absorber cushioning YSR

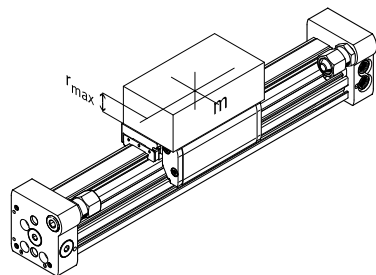


- Ø 8
- · - · - · Ø 12
- - - - - Ø 18
- · · · · Ø 25
- · - · - · - · - · - · Ø 32
- - - - - Ø 40
- - - - - Ø 50
- · - · - · - · - · - · Ø 63

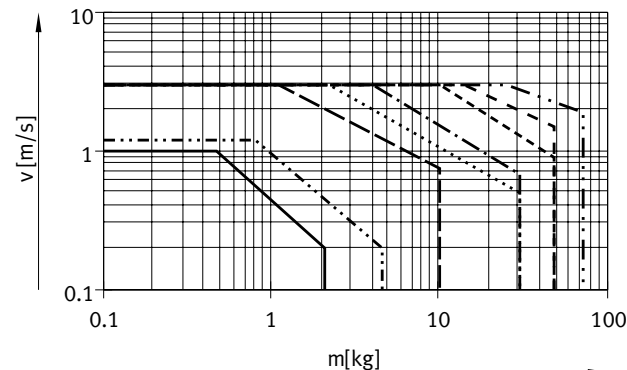
 **Note**
These specifications represent the maximum values that can be achieved. In practice, these values can fluctuate dependent on the position of the payload and mounting position.

Operating range of the cushioning

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



Piston Ø 8 ...40 with shock absorber cushioning YSRW



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

Data for horizontal mounting position:

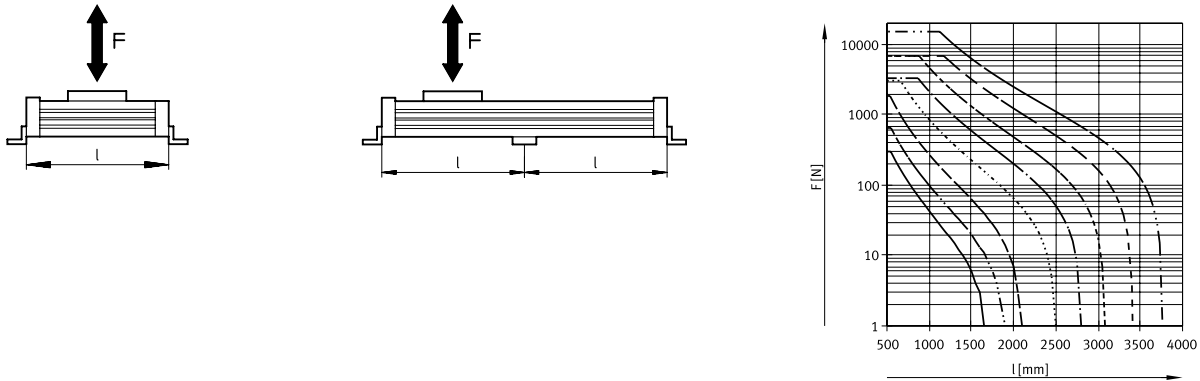
Piston Ø	8	12	18	25	32	40	50	63
Distance r_{max} [mm]	25	35	35	50	50	50	50	50

Datasheet

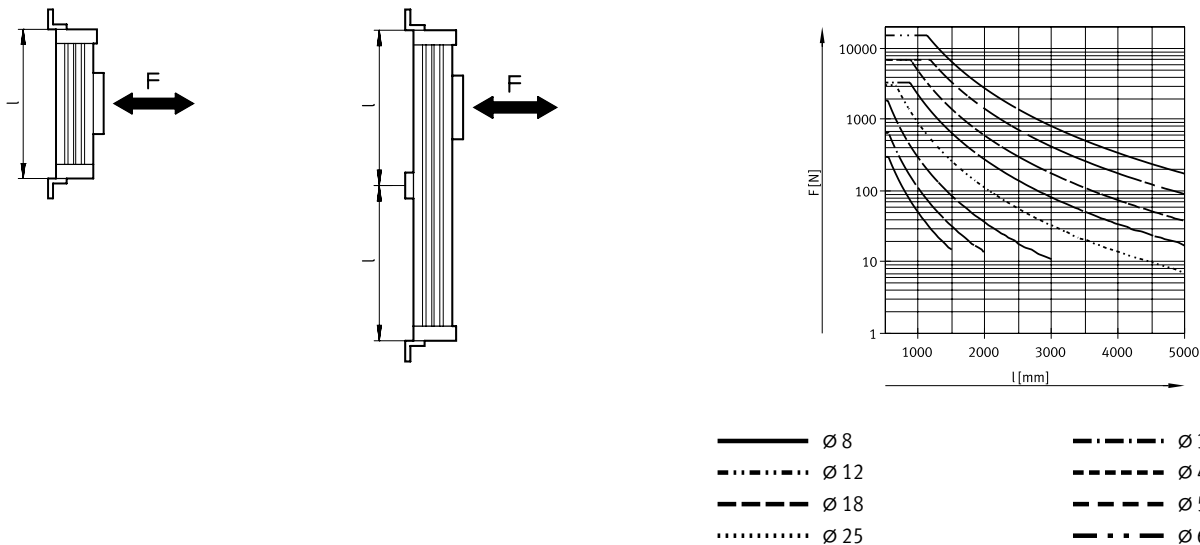
Number of profile mountings MUC as a function of weight force F and support spacing l

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

Horizontal mounting position



Vertical mounting position



Example:

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

The axis has an overall length of:

$$\begin{aligned}
 l &= \text{stroke length} + L1 \\
 &\quad (\text{see dimensions}) \\
 &= 1500 \text{ mm} + 200 \text{ mm} \\
 &= 1700 \text{ mm}
 \end{aligned}$$

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

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

Datasheet

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 Ø 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:
 - Additional slide K
- Cannot be used in combination with:
 - Protected recirculating ball bearing guide GP

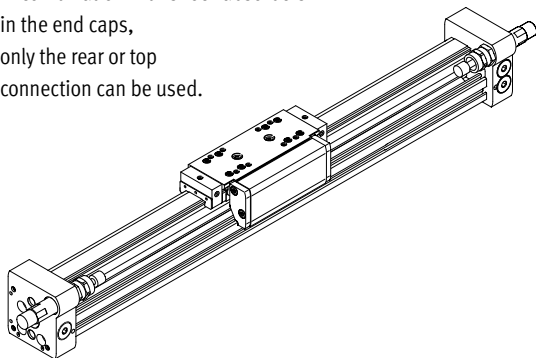
Slide dimensions

→ page 28

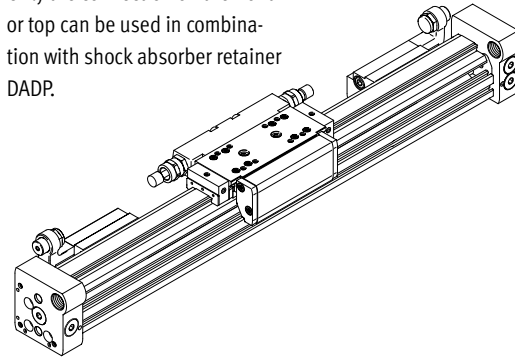
Order code C in the modular product system → page 38

Connection options

In combination with shock absorbers in the end caps, only the rear or top connection can be used.

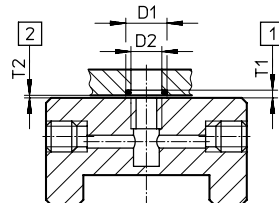


Only the connection on the front or top can be used in combination with shock absorber retainer DADP.



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 Ø 6x1 mm (DIN3771)

[1] Slot depth for O-ring

[2] Required air gap

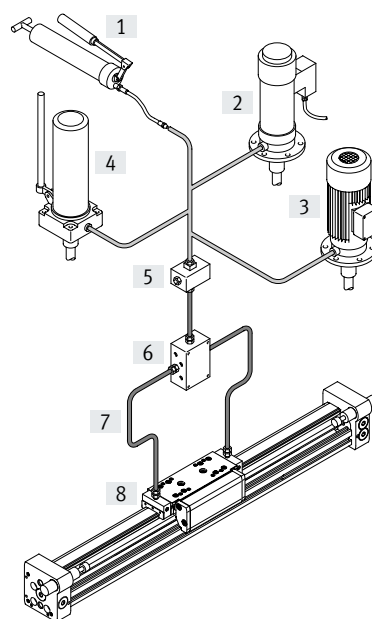
Additional dimensions → page 28

Design 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

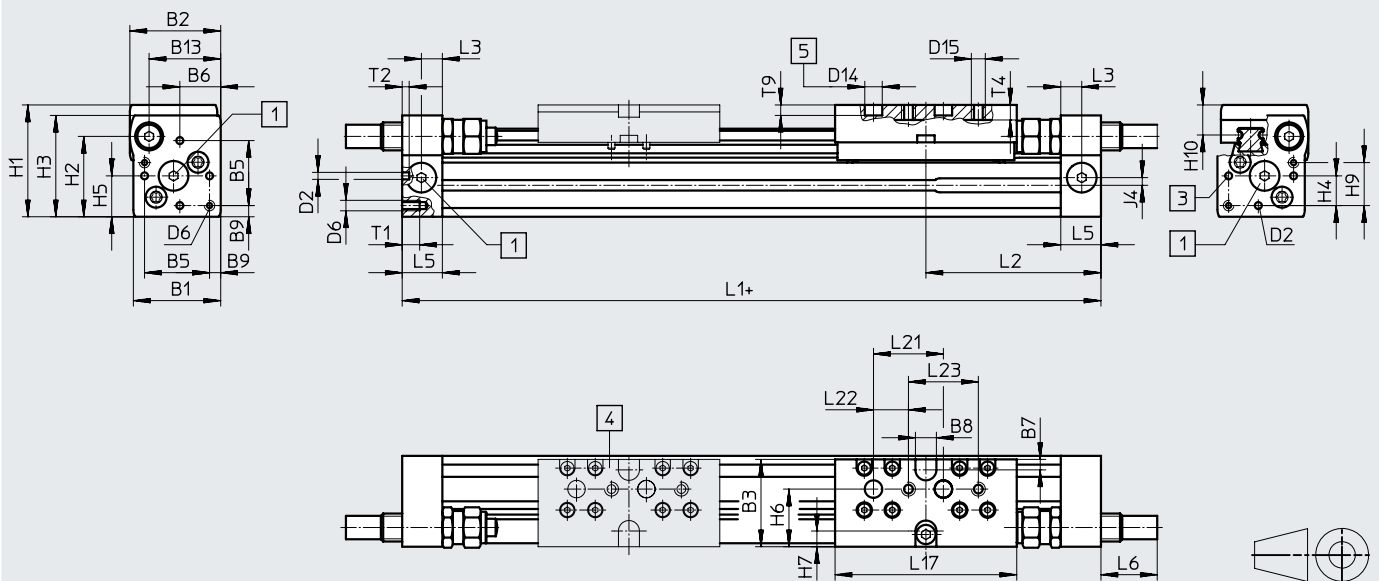
[8] Fittings

Datasheet

Dimensions

Download CAD data → www.festo.com

Ø 8 and 12



+ plus stroke length

[1] The connections on the end caps are sealed with blanking plugs

[3] Mounting hole for foot mounting or centring pin

[4] Additional slide K

[5] Drilled hole for centring pin ZBS

Ø [mm]	B1	B2	B3	B5	B6	B7	B8	B9	B13	D2 Ø H8
8	25	26	25	18.6	11.7	3	±0.05 6	±0.1 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	L22	L23	T1	T2	T4	T9	Stroke tolerance
		±0.03	±0.1	±0.1				±0.2	
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

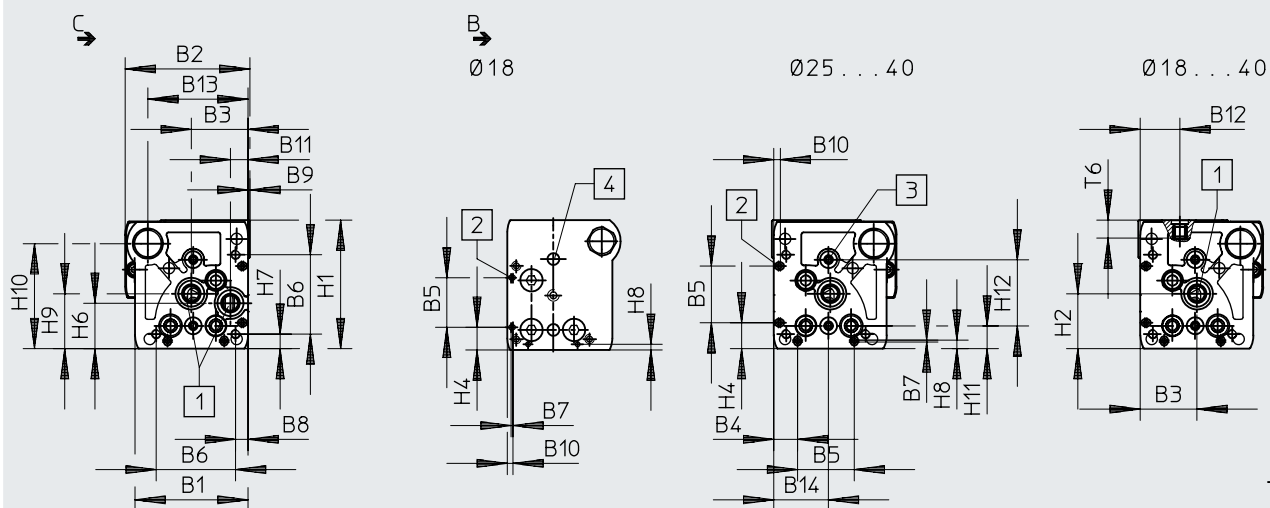
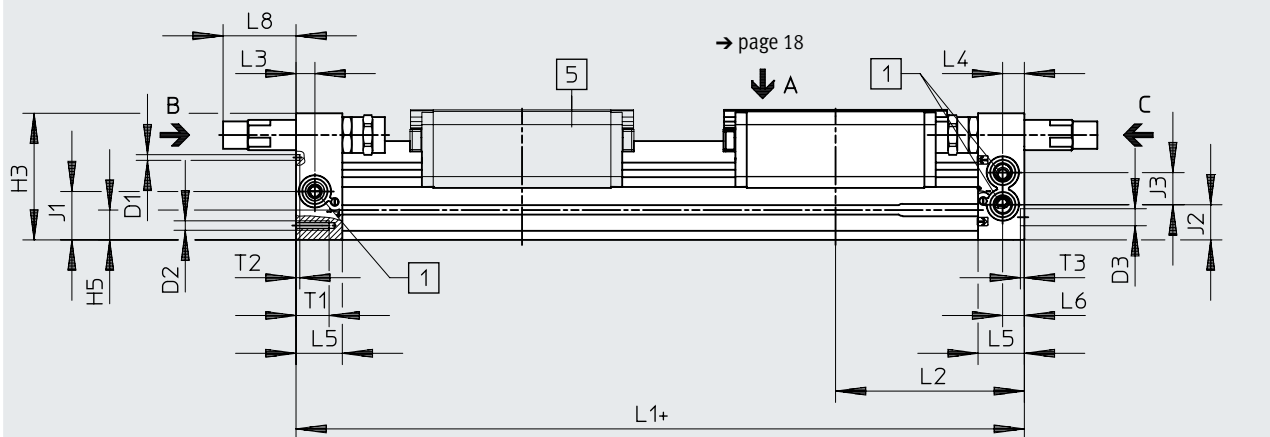
Ø 12



[1] Sensor slot for proximity switch

Ø 18 ... 40

Download CAD data → www.festo.com



- [1] The connections on the end caps are sealed with blanking plugs
- [2] Mounting hole for foot mounting HPC
- [3] Drilled hole for centring sleeve ZBH
- [4] Drilled hole for centring pin ZBS
- [5] Additional slide

Datasheet

∅ [mm]	B1	B2	B3 ±0.05	B4 ±0.1	B5 ±0.05	B6	B7	B8 ±0.1	B9	B10	B11	B12	B13
18	44.5	49.9	19.5	8.8	21	31	0.8	3.8	1	2.4	5.5	15.5	39
25	59.8	66	30	12.65	30	42	1	6.65	1	3.5	9.3	21	53
32	73	79	38.5	5.7	63.1	57.5	–	8.5	1.5	14	14.9	18	65
40	91	98.5	45	17.2	55	65	–	12.2	2	8	16.5	24.8	80.5

∅ [mm]	B14	D1 ∅ ±0.05	D2	D3 ∅ H7	H1	H2	H3	H4 ±0.2	H5	H6	H7	H8	H9
18	19.5	2	M4	5	56.3	23.1	55	9.6	13.4	20	4.6	2.4	25.2
25	30	3	M5	9	68	29	67	13.65	15.8	24	7.65	4.5	29
32	38.5	3	M6	9	78.5	30	77	5.7	17	27.7	8.5	14	35.2
40	45	4	M6	9	99.5	41.5	97.5	17.2	25	36.5	12.2	8	44

∅ [mm]	H10	H11 ±0.15	H12 ±0.05	J1	J2	J3	L1			L2			L3
							KF	KF-GP	KF-1H-PN	KF	KF-GP	KF-1H-PN	
18	46	8.5	30	20	16.5	11	150	157	–	74.5	78	–	5.7
25	55.5	12	35	26.1	18.6	17	200	205	271	100	102.5	100	10.5
32	63.8	11.45	50	30	22	18.5	250	250	320.5	124.8	124.8	124.8	14.5
40	81.5	15	60	35	26	26	300	312	458	150	156	150	14.6

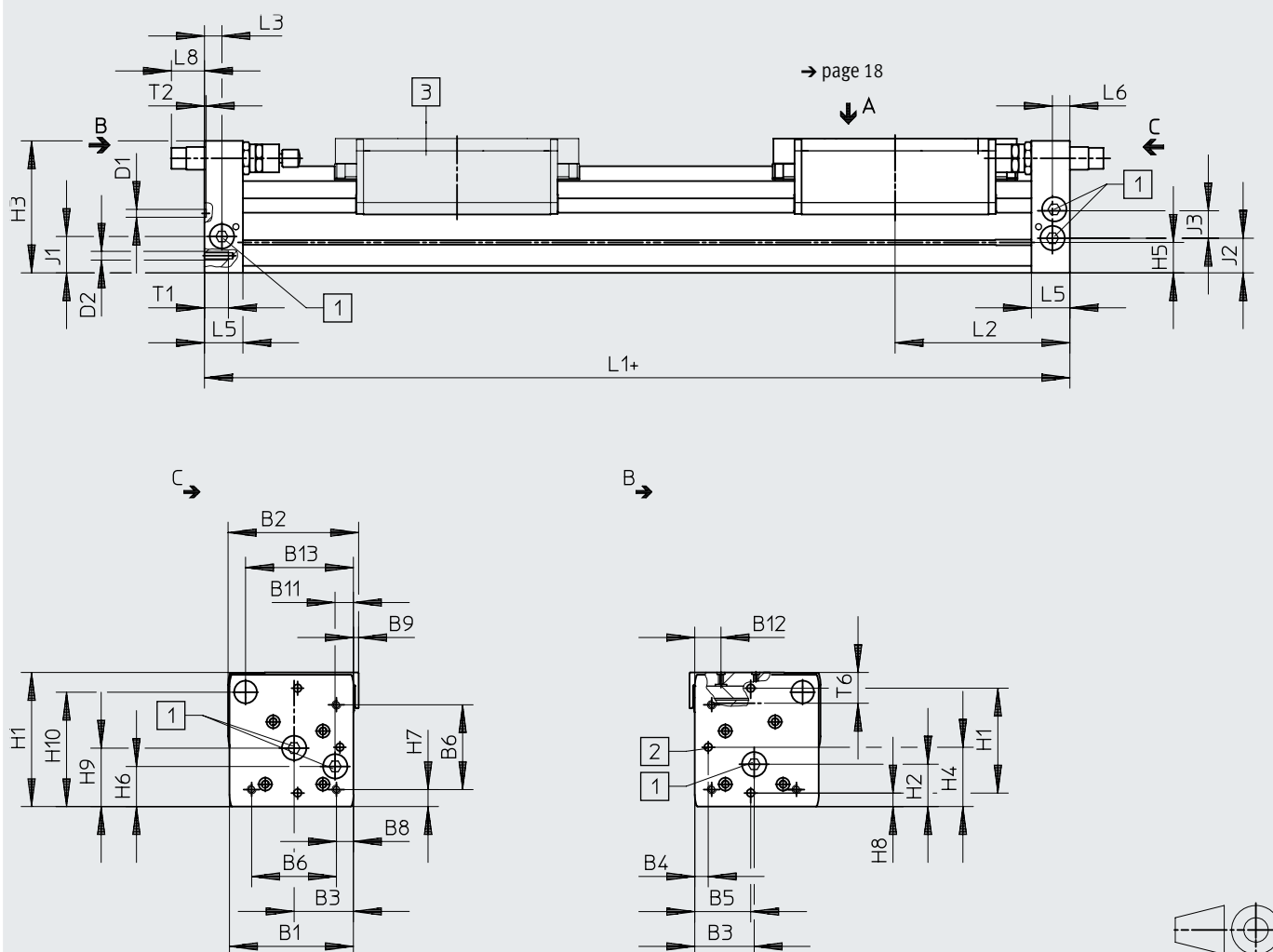
∅ [mm]	L4	L5	L6	L8		T1	T2	T3 +0.2	T6	Stroke tolerance 0 ... 2.5
				YSR	YSRW					
18	5.8	15	5.5	29.9	32.4	9	2	3.1	15	
25	10.6	24.5	10.6	35.6	38.6	17.5	2	2.1	17.3	
32	14.5	30.5	14.5	19.5	28	15	2	2.1	20	
40	14.6	33.5	14.6	38.5	43.5	20	3	2.1	25.7	

Datasheet

Dimensions

Download CAD data → www.festo.com

∅ 50/63



+ plus stroke length

- [1] The connections on the end caps are sealed with blanking plugs
- [2] Mounting hole for foot mounting HPC
- [3] Drilled hole for centring sleeve ZBH

Datasheet

∅ [mm]	B1	B2	B3	B4 ±0.2	B5	B6	B8	B9	B11	B12
50	113	126.5	60	8	52.8	81.6	12	0	21	24
63	142	149	68	15.5	68	97	19.5	5	21	30

∅ [mm]	B13	D1 ∅ H7	D2	H1	H2	H3	H4 ±0.2	H5	H6	H7
50	97	9	M8	124.5	38.5	122.5	52.8	29.3	36	12
63	123.5	9	M10	153.5	48.5	151	68	34.8	46	19.5

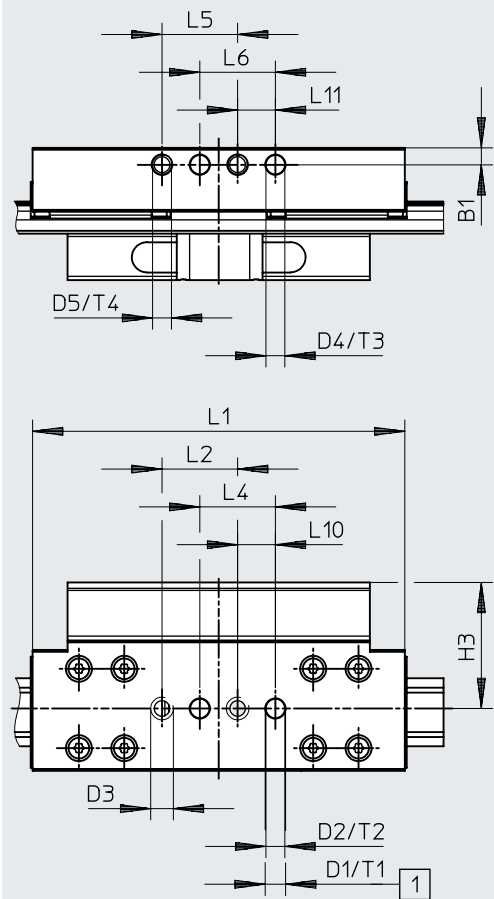
∅ [mm]	H8	H9	H10	H11 ±0.05	J1	J2	J3	L1		L2
								KF	KF-1H-PN	
50	8	53	104.5	100	30.5	30.5	28	350	555.8	175
63	15.5	67	131	120	41.5	39.5	31.5	400	—	200

∅ [mm]	L3	L5	L6	L8		T1	T2 +0.2	T6	Stroke tolerance 0 ... 2.5
				YSR	YSRW				
50	17	41	17	31	36.3	24	2.1	28.75	0 ... 2.5
63	20	44	20	38.3	48.3	27.5	2.1	36.1	

Datasheet

Dimensions Download CAD data → www.festo.com

Slide
Ø 18



[1] Drilled hole for centring pin/sleeve

Ø	B1	D1	D2	D3	D4	D5	H3	L1	L2
[mm]	±0.05	Ø H7			Ø H7		±0.1	±0.1	±0.1
18	4.5	5	M5	M5	5	M5	33.4	98.5	20

Ø	L4	L5	L6	L10	L11	T1	T2	T3	T4
[mm]	±0.03	±0.03	±0.1	±0.1	±0.1	+0.2		±0.1	
18	20	20	20	10	10	3.1	6.7	3.1	7.5

Datasheet

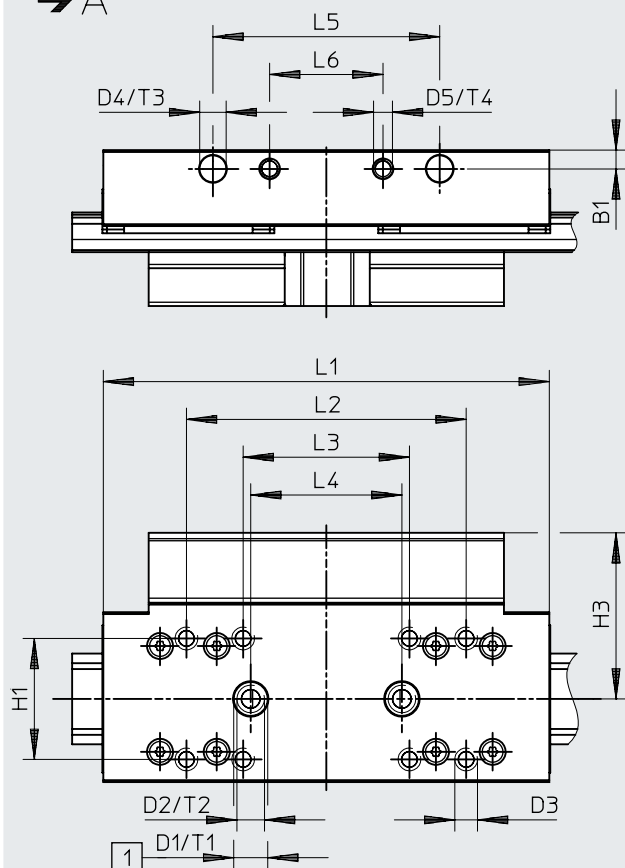
Dimensions

Download CAD data → www.festo.com

Slide

Ø 25

→ A



[1] Drilled hole for centring pin/sleeve

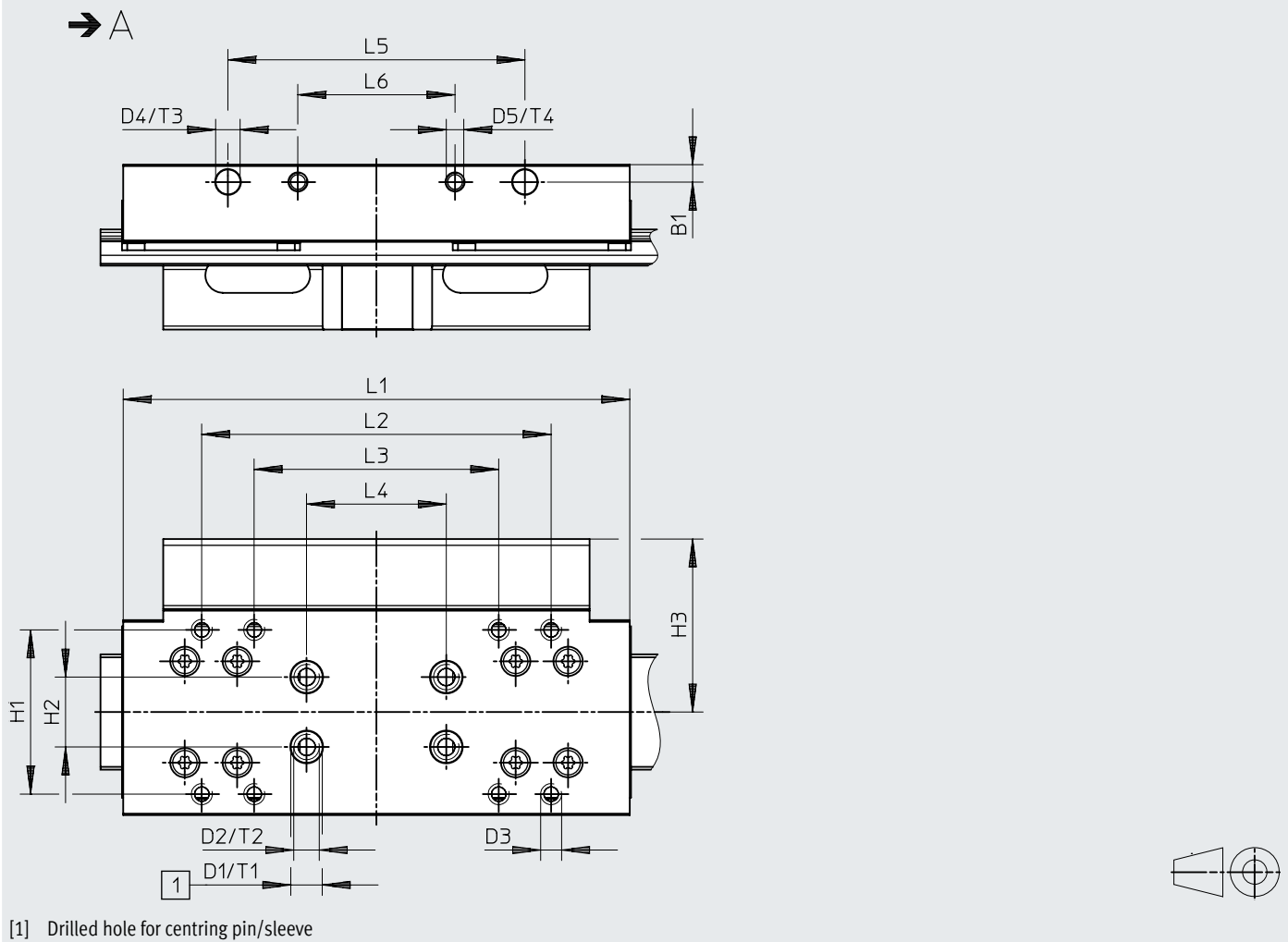
Ø	B1	D1	D2	D3	D4	D5	H1	H3	L1
[mm]	±0.05	Ø H7			Ø H7		±0.2	±0.1	±0.2
25	5	9	M6	M5	7	M5	32	44	118

Ø	L2	L3	L4	L5	L6	T1	T2	T3	T4
[mm]	±0.2	±0.2	±0.3	±0.05	±0.1	+0.2		+0.2	
25	74	44	40	60	30	2.1	8	2.1	7.5

Datasheet

Dimensions Download CAD data → www.festo.com

Slide
Ø 32



[1] Drilled hole for centring pin/sleeve

Ø	B1	D1	D2	D3	D4	D5	H1	H2	H3	L1
[mm]	±0.05	Ø H7			Ø H7		±0.2	±0.03	±0.1	±0.2
32	5	9	M6	M5	7	M5	47	20	49.5	145

Ø	L2	L3	L4	L5	L6	T1	T2	T3	T4
[mm]	±0.2	±0.2	±0.3	±0.05	±0.1	+0.2		+0.2	
32	100	70	40	85	45	2.1	8	2.1	7.5

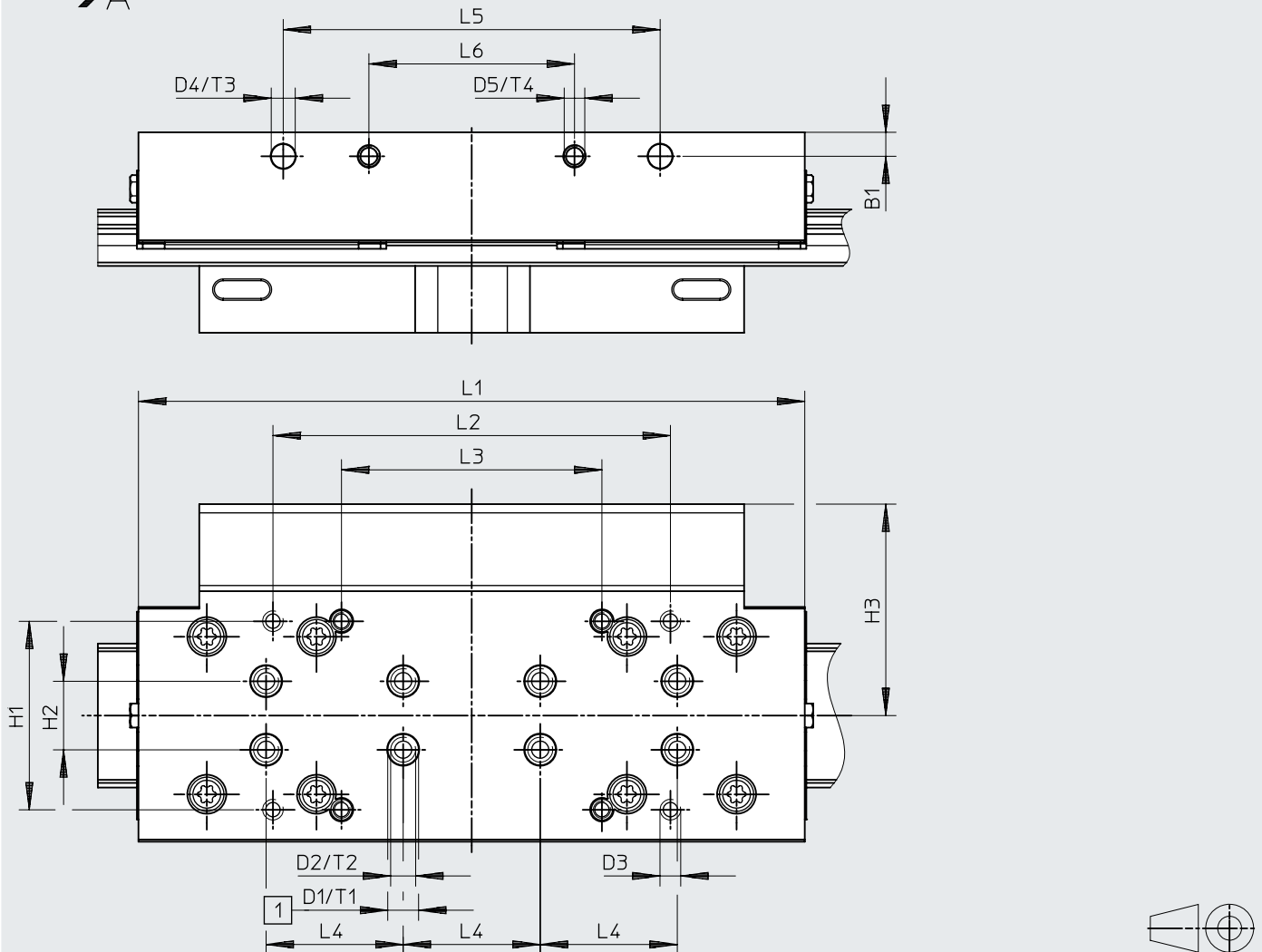
Datasheet

Dimensions

Download CAD data → www.festo.com

Slide

Ø 40



[1] Drilled hole for centring pin/sleeve

Ø	B1	D1	D2	D3	D4	D5	H1	H2	H3	L1
[mm]	±0.05	Ø H7			Ø H7		±0.2	±0.03	±0.1	±0.2
40	7	9	M6	M5	7	M6	55	20	61.7	194.5

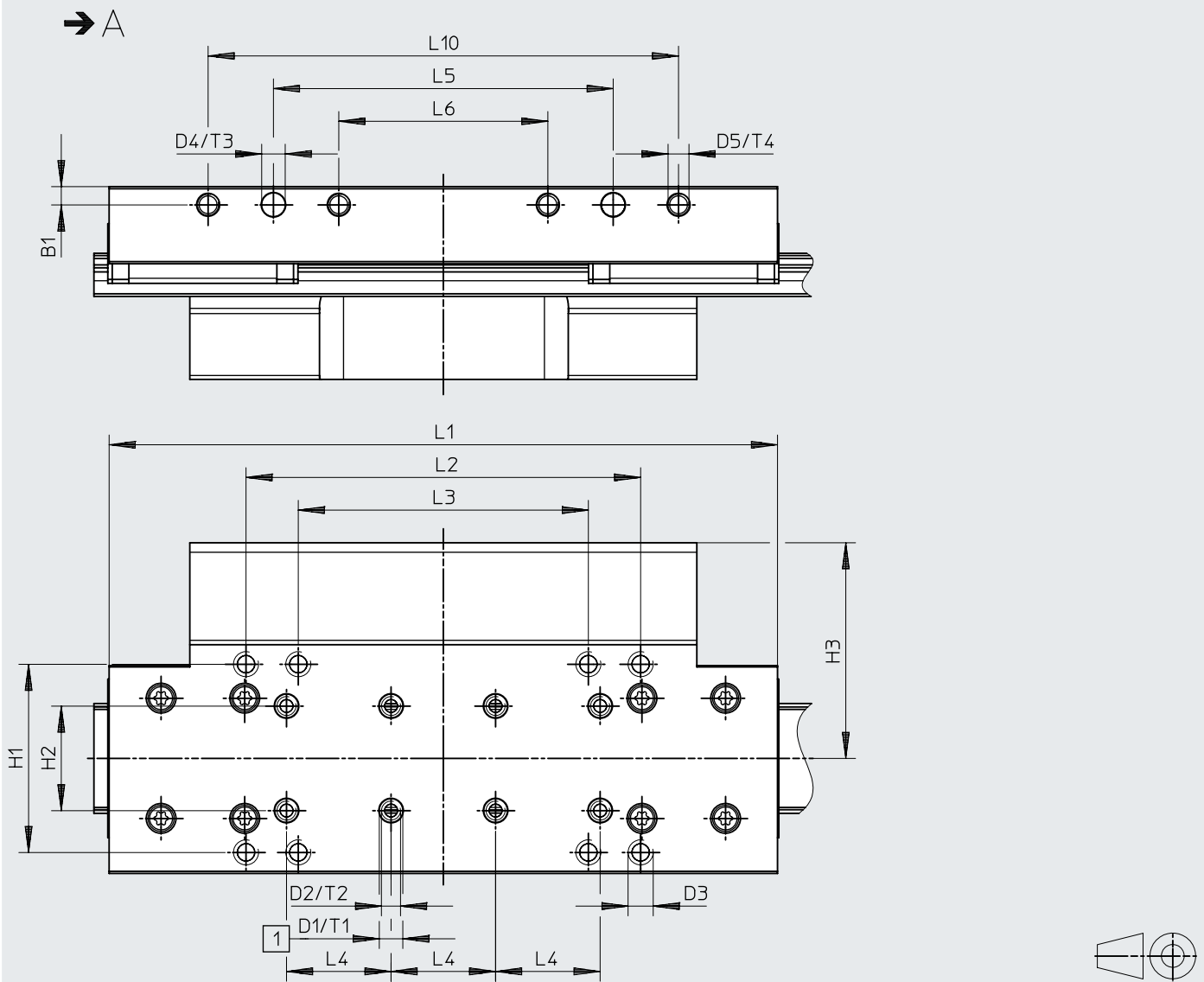
Ø	L2	L3	L4	L5	L6	T1	T2	T3	T4
[mm]	±0.2	±0.2	±0.3	±0.05	±0.1	+0.2		+0.2	
40	116	76	40	110	60	2.1	8.5	2.1	7.5

Datasheet

Dimensions

Download CAD data → www.festo.com

Slide
Ø 50



[1] Drilled hole for centring pin/sleeve

∅	B1	D1	D2	D3	D4	D5	H1	H2	H3	L1
[mm]	±0.05	∅ H7			∅ H7		±0.2	±0.03	±0.1	±0.1
50	7	9	M6	M8	9	M8	72	40	82.5	255.8

∅	L2	L3	L4	L5	L6	L10	T1	T2	T3	T4
[mm]	±0.2	±0.2	±0.03	±0.05	±0.1	±0.1	+0.2		+0.2	
50	151	111	40	130	80	180	2.1	13.5	2.1	18

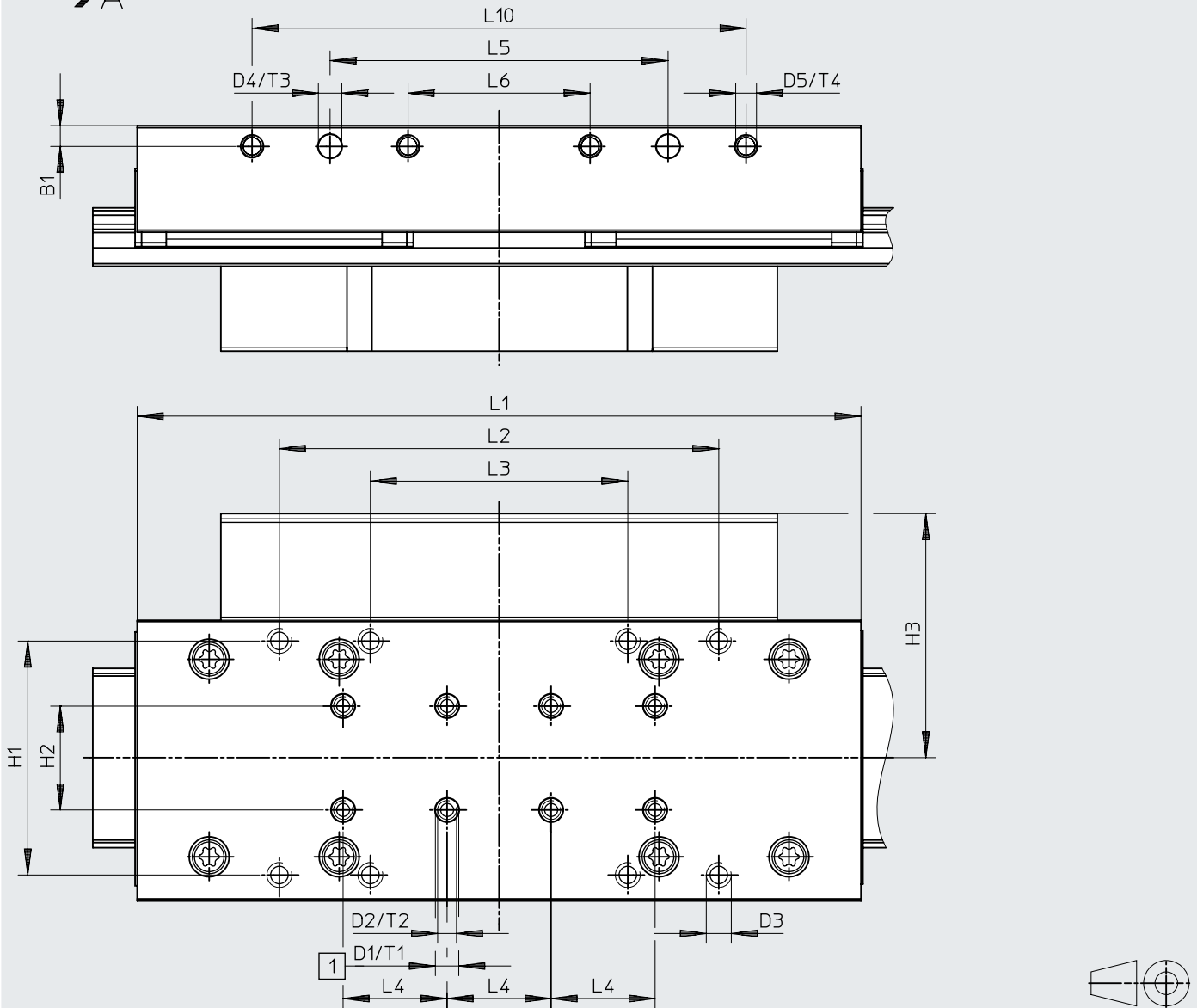
Datasheet

Dimensions

Download CAD data → www.festo.com

Slide

Ø 63



[1] Drilled hole for centring pin/sleeve

Ø	B1	D1	D2	D3	D4	D5	H1	H2	H3	L1
[mm]	±0.05	Ø H7			Ø H7		±0.2	±0.03	±0.1	±0.1
63	8	9	M6	M8	9	M8	90	40	93.8	278.4

Ø	L2	L3	L4	L5	L6	L10	T1	T2	T3	T4
[mm]	±0.2	±0.2	±0.03	±0.05	±0.1	±0.1	+0.2		+0.2	
63	169	99	40	130	70	190	2.1	13.6	2.1	18

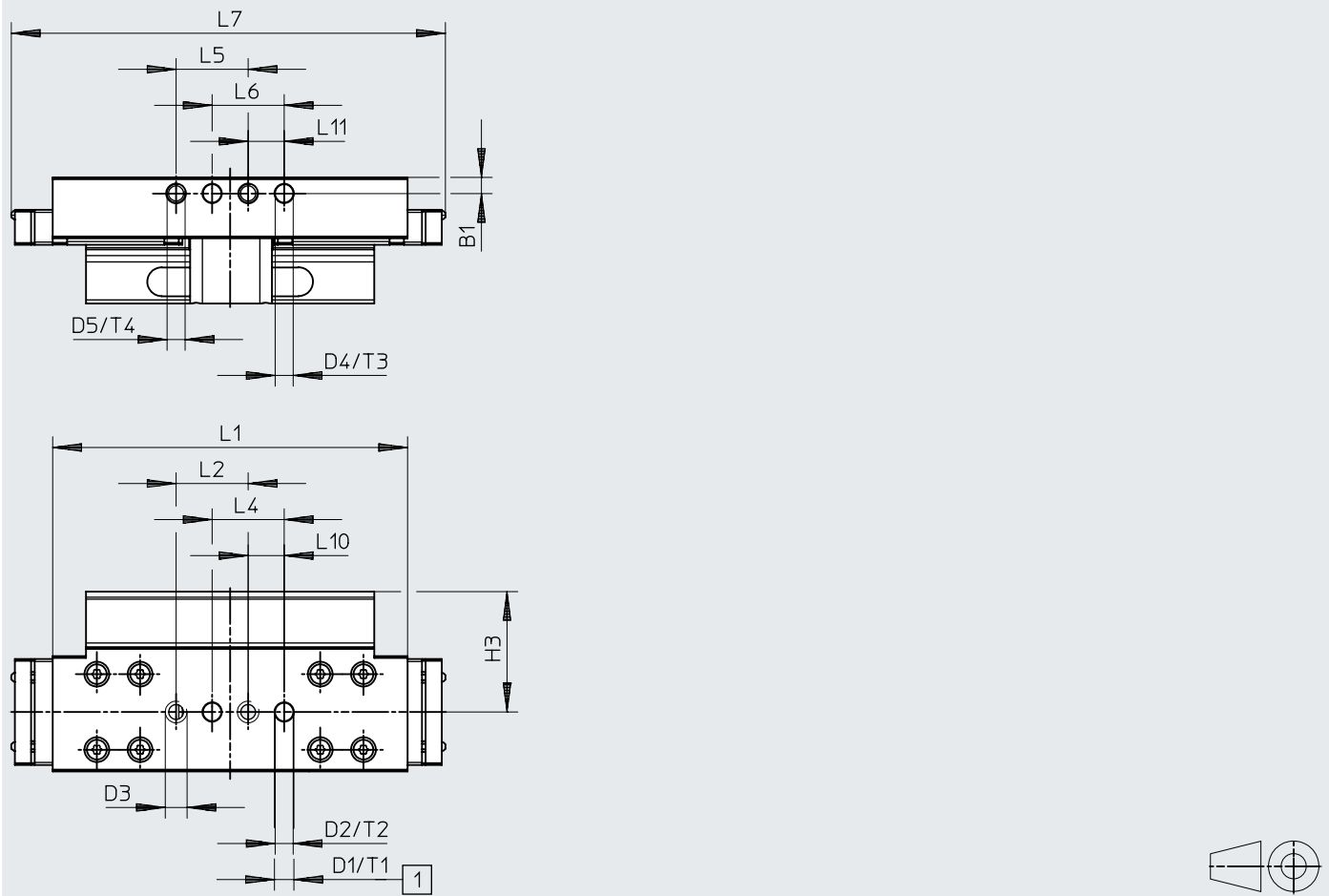
Datasheet

Dimensions

Download CAD data → www.festo.com

Slide, variant GP – Protected recirculating ball bearing guide

Ø 18



[1] Drilled hole for centring pin/sleeve

Ø	B1	D1	D2	D3	D4	D5	H3	L1	L2	L4
[mm]	±0.05	Ø H7			Ø H7		±0.1	±0.1	±0.1	±0.03
18	4.5	5	M5	M5	5	M5	33.4	98.5	20	20

Ø	L5	L6	L7	L10	L11	T1	T2	T3	T4
[mm]	±0.03	±0.1		±0.1	±0.1	+0.2		±0.1	
18	20	20	120	10	10	3.1	6.7	3.1	7.5

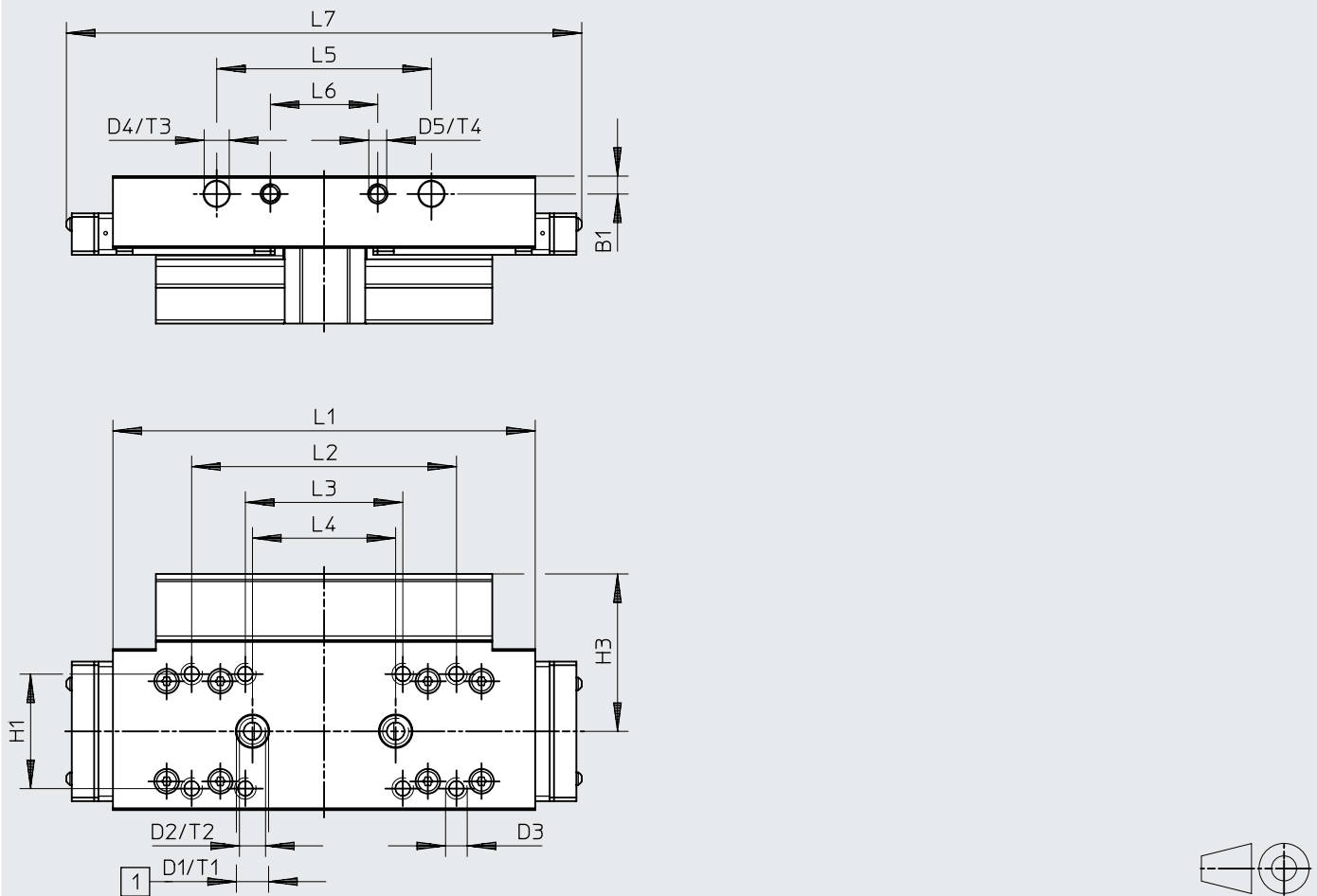
Datasheet

Dimensions

Download CAD data → www.festo.com

Slide, variant GP – Protected recirculating ball bearing guide

Ø 25



[1] Drilled hole for centring pin/sleeve

Ø	B1	D1	D2	D3	D4	D5	H1	H3	L1	L2
[mm]	±0.05	Ø H7			Ø H7		±0.2	±0.1	±0.2	±0.2
25	5	9	M6	M5	7	M5	32	44	118	74

Ø	L3	L4	L5	L6	L7	T1	T2	T3	T4
[mm]	±0.2	±0.3	±0.05	±0.1		+0.2		+0.2	
25	44	40	60	30	144	2.1	8	2.1	7.5

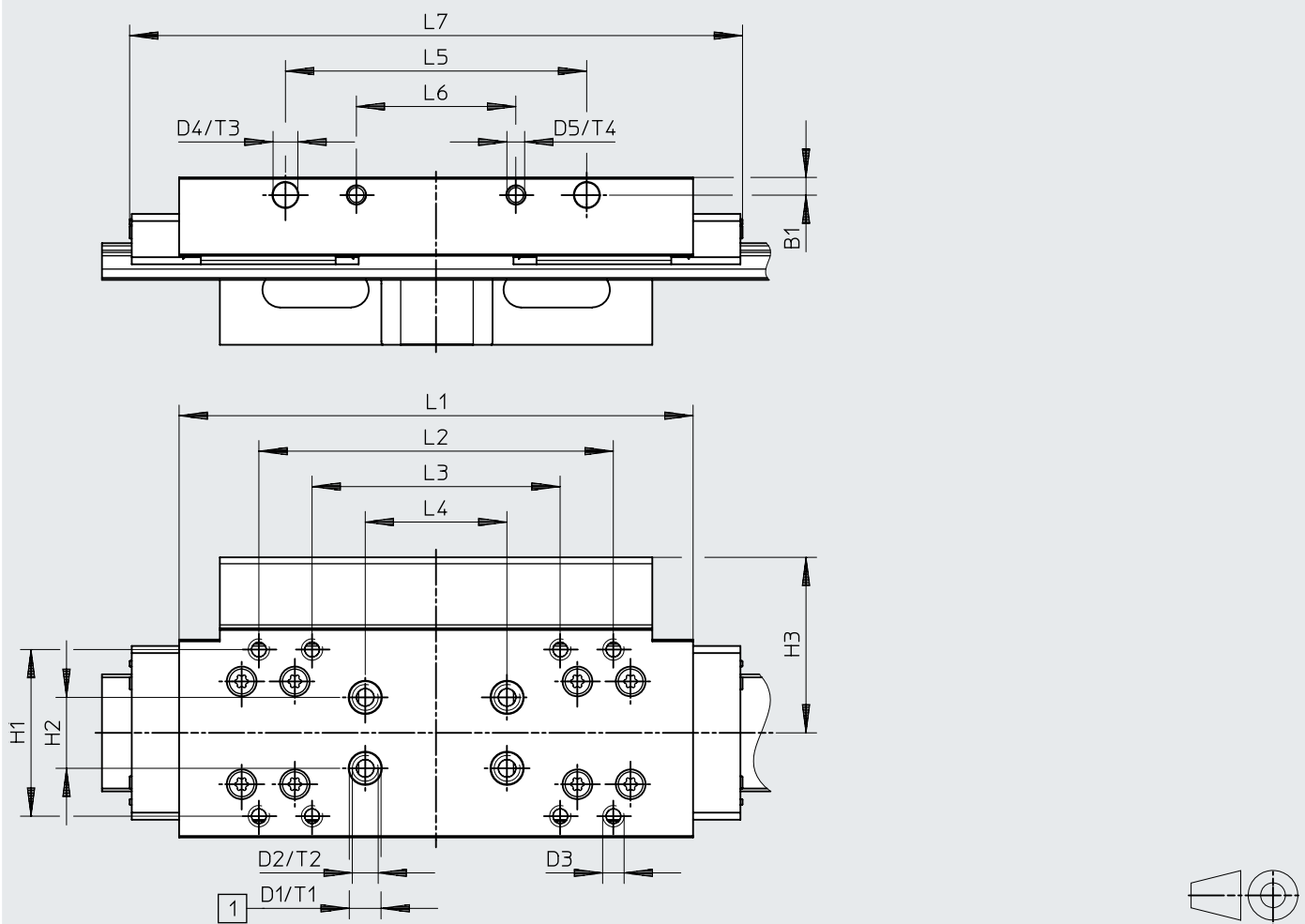
Datasheet

Dimensions

Download CAD data → www.festo.com

Slide, variant GP – Protected recirculating ball bearing guide

Ø 32



[1] Drilled hole for centring pin/sleeve

Ø	B1	D1	D2	D3	D4	D5	H1	H2	H3	L1
[mm]	±0.05	Ø H7			Ø H7		±0.2	±0.03	±0.1	±0.2
32	5	9	M6	M5	7	M5	47	20	49.5	145

Ø	L2	L3	L4	L5	L6	L7	T1	T2	T3	T4
[mm]	±0.2	±0.2	±0.3	±0.05	±0.1		+0.2		+0.2	
32	100	70	40	85	45	172.9	2.1	8	2.1	7.5

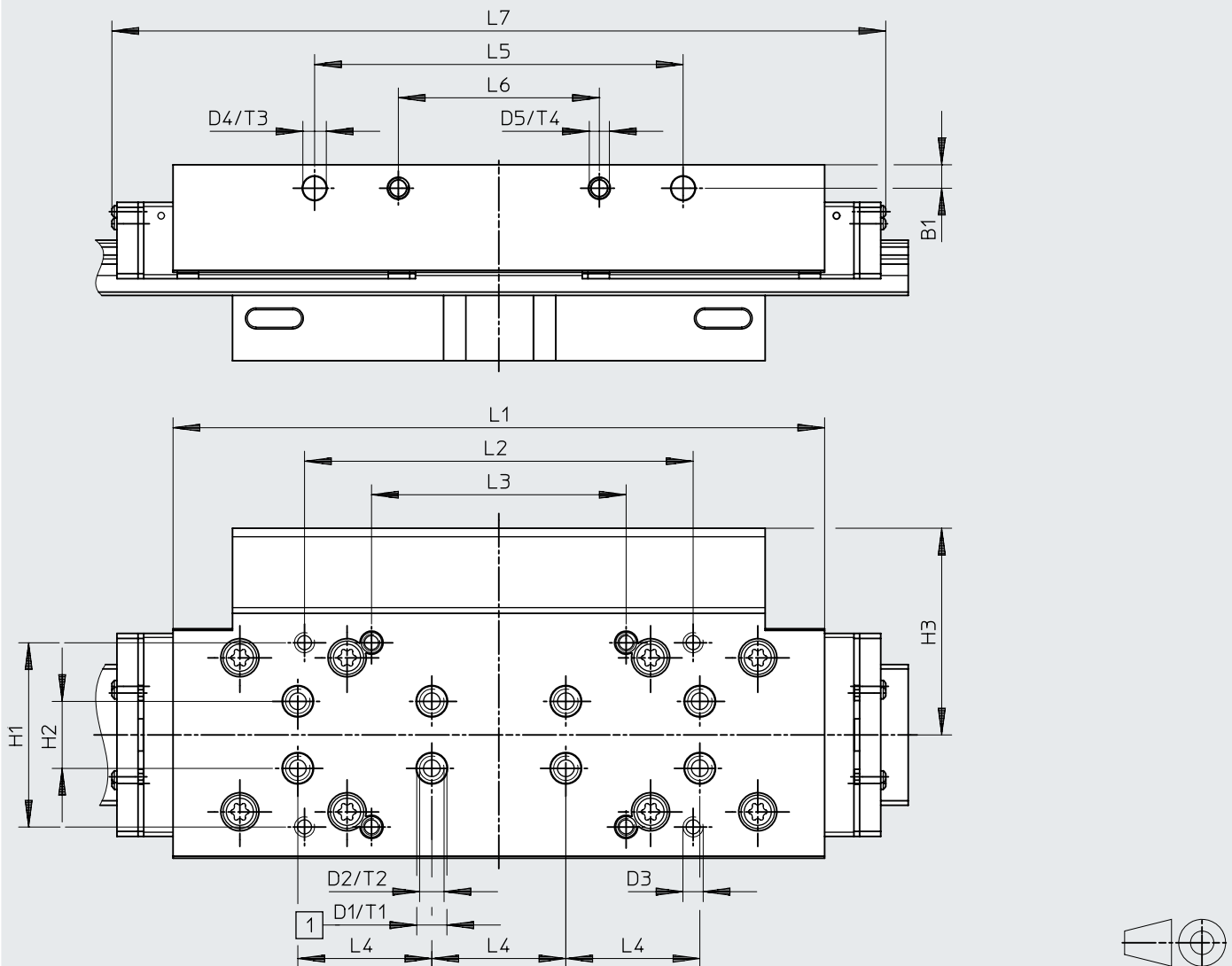
Datasheet

Dimensions

Download CAD data → www.festo.com

Slide, variant GP – Protected recirculating ball bearing guide

Ø 40



[1] Drilled hole for centring pin/sleeve

Ø	B1	D1	D2	D3	D4	D5	H1	H2	H3	L1
[mm]	±0.05	Ø H7			Ø H7		±0.2	±0.03	±0.1	±0.2
40	7	9	M6	M5	7	M6	55	20	61.7	194.5

Ø	L2	L3	L4	L5	L6	L7	T1	T2	T3	T4
[mm]	±0.2	±0.2	±0.3	±0.05	±0.1		+0.2		+0.2	
40	116	76	40	110	60	231	2.1	8.5	2.1	7.5

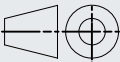
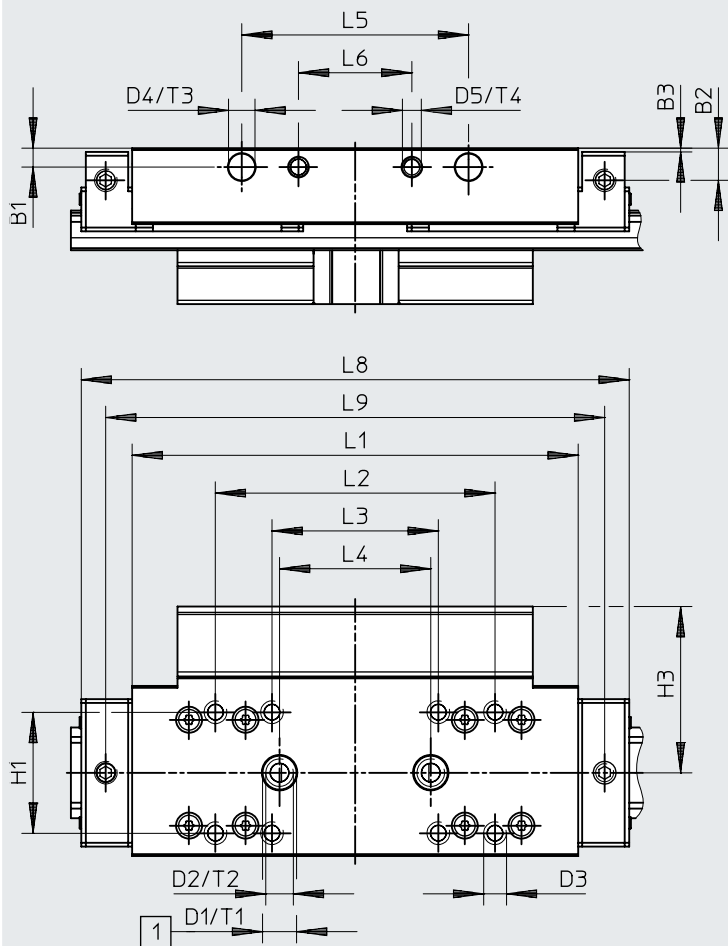
Datasheet

Dimensions

Download CAD data → www.festo.com

Slide, variant C – Lubrication adapter

Ø 25



[1] Drilled hole for centring pin/sleeve

Ø	B1	B2	B3	D1	D2	D3	D4	D5	H1	H3	L1
[mm]	±0.05		±0.05	Ø H7			Ø H7		±0.2	±0.1	±0.2
25	5	8.5	1	9	M6	M5	7	M5	32	44	118

Ø	L2	L3	L4	L5	L6	L8	L9	T1	T2	T3	T4
[mm]	±0.2	±0.2	±0.3	±0.05	±0.1			+0.2		+0.2	
25	74	44	40	60	30	145	132	2.1	8	2.1	7.5

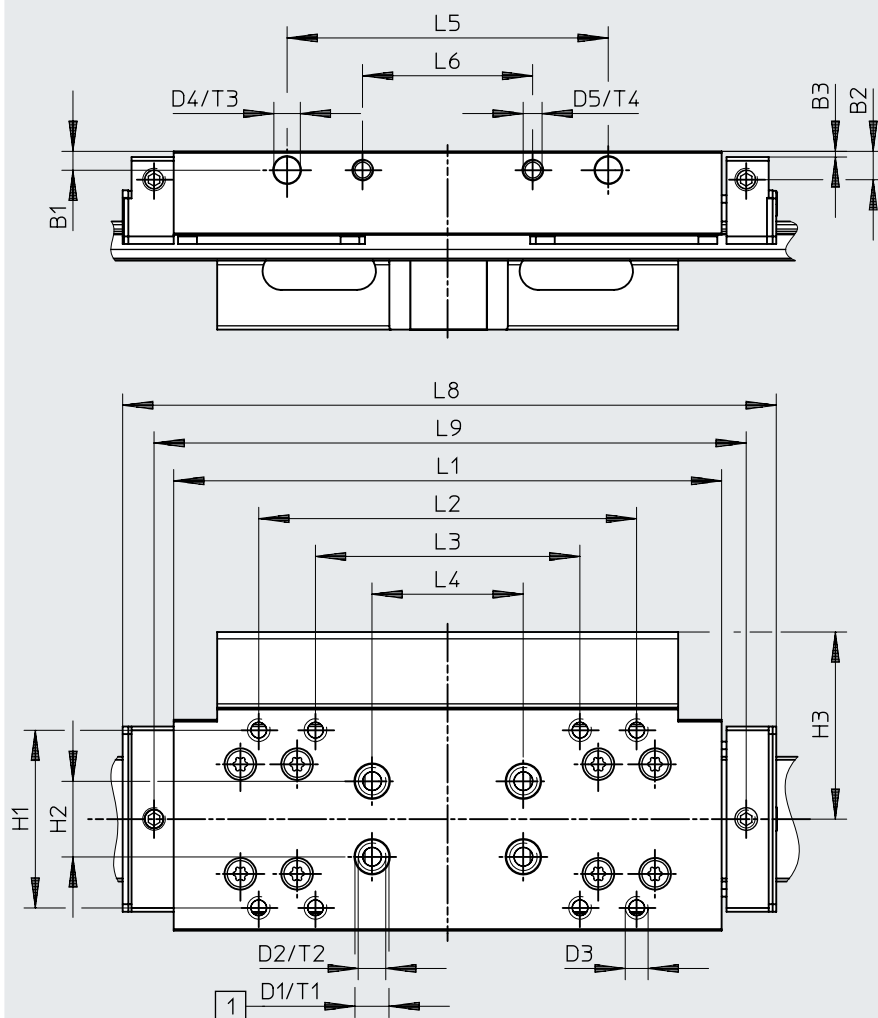
Datasheet

Dimensions

Download CAD data → www.festo.com

Slide, variant C – Lubrication adapter

Ø 32



[1] Drilled hole for centring pin/sleeve

Ø	B1	B2	B3	D1 Ø	D2	D3	D4 Ø	D5	H1	H2	H3	L1
[mm]	±0.05		±0.05	H7			H7		±0.2	±0.03	±0.1	±0.2
32	5	7.5	1.5	9	M6	M5	7	M5	47	20	49.5	145

Ø	L2	L3	L4	L5	L6	L8	L9	T1	T2	T3	T4
[mm]	±0.2	±0.2	±0.3	±0.05	±0.1			+0.2		+0.2	
32	100	70	40	85	45	172	158	2.1	8	2.1	7.5

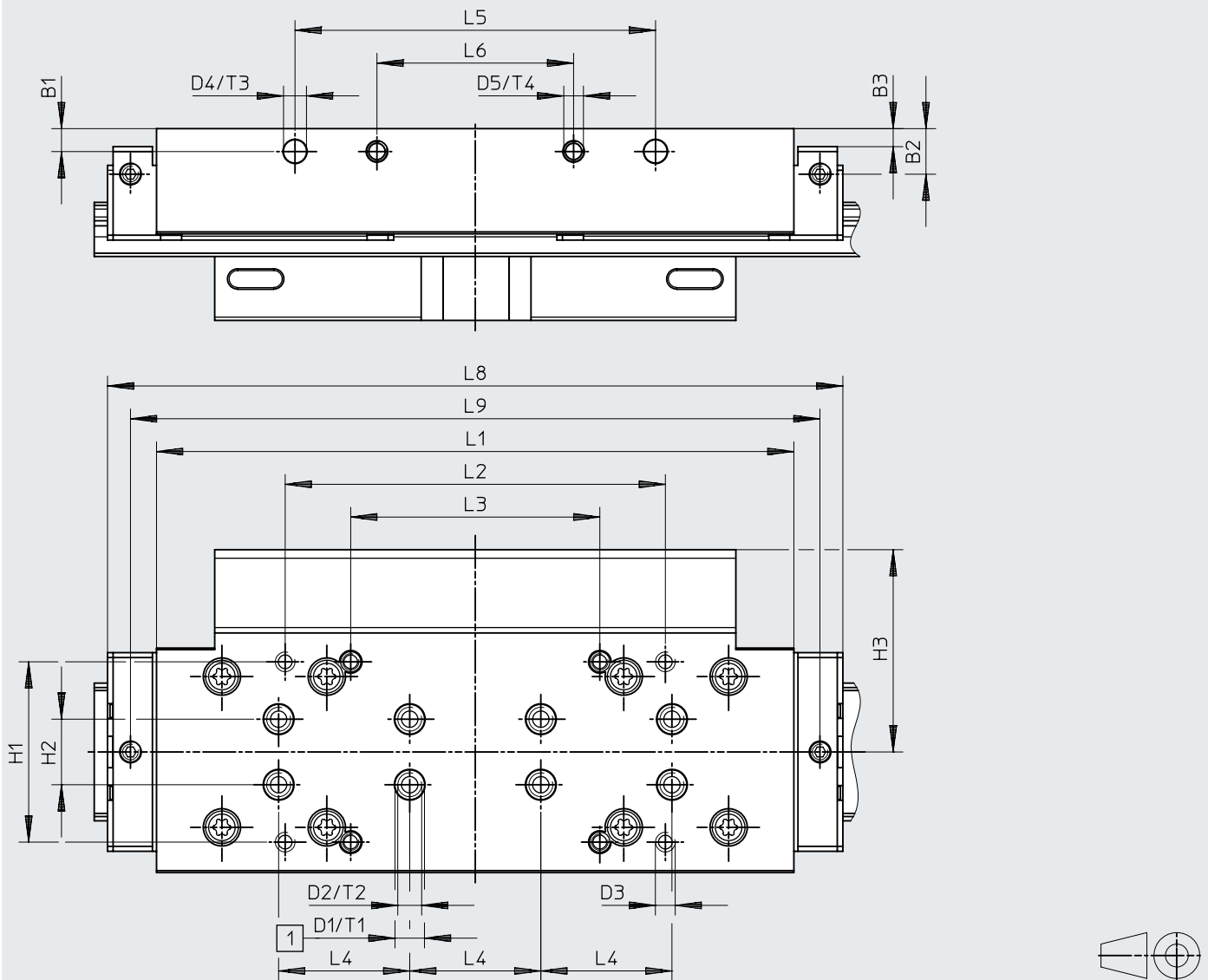
Datasheet

Dimensions

Download CAD data → www.festo.com

Slide, variant C – Lubrication adapter

Ø 40



[1] Drilled hole for centring pin/sleeve

Ø	B1	B2	B3	D1 Ø H7	D2	D3	D4 Ø H7	D5	H1	H2	H3	L1
[mm]	±0.05		±0.05						±0.2	±0.03	±0.1	±0.2
40	7	13.9	5.5	9	M6	M5	7	M6	55	20	61.7	194.5

Ø	L2	L3	L4	L5	L6	L8	L9	T1	T2	T3	T4
[mm]	±0.2	±0.2	±0.3	±0.05	±0.1			+0.2		+0.2	
40	116	76	40	110	60	224.4	210.4	2.1	8.5	2.1	7.5

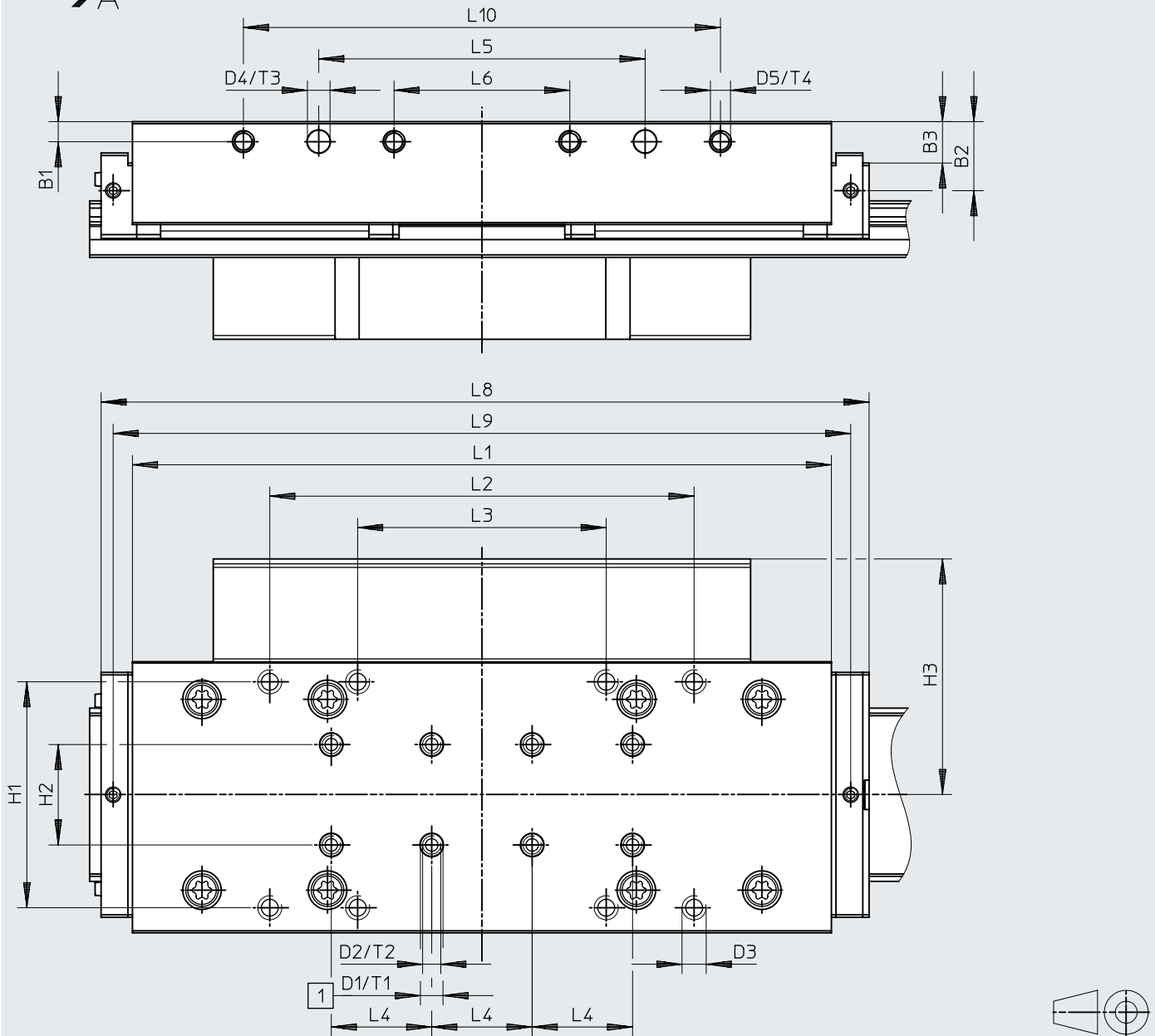
Datasheet

Dimensions

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Slide, variant C – Lubrication adapter

Ø 63

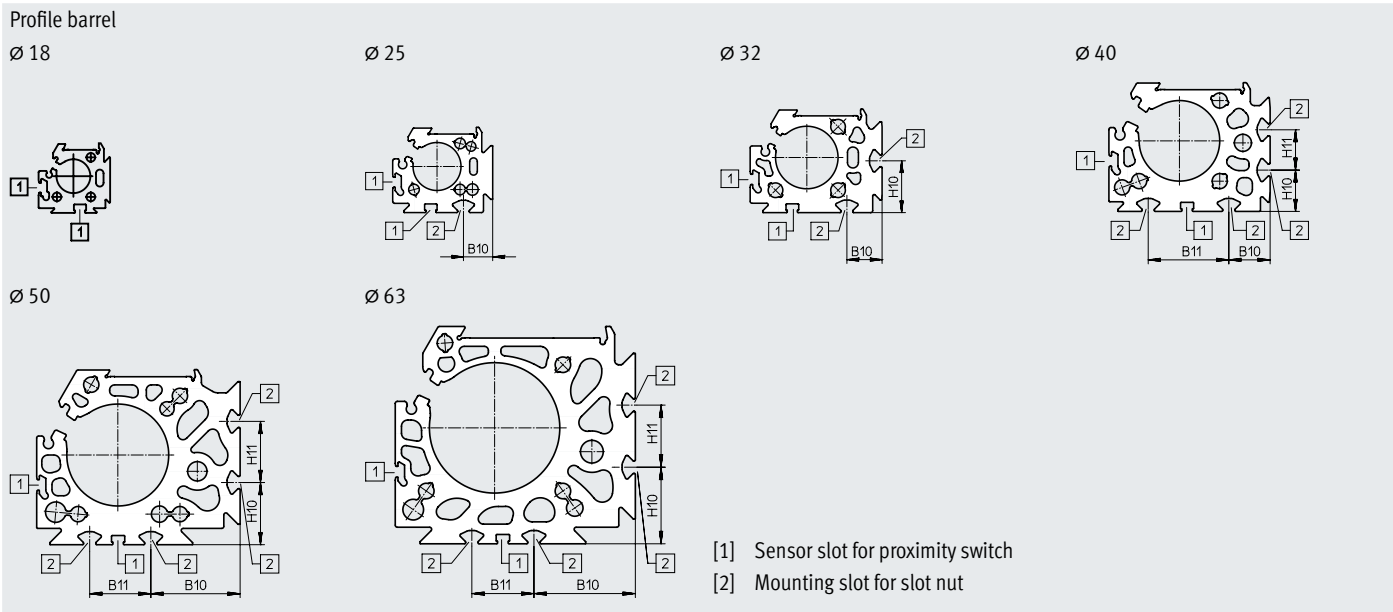


[1] Drilled hole for centring pin/sleeve

Ø	B1	B2	B3	D1 Ø	D2	D3	D4 Ø	D5	H1	H2	H3	L1
[mm]	±0.05			H7			H7		±0.2	±0.03	±0.1	±0.1
63	8	27.5	16.5	9	M6	M8	9	M8	90	40	93.8	278.4

Ø	L2	L3	L4	L5	L6	L8	L9	L10	T1	T2	T3	T4
[mm]	±0.2	±0.2	±0.03	±0.05	±0.1			±0.1	+0.2		+0.2	
63	169	99	40	130	70	305.9	293.8	190	2.1	13.6	2.1	18

Datasheet



Datasheet

∅ [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

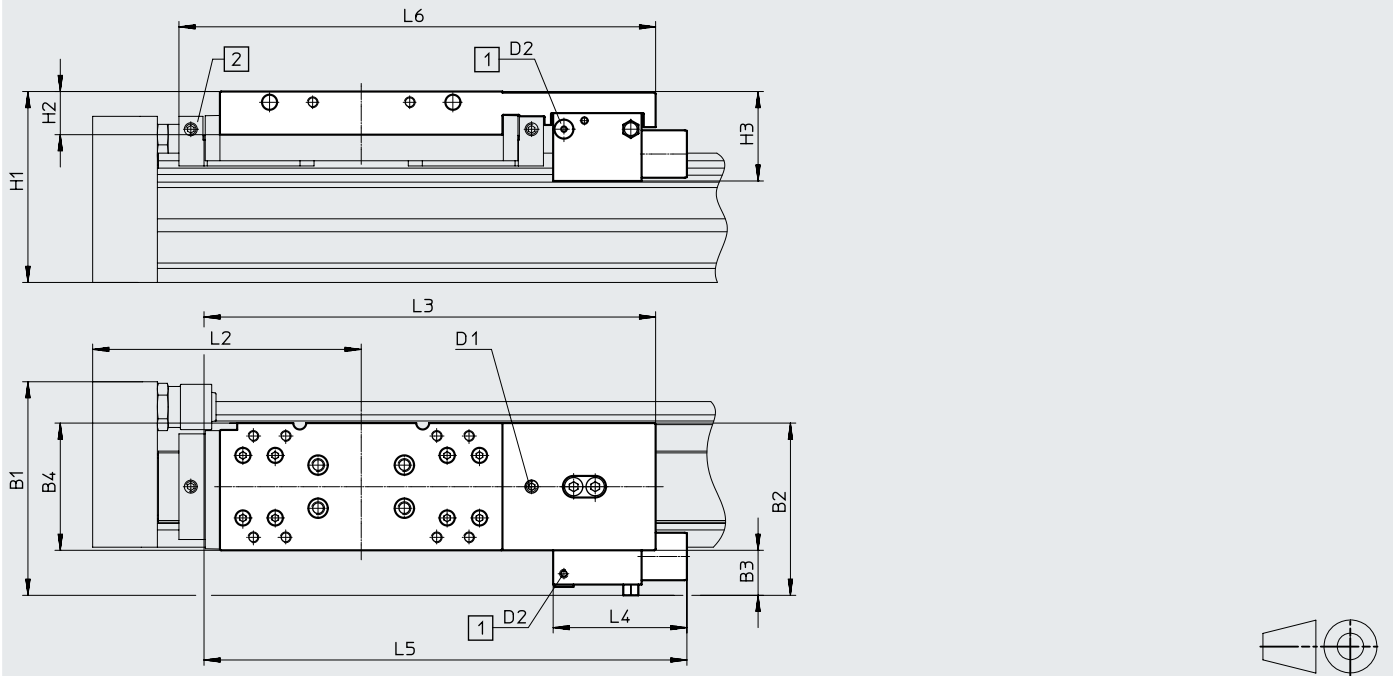
Datasheet

Dimensions

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1H – With clamping unit

Ø 25/32



 **Note**
Overall length L1 at stroke = 0 mm
→ page 14

[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-...-C-1H-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-...-C-1H-PN														221

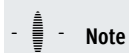
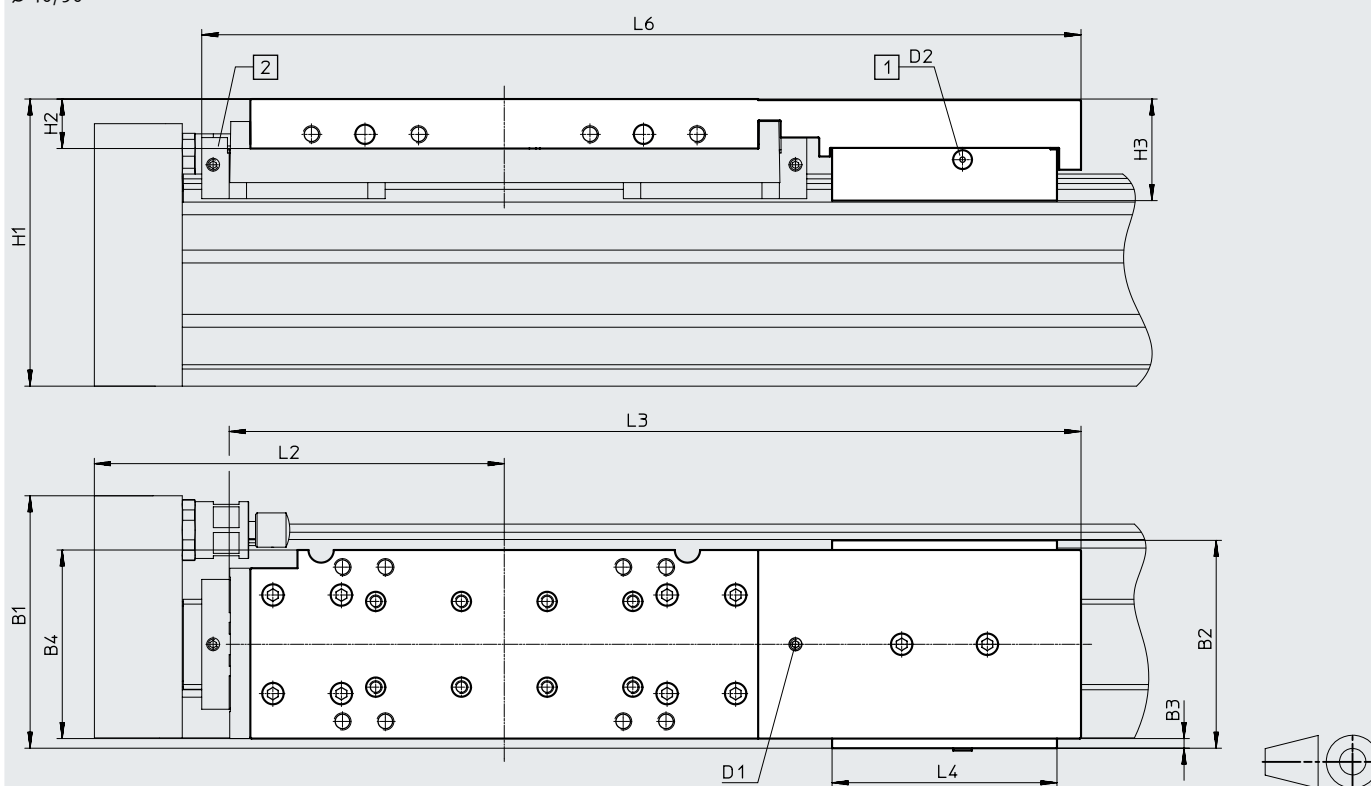
Datasheet

Dimensions

Download CAD data → www.festo.com

1H – With clamping unit

Ø 40/50



Note

Overall length L1 at stroke = 0 mm

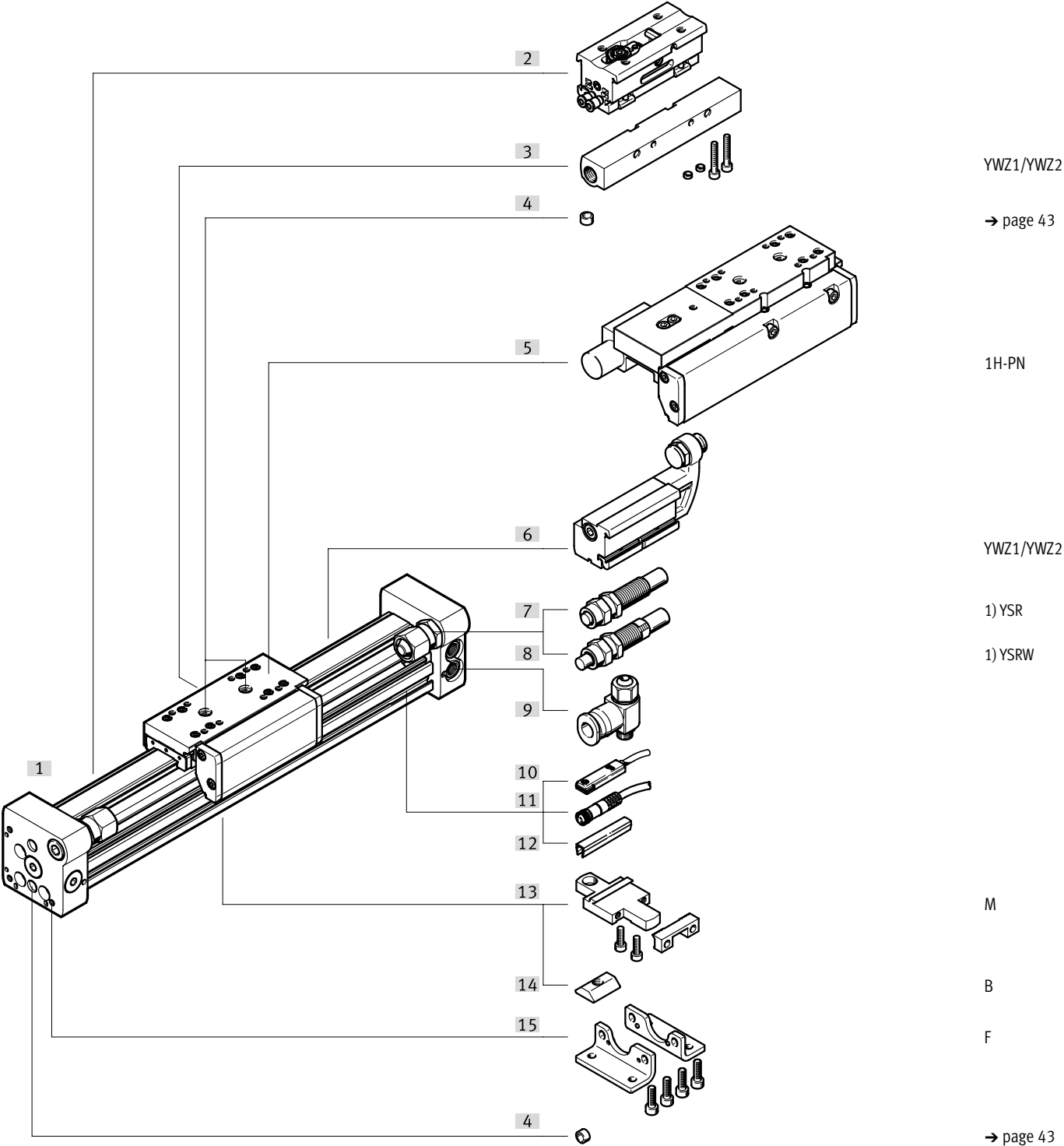
→ page 14

[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-...-C-1H-PN													345.7
DGC-50-...-1H-PN	117.8	97	4.5	88	134	23	47.4	M6	M5	175	397.6	105	–
DGC-50-...-C-1H-PN													412.1

Ordering data – Modular product system



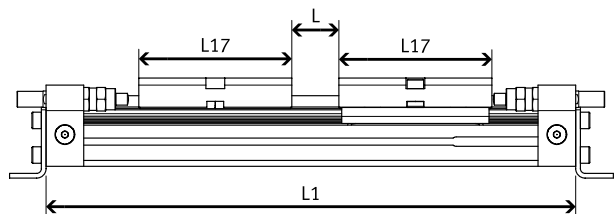
-  - **Note**
1) End stops or shock absorbers must not be removed.

Ordering data – Modular product system

Working stroke reduction when ordering an additional slide K

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

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



∅ [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 mm = 500 mm – 20 mm – 65 mm

Ordering data – Modular product system

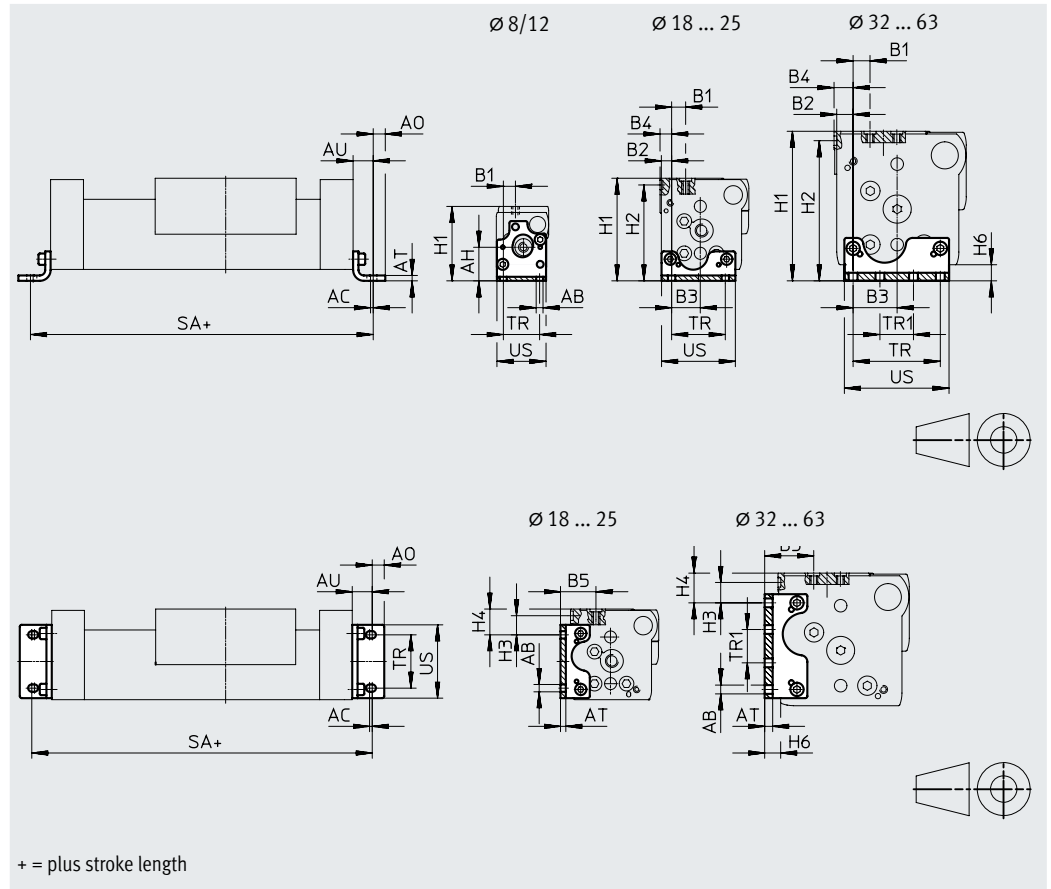
Ordering table											
Size	8	12	18	25	32	40	50	63	Condi- tions	Code	Enter code
Module no.	530906	530907	532446	532447	532448	532449	532450	532451			
Function	Linear drive									DGC	DGC
Piston Ø [mm]	8	12	18	25	32	40	50	63		-...	
Stroke [mm]	1 ... 1 300	1 ... 1 900	1 ... 3 000	1 ... 5 000					[1]	-...	
Guide	Guide axis without drive									-FA	-FA
Cushioning	Elastic cushioning rings/plates at both ends									-P	
	Shock absorber, self-adjusting									-YSR	
	Shock absorber, self-adjusting, progressive									-YSRW	
Slide	–	–	Protected recirculating ball bearing guide				–	–	[2]	-GP	
Lubrication	–	–	Standard								
	–	–	Food-safe lubrication						[3]	-H1	
Lubrication function	Standard										
	–	–	–	Lubrication adapter			–	Lubrication adapter	[4]	-C	
Additional slide	1 ... 2								[5]	-...K	
Clamping unit	–	–	–	None				–			
	–	–	–	1-channel				–	[6]	-1H	
Actuation type	–	–	–	None				–			
	–	–	–	Pneumatic				–	[6]	-PN	
EU certification	II 3GD								[7]	-EX2	
	II 2G								[7]	-EX3	
Foot mounting	1									F	
Profile mounting	1 ... 9									...M	
Slot nut for mounting slot	–	–	–	1 ... 9						...B	
Slot cover, sensor slot	–	–	1 ... 9						...L		
Mechanical end-position limiter	–	–	Variable end position, at one end						[8]	YWZ1	
	–	–	Variable end position, at both ends						[8]	YWZ2	
Operating 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) H1 Not with protected version GP, cushioning YSR, YSRW or clamping unit 1H
- 4) C Not with slide GP
- 5) K For a linear drive DGC with additional slide, the working stroke is reduced by the length of the additional slide and the distance between the two slides
Not with cushioning P
- 6) 1H, PN Not with end-position limiter YWZ1, YWZ2; protected version GP; additional slide K or lubrication H1
Only with cushioning YSRW
1H only with PN
- 7) EX2, EX3 Not with protected recirculating ball bearing guide GP, lubrication adapter C, additional slide K, clamping unit 1H-PN
- 8) YWZ1, YWZ2 Only with cushioning YSR or YSRW

Accessories

Foot mounting HPC (order code: F)

Material:
Galvanised steel



Dimensions and ordering data

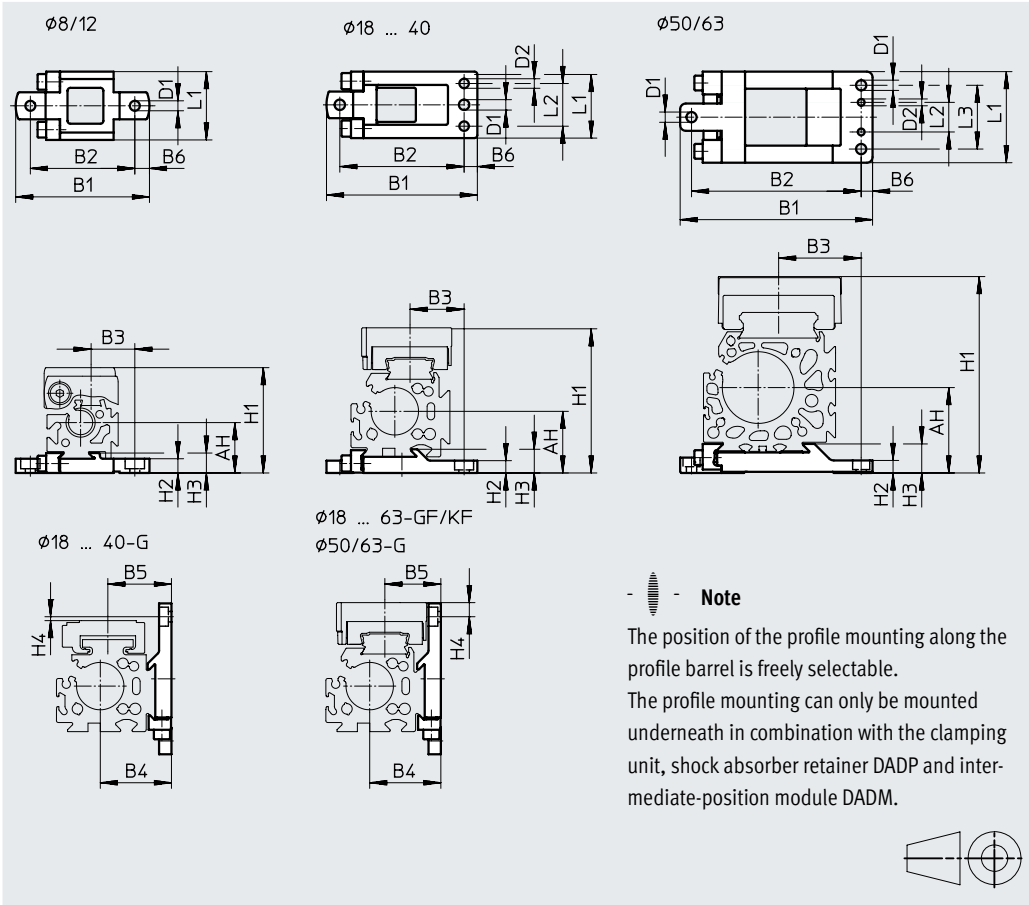
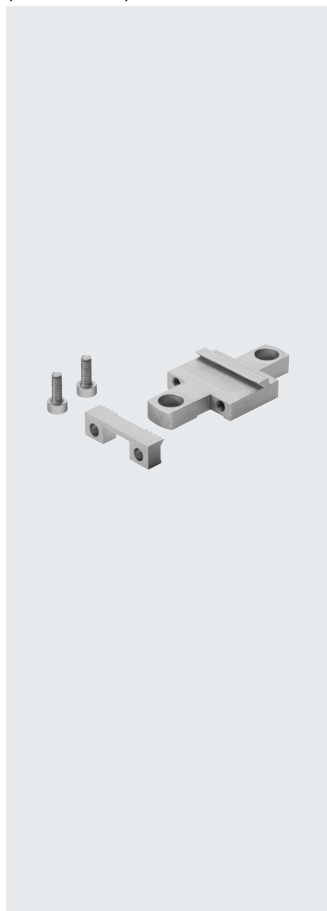
for Ø [mm]	AB Ø	AC	AH	AO	AT	AU	B1	B2	B3	B4	B5	H1
8	3.4	1.5	16.7	3	2	9	6	—	—	—	—	37
12	4.5	2	18.5	4.5	2	11.5	5.4	—	—	—	—	42.5
18	5.5	2	—	6.75	3	13.25	11.2	4.3	15.2	5.3	23.2	64
25	5.5	2	—	9	4	15	13.35	7.65	21.35	8.65	29.5	76.5
32	6.6	2	—	10	5	19	11.5	9	29.5	10.5	27	87.5
40	6.6	2	—	10	6	20	12.6	12.2	32.8	14.2	36.8	111.5
50	9	3	—	11	8	25	12.5	11.5	48.5	11.5	41	141.5
63	11	3	—	13.5	8	28	17.5	12.5	55.5	17.5	49	172.5

for Ø [mm]	H2	H3	H4	H6	SA	TR	TR1	US	Weight [g]	Part no.	Type ¹⁾
8	—	—	—	5	118	18	—	24.4	26	526385	HPC-8
12	—	—	—	5	148	20	—	29.6	38	526388	HPC-12
18	59.5	16.7	21.5	7.7	176	30	—	38.6	58	533667	HPC-18
25	71.5	14.35	19.35	8.5	230	40	—	55	131	533668	HPC-25
32	82.5	8	13	9	288	56.5	19.5	68	239	533669	HPC-32
40	104.5	15.3	22.3	12	340	65	25	78	348	533670	HPC-40
50	134.5	23.4	30.4	17	400	82.6	47.4	102	754	545236	HPC-50
63	164.5	22	30	19	456	111	39	133	1245	545237	HPC-63

1) Suitable for ATEX

Accessories

Profile mounting MUC
 (order code: M)

 Material:
 High-alloy steel

Dimensions and ordering data

for Ø	AH	B1	B2	B3	B4	B5	B6	D1 Ø	D2 Ø H7
[mm]			±0.2						
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 ¹⁾
[mm]								[g]		
8	37	5	7	—	24	—	—	28	526384	MUC-8
12	42.5	4.5	7	—	24	—	—	32	526387	MUC-12
18	64	5.7	9.9	6.4	33	20.5	—	78	531752	MUC-18
25	76.5	6.5	12.5	7.43	35	22.5	—	113	531753	MUC-25
32	87.5	6.5	13	4	45	30	—	174	531754	MUC-32
40	111.5	8.5	16	11.3	60	44	—	346	531755	MUC-40
50	159	11	23.5	9.2	80	26	56	874	531756	MUC-50
63	172.5	11	23.5	15	80	26	56	1080	531757	MUC-63

1) Suitable for ATEX

Accessories

Shock absorber retainer DADP-DGC

Stop KYC

(order code: YWZ1 or YWZ2)

Materials:

Shock absorber retainer:

Housing: Anodised aluminium

Materials:

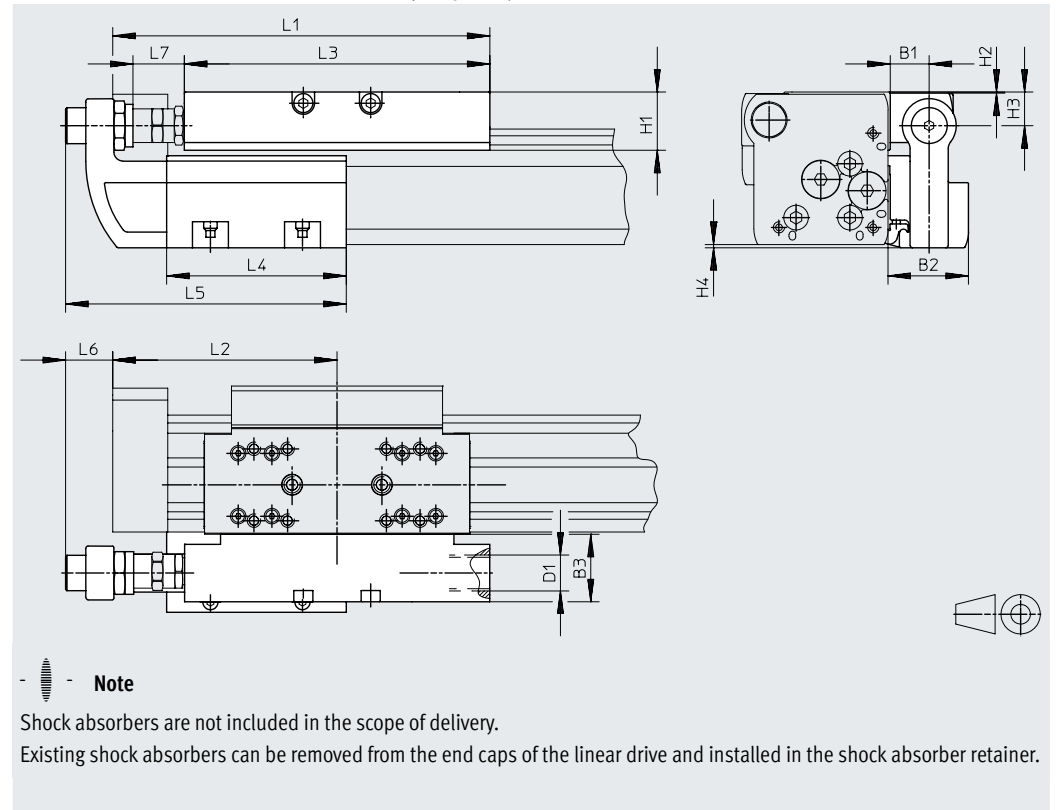
Housing: Anodised aluminium

Stop bracket:

Ø 18 ... 40: Stainless steel casting

Ø 50 ... 63: Anodised aluminium

Clamp: High-alloy steel

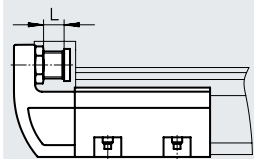


Dimensions															
for Ø [mm]	B1	B2	B3	D1	H1	H2	H3	H4	L1	L2	L3	L4	L5	L6	L7 min.
18	16	34.5	29	M12x1	20.7	0.2	12.5	0.7	128	74.5	107	80	118.5	23.5	14.5
25	16.5	35	30	M16x1	25.5	0.5	15	1.4	168	100	136	80	125	20.5	22.5
32	16.5	35	30	M16x1	25.5	0.5	15	1.7	206.8	124.8	164	120	165	14.5	27.3
40	16	35.7	35	M22x1.5	37	0.5	21.5	2	255	150	210	156	220.5	31	31
50	25	50	41	M22x1.5	40.5	0.5	24	0	301	175	252	170	238	27	31
63	25	50	40	M26x1.5	51.5	1.5	33	0	328	200	256	200	268	24	41

Accessories

Technical data and ordering data

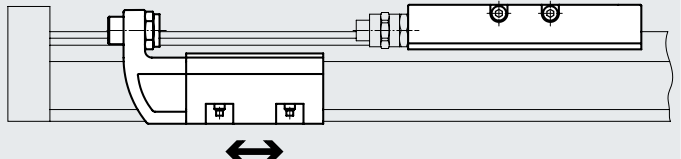
Precision adjustment



 **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.

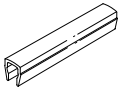
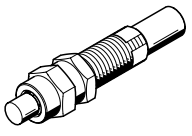
for Ø	Precision adjustment L	Ambient temperature	CRC ¹⁾	Weight	Part no.	Type ²⁾
[mm]	[mm]	[°C]		[g]		
Shock absorber retainer						
18	10	-10 ... +80	2	130	541729	DADP-DGC-18-KF
25	10			180	541730	DADP-DGC-25-KF
32	10			215	541731	DADP-DGC-32-KF
40	15			460	541732	DADP-DGC-40-KF
50	15			890	545244	DADP-DGC-50
63	15			1080	545245	DADP-DGC-63
Stop						
18	10	-10 ... +80	2	400	541691	KYC-18
25	10			560	541692	KYC-25
32	10			790	541693	KYC-32
40	15			1525	541694	KYC-40
50	15			2270	545242	KYC-50
63	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 that are in direct contact with a normal industrial environment.

2) Suitable for ATEX

Accessories

Ordering data		for Ø	Comment	Order code	Part no.	Type	PU ¹⁾
Slot nut NST2)						Datasheets → Internet: hmbn	
	25 ... 40	For mounting slot	B	547264	HMBN-5-1M5		10
	50, 63			186566	HMBN-5-2M5		
Centring pin ZBS/centring sleeve ZBH 2)						Datasheets → Internet: zbs, zbh	
	8 ... 18	For slide	–	150928	ZBS-5		10
	25 ... 63			8137184	ZBH-9-B		
	8, 12	For cover	–	525273	ZBS-2		
	18			150928	ZBS-5		
	25 ... 63			8137184	ZBH-9-B		
Slot cover ABP-S 2)						Datasheets → Internet: abp	
	18 ... 63	For sensor slot Every 0.5 m	L	151680	ABP-5-S		2
Shock absorber 2)						Datasheets → Internet: ysrw	
	18	For DGC-FA with recirculating ball bearing guide	YSRW	540347	YSRW-DGC-18-KF		1
	25			540349	YSRW-DGC-25-KF		
	32			540351	YSRW-DGC-32-KF		
	40, 50			1232870	YSRW-DGC-40/50-B		
	63			543069	YSRW-DGC-63-GF/KF		

1) Packaging unit

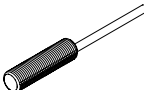
2) Suitable for ATEX

Monitoring with distance sensor SOIA

For monitoring the use and condition of the cushioning elements. Enables predictive maintenance and increases reliability and accuracy.

The following parameters can be monitored:

- Impact velocity
- End position
- Energy absorption
- Residual energy
- Cushioning reserves

Inductive distance sensor SOIA		Type of mounting	Position measuring range	Switching output	Electrical connection	Part no.	Type
	Flush		0 ... 2 mm	PNP/NPN switchable, push-pull	Open end	8161194	SOIA-M8PB-PNLK-LE
			0 ... 4 mm			8161198	SOIA-M12PB-PNLK-LE
	Not flush		0 ... 7 mm			8161196	SOIA-M8PNB-PNLK-LE
						8161200	SOIA-M12PNB-PNLK-LE