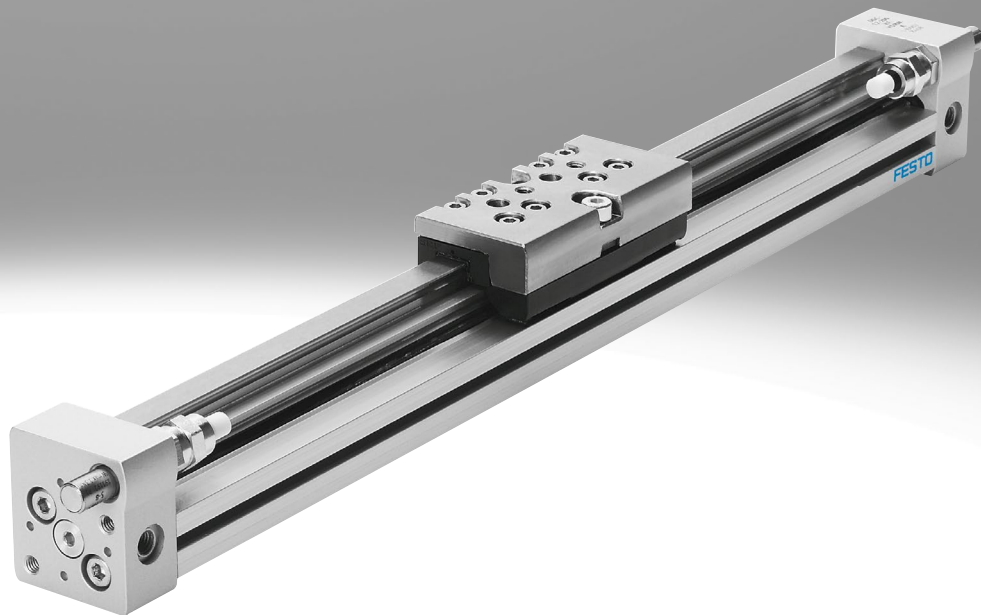


Linear drives DGC

FESTO



Key features

At a glance

- Compact – installation length relative to stroke
- Loads and devices can be directly mounted on the slide.
- There is a choice of three types of cushioning:
 - Elastic cushioning
 - Pneumatic cushioning
 - Hydraulic cushioning
- Optional: NSF-H1 lubricant for the food zone

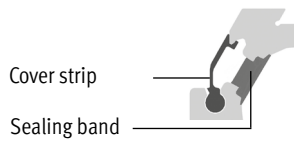
The linear drive is of limited suitability for the food zone.

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

Not approved for use in the food zone:

- DGC...-GP (protected version)
- DGC... with integrated shock absorbers

- Sealing system

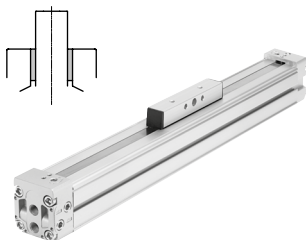


Advantages of the sealing system

- Long strokes with no restrictions
- Virtually no leakage

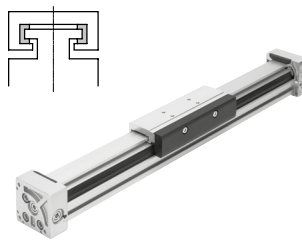
Guide variants

Compact design DGC-K



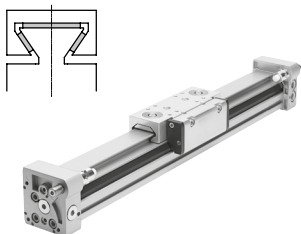
- Piston \varnothing 18 ... 80 mm
- Stroke lengths from 1 ... 8500 mm
- 30% narrower than the DGC-G
- Low moving dead weight
- Symmetrical design

Basic design DGC-G



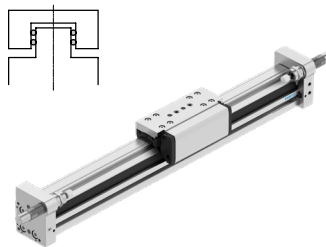
- Piston \varnothing 8 ... 63 mm
- Stroke lengths from 1 ... 8500 mm
- Guide backlash = 0.2 mm
- For small loads
- Operating behaviour under torque load = average

Plain-bearing guide DGC-GF



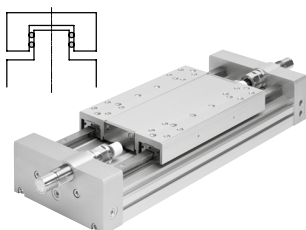
- Piston \varnothing 18 ... 63 mm
- Stroke lengths from 1 ... 8500 mm
- Guide backlash = 0.05 mm
- For small and medium loads
- Operating behaviour under torque load = average

Recirculating ball bearing guide DGC-KF



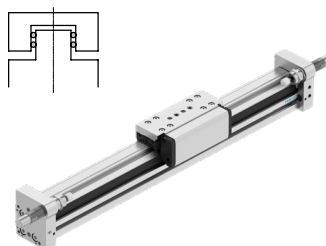
- Piston \varnothing 8 ... 63 mm
- Stroke lengths from 1 ... 8500 mm
- Guide backlash = 0 mm
- For medium and large loads
- Precise mounting interface with centring holes
- Operating behaviour under torque load = very good

Heavy-duty guide DGC-HD



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

Guide axis DGC-FA

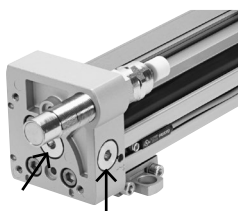


- Without drive
- Piston \varnothing 8 ... 63 mm
- Stroke lengths from 1 ... 8500 mm
- Guide backlash = 0 mm
- Precision guide, suitable for the DGC-KF. Can be used as machine component or as a twin guide with the DGC-KF

Key features

Versatility

Supply ports



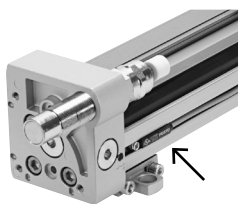
- Optionally on 2 sides (at the front or on the side)
- For DGC-G/DGC-GF/DGC-KF

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

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

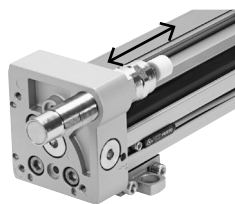
- For piston Ø 18, 25, 32, 40, 50, 63 mm
- For DGC-G, DGC-GF, DGC-KF

G/H/I/J – Proximity switch



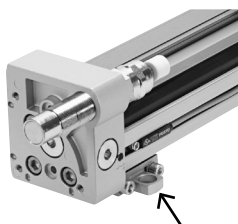
- Proximity switches can be integrated, which means there is no projection. The cable can be guided through the slot behind the second switch
- For DGC-G/DGC-GF/DGC-KF

Precision end-position adjustment



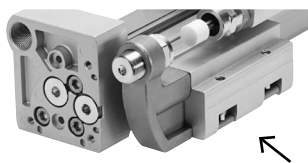
- Between 0 ...25 mm per side
- For DGC-GF/DGC-KF/DGC-FA

M – Profile mounting



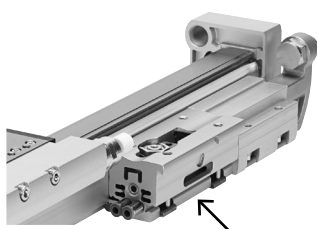
- The profile mounting remains on the base plate after the drive is dismantled. This means faster assembly and removal without repeat adjustment
- For DGC-G/DGC-GF/DGC-KF/DGC-FA

YWZ – Mechanical end-position limiter



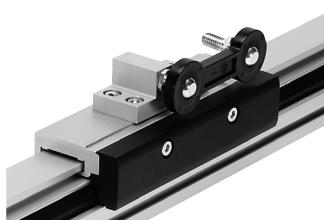
- For variable stroke adjustment, e.g. for format adjustments
- The end stop can be mounted at any position along the stroke
- For DGC-GF/DGC-KF/DGC-FA

Z1/Z2/Z3 – Intermediate-position module



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

FK – Moment compensator

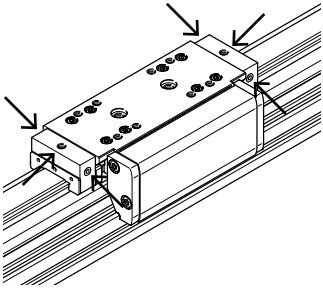


- Compensates for inaccuracies during mounting of the linear drive and external guide
- Max. offset 2.5 mm
- For DGC-G

Key features

Options

C – Central lubrication



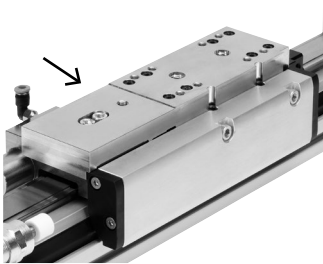
The lubrication adapters enable the guide of the linear drive DGC-KF to be permanently lubricated in applications in humid or wet ambient conditions using semi or fully automatic relubrication devices.

The adapters are suitable for oils and greases.

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

Technical data → page 48

1H-PN – Clamping unit



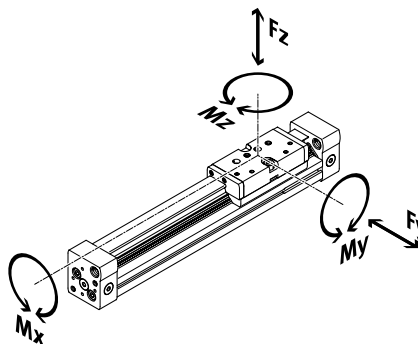
- Single-channel design, for holding loads
- Reliable holding is guaranteed since the forces act directly on the slide
- A limited number of emergency braking operations are permissible with sizes 40 and 50

- For piston \varnothing 25, 32, 40, 50 mm
- For DGC-KF

Technical data → page 45

Key features

Product variants



	Piston \varnothing [mm]	Theoretical force at 0.6 MPa (6 bar, 87 psi) [N]	Guide characteristics					→ Page/ Internet
			Fy [N]	Fz [N]	Mx [Nm]	My [Nm]	Mz [Nm]	
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	
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

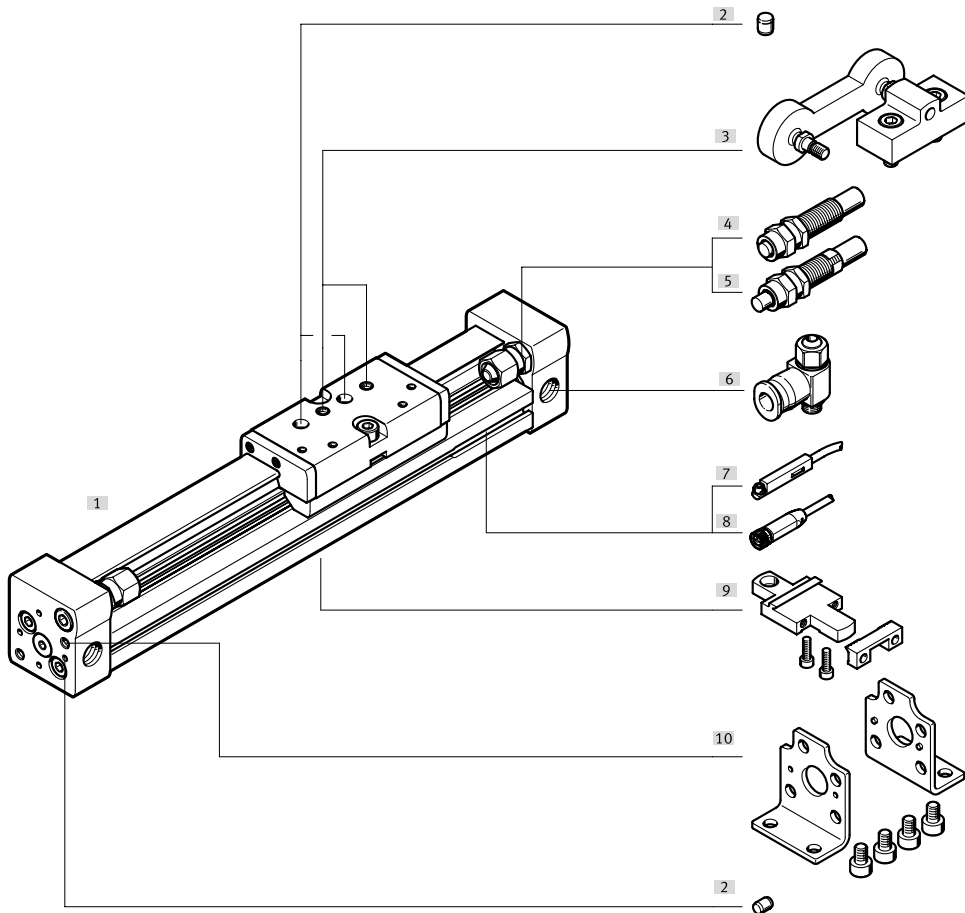
028	Intermediate position	
	None	
Z1	1 intermediate position	
Z2	2 intermediate positions	
Z3	3 intermediate positions	

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: Operation without cushioning components is not permitted.



Variants and accessories

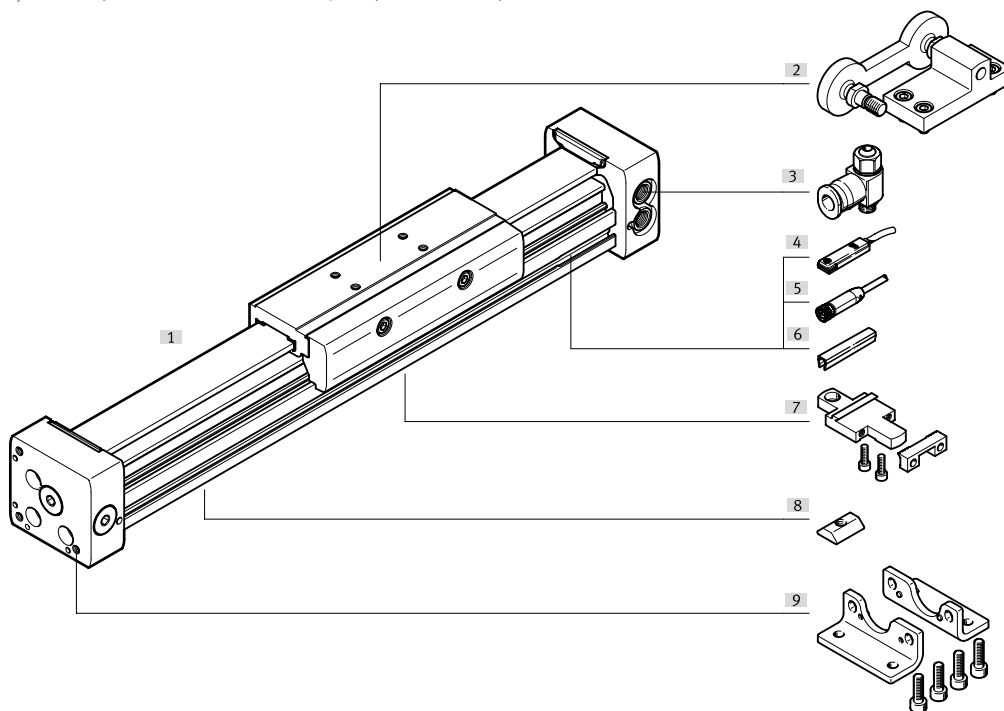
Type/order code	For piston Ø	Description	→ Page/Internet
[1] Linear drive DGC-G	8 ... 63	Linear drive without accessories, basic design	10
[2] Centring pin1) ZBS	8, 12	For centring loads and attachments on the slide	86
Centring pin/sleeve ZBS/ZBH	8, 12, 50, 63	For centring the drive without foot mountings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

1) Included in the scope of delivery of the drive

Peripherals overview

DGC-18 ... 63

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

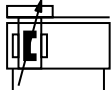


Variants and accessories			
Type/order code	For piston Ø	Description	→ Page/Internet
[1] Linear drive DGC-G	8 ... 63	Linear drive without accessories, basic design	10
[2] Moment compensator FK	8 ... 63	Compensates for inaccuracies during mounting of the linear drive and external guide	80
[3] One-way flow control valve GRLA	8 ... 63	For regulating speed	87
[4] Proximity switch G/H/I/J	8 ... 63	For sensing the slide position	87
[5] Connecting cable V	8 ... 63	Via proximity switch	89
[6] Slot cover L	18 ... 63	For protecting against contamination and securing the proximity switch cable	86
[7] Profile mounting M	8 ... 63	Simple and precise mounting option via dovetail connection.	78
[8] Slot nut B	25 ... 63	For mounting attachments	86
[9] Foot mounting F	8 ... 63	For mounting on the end cap	76
- Cushioning PPV	18 ... 63	Adjustable, pneumatic end-position cushioning. Used at medium speeds.	21

1) Included in the scope of delivery of the drive

Datasheet

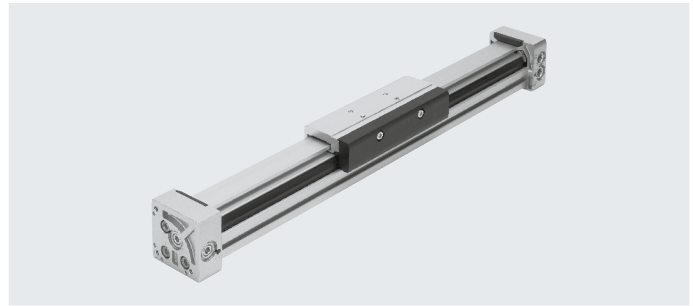
Function





www.festo.com



Repair service



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

General technical data

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

Note

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

Operating and environmental conditions

Piston \varnothing	8	12	18	25	32	40	50	63
Operating pressure	[MPa]	0.25 ... 0.8		0.2 ... 0.8		0.15 ... 0.8		
	[bar]	2.5 ... 8		2 ... 8		1.5 ... 8		
	[psi]	36.25 ... 116		29 ... 116		21.75 ... 116		
Operating medium	Compressed air to ISO 8573-1:2010 [7:-:-]							
Note on the operating/pilot medium	Lubricated operation possible (in which case lubricated operation will always be required)							
Ambient temperature ¹⁾ [°C]	+5 ... +60		-10 ... +60					
Food-safe ²⁾	-		→ Further information on materials					
Corrosion resistance class CRC ³⁾	2 - moderate corrosion stress							

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

Forces [N] and impact energy [J]

Piston \varnothing	8	12	18	25	32	40	50	63
Theoretical force at 0.6 MPa (6 bar, 87 psi)	30	68	153	295	483	754	1178	1870
Impact energy in the end positions	→ Page 12							

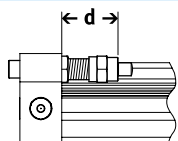
Datasheet

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)	
UKCA marking (see declaration of conformity)	To UK explosion regulations	
Explosion protection certification outside the EU	EPL Gc (GB)	
	EPL Dc (GB)	
EX2 certification		
ATEX category for gas	II 3G	
Type of ignition protection for gas	Ex h IIC T4 Gc X	
ATEX category for dust	II 3D	
Type of ignition protection for dust	Ex h IIIC T120°C Dc X	
EX3 certification		
ATEX category for gas	II 2G	
Type of ignition protection for gas	Ex h IIC T4 Gb X	

1) Note the ATEX certification of the accessories.

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

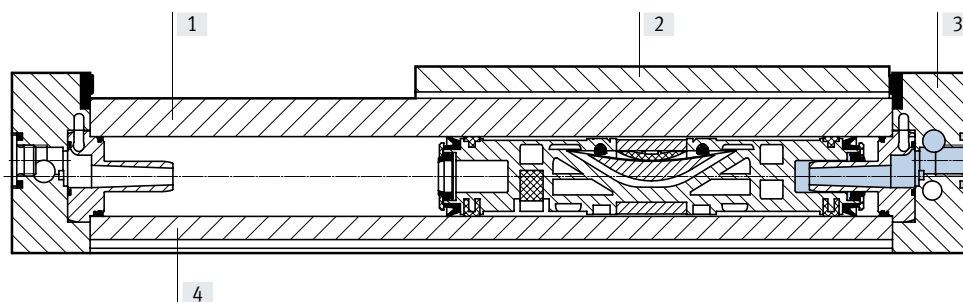
Adjustable end-position range d [mm]



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

Materials

Sectional view



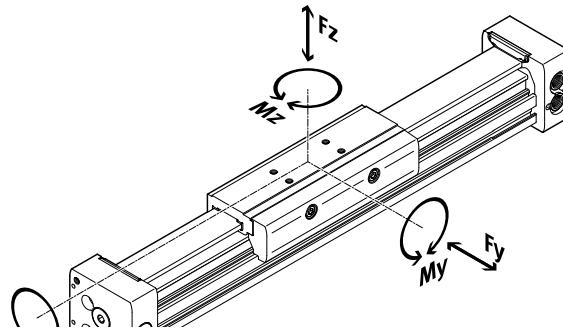
Linear drives		
[1]	Guide rail	Anodised aluminium
[2]	Slide	Anodised aluminium
[3]	End cap	Anodised aluminium
[4]	Cylinder barrel	Anodised aluminium
-	Piston seal	Polyurethane
	Sealing band/cover strip	Polyurethane
	Slide elements	Polyacetal
	Note on materials	RoHS-compliant
	Cleanroom suitability, measured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

Datasheet

Load values

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

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



Note

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

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

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

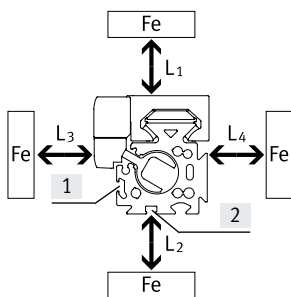
Permissible forces and torques

Piston ø		8	12	18	25	32	40	50	63
$F_{y_{max.}}$	[N]	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 switches

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

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

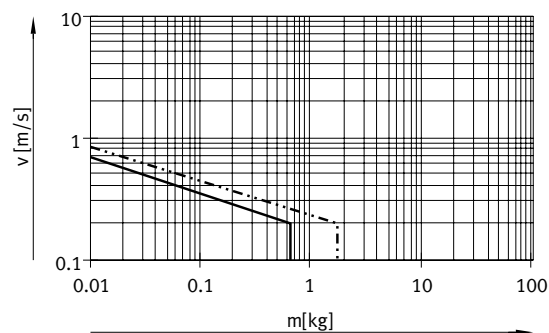


Piston ø		8	12	18	25	32	40	50	63
Distance L1	[1] [mm]	0	0	0	0	0	0	0	0
	[2] [mm]	-	-	0	0	0	0	0	0
Distance L2	[1] [mm]	20	10	10	10	0	0	0	0
	[2] [mm]	-	-	25	25	25	25	25	25
Distance L3	[1] [mm]	30	25	25	25	25	25	25	25
	[2] [mm]	-	-	10	10	0	0	0	0
Distance L4	[1] [mm]	0	0	0	0	0	0	0	0
	[2] [mm]	-	-	0	0	0	0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

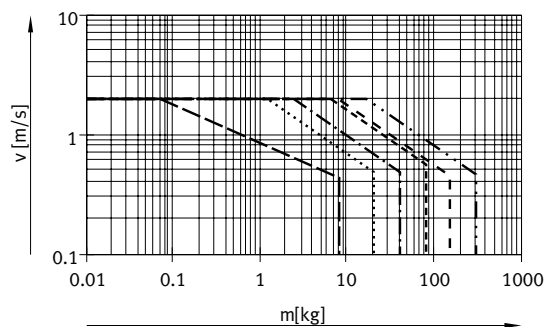
Datasheet

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

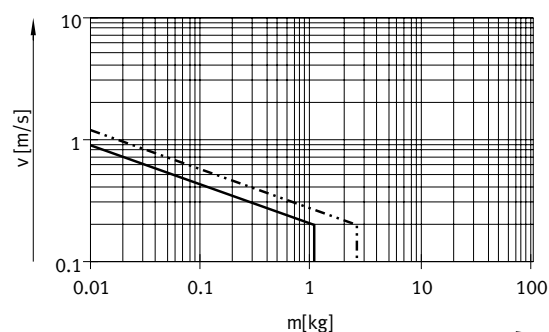
Piston \varnothing 8/12 with elastic cushioning P



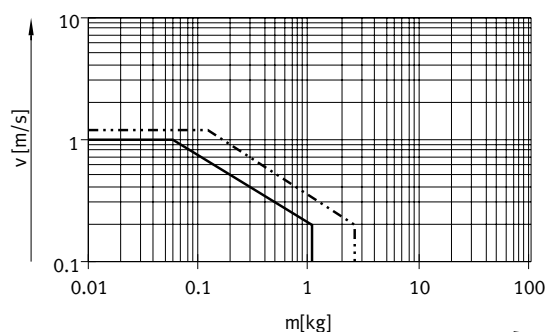
Piston \varnothing 18 ... 63 with cushioning PPV



Piston \varnothing 8/12 with cushioning YSR



Piston \varnothing 8/12 with cushioning YSRW



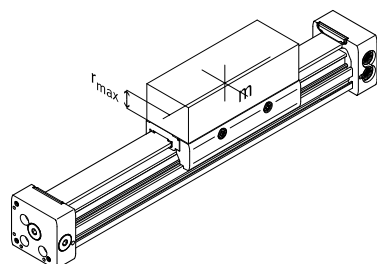
- \varnothing 8
- · - · - \varnothing 12
- - - \varnothing 18
- · · · · \varnothing 25
- · - · - \varnothing 32
- - - \varnothing 40
- - - \varnothing 50
- · - · - \varnothing 63

Note

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

Operating range of the cushioning

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



Note

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

Data for horizontal mounting position:

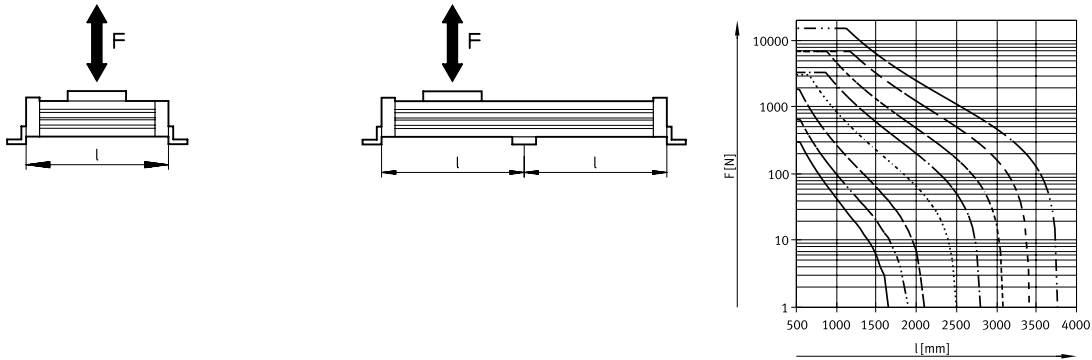
Piston \varnothing	8	12	18	25	32	40	50	63
Distance r_{max} [mm]	25	35	35	50	50	50	50	50

Datasheet

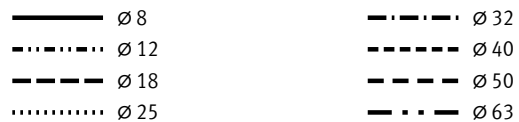
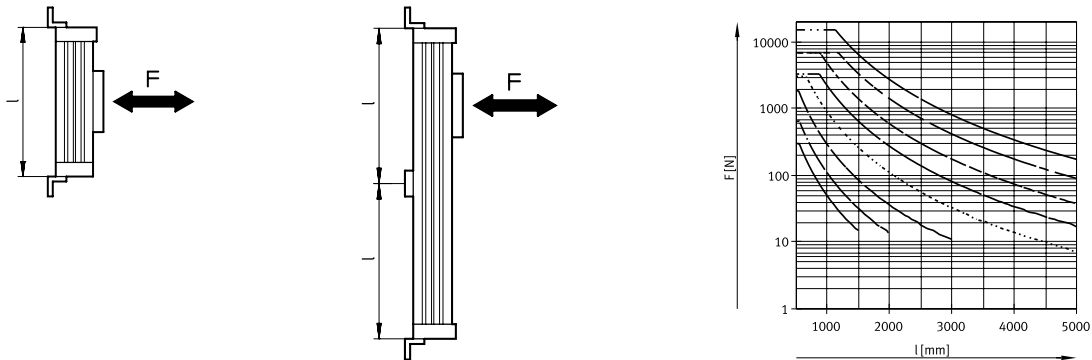
Number of profile mountings MUC as a function of weight force F and support spacing l

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

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

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

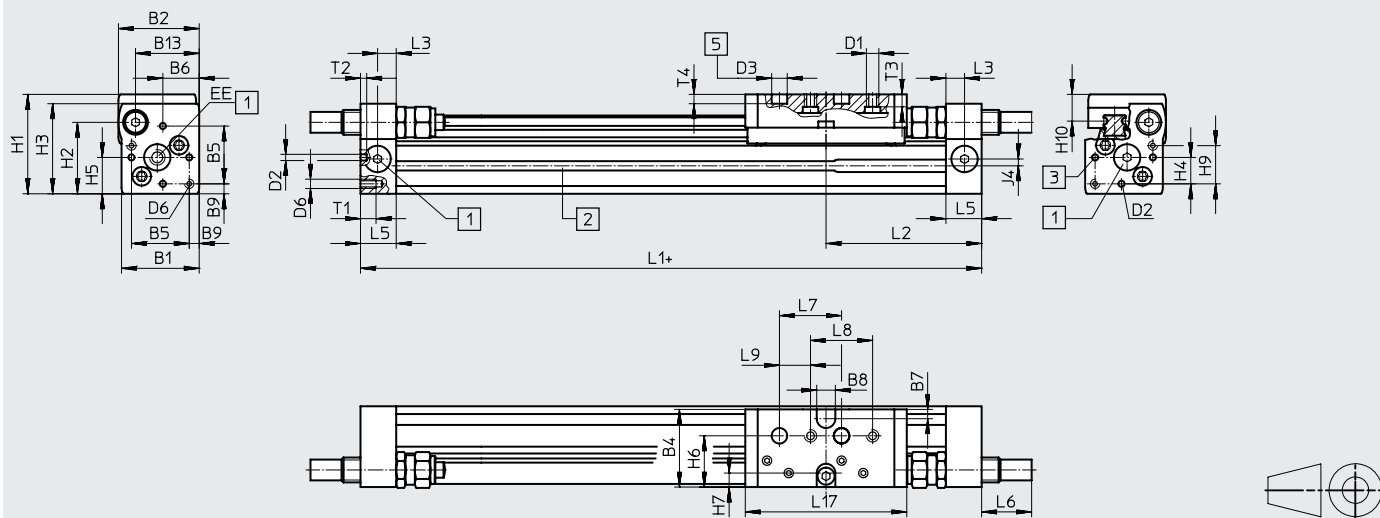
In this example, profile mountings are required as the max. support spacing (1300 mm) is smaller than the overall length of the drive (1700 mm).

Datasheet

Dimensions

Download CAD data → www.festo.com

Ø 8 and 12



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

Ø	B1	B2	B4	B5	B6	B7	B8	B9	B13	D1	D2	D3	D6
[mm]							±0.05	±0.1			Ø H8	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

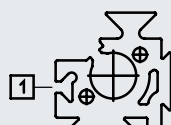
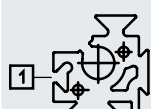
Ø	L3	L5	L6			L7	L8	L9	L17	T1	T2	T3	T4	Stroke tolerance
			P	YSR	YSRW									
[mm]						±0.03	±0.1	±0.1					+0.2	
8	6	11.4	0	16	16.2	20	20	10	52	5	2	4	3	0 ... 1.7
12	8	15.9	0	11.3	12.3	20	20	10	65	6	2	5	3	

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

Profile barrel

Ø 8

Ø 12



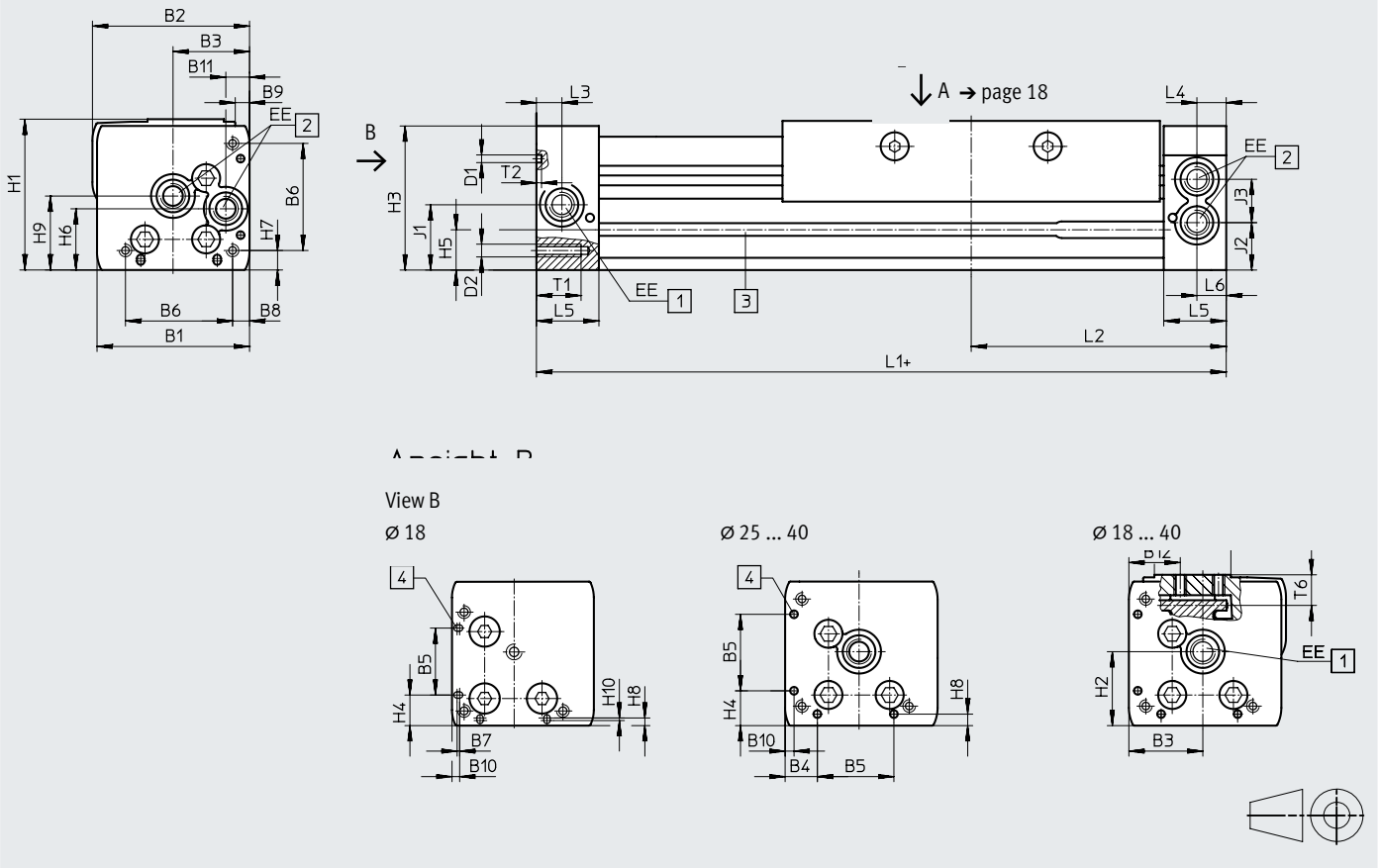
[1] Sensor slot for proximity switch

Datasheet

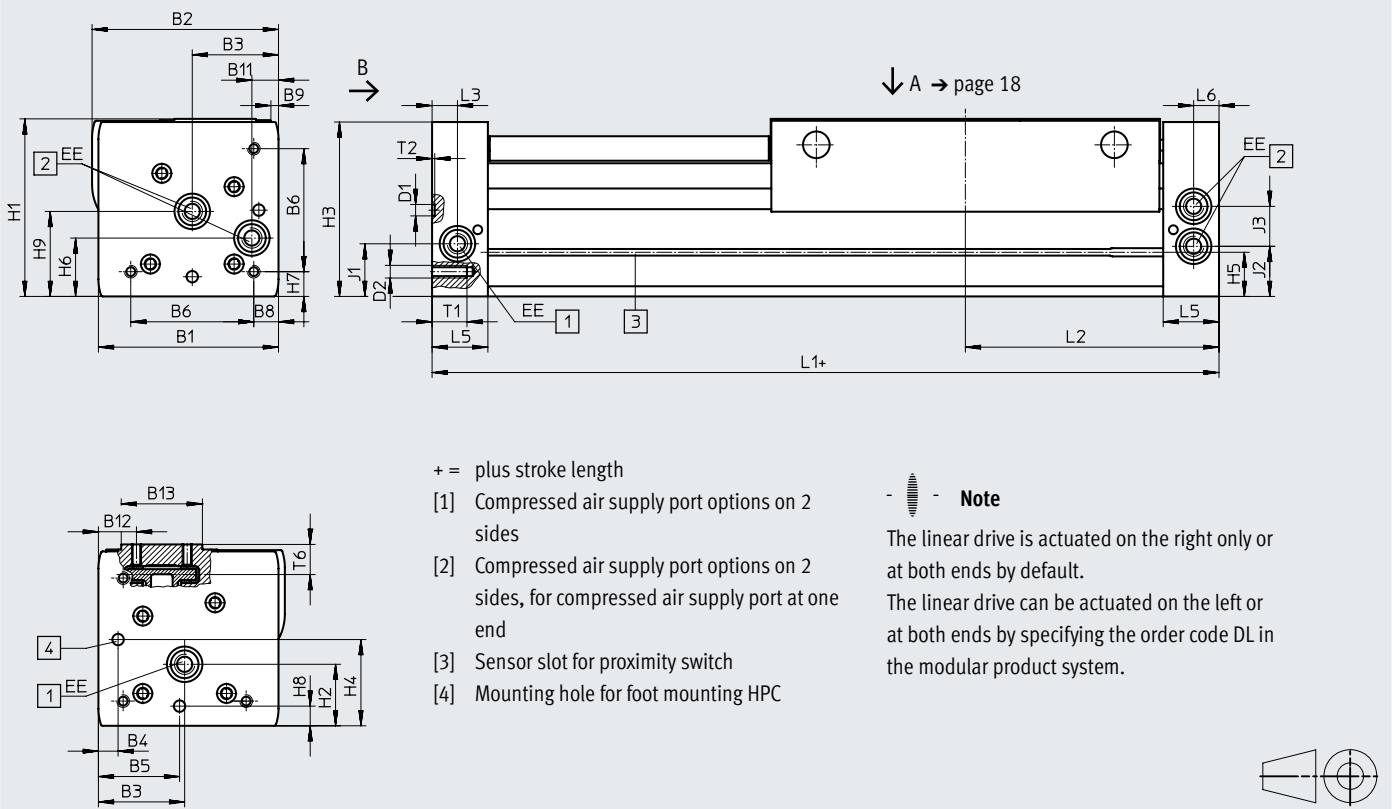
Dimensions

Download CAD data → www.festo.com

∅ 18 ... 40




∅ 50/63



+ = plus stroke length

- [1] Compressed air supply port options on 2 sides
- [2] Compressed air supply port options on 2 sides, for compressed air supply port at one end
- [3] Sensor slot for proximity switch
- [4] Mounting hole for foot mounting HPC

 **Note**

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

Datasheet

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

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

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

∅	L2	L3	L4	L5	L6	T1	T2	T6	Stroke tolerance
[mm]									
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		≤ 1000	≤ 2000	≤ 3000	≤ 4000	≤ 5000	≤ 6000	≤ 7000	≤ 8000	≤ 9000
For stroke	[mm]									
L1	[mm]	+0.90	+1.10	+1.40	+1.50	+1.60	+1.70	+2.20	+2.30	+2.40

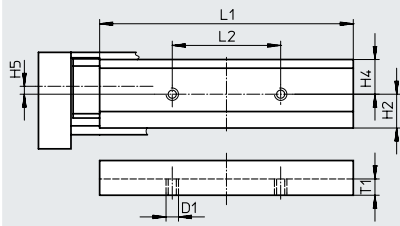
Datasheet

Dimensions

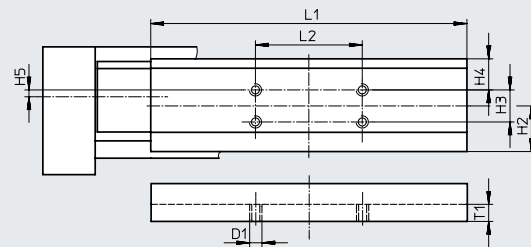
Download CAD data → www.festo.com

Slide – View A

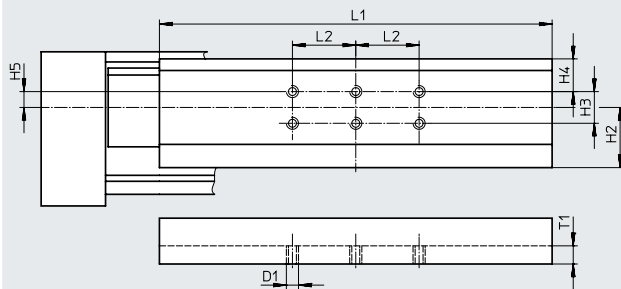
Ø 18



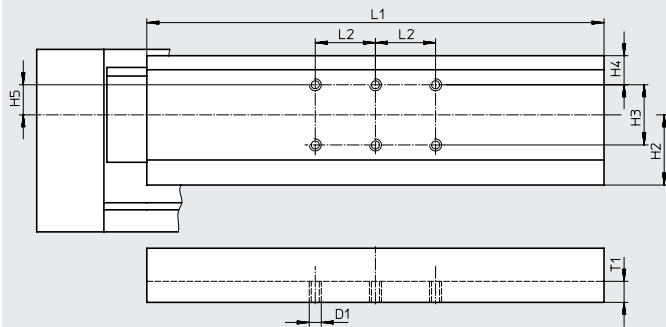
Ø 25



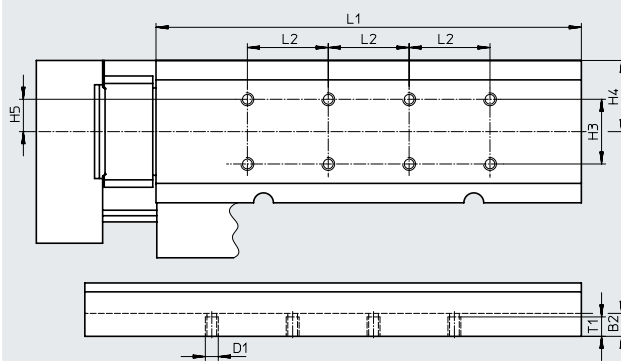
Ø 32



Ø 40



Ø 50



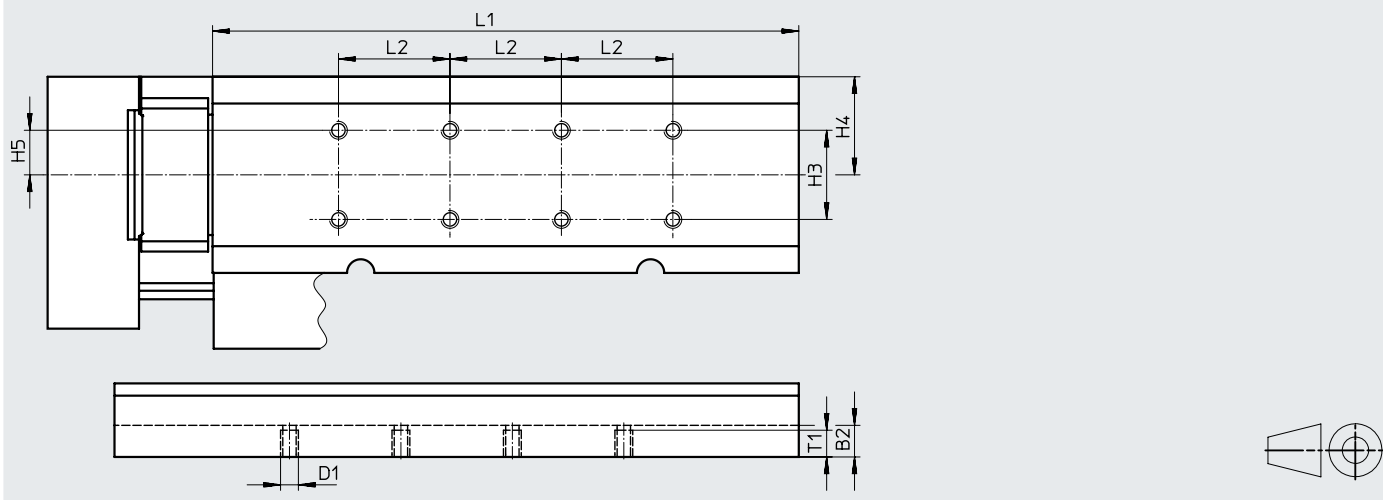
Datasheet

Dimensions

Download CAD data → www.festo.com

Slide – View A

∅ 63



∅ [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

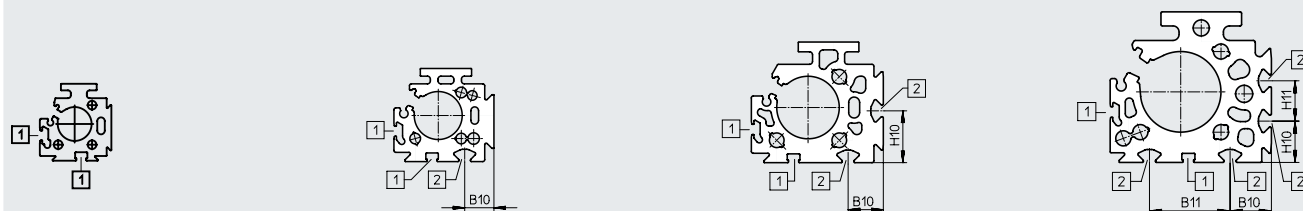
Profile barrel

∅ 18

∅ 25

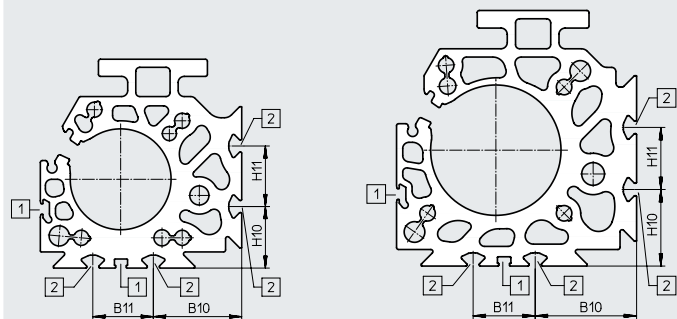
∅ 32

∅ 40



∅ 50

∅ 63



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

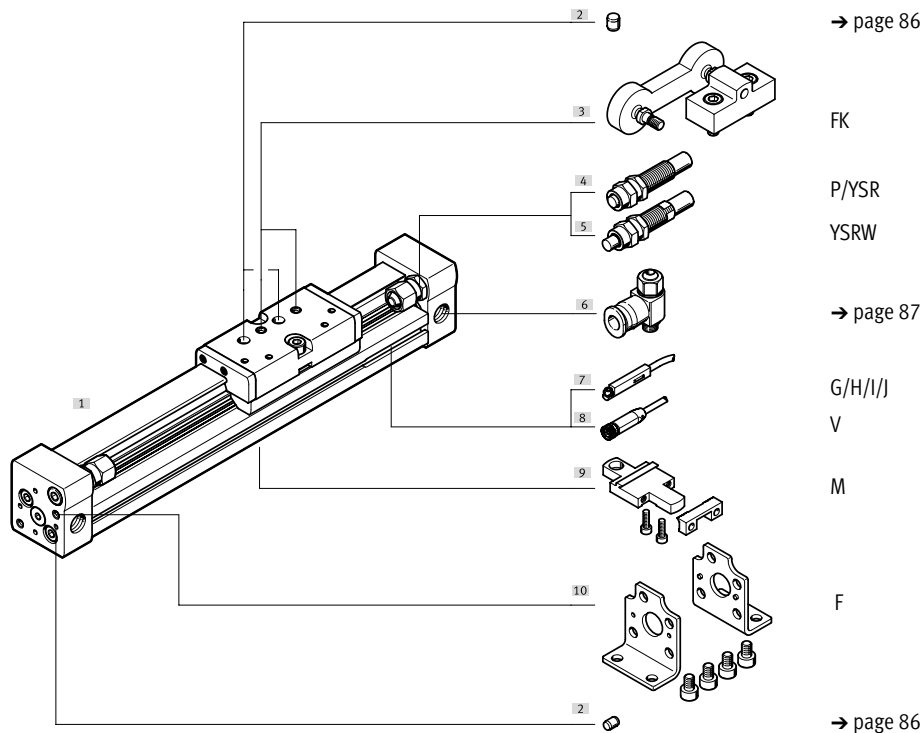
∅ [mm]	B10	B11	H10	H11
25	15.23	–	–	–
32	18	–	26.5	–
40	20.5	40	20.5	20
50	43.8	30	30.5	30
63	49	30	37	30

Ordering data – Modular product system

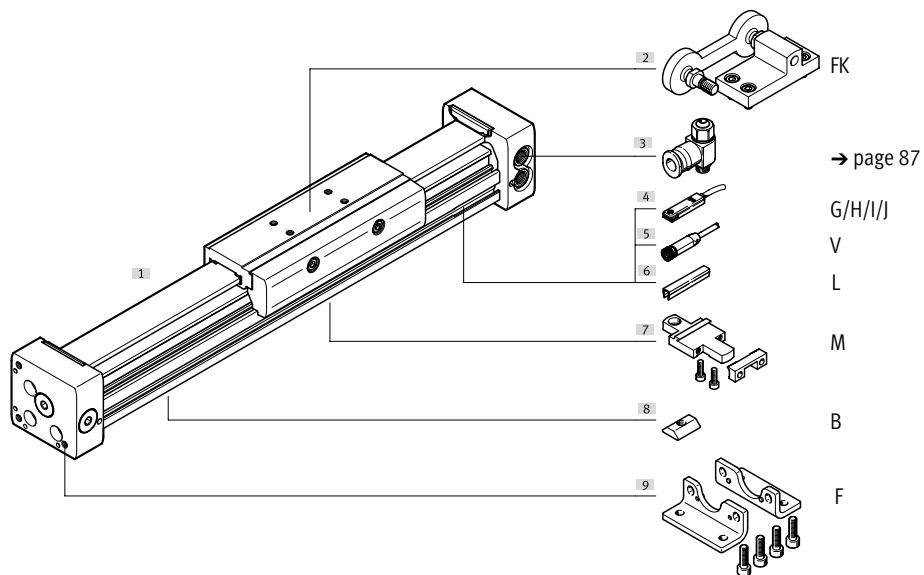
Order code

DGC-8/-12

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



DGC-18 ... 63



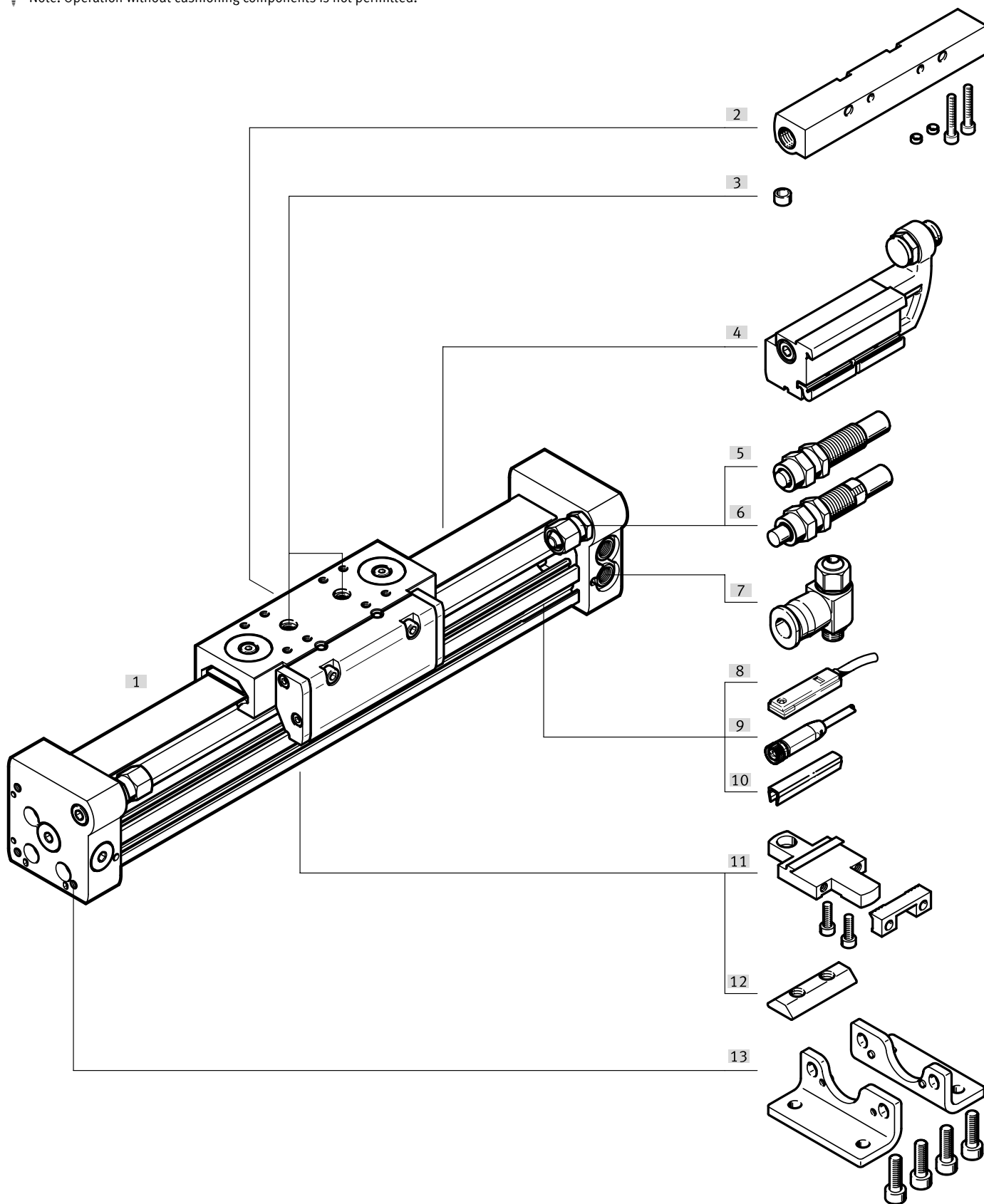
Ordering data – Modular product system

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 ... 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, progres- sive		-	-	-	-	-	-		-YSRW				
Position sensing	Via proximity switch									-A	-A		
Compressed air supply port	On the right end or at both ends												
	-	-	On the left end or at both ends							-DL			
Lubrication	-		Standard										
	-		Food-safe lubrication							-H1			
EU certification	None												
	II 3GD									[1]	-EX2		
	II 2G									[1]	-EX3		
Accessories	Enclosed separately (can be retrofitted)										ZUB-	ZUB-	
Foot mounting	1										F		
Profile mounting	1 ... 9										...M		
Moment compensator	None												
	Coupling for moment compensator										FK		
Slot nut for mounting slot	-	-	-	1 ... 9						...B			
Proximity switch	2.5 m cable	1 ... 9										...G	
	Plug M8	1 ... 9										...H	
Proximity switch, con- tactless, PNP	2.5 m cable	1 ... 9										...I	
	Plug M8	1 ... 9										...J	
Connecting cable	M8, 2.5 m	1 ... 9										...V	
Slot cover, sensor slot	-	-	1 ... 9							...L			
Operating manual	Express waiver – no operating instructions to be included (already available)										-O		

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

Peripherals overview

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



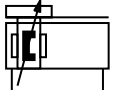
Peripherals overview

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

1) Included in the scope of delivery of the drive

Datasheet

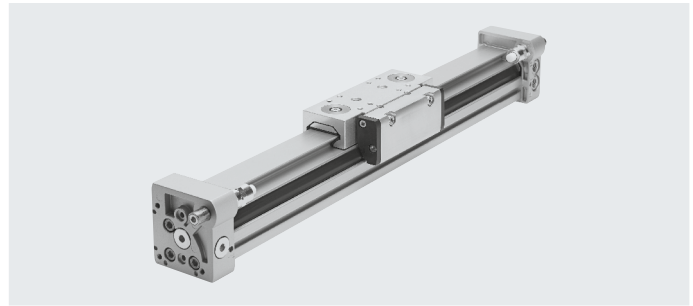
Function





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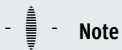


Repair service



-  Diameter
18 ... 63 mm
-  Stroke length
1 ... 8500 mm

General technical data						
Piston \varnothing	18	25	32	40	50	63
Design	Rodless actuator					
Driver principle	Slotted cylinder, mechanically coupled					
Guide	Plain-bearing guide					
Operating mode	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 switch					
Type of mounting	Profile mounting Foot mounting Direct mounting					
Mounting position	Any					



Note

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

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

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

Forces [N] and impact energy [J]						
Piston \varnothing	18	25	32	40	50	63
Theoretical force at 0.6 MPa (6 bar, 87 psi)	153	295	483	754	1178	1870
Impact energy in the end positions	→ Page 27					

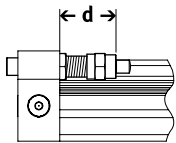
Datasheet

ATEX ¹⁾	
Explosion-proof ambient temperature [°C]	$-10^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$
CE marking (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)
UKCA marking (see declaration of conformity)	To UK explosion regulations
	EPL Gc (GB)
	EPL Dc (GB)
EX2 certification	
ATEX category for gas	II 3G
Type of ignition protection for gas	Ex h IIC T4 Gc X
ATEX category for dust	II 3D
Type of ignition protection for dust	Ex h IIIC T120°C Dc X
EX3 certification	
ATEX category for gas	II 2G
Type of ignition protection for gas	Ex h IIC T4 Gb X

1) Note the ATEX certification of the accessories.

Weight [g]						
Piston \varnothing	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]



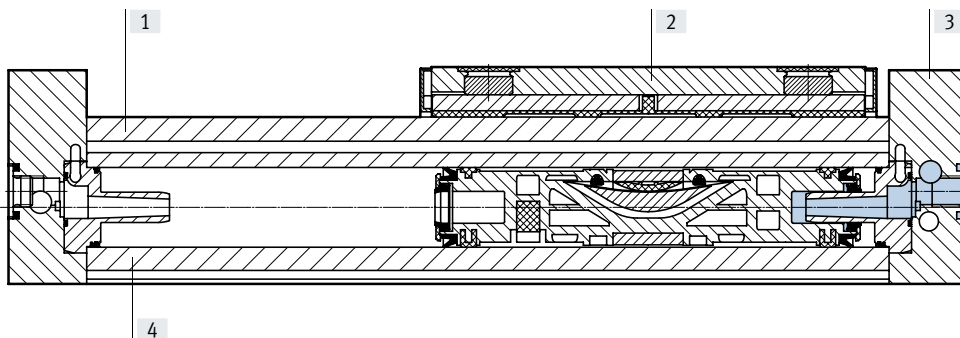
-  - Note

When reducing the stroke with adjustable cushioning PPV on both sides, the permissible kinetic energy decreases.

Piston \varnothing	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



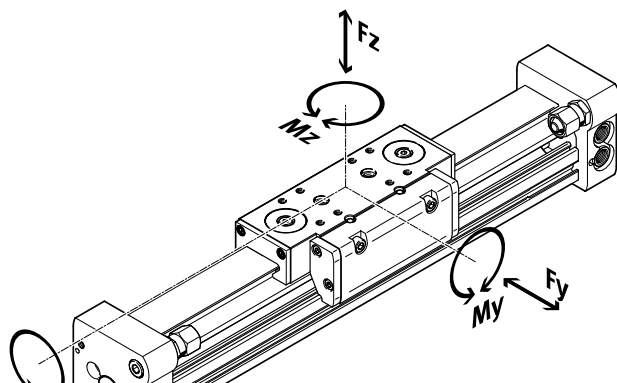
Linear drives		
[1]	Guide rail	Anodised aluminium
[2]	Slide	Anodised aluminium
[3]	End cap	Anodised aluminium
[4]	Cylinder barrel	Anodised aluminium
-	Piston seal	Polyurethane
	Sealing band/cover strip	Polyurethane
	Slide elements	Polyacetal
	Note on materials	RoHs-compliant
	Cleanroom suitability, measured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

Datasheet

Load values

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

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



 **Note**

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

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

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

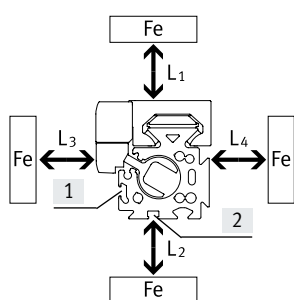
Permissible forces and torques based on a travel speed of 0.2 m/s

Piston Ø		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 switches

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

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

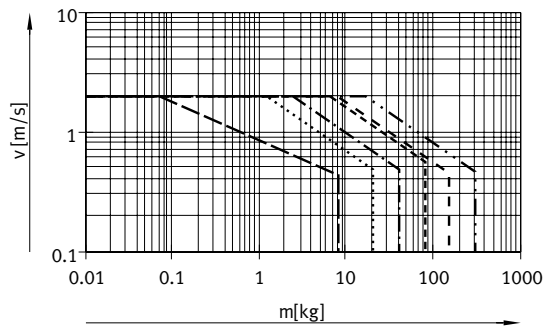


Piston Ø			8	12	18	25	32	40	50	63
Distance L1	[1]	[mm]	0	0	0	0	0	0	0	0
	[2]	[mm]	-	-	0	0	0	0	0	0
Distance L2	[1]	[mm]	20	10	10	10	0	0	0	0
	[2]	[mm]	-	-	25	25	25	25	25	25
Distance L3	[1]	[mm]	30	25	25	25	25	25	25	25
	[2]	[mm]	-	-	10	10	0	0	0	0
Distance L4	[1]	[mm]	0	0	0	0	0	0	0	0
	[2]	[mm]	-	-	0	0	0	0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

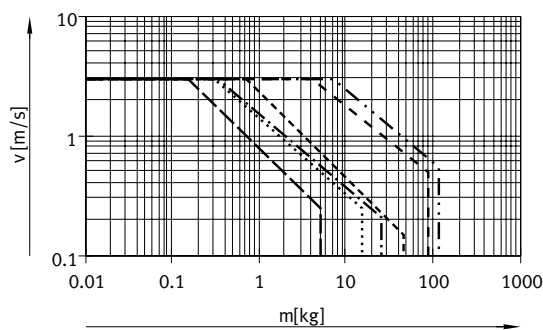
Datasheet

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

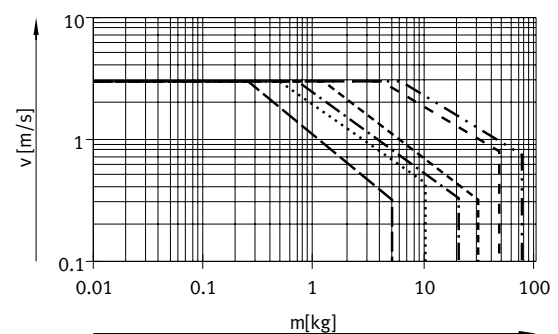
With cushioning PPV



With cushioning YSR



With cushioning YSRW



- — — — — $\varnothing 18$
- $\varnothing 25$
- · - · - · $\varnothing 32$
- - - - - $\varnothing 40$
- — — — — $\varnothing 50$
- · - · - · $\varnothing 63$

Note

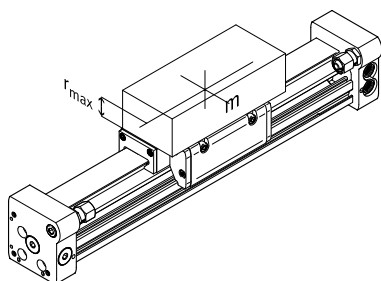
These specifications represent the maximum values that can be achieved. In practice, these values can fluctuate dependent on the position of the payload and mounting position.

Operating range of the cushioning

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

Note

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



Data for horizontal mounting position:

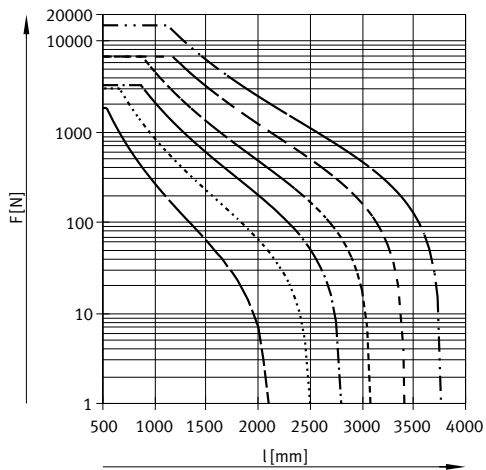
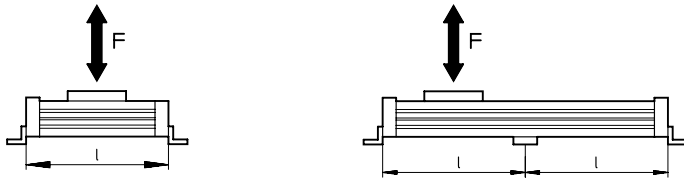
Piston \varnothing	8	12	18	25	32	40	50	63
Distance r_{\max} [mm]	25	35	35	50	50	50	50	50

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

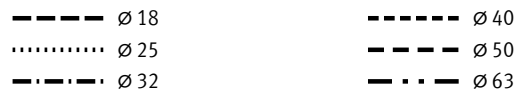
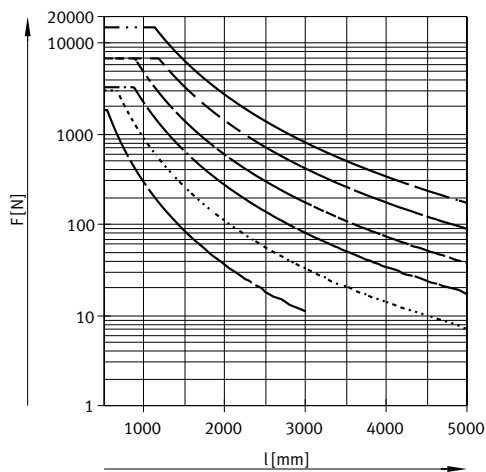
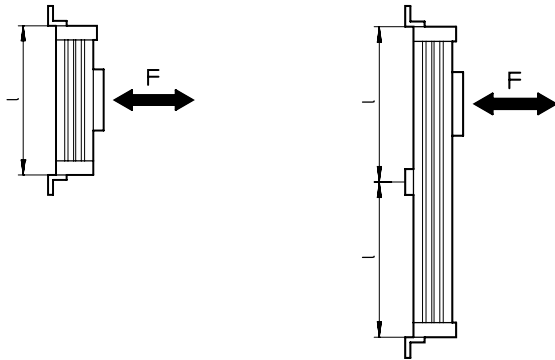


Datasheet

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.

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:

$$\begin{aligned}
 l &= \text{stroke length} + L1 \\
 &= 1500 \text{ mm} + 200 \text{ mm} \\
 &= 1700 \text{ mm}
 \end{aligned}$$

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

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

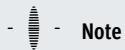
Datasheet

∅	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
[mm]				±0.1	±0.05			±0.1				
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	12.7	30	42	–	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

∅	B13	B14	D1 ∅	D2	D3 ∅	D4	EE	H1	H2	H3	H4	H5
[mm]			±0.05		H7						±0.2	
18	39	19.5	2	M4	5	M10x1	M5	56.3	23.1	55	9.6	13.4
25	53.5	30	3	M5	9	M12x1	G1/8	68	29	67	13.7	15.8
32	65	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

∅	H6	H7	H8	H9	H10	H11	H12	J1	J2	J3	L1	L2	L3
[mm]						±0.15	±0.05						
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	11.5	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

∅	L4	L5	L6	L7			T1	T2	T3	T4	Stroke tolerance
				PPV	YSR	YSRW					
[mm]											
18	5.8	15	5.5	0	15.9	19.4	9	2	3.1 ^{+0.1}	17.1	0 ... 2.5
25	10.6	24.5	10.6	0	12.5	15	17.5	2	2.1 ^{+0.2}	20.5	
32	14.5	30.5	14.5	0	8.5	15.5	15	2	2.1 ^{+0.2}	21.3	
40	14.6	33.5	14.6	0	12.8	21	20	3	2.1 ^{+0.2}	30.7	


Note

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

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

Datasheet

∅ [mm]	B1	B2	B3	B6	B8	B9	B11	B12	B13	B14 ±0.05	B15	D2	D3 ∅ 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

∅ [mm]	EE	H1	H2	H3	H5	H6	H7	H9	H10	H11 ±0.2	H12 ±0.05	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

∅ [mm]	J3	L1	L2	L3	L4	L5	L6	L7			T1	T3 +0.2	T4	Stroke tolerance
								PPV	YSR	YSRW				
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	



Note

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

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

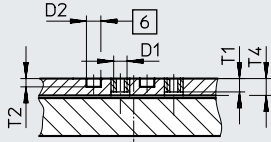
Datasheet

Dimensions

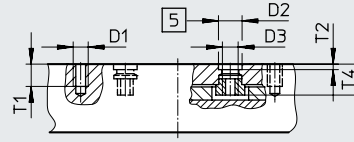
Download CAD data → www.festo.com

Slide

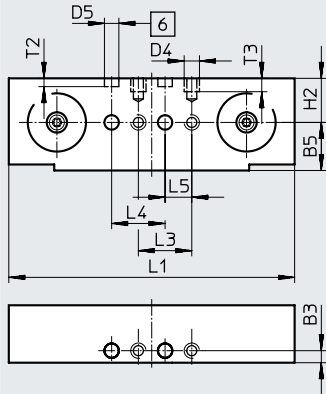
∅ 18



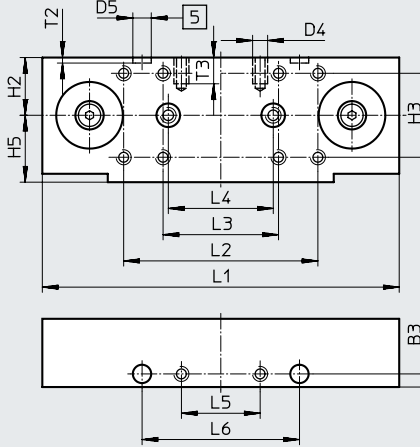
∅ 25



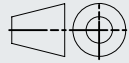
View A



View A



- [5] Drilled hole for centring sleeve ZBH
- [6] Drilled hole for centring pin ZBS



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

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

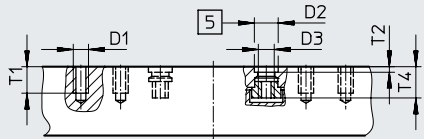
Datasheet

Dimensions

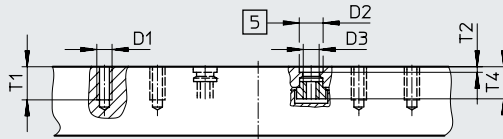
Download CAD data → www.festo.com

Slide

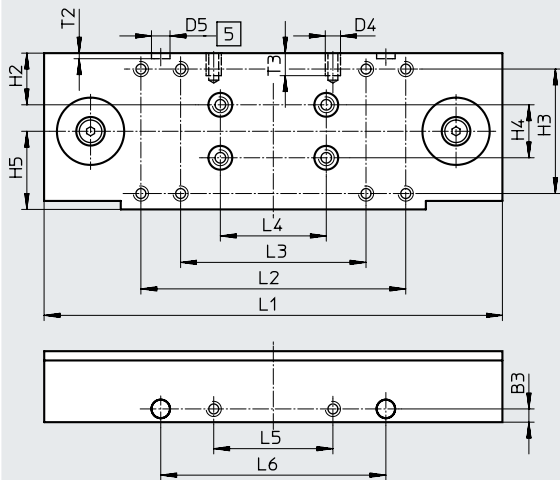
∅ 32



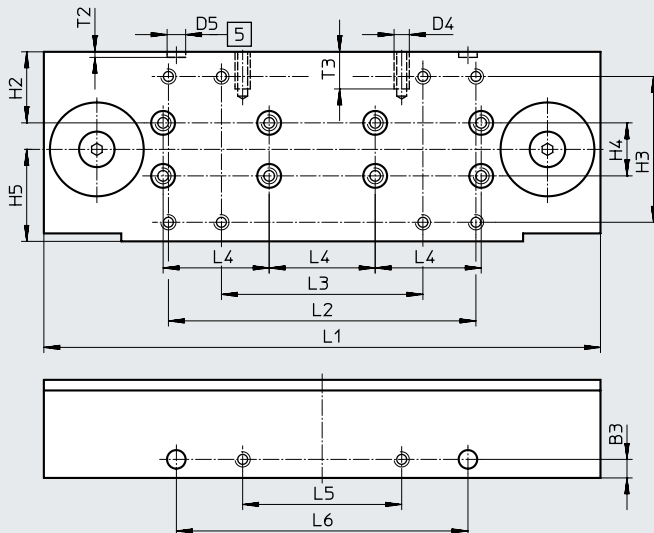
∅ 40



View A



View A



[5] Drilled hole for centring sleeve ZBH



∅	B3	D1	D2 ∅ H7	D3	D4	D5 ∅ H7	H2	H3	H4	H5	L1
32	±0.05	M5	9	M6	M5	7	19.5	47±0.2	±0.03	±0.1	±0.1
40	7	M5	9	M6	M6	7	26.8	55±0.2	20	34.7	210

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

Datasheet

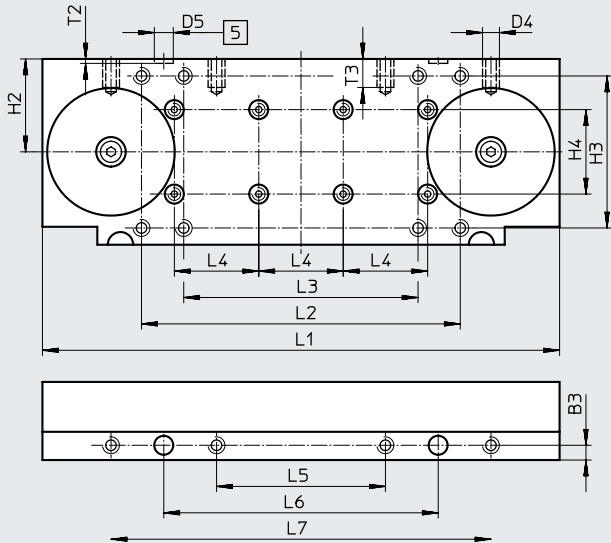
Dimensions

Download CAD data → www.festo.com

Slide

∅ 50

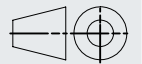
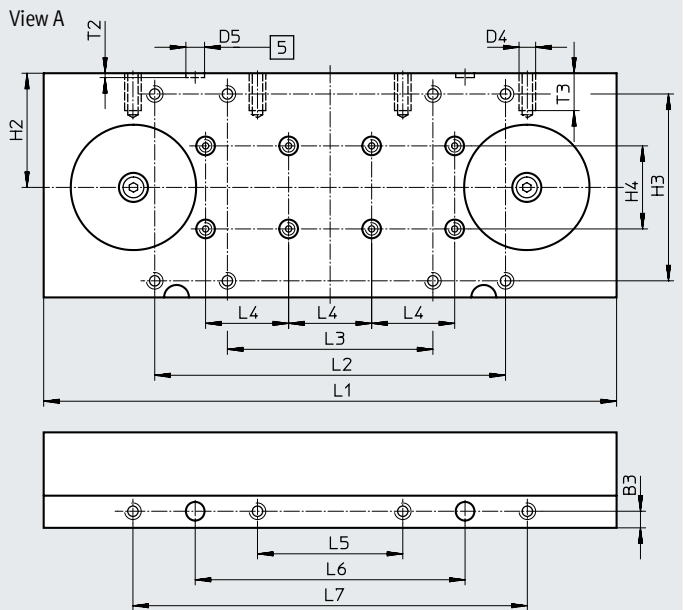
View A



[5] Drilled hole for centring sleeve ZBH



∅ 63



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

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

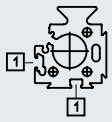
Datasheet

Dimensions

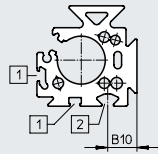
Download CAD data → www.festo.com

Profile barrel

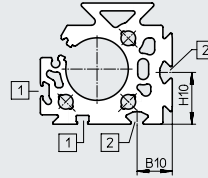
∅ 18



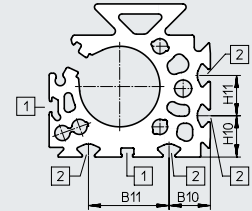
∅ 25



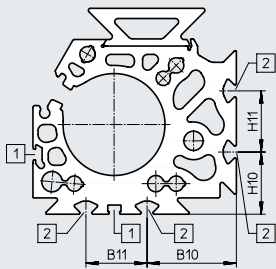
∅ 32



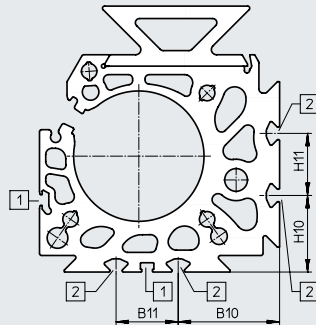
∅ 40



∅ 50



∅ 63





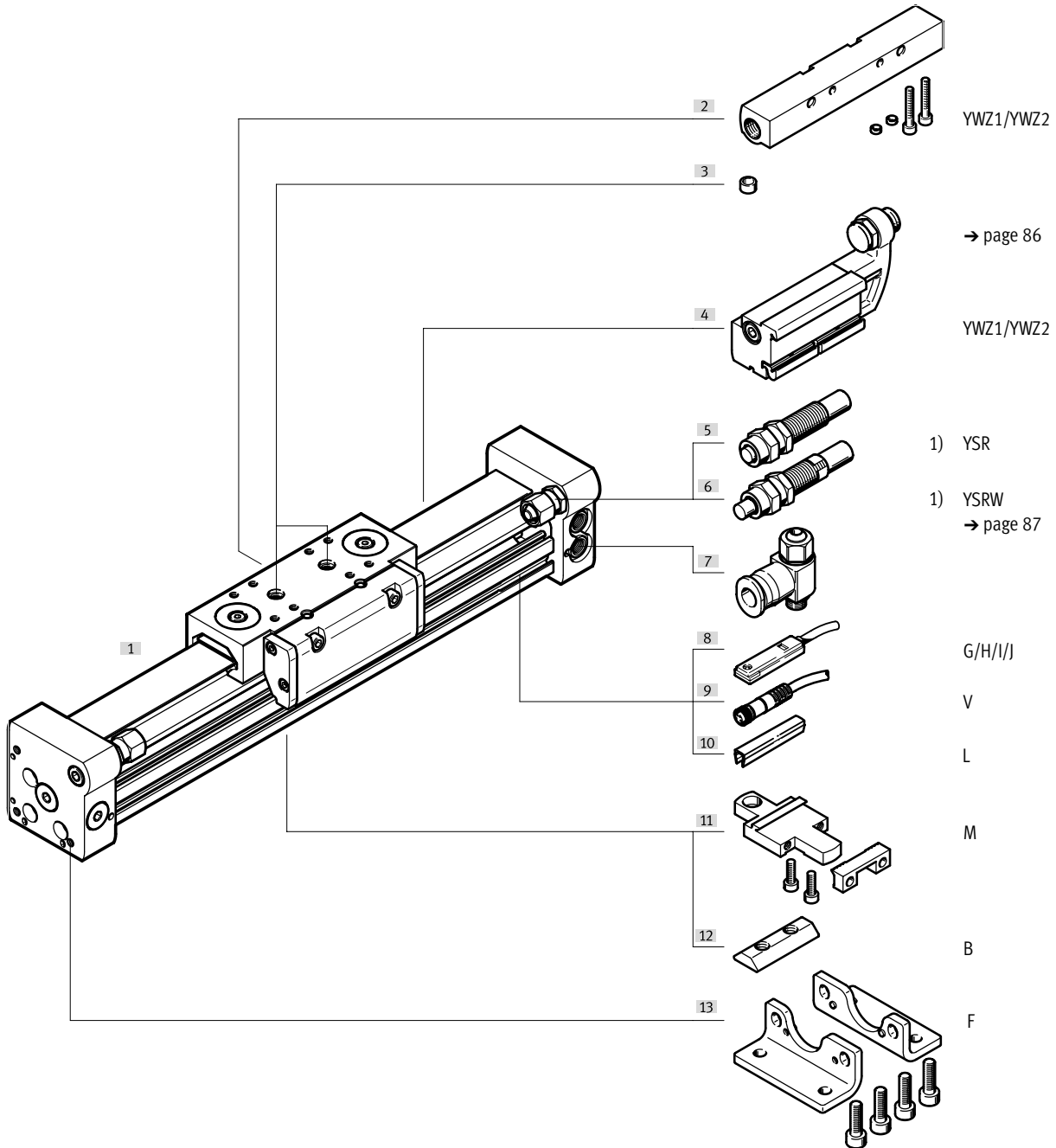
- [1] Sensor slot for proximity switch
- [2] Mounting slot for slot nut

∅	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

-  Note: Operation without cushioning components is not permitted.
-  Note: The item numbers refer to the peripherals overview → page 22




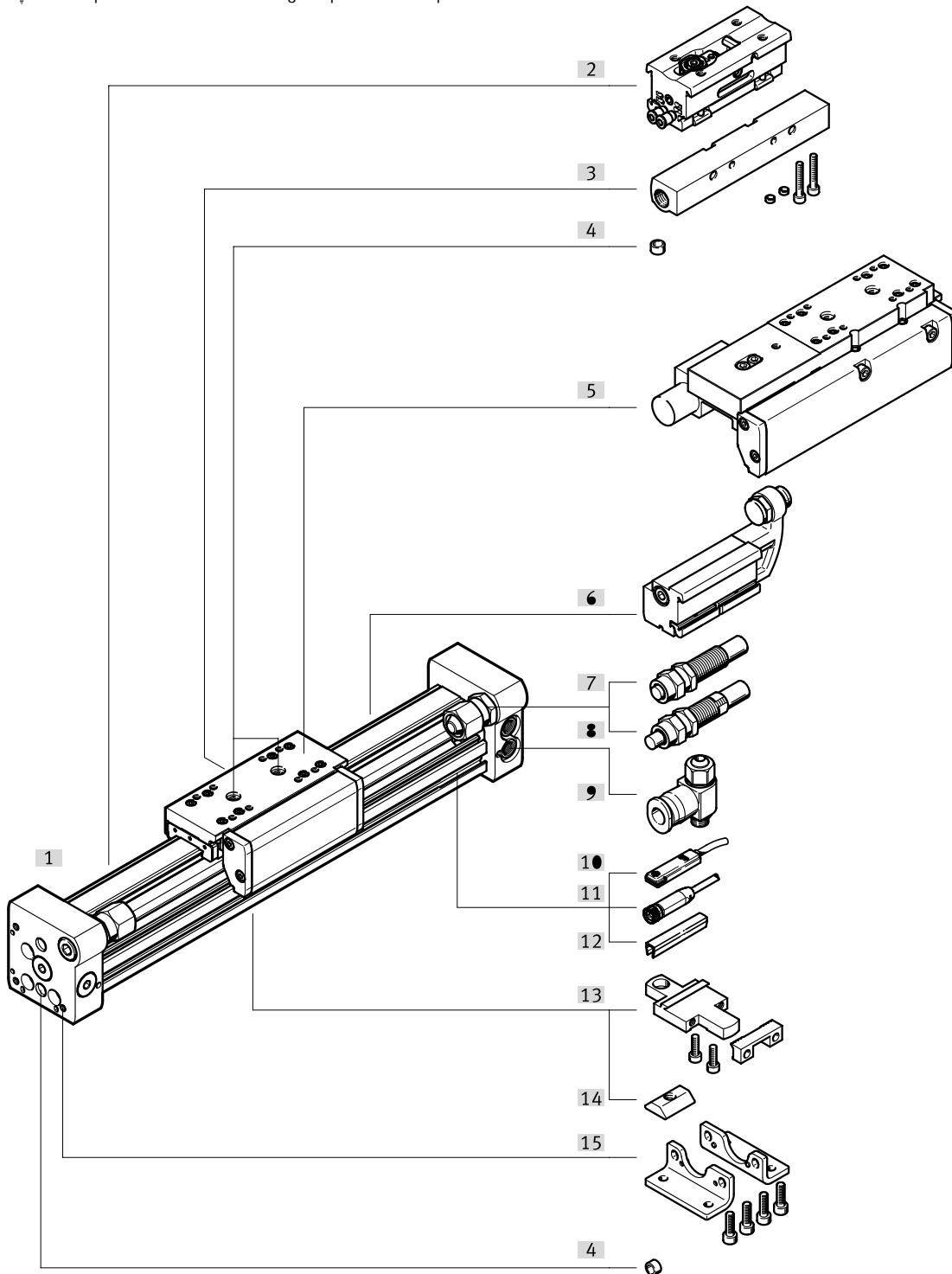
Ordering data – Modular product system

Ordering table										
Size	18	25	32	40	50	63	Condi- tions	Code	Enter code	
Module no.	532446	532447	532448	532449	532450	532451				
Function	Linear drive								DGC	DGC
Piston Ø [mm]	18	25	32	40	50	63		-...		
Stroke [mm]	1 ... 3000	1 ... 8500			1 ... 5000			-...		
Guide	Plain-bearing guide								-GF	-GF
Cushioning	Pneumatic cushioning, adjustable at both ends								-PPV	
	Shock absorber, self-adjusting								-YSR	
	Shock absorber, self-adjusting, progressive								-YSRW	
Position sensing	Via proximity switch								-A	-A
Compressed air supply port	On the right end or at both ends									
	On the left end or at both ends								-DL	
Lubrication	Standard									
	Food-safe lubrication							[1]	-H1	
EU certification	None									
	II 3GD							[2]	-EX2	
	II 2G							[2]	-EX3	
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 switch	2.5 m cable	1 ... 9						...G		
	Plug M8	1 ... 9						...H		
Proximity switch, con- tactless, PNP	2.5 m cable	1 ... 9						...I		
	Plug M8	1 ... 9						...J		
Connecting cable	M8, 2.5 m	1 ... 9						...V		
Slot cover, sensor slot	1 ... 9								...L	
Mechanical end-position limiter	None									
	Variable end position, at one end							[3]	YWZ1	
	Variable end position, at both ends							[3]	YWZ2	
Operating manual	Express waiver – no operating instructions to be included (already available)								-O	

- [1] H1 Not with cushioning YSR, YSRW
 [2] EX2, EX3 Not with proximity switch G, H, I, J, connecting cable V
 [3] YWZ1, YWZ2 Only with cushioning YSR or YSRW

Peripherals overview

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



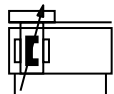
Peripherals overview

Variants and accessories				
	Type/order code	For piston Ø	Description	→ Page/Internet
[1]	Linear drive DGC-KF	8 ... 63	Linear drive without accessories, recirculating ball bearing guide	42
[2]	Intermediate position Z1/Z2/Z3	25, 32, 40	Enables up to three intermediate positions	84
[3] [6]	Mechanical end-position limiter YWZ	18 ... 63	For variable end-position adjustment, e.g. for format adjustments	82
[4]	Centring pin/sleeve1) ZBS/ZBH	8 ... 63	For centring loads and attachments on the slide	86
	Centring pin/sleeve ZBS/ZBH	8 ... 63	For centring the drive without foot mountings (user-specific)	86
[5]	Clamping unit 1H-PN	25, 32, 40, 50	For holding loads	45
[7]	Shock absorber YSR	8 ... 63	Self-adjusting, hydraulic shock absorber with spring return and linear cushioning characteristics.	74
[8]	Shock absorber YSRW	8 ... 63	Self-adjusting hydraulic shock absorber with spring return and progressive cushioning characteristics	74
–	Distance sensor SOIA	8 ... 63	For monitoring the condition of the cushioning components	86
[9]	One-way flow control valve GRLA	8 ... 63	For regulating speed	87
[10]	Proximity switch G/H/I/J	8 ... 63	For sensing the slide position	87
[11]	Connecting cable V	8 ... 63	Via proximity switch	89
[12]	Slot cover L	18 ... 63	For protecting against contamination and securing the proximity switch cable	86
[13]	Profile mounting M	8 ... 63	Simple and precise mounting option via dovetail connection.	78
[14]	Slot nut B	25 ... 63	For mounting attachments	86
[15]	Foot mounting F	8 ... 63	For mounting on the end cap	76
–	Cushioning P	8, 12	Non-adjustable, elastic cushioning. Used only at low speeds.	74
–	Cushioning PPV	18 ... 63	Adjustable, pneumatic end-position cushioning. Used at medium speeds.	74

1) Included in the scope of delivery of the drive

Datasheet

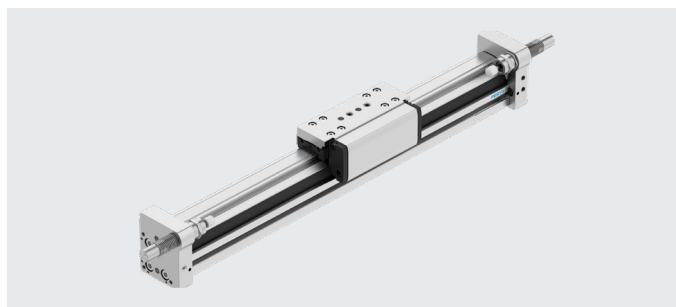
Function





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Repair service



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

General technical data		8	12	18	25	32	40	50	63
Piston \varnothing		8	12	18	25	32	40	50	63
Design		Rodless actuator							
Driver principle		Slotted cylinder, mechanically coupled							
Guide		External recirculating ball bearing guide							
Operating mode		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		Not adjustable at either end			-				
DGC...-PPV		-			Adjustable at both ends				
DGC...-YSR...		Self-adjusting at both ends							
Cushioning length with cushioning PPV	[mm]	-		16.5	15.5	17.5	29.5	29.8	31.1
Max. speed	[m/s]	1	1.2	3					
Repetition accuracy	[mm]	0.02 (with shock absorber YSR/YSRW)							
Position sensing		Via proximity switch							
Type of mounting		Profile mounting Foot mounting Direct mounting							
Mounting position		Any							



Note

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

Operating and environmental conditions		8	12	18	25	32	40	50	63
Piston \varnothing		8	12	18	25	32	40	50	63
Operating pressure	[MPa]	0.25 ... 0.8		0.2 ... 0.8			0.15 ... 0.8		
	[bar]	2.5 ... 8		2 ... 8			1.5 ... 8		
	[psi]	36.25 ... 116		29 ... 116			21.75 ... 116		
Operating medium		Compressed air to ISO 8573-1:2010 [7:-:-]							
Note on the operating/pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)							
Ambient temperature ¹⁾	[°C]	-10 ... +60							
Food-safe ²⁾		-			→ Further information on materials				
Corrosion resistance class CRC ³⁾		1 - low corrosion stress							

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

Datasheet

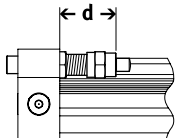
Forces [N]								
Piston \varnothing	8	12	18	25	32	40	50	63
Theoretical force at 0.6 MPa (6 bar, 87 psi)	30	68	153	295	483	754	1178	1870
Impact energy in the end positions	→ Page 46							

ATEX ¹⁾	
Explosion-proof ambient temperature [°C]	$-10^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$
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 GcX
ATEX category for dust	II 3D
Type of ignition protection for dust	Ex h IIIC T120°C DcX
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 \varnothing	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]


Note

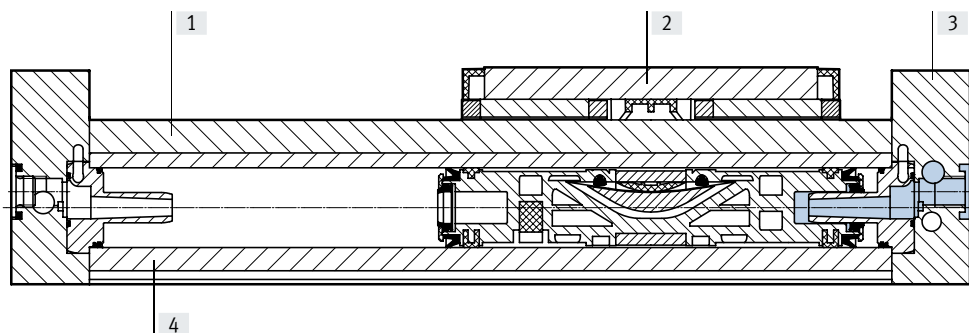
When reducing the stroke with adjustable cushioning PPV on both sides, the permissible kinetic energy decreases.

Piston \varnothing	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

Datasheet

Materials

Sectional view



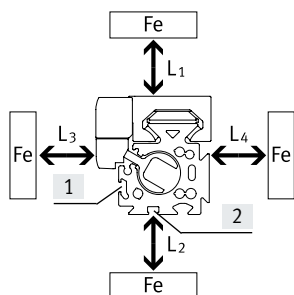
Linear drives

[1]	Guide rail	High-alloy steel
[2]	Slide	
	∅ 8 ... 12	High-alloy steel
	∅ 18 ... 63	Anodised aluminium
[3]	End cap	Anodised aluminium
[4]	Cylinder barrel	Anodised aluminium
–	Piston seal	Polyurethane
	Sealing band/cover strip	Polyurethane
	Note on materials	RoHs-compliant
	Cleanroom suitability, measured according to ISO 14644-14	Class 6 according to ISO 14644-1

Influence of ferritic materials on proximity switches

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

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

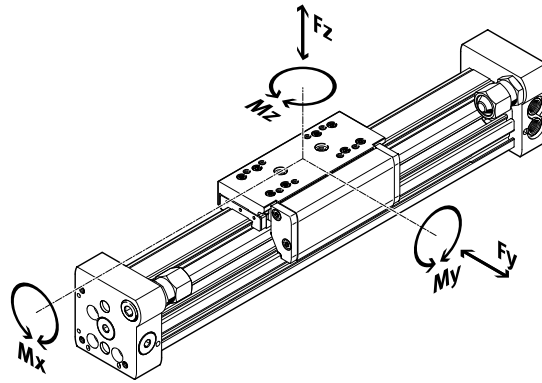


Piston ∅			8	12	18	25	32	40	50	63
Distance L1	[1]	[mm]	0	0	0	0	0	0	0	0
	[2]	[mm]	–	–	0	0	0	0	0	0
Distance L2	[1]	[mm]	20	10	10	10	0	0	0	0
	[2]	[mm]	–	–	25	25	25	25	25	25
Distance L3	[1]	[mm]	30	25	25	25	25	25	25	25
	[2]	[mm]	–	–	10	10	0	0	0	0
Distance L4	[1]	[mm]	0	0	0	0	0	0	0	0
	[2]	[mm]	–	–	0	0	0	0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

Datasheet

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		8	12	18	25	32	40	50	63
Piston \varnothing		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 70			
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	[]	–	–	750	750
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.

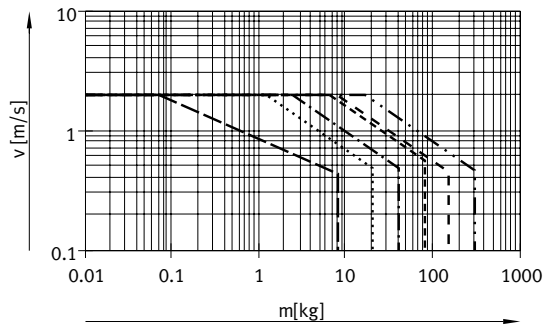
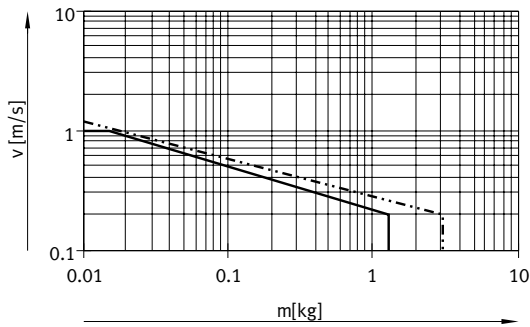
Operating and environmental conditions – Clamping unit		
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]
Operating pressure		
Clamping unit open	[bar]	4.5 ... 8
Clamping unit closed	[bar]	Unpressurised
Ambient temperature	[°C]	–10 ... +60

Datasheet

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

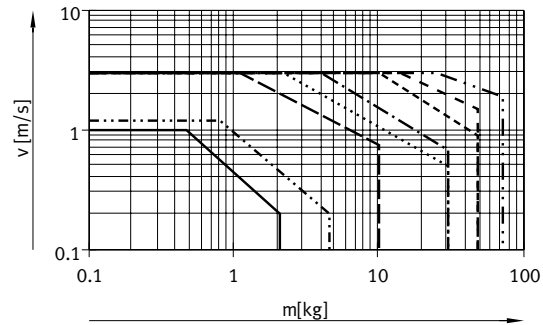
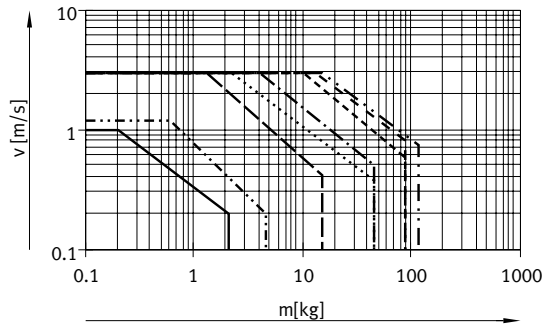
Piston \varnothing 8/12 with elastic cushioning P

Piston \varnothing 18 ... 63 with cushioning PPV



Piston \varnothing 8 ... 63 with cushioning YSR

Piston \varnothing 8 ... 63 with cushioning YSRW



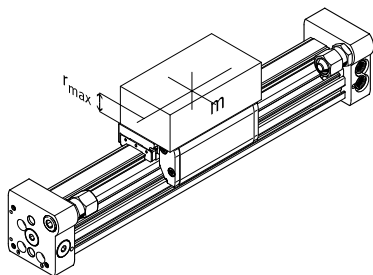
- \varnothing 8
- · - · - \varnothing 12
- - - \varnothing 18
- · · · · \varnothing 25
- · - · - \varnothing 32
- - - \varnothing 40
- - - \varnothing 50
- · - · - \varnothing 63

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 0.03 mm.

Data for horizontal mounting position:

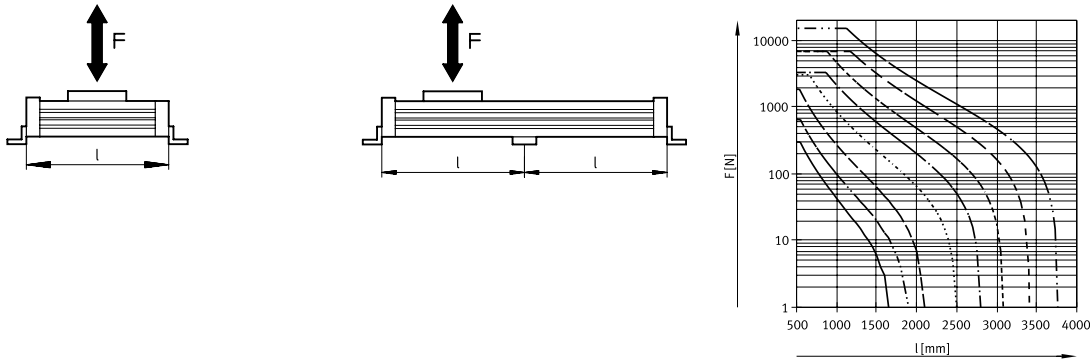
Piston \varnothing	8	12	18	25	32	40	50	63
Distance r_{max} [mm]	25	35	35	50	50	50	50	50

Datasheet

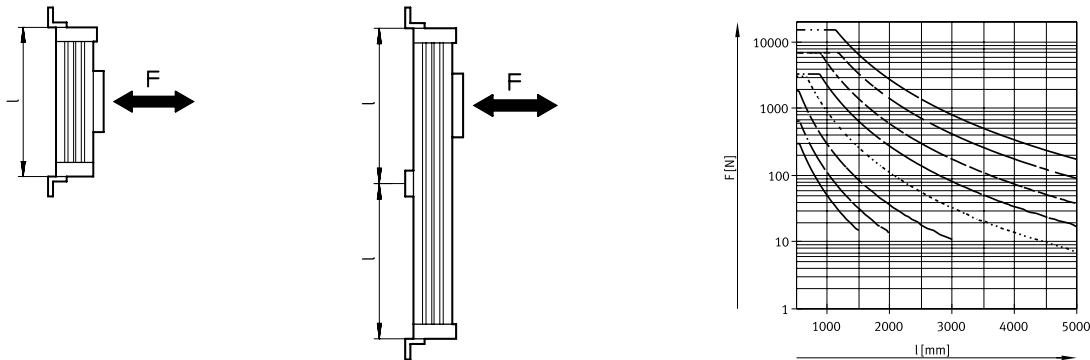
Number of profile mountings MUC as a function of weight force F and support spacing l

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

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

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

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

Datasheet

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 \varnothing 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

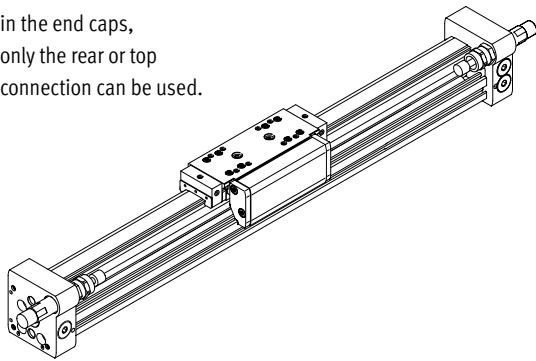
Slide dimensions

→ page 54

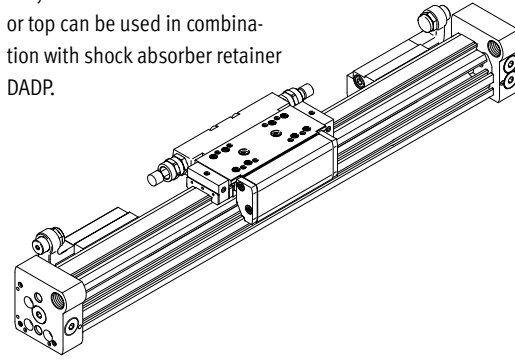
Order code C in the modular product system → page 74

Connection options

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

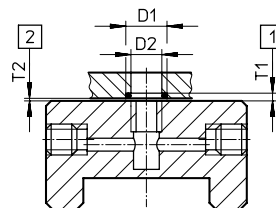


Only the connection on the front or top can be used in combination with shock absorber retainer DADP.



Connection option for customer designs

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 \varnothing 6x1 mm (DIN3771)

[1] Slot depth for O-ring

[2] Required air gap

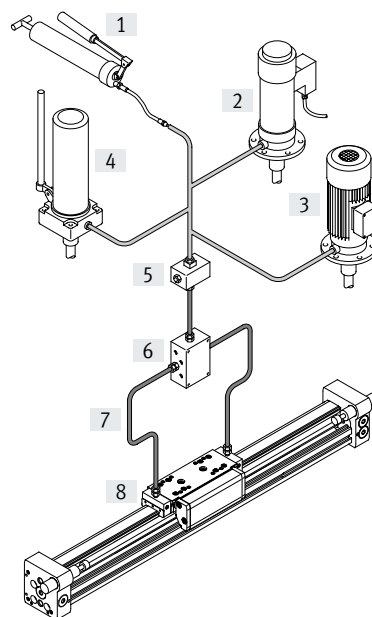
Additional dimensions → page 64

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

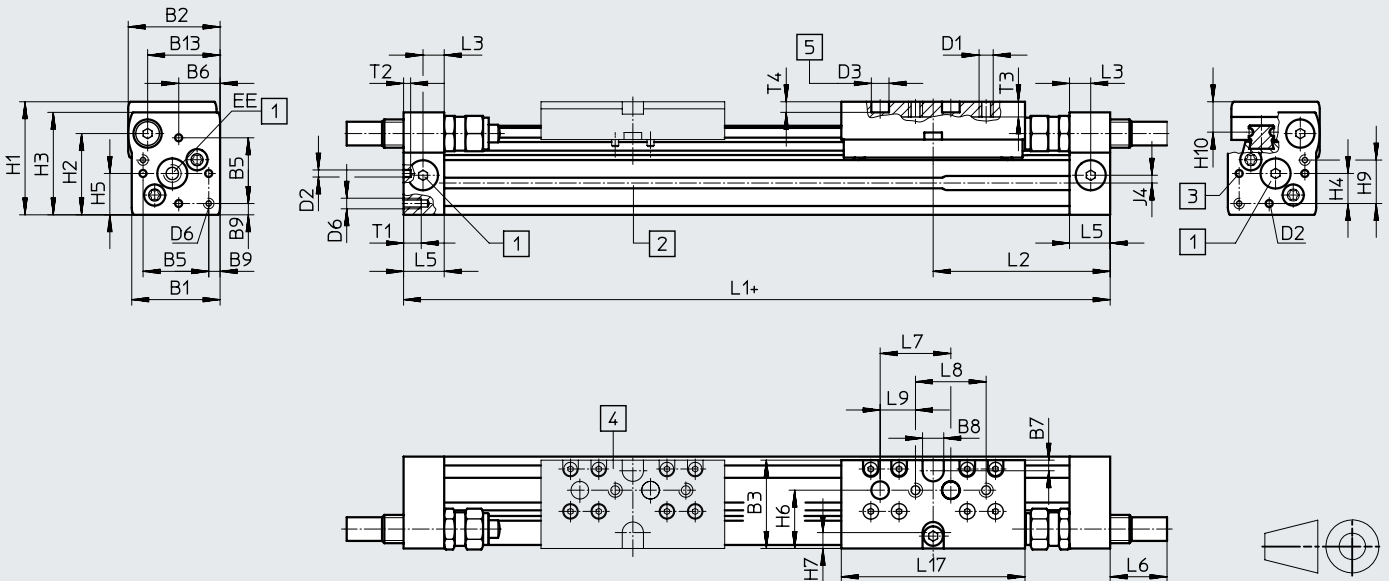
[8] Fittings

Datasheet

Dimensions

Ø 8 and 12

Download CAD data → www.festo.com



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

Ø	B1	B2	B3	B5	B6	B7	B8	B9	B13	D1	D2	D3	D6
[mm]							±0.05	±0.1			Ø 8	Ø 7	
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	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

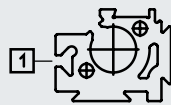
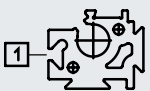
Ø	L3	L5	L6			L7	L8	L9	L17	T1	T2	T3	T4	Stroke tolerance
			P	YSR	YSRW									
[mm]						±0.03	±0.1	±0.1					+0.2	
8	6	11.4	0	16	16.2	20	20	10	52	5	2	4.3	3	0 ... 1.7
12	8	15.9	0	11.3	12.3	20	20	10	65	6	2	5	3	

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

Profile barrel

Ø 8

Ø 12



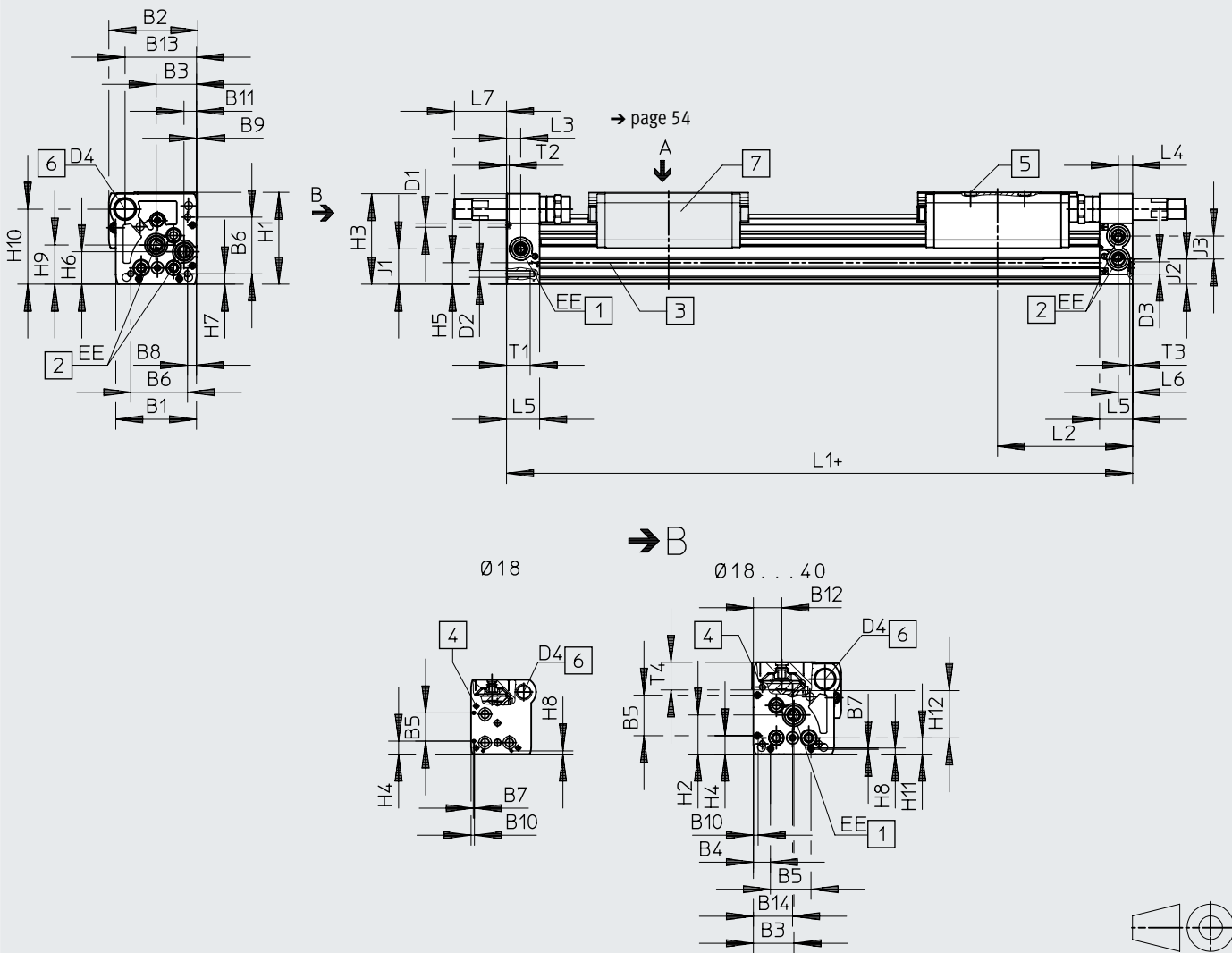
[1] Sensor slot for proximity switch

Datasheet

Dimensions

Download CAD data → www.festo.com

∅ 18 ... 40



- + plus stroke length
- [1] Compressed air supply port options on 2 sides
- [2] Compressed air supply port options on 2 sides, for compressed air supply port at one end
- [3] Sensor slot for proximity switch
- [4] Mounting hole for foot mounting HPC
- [5] Drilled hole for centring pin/sleeve
- [6] Thread for end stop
- [7] Additional slide

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

Datasheet

∅	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11
[mm]			±0.05	±0.1	±0.05			±0.1			
18	44.5	49.9	19.5	8.8	21	31	0.8	3.8	1	2.4	5.5
25	59.8	66	29	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

∅	B12	B13	B14	D1 ∅ ±0.05	D2	D3 ∅ H7	D4	EE	H1	H2	H3
[mm]											
18	15.5	39	19.5	2	M4	5	M12x1	M5	56.3	23.1	55
25	21	53	29	3	M5	9	M16x1	G1/8	68	29	67
32	18	65	38.5	3	M6	9	M16x1	G1/8	78.5	30	77
40	24.5	80.5	45	4	M6	9	M22x1.5	G1/4	99.5	41.5	97.5

∅	H4	H5	H6	H7	H8	H9	H10	H11	H12	J1	J2
[mm]	±0.2							±0.15	±0.05		
18	9.6	13.4	20	4.6	2.4	25.2	46	8.5	30	20	16.5
25	13.65	15.8	24	7.65	3.5	29	55.5	12	35	26.1	18.6
32	5.7	17	27.7	8.5	14	35.2	63.8	11.45	50	30	22
40	17.2	25	36.5	12.2	8	44	81.5	15	60	35	26

∅	J3	L1			KF	L2		L3	L4	L5	L6
		KF	KF-GP	1H-PN		KF-GP	1H-PN				
[mm]											
18	11	150	157	–	74.5	78	–	5.7	5.8	15	5.5
25	17	200	205	271	100	102.5	100	10.5	10.6	24.5	10.6
32	18.5	250	250	320.5	124.8	124.8	124.8	14.5	14.5	30.5	14.5
40	26	300	312	458	150	156	150	14.6	14.6	33.5	14.6

∅	L7			T1	T2	T3	T4	Stroke tolerance
	PPV	YSR	YSRW					
[mm]						+0.2		
18	0	29.9	32.4	9	2	3.1	15	0 ... 2.5
25	0	35.6	38.6	17.5	2	2.1	17.3	
32	0	19.5	28	15	2	2.1	20	
40	0	38.5	43.5	20	3	2.1	25.7	


Note

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

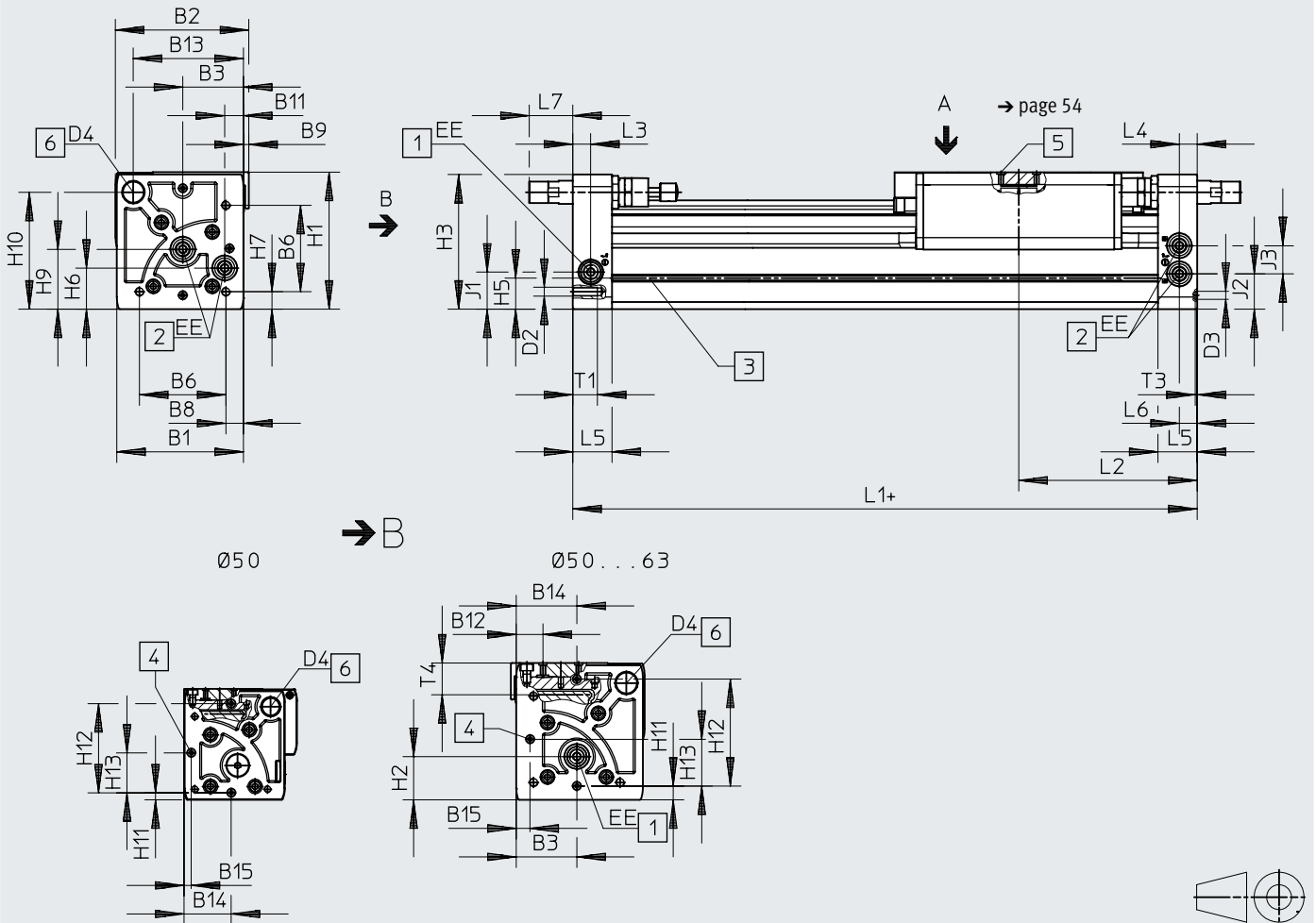
Length tolerance		≤ 1000	≤ 2000	≤ 3000	≤ 4000	≤ 5000	≤ 6000	≤ 7000	≤ 8000	≤ 9000
For stroke	[mm]									
L1	[mm]	+0.90	+1.10	+1.40	+1.50	+1.60	+1.70	+2.20	+2.30	+2.40

Datasheet

Dimensions

Download CAD data → www.festo.com

∅ 50/63



- + plus stroke length
- [1] Compressed air supply port options on 2 sides
- [2] Compressed air supply port options on 2 sides, for compressed air supply port at one end
- [3] Sensor slot for proximity switch
- [4] Mounting hole for foot mounting HPC
- [5] Drilled hole for centring pin/sleeve
- [6] Thread for end stop

Note

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

Datasheet

∅	B1	B2	B3	B6	B8	B9	B11	B12	B13	B14	B15
[mm]			±0.05		±0.1						
50	113	126.5	52.8	81.6	12	–	21	24	97	60	8
63	142	149	68	97	19.5	5	21	30	123.5	68	15.5

∅	D2	D3 ∅ H7	D4	EE	H1	H2	H3	H5	H6	H7	H9
[mm]											
50	M8	9	M22x1.5	G1/4	124.5	38.5	122.5	29.3	36	12	53
63	M10	9	M26x1.5	G3/8	153.5	48.5	151	34.8	46	19.5	67

∅	H10	H11	H12	H13	J1	J2	J3	L1		L2	L3
								KF	1H-PN		
[mm]		±0.2	±0.05								
50	104.5	8	100	52.8	30.5	30.5	28	350	555.8	175	17
63	131	15.5	120	68	41.5	39.5	31.5	400	–	200	20

∅	L4	L5	L6	L7			T1	T3	T4	Stroke tolerance
				PPV	YSR	YSRW				
[mm]								+0.2		
50	17	41	17	0	31	36.3	24	2.1	28.75	0 ... 2.5
63	20	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		≤ 1000	≤ 2000	≤ 3000	≤ 4000	≤ 5000	≤ 6000	≤ 7000	≤ 8000	≤ 9000
For stroke	[mm]									
L1	[mm]	+0.90	+1.10	+1.40	+1.50	+1.60	+1.70	+2.20	+2.30	+2.40

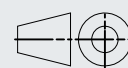
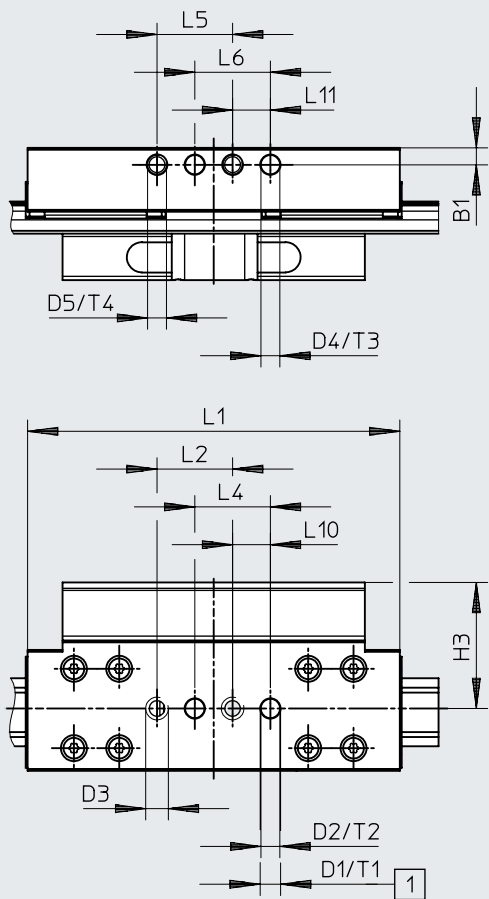
Datasheet

Dimensions

Download CAD data → www.festo.com

Slide

∅ 18



[1] Drilled hole for centring pin/sleeve

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

∅	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

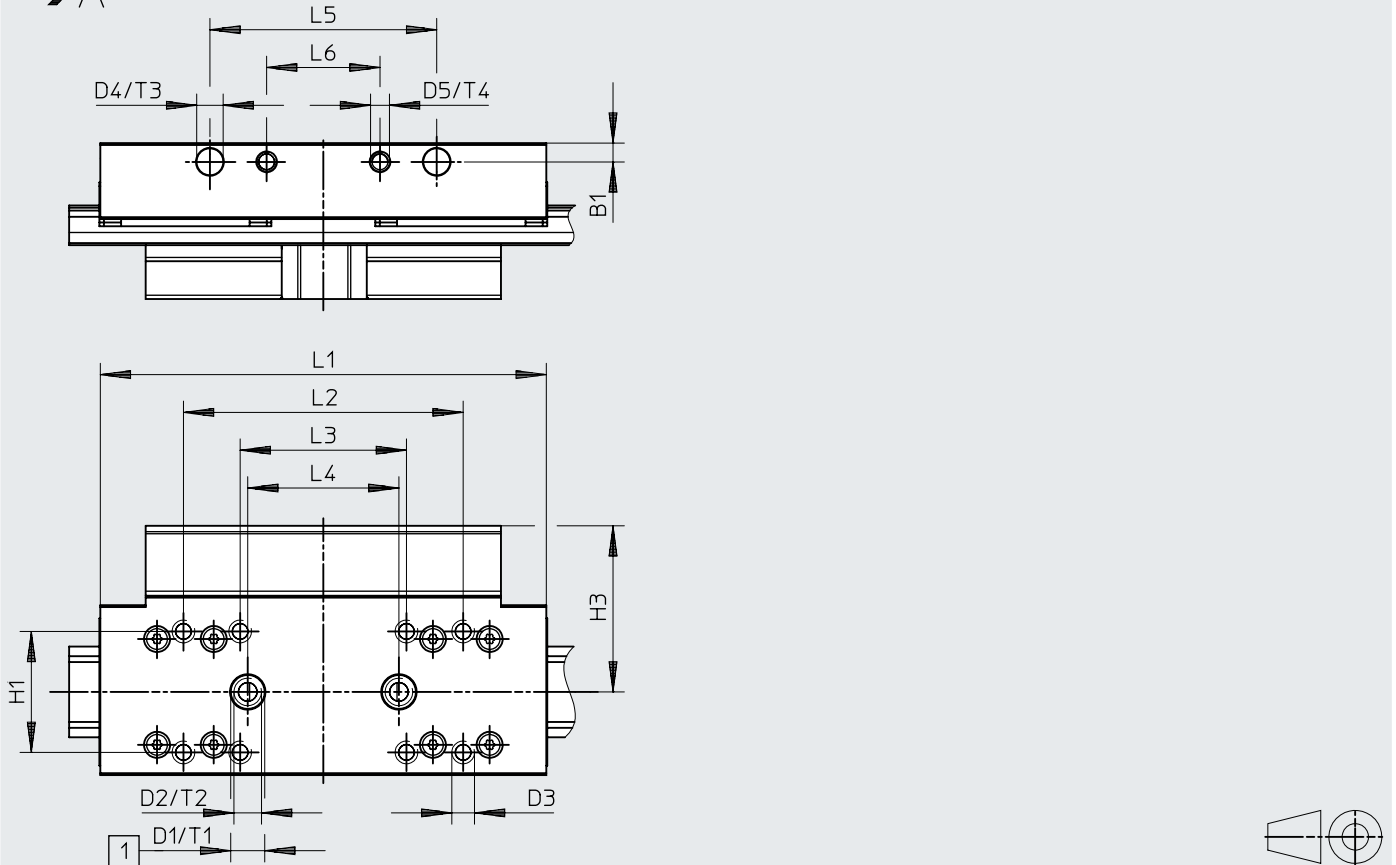
Datasheet

Dimensions

Download CAD data → www.festo.com

Slide

∅ 25



[1] Drilled hole for centring pin/sleeve

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

∅	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

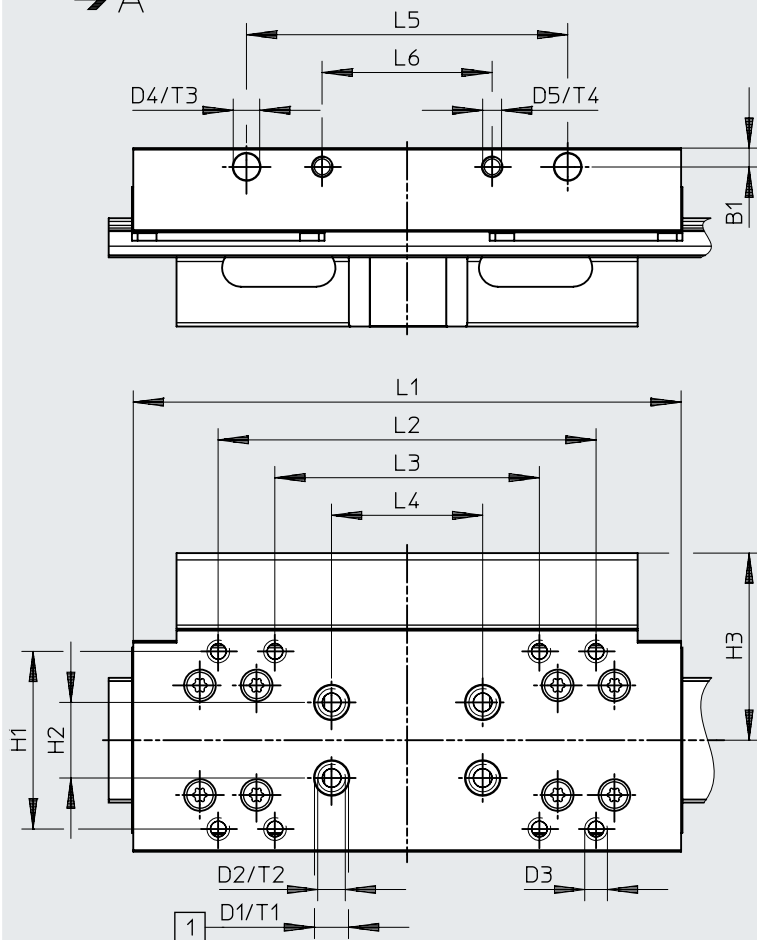
Datasheet

Dimensions

Download CAD data → www.festo.com

Slide

∅ 32



[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	±0.2
32	5	9	M6	M5	7	M5	47	20	49.5	145

∅	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

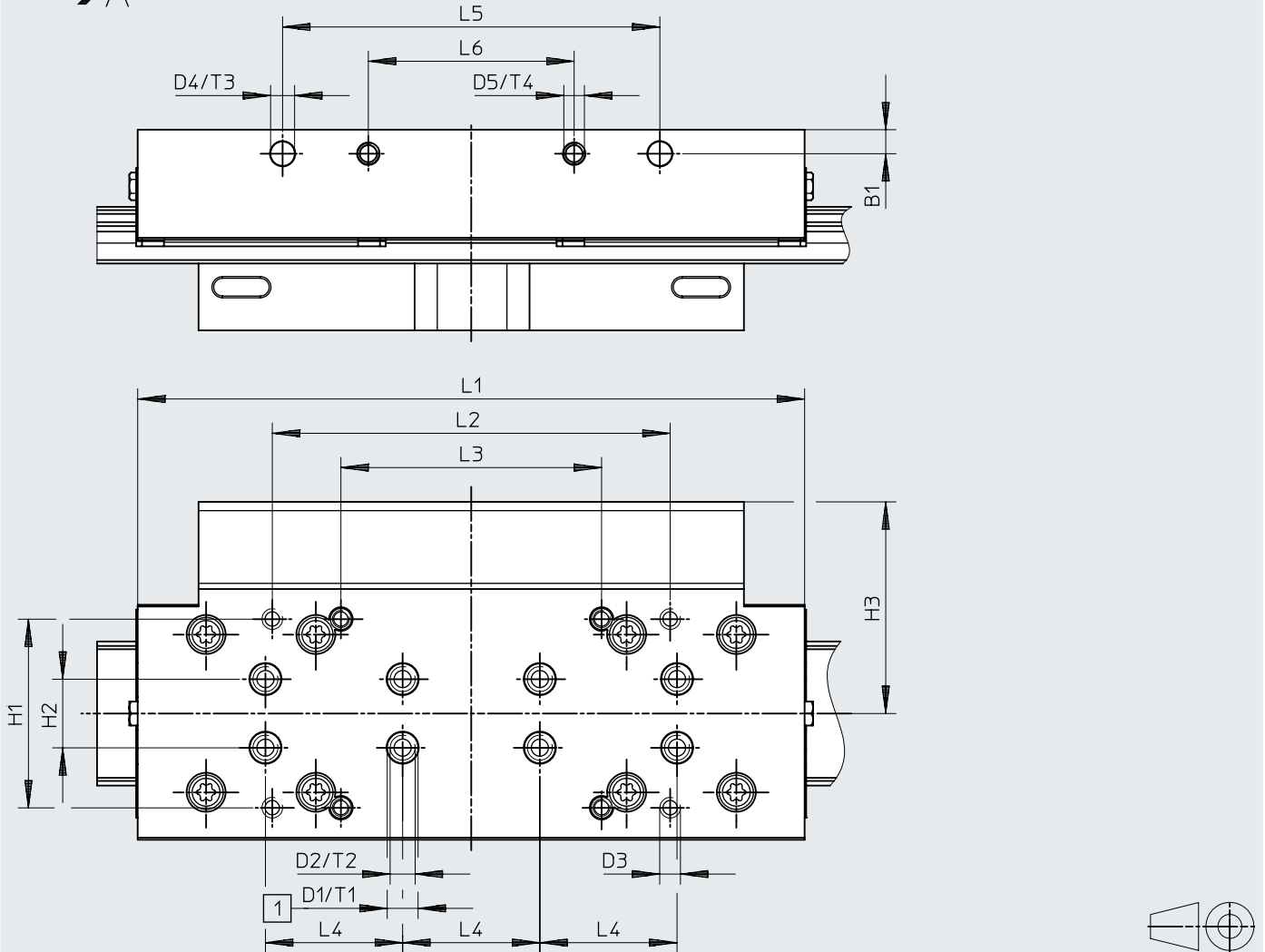
Datasheet

Dimensions

Download CAD data → www.festo.com

Slide

∅ 40



[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	±0.2
40	7	9	M6	M5	7	M6	55	20	61.7	194.5

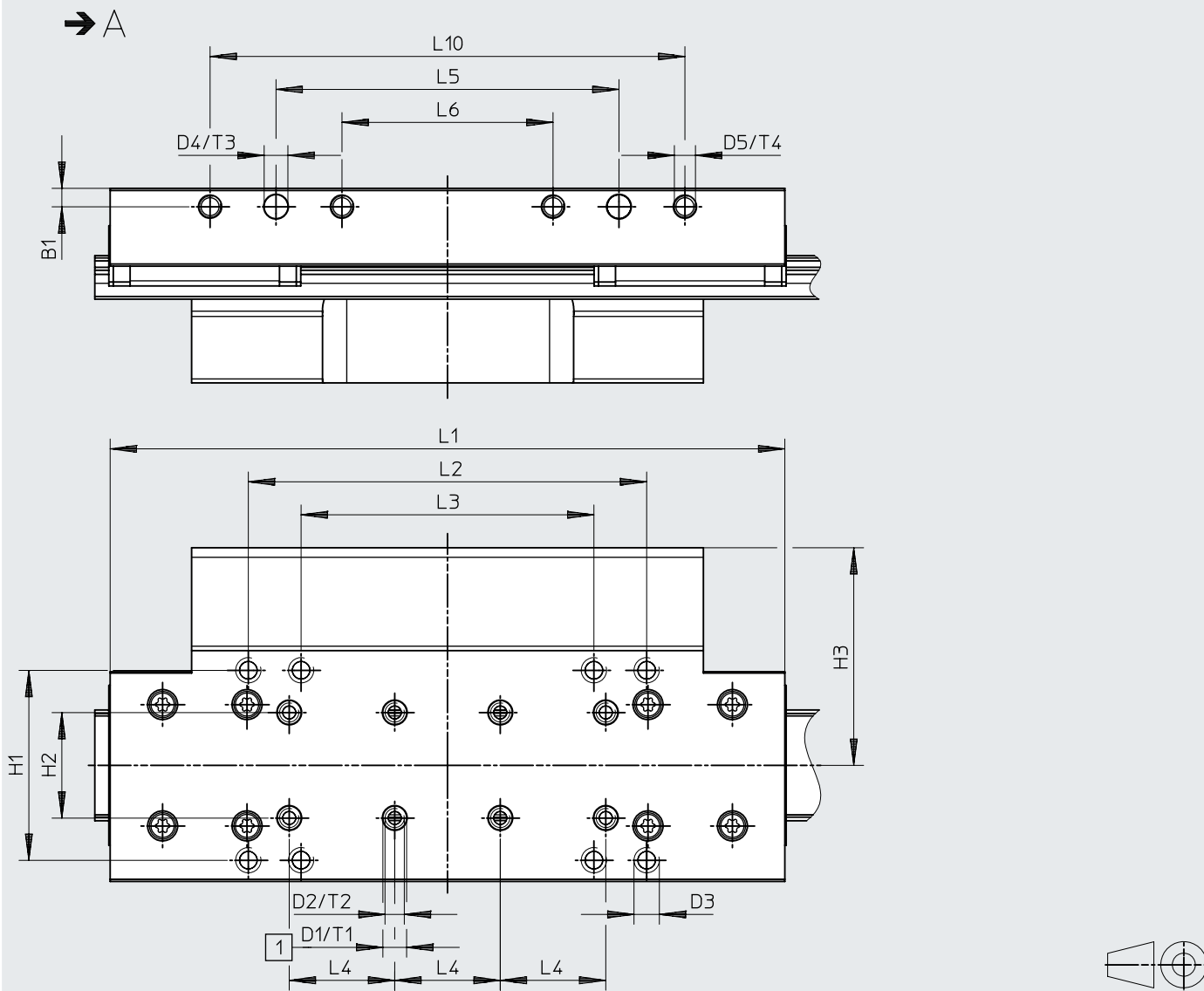
∅	L2	L3	L4	L5	L6	T1	T2	T3	T4
[mm]	±0.2	±0.2	±0.3	±0.05	±0.1	+0.2		+0.2	
40	116	76	40	110	60	2.1	8.5	2.1	7.5

Datasheet

Dimensions

Download CAD data → www.festo.com

Slide
 ø 50



[1] Drilled hole for centring pin/sleeve

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
50	7	9	M6	M8	9	M8	72	40	82.5	255.8

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	
50	151	111	40	130	80	180	2.1	13.5	2.1	18

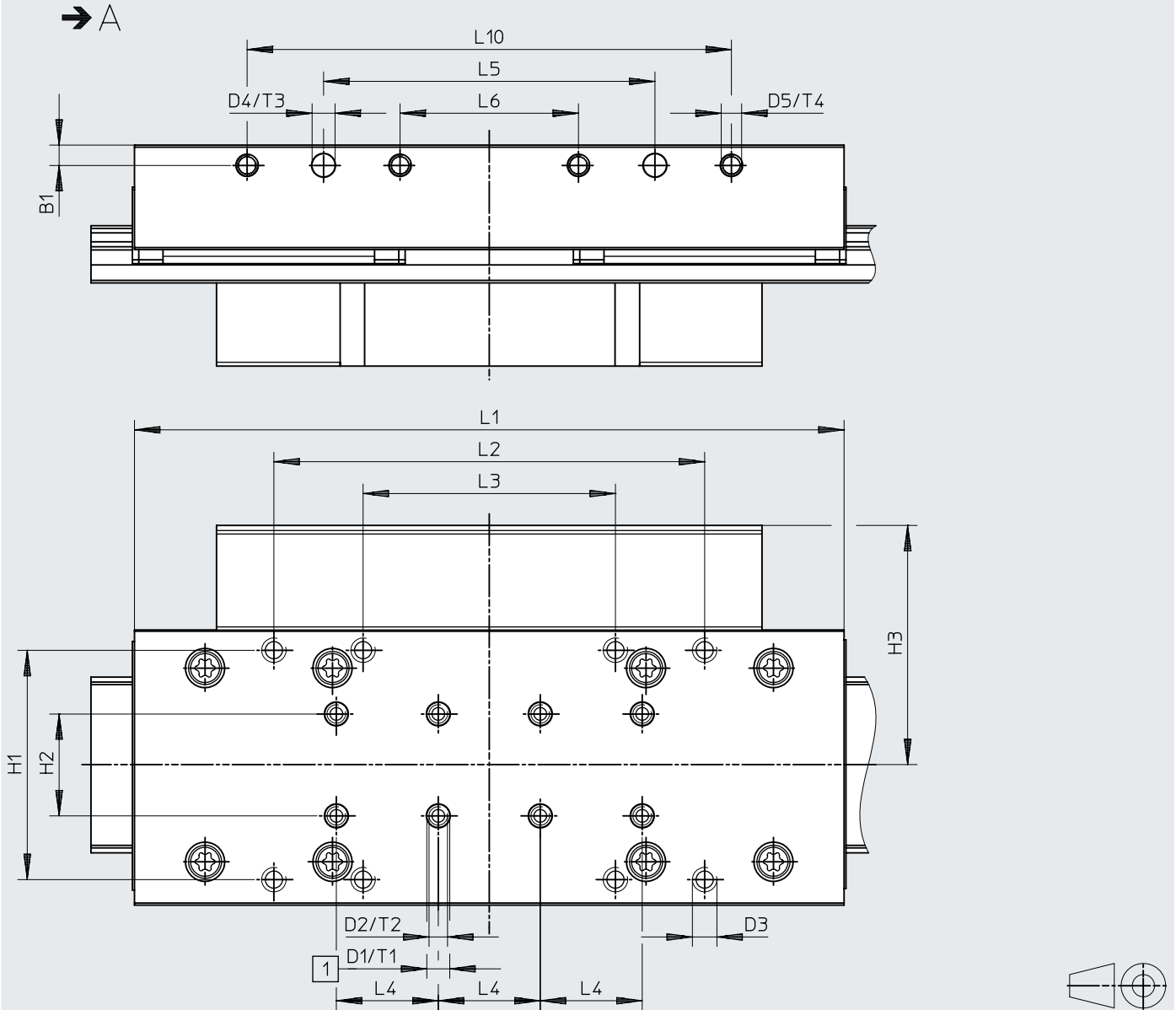
Datasheet

Dimensions

Download CAD data → www.festo.com

Slide

∅ 63



[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
63	8	9	M6	M8	9	M8	90	40	93.8	278.4

∅	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

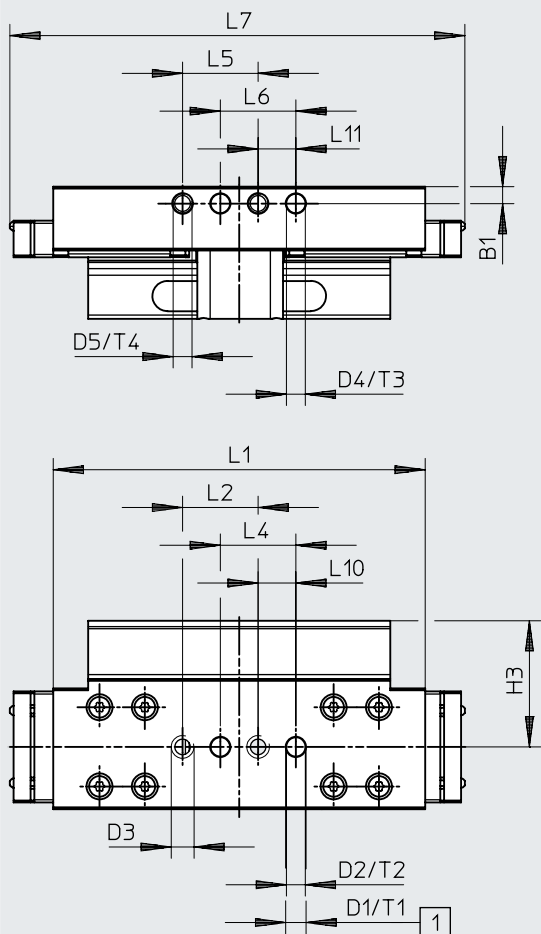
Datasheet

Dimensions

Download CAD data → www.festo.com

Slide, variant GP – Protected recirculating ball bearing guide

∅ 18



[1] Drilled hole for centring pin/sleeve

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

∅	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

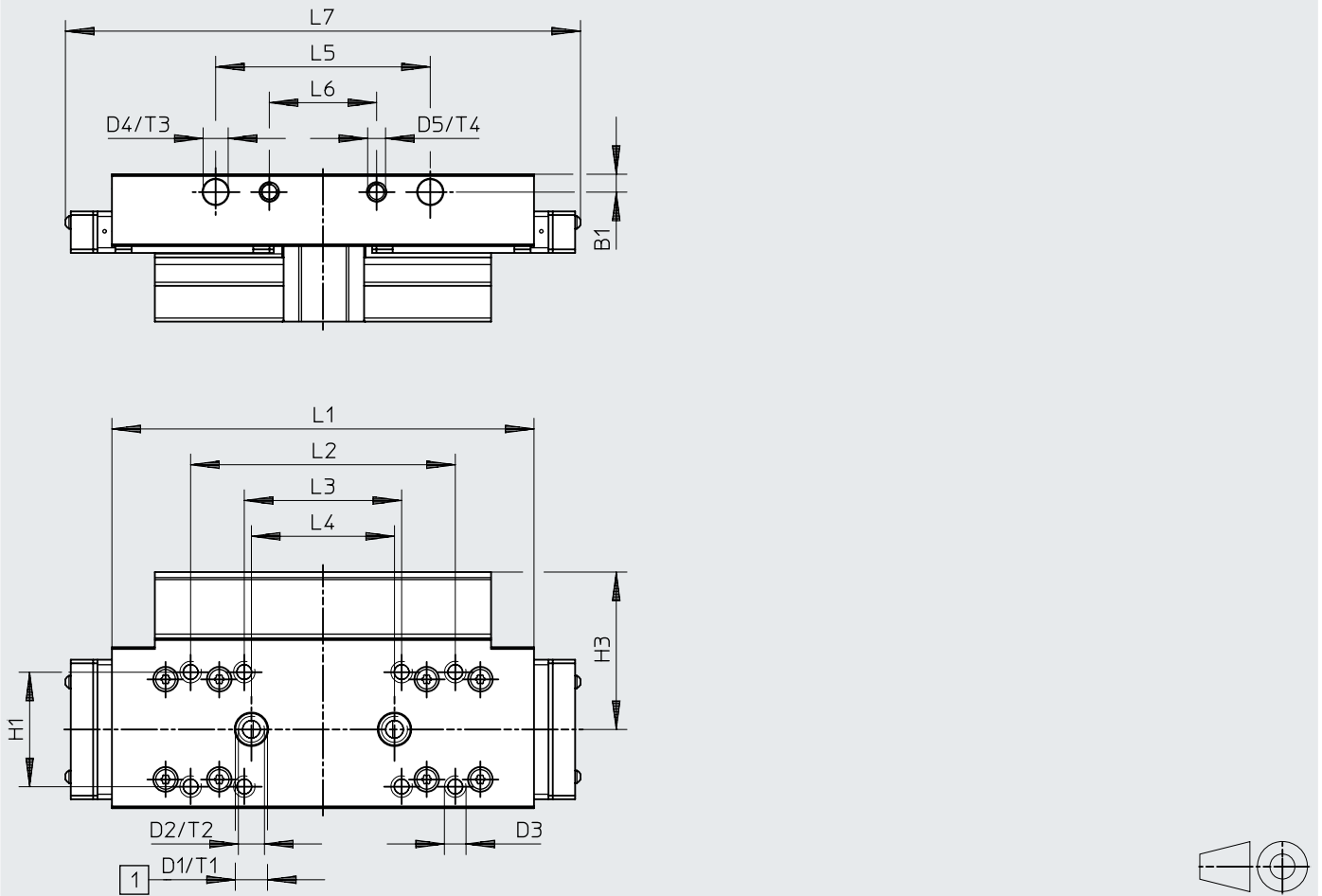
Datasheet

Dimensions

Download CAD data → www.festo.com

Slide, variant GP – Protected recirculating ball bearing guide

∅ 25



[1] Drilled hole for centring pin/sleeve

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

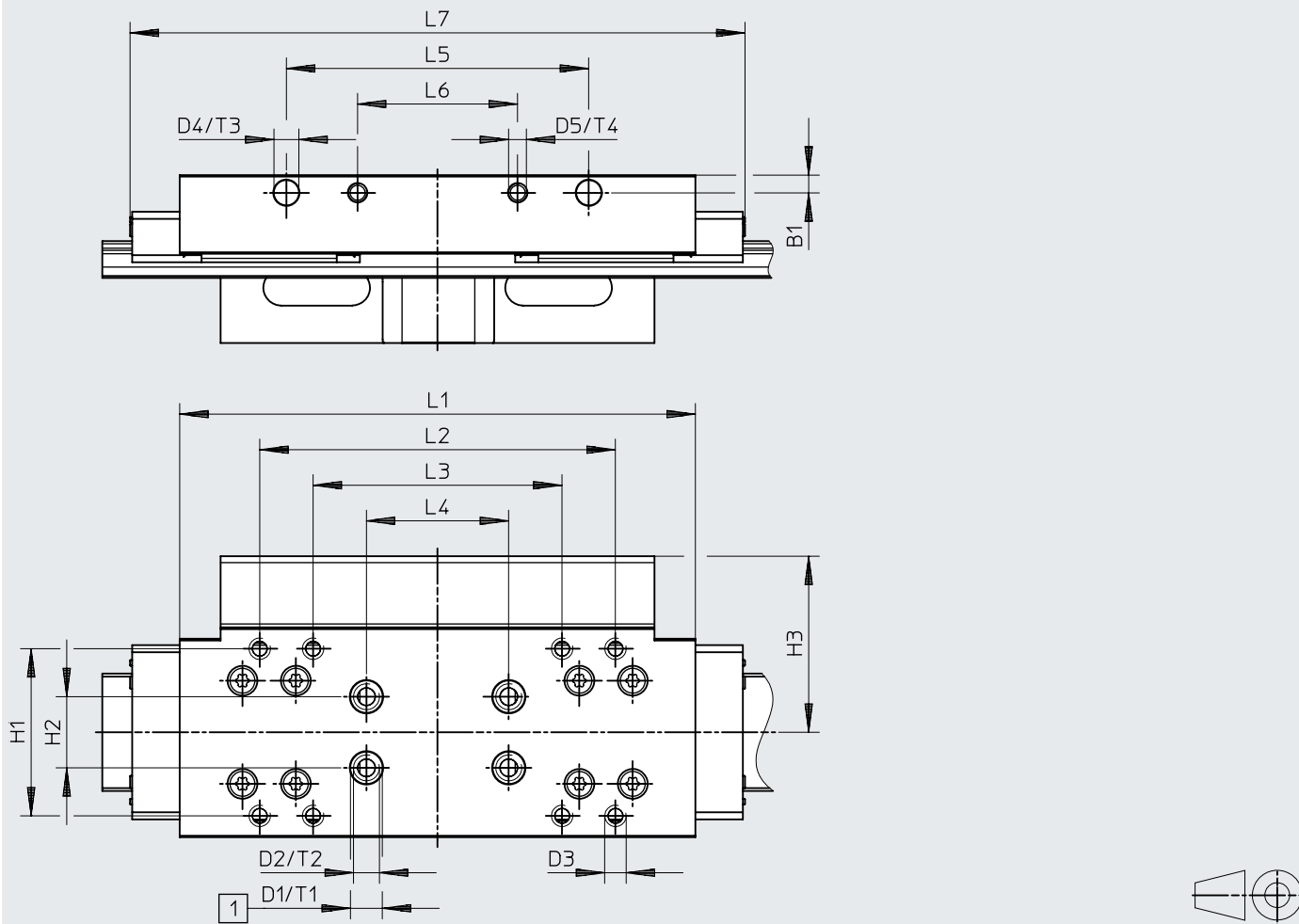
Datasheet

Dimensions

Download CAD data → www.festo.com

Slide, variant GP – Protected recirculating ball bearing guide

∅ 32



[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	±0.2
32	5	9	M6	M5	7	M5	47	20	49.5	145

∅	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

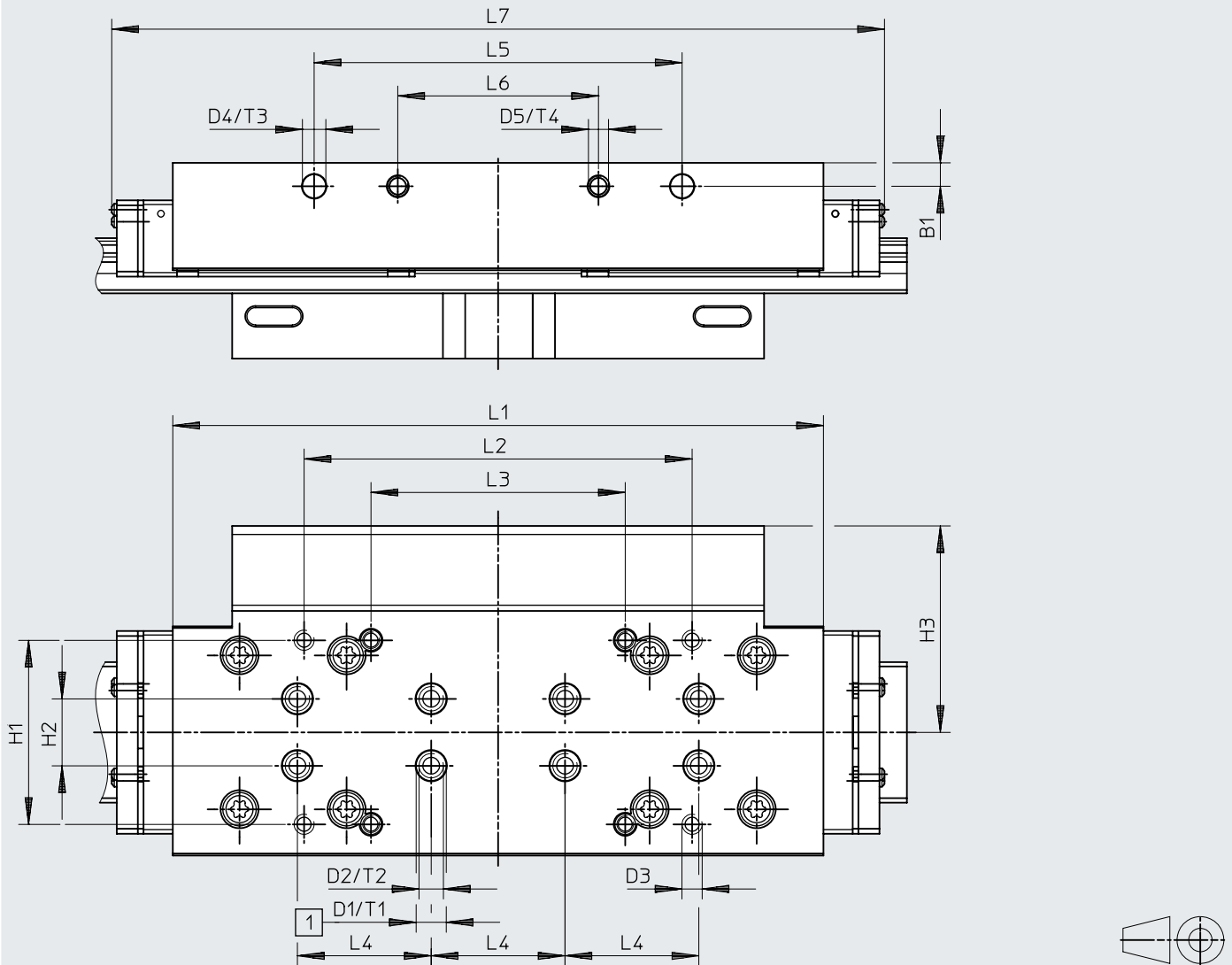
Datasheet

Dimensions

Download CAD data → www.festo.com

Slide, variant GP – Protected recirculating ball bearing guide

∅ 40



[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	±0.2
40	7	9	M6	M5	7	M6	55	20	61.7	194.5

∅	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

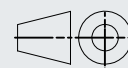
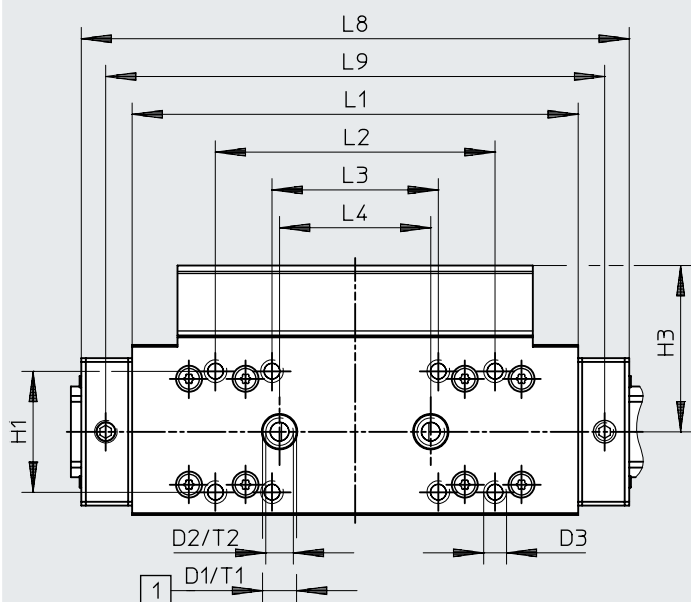
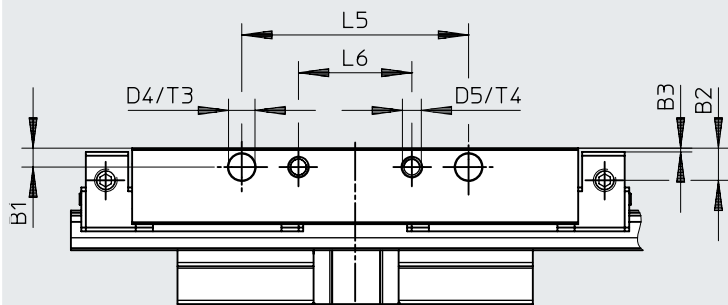
Datasheet

Dimensions

Download CAD data → www.festo.com

Slide, variant C – Lubrication adapter

∅ 25



[1] Drilled hole for centring pin/sleeve

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

∅	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

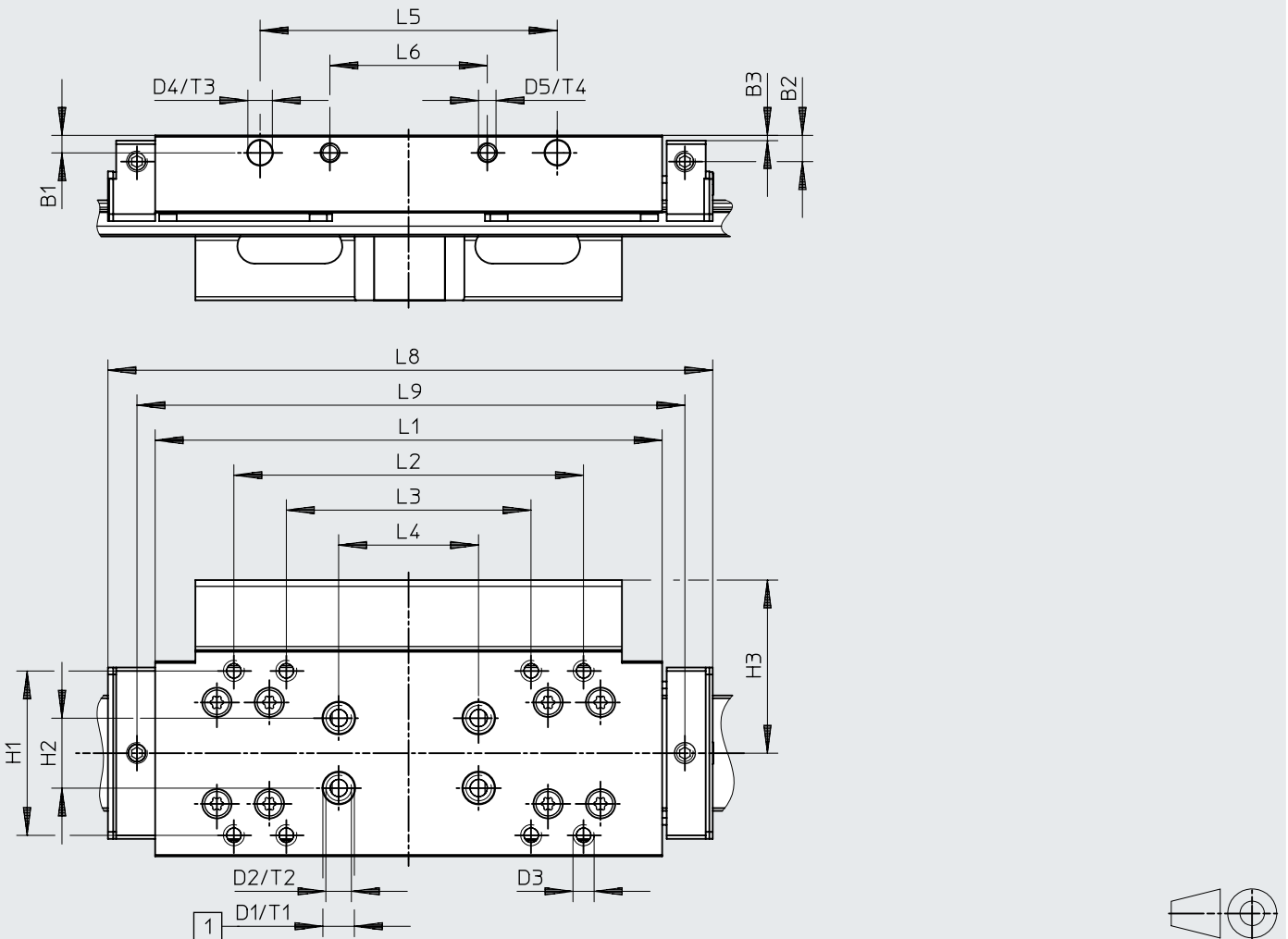
Datasheet

Dimensions

Download CAD data → www.festo.com

Slide, variant C – Lubrication adapter

∅ 32



[1] Drilled hole for centring pin/sleeve

∅	B1	B2	B3	D1	D2	D3	D4	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

∅	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

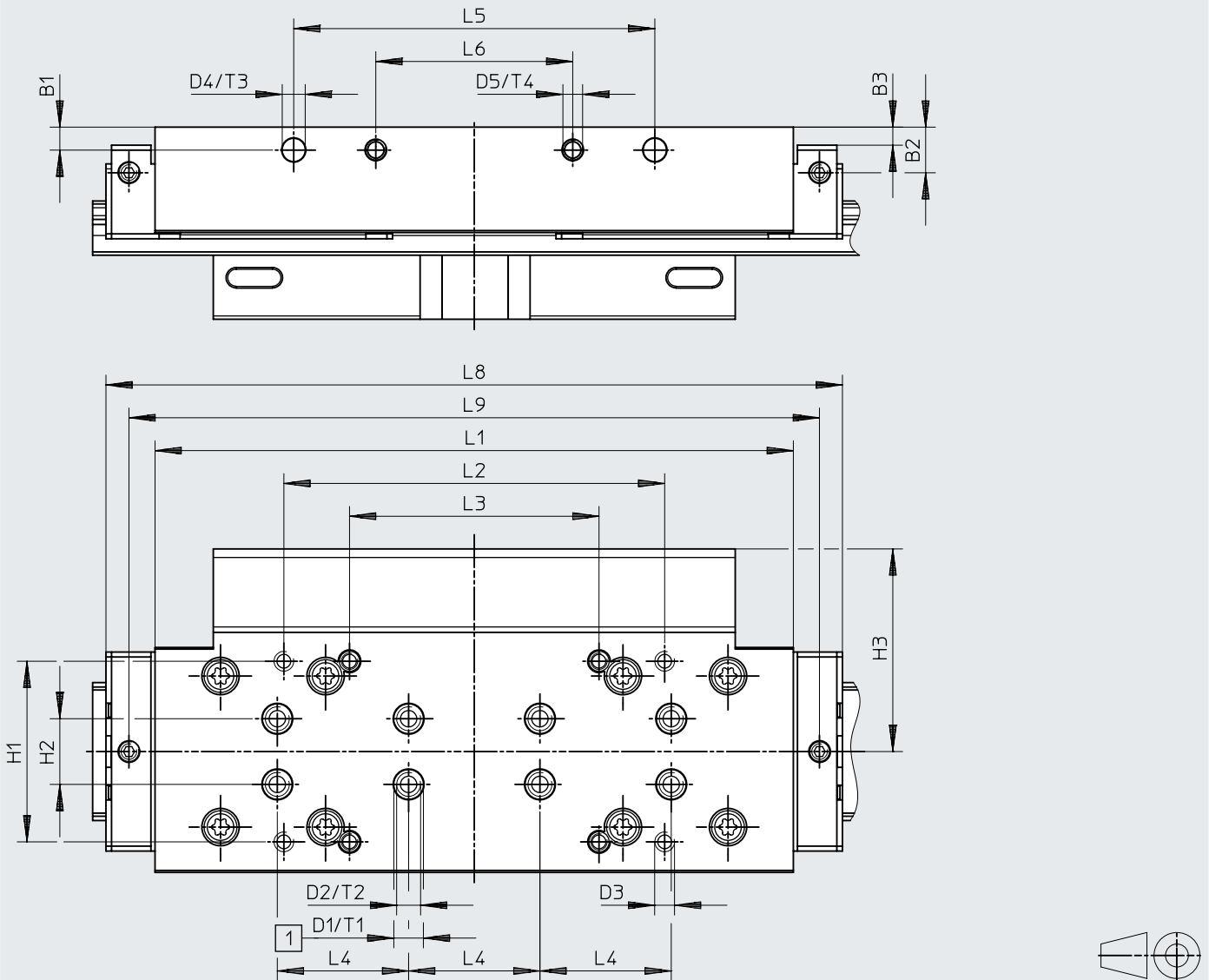
Datasheet

Dimensions

Download CAD data → www.festo.com

Slide, variant C – Lubrication adapter

∅ 40



[1] Drilled hole for centring pin/sleeve

∅	B1	B2	B3	D1	D2	D3	D4	D5	H1	H2	H3	L1
[mm]	±0.05		±0.05	∅ H7			∅ H7		±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

∅	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

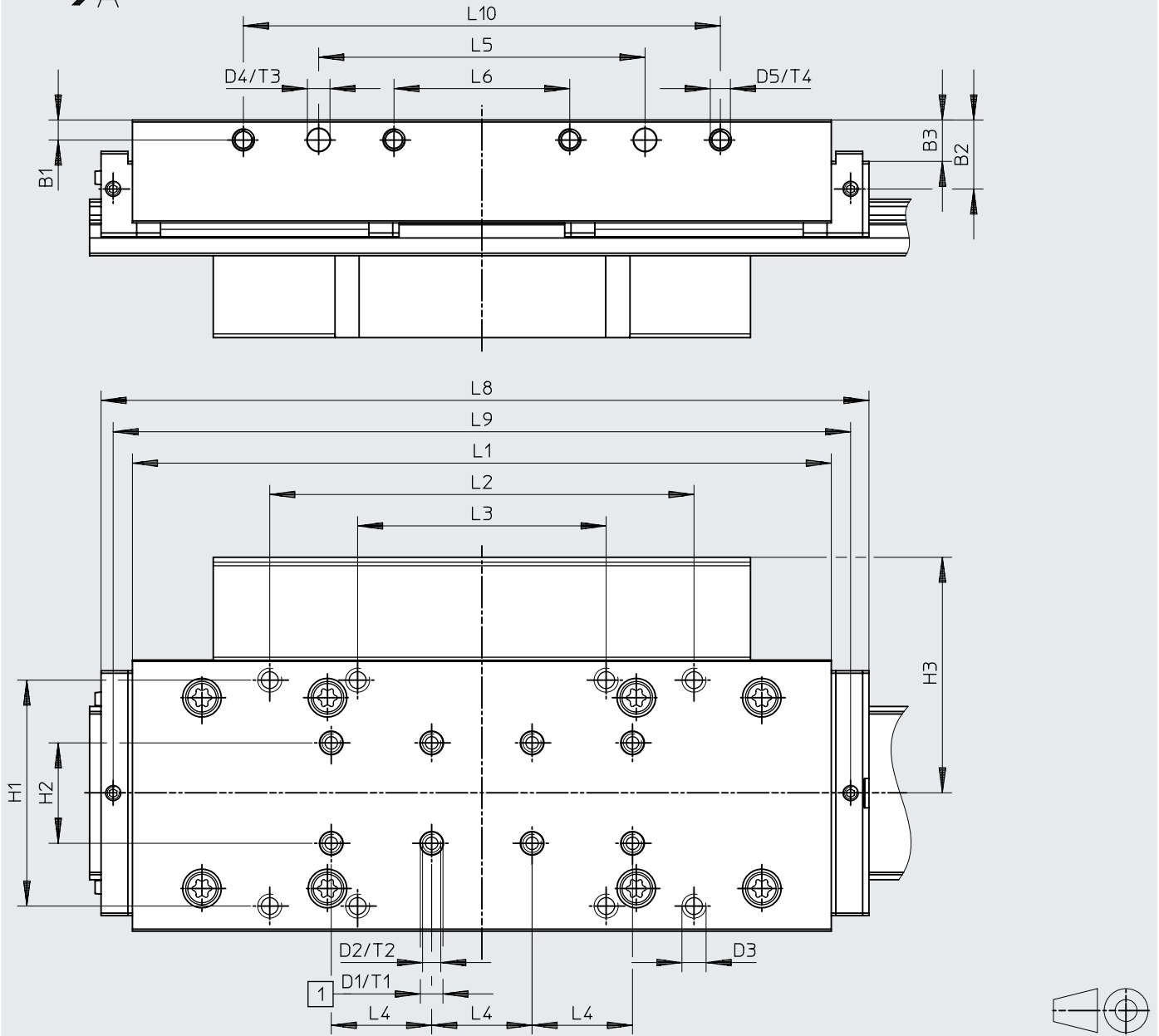
Datasheet

Dimensions

Download CAD data → www.festo.com

Slide, variant C – Lubrication adapter

∅ 63



[1] Drilled hole for centring pin/sleeve

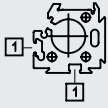
∅	B1	B2	B3	D1	D2	D3	D4	D5	H1	H2	H3	L1
[mm]	±0.05			∅ H7			∅ H7		±0.2	±0.03	±0.1	±0.1
63	8	27.5	16.5	9	M6	M8	9	M8	90	40	93.8	278.4

∅	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

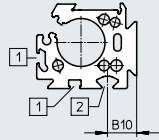
Datasheet

Profile barrel

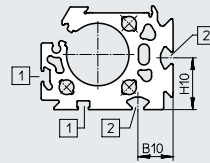
Ø 18



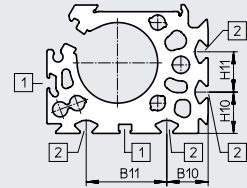
Ø 25



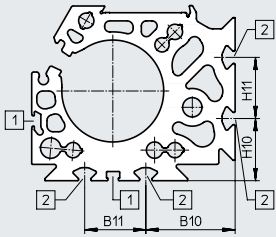
Ø 32



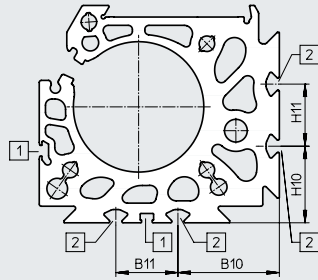
Ø 40



Ø 50



Ø 63



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

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

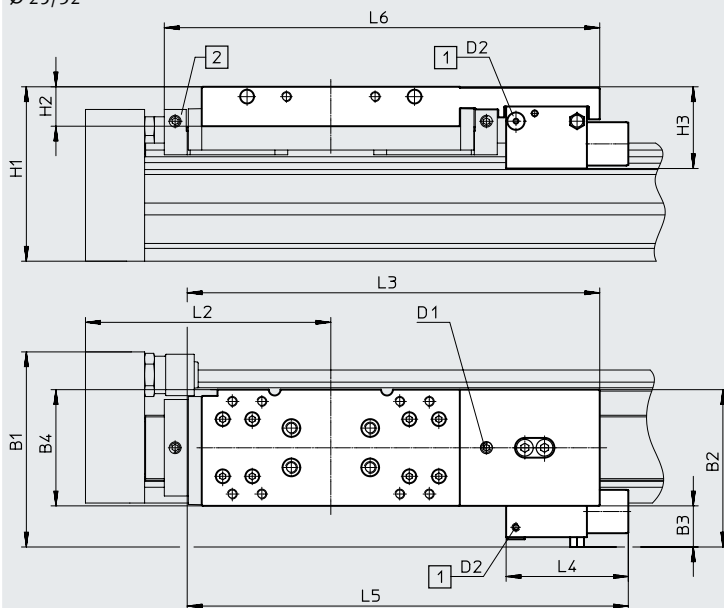
Datasheet

Dimensions

Download CAD data → www.festo.com

1H – With clamping unit

∅ 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-...-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

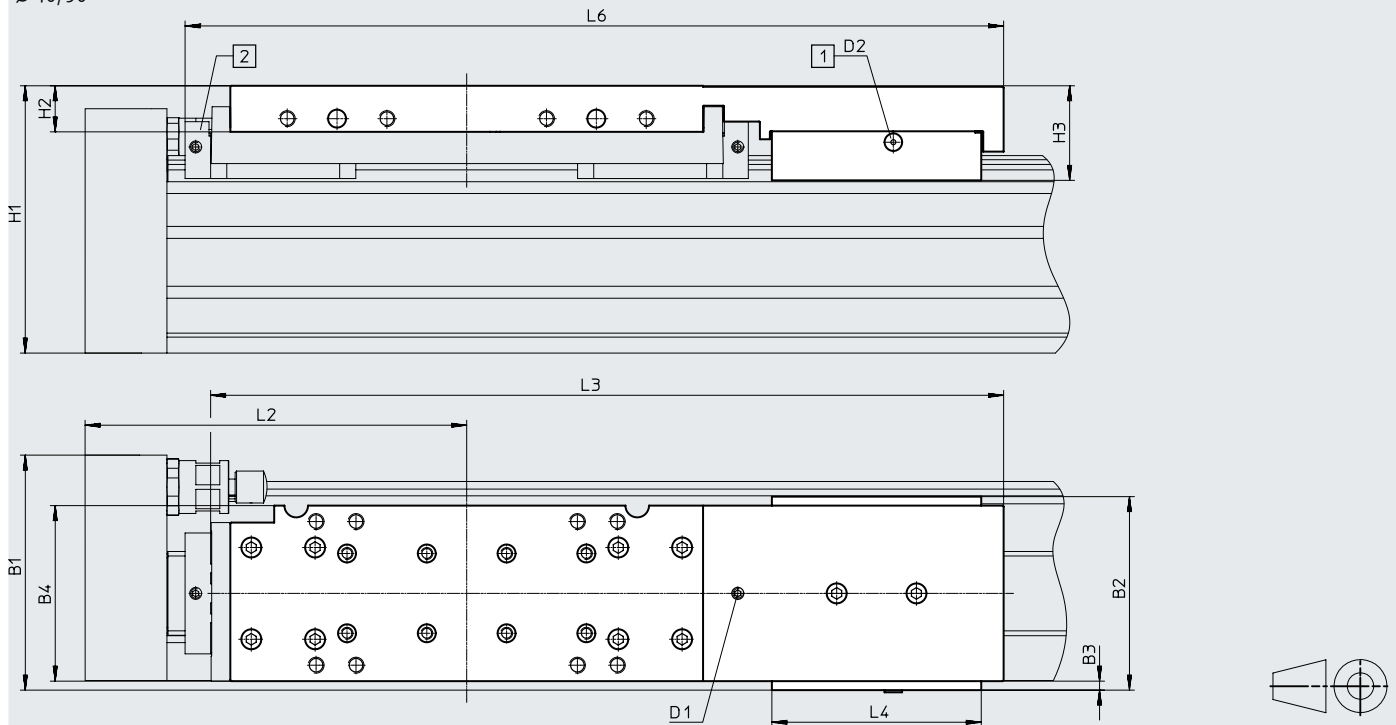
Datasheet

Dimensions

Download CAD data → www.festo.com

1H – With clamping unit

∅ 40/50



Note

Overall length L1 at stroke = 0 mm
→ page 50

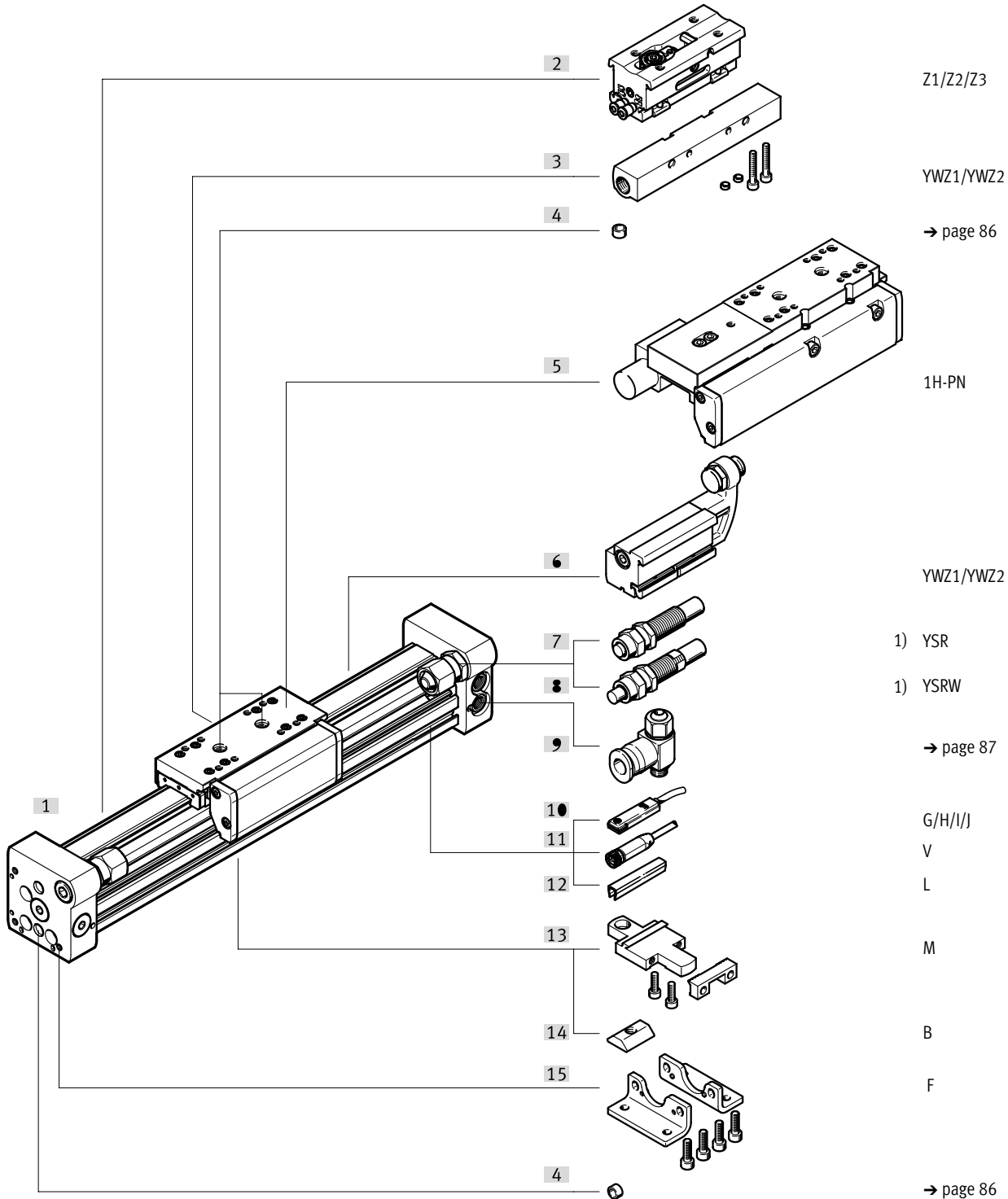
- [1] Compressed air supply port
- [2] Lubrication adapter

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-...-C-1H-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-...-C-1H-PN													412.1

Ordering data – Modular product system

Order code

- Note: End stops or shock absorbers must not be removed.
- Note: The item numbers refer to the peripherals overview → page 40

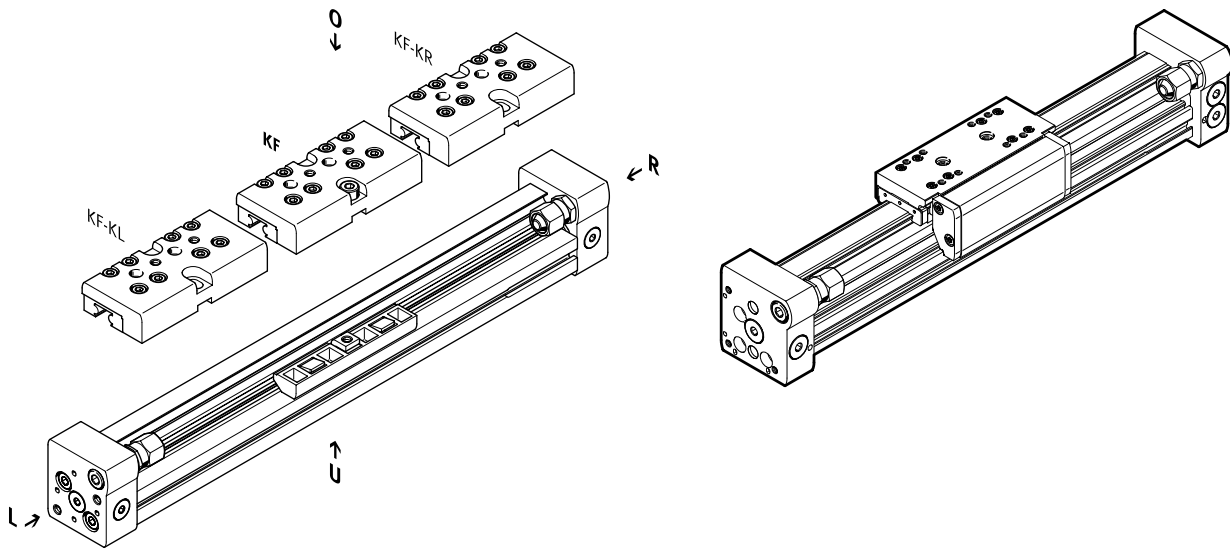


Ordering data – Modular product system

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

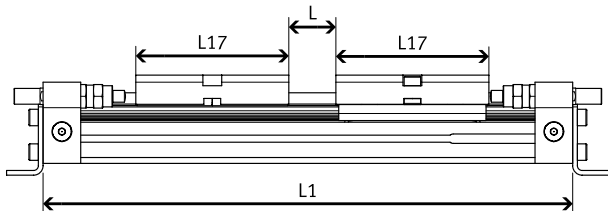
For a linear drive DGC with additional slide, the working stroke is reduced by the length of the additional slide and the distance between the two slides.

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

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 ... 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 switch									-A	-A	
Compressed air supply port	On the right end or at both ends											
	-	-	On the left end or at both ends							-DL		
Slide	-	-	Protected recirculating ball bearing guide				-	-	[1]	-GP		
Lubrication	-	-	Standard									
	-	-	Food-safe lubrication						[2]	-H1		
Lubrication function	Standard											
	-	-	-	Lubrication adapter						[3]	-C	
Additional slide, left	Additional slide, standard, left									[4]	-KL	
Additional slide, right	Additional slide, standard, right									[4]	-KR	
Clamping unit	-	-	-	None				-				
	-	-	-	1-channel				-	[5]	-1H		
Actuation type	-	-	-	None				-				
	-	-	-	Pneumatic				-	[5]	-PN		
EU certification	None											
	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 the two 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 shock absorber 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 switch G, H, I, J, connecting cable V, intermediate-position module Z1, Z2, Z3

Ordering data – Modular product system

Ordering table		8	12	18	25	32	40	50	63	Condi- tions	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 switch	2.5 m cable	1 ... 9										...G	
	Plug M8	1 ... 9										...H	
Proximity switch, contactless, PNP	2.5 m cable	1 ... 9										...I	
	Plug M8	1 ... 9										...J	
Connecting cable	M8, 2.5 m	1 ... 9										...V	
Slot cover, sensor slot		–	–	1 ... 9								...L	
Mechanical end-position limiter		–	–	Variable end position, at one end						[7]		YWZ1	
		–	–	Variable end position, at both ends						[7]		YWZ2	
Intermediate position		–	–	–	1 intermediate position		–	–		[8]		-Z1	
		–	–	–	2 intermediate positions		–	–		[8]		-Z2	
		–	–	–	3 intermediate positions		–	–		[8]		-Z3	
Operating manual		Express waiver – no operating instructions to be included (already available)										-O	

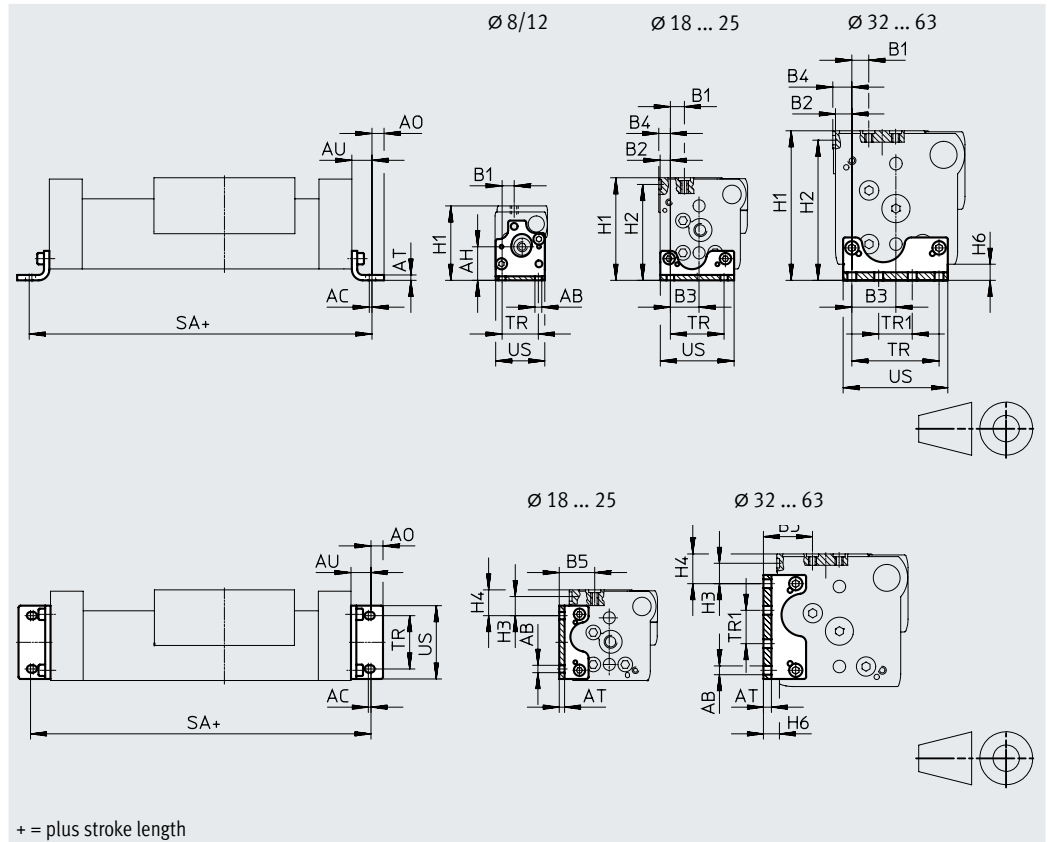
[7] YWZ1, YWZ2 Only with cushioning YSR or YSRW

[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 \varnothing [mm]	AB \varnothing	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 \varnothing [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 \varnothing	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}	–

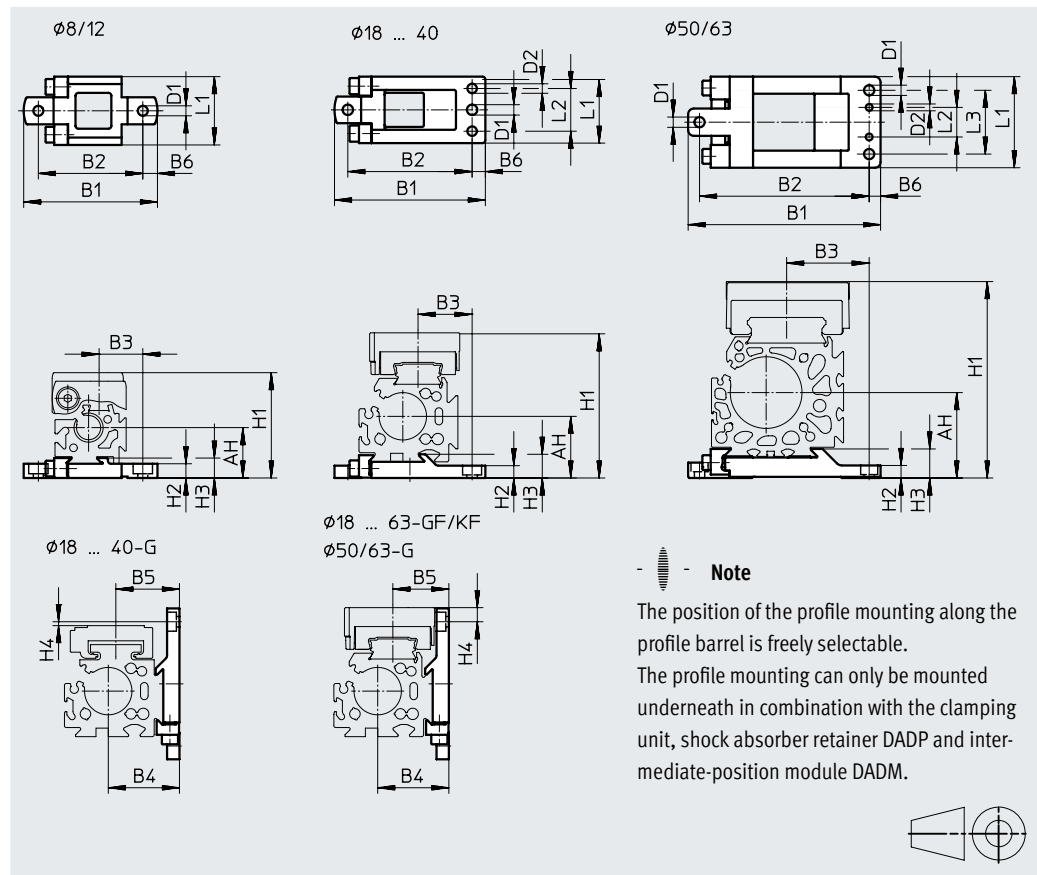
for \varnothing	TR	TR1	US	Weight	Part no.	Type ¹⁾
[mm]	± 0.1	± 0.1		[g]		
8	18	–	24.4	25	526385	HPC-8
12	20	–	29.6	41	526388	HPC-12
18	30	–	38.6	58	533667	HPC-18
25	40	–	55	131	533668	HPC-25
32	56.5	19.5	68	239	533669	HPC-32
40	65	25	78	348	533670	HPC-40
50	82.6	47.4	102	754	545236	HPC-50
63	111	39	133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

1) Suitable for ATEX

Accessories

Profile mounting MUC
(order code: M)

Material:
High-alloy steel



Dimensions and ordering data

for \varnothing [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 \varnothing [mm]	B5		B6	D1 \varnothing H13	D2 \varnothing 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					
for \varnothing	H2	H3	H4		L1
[mm]			G	GF/KF	
8	5	7	–	–	24
12	4.5	7	–	–	24
18	5.7 _{-0.2}	9.9 \pm 0.1	0.1	6.4	33 \pm 0.1
25	6.5 _{-0.2}	12.5 \pm 0.1	2.07	7.43	35 \pm 0.1
32	6.5 _{-0.2}	13 \pm 0.1	1.5	4	45 \pm 0.1
40	8.5 _{-0.2}	16 \pm 0.1	0.2	11.3	60 \pm 0.1
50	11	23.5	4.7	9.2	80 \pm 0.4
63	11	25.5	1.5	15	80 \pm 0.4

for \varnothing	L2	L3	Weight	Part no.	Type ¹⁾
[mm]	\pm 0.05	\pm 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

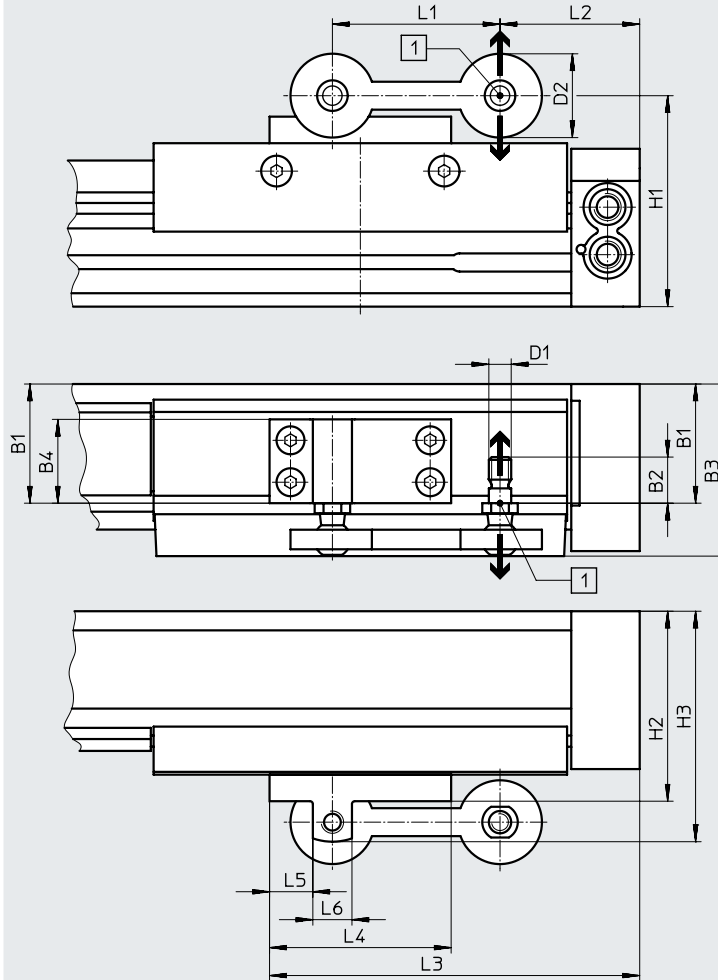
Materials:

Plate: wrought aluminium alloy

Articulated joint: polyamide

Ball stud: high-alloy steel

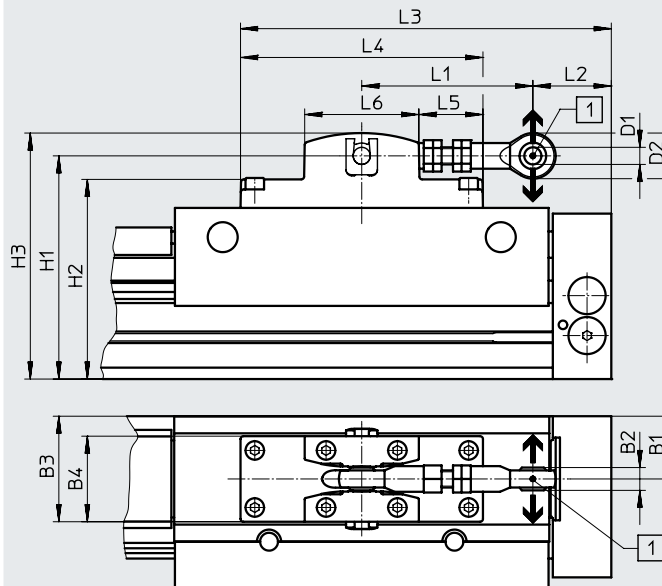
For $\varnothing 8 \dots 40$



Note
 Compensation possible in the direction of the arrow.
 [1] Max. offset:
 at $\varnothing 8 \dots 40$: ± 2.5 mm
 at $\varnothing 50/63$: ± 4 mm



For $\varnothing 50/63$



Accessories

Dimensions and ordering data				
for \varnothing	Max. offset between linear drive and external guide [mm]	Max. permissible load in the direction of force		Ambient temperature
[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	±4	5000	Low backlash	
63		5000	Low backlash	

for \varnothing	B1	B2	B3	B4	D1	D2	H1	H2	H3	L1
[mm]										
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 \varnothing	L2	L3	L4	L5	L6	CRC ¹⁾	Weight	Part no.	Type
[mm]							[g]		
8	5.1	62.6	35	13	9	1 - low	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) More information www.festo.com/x/topic/crc

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

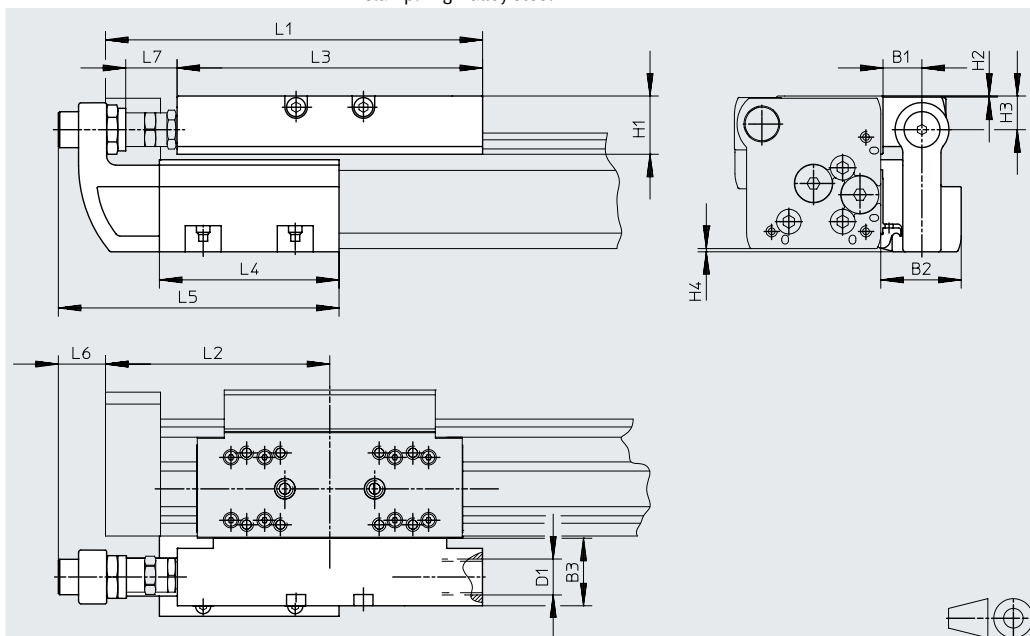
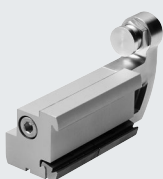
Materials:

Housing: Anodised aluminium
Stop bracket:
∅ 18 ... 40: Stainless steel casting
∅ 50 ... 63: Anodised aluminium
Clamp: High-alloy steel

Shock absorber retainer DADP



Stop KYC



Note

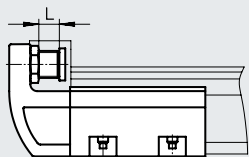
Shock absorbers are not included in the scope of delivery.
Existing shock absorbers can be removed from the end caps of the linear drive and installed in the shock absorber retainer.
The linear drive and the intermediate-position module must under no circumstances be operated without shock absorbers.


Dimensions		B1	B2	B3	D1	H1	H2	H3	H4	L1	L2	L3	L4	L5	L6	L7
for ∅																min.
[mm]																
18	GF	16	34.5	29	M12x1	20.7	0.2	12.5	0.7	128	74.5	107	80	118.5	23.5	14.5
	KF															
25	GF	16.5	35	28	M16x1	25.5	0.5	15	1.4	168	100	136	80	125	20.5	22.5
	KF			30												
32	GF	16.5	35	28	M16x1	25.5	0.5	15	1.7	206.8	124.8	164	120	165	14.5	42.8
	KF			30												
40	GF	16	35.7	29	M22x1.5	32	0.5	21.5	1.6	255	150	210	156	220.5	31	30.8
	KF			35		37			2							
50	GF	25	50	41	M22x1.5	40.5	0.5	24	0	301	175	252	170	238	27	31
	KF															
63	GF	25	50	40	M26x1.5	51.5	1.5	33	0	328	200	256	200	268	24	41
	KF															

Accessories

Technical data and ordering data

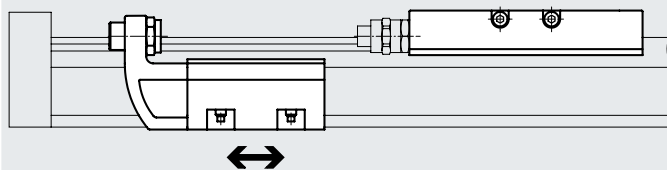
Precision adjustment




 **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 \varnothing [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 - moderate	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						
63	GF	4300			1080	545245	DADP-DGC-63
	KF						

1) More information www.festo.com/x/topic/crc

2) Suitable for ATEX

for \varnothing [mm]	Precision adjustment L [mm]	Ambient temperature [°C]	CRC ¹⁾	Weight [g]	Part no.	Type ²⁾
Stop						
18	10	-10 ... +80	2 - moderate	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) More information www.festo.com/x/topic/crc

2) Suitable for ATEX

Accessories

Intermediate-position module

DADM-DGC

(order code: Z1, Z2 or Z3)

For DGC-KF

Materials:

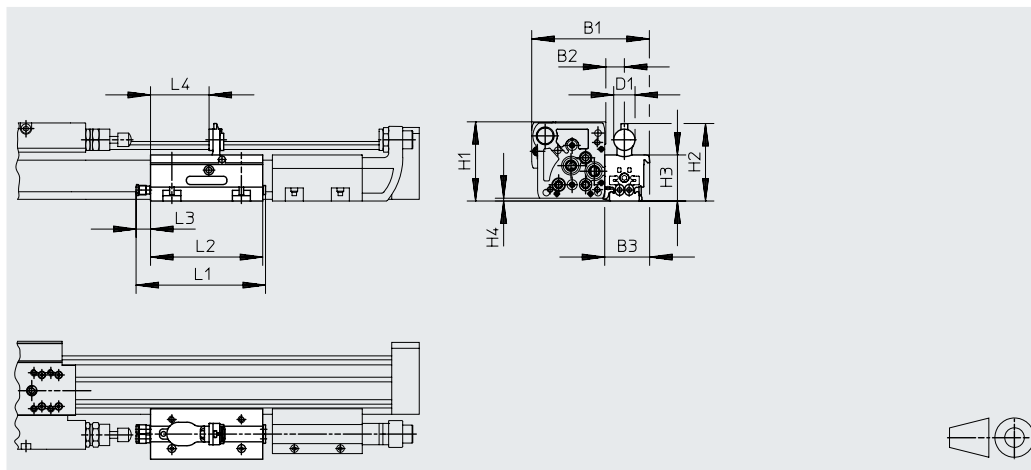
Housing: Anodised aluminium

Stop screw, nut:

Galvanised steel

Clamp, lever:

High-alloy steel

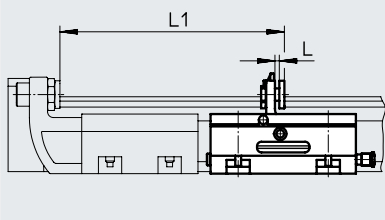


Dimensions

for \varnothing [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

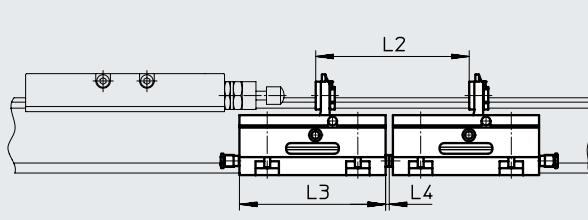
Minimum distance

Between end stop and intermediate position



for \varnothing [mm]	L1
25	145.3
32	185.3
40	271.5

Between two intermediate positions



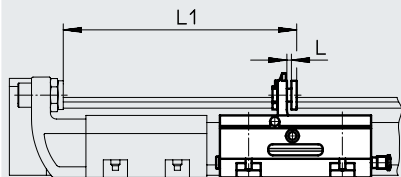
for \varnothing [mm]	L2	L3	L4
25	105	100	2.5
32	105	100	2.5
40	175	170	2.5

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.
- The linear drive and the intermediate-position module must under no circumstances be operated without shock absorbers.
- 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 using proximity switches SME/SMT-10 → page 87.
- After reaching the intermediate position, the slide cannot continue to travel directly 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 fold in. The intermediate position can then be travelled through.

Accessories

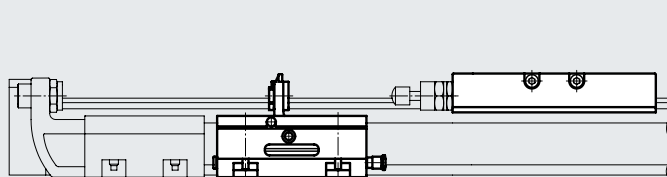
Precision adjustment L



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


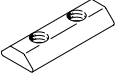

for \varnothing	[mm]	25	32	40
Pneumatic connection		QS-4		
Operating pressure	[MPa]	0.25 ... 0.8		
	[bar]	2.5 ... 8		
	[psi]	36.25 ... 116		
Mounting position		Any		
Impact velocity	[m/s]	→ Page 46		
Swivel time	[ms]	≤100	≤100	≤300
Precision adjustment L	[mm]	2	2	4
Repetition accuracy	[mm]	0.02		
Position sensing		Via proximity switches SME/SMT-10		
Weight	[g]	430	530	970
Ambient temperature	[°C]	-10 ... +60		
Corrosion resistance class CRC ¹⁾		2 - moderate corrosion stress		
Note on materials		RoHS-compliant		

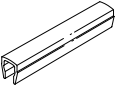
1) More information www.festo.com/x/topic/crc

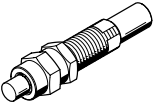
Ordering data

	for \varnothing [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 \varnothing	Comment	Order code	Part no.	Type	PU ¹⁾	
Slot nut HMBN 2) 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							
	For DGC-G						
	8, 12	For slide	–	150928	ZBS-5	10	
	8, 12	For cover	–	525273	ZBS-2		
	50, 63			8137184	ZBH-9-B		
	For DGC-GF						
	18	For slide	–	150928	ZBS-5	10	
	25 ... 63			8137184	ZBH-9-B		
	50, 63	For cover	–	8137184	ZBH-9-B		
	For DGC-KF						
	8, 12, 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						
	for \varnothing	Comment	Order code	Part no.	Type	PU ¹⁾
	18 ... 63	For sensor slot Every 0.5 m	L	151680	ABP-5-S	2

Shock absorber YSRW 2) Datasheets → Internet: ysrw						
	for \varnothing	Comment	Order code	Part no.	Type	PU ¹⁾
	8	For DGC basic design and recirculating ball bearing guide	YSRW	540344	YSRW-DGC-8	1
	12			540345	YSRW-DGC-12	
	18	For DGC with plain-bearing guide		540346	YSRW-DGC-18-GF	
	25			540348	YSRW-DGC-25-GF	
	32			540350	YSRW-DGC-32-GF	
	40			540352	YSRW-DGC-40-GF	
	50			1232870	YSRW-DGC-40/50-B	
	63			543069	YSRW-DGC-63	
	18	For DGC with recirculating ball bearing guide		540347	YSRW-DGC-18-KF	
	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	

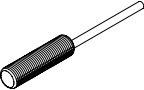
1) Packaging unit
2) Suitable for ATEX

Monitoring with distance sensor SOIA


For monitoring the use and condition of the cushioning components. 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 Datasheets → Internet: 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



Accessories

Ordering data						
	for \varnothing	Comment	Order code	Part no.	Type	PJ ¹⁾
One-way flow control valve GRLA Datasheets → Internet: grla						
	8 ... 18	Metal design	-	193137	GRLA-M5-QS-3-D	1
	25, 32			193138	GRLA-M5-QS-4-D	
				193142	GRLA-1/8-QS-3-D	
				193143	GRLA-1/8-QS-4-D	
				193144	GRLA-1/8-QS-6-D	
				193145	GRLA-1/8-QS-8-D	
				193146	GRLA-1/4-QS-6-D	
				193147	GRLA-1/4-QS-8-D	
	40, 50			193148	GRLA-1/4-QS-10-D	
				193149	GRLA-3/8-QS-6-D	
193150		GRLA-3/8-QS-8-D				
63	193151	GRLA-3/8-QS-10-D				



1) Packaging unit

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

Ordering data – Proximity switch for C-slot, magneto-resistive Datasheets → Internet: smt						
	Type of mounting	Switching output	Electrical connection outlet direction of connection	Cable length [m]	Part no.	Type
N/O						
	Inserted 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-core, lengthwise	2.5	551373	SMT-10M-PS-24V-E-2.5-L-OE

Ordering data – Proximity switch for C-slot, magnetic reed Datasheets → Internet: sme						
	Type of mounting	Switching output	Electrical connection outlet direction of connection	Cable length [m]	Part no.	Type
N/O						
	Inserted in the slot from above	Contacting	Plug M8x1, 3-pin, lengthways	0.3	551367	SME-10M-DS-24V-E-0.3-L-M8D
			Cable, 3-core, lengthwise	2.5	551365	SME-10M-DS-24V-E-2.5-L-OE
			Cable, 2-core, lengthwise	2.5	551369	SME-10M-ZS-24V-E-2.5-L-OE
	Inserted into the slot lengthwise	Contacting	Plug M8x1, 3-pin, lengthways	0.3	173212	SME-10-SL-LED-24
			Cable, 3-core, lengthwise	2.5	173210	SME-10-KL-LED-24

Proximity switch for piston diameter 18 ... 63



Ordering data – Proximity switch for T-slot, magneto-resistive Datasheets → Internet: smt						
	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part no.	Type
N/O						
	Inserted in the slot from above, flush with the cylinder profile, short design	PNP	Cable, 3-core	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-core	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						
	Inserted in the slot from above, flush with the cylinder profile, short design	PNP	Cable, 3-core	7.5	574340	SMT-8M-A-PO-24V-E-7.5-OE

Accessories

Proximity switch for piston diameter 18 ... 63


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

Datasheets → Internet: sme

	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part no.	Type
N/O						
	Inserted in the slot from above, flush with the cylinder profile	Contacting	Cable, 3-core	2.5	543862	SME-8M-DS-24V-K-2.5-OE
				5.0	543863	SME-8M-DS-24V-K-5.0-OE
			Plug M8x1, 3-pin	2.5	543872	SME-8M-ZS-24V-K-2.5-OE
				0.3	543861	SME-8M-DS-24V-K-0.3-M8D
N/C						
	Inserted in the slot from above, flush with the cylinder profile	Contacting	Cable, 3-core	7.5	546799	SME-8M-DO-24V-K-7.5-OE


Ordering data – Proximity switch for T-slot, NAMUR

Datasheets → Internet: sdbt

	Type of mounting	Switching output	Electrical connection	Cable length [m]	Part no.	Type
N/O						
	Inserted in the slot from above, flush with cylinder profile	NAMUR	Cable, 2-core	5	579071	SDBT-MS-20NL-ZN-E-5-LE-EX6
				10	579072	SDBT-MS-20NL-ZN-E-10-LE-EX6


Ordering data – Safety clip for ATEX zone

Datasheets → Internet: neau

	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 switch SMT and connecting cable NEBA ATEX category: gas: II 3G / dust: II 3D 	Plug M8x1	548067	NEAU-M8-GD

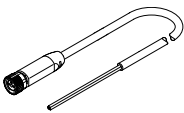
Ordering data – Cable holder DADG

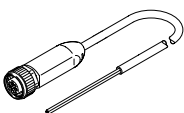
Datasheets → Internet: dadg

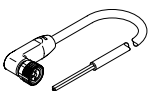
	Description	Part no.	Type	PU ¹⁾
Cable holder DADG				
	For fixing the connecting cables at an angle of 90°	8069000	DADG-HL-N8-P2	2

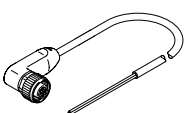
1) Packaging unit

Accessories

Connecting cables NEBA, straight, connection M8						
	Electrical connection 1, connection technology	Electrical connection 2, connection technology	Electrical connection 2, number of pins/cores	Cable length	Part no.	Type
	M8x1 A-coded to EN 61076-2-104	Open end	3	2.5 m	8078223	NEBA-M8G3-U-2.5-N-LE3
				5 m	8078224	NEBA-M8G3-U-5-N-LE3

Connecting cables NEBA, straight, M12 connection						
	Electrical connection 1, connection technology	Electrical connection 2, connection technology	Electrical connection 2, number of pins/cores	Cable length	Part no.	Type
	M12x1, A-coded to EN 61076-2-101	Open end	3	2.5 m	8078236	NEBA-M12G5-U-2.5-N-LE3
				5 m	8078237	NEBA-M12G5-U-5-N-LE3

Connecting cables NEBA, angled, M8 connection						
	Electrical connection 1, connection technology	Electrical connection 2, connection technology	Electrical connection 2, number of pins/cores	Cable length	Part no.	Type
	M8x1 A-coded to EN 61076-2-104	Open end	3	2.5 m	8078230	NEBA-M8W3-U-2.5-N-LE3
				5 m	8078231	NEBA-M8W3-U-5-N-LE3

Connecting cables NEBA, angled, M12 connection						
	Electrical connection 1, connection technology	Electrical connection 2, connection technology	Electrical connection 2, number of pins/cores	Cable length	Part no.	Type
	M12x1, A-coded to EN 61076-2-101	Open end	3	2.5 m	8078245	NEBA-M12W5-U-2.5-N-LE3
				5 m	8078246	NEBA-M12W5-U-5-N-LE3