

## Guide axes DGC-FA, without drive

**FESTO**

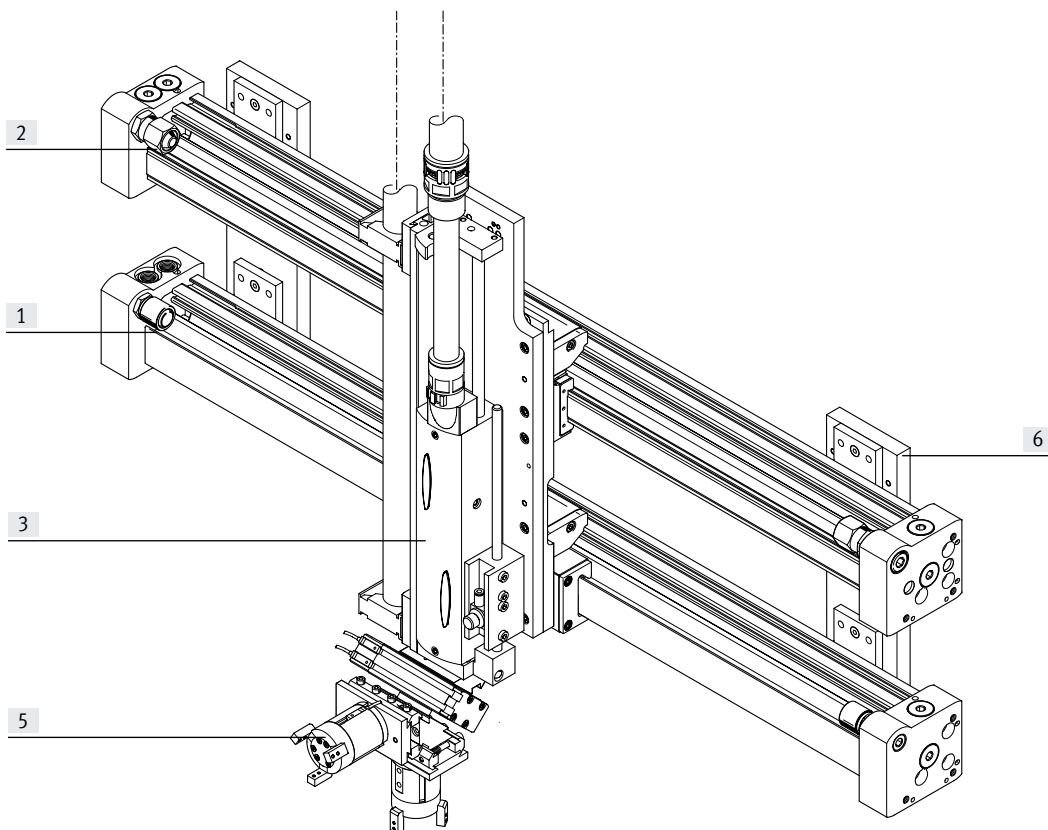


## Key features

### At a glance

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

### System product for handling and assembly technology



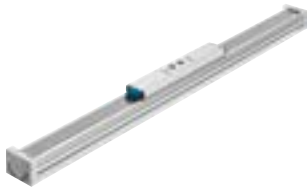
### System components and accessories

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

## Key features

### Guide axes and the corresponding axes/drives

#### Guide axis ELFA-RF



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

#### Guide axis EGC-FA



- Can be combined with:
  - Toothed belt axis EGC-TB
  - Spindle axis EGC-BS
- For size 70 ...185
- Load capacity up to max. 15200 N or 1157 Nm

#### Guide axis DGC-FA



- Can be combined with:
  - Linear drive DGC-KF
- For size 8 ... 63
- Load capacity up to max. 15200 N or 1157 Nm

#### Guide axis FDG-ZR-RF



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

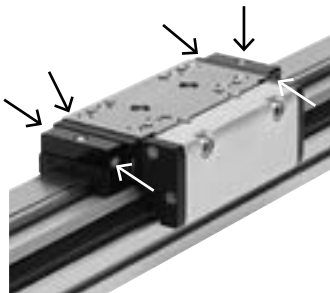
#### Guide axis FDG-ZR/SP



- Can be combined with:
  - Toothed belt axis DGE-ZR-KF
  - Spindle axis DGE-SP-KF
- For size 18 ...63
- Load capacity up to max. 14050 N or 1820 Nm

## Options

### Central lubrication – C



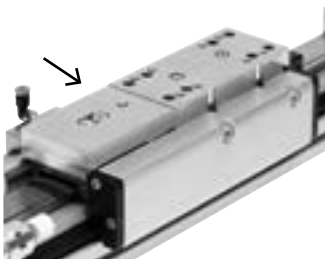
The lubrication adapter enables the guide of the guide axis DGC-FA to be permanently lubricated in applications in humid or wet ambient conditions using semi or fully automatic relubrication devices.

The adapters are suitable for oils and greases.

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

Technical data → page 12

### Clamping unit – 1H-PN

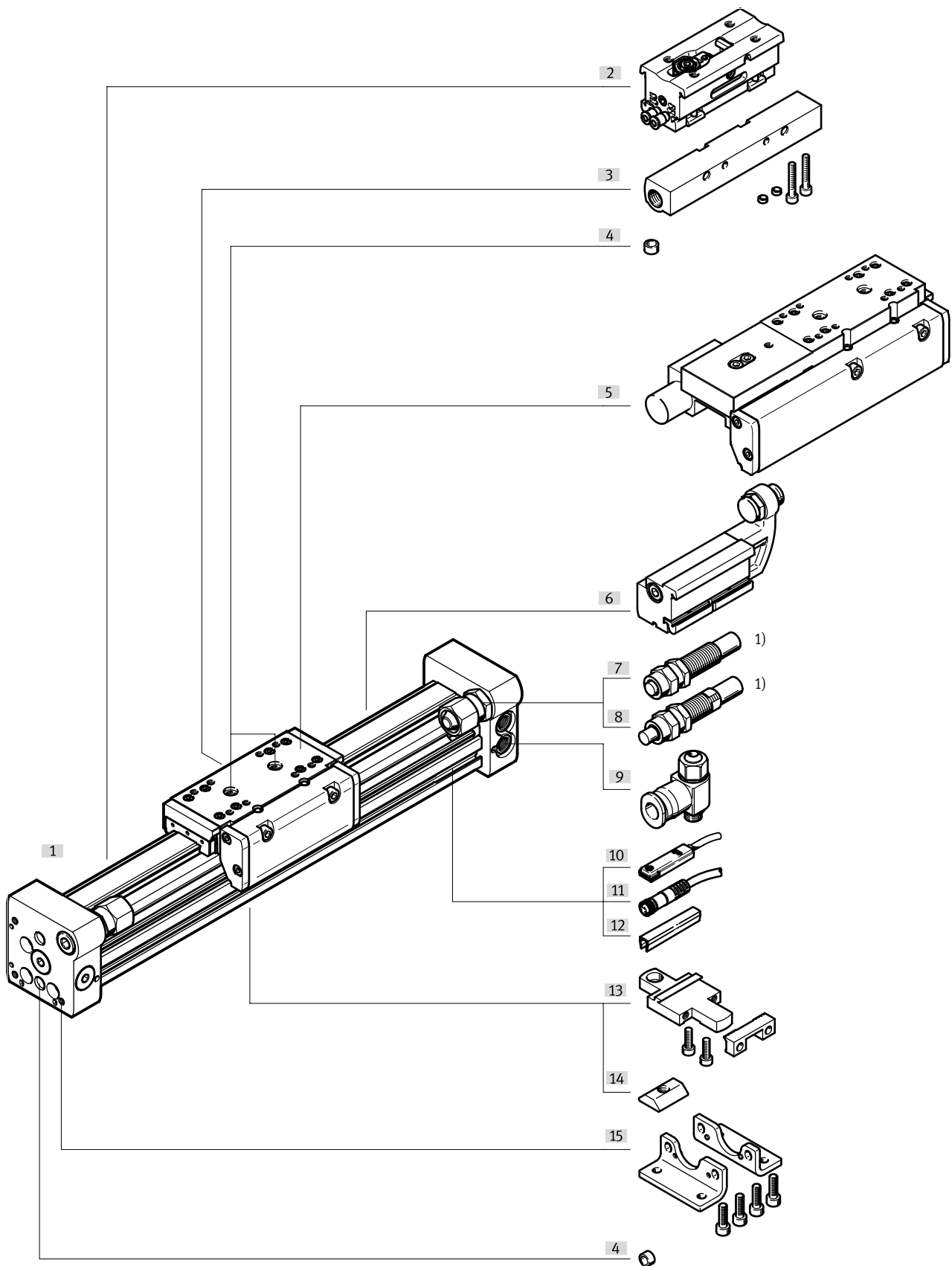



- Single-channel design, for holding loads
- Reliable holding is guaranteed since the forces act directly on the slide
- A limited number of emergency braking operations are permissible with sizes 40 and 50

- For piston Ø 25, 32, 40, 50 mm

Technical data → page 9

Peripherals overview



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

## Peripherals overview

Variants and accessories		
Type/order code	Description	→ Page/Internet
[1] Guide axis DGC-FA	Guide axis without accessories	6
[2] Intermediate position Z1/Z2/Z3	Enables up to three intermediate positions	dadm
[3] [6] Mechanical end-position limiter YWZ	For variable end-position adjustment, e.g. for format adjustments	29
[4] Centring pin/sleeve <sup>1)</sup> ZBS/ZBH	<ul style="list-style-type: none"> <li>• For centring loads and attachments on the slide</li> <li>• For centring the drive DGC without foot mountings (user-specific)</li> </ul>	31
[5] Clamping unit 1H-PN	For holding loads	9
– Cushioning P	Non-adjustable, elastic cushioning. Only used for low speeds.	26
[7] Shock absorber YSR	Self-adjusting, hydraulic shock absorber with spring return and linear cushioning characteristics.	26
[8] Shock absorber YSRW	Self-adjusting hydraulic shock absorber with spring return and progressive cushioning characteristics	26
[9] One-way flow control valve GRLA	For regulating speed	gria
[10] Proximity switch G/H/I/I)	For sensing the slide position	dgc
[11] Connecting cable V	For proximity switch	dgc
[12] Slot cover L	For protecting against contamination and securing the proximity switch cable	31
[13] Profile mounting M	Simple and precise mounting option via dovetail connection.	28
[14] Slot nut B	For mounting attachments	31
[15] Foot mounting F	For mounting on the end cap	27

1) Included in the scope of delivery of the axis

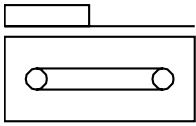
## Type codes



<b>001</b>	<b>Series</b>	
<b>DGC</b>	Linear drive	
<b>002</b>	<b>System of units</b>	
	Metric	
<b>N</b>	Imperial	
<b>003</b>	<b>Piston diameter</b>	
<b>8</b>	8	
<b>12</b>	12	
<b>18</b>	18	
<b>25</b>	25	
<b>32</b>	32	
<b>40</b>	40	
<b>50</b>	50	
<b>63</b>	63	
<b>004</b>	<b>Stroke</b>	
<b>...</b>	1 ... 8500	
<b>005</b>	<b>Guide</b>	
<b>FA</b>	Guide axis	
<b>006</b>	<b>Cushioning</b>	
<b>P</b>	Elastic cushioning rings/plates on both sides	
<b>YSR</b>	Shock absorber, self-adjusting	
<b>YSRW</b>	Shock absorber, self-adjusting, progressive	
<b>007</b>	<b>Slide</b>	
	Standard	
<b>GP</b>	Protected recirculating ball bearing guide	
<b>008</b>	<b>Lubrication</b>	
	Standard	
<b>H1</b>	Food-safe lubrication	
<b>009</b>	<b>Lubrication function</b>	
	None	
<b>C</b>	Lubrication adapter	
<b>010</b>	<b>Additional slide</b>	
<b>...K</b>	1 ... 2 pieces	

<b>011</b>	<b>Clamping unit</b>	
	None	
<b>1H</b>	Holding function, 1-channel	
<b>012</b>	<b>Actuation type</b>	
	None	
<b>PN</b>	Pneumatically actuated	
<b>013</b>	<b>EU certification</b>	
	None	
<b>EX2</b>	II 3GD	
<b>EX3</b>	II 2G	
<b>014</b>	<b>Accessories</b>	
	None	
<b>ZUB-</b>	Accessories supplied loose	
<b>015</b>	<b>Foot mounting</b>	
	None	
<b>F</b>	1 record	
<b>016</b>	<b>Profile mounting</b>	
	None	
<b>...M</b>	1 ... 9 pieces	
<b>017</b>	<b>Slot nut, mounting slot</b>	
	Without	
<b>...B</b>	1 ... 9 pieces	
<b>018</b>	<b>Slot cover, sensor slot</b>	
	Without	
<b>...L</b>	1 ... 9 pieces	
<b>019</b>	<b>Mechanical end position limitation</b>	
	None	
<b>YWZ1</b>	Variable end position, one side	
<b>YWZ2</b>	Variable end position, both sides	
<b>020</b>	<b>Operating instructions</b>	
	Standard	
<b>O</b>	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 <a href="http://www.festo.com">http://www.festo.com</a> )	

## Datasheet

### Function



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



### General technical data

Piston Ø	8	12	18	25	32	40	50	63
Stroke [mm]	1 ... 1300	1 ... 1900	1 ... 3000	1 ... 8500			1 ... 5000	
Guide	External recirculating ball bearing guide							
Mounting position	Any							
Cushioning → page 10								
DGC-...-P	Non-adjustable at both ends							
DGC-...-YSR...	Self-adjusting at both ends							
Type of mounting	Profile mounting							
	Foot mounting							
	Direct mounting							
Max. speed [m/s]	1	1.2	3					
Repetition accuracy [mm]	0.02 (with shock absorber YSR/YSRW)							

### Operating and environmental conditions

Ambient temperature [°C]	-10 ... +60
Corrosion resistance class CRC <sup>1)</sup>	1

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

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

### ATEX<sup>1)</sup>

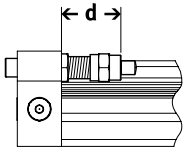
Size	8	12 ... 63
Explosion-proof ambient temperature [°C]	+5 °C ≤ Ta ≤ +60 °C	-10 °C ≤ Ta ≤ +60 °C
CE marking (see declaration of conformity)	To EU Explosion Protection Directive (ATEX)	
<b>EX2 certification</b>		
ATEX category for gas	II 3G	
Type of (ignition) protection for gas	c T4 X	
ATEX category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

1) Note the ATEX certification of the accessories.

## Datasheet

Weight [g]								
Piston Ø	8	12	18	25	32	40	50	63
DGC...								
Basic weight with 0 mm stroke	225	391	975	2113	2837	6996	13342	22220
Additional weight per 10 mm stroke	11	16	31	49	74	117	153	236
Moving mass	77	149	331	732	1146	2330	4511	8225
DGC...-1H-PN – With clamping unit								
Basic weight with 0 mm stroke	–	–	–	3134	4272	12009	19394	–
Additional weight per 10 mm stroke	–	–	–	49	74	117	153	–
Moving mass	–	–	–	1405	2059	5494	8411	–

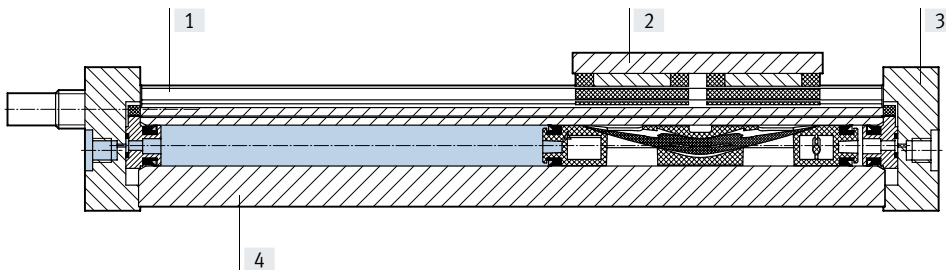
### Adjustable end-position range d [mm]



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

### Materials

Sectional view



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

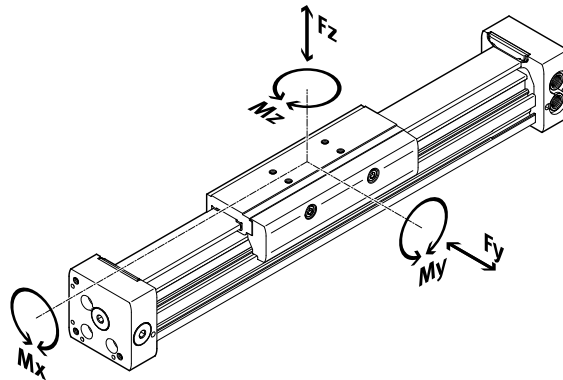


## Datasheet

### Load values

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

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



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

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

Permissible forces and torques		8	12	18	25	32	40	50	63
Piston Ø		8	12	18	25	32	40	50	63
$F_{y_{max.}}$	[N]	300	650	1850	3050	3310	6890	6890	15200
$F_{z_{max.}}$	[N]	300	650	1850	3050	3310	6890	6890	15200
$M_{x_{max.}}$	[Nm]	1.7	3.5	16	36	54	144	144	529
$M_{y_{max.}}$	[Nm]	4.5	10	51	97	150	380	634	1157
$M_{z_{max.}}$	[Nm]	4.5	10	51	97	150	380	634	1157

Technical data – Clamping unit		Dimensions → page 22			
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 <sup>1)</sup>	[l]	–	–	750	750
at reference energy				35	35
Number of clamping operations under rated load	[millions of switching cycles]	0.45	0.55	0.05	0.05

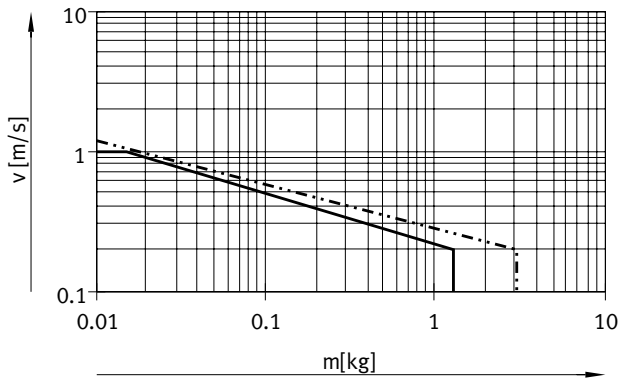
1) Emergency braking refers to braking the payload if the drive axis loses power.

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

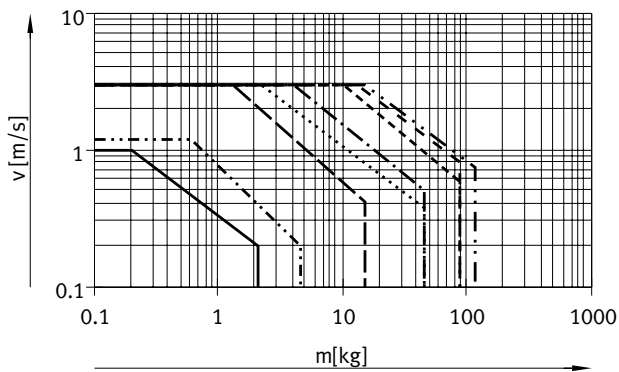
## Datasheet

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

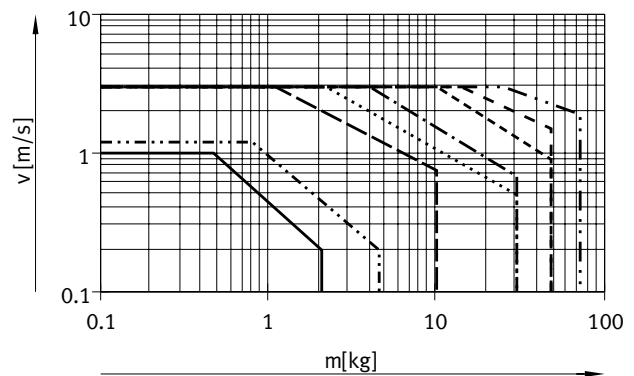
Piston  $\varnothing$  8/12 with cushioning P



Piston  $\varnothing$  8 ...40 with shock absorber YSR



Piston  $\varnothing$  8 ...40 with shock absorber YSRW



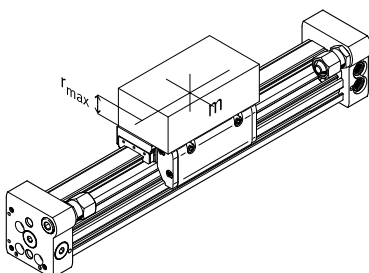
- $\varnothing$  8
- · - · -  $\varnothing$  12
- - -  $\varnothing$  18
- · · · ·  $\varnothing$  25
- · - · -  $\varnothing$  32
- - -  $\varnothing$  40
- - -  $\varnothing$  50
- · - · -  $\varnothing$  63

#### 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 0.01 mm.

Data for horizontal mounting position:

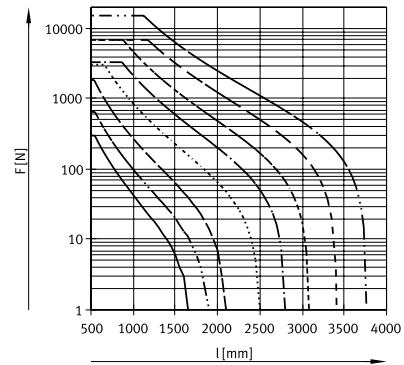
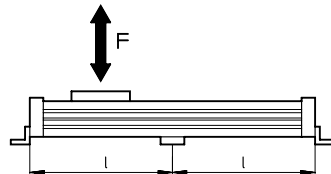
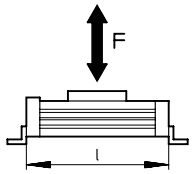
Piston $\varnothing$	8	12	18	25	32	40	50	63
Distance $r_{\max}$ [mm]	25	35	35	50	50	50	50	50

## Datasheet

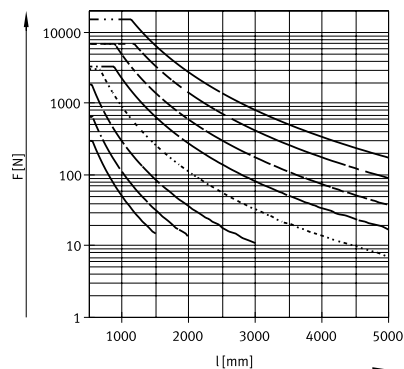
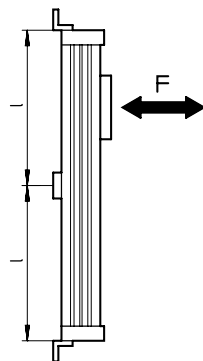
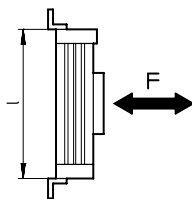
### Number of profile mountings MUC as a function of weight force F and support spacing l

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 installation position



#### Example:

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

The axis has an overall length of:

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

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

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

## Datasheet

### Central lubrication

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

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

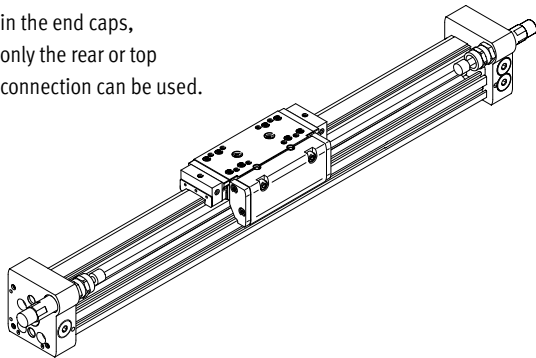
Slide dimensions

→ page 20

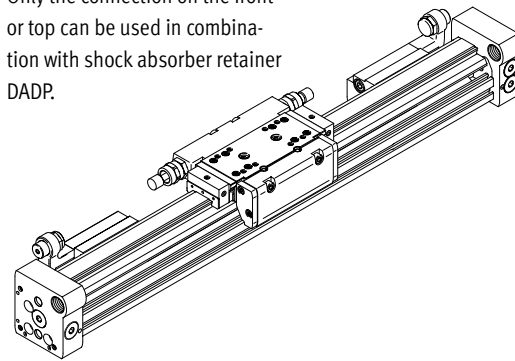
Order code C in the modular product system → page 26

### Connection options

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

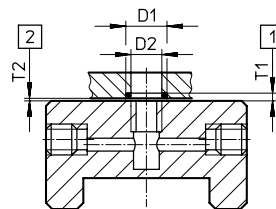


Only the connection on the front or top can be used in combination with shock absorber retainer DADP.



### Connection option for customer design

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



D1 8<sup>+0.2</sup> mm

D2 6 mm

T1 0.6<sub>-0.05</sub> mm

T2 0.1<sup>+0.2</sup> mm

O-ring ∅ 6x1 mm (DIN3771)

[1] Slot depth for O-ring

[2] Required air gap

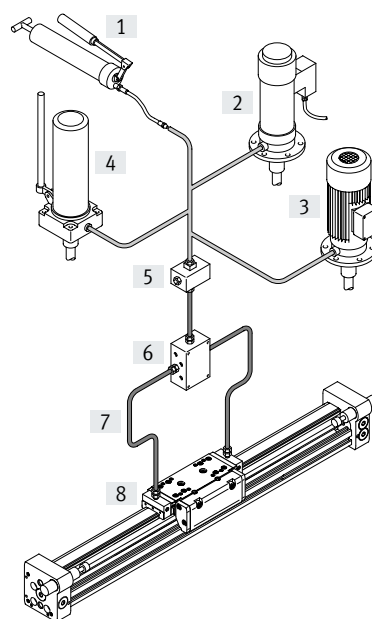
Additional dimensions → page 20

### Design of a central lubrication system

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

- Lincoln
- Bielomatik
- SKF (Vogel)

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



[1] Hand pump

[2] Pneumatic container pump

[3] Electric container pump

[4] Manually operated container pump

[5] Nipple block

[6] Distributor block

[7] Tubing or piping

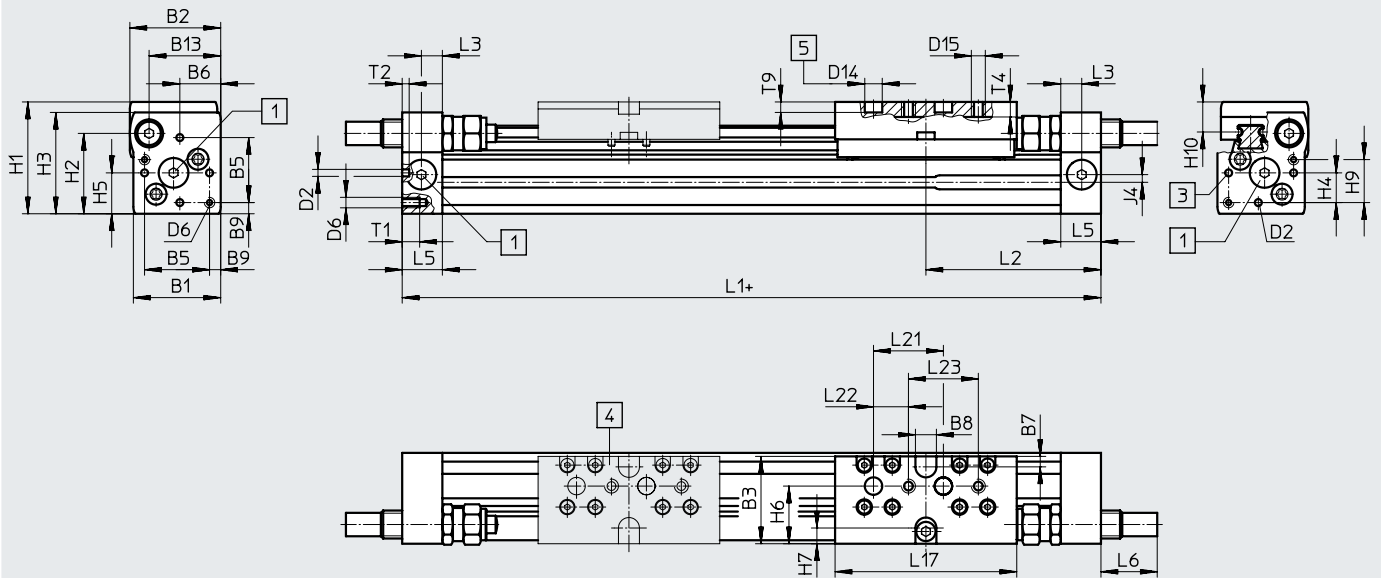
[8] Fittings

Datasheet

Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

∅ 8 and 12



+ plus stroke length

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

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

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

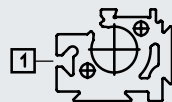
∅ [mm]	H9	H10	J4	L1	L2	L3	L5	L6		
								P	YSR	YSRW
8	12.3	8.7	2.2	100	50.1	6	11.5	0	16	16.2
12	14.7	9.8	3	125	62.1	8	16	0	11.3	12.3

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

Profile barrel

∅ 8

∅ 12



[1] Sensor slot for proximity switch



## Datasheet

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

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

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

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

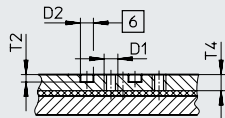
Datasheet

Dimensions

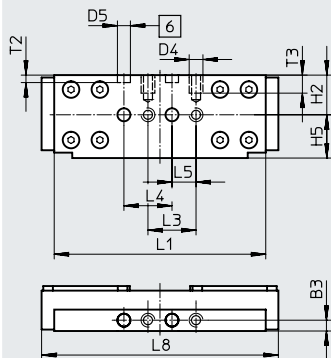
Download CAD data → [www.festo.com](http://www.festo.com)

Slide

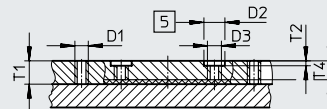
Ø 18



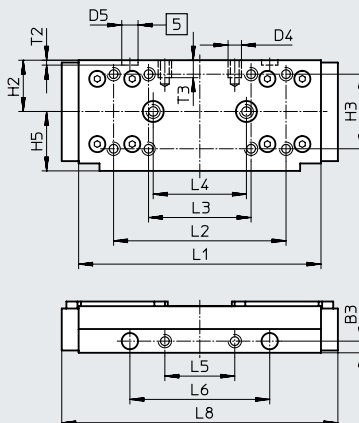
View A



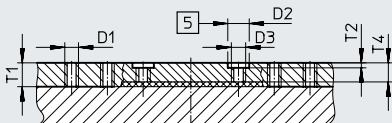
Ø 25



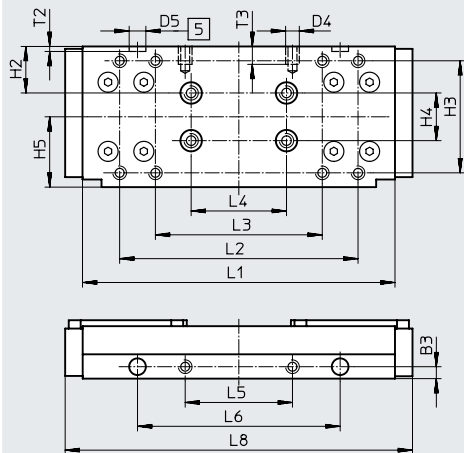
View A



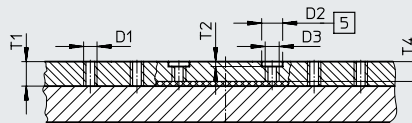
Ø 32



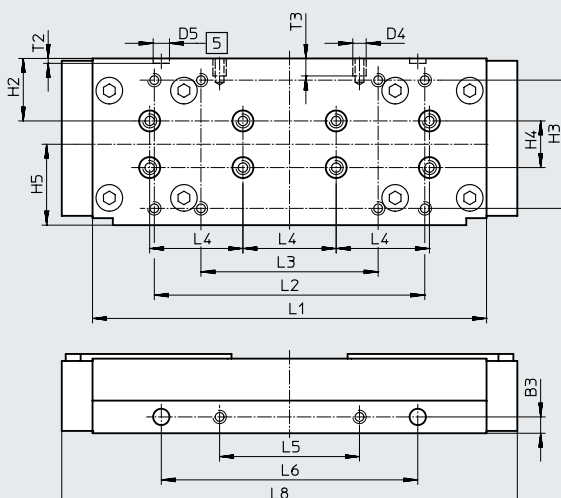
View A



Ø 40



View A



[5] Drilled hole for centring sleeve ZBH

[6] Drilled hole for centring pin ZBS



Datasheet

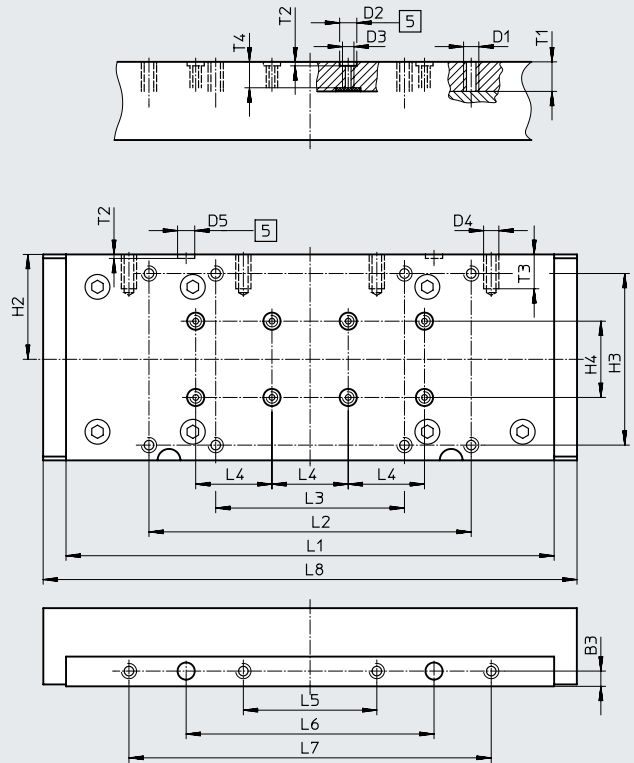
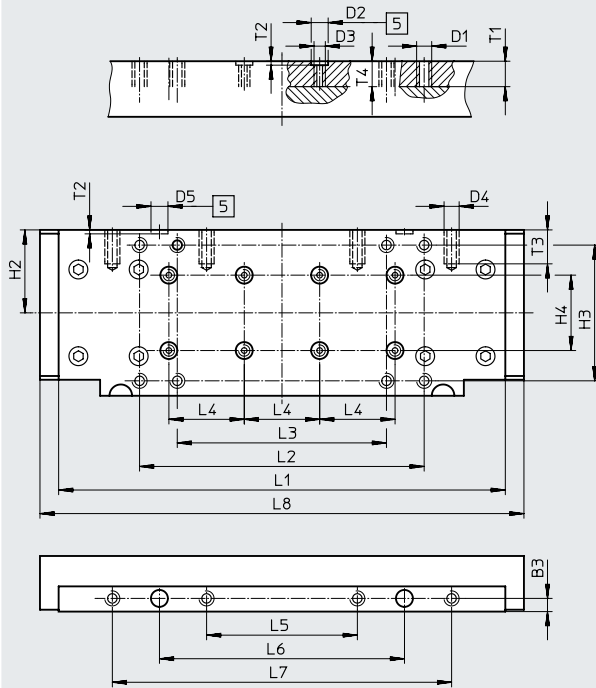
Dimensions

Download CAD data → [www.festo.com](http://www.festo.com)

Slide

∅ 50

∅ 63



[5] Drilled hole for centring sleeve ZBH

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

∅	L2	L3	L4	L5	L6	L7	L8	T1	T2	T3	T4
[mm]	±0.2		±0.03	±0.1	±0.05	±0.1					
18	–	20±0.1	20	10	–	–	99	–	3.1±0.1	7.5	6.7
25	74	44±0.2	40	30	60	–	118.5	10	2.1±0.2	7.5	8
32	100	70±0.2	40	45	85	–	145.7	10	2.1±0.2	7.5	8
40	116	76±0.2	40	60	110	–	195.4	10.5	2.1±0.2	7.5	8.5
50	151	111±0.2	40	80	130	180	256.8	13.5	2.1±0.2	18	13.5
63	169	99±0.2	40	70	130	190	280	15.5	2.1±0.2	18	13.6

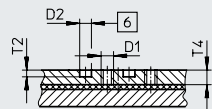
# Datasheet

## Dimensions

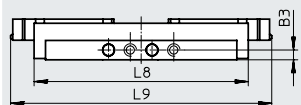
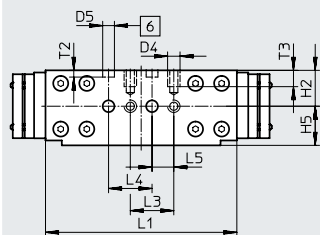
Download CAD data → [www.festo.com](http://www.festo.com)

Slide, variant GP – Protected recirculating ball bearing guide

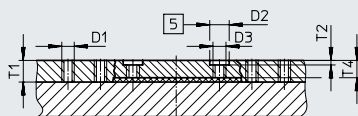
Ø 18



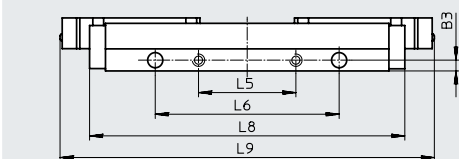
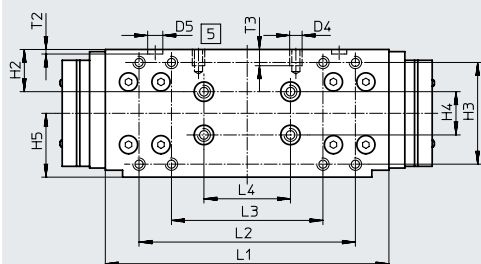
View A



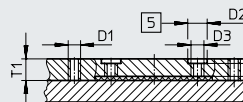
Ø 32



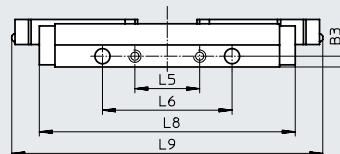
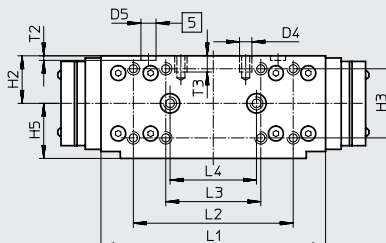
View A



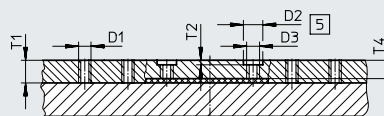
Ø 25



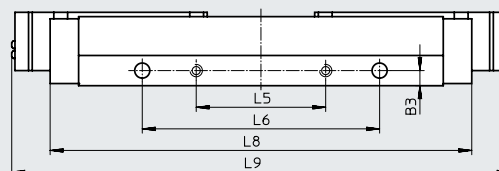
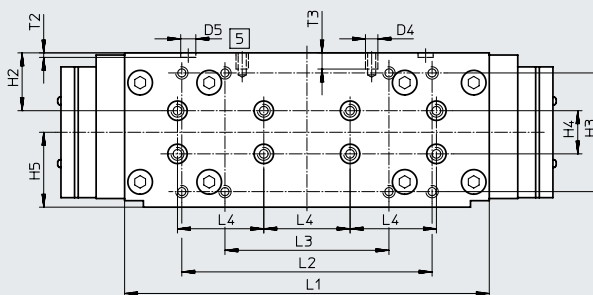
View A



Ø 40



View A



[5] Drilled hole for centring sleeve ZBH

[6] Drilled hole for centring pin ZBS

## Datasheet

∅ [mm]	B3 ±0.05	D1	D2 ∅ H7	D3	D4	D5 ∅ H7	H2	H3
18	4.5	M5	5	–	M5	5	16.5	–
25	5	M5	9	M6	M5	7	22	32±0.2
32	5	M5	9	M6	M5	7	19.5	47±0.2
40	7	M5	9	M6	M6	7	26.8	55±0.2
50	7	M8	9	M6	M8	9	44	72±0.3
63	8	M8	9	M6	M8	9	55	90±0.3

∅ [mm]	H4 ±0.03	H5 ±0.1	L1	L2 ±0.2	L3	L4 ±0.03	L5 ±0.1	L6 ±0.05
18	–	18	88±0.1	–	20±0.1	20	10	–
25	–	25.5	104±0.2	74	44±0.2	40	30	60
32	20	29.5	131±0.2	100	70±0.2	40	45	85
40	20	34.7	169±0.2	116	76±0.2	40	60	110
50	40	–	237±0.1	151	111±0.2	40	80	130
63	40	–	256±0.1	169	99±0.2	40	70	130

∅ [mm]	L7 ±0.1	L8	L9	T1	T2	T3	T4
18	–	99	120	–	3.1±0.1	7.5	6.7
25	–	118.5	144	10	2.1±0.2	7.5	8
32	–	145.7	173	10	2.1±0.2	7.5	8
40	–	195.4	231	10.5	2.1±0.2	7.5	8.5
50	180	256.8	–	13.5	2.1±0.2	18	13.5
63	190	280	–	15.5	2.1±0.2	18	13.6

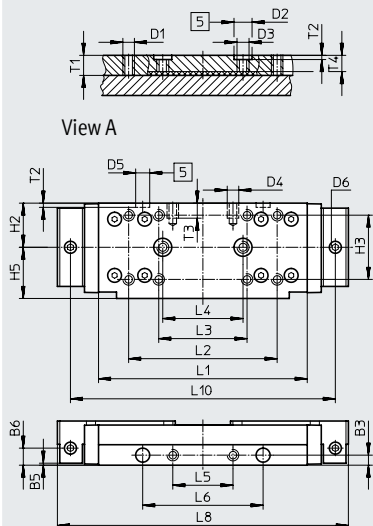
Datasheet

Dimensions

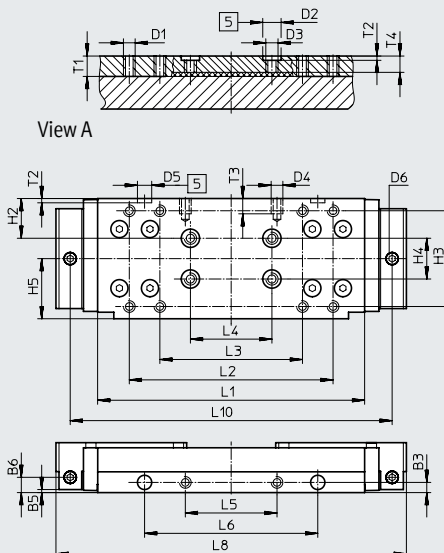
Download CAD data → [www.festo.com](http://www.festo.com)

Slide, variant C – Lubrication adapter

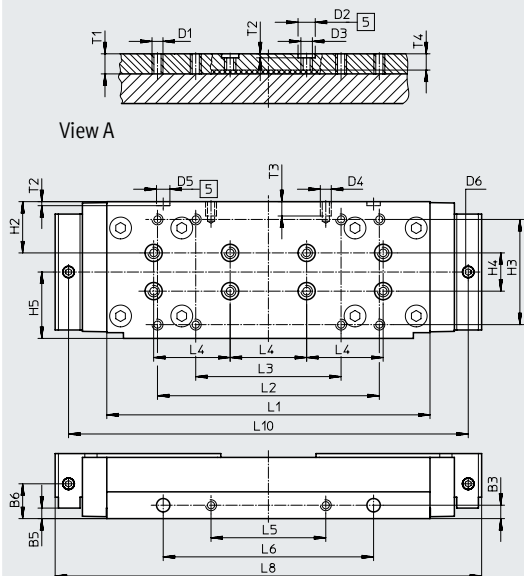
Ø 25



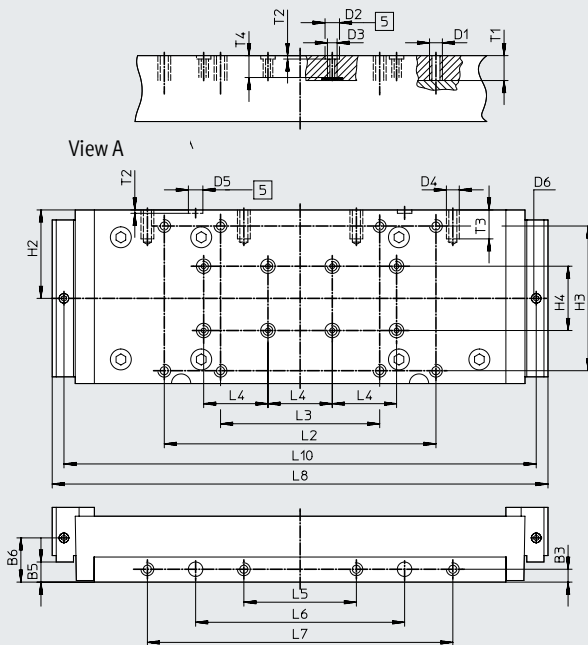
Ø 32



Ø 40



Ø 63



[5] Drilled hole for centring sleeve ZBH

Datasheet

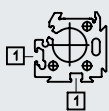
∅	B3	B5	B6	D1	D2 ∅ H7	D3	D4	D5 ∅ H7	D6	H2	H3	H4	H5
[mm]	±0.05	±0.05										±0.03	±0.1
25	5	1	8.5	M5	9	M6	M5	7	M6x1	22	32±0.2	–	25.5
32	5	1.5	7.5	M5	9	M6	M5	7	M6x1	19.5	47±0.2	20	29.5
40	7	18.2	18.2	M5	9	M6	M6	7	M6x1	26.8	55±0.2	20	34.7
63	8	12.5	27.5	M8	9	M6	M8	9	M6x1	55	90±0.3	40	–

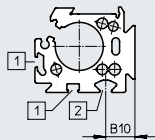
∅	L1	L2	L3	L4	L5	L6	L7	L8	L10	T1	T2	T3	T4
[mm]		±0.2	±0.2	±0.03	±0.1	±0.05	±0.1				±0.2		
25	104±0.2	74	44	40	30	60	–	145	132	10	2.1	7.5	8
32	131±0.2	100	70	40	45	85	–	172	158	10	2.1	7.5	8
40	169±0.2	116	76	40	60	110	–	223	209	10.5	2.1	7.5	8.5
63	256±0.1	169	99	40	70	130	190	308.4	293.8	15.5	2.1	18	13.6

Profile barrel

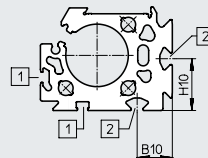
∅ 18



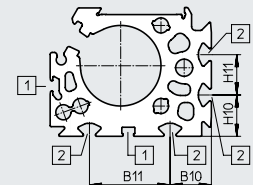
∅ 25



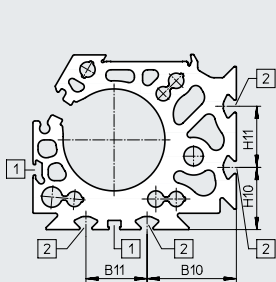
∅ 32



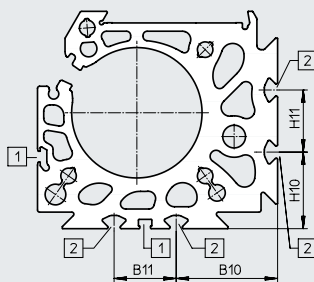
∅ 40



∅ 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

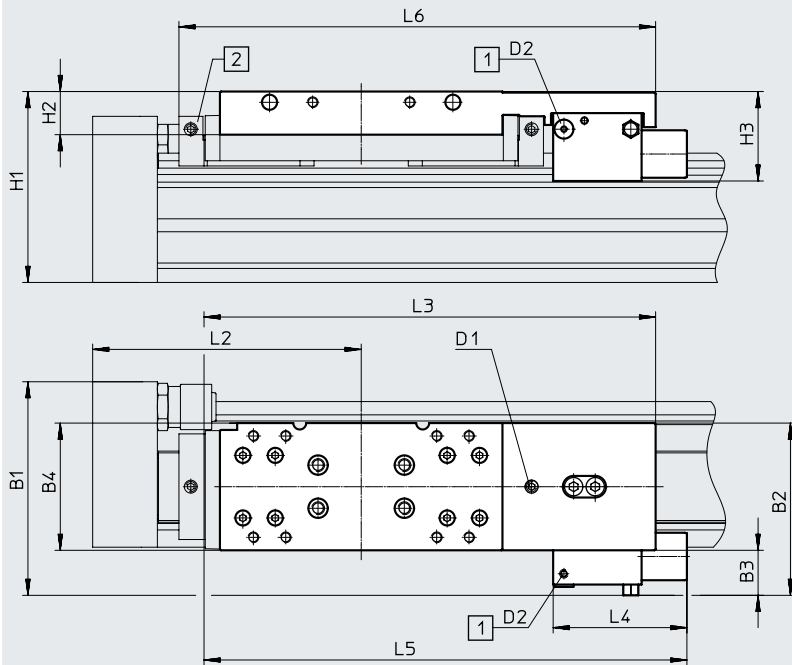
Datasheet

Dimensions

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1H – With clamping unit

∅ 25/32



- - Note

Overall length L1 at stroke = 0 mm

→ page 14

[1] Compressed air supply port

[2] Lubrication adapter

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

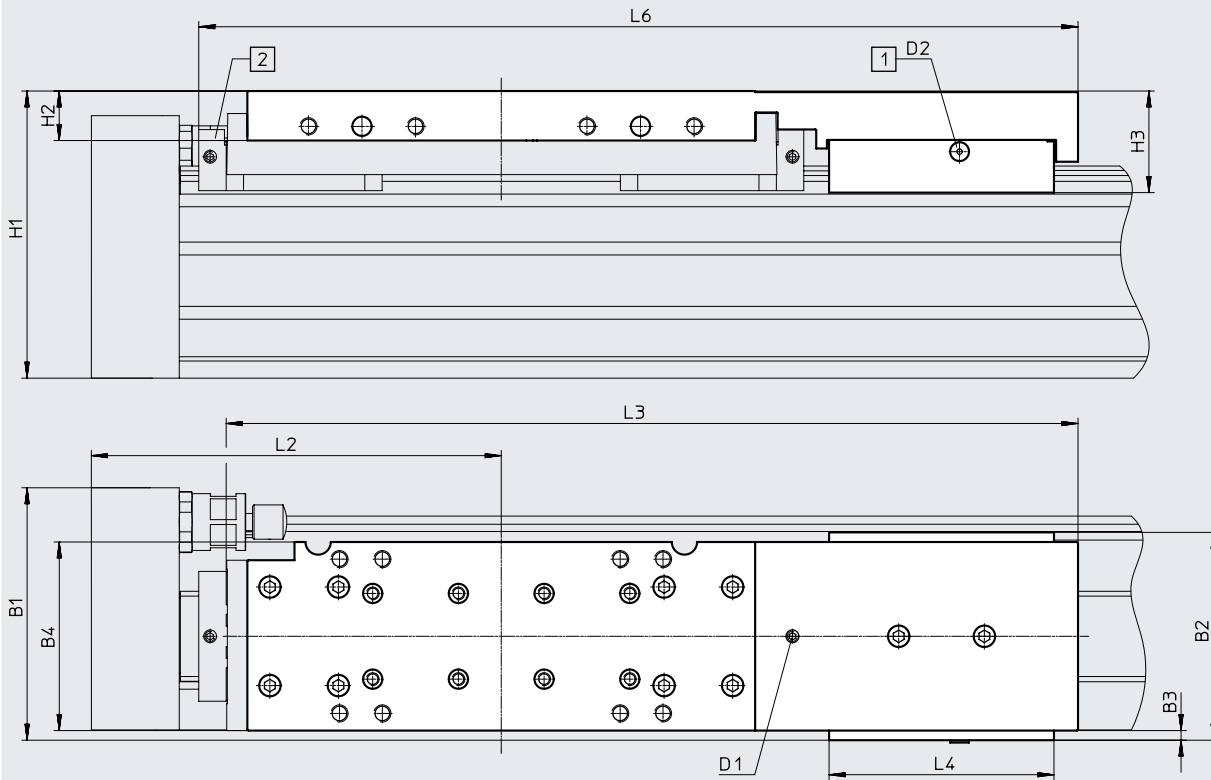
Datasheet

Dimensions

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1H – With clamping unit

∅ 40/50



Note

Overall length L1 at stroke = 0 mm

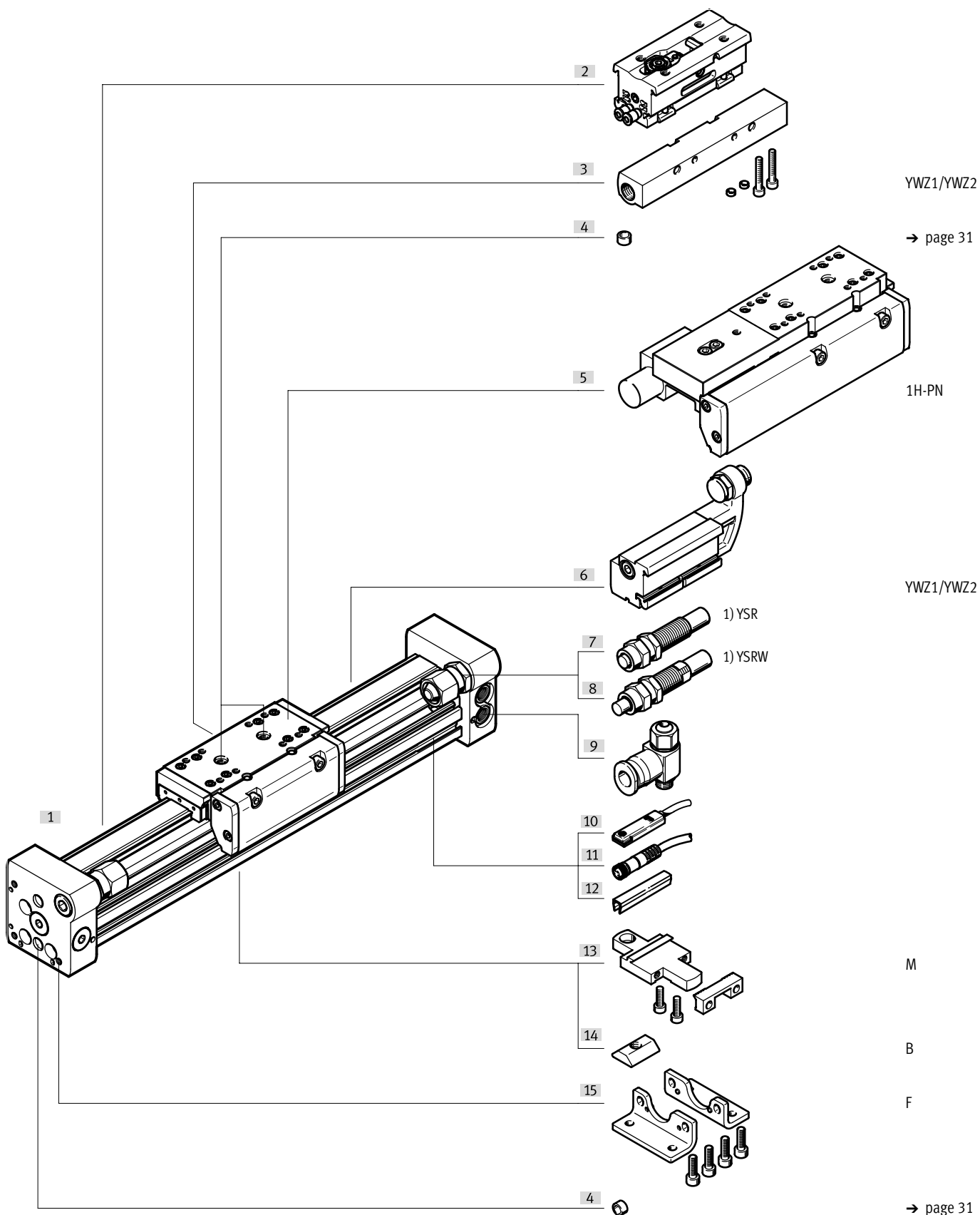
→ page 14


[1] Compressed air supply port

[2] Lubrication adapter

Type	B1	B2	B3	B4	H1	H2	H3	D1	D2	L2	L3	L4	L6
DGC-40-...-1H-PN	109.9	97	11.7	69.4	113.5	28	48.9	M6	M5	150	331.2	105	-
DGC-40-...-C-1H-PN													345.7
DGC-50-...-1H-PN	117.8	97	4.5	88	134	23	47.4	M6	M5	175	397.6	105	-
DGC-50-...-C-1H-PN													412.1

Ordering data – Modular product system



-  - **Note**

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

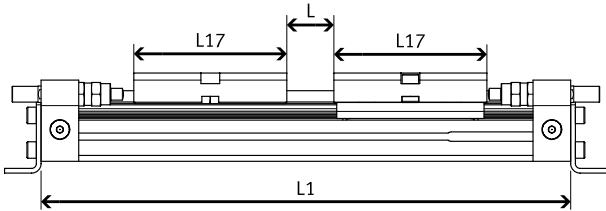


## Ordering data – Modular product system

### Working stroke reduction when ordering an additional slide K

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

Assuming:  
 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

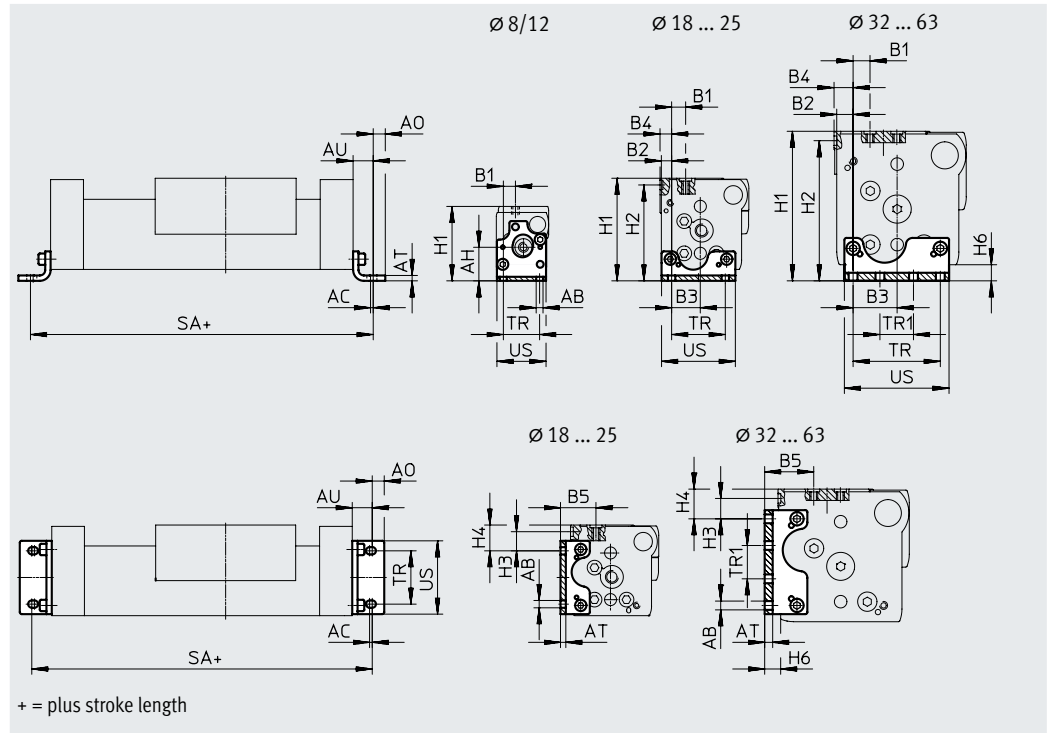
Ordering table												
Size	8	12	18	25	32	40	50	63	Condi- tions	Code	Enter code	
Module no.	<b>530906</b>	<b>530907</b>	<b>532446</b>	<b>532447</b>	<b>532448</b>	<b>532449</b>	<b>532450</b>	<b>532451</b>				
Function	Linear drive									<b>DGC</b>	DGC	
Piston Ø [mm]	8	12	18	25	32	40	50	63		-...		
Stroke [mm]	1 ... 1 300	1 ... 1 900	1 ... 3 000	1 ... 5 000					[1]	-...		
Guide	Guide axis without drive									<b>-FA</b>	-FA	
Cushioning	Elastic cushioning rings/pads at both ends									<b>-P</b>		
	Shock absorber, self-adjusting									<b>-YSR</b>		
	Shock absorber, self-adjusting, progressive									<b>-YSRW</b>		
Slide	-	-	Protected recirculating ball bearing guide			-	-		[2]	<b>-GP</b>		
Lubrication	-	-	Standard									
	-	-	Food-safe lubrication						[3]	<b>-H1</b>		
Lubrication function	Standard											
	-	-	-	Lubrication adapter		-	Lubrication adapter		[4]	<b>-C</b>		
Additional slide	1 ... 2								[5]	<b>-...K</b>		
Clamping unit	-	-	-	None			-					
	-	-	-	1-channel			-		[6]	<b>-1H</b>		
Actuation type	-	-	-	None			-					
	-	-	-	Pneumatic			-		[6]	<b>-PN</b>		
EU certification	II 3GD								[7]	<b>-EX2</b>		
	II 2G								[7]	<b>-EX3</b>		
Accessories	Enclosed separately (can be retrofitted)										<b>ZUB-</b>	ZUB-
Foot mounting	1										<b>F</b>	
Profile mounting	1 ... 9										<b>...M</b>	
Slot nut for mounting slot	-	-	-	1 ... 9						<b>...B</b>		
Slot cover, sensor slot	-	-	1 ... 9							<b>...L</b>		
Mechanical end-position limiter	-	-	Variable end position, at one end						[8]	<b>YWZ1</b>		
	-	-	Variable end position, at both ends						[8]	<b>YWZ2</b>		
Operating manual	Express waiver – no operating instructions to be included (already available)										<b>-O</b>	

- 1) Stroke Size 25, 32, 40: strokes up to 8,500 mm on request
- 2) GP Not with cushioning YSR and YSRW  
Not with additional slide K
- 3) H1 Not with protected version GP, cushioning YSR, YSRW or clamping unit 1H
- 4) C Not with slide GP
- 5) K For a linear drive DGC with additional slide, the working stroke is reduced by the length of the additional slide and the distance between the two slides  
Not with cushioning P
- 6) 1H, PN Not with end-position limiter YWZ1, YWZ2; protected version GP; additional slide K or lubrication H1  
Only with cushioning YSRW  
1H only with PN
- 7) EX2, EX3 Not with protected recirculating ball bearing guide GP, lubrication adapter C, additional slide K, clamping unit 1H-PN
- 8) YWZ1, YWZ2 Only with cushioning YSR or YSRW

## Accessories

### Foot mounting HPC (order code: F)

Material:  
Galvanised steel



#### Dimensions and ordering data

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

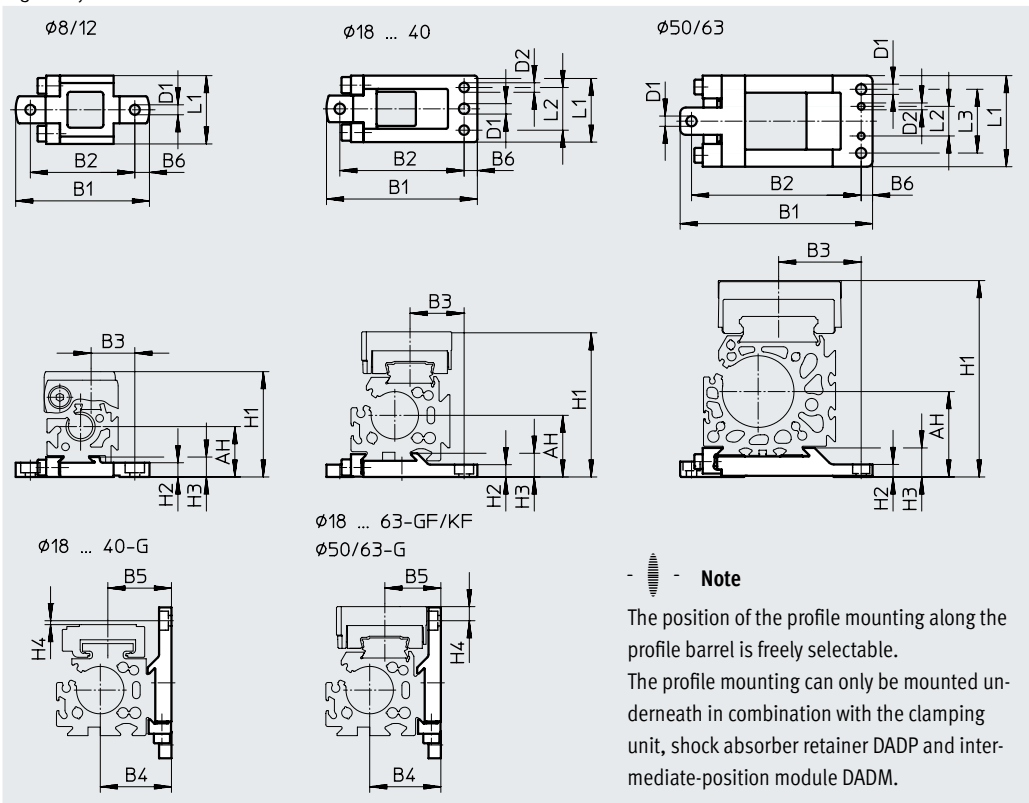
For $\varnothing$ [mm]	H2	H3	H4	H6	SA	TR	TR1	US	Weight [g]	Part no.	Type <sup>1)</sup>
8	–	–	–	5	118	18	–	24.4	26	526385	HPC-8
12	–	–	–	5	148	20	–	29.6	38	526388	HPC-12
18	59.5	16.7	21.5	7.7	176	30	–	38.6	58	533667	HPC-18
25	71.5	14.35	19.35	8.5	230	40	–	55	131	533668	HPC-25
32	82.5	8	13	9	288	56.5	19.5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

1) Suitable for ATEX

## Accessories

### Profile mounting MUC (order code: M)

Material:  
High-alloy steel



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

#### Dimensions and ordering data

For $\varnothing$ [mm]	AH	B1	B2 $\pm 0.2$	B3	B4	B5	B6	D1 $\varnothing$	D2 $\varnothing$ H7
8	17.7	47	36.7	15.35	–	–	5.1	3.5	–
12	18.5	52.5	42.2	16.5	–	–	5.1	3.5	–
18	27.2	67.8	56	28.7	27.2	28.7	5.7	5.5	5
25	32.5	79.5	65.5	28.5	37.5	29.5	7	5.5	5
32	37.5	94	80	35	47.5	37	7	5.5	5
40	47	110.5	96	43	57	46.8	7	6.5	6
50	61	145	125	56	77	61	7	9	6
63	75	169	149	72.5	87	69	10	9	6

For $\varnothing$ [mm]	H1	H2	H3	H4	L1	L2	L3	Weight [g]	Part no.	Type <sup>1)</sup>
8	37	5	7	–	24	–	–	28	526384	MUC-8
12	42.5	4.5	7	–	24	–	–	32	526387	MUC-12
18	64	5.7	9.9	6.4	33	20.5	–	78	531752	MUC-18
25	76.5	6.5	12.5	7.43	35	22.5	–	113	531753	MUC-25
32	87.5	6.5	13	4	45	30	–	174	531754	MUC-32
40	111.5	8.5	16	11.3	60	44	–	346	531755	MUC-40
50	159	11	23.5	9.2	80	26	56	874	531756	MUC-50
63	172.5	11	23.5	15	80	26	56	1080	531757	MUC-63

1) Suitable for ATEX

## Accessories

### Shock absorber retainer DADP-DGC

#### Stop KYC

(order code: YWZ1 or YWZ2)

#### Materials:

Shock absorber retainer:

Housing: Anodised aluminium

Free of copper and PTFE

#### Materials:

Stop:

Housing: Anodised aluminium

Stop bracket: Stainless steel casting

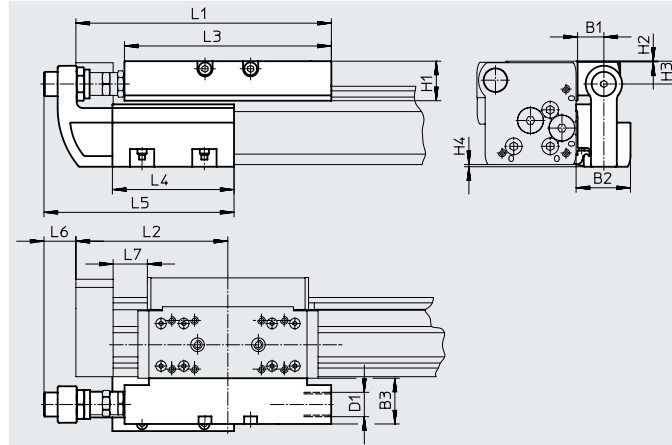
Clamp: High-alloy steel

Free of copper and PTFE

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.

#### Dimensions

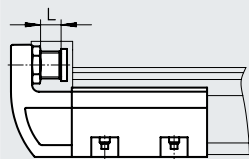
For $\varnothing$	B1	B2	B3	H1	H2	H3	H4
[mm]							
18	16	34.5	29	20.7	0.2	12.5	0.7
25	16.5	35	30	25.5	0.5	15	1.4
32	16.5	35	30	25.5	0.5	15	1.7
40	16	35.7	35	37	0.5	21.5	2
50	25	50	41	40.5	0.5	24	0
63	25	50	40	51.5	1.5	33	0


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

## Accessories

### Technical data and ordering data

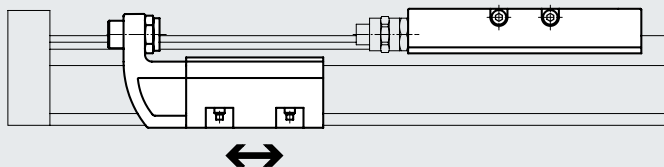
#### Precision adjustment




 **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.


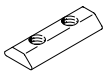

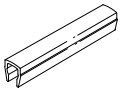
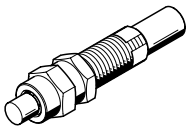
For $\varnothing$ [mm]	Precision adjustment L [mm]	Ambient temperature [°C]	CRC <sup>1)</sup>	Weight [g]	Part no.	Type <sup>2)</sup>
<b>Shock absorber retainer</b>						
18	10	-10 ... +80	2	130	541729	DADP-DGC-18-KF
25	10			180	541730	DADP-DGC-25-KF
32	10			215	541731	DADP-DGC-32-KF
40	15			460	541732	DADP-DGC-40-KF
50	15			890	545244	DADP-DGC-50
63	15			1080	545245	DADP-DGC-63
<b>Stop</b>						
18	10	-10 ... +80	2	400	541691	KYC-18
25	10			560	541692	KYC-25
32	10			790	541693	KYC-32
40	15			1525	541694	KYC-40
50	15			2270	545242	KYC-50
63	15			2950	545243	KYC-63

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

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

2) Suitable for ATEX (areas)

## Accessories

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

1) Packaging unit

2) Suitable for ATEX