




- Smallest dimensions
- Quick and easy installation
- Optimised mounting options
- Precise and reliable
- As individual component or for multi-axis applications

 **New**
Piston Ø 50/63 mm

Linear drives DGC

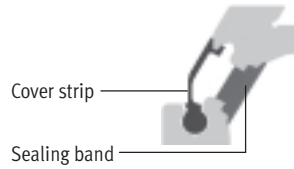
Key features

FESTO

General

- Compact – fitting length relative to stroke
- Loads and devices can be directly mounted on the slide
- Three types of cushioning available:
 - Flexible cushioning
 - Pneumatic cushioning
 - Hydraulic cushioning
- All settings accessible from one side:
 - Precision end position adjustment
 - Position of proximity sensors
 - Mounting of drive
 - Speed regulation
 - Pneumatic end position cushioning

- Sealing system



Advantages of the sealing system

- Long strokes without restrictions
- DGC-18 to 3,000 mm
- Above DGC-25 to 5,000 mm
- Virtually zero-leakage

Wide choice of variants

Basic design DGC-G



- Piston Ø 8 ... 63 mm
- Stroke lengths from 1 ... 5,000 mm¹⁾
- Guide backlash = 0.2 mm
- For small loads
- Operating behaviour with torque load = Average

Plain-bearing guide DGC-GF



- Piston Ø 18 ... 63 mm
- Stroke lengths from 1 ... 5,000 mm¹⁾
- Guide backlash = 0.05 mm
- For small and medium loads
- Operating behaviour with torque load = Average

Recirculating ball bearing guide DGC-KF



- Piston Ø 8 ... 63 mm
- Stroke lengths from 1 ... 5,000 mm¹⁾
- Guide backlash = 0 mm
- For medium and large loads
- Precision mounting interface with stainless steel slide
- Operating behaviour with torque load = Very good

Recirculating ball bearing guide with protected guide DGC-KF-GP



- Piston Ø 18 ... 40 mm
- Stroke lengths from 1 ... 5,000 mm¹⁾
- Guide backlash = 0 mm
- The protected guide cleans the guide rail and protects the recirculating ball bearing guide by means of an additional wiper seal and lubrication unit

Passive guide axis DGC-FA



- Without drive
- Piston Ø 8 ... 63 mm
- Stroke lengths from 1 ... 5,000 mm¹⁾
- Guide backlash = 0 mm
- Precision guide, suitable for DGC-KF. Can be used as machine component or as twin guide with DGC-KF

Passive guide axis with protected guide DGC-FA-GP



- Without drive
- Piston Ø 18 ... 40 mm
- Stroke lengths from 1 ... 5,000 mm¹⁾
- Guide backlash = 0 mm
- The protected guide cleans the guide rail and protects the recirculating ball bearing guide by means of an additional wiper seal and lubrication unit

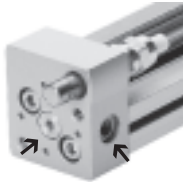
1) Up to 8,500 mm on request

Linear drives DGC

Key features

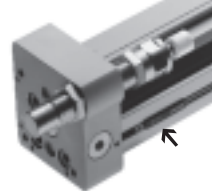
Versatile

1 Supply ports



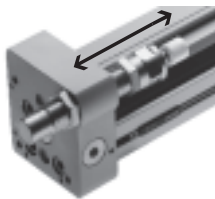
- Optional on two faces (on the end face or from the front)
- For DGC-G/DGC-GF/DGC-KF

2 Proximity sensor G/H/I/J



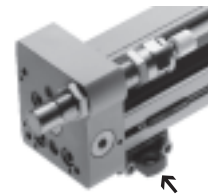
- Proximity sensors can be integrated, which means there is no projection. Cable can be guided through the slot behind a second sensor
- For DGC-G/DGC-GF/DGC-KF

3 Precision end position adjustment



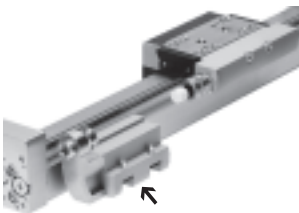
- Between 0 ... 25 mm per side
- For DGC-GF/DGC-KF/DGC-FA

4 Profile mounting M



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

5 Mechanical end position limiter YWZ



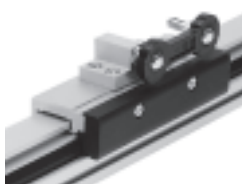
- For variable end position adjustment, e.g. for format adjustments
- The end stop can be mounted at any position within the stroke
- For DGC-GF/DGC-KF/DGC-FA

6 Intermediate position Z1/Z2/Z3



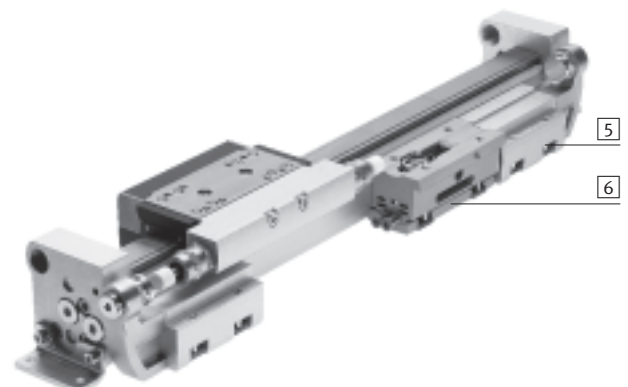
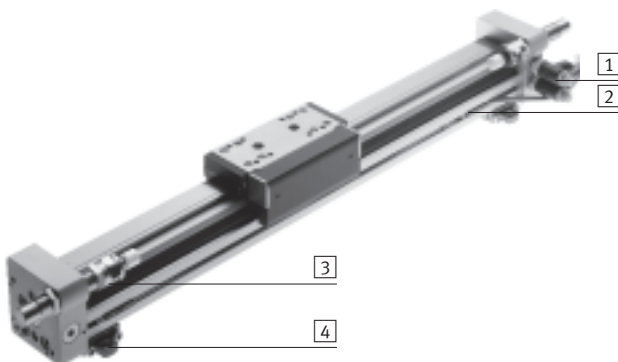
- Permits variable intermediate positions
- The intermediate position module can be mounted at any position within the stroke
- Precision repetition accuracy (0.02 mm) with highly dynamic response
- For DGC-KF

Driver FK



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

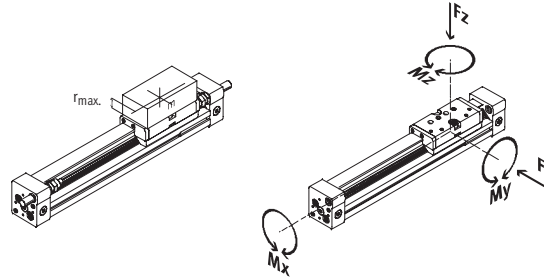
Example







Linear drives DGC

Key features

Product variants



	Piston \varnothing [mm]	Theoretical force at 6 bar [N]	Max. perm. effective load ¹⁾ m [kg] / at max. load distance r [mm]	Guide characteristics					→ Page
				F _y [N]	F _z [N]	M _x [Nm]	M _y [Nm]	M _z [Nm]	
Basic design DGC-G									
	8	30	0.06 / 25	150	150	0.5	2	2	1 / 3.1-8
	12	68	0.1 / 35	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	1,100	12	60	25	
	50	1,178	- / -	480	1,600	20	150	37	
63	1,870	- / -	650	2,000	26	150	48		
Plain-bearing guide DGC-GF									
	18	153	3 / 35	440	540	3.4	20	8.5	1 / 3.1-24
	25	295	8 / 50	640	1,300	8.5	40	20	
	32	483	11 / 50	900	1,800	15	70	33	
	40	754	15 / 50	1,380	2,000	28	110	54	
	50	1,178	48 / 50	1,500	2,870	54	270	103	
	63	1,870	75 / 50	2,300	4,460	96	450	187	
Recirculating ball bearing guide DGC-KF/DGC-KF-GP									
	8	30	0.7 / 25	300	300	1.7	4.5	4.5	1 / 3.1-40
	12	68	1.8 / 35	650	650	3.5	10	10	
	18	153	10 / 35	1,850	1,850	16	51	51	
	25	295	30 / 50	3,050	3,050	36	97	97	
	32	483	30 / 50	3,310	3,310	54	150	150	
	40	754	50 / 50	6,890	6,890	144	380	380	
	50	1,178	90 / 50	6,890	6,890	144	634	634	
63	1,870	130 / 50	15,200	15,200	529	1,157	1,157		
Passive guide axis without drive DGC-FA/DGC-FA-GP									
	8	0	0.7 / 25	300	300	1.7	4.5	4.5	Volume 5
	12	0	1.8 / 35	650	650	3.5	10	10	
	18	0	10 / 35	1,850	1,850	16	51	51	
	25	0	30 / 50	3,050	3,050	36	97	97	
	32	0	30 / 50	3,310	3,310	54	150	150	
	40	0	50 / 50	6,890	6,890	144	380	380	
	50	0	90 / 50	6,890	6,890	144	634	634	
63	0	130 / 50	15,200	15,200	529	1,157	1,157		

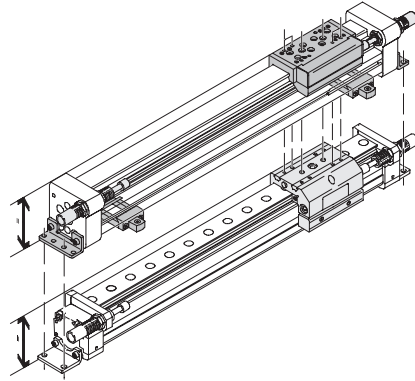
1) At v = 0.5 m/s with shock absorber YSR or YSRW

Linear drives DGC

Key features

Interchangeability with linear drive DGPL

Special foot mountings for the drive DGC allow the linear drive DGPL to be replaced with the linear drive DGC-GF/-KF with identical slide position and identical interfaces.



Slide position	Linear drive DGPL	Linear drive DGC-GF/-KF	Foot mounting required → 1 / 3.1-60
Top			Type HPC-...-SO/ HPC-...-S
Rear			Type HPC-...-SH/ HPC-...-S

Alternatives

Electro-mechanical drives

Toothed belt axes DGE-ZR

Spindle axes DGE-SP

Rodless cylinders,
magnetically coupled
Linear drives DGO



Advantages:

Positioning drive for approaching several positions

→ Volume 5

Positioning drive for approaching several positions

→ Volume 5

Hermetically sealed drive

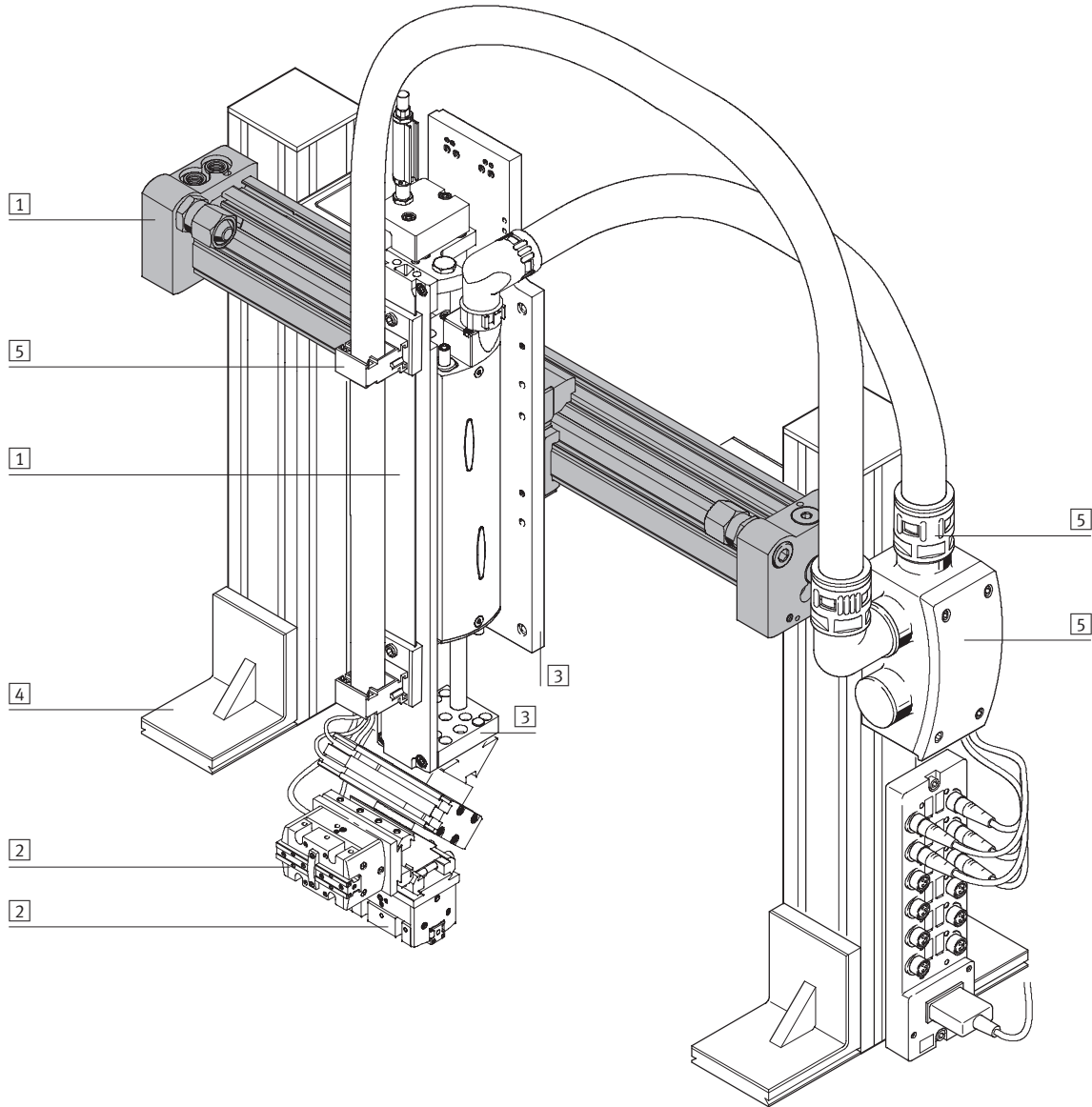
→ 1 / 3.2-1

Linear drives DGC

Key features



System product for handling and assembly technology



Rodless cylinders
Mechanically coupled

3.1

Linear drives DGC

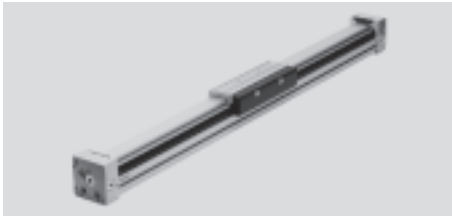
Key features



System elements and accessories			
	Brief description	→ Page	
1	Drive units	Wide range of combinations possible within handling and assembly technology	Volume 1
2	Grippers	Diverse variation options in handling and assembly technology	Volume 1
3	Adapters	For drive/drive and drive/gripper combinations	Volume 5
4	Basic mounting components	Profiles and profile connectors as well as profile/drive connectors	Volume 5
5	Installation components	For achieving a clear-cut, safe layout for electrical cables and tubing	Volume 5
-	Axes	Wide range of combinations possible within handling and assembly technology	Volume 5
-	Motors	Servo and stepper motors, with or without gear unit	Volume 5

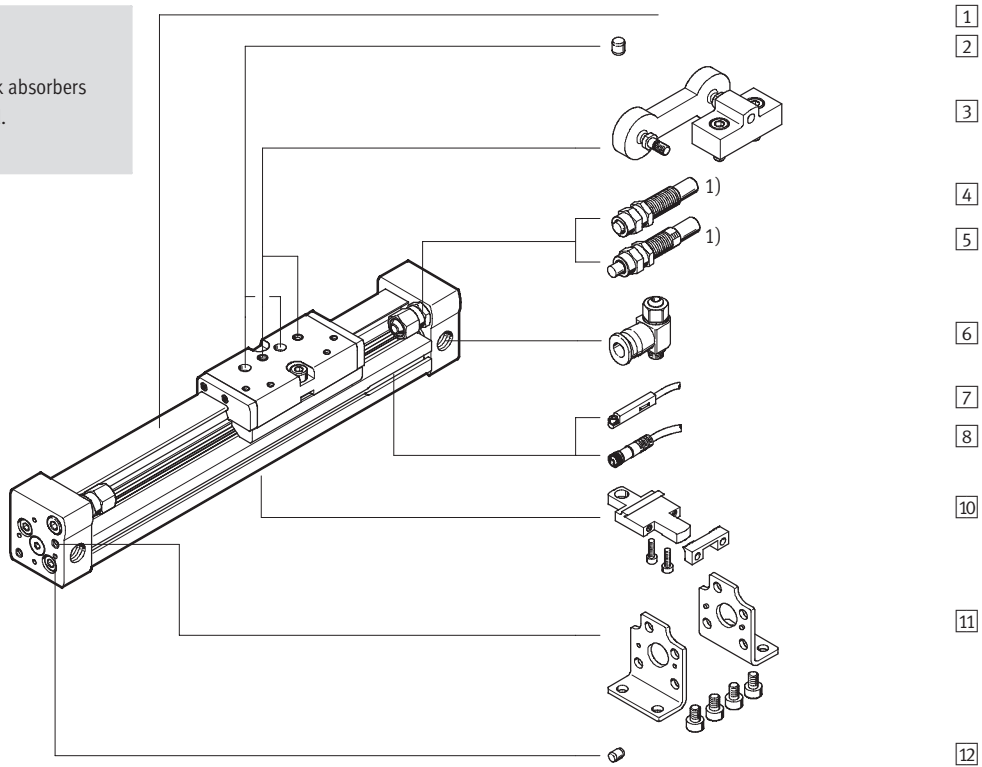
Linear drives DGC-G

Peripherals overview

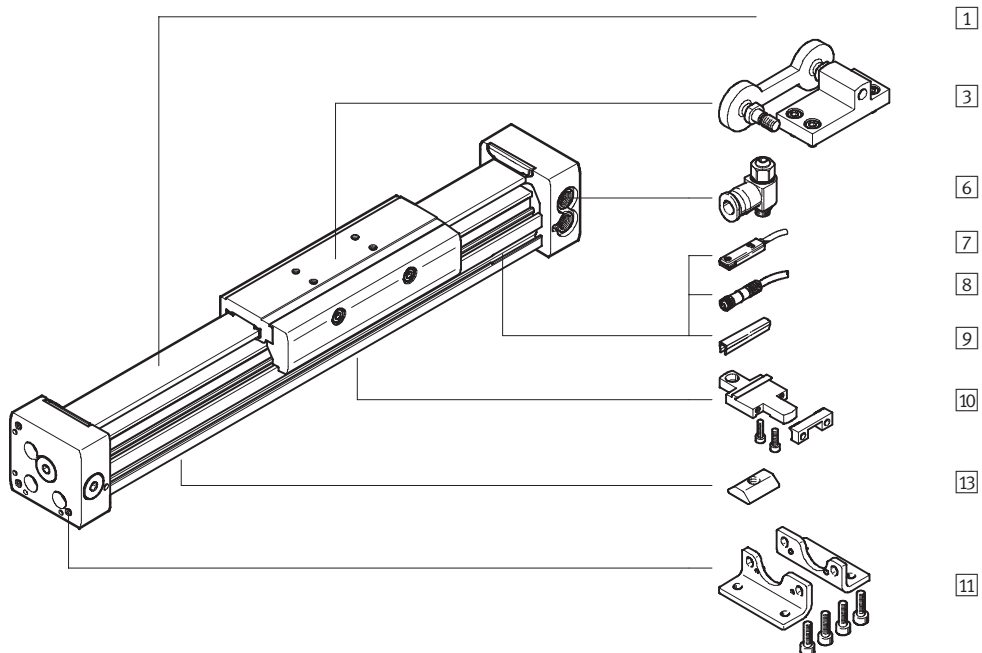


DGC-8/-12

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



DGC-18 ... 63



Rodless cylinders
Mechanically coupled

3.1

Linear drives DGC-G

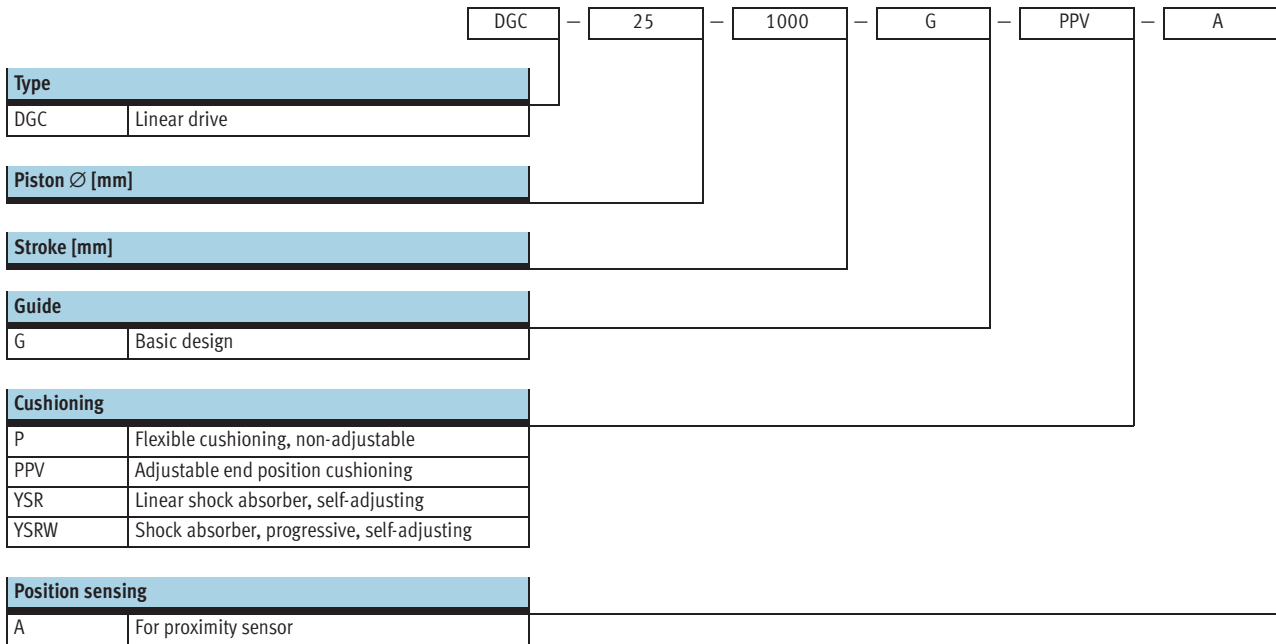
Peripherals overview

Variants and accessories			
Type	For piston \varnothing	Brief description	→ Page
1 Linear drive DGC-G	8 ... 63	Linear drive without accessories, basic design	1 / 3.1-12
2 Centring pin ¹⁾ ZBS	8, 12	For centring loads and attachments on the slide	1 / 3.1-72
3 Driver FK	8 ... 63	Compensates inaccuracies in the mounting of the linear drive and external guide	1 / 3.1-66
– Cushioning P	8, 12	Non-adjustable, flexible cushioning. Used only at low speeds	1 / 3.1-23
– Cushioning PPV	18 ... 63	Adjustable pneumatic end position cushioning. Used at medium speeds	1 / 3.1-23
4 Shock absorber YSR	8, 12	Self-adjusting hydraulic shock absorber with spring return and linear cushioning characteristic	1 / 3.1-23
5 Shock absorber YSRW	8, 12	Self-adjusting hydraulic shock absorber with spring return and progressive cushioning characteristic	1 / 3.1-23
6 One-way flow control valve GRLA	8 ... 63	For regulating speed	1 / 3.1-72
7 Proximity sensor G/H/I/J	8 ... 63	For sensing the slide position	1 / 3.1-73
8 Cable with socket V	8 ... 63	For proximity sensor	1 / 3.1-73
9 Slot cover L	18 ... 63	For protecting against ingress of dirt and securing proximity sensor cables	1 / 3.1-72
10 Profile mounting M	8 ... 63	Simple and precise mounting option via dovetail connection	1 / 3.1-64
11 Foot mounting F	8 ... 63	For mounting on end cap	1 / 3.1-60
12 Centring pin ¹⁾ ZBS	8, 12	For centring the drive without foot mountings (user-specific)	1 / 3.1-72
13 Slot nut B	25 ... 63	For mounting attachments	1 / 3.1-72

1) Included in the scope of delivery of the drive

Linear drives DGC-G

Type codes



Linear drives DGC-G

Type codes



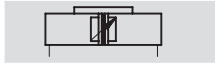
		+ ZUB	- F			2B	2G		2L	
Accessories										
ZUB	Accessories supplied loose									
Foot mounting										
F	Foot mounting									
Profile mounting										
...M	Profile mounting									
Driver										
FK	Moment compensator									
Slot nut										
...B	For mounting slot									
Proximity sensor										
...G	With cable, 2.5 m									
...H	With plug									
...I	Contactless with cable, 2.5 m									
...J	Contactless, with plug									
Cable with socket										
...V	2.5 m									
Slot cover										
...L	For sensor slot									
User manual										
0	Express waiver – no operating instructions to be included									

Linear drives DGC-G



Technical data

FESTO

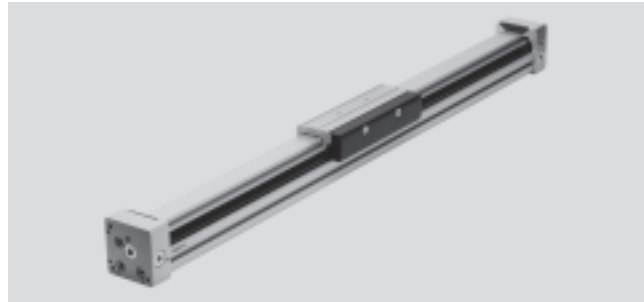
Function



www.festo.com/en/Spare_parts_service

-  Diameter
8 ... 63 mm
-  Stroke length
1 ... 5,000 mm

Wearing parts kits
→ 1 / 3.1-23



General technical data									
Piston Ø		8	12	18	25	32	40	50	63
Stroke	[mm]	1 ... 1,500	1 ... 2,000	1 ... 3,000	1 ... 5,000 ¹⁾			1 ... 5,000	
Pneumatic connection		M5			G1/8	G1/4		G3/8	
Mode of operation		Double-acting							
Design		Rodless drive							
Driver principle		Slotted cylinder, mechanically coupled							
Guide		Basic design							
Mounting position		Any							
Cushioning → 1 / 3.1-15	P	Non-adjustable at either end		-					
	PPV	-		Adjustable at both ends					
	YSR...	Self-adjusting at both ends		-					
Cushioning length with PPV cushioning	[mm]	-		16.5	15.5	17.5	29.5	29.8	31.1
Position sensing		For proximity sensor							
Type of mounting		Profile mounting							
		Foot mounting							
		Direct mounting							
Max. speed	[m/s]	1	1.2	3					

- 1) Strokes up to 8,500 mm on request
 - Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Operating and environmental conditions									
Piston Ø		8	12	18	25	32	40	50	63
Operating pressure	[bar]	2.5 ... 8			2 ... 8		1.5 ... 8		
Operating medium		Filtered compressed air, lubricated or unlubricated							
Ambient temperature ¹⁾	[°C]	+5 ... +60		-10 ... +60					
Corrosion resistance class CRC ²⁾		2							

- 1) Note operating range of proximity sensors
 2) Corrosion resistance class 2 to Festo standard 940 070
 Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents

Forces [N] and impact energy [J]									
Piston Ø		8	12	18	25	32	40	50	63
Theoretical force at 6 bar		30	68	153	295	483	754	1,178	1,870
Impact energy at end positions		→ 1 / 3.1-15							

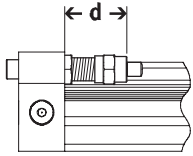
Weights [g]									
Piston Ø		8	12	18	25	32	40	50	63
Basic weight with 0 mm stroke		170	290	546	1,004	2,126	4,121	9,050	14,040
Additional weight per 10 mm stroke		9	12	22	34	54	77	116	150
Moving load		36	65	178	287	508	1,312	2,850	4,330

Linear drives DGC-G

Technical data



Adjustable end position range d [mm]



- - Note

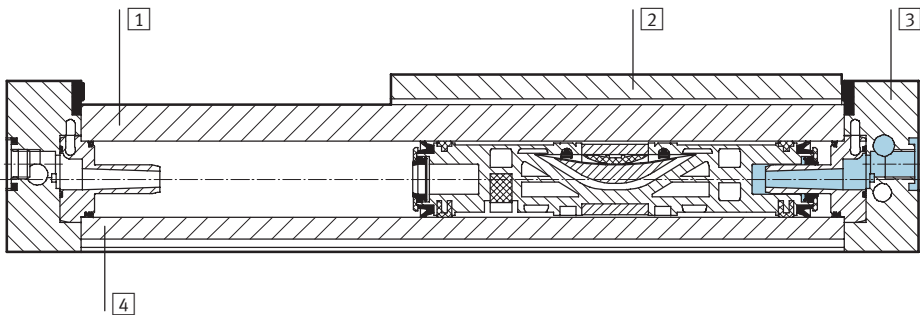
The permissible kinetic energy decreases if the stroke is reduced

with PPV adjustable cushioning at both ends.

Piston Ø	8	12	18	25	32	40	50	63
Cushioning P/PPV	11.3 ... 16.3	12.7 ... 17.7	-					
Cushioning YSR/YSRW	12.8 ... 22.8	14 ... 24	-					

Materials

Sectional view



Linear drives

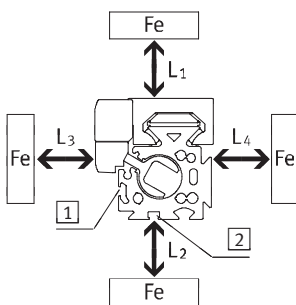
1	Guide rail	Anodised aluminium
2	Slide	Anodised aluminium
3	End cap	Anodised aluminium
4	Cylinder barrel	Anodised aluminium
-	Piston seal	Polyurethane
-	Sealing band/cover strip	Polyurethane
-	Slide elements	Polyacetate

Influence of ferritic materials on proximity sensors

Ferritic materials (steel parts or panels) directly next to the proximity sensors can cause sensing

malfunctions. The following safety distances must be observed.

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



Piston 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

Linear drives DGC-G

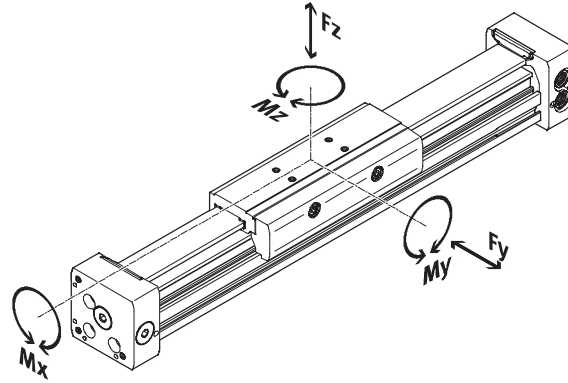
Technical data



Characteristic load values

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

They must not be exceeded in the dynamic range. Special attention must be paid to the cushioning phase.



- - Note

In order to avoid frictional restraint of the guide in the case of the basic drive DGC-G when used in vertical mode and with a high torque load, the variant with the recirculating ball bearing guide DGC-KF

→ 1 / 3.1-40 is recommended.

Rodless cylinders
Mechanically coupled

3.1

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

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

Permissible forces and torques									
Piston 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	1,100	1,600	2,000
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



Help in selection and ordering
ProDrive
www.festo.com/en/engineering

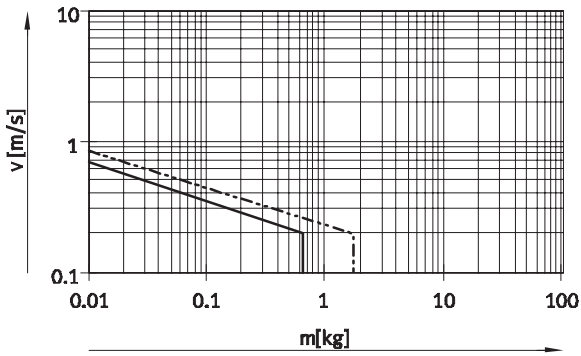
Linear drives DGC-G

Technical data

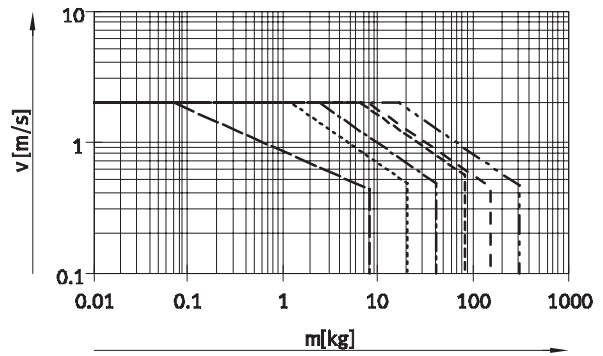


Maximum permissible piston speed v as a function of effective load m

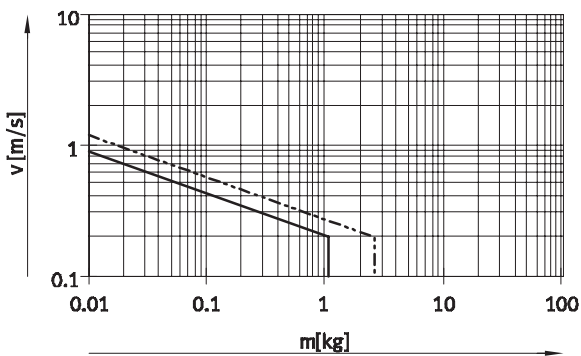
Piston \varnothing 8/12 with P cushioning



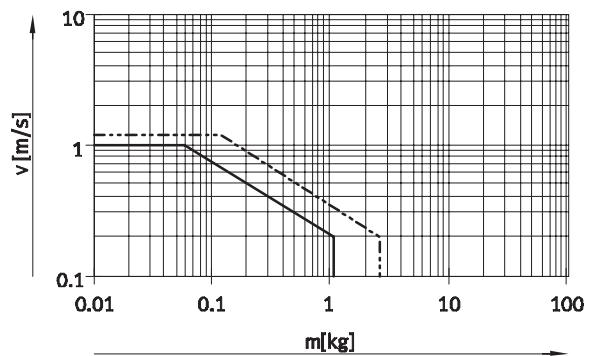
Piston \varnothing 18 ... 63 with PPV cushioning



Piston \varnothing 8/12 with YSR cushioning



Piston \varnothing 8/12 with YSRW cushioning



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

Note

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

Operating range of cushioning

The end position cushioning must be adjusted to ensure jerk-free operation. If the operating conditions are outside the permissible range, the

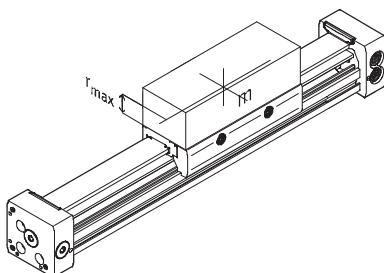
load to be moved must be cushioned using suitable equipment (external shock absorbers), preferably at the centre of gravity of the mass.

Note

To avoid distortion in the slide, 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



Linear drives DGC-G

Technical data



Rodless cylinders
Mechanically coupled

3.1

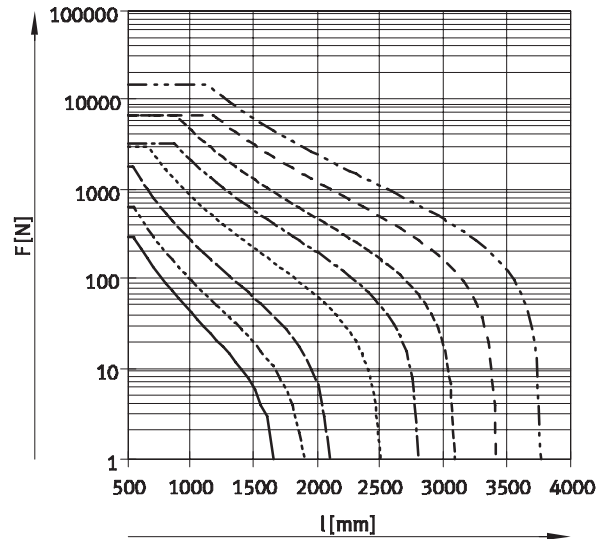
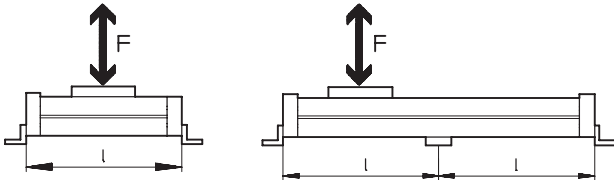
Number of profile mountings MUC dependent on force due to weight F and support span l

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

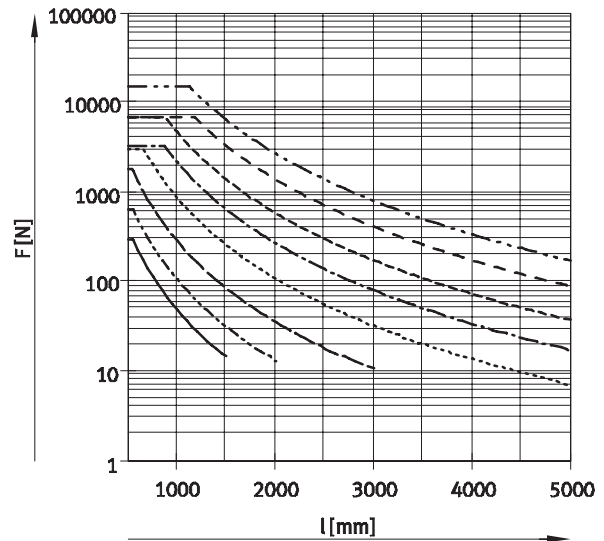
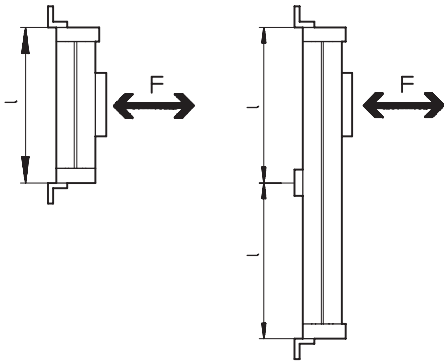
serve to determine the maximum permissible support span as a

function of the mounting position and the perpendicular force.

Horizontal mounting position



Vertical mounting position



- | | | | | | |
|-----------|------|-----------|------|-----------|------|
| — | ∅ 8 | - - - | ∅ 18 | - · - · - | ∅ 40 |
| - · - · - | ∅ 12 | - · - · - | ∅ 25 | - - - | ∅ 50 |
| | | - - - | ∅ 32 | - · - · - | ∅ 63 |

Example:

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

The drive has an overall length of:
 $l = \text{stroke length} + L1$
 (see dimensions)
 $= 1,500 \text{ mm} + 200 \text{ mm}$
 $= 1,700 \text{ mm}$

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

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

Linear drives DGC-G

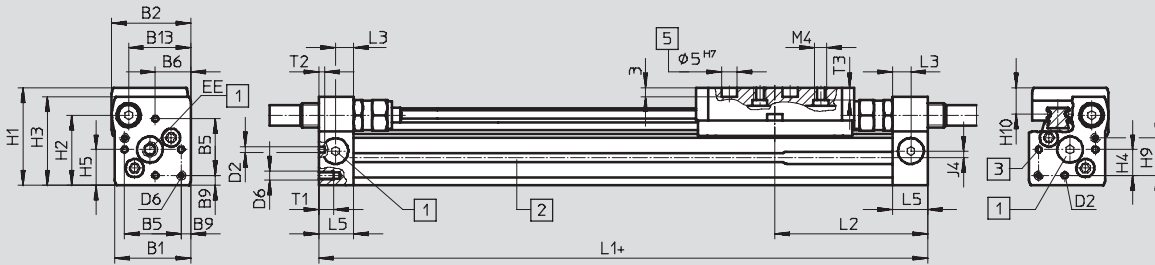
Technical data



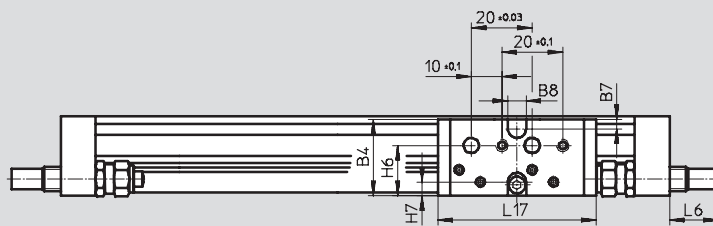
Dimensions

Download CAD data → www.festo.com/en/engineering

Ø 8 and 12



- + plus stroke length
- 1 Supply port
optional on three faces
- 2 Sensor slot for proximity
sensor
- 3 Mounting hole for foot
mounting or centring pin
- 5 Hole for centring pin ZBS



Ø	B1	B2	B4	B5	B6	B7	B8	B9	B13	D2	D6	EE
[mm]							±0.05	±0.1		Ø H8		
8	25	26	25.5	18.6	11.7	3	6	3.2	20.5	2	M3	M5
12	30.2	31	30.5	20.6	13.5	3	8	4.8	25	2	M4	M5

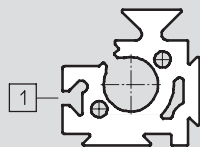
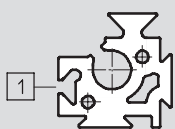
Ø	H1	H2	H3	H4	H5	H6	H7	H9	H10	J4	L1	L2
[mm]											+0.5/ -0.4	
8	32	23	29	8.5	11.7	16.5	4.5	12.3	8.7	2.2	100	50.1
12	37.5	28.5	34.5	8.7	13.5	20.5	5	14.7	9.8	3	125	62.1

Ø	L3	L5	L6			L17	T1	T2	T3	Stroke tolerance
			P	YSR	YSRW					
[mm]										
8	6	11.5	0	16	16.2	52	5	2	4	0 ... 1.7
12	8	16	0	11.3	12.3	65	6	2	5	

Profile barrel

Ø 8

Ø 12



1 Sensor slot for proximity sensor

Rodless cylinders
Mechanically coupled

3.1

Linear drives DGC-G

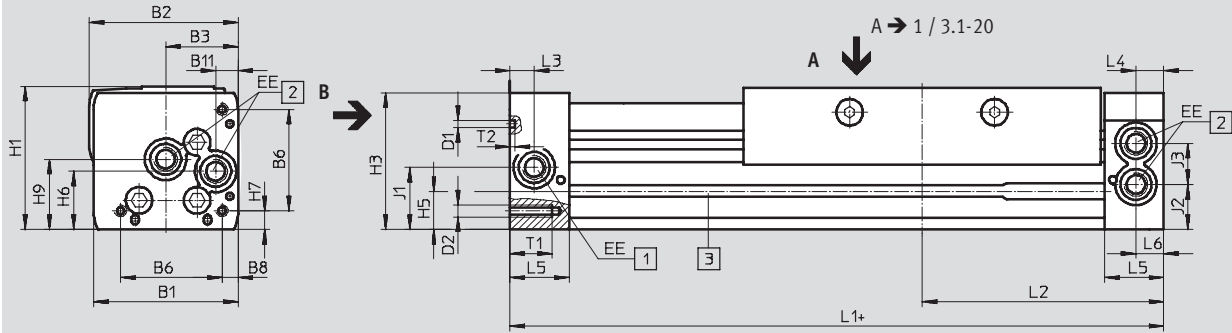
Technical data



Dimensions

Download CAD data → www.festo.com/en/engineering

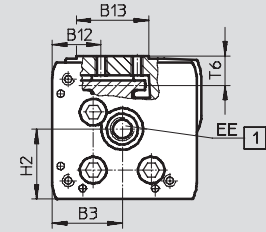
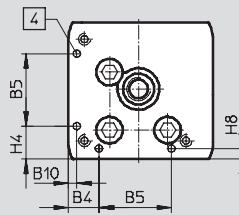
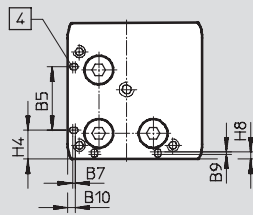
Ø 18 ... 40



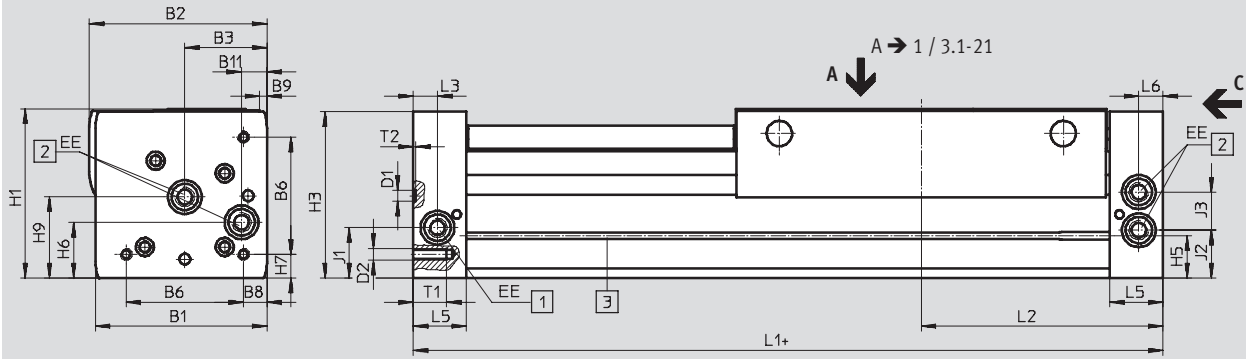
View B
Ø 18

Ø 25 ... 40

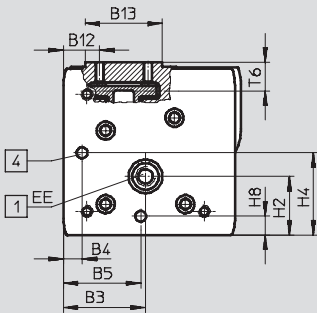
Ø 18 ... 40



Ø 50/63



View C



- + plus stroke length
- 1 Supply port optional on two faces
- 2 Supply port optional on two faces, for supplying from one end

- 3 Sensor slot for proximity sensor
- 4 Mounting hole for foot mounting HPC

Linear drives DGC-G

Technical data

FESTO

∅	B1	B2	B3	B4	B5	B6	B7	B8	B9
[mm]					±0.05				
18	44.5	46.3	19.5	8.8	21	31	0.3	3.8	0.4
25	59.8	61.6	30	12.65	30	42	–	6.65	–
32	73	75.5	38.5	5.7	63.1	57.5	–	8.5	–
40	91	94.5	45	17.2	55	65	–	12.2	–
50	113	127	60	8	52.8	81.6	–	12	–
63	142	147	68	15.5	68	97	–	19.5	6

∅	B10	B11	B12	B13	D1	D2	EE	H1	H2
[mm]					∅				
18	2.4	5.5	19.3	20	2±0.05	M4	M5	49.8	23.1
25	3.5	9.3	20.15	30	3±0.05	M5	G $\frac{1}{8}$	58.5	29
32	14	14.9	20.5	35	3±0.05	M6	G $\frac{1}{8}$	73	30
40	8	16.5	19.8	45	4±0.05	M6	G $\frac{1}{4}$	88	41.5
50	–	21	24	64	9 ^{H7}	M8	G $\frac{1}{4}$	120	38.5
63	–	21	30	64	9 ^{H7}	M10	G $\frac{3}{8}$	140	48.5

∅	H3	H4	H5	H6	H7	H8	H9	J1	J2
[mm]		±0.2							
18	48.3	10.3	13.4	20	5.3	2.4	25.2	20	16.5
25	56.5	13	15.8	24	7	4.5	29	26.1	18.6
32	71.5	5.7	17	27.7	8.5	14	35.2	30	22
40	85	17.2	25	36.5	12.2	8	44	35	26
50	116	52.8	29.3	36	12	8	53	30.5	30.5
63	137.5	68	34.8	46	19.5	15.5	67	41.5	39.5

∅	J3	L1	L2	L3	L4	L5	L6	T1	T2	T6	Stroke tolerance
[mm]		+0.9/-0.2									
18	11	150	74.5	5.7	5.8	15	5.5	9	2	10.7	0 ... 2.5
25	17	200	100	10.5	10.6	24.5	10.6	17.5	2	12	
32	18.5	250	124.8	14.5	14.5	30.5	14.5	15	2	13.8	
40	26	300	150	14.6	14.6	33.5	14.6	20	3	16.8	
50	28	350	175	17	–	41	17	24	2.1 ^{+0.2}	20.75	
63	31.5	400	200	20	–	44	20	27.5	2.1 ^{+0.2}	20.75	

· † - Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Rodless cylinders
Mechanically coupled

3.1

Linear drives DGC-G

Technical data

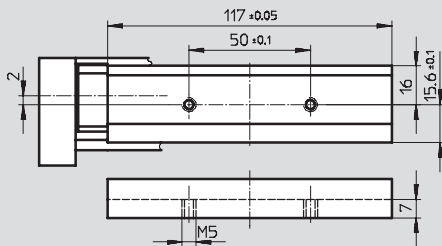
FESTO

Dimensions

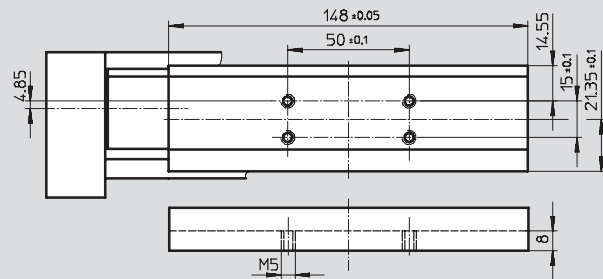
Download CAD data → www.festo.com/en/engineering

Slide – View A

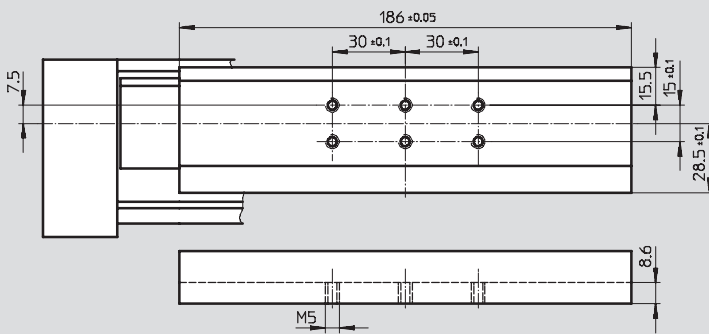
Ø 18



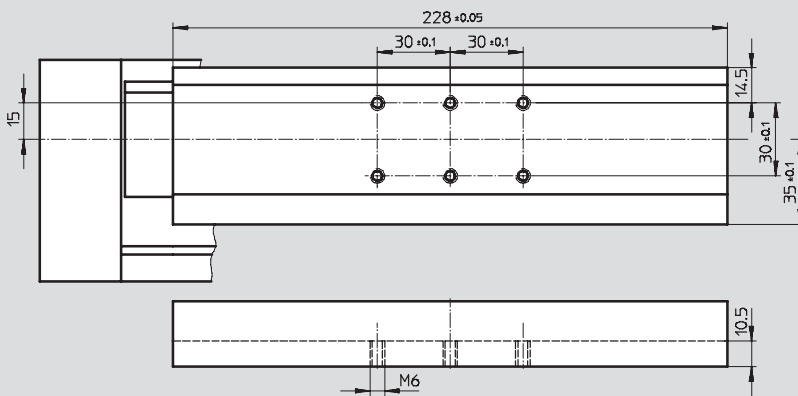
Ø 25



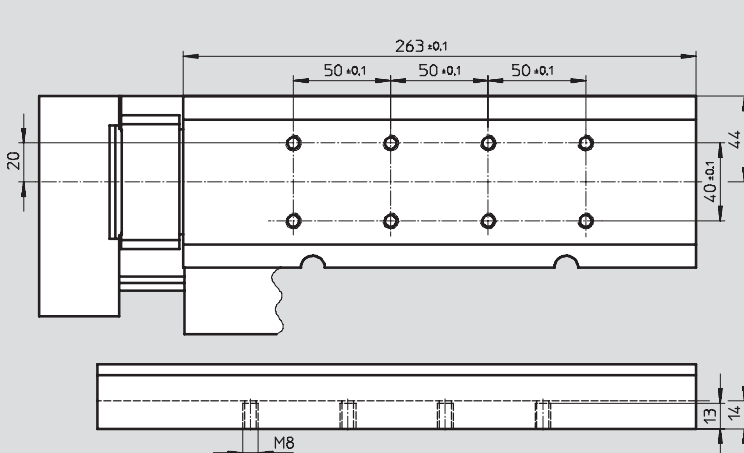
Ø 32



Ø 40



Ø 50



Rodless cylinders
Mechanically coupled

3.1

Linear drives DGC-G

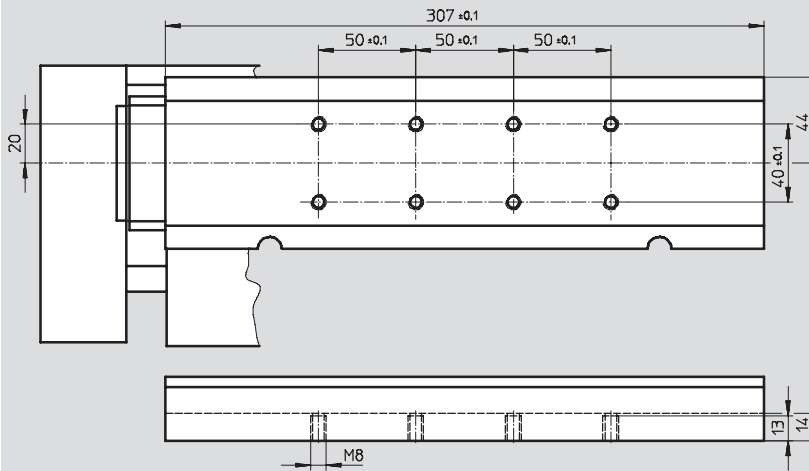
Technical data



Dimensions Download CAD data → www.festo.com/en/engineering

Slide – View A

Ø 63



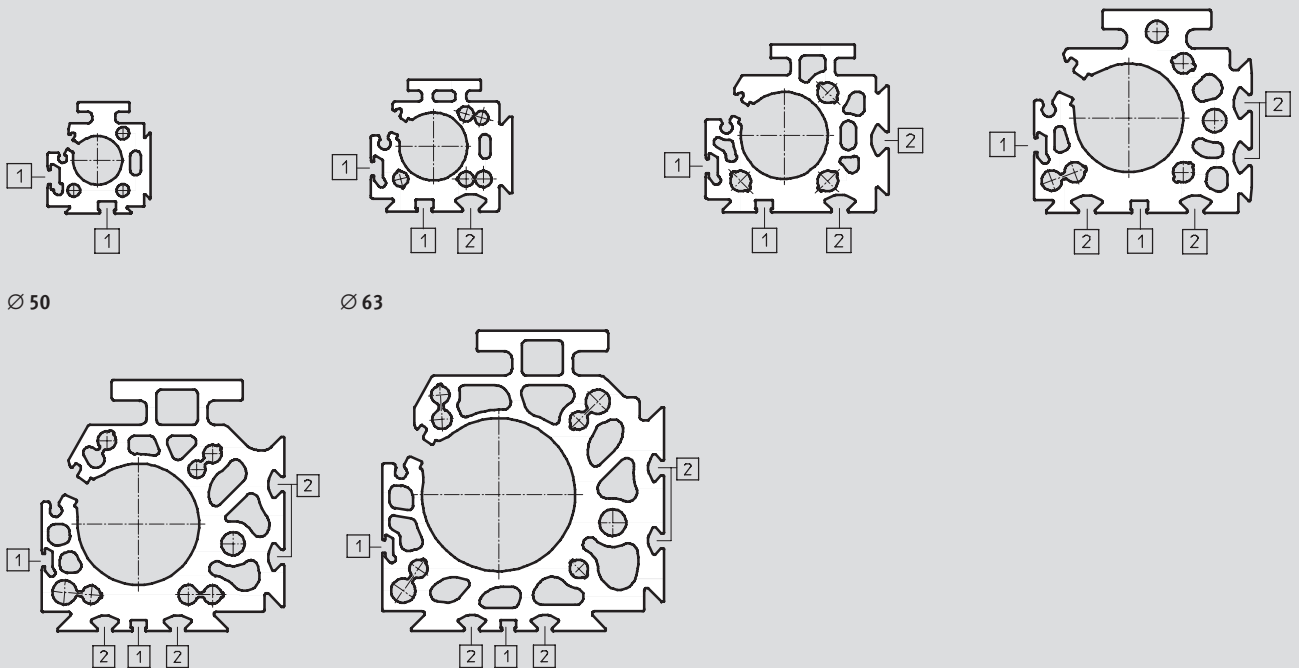
Profile barrel

Ø 18

Ø 25

Ø 32

Ø 40



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

Linear drives DGC-G


Ordering data – Modular products



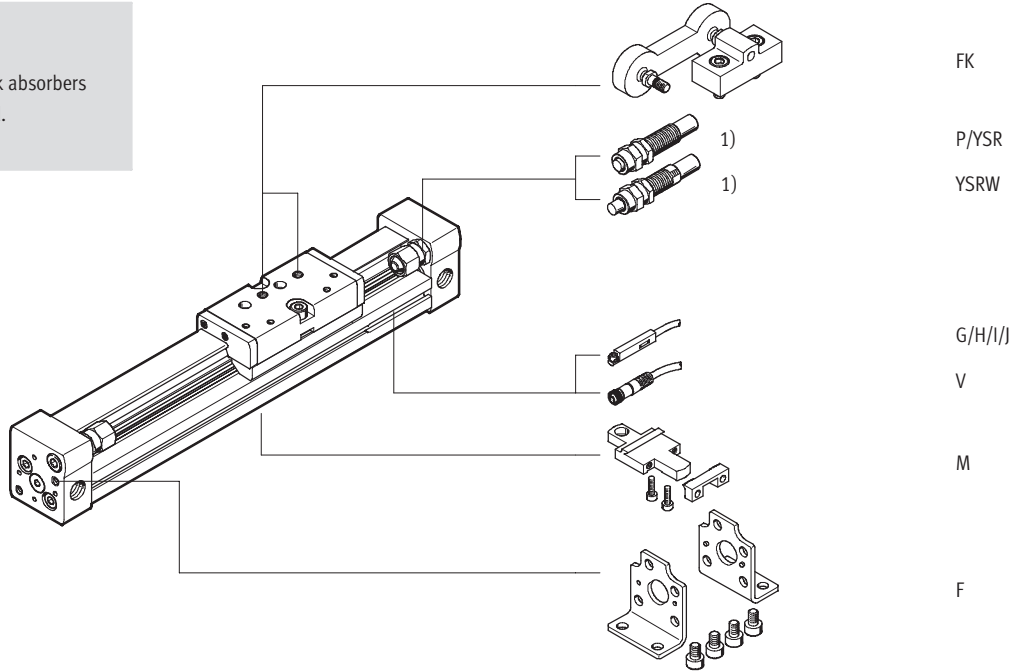
Order code

Mandatory data/options

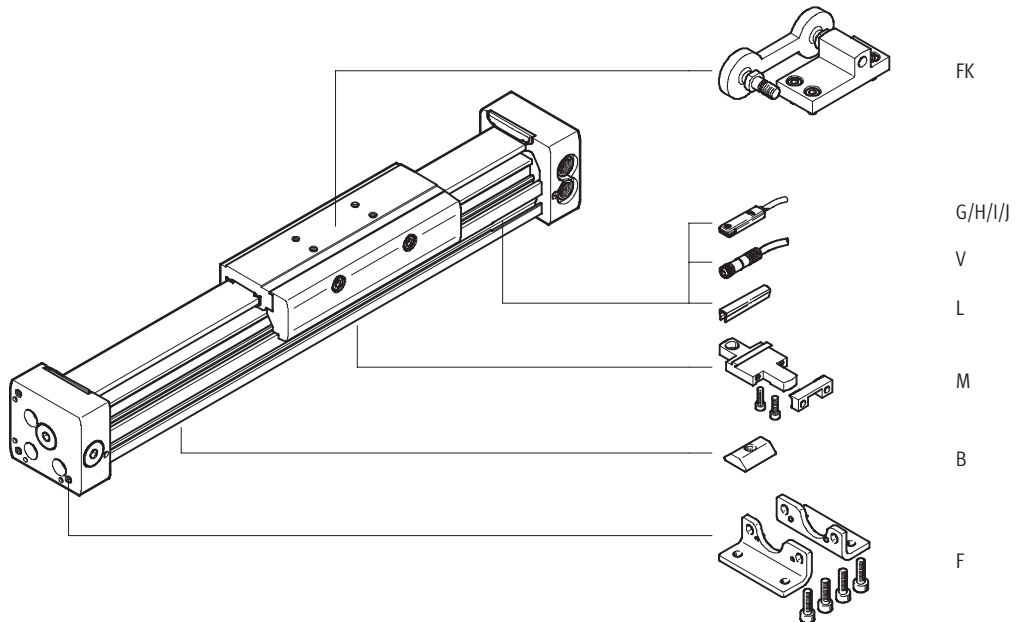
DGC-8/-12

-  - Note

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



DGC-18 ... 63



Rodless cylinders
Mechanically coupled

3.1

Linear drives DGC-G

Ordering data – Modular products

FESTO

M Mandatory data				O Options				
Module No.	Function		Stroke		Cushioning		Accessories	
	Piston \varnothing		Guide		Position sensing		Accessories supplied loose	User manual
530 906	DGC	8	1 ... 5,000	G	P	A	F, ...M, FK, ...B, ...G, ...H, ...I, ...J, ...V, ...L	0
530 907		12			PPV			
532 446		18			YSR			
532 447		25			YSRW			
532 448		32						
532 449		40						
532 450		50						
532 451		63						
Order example								
530 906	DGC	- 8	- 300	- G	- P	- A	ZUB	- F2M

Ordering table												
Size	8	12	18	25	32	40	50	63	Condi- tions	Code	Enter code	
M Module No.	530 906	530 907	532 446	532 447	532 448	532 449	532 450	532 451				
Function	Linear drive									DGC	DGC	
Piston \varnothing [mm]	8	12	18	25	32	40	50	63		-...		
Stroke [mm]	1 ... 1,500	1 ... 2,000	1 ... 3,000	1 ... 5,000					1	-...		
Guide	Basic design									-G	-G	
Cushioning	At both ends	Flexible cushioning rings/plates		-	-	-	-	-		-P		
	Adjustable at both ends	-		Pneumatic cushioning						-PPV		
	Self-adjusting	Shock absorber		-	-	-	-	-		-YSR		
		Shock absorber, progressive		-	-	-	-	-		-YSRW		
Position sensing	For proximity sensor									-A	-A	
O Accessories	Supplied loose (can be retrofitted)									ZUB-	ZUB-	
Foot mounting	1									F		
Profile mounting	1 ... 9									...M		
Driver	Moment compensator									FK		
Slot nut for mounting slot	-	-	-	1 ... 9						...B		
Proximity sensor	Cable, 2.5 m	1 ... 9									...G	
	M8 plug	1 ... 9									...H	
Proximity sensor, contactless, PNP	Cable, 2.5 m	1 ... 9									...I	
	M8 plug	1 ... 9									...J	
Cable with socket	M8, 2.5 m	1 ... 9									...V	
Slot cover for sensor slot	-	-	1 ... 9							...L		
User manual	Express waiver – no operating instructions to be included (already available)									-O		

1 Stroke Size 25, 32, 40: Strokes up to 8,500 mm on request

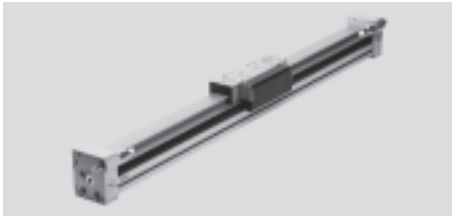
Transfer order code

DGC - - - G - - A ZUB - -

Ordering data – Wearing parts kits					
Piston \varnothing	Part No.	Type	Piston \varnothing	Part No.	Type
8	665 333	DGC-8-G	32	684 488	DGC-32
12	665 334	DGC-12-G	40	684 489	DGC-40
18	684 486	DGC-18	50	719 825	DGC-50
25	684 487	DGC-25	63	719 826	DGC-63


Linear drives DGC-GF, with plain-bearing guide

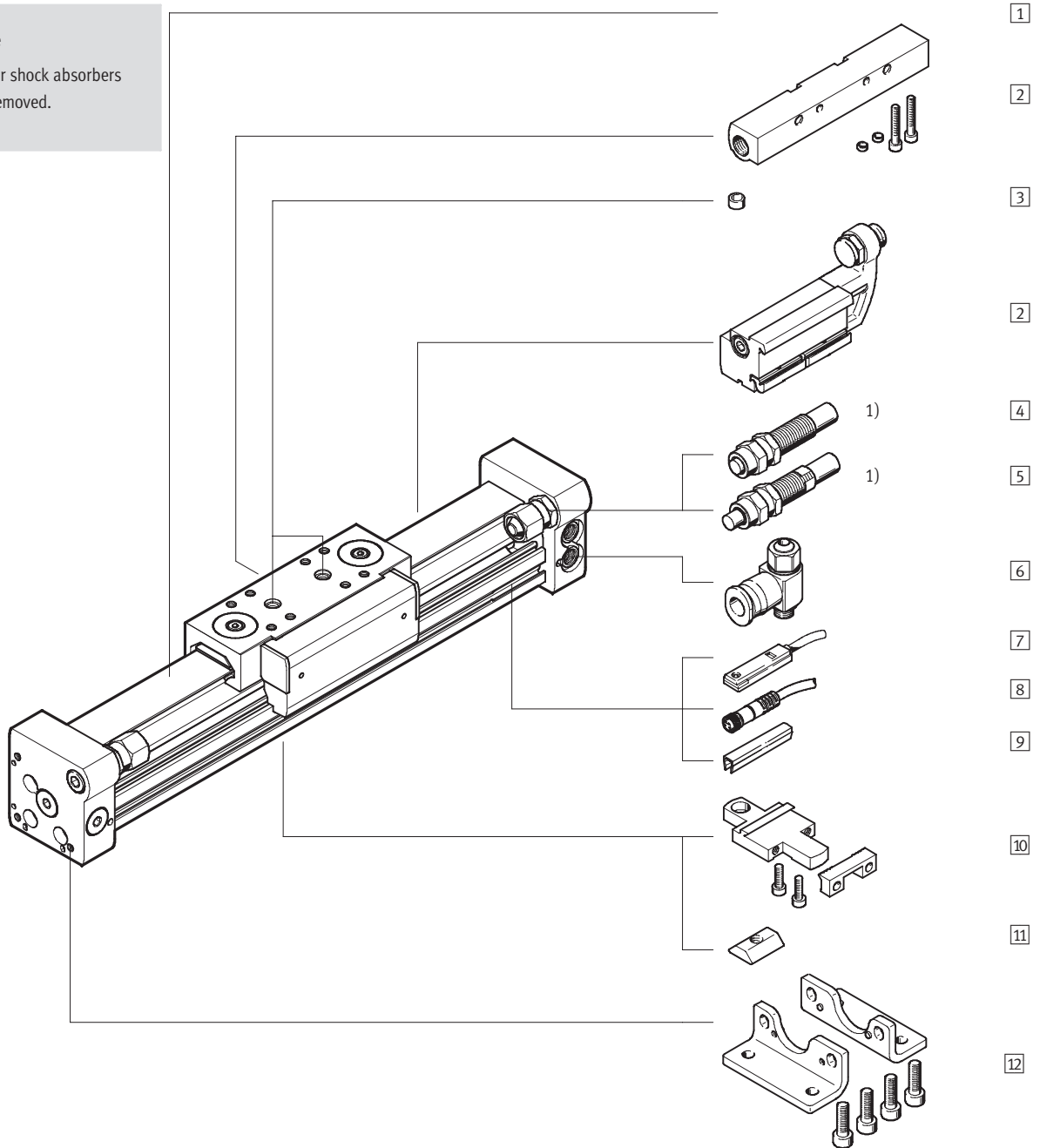
Peripherals overview



Rodless cylinders
Mechanically coupled

3.1

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



Linear drives DGC-GF, with plain-bearing guide

Peripherals overview

FESTO

Variants and accessories			
Type	For piston \varnothing	Brief description	→ Page
1) Linear drive DGC-GF	18 ... 63	Linear drive without accessories, plain-bearing guide	1 / 3.1-28
2) Mechanical end position limiter YWZ	18 ... 63	For variable end position adjustment, e.g. for format adjustments	1 / 3.1-68
3) Centring pin/sleeve ¹⁾ ZBS/ZBH	18 ... 63	For centring loads and attachments on the slide	1 / 3.1-72
– Cushioning PPV	18 ... 63	Adjustable pneumatic end position cushioning. Used at medium speeds	1 / 3.1-39
4) Shock absorber YSR	18 ... 63	Self-adjusting hydraulic shock absorber with spring return and linear cushioning characteristic	1 / 3.1-39
5) Shock absorber YSRW	18 ... 63	Self-adjusting hydraulic shock absorber with spring return and progressive cushioning characteristic	1 / 3.1-39
6) One-way flow control valve GRLA	18 ... 63	For regulating speed	1 / 3.1-72
7) Proximity sensor G/H/I/J	18 ... 63	For sensing the slide position	1 / 3.1-73
8) Cable with socket V	18 ... 63	For proximity sensor	1 / 3.1-73
9) Slot cover L	18 ... 63	For protecting against ingress of dirt and securing proximity sensor cables	1 / 3.1-72
10) Profile mounting M	18 ... 63	Simple and precise mounting option via dovetail connection	1 / 3.1-64
11) Slot nut B	25 ... 63	For mounting attachments	1 / 3.1-72
12) Foot mounting F	18 ... 63	For mounting on end cap	1 / 3.1-60

1) Included in the scope of delivery of the drive

Rodless cylinders
Mechanically coupled

3.1

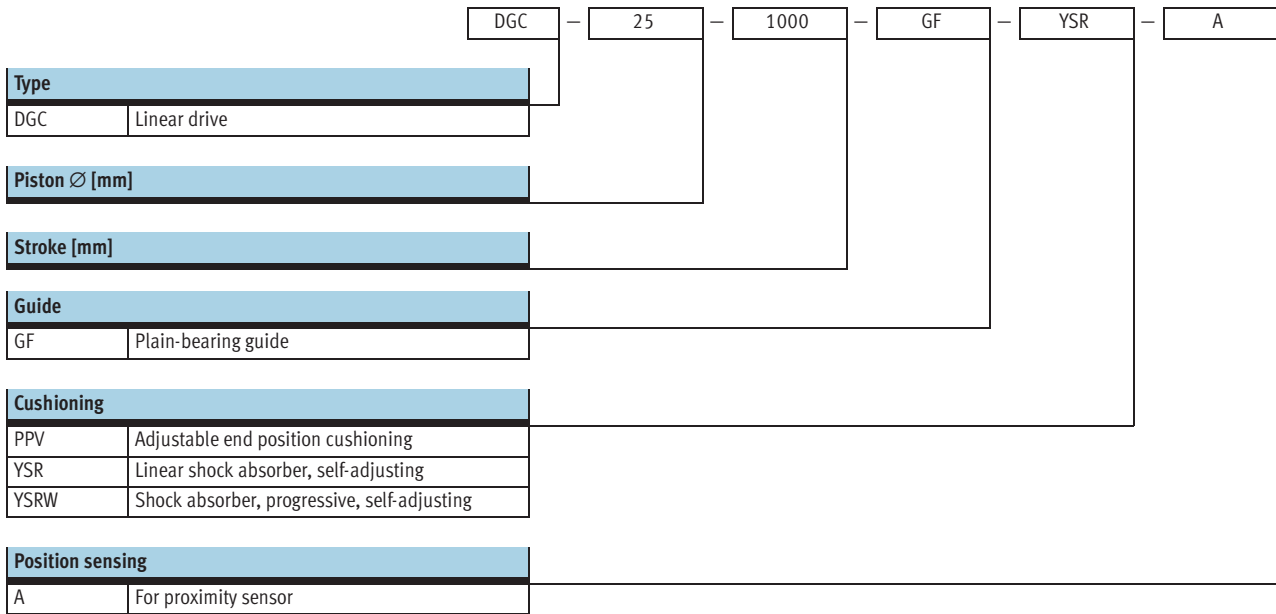
Linear drives DGC-GF, with plain-bearing guide

Type codes



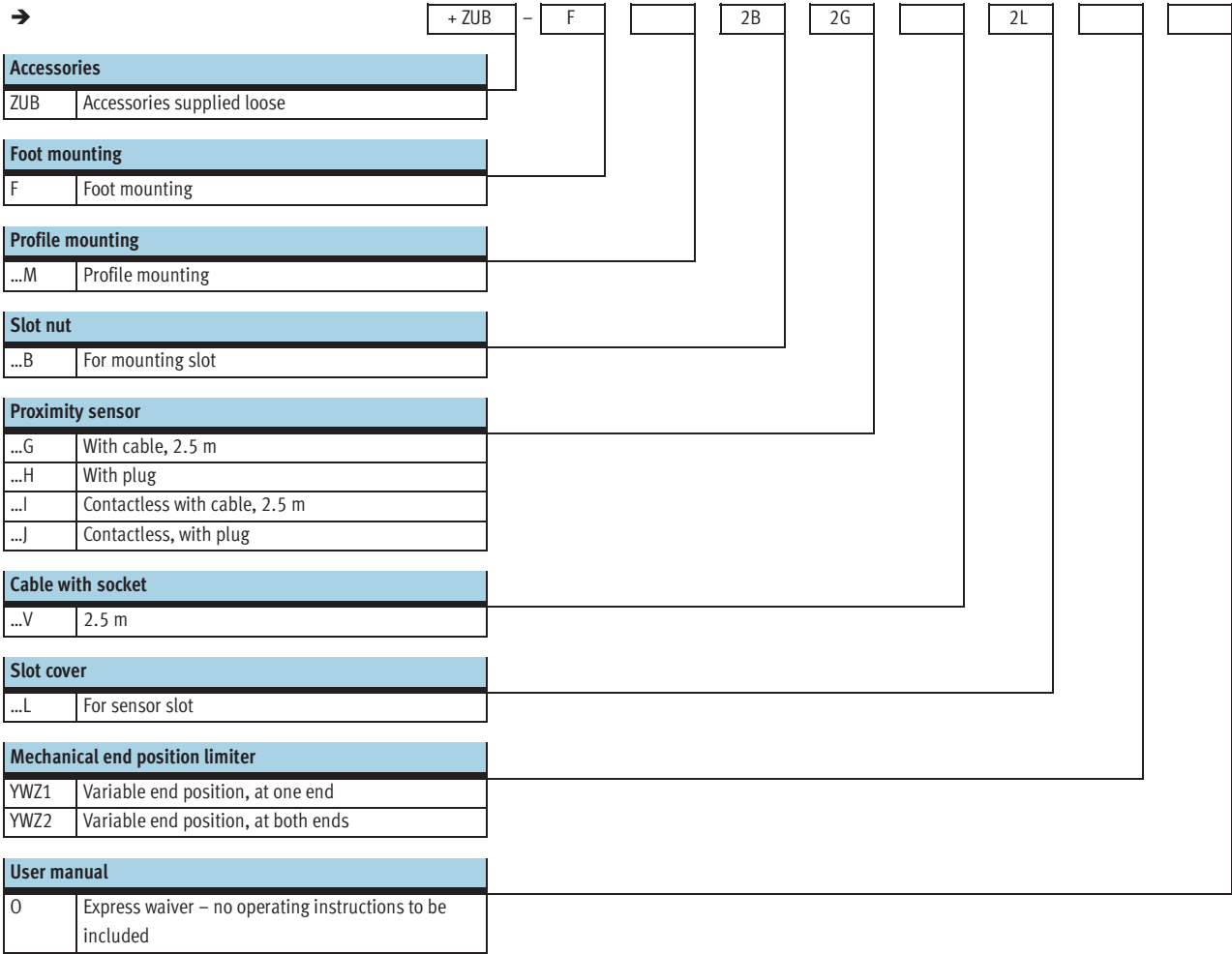
Rodless cylinders
Mechanically coupled

3.1



Linear drives DGC-GF, with plain-bearing guide

Type codes

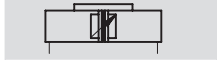


Linear drives DGC-GF, with plain-bearing guide

Technical data

FESTO

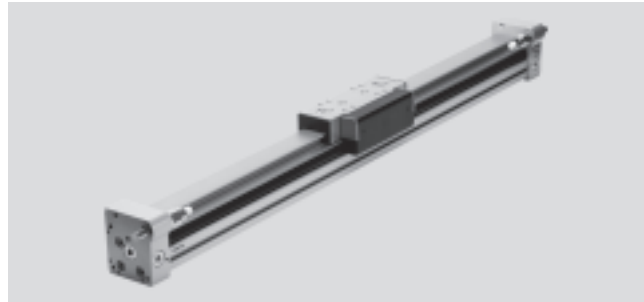
Function



www.festo.com/en/Spare_parts_service

- - Diameter
18 ... 63 mm
- - Stroke length
1 ... 5,000 mm

Wearing parts kits
→ 1 / 3.1-39



General technical data							
Piston Ø		18	25	32	40	50	63
Stroke	[mm]	1 ... 3,000			1 ... 5,000 ¹⁾		1 ... 5,000
Pneumatic connection		M5	G ¹ / ₈		G ¹ / ₄		G ³ / ₈
Mode of operation		Double-acting					
Design		Rodless drive					
Driver principle		Slotted cylinder, mechanically coupled					
Guide		Plain-bearing guide					
Mounting position		Any					
Cushioning	PPV	Adjustable at both ends					
→ 1 / 3.1-31	YSR...	Self-adjusting at both ends					
Cushioning length with PPV cushioning	[mm]	16.5	15.5	17.5	29.5	29.8	31.1
Position sensing		For proximity sensor					
Type of mounting		Profile mounting					
		Foot mounting					
		Direct mounting					
Max. speed	[m/s]	3					

- 1) Strokes up to 8,500 mm on request
 - - Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Operating and environmental conditions							
Piston Ø		18	25	32	40	50	63
Operating pressure	[bar]	2 ... 8			1.5 ... 8		
Operating medium		Filtered compressed air, lubricated or unlubricated					
Ambient temperature ¹⁾	[°C]	-10 ... +60					
Corrosion resistance class CRC ²⁾		2					

- 1) Note operating range of proximity sensors
 2) Corrosion resistance class 2 to Festo standard 940 070
 Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents

Forces [N] and impact energy [J]							
Piston Ø		18	25	32	40	50	63
Theoretical force at 6 bar		153	295	483	754	1,178	1,870
Impact energy at end positions		→ 1 / 3.1-31					

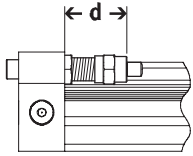
Weights [g]							
Piston Ø		18	25	32	40	50	63
Basic weight with 0 mm stroke		763	1,609	2,532	5,252	10,065	16,308
Additional weight per 10 mm stroke		23	35	55	76	117	180
Moving load		267	526	824	1,725	3,319	5,226

Linear drives DGC-GF, with plain-bearing guide

Technical data



Adjustable end position range d [mm]



- - Note

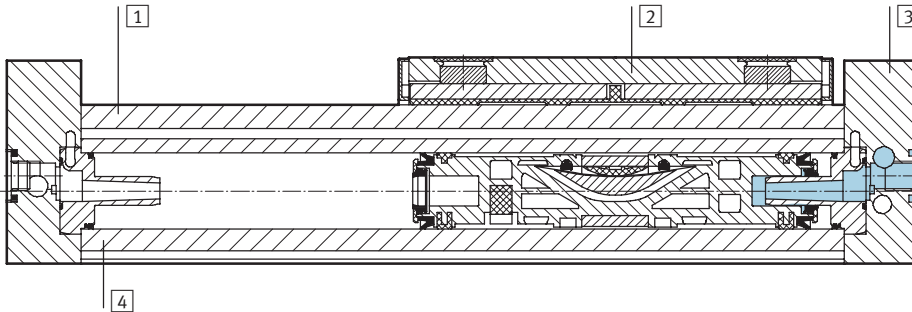
The permissible kinetic energy decreases if the stroke is reduced

with PPV adjustable cushioning at both ends.

Piston Ø	18	25	32	40	50	63
Cushioning 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
Cushioning 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

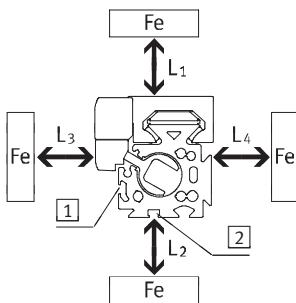
1	Guide rail	Anodised aluminium
2	Slide	Anodised aluminium
3	End cap	Anodised aluminium
4	Cylinder barrel	Anodised aluminium
-	Piston seal	Polyurethane
-	Sealing band/cover strip	Polyurethane
-	Slide elements	Polyacetate

Influence of ferritic materials on proximity sensors

Ferritic materials (steel parts or panels) directly next to the proximity sensors can cause sensing

malfunctions. The following safety distances must be observed.

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



Piston 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

Linear drives DGC-GF, with plain-bearing guide

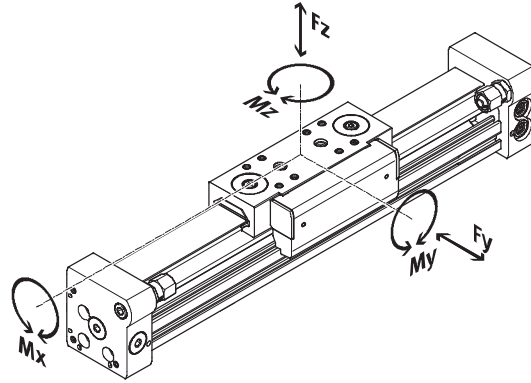
Technical data



Characteristic load values

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

They must not be exceeded in the dynamic range. Special attention must be paid to the cushioning phase.



Note

In order to avoid frictional restraint of the guide in the case of the drive DGC-GF with plain-bearing guide when used in vertical mode and with a high torque load, the variant with the recirculating ball bearing guide DGC-KF → 1 / 3.1-40 is recommended.

Rodless cylinders
Mechanically coupled

3.1

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

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

Permissible forces and torques referred to a speed of travel of 0.2 m/s

Piston Ø		18	25	32	40	50	63
F _y _{max.}	[N]	440	640	900	1,380	1,500	2,300
F _z _{max.}	[N]	540	1,300	1,800	2,000	2,870	4,460
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



Help in selection and ordering
ProDrive
www.festo.com/en/engineering

Linear drives DGC-GF, with plain-bearing guide

Technical data

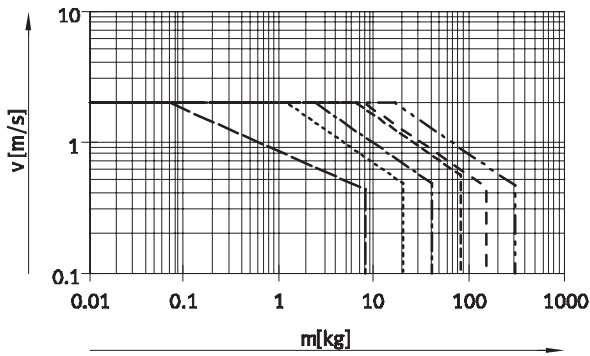


Rodless cylinders
Mechanically coupled

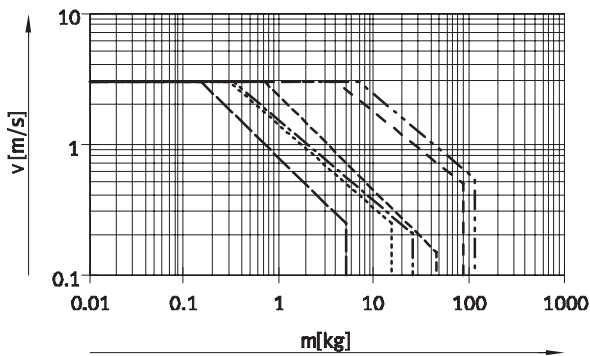
3.1

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

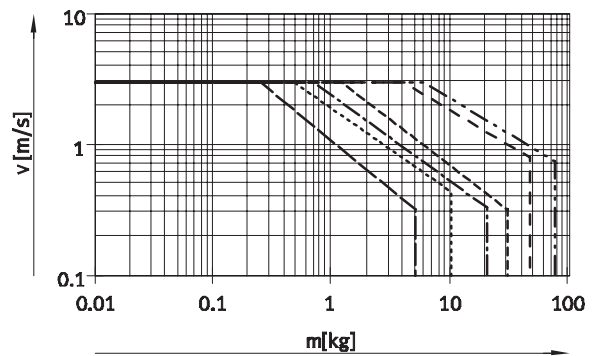
With PPV cushioning



With YSR cushioning



With YSRW cushioning



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

Note

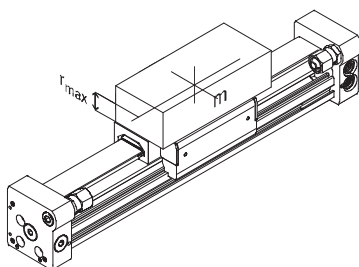
This data represents the maximum values that can be achieved. Values fluctuate in practice relative to the position of the effective load and mounting position.

Operating range of cushioning

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

Note

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



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

Linear drives DGC-GF, with plain-bearing guide

Technical data



Rodless cylinders
Mechanically coupled

3.1

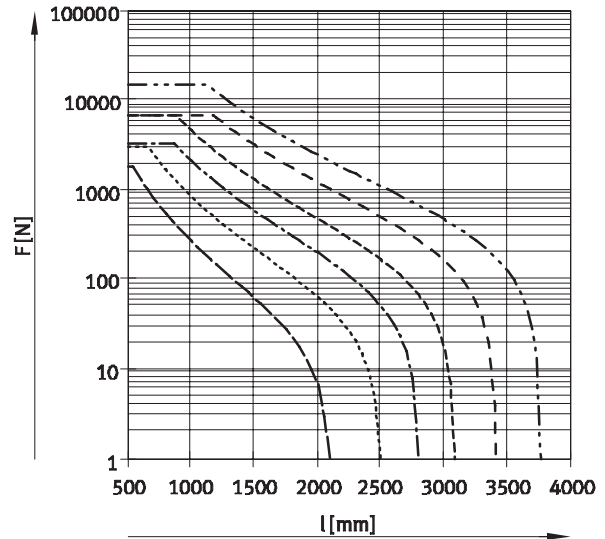
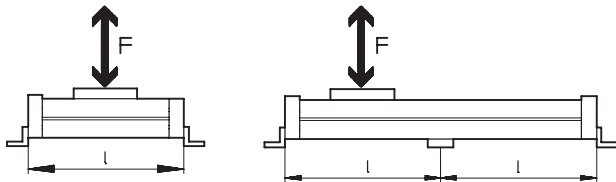
Number of profile mountings MUC dependent on force due to weight F and support span l

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

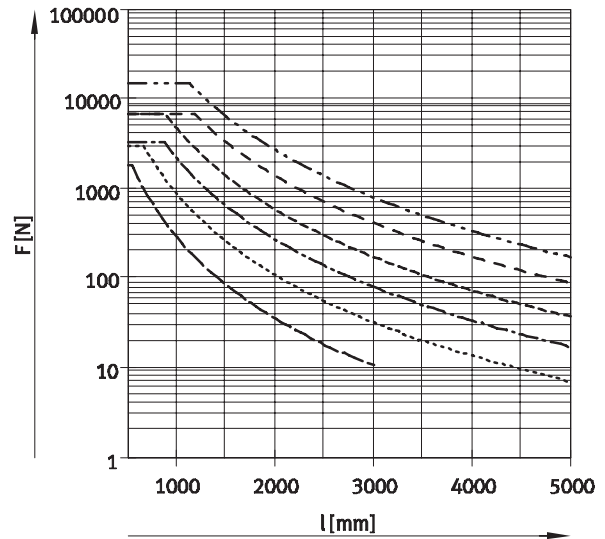
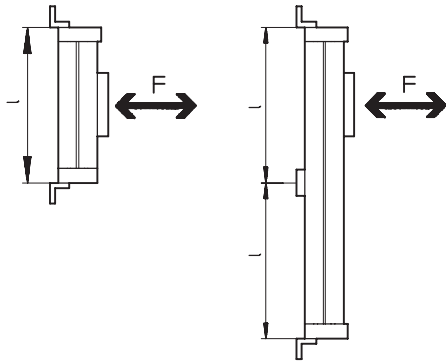
serve to determine the maximum permissible support span as a

function of the mounting position and the perpendicular force.

Horizontal mounting position



Vertical mounting position



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

Example:

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

The drive has an overall length of:
 $l = \text{stroke length} + L1$
 (see dimensions)
 $= 1,500 \text{ mm} + 200 \text{ mm}$
 $= 1,700 \text{ mm}$

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

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

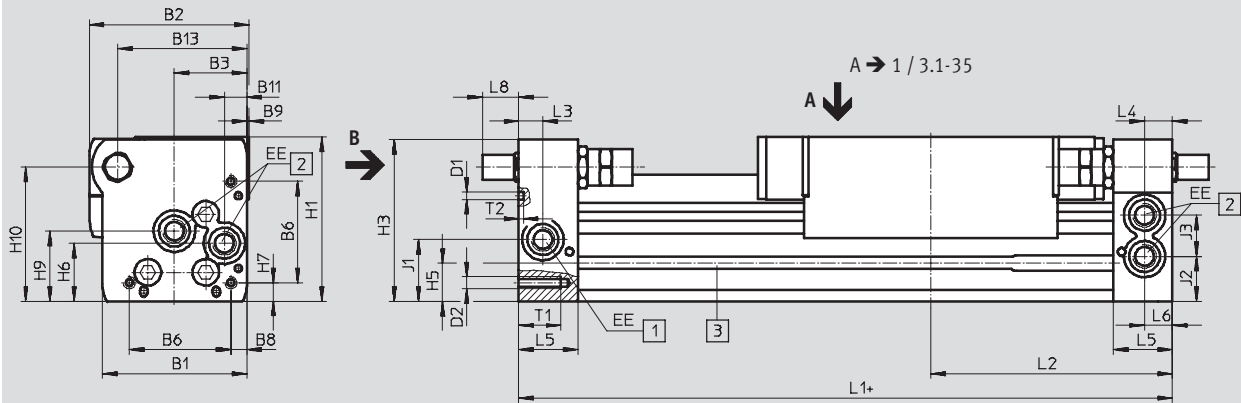
Linear drives DGC-GF, with plain-bearing guide

Technical data



Dimensions Download CAD data → www.festo.com/en/engineering

Ø 18 ... 40

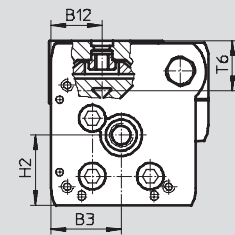
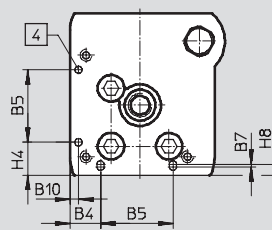
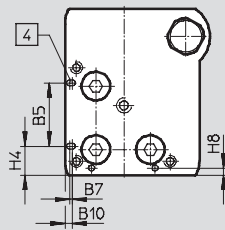


View B
Ø 18

Ø 25 ... 40

Ø 18 ... 40

- + plus stroke length
- 1 Supply port optional on two faces
- 2 Supply port optional on two faces, for supplying from one end
- 3 Sensor slot for proximity sensor
- 4 Mounting hole for foot mounting HPC



Ø	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	D1
[mm]					±0.05									±0.05
18	44.5	49.9	19.5	8.8	21	31	0.8	3.8	1	2.4	5.5	15.5	39	2
25	59.8	66	30	12.65	30	42	1	6.65	1	3.5	9.3	21	53.5	3
32	73	79	38.5	5.7	63.1	57.5	-	8.5	1.5	14	14.9	18	66.5	3
40	91	98.5	45	17.2	55	65	-	12.2	2	8	16.5	24.8	80.5	4

Ø	D2	EE	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	J1	J2
[mm]						±0.2								
18	M4	M5	56.3	23.1	55	9.6	13.4	20	4.6	2.4	25.2	46	20	16.5
25	M5	G $\frac{3}{8}$	68	29	67	13.65	15.8	24	7.65	4.5	29	55.5	26.1	18.6
32	M6	G $\frac{3}{8}$	78.5	30	77	5.7	17	27.7	8.5	14	35.2	63.8	30	22
40	M6	G $\frac{3}{4}$	99.5	41.5	97.5	17.2	25	36.5	12.2	8	44	81.5	35	26

Ø	J3	L1	L2	L3	L4	L5	L6	L8			T1	T2	T6	Stroke tolerance
								PPV	YSR	YSRW				
[mm]		+0.9/-0.2												
18	11	150	74.5	5.7	5.8	15	5.5	0	15.9	19.4	9	2	17.1	0 ... 2.5
25	17	200	100	10.5	10.6	24.5	10.6	0	12.5	15	17.5	2	20.5	
32	18.5	250	124.8	14.5	14.5	30.5	14.5	0	8.5	15.5	15	2	21.3	
40	26	300	150	14.6	14.6	33.5	14.6	0	12.8	21	20	3	30.7	

Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Linear drives DGC-GF, with plain-bearing guide

Technical data



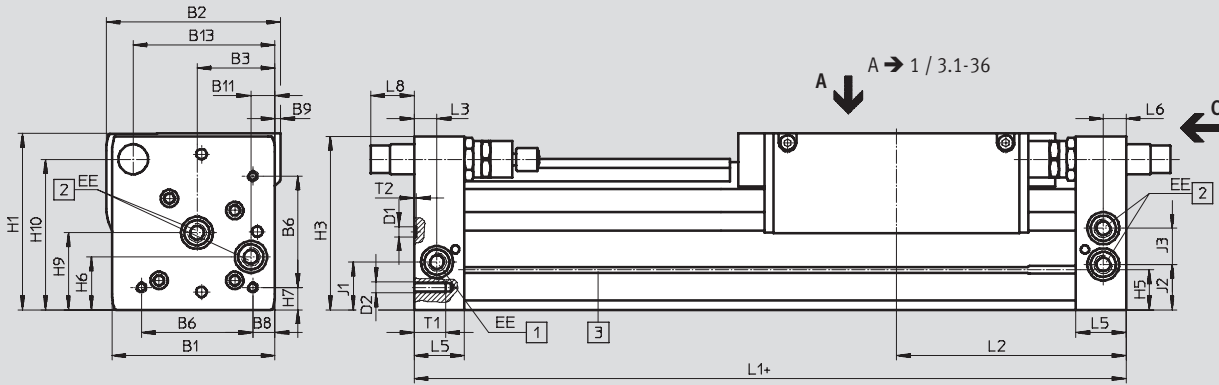
Rodless cylinders
Mechanically coupled

3.1

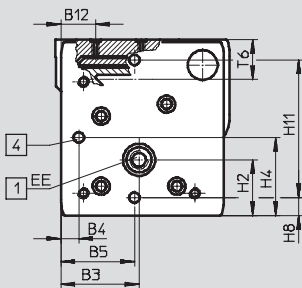
Dimensions

Download CAD data → www.festo.com/en/engineering

∅ 50/63



View C



- + plus stroke length
- 1 Supply port optional on two faces
- 2 Supply port optional on two faces, for supplying from one end
- 3 Sensor slot for proximity sensor
- 4 Mounting hole for foot mounting HPC

∅	B1	B2	B3	B4	B5	B6	B8	B9	B11	B12	B13	D1	D2
[mm]					±0.05							∅ H7	
50	113	126.5	60	8	52.8	81.6	12	–	21	24	97	9	M8
63	142	149	68	15.5	68	97	19.5	5	21	30	123.5	9	

∅	EE	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	J1
[mm]												±0.05	
50	G1/4	124.5	38.5	122.5	52.8	29.3	36	12	8	53	104.5	100	30.5
63	G3/8	153.5	48.5	151	68	34.8	46	19.5	15.5	67	131	120	41.5

∅	J2	J3	L1	L2	L3	L5	L6	L8			T1	T2	T6	Stroke tolerance
								PPV	YSR	YSRW				
[mm]			+0.9/-0.2								+0.2			
50	30.5	28	350	175	17	41	17	0	31	36.3	24	2.1	30.4	0 ... 2.5
63	39.5	31.5	400	200	20	44	20	0	38.3	48.3	27.5	2.1	36.2	

– † – Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Linear drives DGC-GF, with plain-bearing guide

Technical data

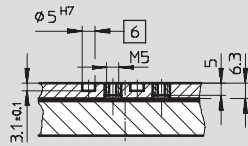


Dimensions

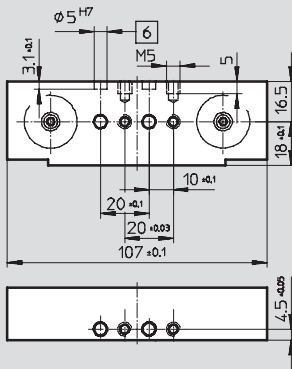
Download CAD data → www.festo.com/en/engineering

Slide

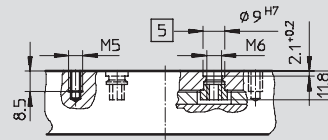
Ø 18



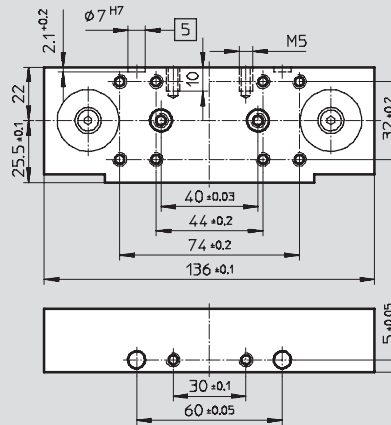
View A



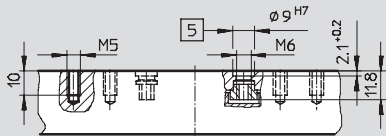
Ø 25



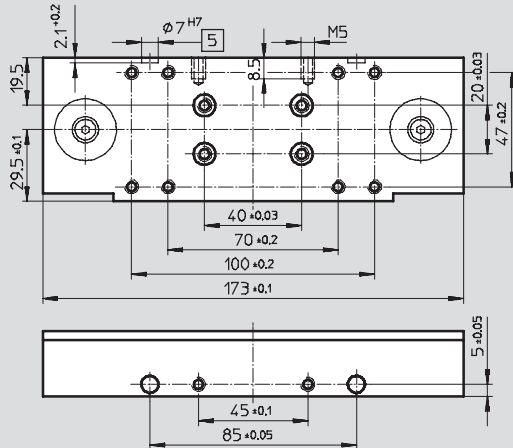
View A



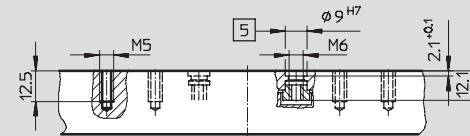
Ø 32



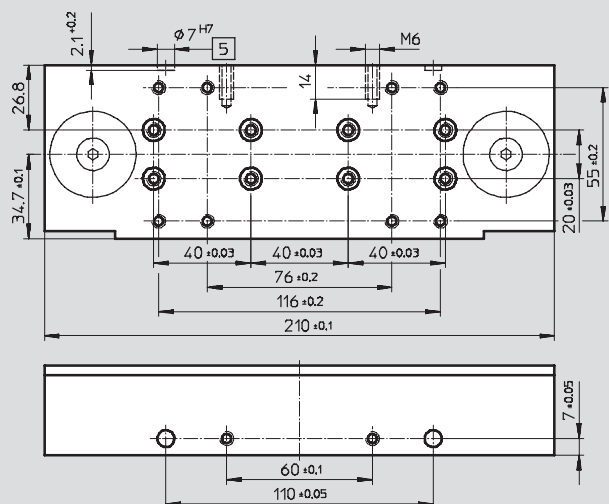
View A



Ø 40



View A



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

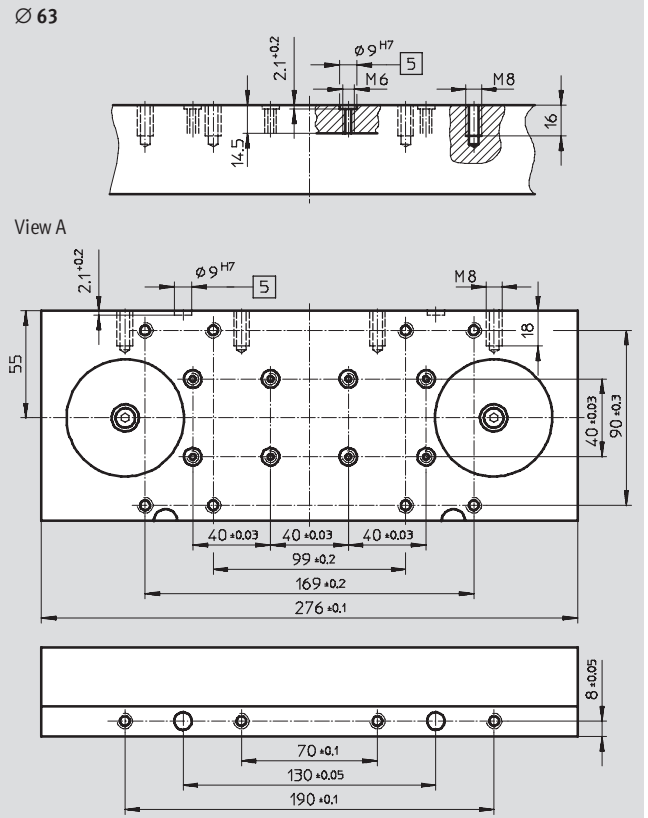
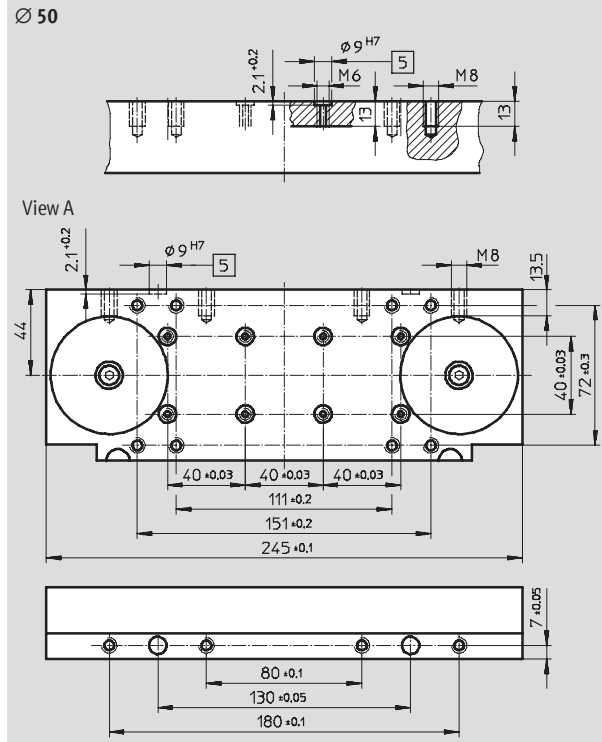
Linear drives DGC-GF, with plain-bearing guide

Technical data



Dimensions Download CAD data → www.festo.com/en/engineering

Slide



5 Hole for centring sleeve ZBH

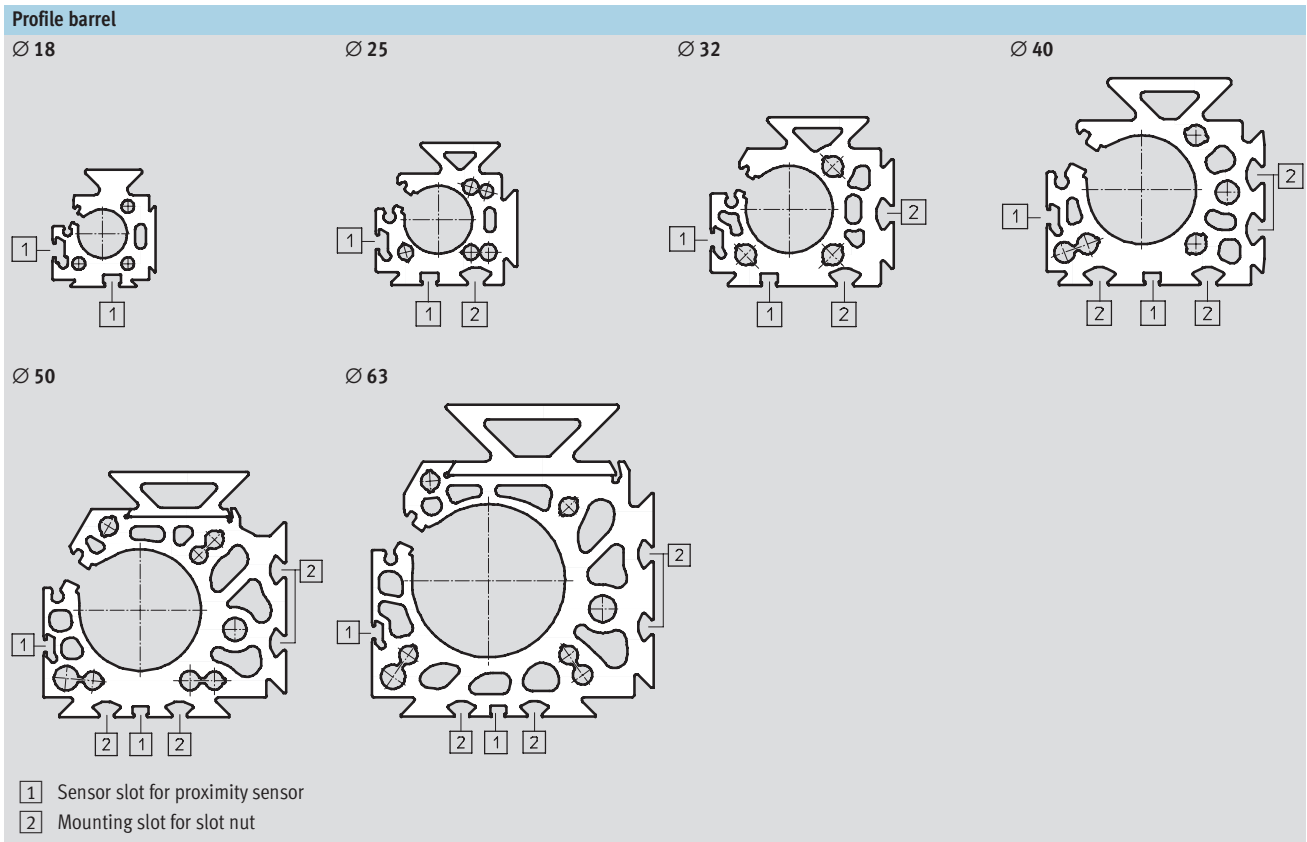
6 Hole for centring pin ZBS

Rodless cylinders
Mechanically coupled

3.1

Linear drives DGC-GF, with plain-bearing guide

Technical data



Rodless cylinders
Mechanically coupled

3.1


Linear drives DGC-GF, with plain-bearing guide

Ordering data – Modular products

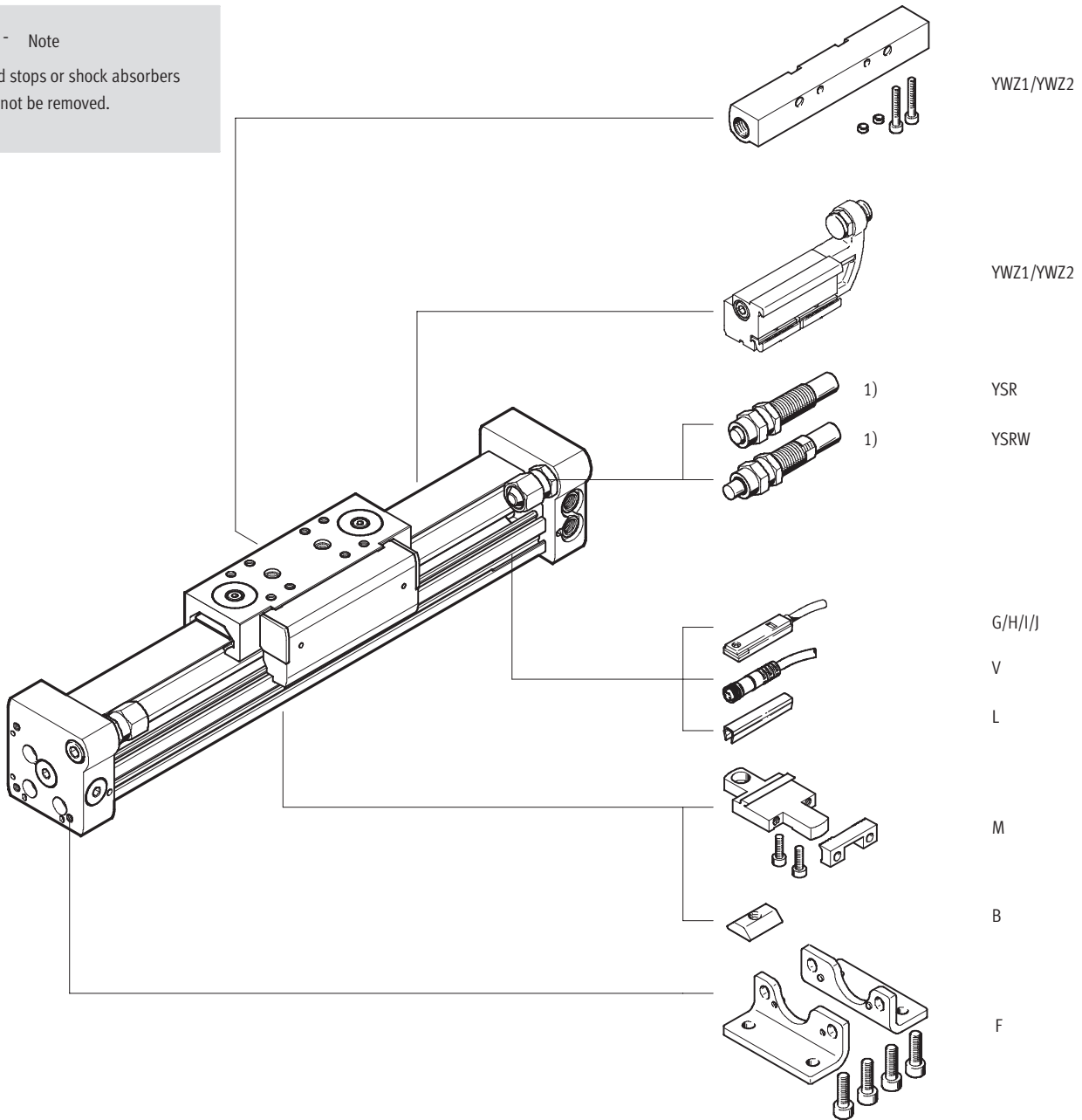


Order code

Mandatory data/options

-  - Note

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



Rodless cylinders
Mechanically coupled

3.1

Linear drives DGC-GF, with plain-bearing guide

Ordering data – Modular products

FESTO

M Mandatory data				O Options		
Module No.	Function	Stroke	Cushioning	Accessories		
	Piston \varnothing	Guide	Position sensing	Accessories supplied loose	User manual	
532 446	DGC	18	1 ... 5,00	PPV	A	F, ...M, ...B, ...G, ...H, ...I, ...J, ...V, ...L, YWZ1, YWZ2
532 447		25	0	YSR		0
532 448		32		YSRW		
532 449		40				
532 450		50				
532 451		63				
Order example						
532 446	DGC	- 18	- 250	- GF	- PPV	- A
					ZUB	- F2M2I2V

Ordering table										
Size	18	25	32	40	50	63	Condi- tions	Code	Enter code	
M Module No.	532 446	532 447	532 448	532 449	532 450	532 451				
Function	Linear drive							DGC	DGC	
Piston \varnothing [mm]	18	25	32	40	50	63		-...		
Stroke [mm]	1 ... 3,000		1 ... 5,000				1	-...		
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	For proximity sensor							-A	-A	
O Accessories	Supplied loose (can be retrofitted)							ZUB-	ZUB-	
Foot mounting	1							F		
Profile mounting	1 ... 9							...M		
Slot nut for mounting slot	-		1 ... 9				...B			
Proximity sensor	Cable, 2.5 m	1 ... 9					...G			
	M8 plug	1 ... 9					...H			
Proximity sensor,	Cable, 2.5 m	1 ... 9					...I			
contactless, PNP	M8 plug	1 ... 9					...J			
Cable with socket	M8, 2.5 m	1 ... 9					...V			
Slot cover for sensor slot	1 ... 9							...L		
Mechanical end position limiter	Variable end position, at one end						2	YWZ1		
	Variable end position, at both ends						2	YWZ2		
User manual	Express waiver – no operating instructions to be included (already available)							-O		

1 Stroke Size 25, 32, 40: Strokes up to 8,500 mm on request

2 YWZ1, YWZ2 Only with cushioning YSR or YSRW

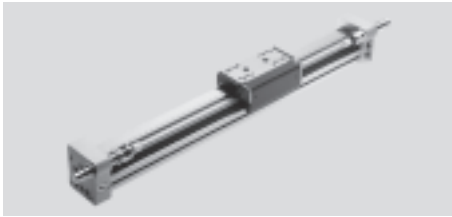
Transfer order code

DGC - - - GF - - A ZUB - -

Ordering data – Wearing parts kits					
Piston \varnothing	Part No.	Type	Piston \varnothing	Part No.	Type
18	684 486	DGC-18	40	684 489	DGC-40
25	684 487	DGC-25	50	719 825	DGC-50
32	684 488	DGC-32	63	719 826	DGC-63


Linear drives DGC-KF, with recirculating ball bearing guide

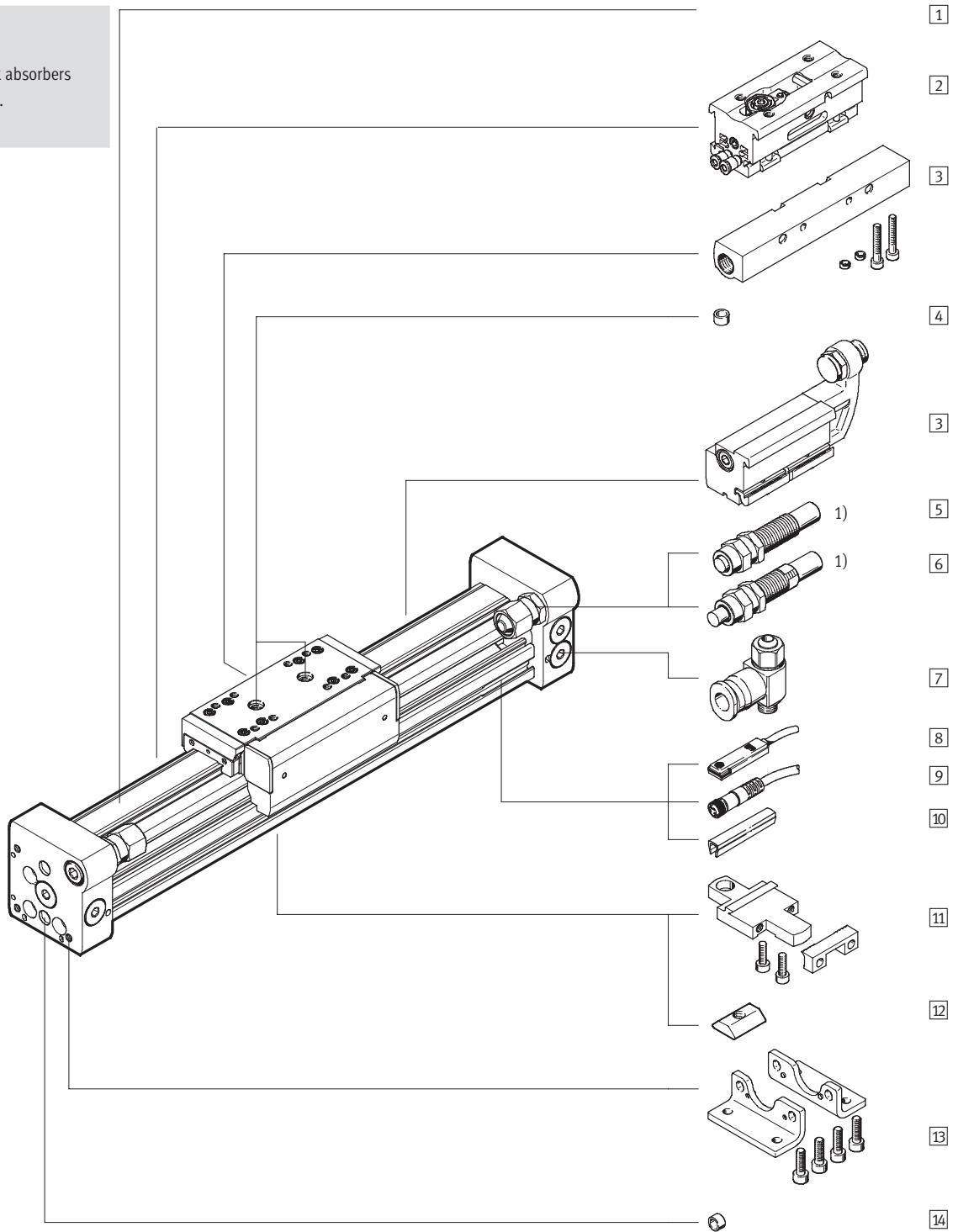
Peripherals overview



Rodless cylinders
Mechanically coupled

3.1

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



Linear drives DGC-KF, with recirculating ball bearing guide

Peripherals overview

Variants and accessories			
Type	For piston \varnothing	Brief description	→ Page
1) Linear drive DGC-KF	8 ... 63	Linear drive without accessories, with recirculating ball bearing guide	1 / 3.1-44
2) Intermediate position module Z1/Z2/Z3	25, 32	Permits up to three intermediate positions	1 / 3.1-70
3) Mechanical end position limiter YWZ	18 ... 63	For variable end position adjustment, e.g. for format adjustments	1 / 3.1-68
4) Centring pin/sleeve ¹⁾ ZBS/ZBH	8 ... 63	For centring loads and attachments on the slide	1 / 3.1-72
- Cushioning P	8, 12	Non-adjustable, flexible cushioning. Used only at low speeds	1 / 3.1-58
- Cushioning PPV	18 ... 63	Adjustable pneumatic end position cushioning. Used at medium speeds	1 / 3.1-58
5) Shock absorber YSR	8 ... 63	Self-adjusting hydraulic shock absorber with spring return and linear cushioning characteristic	1 / 3.1-58
6) Shock absorber YSRW	8 ... 63	Self-adjusting hydraulic shock absorber with spring return and progressive cushioning characteristic	1 / 3.1-58
7) One-way flow control valve GRLA	8 ... 63	For regulating speed	1 / 3.1-72
8) Proximity sensor G/H/I/J	8 ... 63	For sensing the slide position	1 / 3.1-73
9) Cable with socket V	8 ... 63	For proximity sensor	1 / 3.1-73
10) Slot cover L	18 ... 63	For protecting against ingress of dirt and securing proximity sensor cables	1 / 3.1-72
11) Profile mounting M	8 ... 63	Simple and precise mounting option via dovetail connection	1 / 3.1-64
12) Slot nut B	25 ... 63	For mounting attachments	1 / 3.1-72
13) Foot mounting F	8 ... 63	For mounting on end cap	1 / 3.1-60
14) Centring pin/sleeve ¹⁾ ZBS/ZBH	8 ... 63	For centring the drive without foot mountings (user-specific)	1 / 3.1-72

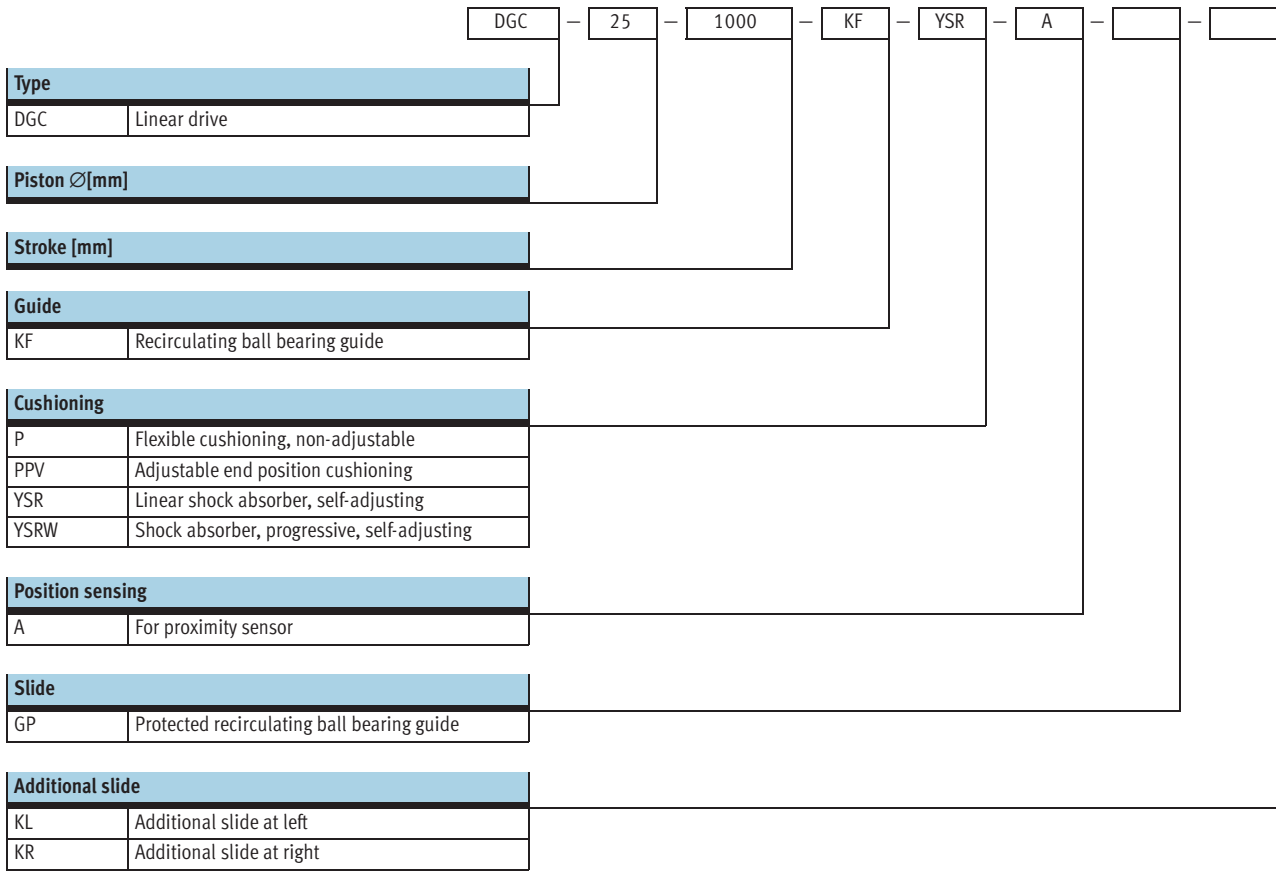
1) Included in the scope of delivery of the drive

Linear drives DGC-KF, with recirculating ball bearing guide

Type codes

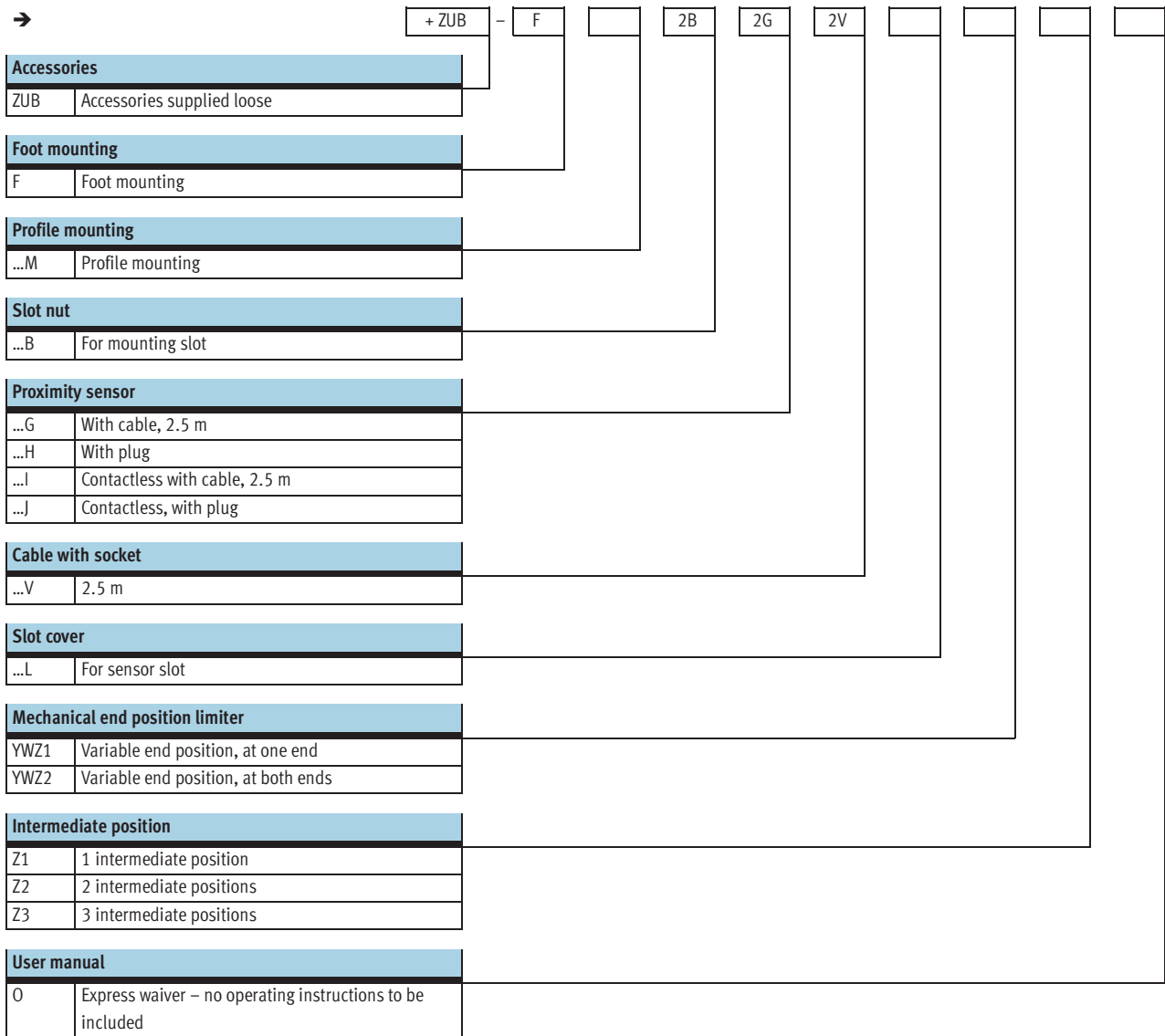
Rodless cylinders
Mechanically coupled

3.1



Linear drives DGC-KF, with recirculating ball bearing guide

Type codes



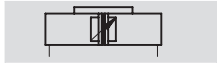
Rodless cylinders
 Mechanically coupled
3.1

Linear drives DGC-KF, with recirculating ball bearing guide

Technical data



Function



www.festo.com/en/Spare_parts_service

Wearing parts kits
→ 1 / 3.1-58



- Diameter
8 ... 63 mm
- Stroke length
1 ... 5,000 mm

General technical data									
Piston Ø		8	12	18	25	32	40	50	63
Stroke	[mm]	1 ... 1,300	1 ... 1,900	1 ... 3,000	1 ... 5,000 ¹⁾			1 ... 5,000	
Pneumatic connection		M5			G ¹ / ₈	G ¹ / ₄		G ³ / ₈	
Mode of operation		Double-acting							
Design		Rodless drive							
Driver principle		Slotted cylinder, mechanically coupled							
Guide		External recirculating ball bearing guide							
Mounting position		Any							
Cushioning → 1 / 3.1-47	P	Non-adjustable at either end		-					
	PPV	-		Adjustable at both ends					
	YSR...	Self-adjusting at both ends							
Cushioning length with PPV cushioning	[mm]	-		16.5	15.5	17.5	29.5	29.8	31.1
Position sensing		For proximity sensor							
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)							

1) Strokes up to 8,500 mm on request

- Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Operating and environmental conditions									
Piston Ø		8	12	18	25	32	40	50	63
Operating pressure	[bar]	2.5 ... 8		2 ... 8		1.5 ... 8			
Operating medium		Filtered compressed air, lubricated or unlubricated							
Ambient temperature ¹⁾	[°C]	-10 ... +60							
Corrosion resistance class CRC ²⁾		1							

1) Note operating range of proximity sensors

2) Corrosion resistance class 1 to Festo standard 940 070

Components requiring low corrosion resistance. Transport and storage protection. Parts that do not have primarily decorative surface requirements, e.g. in internal areas that are not visible or behind covers

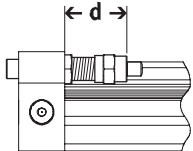
Forces [N]									
Piston Ø		8	12	18	25	32	40	50	63
Theoretical force at 6 bar		30	68	153	295	483	754	1,178	1,870
Impact energy at end positions		→ 1 / 3.1-47							

Linear drives DGC-KF, with recirculating ball bearing guide

Technical data

Weights [g]								
Piston Ø	8	12	18	25	32	40	50	63
Basic weight with 0 mm stroke	225	391	975	2,113	2,837	6,996	13,342	22,220
Additional weight per 10 mm stroke	11	16	31	49	74	117	153	236
Moving load	77	149	331	732	1,146	2,330	4,511	8,225

Adjustable end position range d [mm]



-  - Note

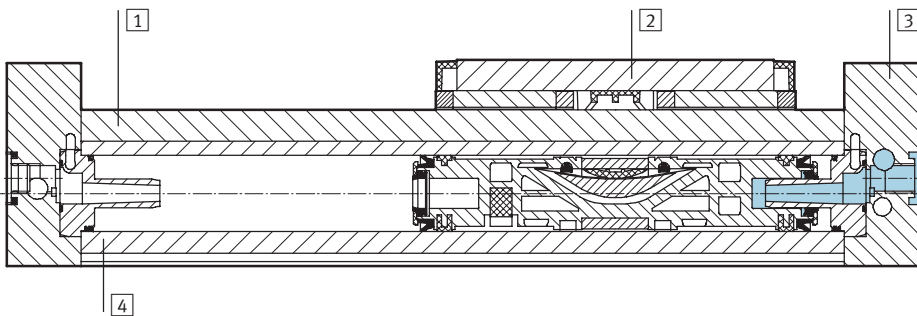
The permissible kinetic energy decreases if the stroke is reduced

with PPV adjustable cushioning at both ends.

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

Materials

Sectional view



Linear drives		
1	Guide rail	High-alloy steel
2	Slide	High-alloy steel
3	End cap	Anodised aluminium
4	Cylinder barrel	Anodised aluminium
-	Piston seal	Polyurethane
-	Sealing band/cover strip	Polyurethane
-	Note on materials	Free of copper, PTFE and silicone

Linear drives DGC-KF, with recirculating ball bearing guide

Technical data

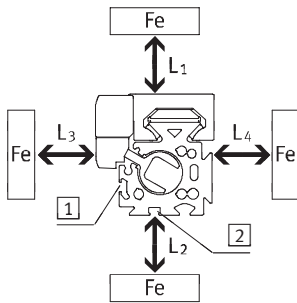


Influence of ferritic materials on proximity sensors

Ferritic materials (steel parts or panels) directly next to the proximity sensors can cause sensing

malfunctions. The following safety distances must be observed.

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



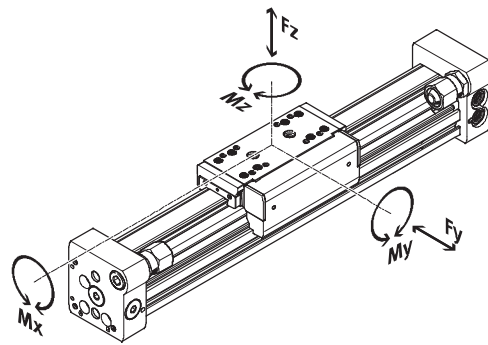
Piston Ø		8	12	18	25	32	40	50	63
Distance L1	1 [mm]	0	0	0	0	0	0	0	0
	2 [mm]	-	-	0	0	0	0	0	0
Distance L2	1 [mm]	20	10	10	10	0	0	0	0
	2 [mm]	-	-	25	25	25	25	25	25
Distance L3	1 [mm]	30	25	25	25	25	25	25	25
	2 [mm]	-	-	10	10	0	0	0	0
Distance L4	1 [mm]	0	0	0	0	0	0	0	0
	2 [mm]	-	-	0	0	0	0	0	0

3.1

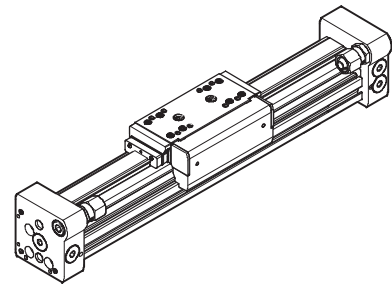
Characteristic load values for linear drive with recirculating ball bearing guide and guide

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

They must not be exceeded in the dynamic range. Special attention must be paid to the cushioning phase.



GP – Protected guide



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

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

Permissible forces and torques

Piston Ø		8	12	18	25	32	40	50	63
F _y _{max.}	[N]	300	650	1,850	3,050	3,310	6,890	6,890	15,200
F _z _{max.}	[N]	300	650	1,850	3,050	3,310	6,890	6,890	15,200
M _x _{max.}	[Nm]	1.7	3.5	16	36	54	144	144	529
M _y _{max.}	[Nm]	4.5	10	51	97	150	380	634	1,157
M _z _{max.}	[Nm]	4.5	10	51	97	150	380	634	1,157



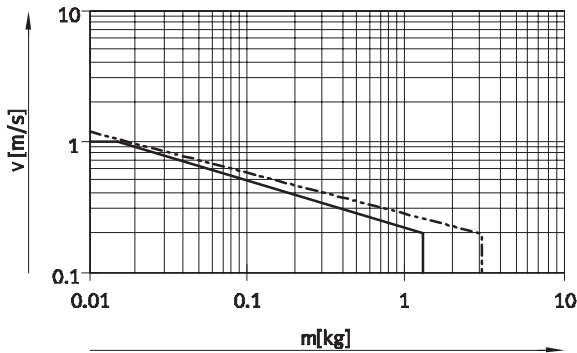
Help in selection and ordering
ProDrive
www.festo.com/en/engineering

Linear drives DGC-KF, with recirculating ball bearing guide

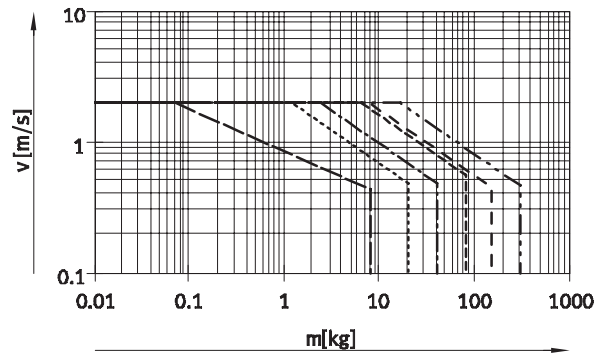
Technical data

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

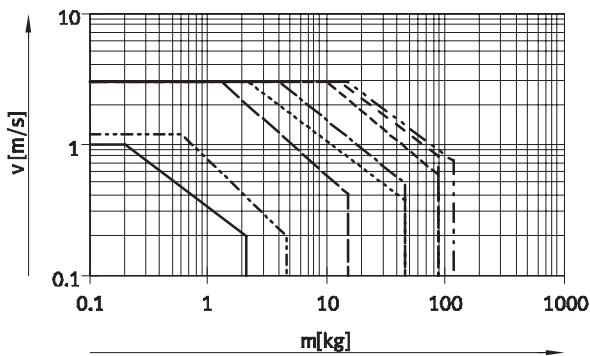
Piston \varnothing 8/12 with P cushioning



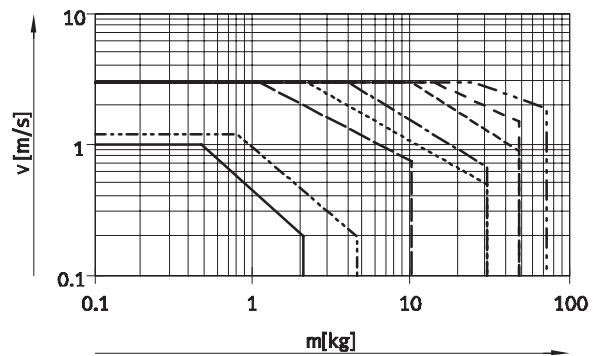
Piston \varnothing 18 ... 63 with PPV cushioning



Piston \varnothing 8 ... 63 with YSR cushioning



Piston \varnothing 8 ... 63 with YSRW cushioning



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

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

Operating range of cushioning

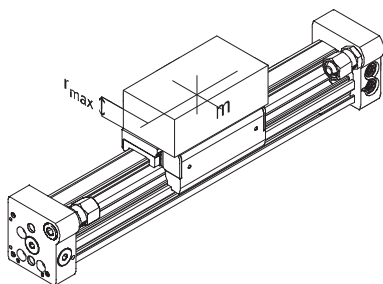
The end position cushioning must be adjusted to ensure jerk-free operation. If the operating conditions are outside the permissible range, the

load to be moved must be cushioned using suitable equipment (shock absorbers, stops, etc.), preferably at the centre of gravity of the mass.

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

The data applies to a horizontal mounting position:

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



Linear drives DGC-KF, with recirculating ball bearing guide

Technical data



Rodless cylinders
Mechanically coupled

3.1

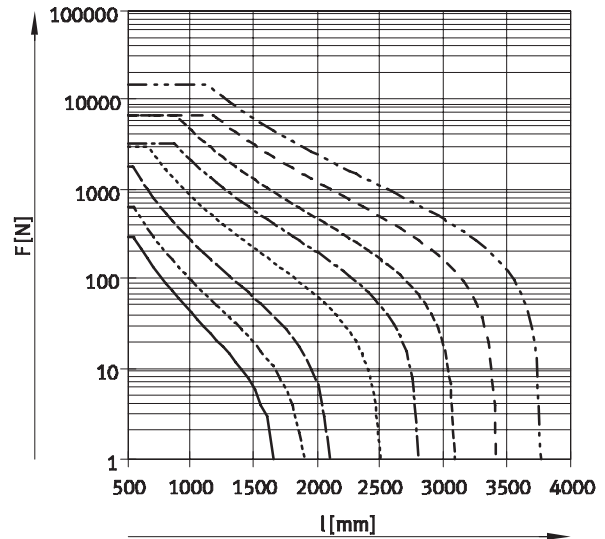
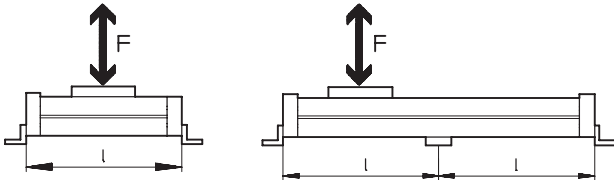
Number of profile mountings MUC dependent on force due to weight F and support span l

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

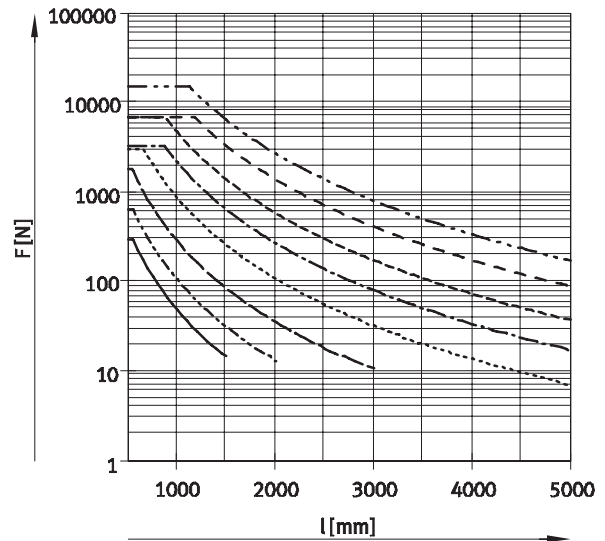
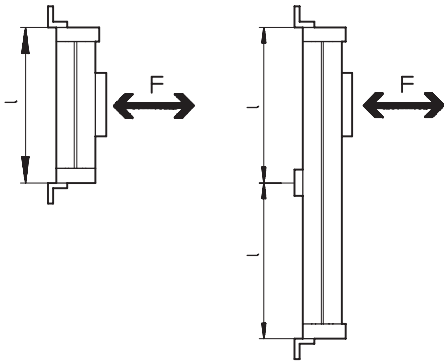
serve to determine the maximum permissible support span as a

function of the mounting position and the perpendicular force.

Horizontal mounting position



Vertical mounting position



—	∅ 8	- - - -	∅ 18	- - - - -	∅ 40
- · - · -	∅ 12	- · - · -	∅ 25	- · - · -	∅ 50
		- · - · -	∅ 32	- · - · -	∅ 63

Example:

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

The drive has an overall length of:
 $l = \text{stroke length} + L1$
 (see dimensions)
 $= 1,500 \text{ mm} + 200 \text{ mm}$
 $= 1,700 \text{ mm}$

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

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

Linear drives DGC-KF, with recirculating ball bearing guide

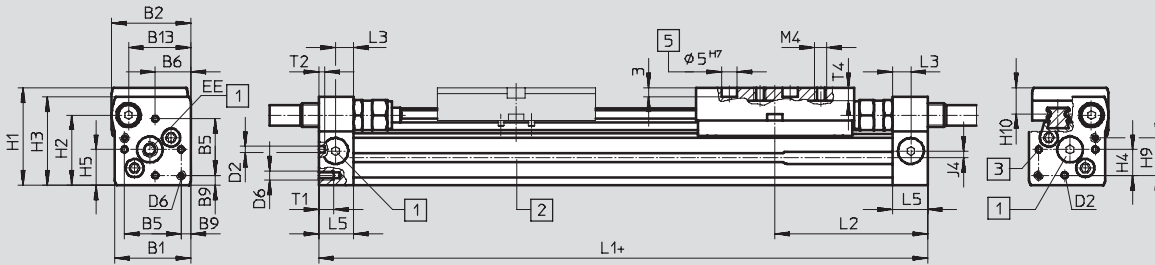
Technical data



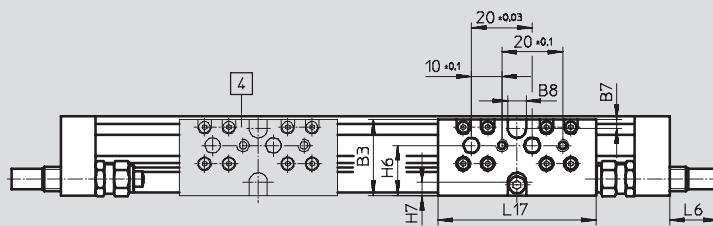
Dimensions

Download CAD data → www.festo.com/en/engineering

Ø 8 and 12



- + plus stroke length
- 1 Supply port
optional on three faces
- 2 Sensor slot for proximity sensor
- 3 Mounting hole for foot
mounting or centring pin
- 4 Additional slide KL
- 5 Hole for centring pin ZBS



Ø	B1	B2	B3	B5	B6	B7	B8	B9	B13	D2	D6	EE
[mm]							±0.05	±0.1		Ø H8		
8	25	26	25	18.6	11.7	3	6	3.2	20.5	2	M3	M5
12	30.2	31	31	20.6	13.5	3	8	4.8	25	2	M4	M5

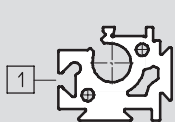
Ø	H1	H2	H3	H4	H5	H6	H7	H9	H10	J4	L1	L2
[mm]											+0.5/ -0.4	
8	32	23	29	8.5	11.7	16.5	4.5	12.3	8.7	2.2	100	50.1
12	37.5	28.5	34.5	8.7	13.5	20.5	5	14.7	9.8	3	125	62.1

Ø	L3	L5	L6			L17	T1	T2	T4	Stroke tolerance
			P	YSR	YSRW					
[mm]										
8	6	11.5	0	16	16.2	52	5	2	4.3	0 ... 1.7
12	8	16	0	11.3	12.3	65	6	2	5	

Profile barrel

Ø 8

Ø 12



1 Sensor slot for proximity sensor

Rodless cylinders
Mechanically coupled

3.1

Linear drives DGC-KF, with recirculating ball bearing guide

Technical data

FESTO

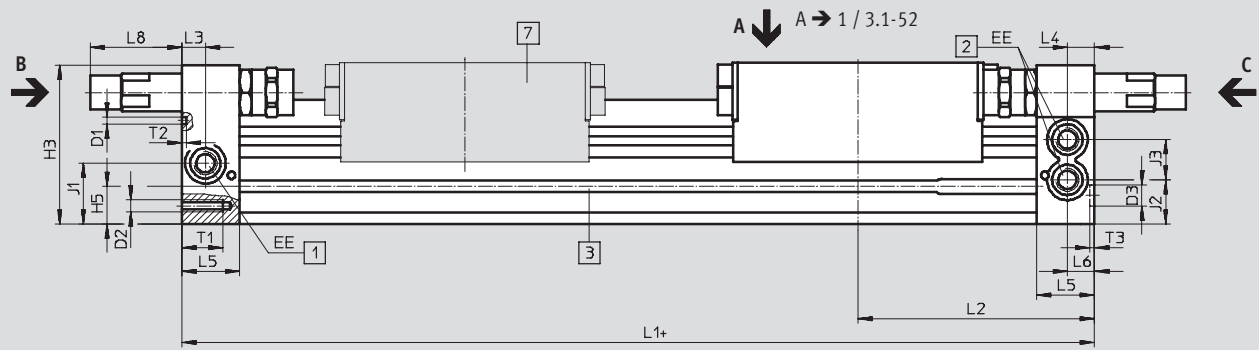
Rodless cylinders
Mechanically coupled

3.1

Dimensions

Download CAD data → www.festo.com/en/engineering

Ø 18 ... 40



View C

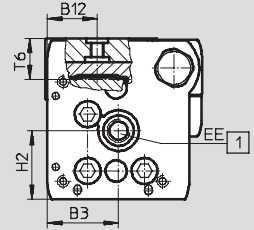
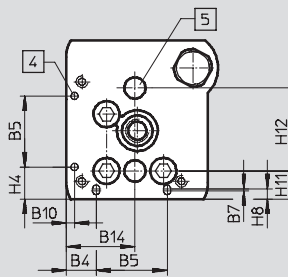
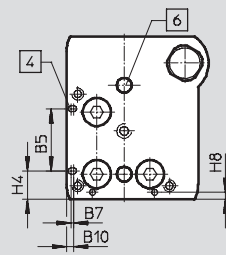
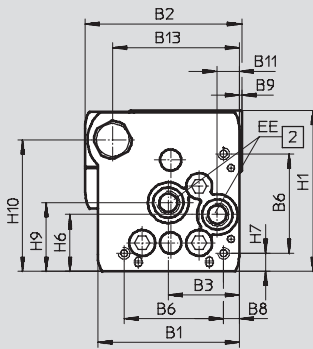
Ø 18 ... 40

View B

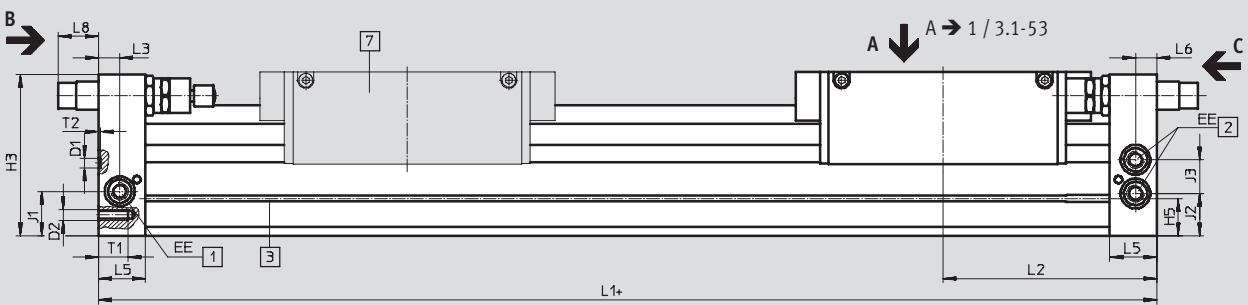
Ø 18

Ø 25 ... 40

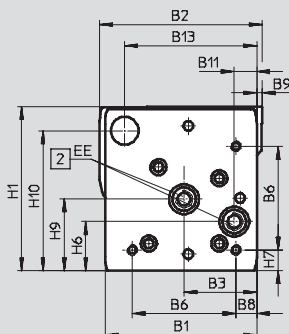
Ø 18 ... 40



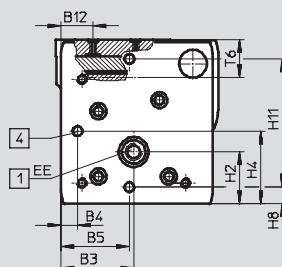
Ø 50/63



View C



View B



- + plus stroke length
- [1] Supply port optional on two faces
- [2] Supply port optional on two faces, for supplying from one end
- [3] Sensor slot for proximity sensor
- [4] Mounting hole for foot mounting HPC
- [5] Hole for centring sleeve ZBH
- [6] Hole for centring pin ZBS
- [7] Additional slide

Linear drives DGC-KF, with recirculating ball bearing guide

Technical data

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

∅	B13	B14	D1	D2	D3	EE	H1	H2	H3	H4	H5	H6
[mm]			∅		∅					±0.2		
			H7		H7							
18	39	19.5	2±0.05	M4	5	M5	56.3	23.1	55	9.6	13.4	20
25	53	30	3±0.05	M5	9	G $\frac{1}{8}$	68	29	67	13.65	15.8	24
32	65	38.5	3±0.05	M6	9	G $\frac{1}{8}$	78.5	30	77	5.7	17	27.7
40	80.5	45	4±0.05	M6	9	G $\frac{1}{4}$	99.5	41.5	97.5	17.2	25	36.5
50	97	–	9 ^{H7}	M8	–	G $\frac{1}{4}$	124.5	38.5	122.5	52.8	29.3	36
63	123.5	–	9 ^{H7}	M10	–	G $\frac{3}{8}$	153.5	48.5	151	68	34.8	46

∅	H7	H8	H9	H10	H11	H12	J1	J2	J3	L1	
										KF	KF-GP
[mm]						±0.05				+0.9/–0.2	+0.9/–0.2
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	–

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

• † - Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Linear drives DGC-KF, with recirculating ball bearing guide

Technical data



Rodless cylinders
Mechanically coupled

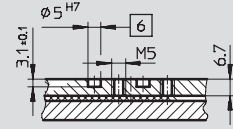
3.1

Dimensions

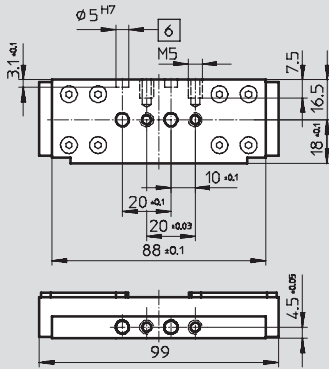
Download CAD data → www.festo.com/en/engineering

Slide

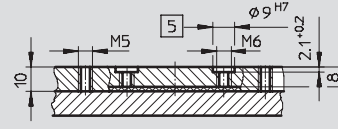
Ø 18



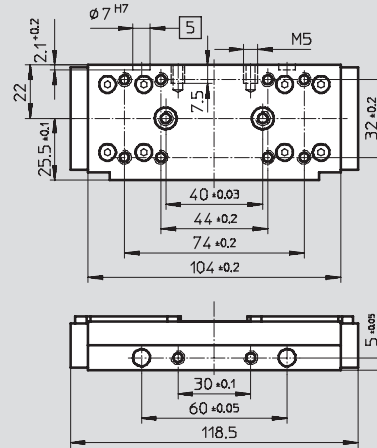
View A



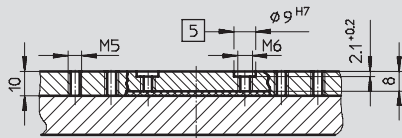
Ø 25



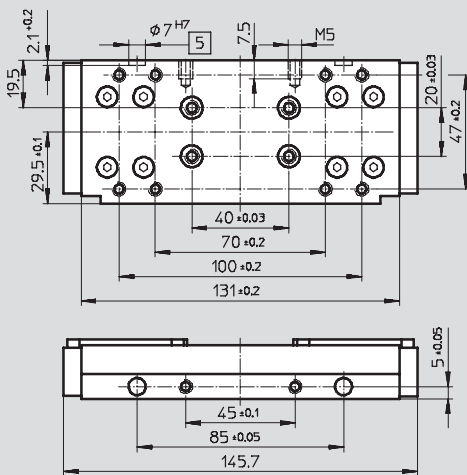
View A



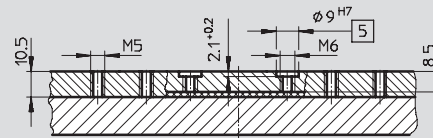
Ø 32



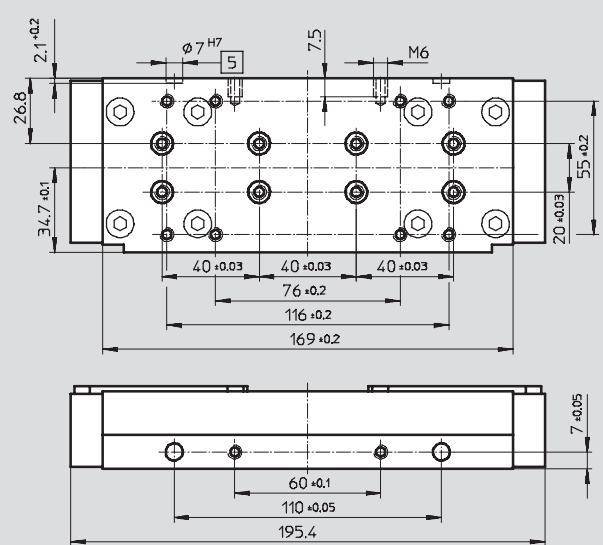
View A



Ø 40



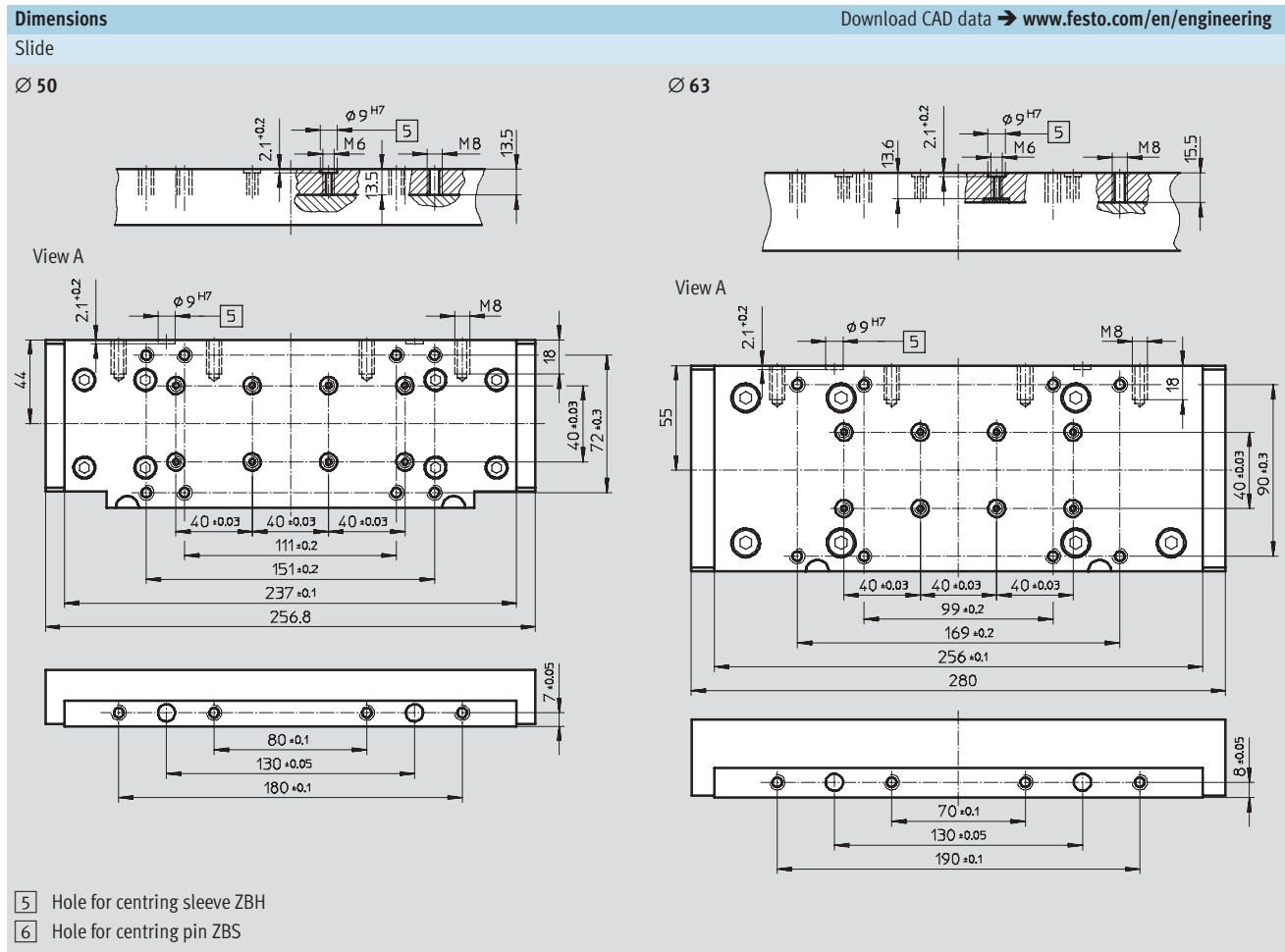
View A



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

Linear drives DGC-KF, with recirculating ball bearing guide

Technical data



Rodless cylinders
Mechanically coupled

3.1

Linear drives DGC-KF, with recirculating ball bearing guide

Technical data

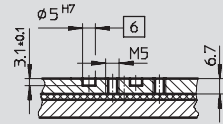


Dimensions

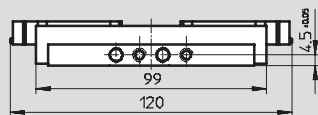
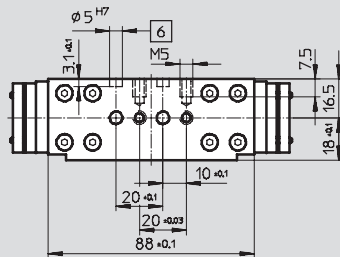
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Slide, variant GP – Protected recirculating ball bearing guide

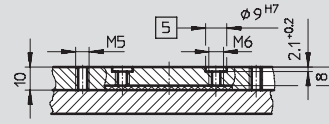
Ø 18



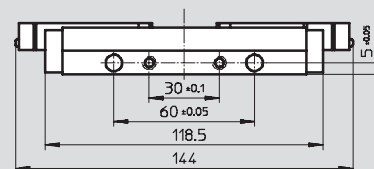
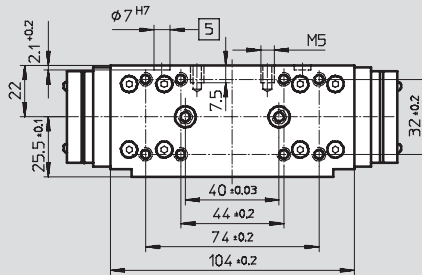
View A



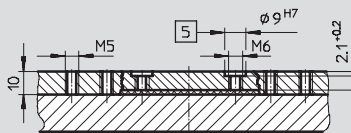
Ø 25



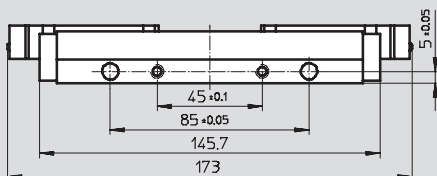
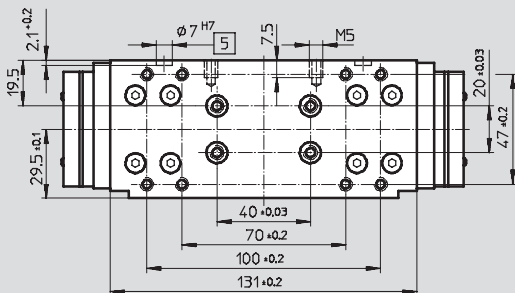
View A



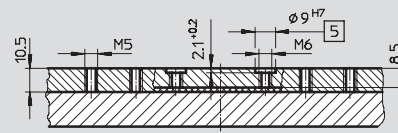
Ø 32



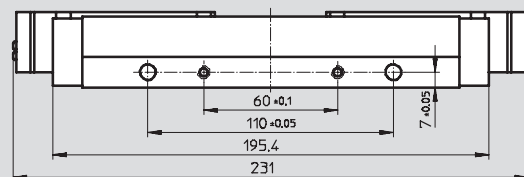
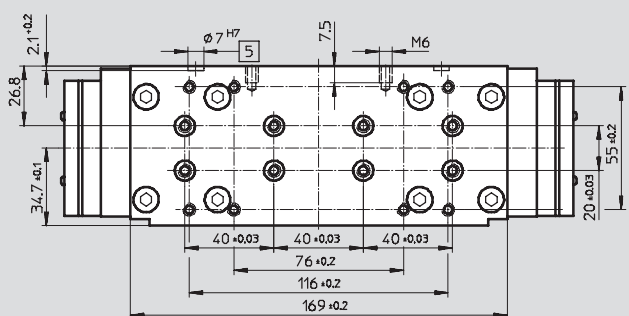
View A



Ø 40



View A



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

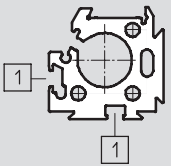
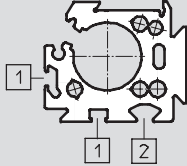
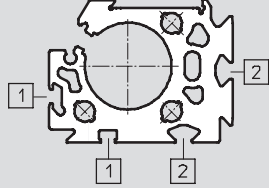
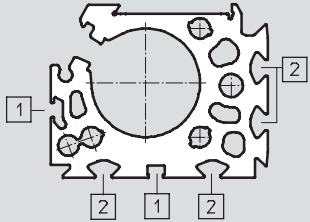
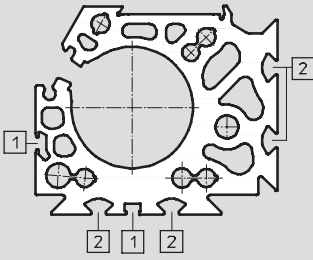
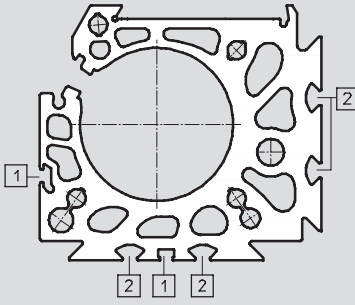
Rodless cylinders
Mechanically coupled

3.1

Linear drives DGC-KF, with recirculating ball bearing guide

Technical data

Profile barrel

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

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

Rodless cylinders
 Mechanically coupled

3.1


Linear drives DGC-KF, with recirculating ball bearing guide

Ordering data – Modular products



Order code

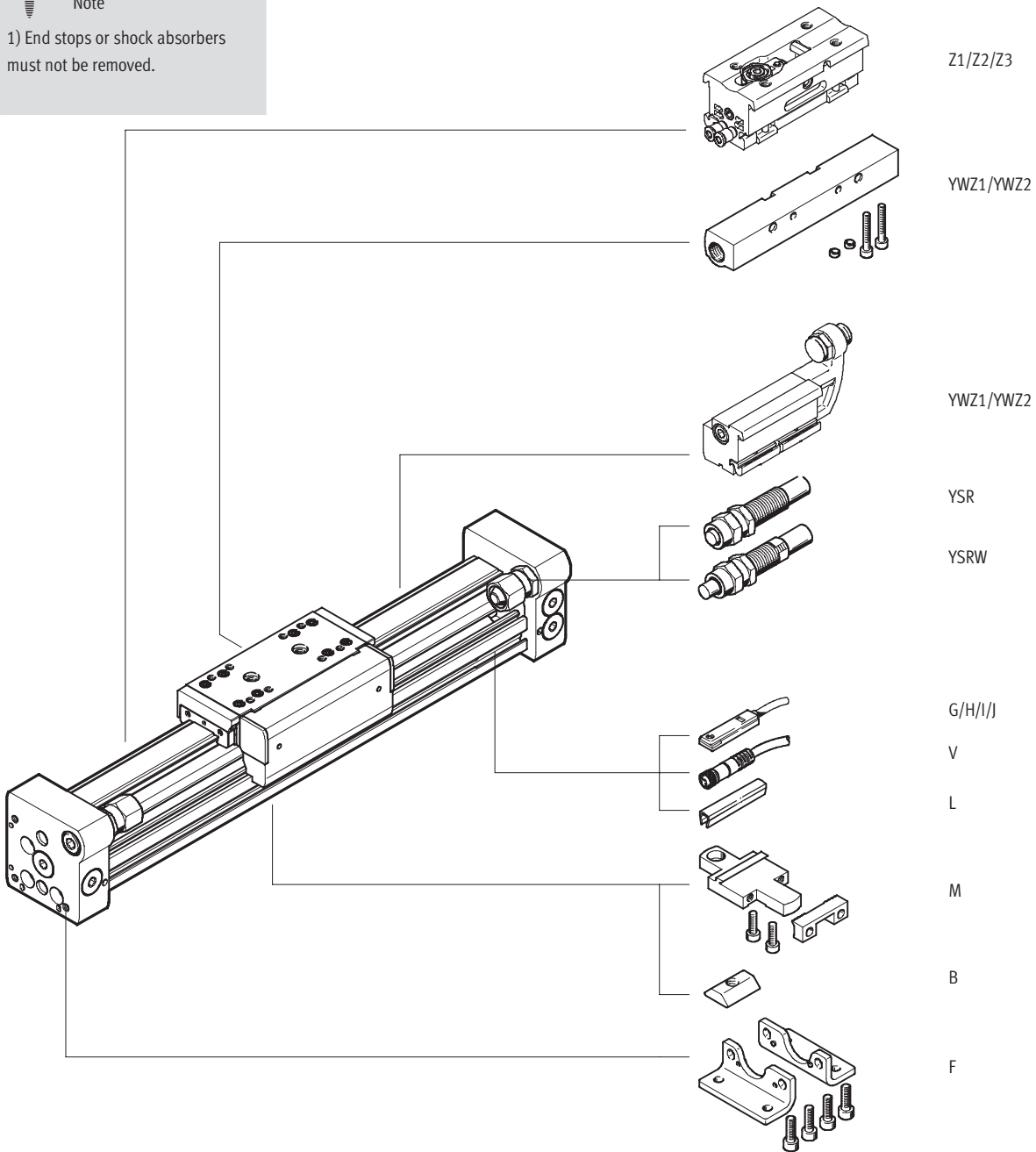
Mandatory data/options

-  - Note

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

Rodless cylinders
Mechanically coupled

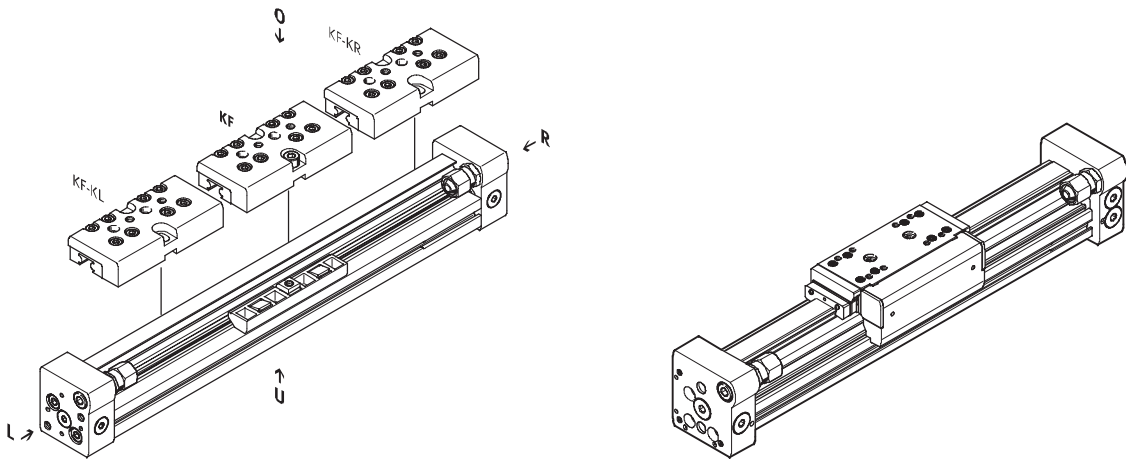
3.1



Linear drives DGC-KF, with recirculating ball bearing guide

Ordering data – Modular products

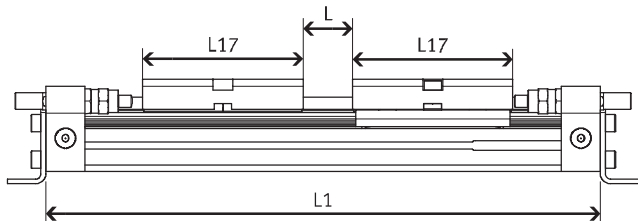
Order code	
KL/KR – With additional slide	GP – With protected recirculating ball bearing guide



Effective stroke reduction when ordering an additional slide KL or KR

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

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

New
Piston Ø 50/63 mm

Linear drives DGC-KF, with recirculating ball bearing guide

Ordering data – Modular products



Rodless cylinders
 Mechanically coupled

3.1

[M] Mandatory data →

Module No.	Function	Piston Ø	Stroke	Guide	Cushioning	Position sensing
530 906	DGC	8	1 ... 5 000	KF	P PPV YSR YSRW	A
530 907						
532 446						
532 447						
532 448						
532 449						
532 450						
532 451						
Order example						
530 907	DGC	- 12	- 250	- KF	- YSRW	- A

Ordering table												
Size	8	12	18	25	32	40	50	63	Condi- tions	Code	Enter code	
[M] Module No.	530 906	530 907	532 446	532 447	532 448	532 449	532 450	532 451				
Function	Linear drive									DGC	DGC	
Piston Ø [mm]	8	12	18	25	32	40	50	63		-...		
Stroke [mm]	1 ... 1,300	1 ... 1,900	1 ... 3,000	1 ... 5,000					1	-...		
Guide	Recirculating ball bearing guide									-KF	-KF	
Cushioning	Flexible cushioning rings/pads at both ends		-	-	-	-	-	-		-P		
	-		Pneumatic cushioning, adjustable at both ends								-PPV	
			Shock absorber, self-adjusting								-YSR	
			Shock absorber, self-adjusting, progressive								-YSRW	
Position sensing	For proximity sensor									-A	-A	

1 Stroke Size 25, 32, 40: Strokes up to 8,500 mm on request

Transfer order code

DGC - - - **KF** - - **A** -

Linear drives DGC-KF, with recirculating ball bearing guide

Ordering data – Modular products

FESTO

→ **0** Options

Slide	Additional slide at left	Additional slide at right	Accessories	Accessories supplied loose	Intermediate position	User manual
GP	KL	KR		F, ...M, ...B, ...G, ...H, ...I, ...J, ...V, ...L, YWZ1, YWZ2	Z1, Z2, Z3	0
-	- KL -	- KR -	ZUB -	- F2M -	-	-

Ordering table											
Size	8	12	18	25	32	40	50	63	Conditions	Code	Enter code
0 Slide	-	-	Protected recirculating ball bearing guide			-	-	-	2	-GP	
Additional slide at left	Additional slide, standard, left								3	-KL	
Additional slide at right	Additional slide, standard, right								3	-KR	
Accessories	Supplied loose (can be retrofitted)									ZUB-	ZUB-
Foot mounting	1									F	
Profile mounting	1 ... 9									...M	
Slot nut for mounting slot	-	-	-	1 ... 9						...B	
Proximity sensor	Cable, 2.5 m	1 ... 9								...G	
	M8 plug	1 ... 9								...H	
Proximity sensor, contactless, PNP	Cable, 2.5 m	1 ... 9								...I	
	M8 plug	1 ... 9								...J	
Cable with socket	M8, 2.5 m	1 ... 9								...V	
Slot cover for sensor slot	-	-	-	1 ... 9						...L	
Mechanical end position limiter	-			Variable end position, at one end					4	YWZ1	
	-			Variable end position, at both ends					4	YWZ2	
Intermediate position	-			1 intermediate position	-	-	-		5	-Z1	
	-			2 intermediate positions	-	-	-		5	-Z2	
	-			3 intermediate positions	-	-	-		5	-Z3	
User manual	Express waiver – no operating instructions to be included (already available)									-0	

2 GP Not with cushioning YSR and YSRW

4 YWZ1, YWZ2 Only with cushioning YSR or YSRW

3 KL, KR For a linear drive DGC with additional slide, the effective stroke is reduced by the length of the additional slide and the distance between both slides

5 Z1, Z2, Z3 Only with cushioning YSR or YSRW and mechanical end position limiter YWZ1 or YWZ2

Transfer order code

- - - **ZUB** - - -

Ordering data – Wearing parts kits					
Piston \varnothing	Part No.	Type	Piston \varnothing	Part No.	Type
8	665 335	DGC-8-KF	32	684 488	DGC-32
12	665 336	DGC-12-KF	40	684 489	DGC-40
18	684 486	DGC-18	50	719 825	DGC-50
25	684 487	DGC-25	63	719 826	DGC-63

Linear drives DGC

Accessories

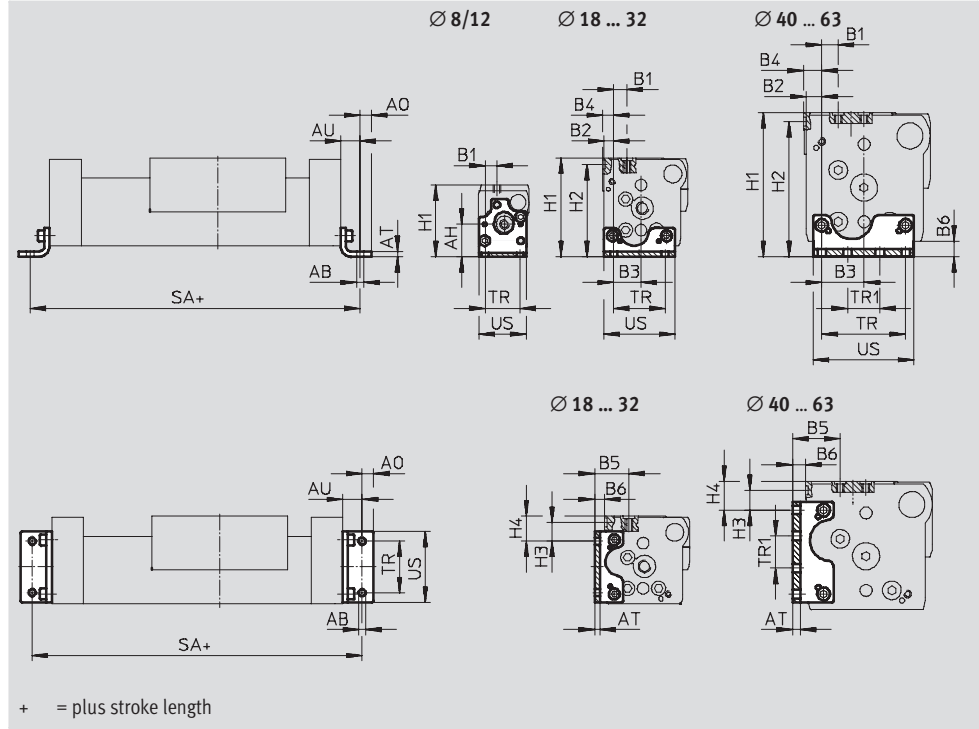


Foot mounting HPC
(order code: F)

Material:
Galvanised steel

Rodless cylinders
Mechanically coupled

3.1



Dimensions and ordering data																	
For Ø	AB Ø	AH	AO	AT	AU	B1		B2	B3	B4		B5		B6		H1	
						G	GF/KF			GF	KF	G	GF/KF	G	GF/KF	G	GF/KF
8	3.4	16.7	3	2	9	6	6	-	-	-	-	-	-	-	-	37	37
12	4.5	18.5	4.5	2	11.5	5.4	5.4	-	-	-	-	-	-	-	-	42.5	42.5
18	5.5	-	6.75	3	13.25	15	11.2	4.3	15.2	-	5.3	27	23.2	-	7.7	57.5	64
25	5.5	-	9	4	15	12.5	13.35	7.65	21.35	-	8.65	28.65	29.5	-	8.5	67	76.5
32	6.6	-	10	5	19	11.5	9	9	29.5	-	10.5	29.5	27	-	9	82	87.5
40	6.6	-	10	6	20	7.6	12.6	12.2	32.8	-	14.2	31.8	36.8	-	12	100	111.5
50	9	-	11	8	25	12.5	12.5	11.5	48.5	11.5	11.5	41	41	17	17	137	141.5
63	11	-	13.5	8	28	17.5	17.5	12.5	55.5	6.5	17.5	49	49	25	14	159	172.5

For Ø	H2	H3	H4		SA	TR	TR1	US	Weight	Part No.	Type
			G	GF/KF							
8	-	-	-	-	118	18	-	24.4	25	526 385	HPC-8
12	-	-	-	-	148	20	-	29.6	41	526 388	HPC-12
18	59.5	16	14	21.2	176.5	30	-	38.6	58	533 667	HPC-18
25	71.5	14.35	9.85	19.35	230	40	-	55	131	533 668	HPC-25
32	82.5	8	7.5	13	288	56.5	19.5	68	239	533 669	HPC-32
40	104.5	15.3	10.8	22.3	340	65	25	78	348	533 670	HPC-40
50	134.5	23.4	25.9	30.4	400	82.6	47.4	102	754	545 236	HPC-50
63	164.5	22	24	30	456	111	39	133	1,245	545 237	HPC-63

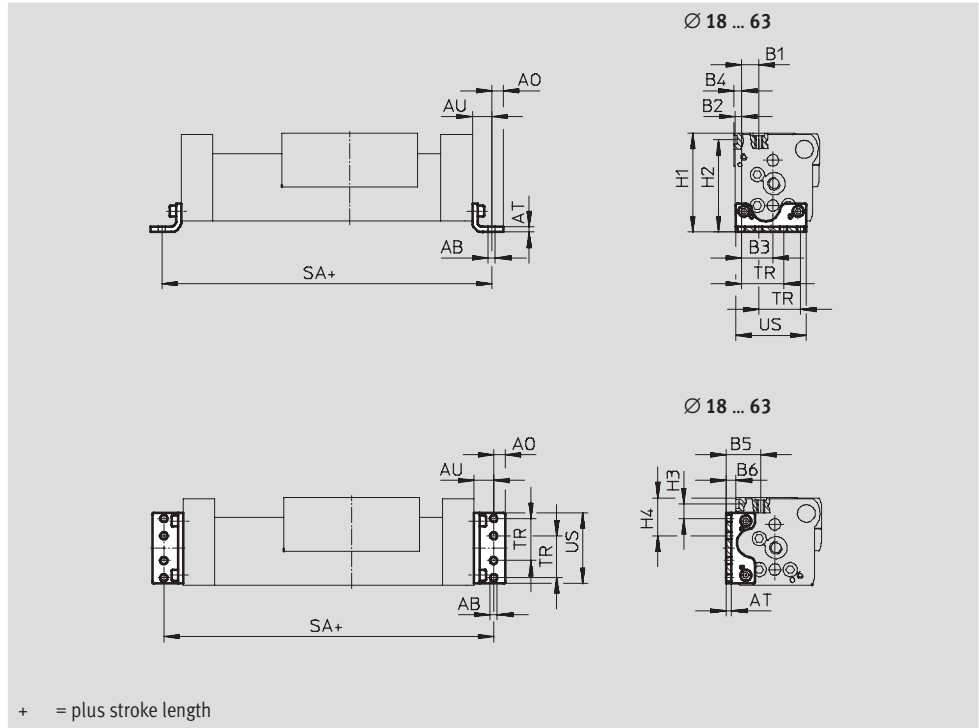
Linear drives DGC

Accessories



Foot mounting HPC-S
(when replacing linear drive DGPL
with linear drive DGC-GF/-KF)

Material:
Galvanised steel



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

For Ø	H1	H2	H3	H4	SA	TR	US	Weight	Part No.	Type
[mm]						±0.1		[g]		
18	64	59.5	15.9	28	176.5 ^{+0.9/-0.2}	24	40	54	535 600	HPC-18-S
25	75.5	70.5	11.45	29.75	226 ^{+0.9/-0.2}	32.5	55	89	535 601	HPC-25-S
32	87.5	82.5	8	31.5	284 ^{+0.9/-0.2}	38	68	180	538 413	HPC-32-S
50	138.5	131.5	23.4	48	400 ^{+1.7/-0.2}	65	102	754	545 238	HPC-50-S
63	160.5	152.5	22	66	456 ^{+1.7/-0.2}	75	133	1,138	545 239	HPC-63-S

Rodless cylinders
Mechanically coupled
3.1

Linear drives DGC

Accessories

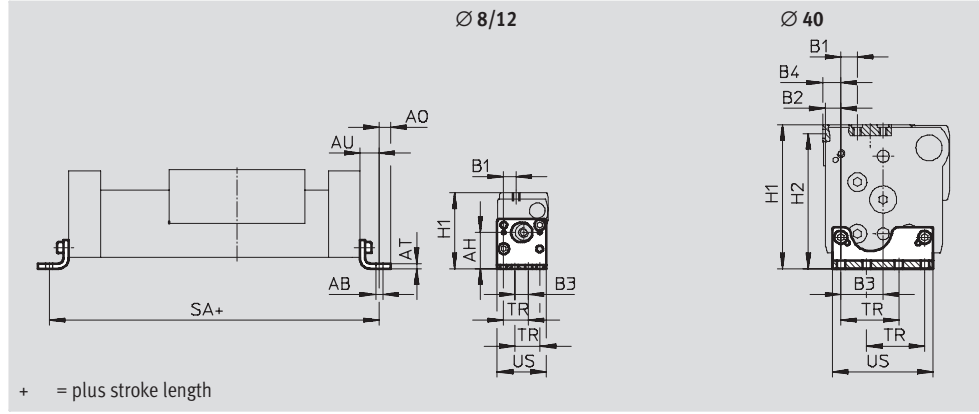


Foot mounting HPC-SO

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

Material:

Galvanised steel



Dimensions and ordering data

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

For Ø [mm]	B4	H1	H2	SA +0.9/-0.2	TR ±0.1	US	Weight [g]	Part No.	Type
8	-	39	-	118	13	25.4	25	529 346	HPC-8-SO
12	-	47.5	-	143	18.6	33.8	42	529 348	HPC-12-SO
40	14.3	104.5	97.5	335	45	78	264	536 745	HPC-40-SO

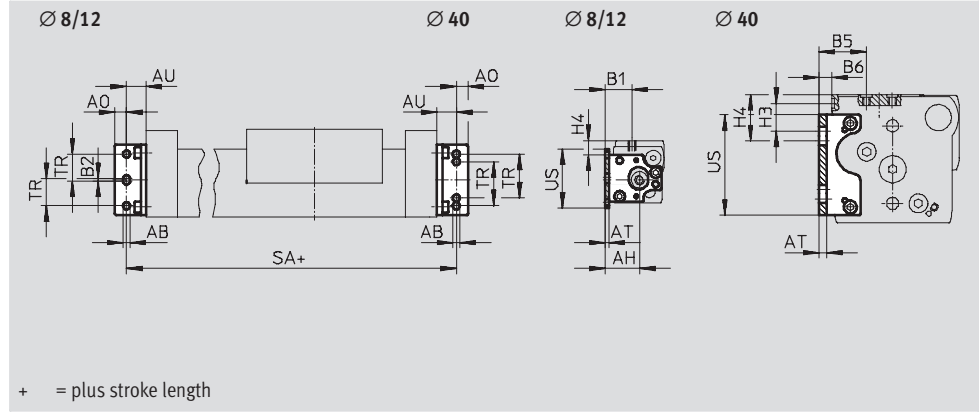
Linear drives DGC

Accessories



Foot mounting HPC-SH
(when replacing linear drive DGPL
with linear drive DGC-GF/-KF)

Material:
Galvanised steel



Dimensions and ordering data								
For \varnothing	AB	AH	AO	AT	AU	B1	B2	B5
[mm]	\varnothing							
8	3.4	17.8	3	2	9	13.8	1.5	-
12	3.4	21.1	3	2	9	16.5	1.4	-
40	6.6	-	8.5	5	17.5	-	-	36

For \varnothing	B6	H3	H4	SA	TR	US	Weight	Part No.	Type
[mm]				+0.9/-0.2	± 0.1		[g]		
8	-	-	7.25	118	13	30.5	25	529 347	HPC-8-SH
12	-	-	4.5	143	18.6	41.8	41	529 349	HPC-12-SH
40	9.2	21.6	36	335	45	78	275	536 746	HPC-40-SH

Rodless cylinders
Mechanically coupled

3.1

Linear drives DGC

Accessories

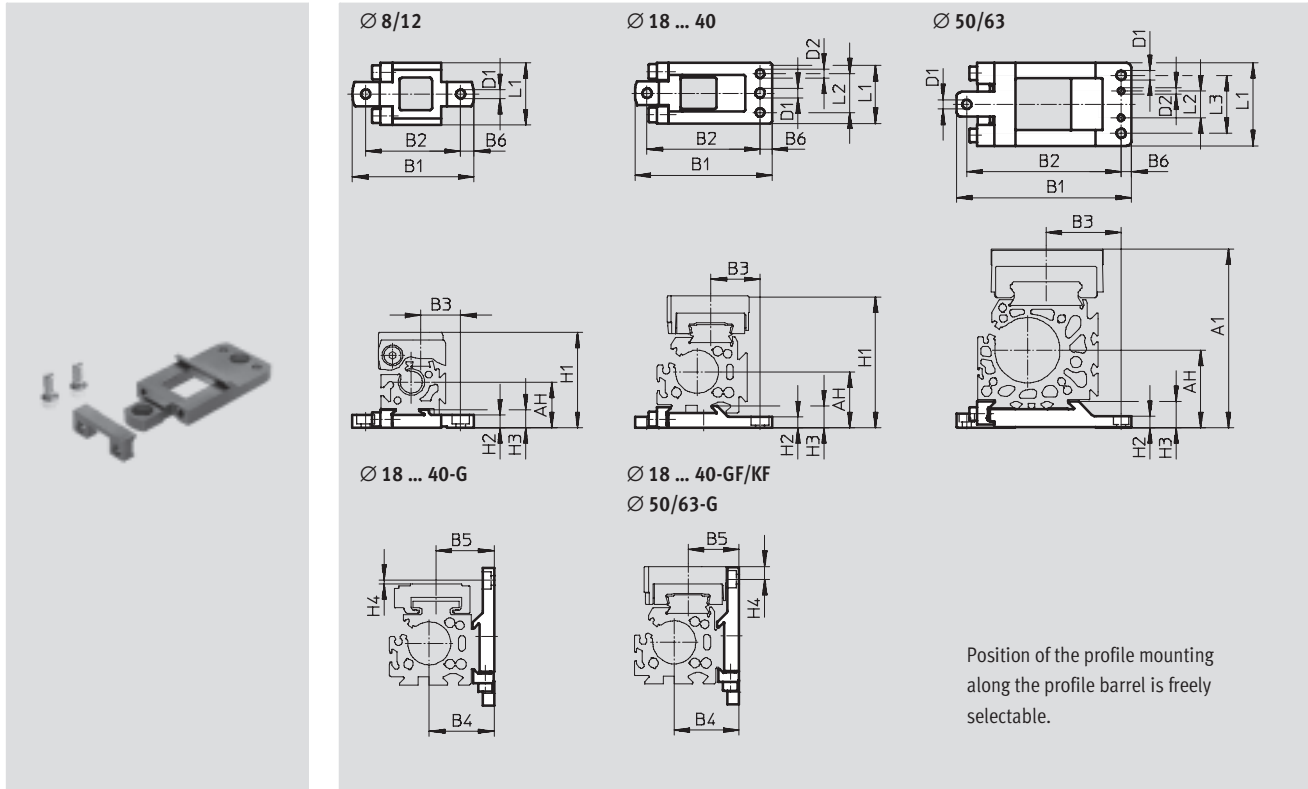


Rodless cylinders
Mechanically coupled

3.1

Profile mounting MUC
(order code: M)

Material:
High-alloy steel



Position of the profile mounting along the profile barrel is freely selectable.

Dimensions and ordering data						
For Ø	AH	B1	B2	B3		B4
[mm]			±0.2	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	56	32.5	28.7	27.2
25	32.5	79.5	65.5	35.15	28.5	37.5
32	37.5	94	80	35	35	47.5
40	47	110.5	96	43	43	57
50	61	145	125	56	56	77
63	75	169	149	72.5	72.5	87

For Ø	B5		B6	D1	D2	H1	
[mm]	G	GF/KF		Ø	Ø	G	GF/KF
					H7		
8	–	–	5.1	3.5	–	37	37
12	–	–	5.1	3.5	–	42.5	42.5
18	27	28.7	5.7	5.5	5	57.5	64
25	36.15	29.5	7	5.5	5	67	76.5
32	37	37	7	5.5	5	82	87.5
40	46.8	46.8	7	6.5	6	100	111.5
50	61	61	7	9	6	137	159
63	69	69	10	9	6	141.5	172.5

Linear drives DGC

Technical data

FESTO

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

For Ø	L2	L3	Weight	Part No.	Type
[mm]			[g]		
8	–	–	28	526 384	MUC-8
12	–	–	32	526 387	MUC-12
18	20.5	–	78	531 752	MUC-18
25	22.5	–	113	531 753	MUC-25
32	30	–	174	531 754	MUC-32
40	44	–	346	531 755	MUC-40
50	26	56	874	531 756	MUC-50
63	26	56	1,080	531 757	MUC-63

Rodless cylinders
Mechanically coupled

3.1

Linear drives DGC

Accessories



Driver FK
(order code: FK)
for DGC-G

Materials:
Plate: Wrought aluminium alloy

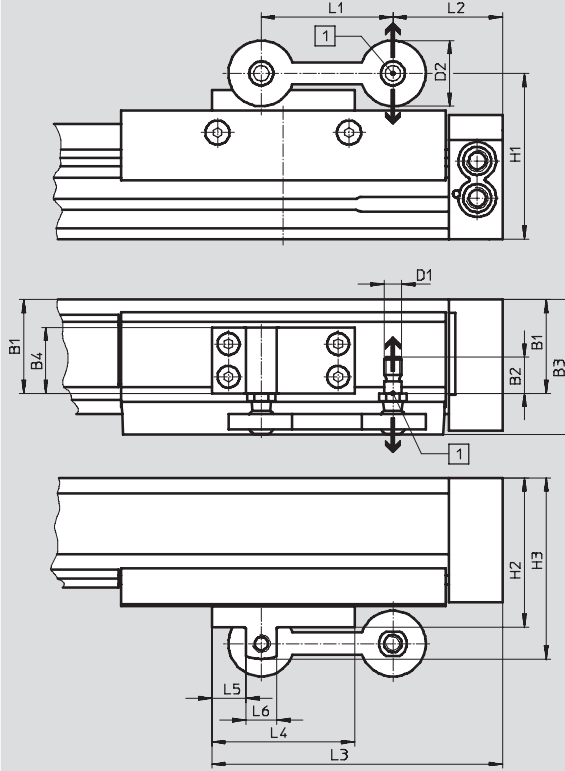
Joint: Polyamide
Ball pin: High-alloy steel

Rodless cylinders
Mechanically coupled

3.1



For $\varnothing 8 \dots 40$

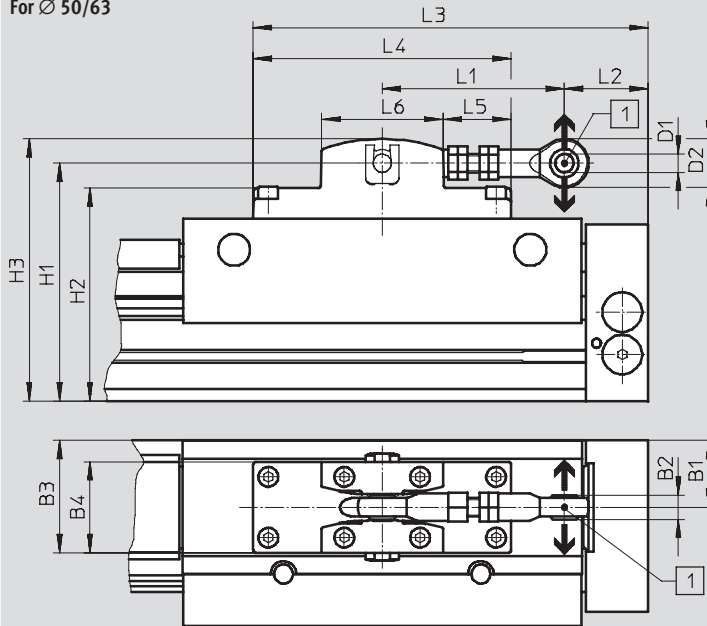


- - Note

Compensation possible in direction of arrow.

- 1 Radial deflection:
with $\varnothing 8 \dots 40$: ± 2.5 mm
with $\varnothing 50/63$: ± 4 mm

For $\varnothing 50/63$



Linear drives DGC

Accessories

FESTO

Dimensions and ordering data				
For Ø [mm]	Max. offset between linear drive and external guide [mm]	Max. permissible load in direction of force		Ambient temperature [°C]
		[N]		
8	±2.5	550	Backlash-free	-10 ... +60
12		550	Backlash-free	
18		1,400	Backlash-free	
25		1,400	Backlash-free	
32		1,400	Backlash-free	
40		1,400	Backlash-free	
50	±4	5,000	Low-backlash	
63		5,000	Low-backlash	

For Ø [mm]	B1	B2	B3	B4	D1	D2	H1	H2	H3	L1
8	17.5	10.2	30	16	M5	20	43.5	42	48	40
12	18.5	10.2	31	16	M5	20	49	47.5	53.5	40
18	29.3	16.5	47.8	20	M8	30	66.8	59.8	73.8	60
25	42.65	16.5	61.15	30	M8	30	75.5	68	82.5	60
32	43	16.5	61.5	30	M8	30	90	82.5	97	60
40	57.3	16.5	75.8	45	M8	30	105	97.5	113	60
50	44	16	74	60	12 ^{H7}	32	156.5	140	172.4	120
63	50	16	80	60	12 ^{H7}	32	176.5	161.5	192.4	120

For Ø [mm]	L2	L3	L4	L5	L6	CRC ¹⁾	Weight [g]	Part No.	Type
8	5.1	62.6	35	13	9	1	29	529 350	FKC-8/12
12	17.1	74.6	35	13	9	1	29	529 350	FKC-8/12
18	24.5	107	65	15.5	14	1	97	538 714	FKC-18
25	50	132.5	65	15.5	14	1	119	538 715	FKC-25
32	77.5	162	75	17.5	14	1	122	538 961	FKC-32
40	103	187.5	75	17.5	14	1	180	538 962	FKC-40
50	55	260	170	45	80	1	1,200	545 240	FKC-50/63
63	80	260	170	45	80	1	1,200	545 240	FKC-50/63

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

Rodless cylinders
Mechanically coupled

3.1

Linear drives DGC

Accessories



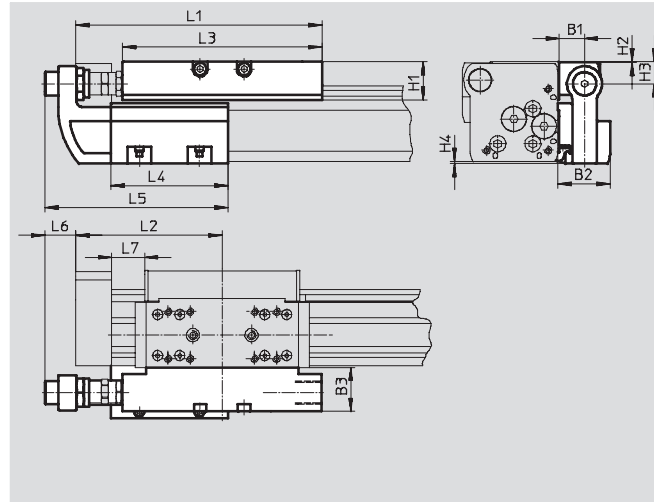
Shock absorber retainer DADP

Stop KYC

(order code: YWZ1 or YWZ2)
For DGC-GF, DGC-KF, DGC-FA

Materials: Stop
Housing: Anodised aluminium
Stop bracket: Stainless steel casting
Clamp: High-alloy steel
Free of copper and PTFE

Materials: Shock absorber retainer
Housing: Anodised aluminium
Free of copper and PTFE



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

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

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

Rodless cylinders
Mechanically coupled

3.1

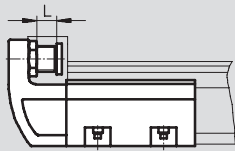
Linear drives DGC

Accessories



Technical data and ordering codes

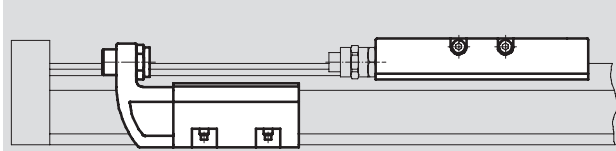
Precision adjustment



Note

The stop KYC can be used in both directions.

Installation example



Note

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

For Ø [mm]		Max. impact force [N]	Ambient temperature [°C]	CRC ¹⁾	Weight [g]	Part No.	Type
Shock absorber retainer							
18	GF	1,100	-10 ... +80	2	140	541 725	DADP-DGC-18-GF
	KF				130	541 729	DADP-DGC-18-KF
25	GF	1,400			205	541 726	DADP-DGC-25-GF
	KF					180	541 730
32	GF	1,700			225	541 727	DADP-DGC-32-GF
	KF					215	541 731
40	GF	3,500			380	541 728	DADP-DGC-40-GF
	KF					460	541 732
50	GF	3,500			890	545 244	DADP-DGC-50
	KF						
63	GF	4,300			1,080	545 245	DADP-DGC-63
	KF						

1) Corrosion resistance class 2 to Festo standard 940 070

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

For Ø [mm]	Precision adjustment L [mm]	Ambient temperature [°C]	CRC ¹⁾	Weight [g]	Part No.	Type
Stop						
18	10	-10 ... +80	2	400	541 691	KYC-18
25	10			560	541 692	KYC-25
32	10			790	541 693	KYC-32
40	15			1,525	541 694	KYC-40
50	15			2,270	545 242	KYC-50
63	15			2,950	545 243	KYC-63

1) Corrosion resistance class 2 to Festo standard 940 070

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

Linear drives DGC

Accessories



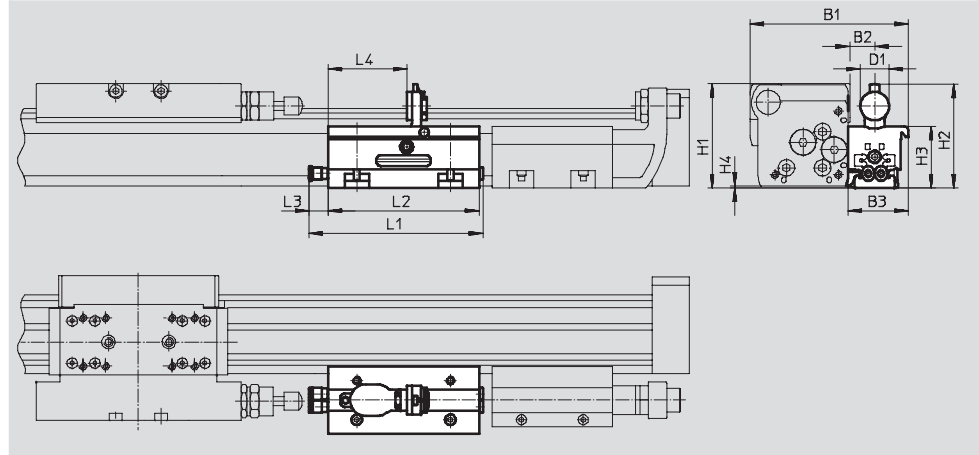
Rodless cylinders
Mechanically coupled

3.1

Intermediate position module DADM
(order code: Z1, Z2 or Z3)
For DGC-KF

Materials:
Housing: Anodised aluminium
Stop screw, nut:
Galvanised steel

Clamp, lever:
High-alloy steel
Free of copper and PTFE



- - Note

- Shock absorber not included in scope of delivery. Existing shock absorbers can be removed from the end caps of the linear drive and installed in the shock absorber retainer. Under no circumstances may the linear drive and the intermediate position module be operated without a shock absorber.
- A shock absorber retainer DADP and a stop KYC are additionally needed when using an intermediate position module.
- The projection (dimension H4) must be noted when using the drive in combination with the intermediate position module DADM. Mounting via foot mountings HP or profile mountings MUC is recommended in this case.

Dimensions						
For \varnothing [mm]	B1	B2	B3	D1	H1	H2
25	105	16.5	40	19	69.4	68.6
32	117.5	16.5	40	19	80.2	79.7

For \varnothing [mm]	H3	H4	L1	L2	L3	L4
25	41	1.4	116	100	13.4	52.2
32	52	1.7	116	100	13.4	52.2

Linear drives DGC

Accessories

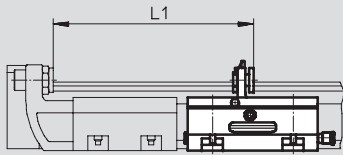


Rodless cylinders
Mechanically coupled

3.1

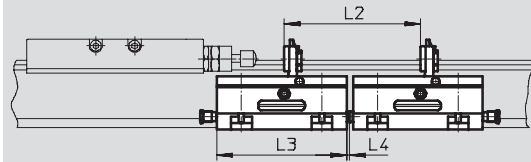
Minimum distance

between end stop and intermediate position



∅	L1
25	145.3
32	185.3

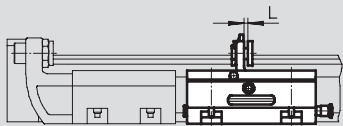
between two intermediate positions



∅	L2	L3	L4
25	105	100	2.5
32	105	100	2.5

Technical data and ordering codes

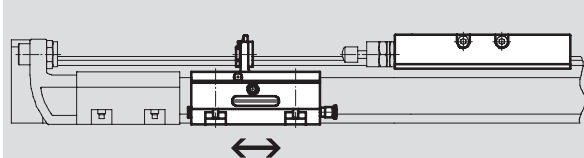
Precision adjustment L



- - Note

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

Installation example



- - Note

The intermediate position module DADM can be mounted at any position within the stroke.

For ∅ [mm]	Operating pressure [bar]	Impact velocity [m/s]	Swivel time [ms]	Repetition accuracy [mm]	Pneumatic connection	Precision adjustment L [mm]
25 32	2.5 ... 8	→ 1 / 3.1-4.7	<100	0.02	QS-4	2

For ∅ [mm]	Ambient temperature [°C]	CRC ¹⁾	Mounting position	Position sensing	Weight [g]	Part No.	Type
25	-10 ... +60	2	Any	For proximity sensor SME/SMT-10	430	541 700	DADM-DGC-25-A
32					530	541 701	DADM-DGC-32-A

1) Corrosion resistance class 2 to Festo standard 940 070

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




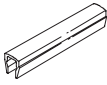
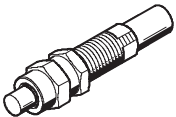
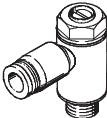
Linear drives DGC

Accessories

FESTO

Rodless cylinders
Mechanically coupled

3.1

Ordering data						
	For Ø	Remarks	Order code	Part No.	Type	PU ¹⁾
Slot nut NST Technical data → 1 / 10.1-3						
	25 ... 40	For mounting slot	B	547 264	HMBN-5-1M5	10
	50, 63			186 566	HMBN-5-2M5	
Centring pin/sleeve ZBS/ZBH Technical data → 1 / 10.1-3						
	8 ... 18	For slide	-	150 928	ZBS-5	10
	25 ... 63			150 927	ZBH-9	
	8, 12	For end cap	-	525 273	ZBS-2	
	18			150 928	ZBS-5	
	25 ... 63			150 927	ZBH-9	
Slot cover ABP-S Technical data → 1 / 10.1-3						
	18 ... 63	For sensor slot each 0.5 m	L	151 680	ABP-5-S	2
Shock absorber YSRW Technical data → 1 / 9.0-1						
	8	For DGC basic version and recirculating ball bearing guide	YSRW	540 344	YSRW-DGC-8	1
	12			540 345	YSRW-DGC-12	
	18			540 346	YSRW-DGC-18-GF	
	25			540 348	YSRW-DGC-25-GF	
	32			540 350	YSRW-DGC-32-GF	
	40	540 352		YSRW-DGC-40-GF		
	50	551 489		YSRW-DGC-50-GF/KF		
	63	543 069		YSRW-DGC-63-GF/KF		
	18	For DGC with plain-bearing guide		540 347	YSRW-DGC-18-KF	
	25			540 349	YSRW-DGC-25-KF	
	32			540 351	YSRW-DGC-32-KF	
	40			540 353	YSRW-DGC-40-KF	
	50			551 489	YSRW-DGC-50-GF/KF	
	63			543 069	YSRW-DGC-63-GF/KF	
	One-way flow control valve GRLA Technical data → Volume 2					
	8 ... 18	Metal design	-	193 137	GRLA-M5-QS-3-D	1
	25, 32			193 138	GRLA-M5-QS-4-D	
				193 142	GRLA-1/8-QS-3-D	
				193 143	GRLA-1/8-QS-4-D	
				193 144	GRLA-1/8-QS-6-D	
				193 145	GRLA-1/8-QS-8-D	
	40, 50			193 146	GRLA-1/4-QS-6-D	
				193 147	GRLA-1/4-QS-8-D	
				193 148	GRLA-1/4-QS-10-D	
	63			193 149	GRLA-3/8-QS-6-D	
193 150		GRLA-3/8-QS-8-D				
		193 151	GRLA-3/8-QS-10-D			


1) Packaging unit quantity


Linear drives DGC

Accessories




FESTO

Proximity sensors for piston \varnothing 8/12 and intermediate position module DADM

Ordering data – Proximity switches for C-slot, magneto-resistive					Technical data → www.festo.com/catalogue/sm	
	Type of mounting	Switch output	Electrical connection, connection direction	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot lengthwise	PNP	Plug M8x1, 3-pin, in-line	0,3	173 220	SMT-10-PS-SL-LED-24
			Cable, 3-wire, in-line	2,5	173 218	SMT-10-PS-KL-LED-24

Ordering data – Proximity switches for C-slot, magnetic reed					Technical data → www.festo.com/catalogue/sm	
	Type of mounting	Switch output	Electrical connection, connection direction	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot lengthwise	Contacting	Plug M8x1, 3-pin, in-line	0,3	173 212	SME-10-SL-LED-24
			Cable, 3-wire, in-line	2,5	173 210	SME-10-KL-LED-24

Proximity sensors for piston \varnothing 18 ... 63

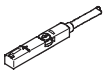


Ordering data – Proximity switches for T-slot, magneto-resistive					Technical data → www.festo.com/catalogue/sm	
	Type of mounting	Switch output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above, flush with cylinder profile	PNP	Cable, 3-wire	2,5	543 867	SMT-8M-PS-24V-K-2,5-OE
			Plug M8x1, 3-pin	0,3	543 866	SMT-8M-PS-24V-K-0,3-M8D
			Plug M12x1, 3-pin	0,3	543 869	SMT-8M-PS-24V-K-0,3-M12
		NPN	Cable, 3-wire	2,5	543 870	SMT-8M-NS-24V-K-2,5-OE
			Plug M8x1, 3-pin	0,3	543 871	SMT-8M-NS-24V-K-0,3-M8D
	Insertable in the slot lengthwise, flush with the cylinder profile	PNP	Cable, 3-wire	2,5	175 436	SMT-8-PS-K-LED-24-B
			Plug M8x1, 3-pin	0,3	175 484	SMT-8-PS-S-LED-24-B
N/C contact						
	Insertable in the slot from above, flush with cylinder profile	PNP	Cable, 3-wire	7,5	543 873	SMT-8M-PO-24V-K7,5-OE



Linear drives DGC

Accessories

FESTO

Proximity sensors for piston $\varnothing 18 \dots 63$

Ordering data – Proximity switches for T-slot, magnetic reed					Technical data → www.festo.com/catalogue/sm	
	Type of mounting	Switch output	Electrical connection	Cable length [m]	Part No.	Type
N/O contact						
	Insertable in the slot from above, flush with cylinder profile	Contacting	Cable, 3-wire	2,5	543 862	SME-8M-DS-24V-K-2,5-OE
				5,0	543 863	SME-8M-DS-24V-K-5,0-OE
			Plug M8x1, 3-pin	2,5	543 872	SME-8M-ZS-24V-K-2,5-OE
				0,3	543 861	SME-8M-DS-24V-K-0,3-M8D
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	2,5	150 855	SME-8-K-LED-24
			Plug M8x1, 3-pin	0,3	150 857	SME-8-S-LED-24
N/C contact						
	Insertable in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-wire	7,5	160 251	SME-8-O-K-LED-24

Ordering data – Connecting cable				Technical data → www.festo.com/catalogue/nebu	
	Electrical connection, left	Electrical connection, right	Cable length [m]	Part No.	Type
	Straight socket, M8x1, 3-pin	Cable, open end, 3-wire	2,5	541 333	NEBU-M8G3-K-2.5-LE3
			5	541 334	NEBU-M8G3-K-5-LE3
	Straight socket, M12x1, 5-pin	Cable, open end, 3-wire	2,5	541 363	NEBU-M12G5-K-2.5-LE3
			5	541 364	NEBU-M12G5-K-5-LE3
	Angled socket, M8x1, 3-pin	Cable, open end, 3-wire	2,5	541 338	NEBU-M8W3-K-2.5-LE3
			5	541 341	NEBU-M8W3-K-5-LE3
	Angled socket, M12x1, 5-pin	Cable, open end, 3-wire	2,5	541 367	NEBU-M12W5-K-2.5-LE3
			5	541 370	NEBU-M12W5-K-5-LE3

Rodless cylinders
Mechanically coupled

3.1