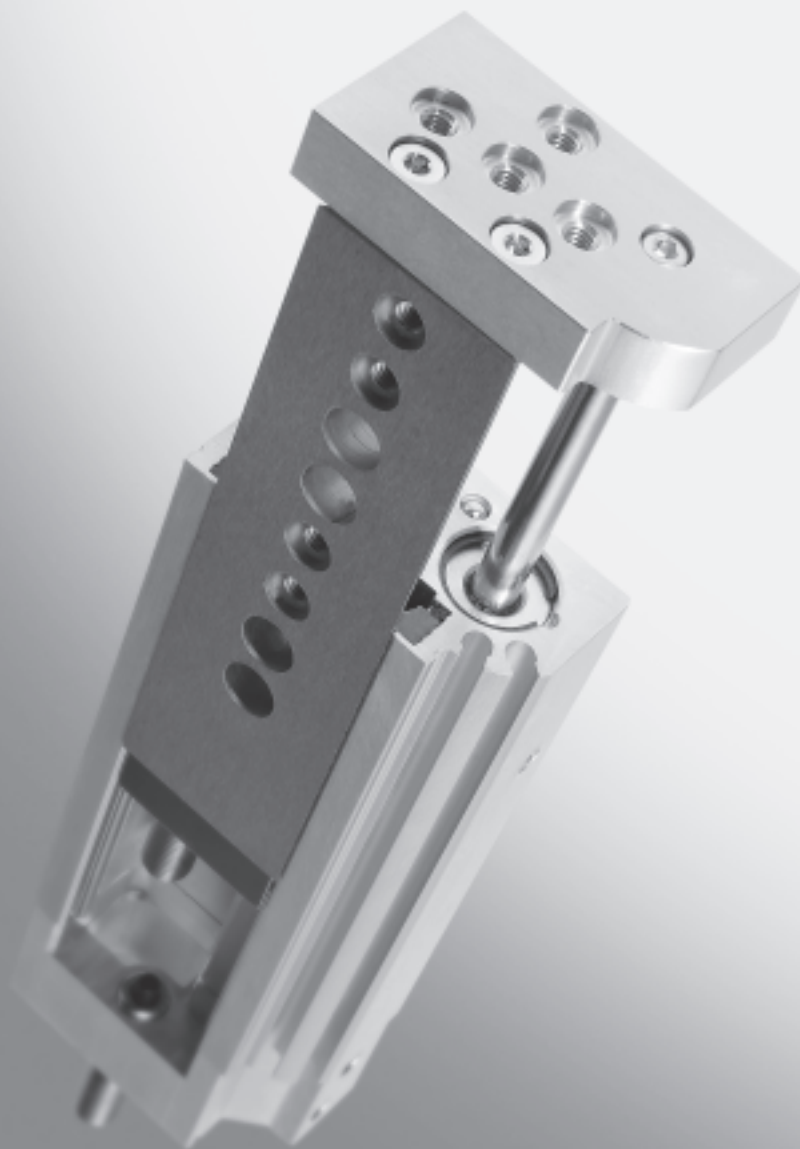


Mini slides DGSL

FESTO



- High load capacity and positioning accuracy
- Maximum flexibility thanks to 8 sizes
- Compact

Mini slides DGSL

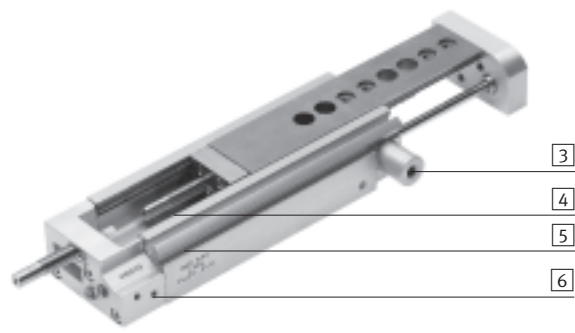
Key features

FESTO

General

- Double-acting drives
- Versatile combination options include:
 - Drives, grippers
- System product for handling and assembly technology
- Highly flexible thanks to versatile assembly and connection options on:
 - Drive body, slide, yoke plate

The technology in detail

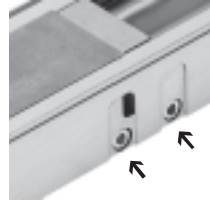


1 Cushioning



- Choice of three types of cushioning:
 - Flexible cushioning without metallic end position (P)
 - Flexible cushioning with metallic end position (P1)
 - Hydraulic shock absorbers (Y3)

2 Coarse stroke adjustment



- The end stop for the front end position can be shifted mechanically, e.g. to shorten the stroke

3 Clamping unit



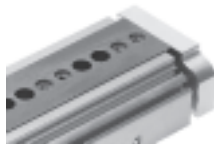
- Mechanical clamping, for fixing the slide in any position, frictional locking

3 End lock



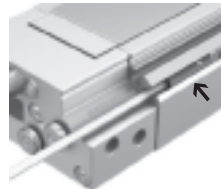
- Mechanical lock when the end position is reached, for fixing the slide in the unpressurized, retracted state, mechanical locking

4 Innovative guide unit



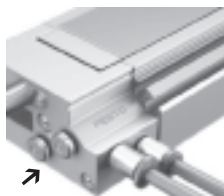
- Wide roller track, which provides extremely high rigidity
- High load capacity
- High precision
- Housing and steel slide form a guide; no accumulative tolerances

5 Position sensing



- Proximity sensors can be integrated, therefore there are no projecting parts
- Two slots for mounting
- Clearly visible from the side and from above

6 Compressed air connections



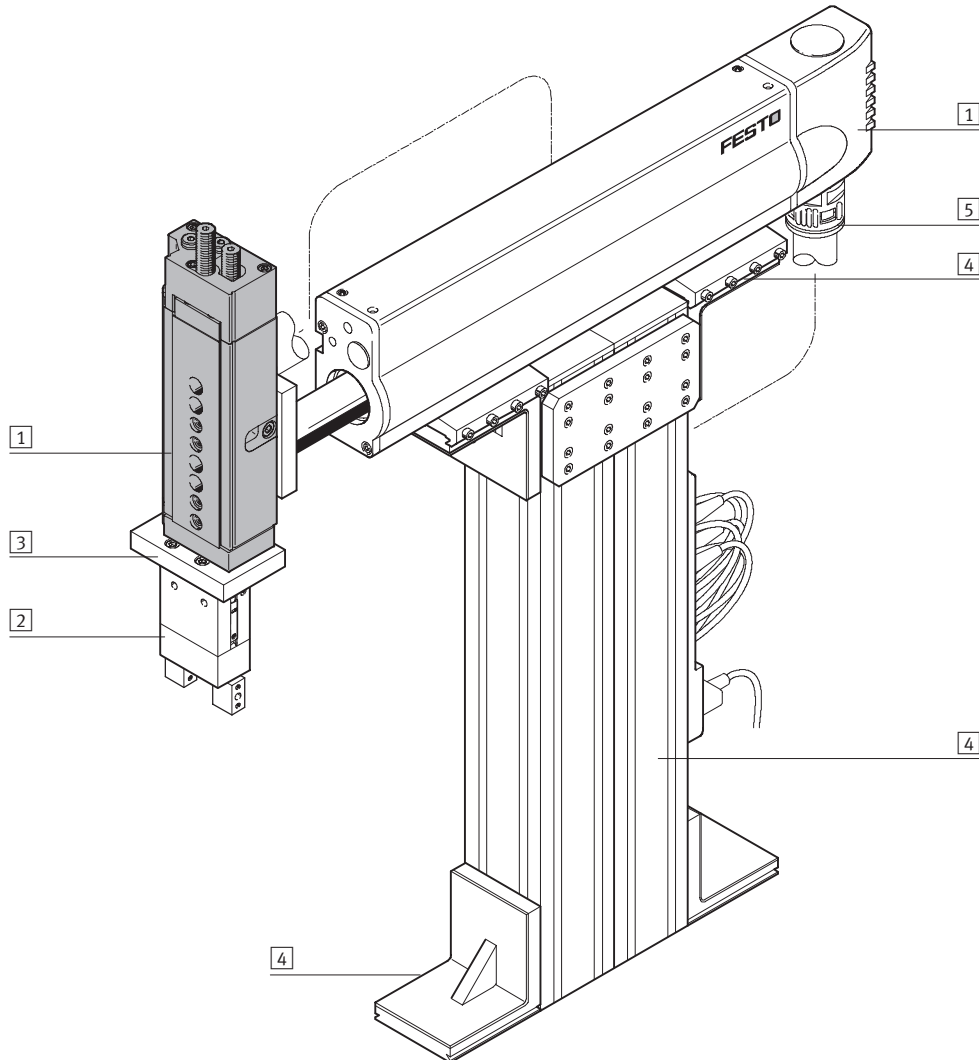
- Options on two sides:
 - On front face
 - At the side

Mini slides DGSL

System example

FESTO

System product for handling and assembly technology

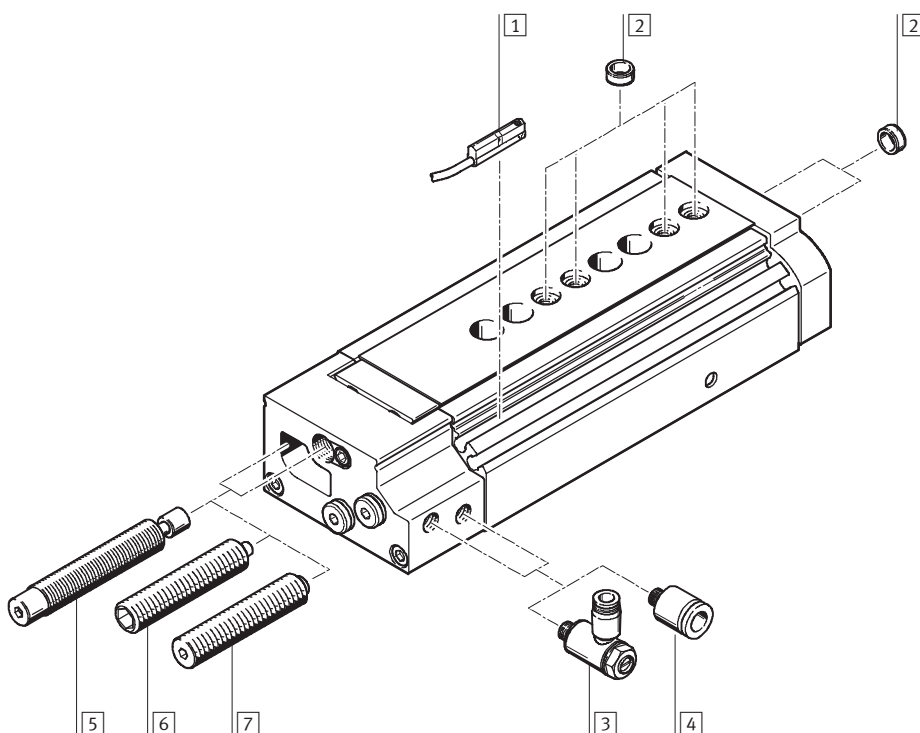


System elements and accessories		
	Brief description	→ Page
1	Drive units	Wide range of combinations possible within handling and assembly technology Volume 1
2	Grippers	Wide range of variations possible within handling and assembly technology Volume 1
3	Adapters	For drive/drive and drive/gripper combinations Volume 5
4	Basic mounting components	Profiles and profile connectors as well as profile/drive connectors Volume 5
5	Installation components	For manageable and secure guidance of 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

Mini slides DGSL

Peripherals overview

FESTO



Note

End stops must not be removed.

Accessories		
	Brief description	→ Page
1	Proximity sensor SME/SMT-10	For position sensing. Can be integrated in sensor slot, thus no projecting parts
2	Centring sleeve ZBH	For centring loads and attachment components
3	One-way flow control valve GRLA	For speed regulation
4	Push-in fitting QSM	For connecting compressed air tubing with standard external diameters
5	Cushioning with shock absorber Y3	For large loads and high speed. Ensures precise, metal-to-metal contact after the cushioning
6	Cushioning with stop P1	Precision metal stop for small loads at slow speed
7	Cushioning P	Tope elástico para masas medianas a mediana velocidad (standard version)

Mini slides DGSL

Type codes

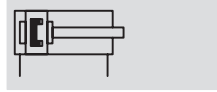
		DGSL	–	10	–	100	–	Y3		A
Type										
Double-acting										
DGSL	Mini slide									
Size										
Stroke [mm]										
Cushioning										
P	Flexible cushioning, without metallic end position, both ends									
P1	Flexible cushioning, with metallic end position, both ends									
Y3	Progressive shock absorbers, both ends									
Position sensing										
A	For proximity sensor									

Mini slides DGSL

Technical data

FESTO

Function



-  - Size
4 ... 25
-  - Stroke length
10 ... 200 mm



General technical data									
Size		4	6	8	10	12	16	20	25
Pneumatic connection		M3			M5			G1/8	
Design		Kinematic yoke system							
Guide		Caged ball bearing guide							
Type of mounting		Via through-holes							
		With female thread							
Cushioning	P	Flexible cushioning, without metallic end position, both ends							
	P1	Flexible cushioning, with metallic end position, both ends							
	Y3	–		With progressive shock absorber, both ends					
Position sensing		For proximity sensor							
Assembly position		Any							
Max. advancing speed	[m/s]	0.5		0.8					
Max. retracting speed	[m/s]	0.5		0.8					
Repetition accuracy	P1/Y3	[mm]	±0.01						
	P	[mm]	0.3						

Operating and environmental conditions								
Size	4	6	8	10	12	16	20	25
Operating medium	Dried compressed air, lubricated or unlubricated							
Min. operating pressure	[bar]	1.5				1		
Max. operating pressure	[bar]	8						
Ambient temperature ¹⁾	[°C]	0 ... +60						

1) Note operating range of proximity sensors

Forces [N] and impact energy [Nm]								
Size	4	6	8	10	12	16	20	25
Theoretical force at 6 bar, advancing	17	30	47	68	121	188	295	483
Theoretical force at 6 bar, retracting	13	23	40	51	104	158	247	415
Impact energy at end positions	P	0.015	0.05	0.08	0.12	0.25	0.35	0.55
	P1	0.005	0.02	0.03	0.04	0.06	0.12	0.25
	Y3	–	–	0.8	1.3	2.5	4	12

Mini slides DGSL

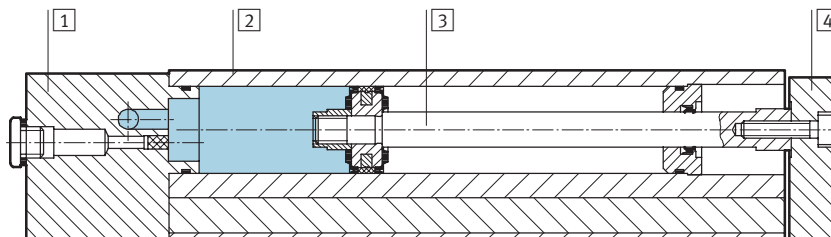
Technical data

FESTO

Weights [g]									
Size	Stroke	4	6	8	10	12	16	20	25
Product weight without cushioning component									
	10	82	158	235	396	604	896	1 535	2 520
	20	93	179	263	434	660	954	1 649	2 670
	30	104	197	289	470	711	1 008	1 746	2 824
	40	–	215	313	507	762	1 072	1 857	2 983
	50	–	232	370	548	813	1 143	1 991	3 137
	80	–	–	454	727	1 112	1 365	2 295	4 019
	100	–	–	–	813	1 229	1 712	2 921	4 519
	150	–	–	–	–	1 499	2 034	3 620	5 344
	200	–	–	–	–	–	–	4 248	6 139
Moving load without cushioning component									
	10	31	68	101	163	256	403	660	998
	20	34	76	111	180	279	432	710	1 052
	30	38	83	121	194	299	459	750	1 115
	40	–	90	130	208	320	486	801	1 181
	50	–	99	152	226	340	519	858	1 244
	80	–	–	185	299	456	618	998	1 567
	100	–	–	–	334	507	776	1 254	1 761
	150	–	–	–	–	614	910	1 566	2 102
	200	–	–	–	–	–	–	1 807	2 432
Cushioning component									
	P	2	3.6	6	14	23	45.6	82.4	106
	P1	1.6	3	5	12	19.7	39.6	77.3	104
	Y3	–	–	6	11	21	42	67	91

Materials

Sectional view



Mini slide	
1 End cap	Anodised aluminium
2 Housing	Anodised aluminium
3 Piston rod	High-alloy steel
4 Yoke plate	Anodised aluminium
– Guide	Tempered steel
– Seals	Thermoplastic rubber, hydrogenated nitrile rubber, nitrile rubber
Note on materials	Free of copper and PTFE

Mini slides DGSL

Technical data

FESTO

Piston speed v as a function of working load m and cushioning P

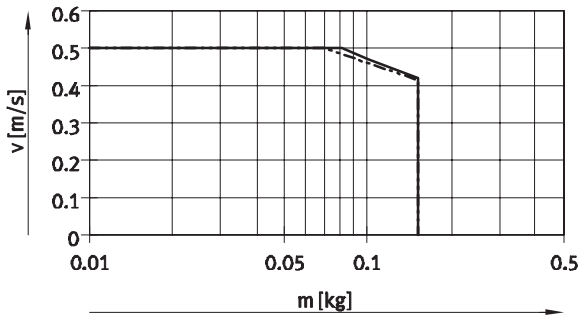


The piston speed as a function of working load illustrated in these graphs may not be exceeded as the

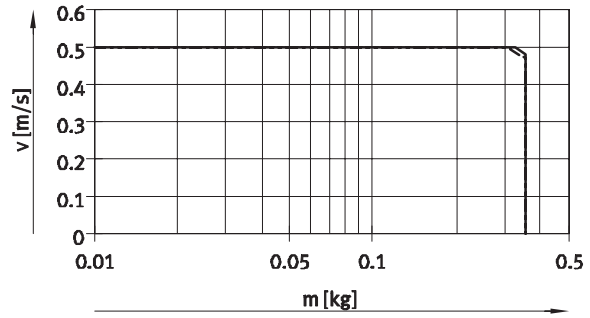
kinetic impact or residual energy in the end positions can result in damage to the drive.

The data applies to a horizontal assembly position.

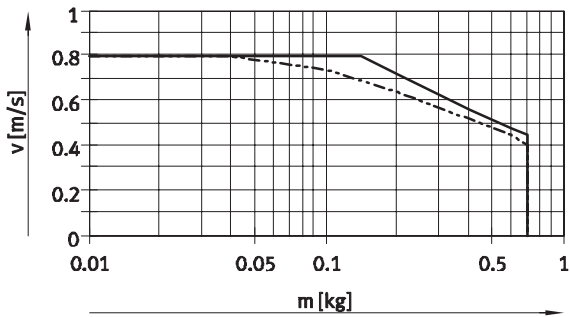
DGSL-4



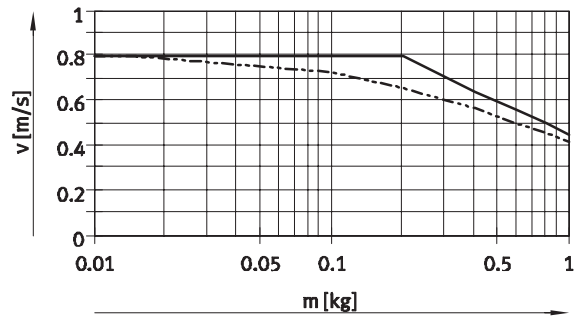
DGSL-6



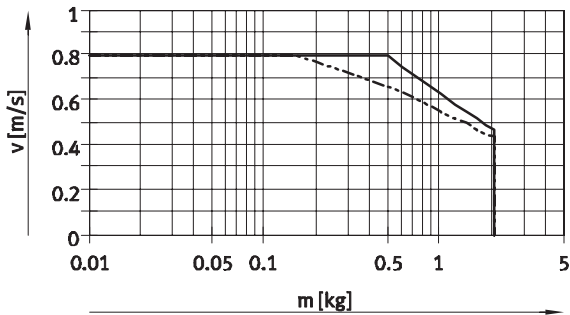
DGSL-8



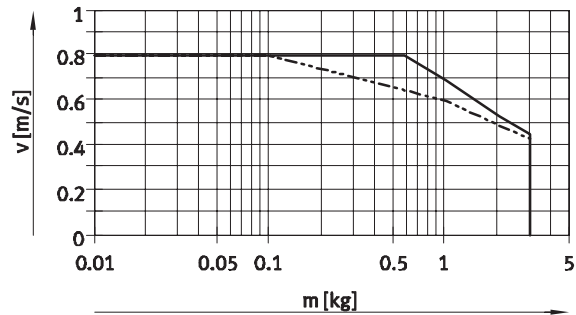
DGSL-10



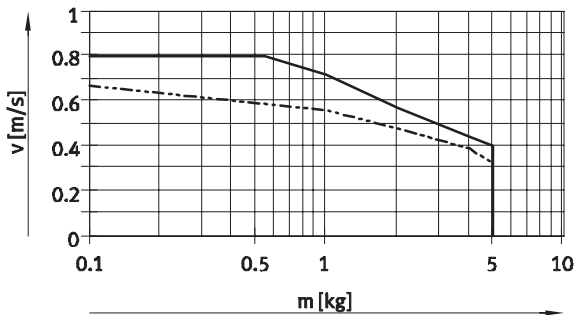
DGSL-12



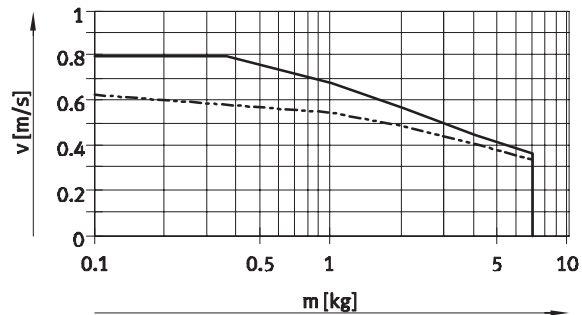
DGSL-16



DGSL-20



DGSL-25



— Min. stroke
- - - - - Max. stroke

Mini slides DGSL

Technical data

FESTO

Piston speed v as a function of working load m and cushioning P1

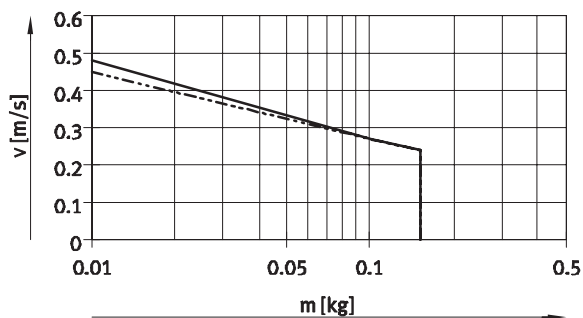


The piston speed as a function of working load illustrated in these graphs may not be exceeded as the

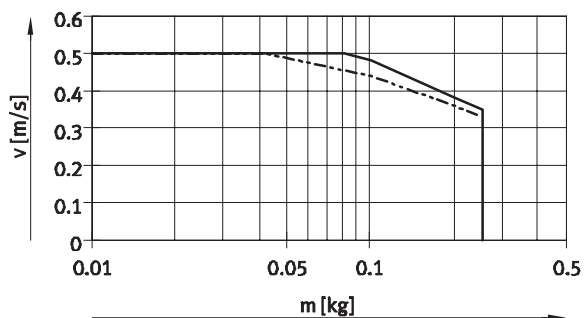
kinetic impact or residual energy in the end positions can result in damage to the drive.

The data applies to a horizontal assembly position.

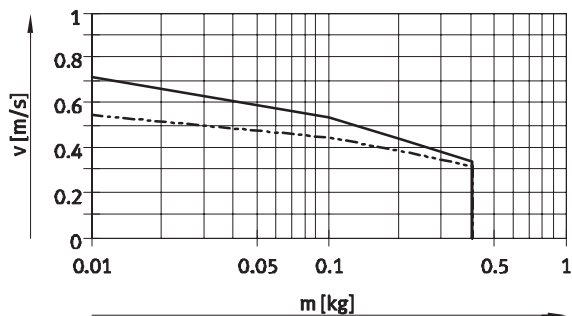
DGSL-4



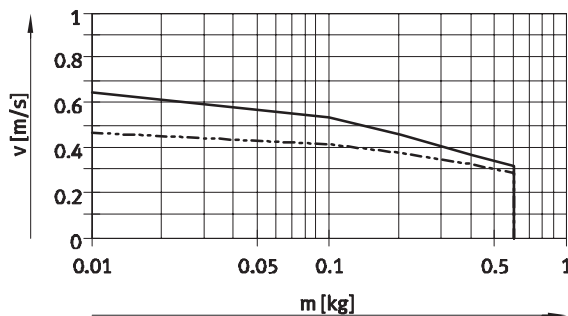
DGSL-6



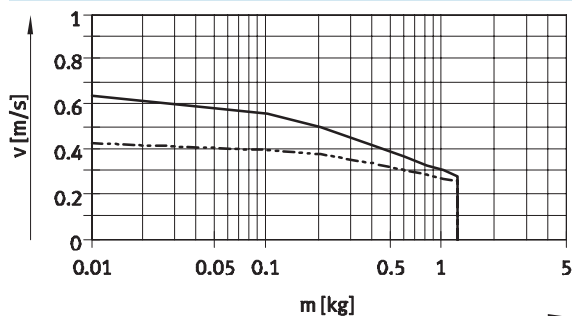
DGSL-8



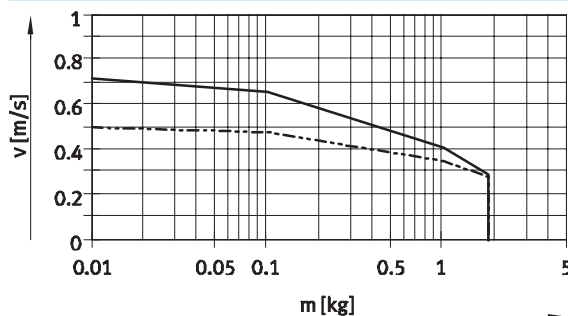
DGSL-10



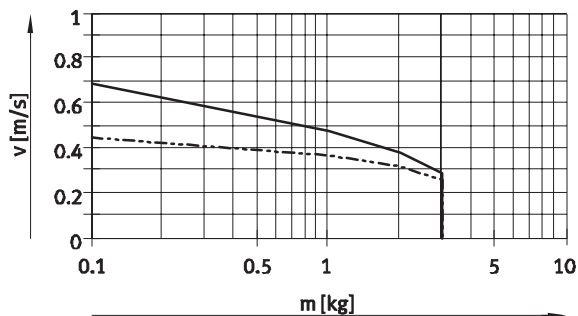
DGSL-12



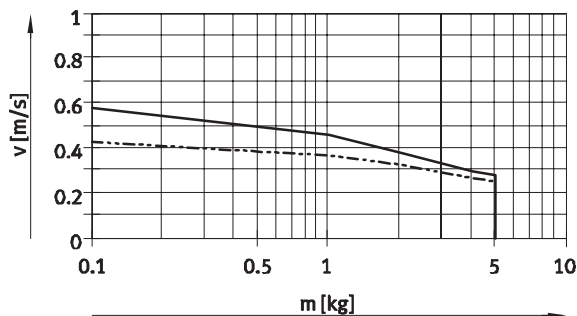
DGSL-16



DGSL-20



DGSL-25



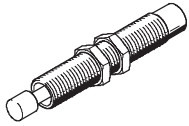
— Min. stroke
- - - Max. stroke

Mini slides DGSL

Technical data

FESTO

Piston speed v as a function of working load m and cushioning Y3

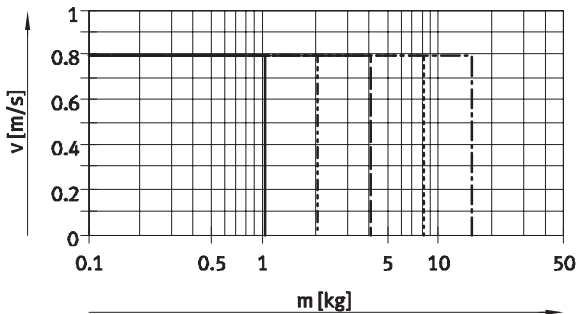


The piston speed as a function of working load illustrated in these graphs may not be exceeded as the

kinetic impact or residual energy in the end positions can result in damage to the drive.

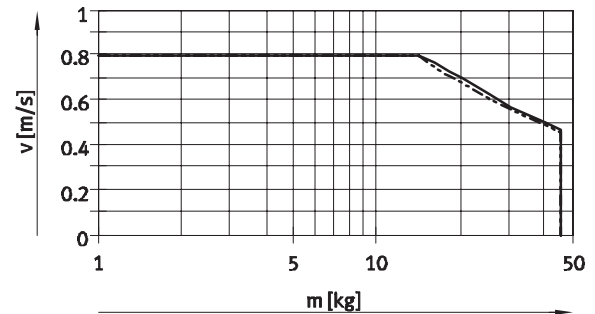
The data applies to a horizontal assembly position.

DGSL-8...20



- Size 8 min./max. stroke
- - - Size 10 min./max. stroke
- · - Size 12 min./max. stroke
- · · Size 16 min./max. stroke
- - - Size 20 min./max. stroke

DGSL-25



- DGSL-25 min. stroke
- - - DGSL-25 max. stroke

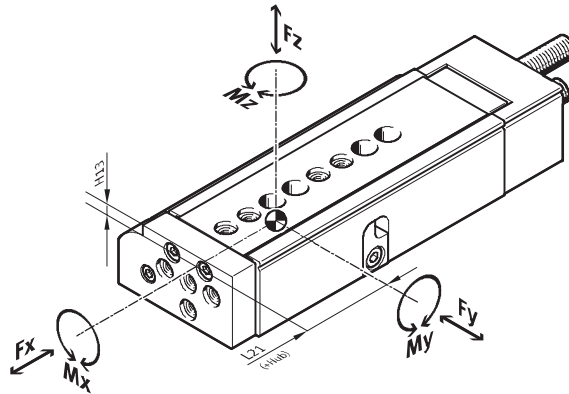
Mini slides DGSL

Technical data

FESTO

Dynamic characteristic load values

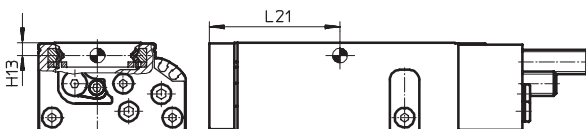
Torques are indicated with reference to the centre of the guide. They must not be exceeded in the dynamic range. Special attention must be paid to the cushioning phase.



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:

$$\frac{|F_{y1}|}{F_{y\max.}} + \frac{|F_{z1}|}{F_{z\max.}} + \frac{|M_{x1}|}{M_{x\max.}} + \frac{|M_{y1}|}{M_{y\max.}} + \frac{|M_{z1}|}{M_{z\max.}} \leq 1$$

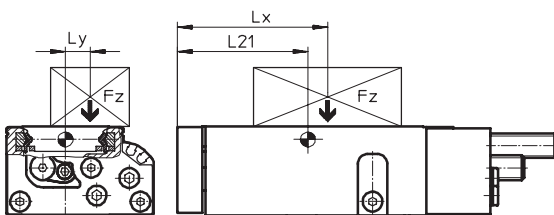
Position of guide centre



+ plus stroke length

Calculation example

Given:



Mini slide = DGSL-10
Stroke length = 80 mm
Lever arm L_x = 50 mm
Lever arm L_y = 30 mm
Weight F_z = 0.8 kg
Acceleration a = 0 m/s²

To be found:

F_y , F_z , M_x , M_y , M_z
and
verification of function with combined load

Solution:

$L_{21} = 83$ mm from table

$F_y = 0$ N

$F_z = m \times g$
 $= 0.8 \text{ kg} \times 9.81 \text{ m/s}^2 = 7.848 \text{ N}$

$M_x = m \times g \times L_y$
 $= 0.8 \text{ kg} \times 9.81 \text{ m/s}^2 \times 30 \text{ mm} = 0.236 \text{ Nm}$

$M_y = m \times g \times [(L_{21} + \text{stroke}) - L_x]$
 $= 0.8 \text{ kg} \times 9.81 \text{ m/s}^2 [(83 \text{ mm} + 80 \text{ mm}) - 50 \text{ mm}] = 0.886 \text{ Nm}$

$M_z = 0$ Nm

Combined load:

$$\frac{|F_{y1}|}{F_{y\max.}} + \frac{|F_{z1}|}{F_{z\max.}} + \frac{|M_{x1}|}{M_{x\max.}} + \frac{|M_{y1}|}{M_{y\max.}} + \frac{|M_{z1}|}{M_{z\max.}}$$

$$= 0 + \frac{7.848 \text{ N}}{1200 \text{ N}} + \frac{0.2366 \text{ Nm}}{18 \text{ Nm}} + \frac{0.886 \text{ Nm}}{12 \text{ Nm}} + 0 = 0.094 \leq 1$$

Forces and torques

→ 1 / 6.1-12

Mini slides DGSL

Technical data

FESTO

Permissible forces and torques						Guide centre dims.	
Size	Stroke	F _y _{max} [N]	F _z _{max} [N]	M _x _{max} [Nm]	M _y _{max} , M _z _{max} [Nm]	H13 [mm]	L21 [mm]
4							
	10	343	343	2	2	2.7	31
	20	368	368	2	2		36
	30	387	387	2	2		42
6							
	10	540	540	6	4.5	3.4	37
	20	590	590	7	5		42
	30	631	631	8	5.5		47
	40	677	677	8	5.5		52
	50	719	719	8	5.5		57
8							
	10	657	657	7	5.5	3.25	41
	20	745	745	8	5.5		46
	30	850	850	9	5.5		51
	40	934	934	10	5.5		56
	50	962	962	10	8		67
	80	971	971	10	8		82
10							
	10	927	927	15	6	4.2	43
	20	1 003	1 003	15	7		46
	30	1 078	1 078	15	8		51
	40	1 152	1 152	15	9		56
	50	1 175	1 175	18	9		61
	80	1 200	1 200	18	12		83
	100	1 250	1 250	18	12		96
12							
	10	942	942	15	8	5.2	44
	20	1 006	1 006	15	9		49
	30	1 075	1 075	15	10		54
	40	1 142	1 142	18	11		59
	50	1 200	1 200	18	12		64
	80	1 280	1 280	20	15		88
	100	1 340	1 340	20	15		98
	150	1 400	1 400	20	15		124

Mini slides DGSL

Technical data

FESTO

Permissible forces and torques						Guide centre dims.	
Size	Stroke	F _y _{max} [N]	F _z _{max} [N]	M _x _{max} [Nm]	M _y _{max} , M _z _{max} [Nm]	H13 [mm]	L21 [mm]
16							
	10	1 769	1 769	35	20	6.4	54
	20	2 021	2 021	35	22		59
	30	2 274	2 274	35	22		64
	40	2 527	2 527	40	25		69
	50	2 780	2 780	40	25		74
	80	2 800	2 800	50	27		89
	100	2 850	2 850	50	43		113
	150	2 900	2 900	50	43		138
20							
	10	2 911	2 911	60	30	7.55	56
	20	3 143	3 143	60	30		61
	30	3 354	3 354	60	30		66
	40	3 612	3 612	60	40		71
	50	3 816	3 816	70	50		76
	80	4 032	4 032	80	50		91
	100	4 200	4 200	85	80		121
	150	4 400	4 400	90	80		152
	200	4 600	4 600	90	80		177
25							
	10	3 270	3 270	100	60	8.55	64
	20	3 744	3 744	100	60		69
	30	4 205	4 205	100	60		74
	40	4 643	4 643	110	60		79
	50	4 650	4 650	120	60		84
	80	4 700	4 700	130	80		112
	100	4 750	4 750	130	80		129
	150	4 800	4 800	130	80		154
	200	4 800	4 800	130	80		179

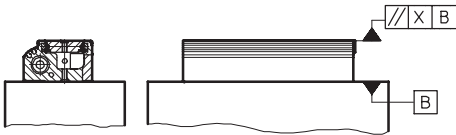
Mini slides DGSL

Technical data

FESTO

Parallelism

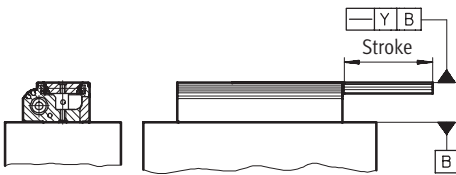
The term parallelism refers to the accuracy between the mounting surface and the slide surface.



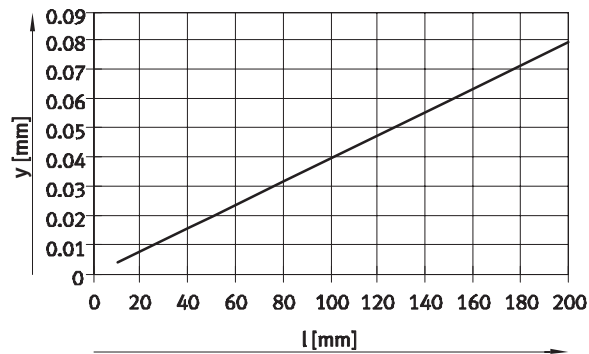
Size	Stroke	4	6	8	10	12	16	20	25
Parallelism X	10	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
	20	0.02	0.02	0.02	0.02	0.025	0.025	0.025	0.025
	30	0.025	0.025	0.025	0.025	0.025	0.025	0.03	0.03
	40	–	0.025	0.025	0.025	0.03	0.03	0.035	0.035
	50	–	0.03	0.03	0.03	0.035	0.035	0.04	0.04
	80	–	–	0.035	0.035	0.04	0.04	0.045	0.045
	100	–	–	–	0.045	0.05	0.05	0.055	0.055
	150	–	–	–	–	0.075	0.075	0.08	0.08
	200	–	–	–	–	–	–	0.08	0.08

Linearity

The term linearity refers to the accuracy between the mounting surface and the slide surface as a function of the stroke.

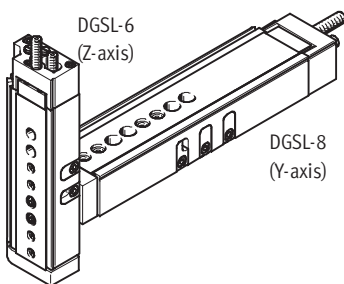


Linear speed of travel x as a function of stroke length l

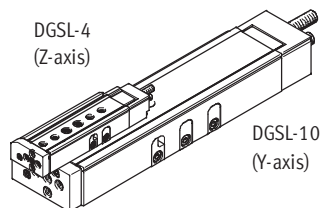


Possible combinations without adapter plate

Pick & place



Piggy-back assembly



	Y-axis								
	Size	4	6	8	10	12	16	20	25
Z-axis	4	■	■	■	■	–	–	–	–
	6	–	■	■	■	–	–	–	–
	8	–	–	■	■	■	■	–	–
	10	–	–	–	■	■	■	–	–
	12	–	–	–	–	■	■	■	■
	16	–	–	–	–	–	■	■	■
	20	–	–	–	–	–	–	■	■
	25	–	–	–	–	–	–	–	■

Mini slides DGSL

Technical data

FESTO

Adjustable end-position range

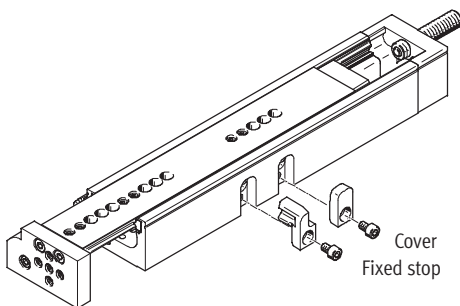
Coarse adjustment of forward end position

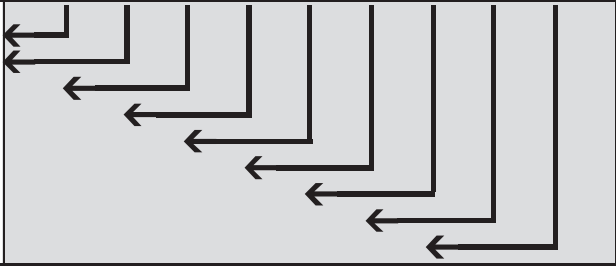
The mini slide DGSL allows the front fixed stop to be adjusted by moving the cover.

This allows a stroke reduction through to the next but one standard stroke.

Advantages:

- Can be flexibly adapted to the application
- Integrated, therefore less conversion work required
- Extensive setting range



Stroke [mm]	0	10	20	30	40	50	80	100	150	200
Shorten the stroke										

Precision adjustment of end positions

The stroke can be adjusted precisely using the cushioning components (on the slide and in the end cap).

Step 1:

Release clamping element.

Step 2:

Manually position slide in the desired end position.

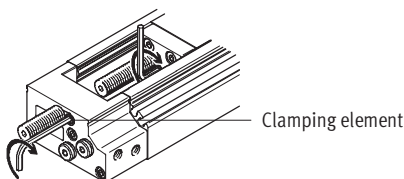
Step 3:

Rotate the stop element using an Allen key until the end position is obtained.

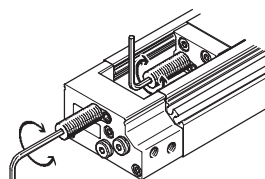
Advantages:

- Precision adjustment fixed by means of clamping element
- No readjustment necessary, position is 100% maintained by locking or load
- Simple and fast setting; only one tool required

Step 1



Step 2 + 3



Adjustable end position range [mm] per end position

Size		4	6	8	10	12	16	20	25
With cushioning	P	14	16	20	22	27	41	51	51
	P1	13	15	18	20	25	39	49	49
	Y3	–	–	14	15	25	37	41	50

Mini slides DGSL

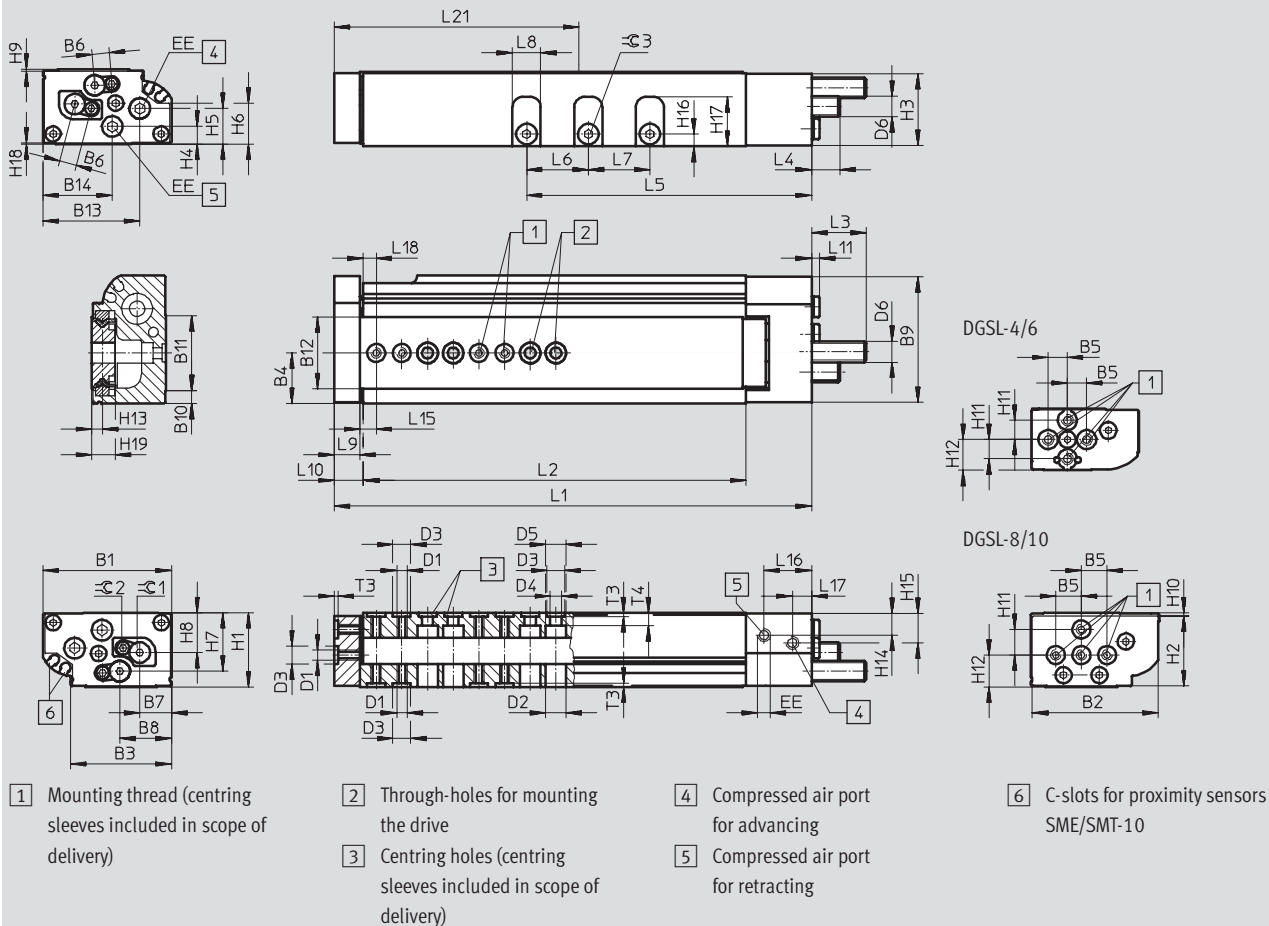
Technical data

FESTO

Dimensions

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

Size 4 ... 10



General dimensions

Size	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	D1
4	28	27.4	18.3	9.35	5	3.55	12	6.3	27.5	2	17.2	12.4	20.45	14.45	M3
6	35	34.5	26.3	13.5	5	5	8.2	13.5	34.5	3.5	19.9	20	24.9	18.9	M3
8	42	41.3	31.65	16.6	10	6	10.3	16.25	41.5	4.5	24	24.1	31.5	25.4	M4
10	50	49	39.2	19.65	10	6.8	12.35	20.1	49	5	29.2	28	37.7	27	M4

Size	D2 Ø	D3 Ø	D4 Ø	D5 Ø	D6	EE	H1 ±0.08	H2	H3	H4	H5	H6	H7	H8
4	6.2	5 ^{H7}	3.3	6	M4x0.5	M3	16	15.4	15.35	3.5	6.3	8.6	8.4	8.1
6	6.2	5 ^{H7}	3.3	6	M5x0.5	M3	20	19	19.25	5.2	9.4	10.2	16	10.55
8	8	7 ^{H7}	4.3	8	M6x0.5	M3	24	22.7	23	6.5	10.6	14	18.9	13.3
10	8	7 ^{H7}	4.3	8	M8x1	M5	29	27.1	28	6.8	13.8	15.8	22.8	15.5

Size	H9	H10	H11	H12	H13	H14	H15	H16	H17	H18	H19	T3 +0.1	T4	∅C2	∅C3
4	0.4	0.3	5	8	2.7	5.35	5.85	3	10.6	0.25	5.3	1.3	2.3	1.3	2
6	0.5	0.5	5	11.5	3.4	6.5	6.7	3.7	13.1	0.27	6.5	1.3	3.3	1.5	2.5
8	0.6	0.9	10	8.7	3.25	7.8	10.5	4.1	16.8	0.35	6.6	1.6	3.8	2	2.5
10	0.6	1.4	10	12.5	4.2	8.75	11.75	4.8	19	0.4	9	1.6	5	2.5	3

Mini slides DGSL

Technical data

FESTO

Stroke-dependent dimensions															
Size	Stroke	L1	L2	L5	L6	L7	L8	L9	L10	L11	L15 ±0.05	L16	L17	L18 ±0.05	L21
4	10	72	48	36.35	–	–	6.5	5.5	6.6	1.8	4	12.25	5.25	3	31
	20	81.1	57.1	37.95	10										36
	30	91.1	67.1	47.95											42
6	10	81.1	54	33.1	–		8	8	9.6	1.8	5.1	12.25	5.25	3.5	37
	20	91.1	64	43.1	14										42
	30	101.1	74	53.1											47
	40	111.1	84	63.1											52
	50	121.1	94	73.1		14									57
8	10	90.1	59.6	34.6	–	–	8	10	11.6	1.8	7	14.25	7.1	5.5	41
	20	100.1	69.6	44.6	10										46
	30	110.1	79.6	54.6											51
	40	120.1	89.6	64.6											56
	50	142.1	111.6	74.6											67
	80	172.1	141.6	104.6		10									82
10	10	102.9	66	41.3	–	–	11	10	11.6	3	6.4	18.5	7.5	5	43
	20	112.6	75.7	51											46
	30	122.6	85.7	61											51
	40	132.6	95.7	71											56
	50	142.6	105.7	81											61
	80	186	149.1	111	24										83
	100	209	169.1	131	24	24									96

Cushioning-dependent dimensions					
Size	Cushioning	L3 max.	L4 max.	±0.1	
				For adjusting the cushioning stroke	For adjusting the end position
4	P	15.2	7.8	–	1.3
	P1	14	6	1.3	2.5
6	P	17.6	8.1	–	1.5
	P1	15.5	5.8	1.5	3
8	P	21.1	10.7	–	2
	P1	19	9.1	2	4
	Y3	24.3	23.9	–	2
10	P	22.8	12.5	–	2.5
	P1	20.5	10.2	2.5	5
	Y3	25.5	14.9	–	2.5

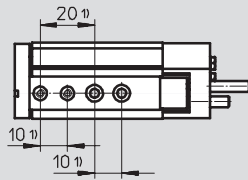
Mini slides DGSL

Technical data

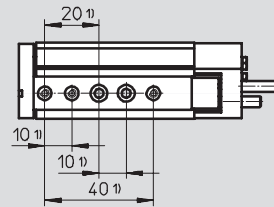
FESTO

Hole pattern for mounting thread and centring holes

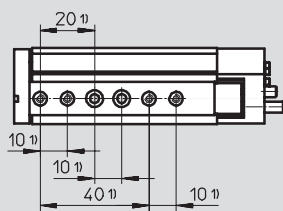
DGSL-4-10



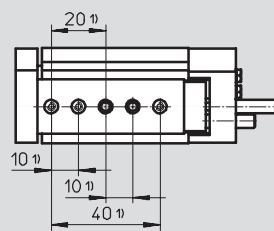
DGSL-4-20



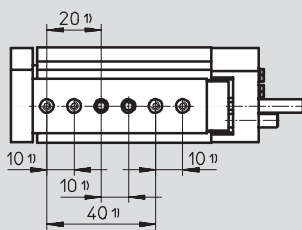
DGSL-4-30



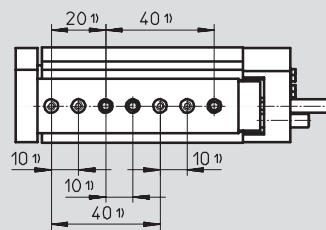
DGSL-6-10



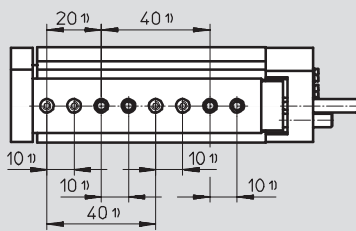
DGSL-6-20



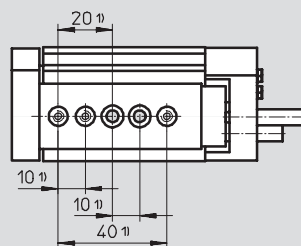
DGSL-6-30



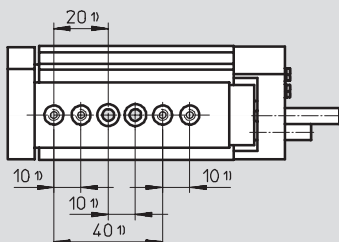
DGSL-6-40/50



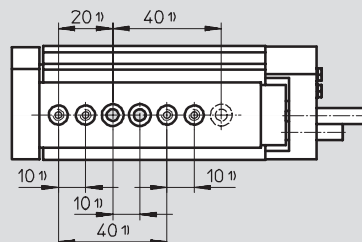
DGSL-8-10



DGSL-8-20



DGSL-8-30

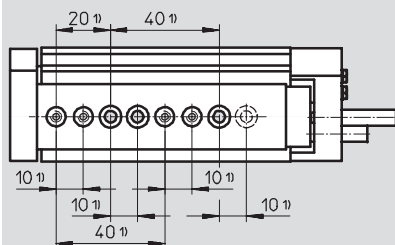


Mini slides DGSL

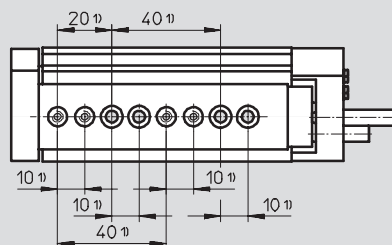
Technical data

Hole pattern for mounting thread and centring holes

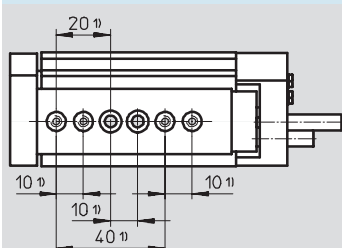
DGSL-8-40



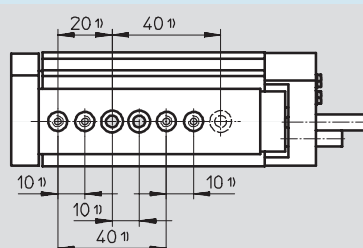
DGSL-8-50/80



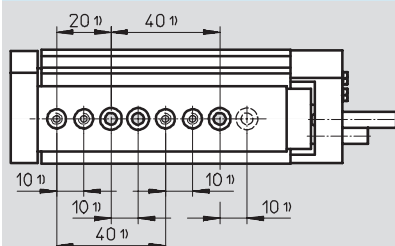
DGSL-10-10



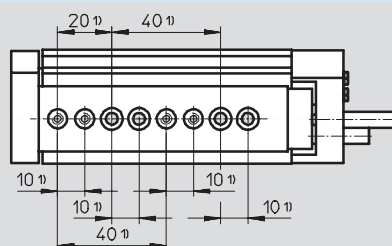
DGSL-10-20



DGSL-10-30

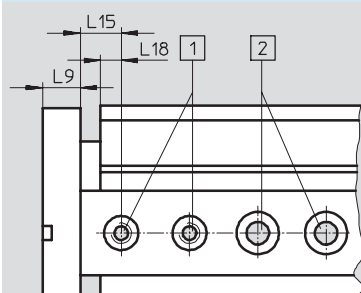


DGSL-10-40 ... 100



Distances from the yoke plate to the mounting threads and centring holes

DGSL-4 ... 10



- 1) Centring holes with thread
- 2) Through-holes for mounting the drive

- 1) Tolerance for centring hole ± 0.02
- Tolerance for through-hole ± 0.1

Size	L9	L15 ± 0.05	L18
4	5.5	4	3
6	8	5.1	3.5
8	10	7	5.5
10	10	6.4	5

Mini slides DGSL

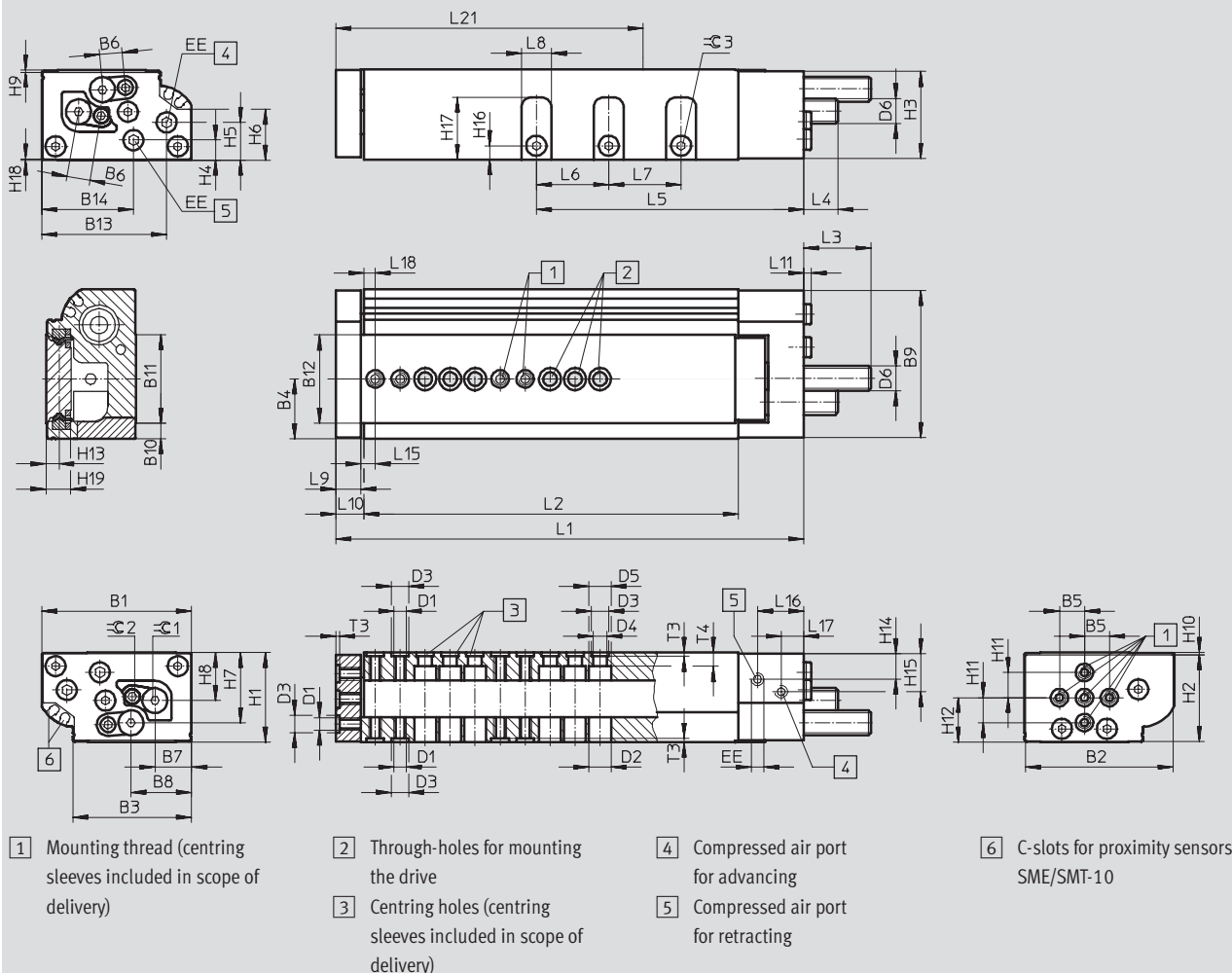
Technical data

FESTO

Dimensions

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

Size 12/16



General dimensions

Size	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	D1
12	60	59	50	24	10	9.2	14.7	24.3	59	6.4	35.35	35.2	50	36.7	M5
16	66	65	53.5	26.7	10	11.1	16.7	27.5	65	7.75	37.9	38	50.4	36.7	M5

Size	D2	D3	D4	D5	D6	EE	H1	H2	H3	H4	H5	H6	H7	H8
	Ø	Ø	Ø	Ø			±0.08							
12	8.8	7 ^{H7}	5.5	8.8	M10x1	M5	36	34.8	34.7	8	15.1	20.35	28.2	19.3
16	8.8	7 ^{H7}	5.5	9.2	M12x1	M5	40	38	39	8.5	16.7	20.6	31.7	20.8

Size	H9	H10	H11	H12	H13	H14	H15	H16	H17	H18	H19	T3	T4	⌀C2	⌀C3
												+0.1			
12	0.8	0.95	10	17.9	5.2	10.75	15.75	5.5	24.9	0.5	10	1.6	5.6	3	3
16	0.5	1.5	10	20	6.4	10.5	16.7	7	26.6	0.5	12.4	1.6	6.1	4	4

Mini slides DGSL

Technical data

FESTO

Stroke-dependent dimensions															
Size	Stroke	L1	L2	L5	L6	L7	L8	L9	L10	L11	L15 ±0.05	L16	L17	L18 ±0.05	L21
12	10	105.9	68.6	42.4	–	–	12	10	11.6	3	5.8	18.5	9	4.5	44
	20	115.9	78.6	52.4											49
	30	125.9	88.6	62.4											54
	40	135.9	98.6	72.4											59
	50	145.9	108.6	82.4											64
	80	197.3	160	117											88
	100	217.3	180	137											98
	150	267.3	230	187	29	124									
16	10	123.8	82.5	45	–	–	14	12	13.6	3	18.8	21	10	5.5	54
	20	134.3	93	54.6											59
	30	144.3	103	64.6											64
	40	154.3	113	74.6											69
	50	164.3	123	84.6											74
	80	194.3	153	114.6											89
	100	243.3	202	134.6											113
	150	293.3	252	184.6	35	138									

Cushioning-dependent dimensions					
Size	Cushioning	L3 max.	L4 max.	≈G1	
				For adjusting the cushioning stroke	For adjusting the end position
12	P	28.1	14.9	–	3
	P1	26	12.8	3	6
	Y3	36.9	23.7	–	3
16	P	42.3	26.1	–	4
	P1	40	23.8	4	8
	Y3	51.9	35.7	–	4

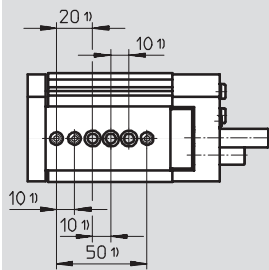
Mini slides DGSL

Technical data

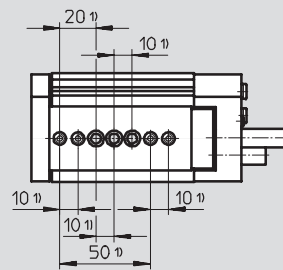
FESTO

Hole pattern for mounting thread and centring holes

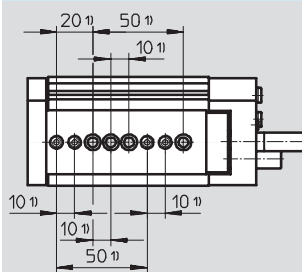
DGSL-12-10



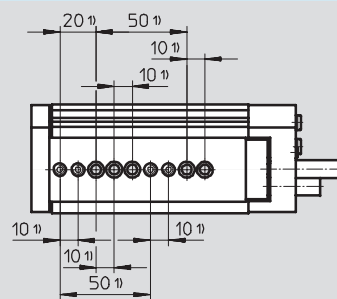
DGSL-12-20



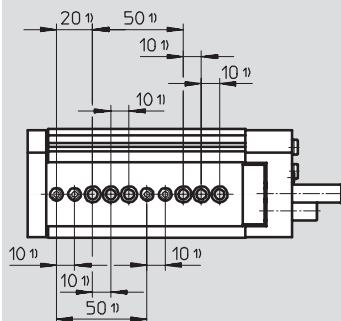
DGSL-12-30



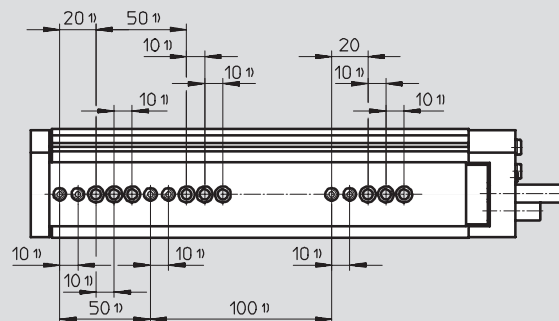
DGSL-12-40



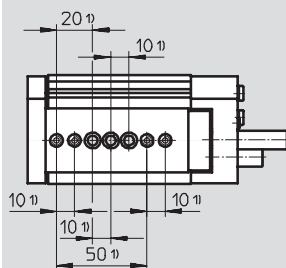
DGSL-12-50 ... 100



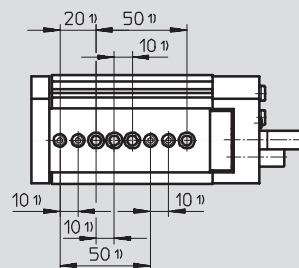
DGSL-12-150



DGSL-16-10



DGSL-16-20

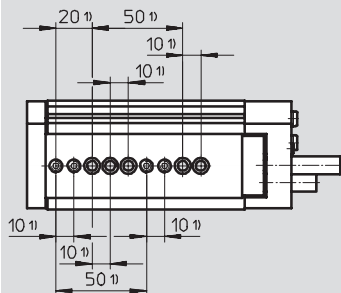


Mini slides DGSL

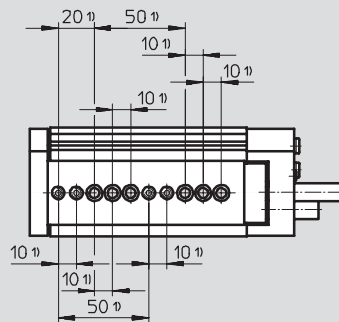
Technical data

Hole pattern for mounting thread and centring holes

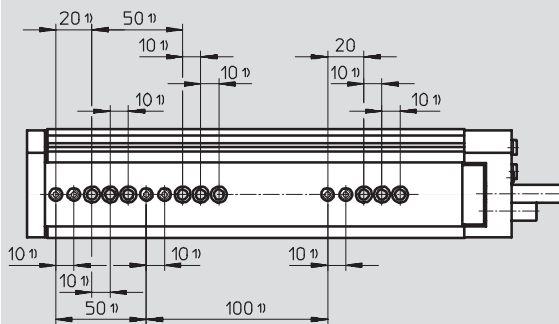
DGPL-16-30



DGSL-16-40 ... 100

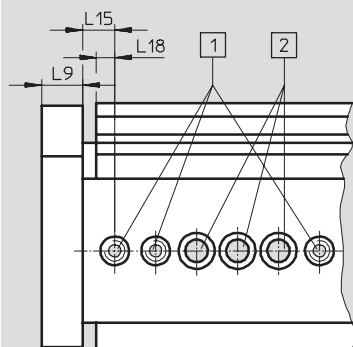


DGPL-16-150



Distances from the yoke plate to the mounting threads and centring holes

DGPL-12/16



- | | |
|---|---|
| 1) Centring holes with thread | 1) Tolerance for centring hole ± 0.02 |
| 2) Through-holes for mounting the drive | Tolerance for through-hole ± 0.1 |

Size	L9	L15 ±0.05	L18
12	10	5.8	4.5
16	12	18.8	5.5

Mini slides DGSL

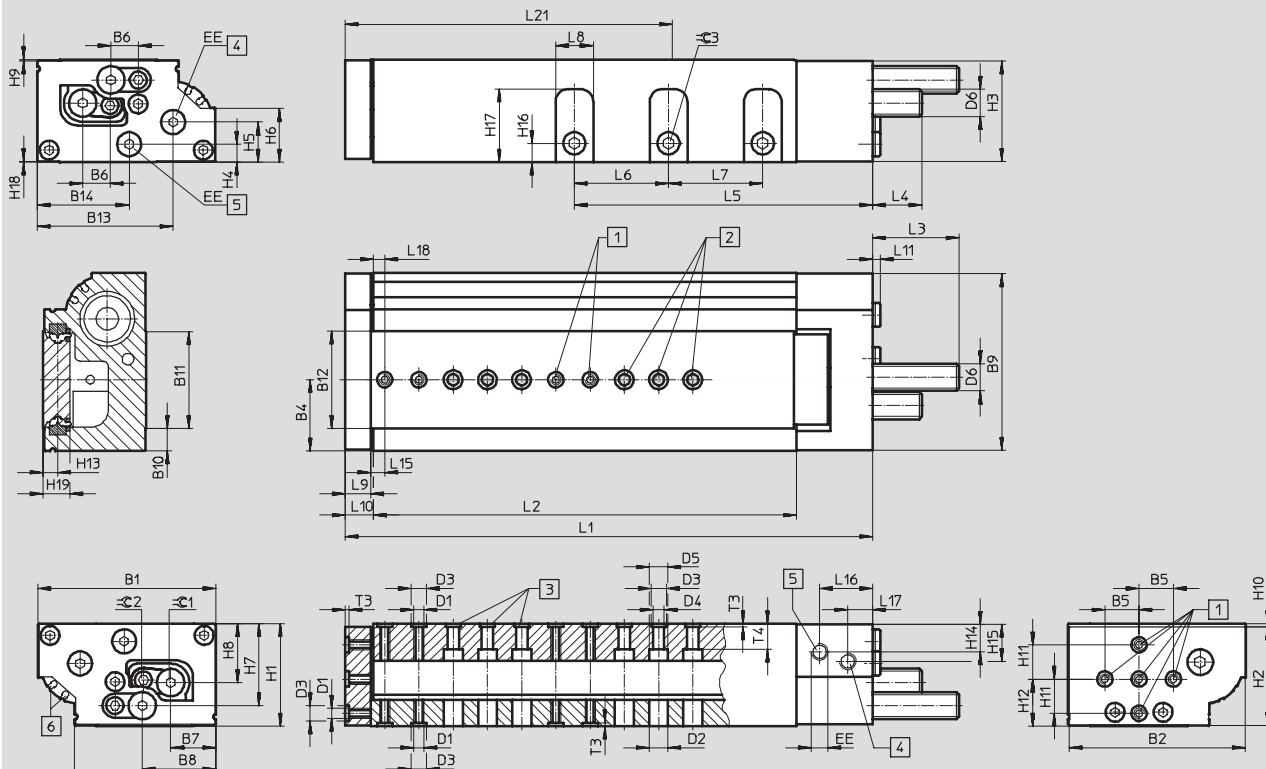
Technical data

FESTO

Dimensions

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

Size 20/25



- 1 Mounting thread (centring sleeves included in scope of delivery)
- 2 Through-holes for mounting the drive
- 3 Centring holes (centring sleeves included in scope of delivery)
- 4 Compressed air port for advancing
- 5 Compressed air port for retracting
- 6 C-slots for proximity sensors SME/SMT-10

General dimensions

Size	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	D1
20	85	84	68.35	34.5	20	14.15	21.4	36.3	83.4	10	48.9	49.2	64.1	48.6	M6
25	104	103	82.6	41.6	20	16.2	26.6	43.1	103	13.25	56.5	56.7	79.4	53.7	M6

Size	D2 Ø	D3 Ø	D4 Ø	D5 Ø	D6	EE	H1 ±0.05	H2	H3	H4	H5	H6	H7	H8
20	11	⁹ H7	6.6	9	M14x1	G ¹ / ₈	49	46.5	47.7	10.3	20.6	23.2	38.2	26.1
25	11	⁹ H7	6.6	11	M16x1	G ¹ / ₈	60	57.5	58.5	10.5	23.4	31.7	48	34.5

Size	H9	H10	H11	H12	H13	H14	H15	H16	H17	H18	H19	T3 +0.1	T4	⌀C2	⌀C3
20	0.5	2	10	23.6	7.55	14.7	14.7	10	33.3	0.8	14.5	2.1	8.8	4	5
25	1	2	20	27.5	8.55	16.6	22.2	11	42.7	0.5	15.5	2.1	15.1	5	6

Mini slides DGSL

Technical data

FESTO

Stroke-dependent dimensions															
Size	Stroke	L1	L2	L5	L6	L7	L8	L9	L10	L11	L15 ±0.05	L16	L17	L18 ±0.05	L21
20	10	140.9	84.6	59.1	–	–	17	14	15.6	4.5	7.8	29.3	12	6.5	56
	20	150.9	94.6	69.1											61
	30	160.9	104.6	79.1											66
	40	170.9	114.6	89.1											71
	50	182.9	126.6	99.1											76
	80	210.9	154.6	129.1											91
	100	269.9	213.6	149.1	44	44									121
	150	332.9	276.6	199.1											152
	200	382.9	326.6	252.1											177
25	10	157	96	63.7	–	–	22	15	16.6	4.5	8	30.9	14.5	6.5	64
	20	167	106	72.2											69
	30	177	116	82.2											74
	40	187	126	92.2											79
	50	197	136	102.2											84
	80	253	192	132.2											55
	100	286	225	152.2	129										
	150	338	277	202.2	154										
	200	388	327	254.2	179										

Cushioning-dependent dimensions					
Size	Cushioning	L3 max.	L4 max.	≈ 1	
				For adjusting the cushioning stroke	For adjusting the end position
20	P	52.4	31.2	–	4
	P1	50.1	28.9	4	8
	Y3	55.5	34.3	–	4
25	P	51.9	30.5	–	5
	P1	49.6	28.2	5	10
	Y3	65.2	43.8	–	5

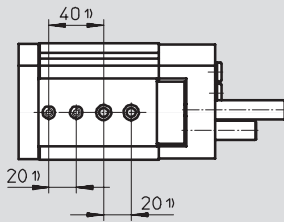
Mini slides DGSL

Technical data

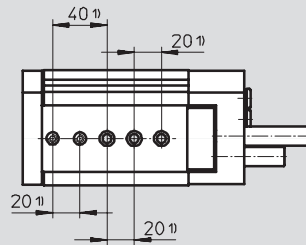
FESTO

Hole pattern for mounting thread and centring holes

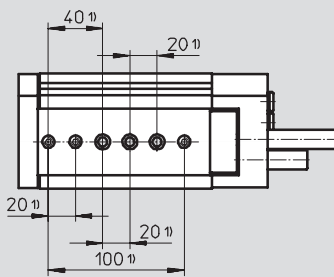
DGSL-20-10/20



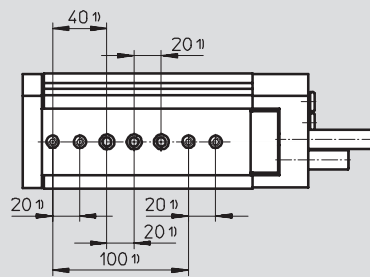
DGSL-20-30/40



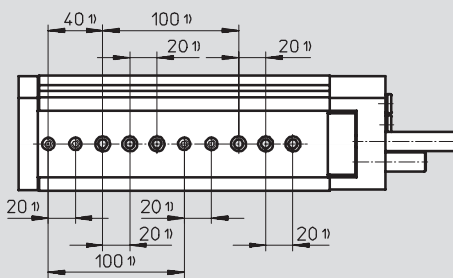
DGSL-20-50



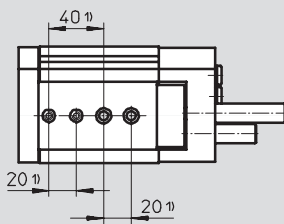
DGSL-20-80



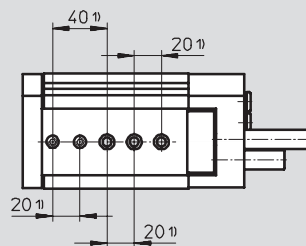
DGSL-20-100 ... 200



DGSL-25-10



DGSL-25-20



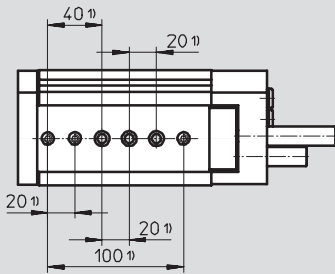
Mini slides DGSL

Technical data

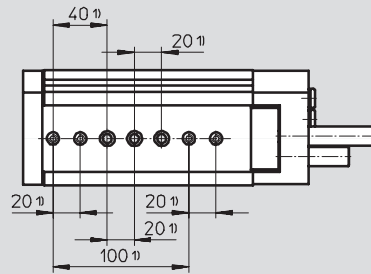
FESTO

Hole pattern for mounting thread and centring holes

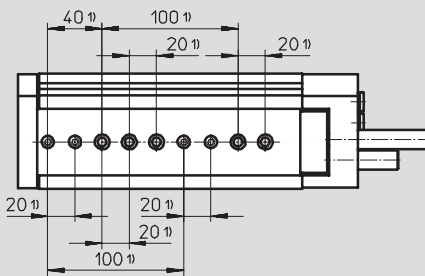
DGSL-25-30/40



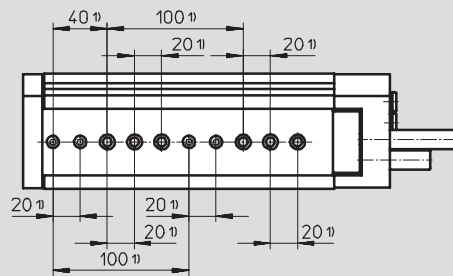
DGSL-25-50



DGSL-25-80

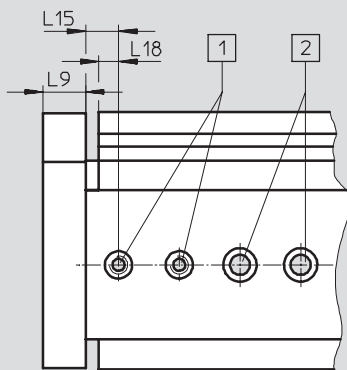


DGSL-25-100 ... 200



Distances from the yoke plate to the mounting threads and centring holes

DGSL-20/25



- 1 Centring holes with thread
- 2 Through-holes for mounting the drive
- 1) Tolerance for centring hole ± 0.02
- Tolerance for through-hole ± 0.1

Size	L9	L15 ± 0.05	L18
20	14	7.8	6.5
25	15	8	6.5

Mini slides DGSL

Technical data

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Ordering data											
Size	Stroke [mm]	Part No.	Type	Size	Stroke [mm]	Part No.	Type	Size	Stroke [mm]	Part No.	Type
With cushioning P				With cushioning P1				With cushioning Y3			
4	10	543 910	DGSL-4-10-PA	4	10	543 913	DGSL-4-10-P1A	4	10	–	
	20	543 911	DGSL-4-20-PA		20	543 914	DGSL-4-20-P1A		20	–	
	30	543 912	DGSL-4-30-PA		30	543 915	DGSL-4-30-P1A		30	–	
6	10	543 916	DGSL-6-10-PA	6	10	543 921	DGSL-6-10-P1A	6	10	–	
	20	543 917	DGSL-6-20-PA		20	543 922	DGSL-6-20-P1A		20	–	
	30	543 918	DGSL-6-30-PA		30	543 923	DGSL-6-30-P1A		30	–	
	40	543 919	DGSL-6-40-PA		40	543 924	DGSL-6-40-P1A		40	–	
	50	543 920	DGSL-6-50-PA		50	543 925	DGSL-6-50-P1A		50	–	
8	10	543 926	DGSL-8-10-PA	8	10	543 932	DGSL-8-10-P1A	8	10	–	
	20	543 927	DGSL-8-20-PA		20	543 933	DGSL-8-20-P1A		20	–	
	30	543 928	DGSL-8-30-PA		30	543 934	DGSL-8-30-P1A		30	543 938	DGSL-8-30-Y3A
	40	543 929	DGSL-8-40-PA		40	543 935	DGSL-8-40-P1A		40	543 939	DGSL-8-40-Y3A
	50	543 930	DGSL-8-50-PA		50	543 936	DGSL-8-50-P1A		50	543 940	DGSL-8-50-Y3A
	80	543 931	DGSL-8-80-PA		80	543 937	DGSL-8-80-P1A		80	543 941	DGSL-8-80-Y3A
10	10	543 942	DGSL-10-10-PA	10	10	543 949	DGSL-10-10-P1A	10	10	–	
	20	543 943	DGSL-10-20-PA		20	543 950	DGSL-10-20-P1A		20	–	
	30	543 944	DGSL-10-30-PA		30	543 951	DGSL-10-30-P1A		30	543 956	DGSL-10-30-Y3A
	40	543 945	DGSL-10-40-PA		40	543 952	DGSL-10-40-P1A		40	543 957	DGSL-10-40-Y3A
	50	543 946	DGSL-10-50-PA		50	543 953	DGSL-10-50-P1A		50	543 958	DGSL-10-50-Y3A
	80	543 947	DGSL-10-80-PA		80	543 954	DGSL-10-80-P1A		80	543 959	DGSL-10-80-Y3A
	100	543 948	DGSL-10-100-PA		100	543 955	DGSL-10-100-P1A		100	543 960	DGSL-10-100-Y3A
	150	543 949	DGSL-10-150-PA		150	543 956	DGSL-10-150-P1A		150	543 961	DGSL-10-150-Y3A
12	10	543 961	DGSL-12-10-PA	12	10	543 969	DGSL-12-10-P1A	12	10	–	
	20	543 962	DGSL-12-20-PA		20	543 970	DGSL-12-20-P1A		20	–	
	30	543 963	DGSL-12-30-PA		30	543 971	DGSL-12-30-P1A		30	543 977	DGSL-12-30-Y3A
	40	543 964	DGSL-12-40-PA		40	543 972	DGSL-12-40-P1A		40	543 978	DGSL-12-40-Y3A
	50	543 965	DGSL-12-50-PA		50	543 973	DGSL-12-50-P1A		50	543 979	DGSL-12-50-Y3A
	80	543 966	DGSL-12-80-PA		80	543 974	DGSL-12-80-P1A		80	543 980	DGSL-12-80-Y3A
	100	543 967	DGSL-12-100-PA		100	543 975	DGSL-12-100-P1A		100	543 981	DGSL-12-100-Y3A
	150	543 968	DGSL-12-150-PA		150	543 976	DGSL-12-150-P1A		150	543 982	DGSL-12-150-Y3A
16	10	543 983	DGSL-16-10-PA	16	10	543 991	DGSL-16-10-P1A	16	10	–	
	20	543 984	DGSL-16-20-PA		20	543 992	DGSL-16-20-P1A		20	–	
	30	543 985	DGSL-16-30-PA		30	543 993	DGSL-16-30-P1A		30	543 999	DGSL-16-30-Y3A
	40	543 986	DGSL-16-40-PA		40	543 994	DGSL-16-40-P1A		40	544 000	DGSL-16-40-Y3A
	50	543 987	DGSL-16-50-PA		50	543 995	DGSL-16-50-P1A		50	544 001	DGSL-16-50-Y3A
	80	543 988	DGSL-16-80-PA		80	543 996	DGSL-16-80-P1A		80	544 002	DGSL-16-80-Y3A
	100	543 989	DGSL-16-100-PA		100	543 997	DGSL-16-100-P1A		100	544 003	DGSL-16-100-Y3A
	150	543 990	DGSL-16-150-PA		150	543 998	DGSL-16-150-P1A		150	544 004	DGSL-16-150-Y3A
20	10	544 005	DGSL-20-10-PA	20	10	544 014	DGSL-20-10-P1A	20	10	–	
	20	544 006	DGSL-20-20-PA		20	544 015	DGSL-20-20-P1A		20	–	
	30	544 007	DGSL-20-30-PA		30	544 016	DGSL-20-30-P1A		30	544 023	DGSL-20-30-Y3A
	40	544 008	DGSL-20-40-PA		40	544 017	DGSL-20-40-P1A		40	544 024	DGSL-20-40-Y3A
	50	544 009	DGSL-20-50-PA		50	544 018	DGSL-20-50-P1A		50	544 025	DGSL-20-50-Y3A
	80	544 010	DGSL-20-80-PA		80	544 019	DGSL-20-80-P1A		80	544 026	DGSL-20-80-Y3A
	100	544 011	DGSL-20-100-PA		100	544 020	DGSL-20-100-P1A		100	544 027	DGSL-20-100-Y3A
	150	544 012	DGSL-20-150-PA		150	544 021	DGSL-20-150-P1A		150	544 028	DGSL-20-150-Y3A
25	10	544 030	DGSL-25-10-PA	25	10	544 039	DGSL-25-10-P1A	25	10	–	
	20	544 031	DGSL-25-20-PA		20	544 040	DGSL-25-20-P1A		20	–	
	30	544 032	DGSL-25-30-PA		30	544 041	DGSL-25-30-P1A		30	544 048	DGSL-25-30-Y3A
	40	544 033	DGSL-25-40-PA		40	544 042	DGSL-25-40-P1A		40	544 049	DGSL-25-40-Y3A
	50	544 034	DGSL-25-50-PA		50	544 043	DGSL-25-50-P1A		50	544 050	DGSL-25-50-Y3A
	80	544 035	DGSL-25-80-PA		80	544 044	DGSL-25-80-P1A		80	544 051	DGSL-25-80-Y3A
	100	544 036	DGSL-25-100-PA		100	544 045	DGSL-25-100-P1A		100	544 052	DGSL-25-100-Y3A
	150	544 037	DGSL-25-150-PA		150	544 046	DGSL-25-150-P1A		150	544 053	DGSL-25-150-Y3A
	200	544 038	DGSL-25-200-PA		200	544 047	DGSL-25-200-P1A		200	544 054	DGSL-25-200-Y3A

Mini slides DGSL

Accessories

Ordering data						
	For size	Brief description	Order code	Part No.	Type	PU ¹⁾
Centring sleeve ZBH Technical data ➔ 1 / 10.1-18						
	4, 6	For centring loads and attachment components	–	189 652	ZBH-5	10
	8, 10, 12, 16			186 717	ZBH-7	
	20, 25			150 927	ZBH-9	
Shock absorber DYEY Technical data ➔ 1 / 9.0-2						
	4	Flexible cushioning, with metal end position	P1	548 370	DYEF-M4-Y1F	1
	6			548 371	DYEF-M5-Y1F	
	8			548 372	DYEF-M6-Y1F	
	10			548 373	DYEF-M8-Y1F	
	12			548 374	DYEF-M10-Y1F	
	16			548 375	DYEF-M12-Y1F	
	20			548 376	DYEF-M14-Y1F	
	25			548 377	DYEF-M16-Y1F	
Shock absorber DYSW Technical data ➔ 1 / 9.0-2						
	8	Progressive shock absorbers, both ends	Y3	548 070	DYSW-4-6-Y1F	1
	10			548 071	DYSW-5-8-Y1F	
	12			548 072	DYSW-7-10-Y1F	
	16			548 073	DYSW-8-14-Y1F	
	20			548 074	DYSW-10-17-Y1F	
	25			548 075	DYSW-12-20-Y1F	
One-way flow control valve GRLA Technical data ➔ Volume 2						
	4, 6, 8	For speed regulation	–	175 041	GRLA-M3-QS-3	1
	10, 12, 16			193 138	GRLA-M5-QS-4-D	
	20, 25			193 144	GRLA-G ¹ / ₈ -QS-6-D	
Push-in fitting QSM Technical data ➔ Volume 3						
	4, 6, 8	For connecting compressed air tubing with standard external diameters	–	153 301	QSM-M3-3	10
	10, 12, 16			153 304	QSM-M5-4	
	20, 25			153 307	QSM- ¹ / ₈ -6	

1) Packaging unit quantity

Ordering data – Proximity sensor for C-slot, magneto-resistive								Technical data → 1 / 10.2-57	
	Assembly	Switching output	Electrical connection		Cable length [m]	Connection direction	Part No.	Type	
			Cable	M8 plug					
N/O contact									
	Insertable from above	PNP	3-wire	–	2.5	In-line	525 915	SMT-10F-PS-24V-K2,5L-OE	
			–	3-pin	0.3	In-line	525 916	SMT-10F-PS-24V-K0,3L-M8D	
						Lateral	526 675	SMT-10F-PS-24V-K0,3Q-M8D	
	Insertable from end	PNP	–	3-pin	0.3	In-line	173 220	SMT-10-PS-SL-LED-24	
			3-wire	–	2.5		173 218	SMT-10-PS-KL-LED-24	

Mini slides DGSL

Accessories

FESTO

Ordering data – Proximity sensor for C-slot, magnetic reed							Technical data → 1 / 10.2-60	
	Assembly	Electrical connection		Cable length [m]	Connection direction	Part No.	Type	
		Cable	M8 plug					
N/O contact								
	Insertable from above	–	3-pin	0.3	In-line	525 914	SME-10F-DS-24V-K0,3L-M8D	
		3-wire	–	2.5	In-line	525 913	SME-10F-DS-24V-K2,5L-OE	
		2-wire				526 672	SME-10F-ZS-24V-K2,5L-OE	
	Insertable from end	–	3-pin	0.3	In-line	173 212	SME-10-SL-LED-24	
		3-wire	–	2.5		173 210	SME-10-KL-LED-24	

 Note
Proximity sensors SME are not permitted for size 4.

Ordering data – Plug socket with cable							Technical data → 1 / 10.2-114	
	Assembly	Switching output		Connection	Cable length [m]	Part No.	Type	
		PNP	NPN					
Straight plug socket								
	M8 union nut	■	■	3-pin	2.5	159 420	SIM-M8-3GD-2,5-PU	
					5	159 421	SIM-M8-3GD-5-PU	
Angled plug socket								
	M8 union nut	■	■	3-pin	2.5	159 422	SIM-M8-3WD-2,5-PU	
					5	159 423	SIM-M8-3WD-5-PU	