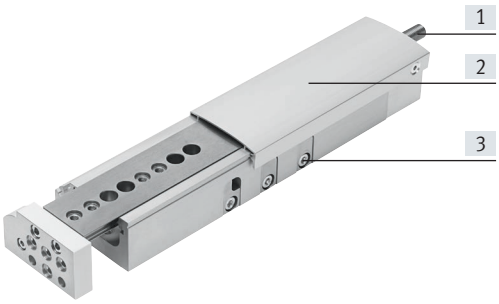
Mini slides DGSL

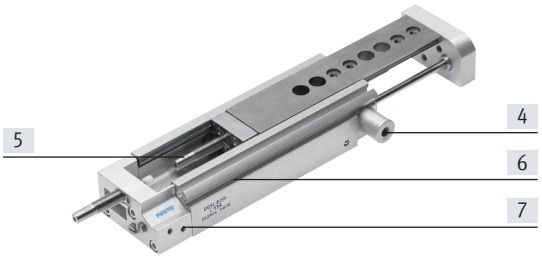
Key features

General

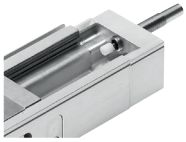
- Double-acting drives
- Wide range of mounting options
- System product for handling and assembly technology
- Very flexible thanks to versatile assembly and mounting options on:
  – Drive body, slide, yoke plate

The technology in detail





[1] Cushioning



- Choice of five cushioning types:
  – Elastic cushioning without metal end position (P)
  – Elastic cushioning without metal end position, short design (E)
  – Elastic cushioning with metal end position (P1)
  – Shock absorber (Y3)
  – Shock absorber with reducing sleeve (Y11)
- Alternatives:
  – Without cushioning (N)

[2] Cover → Page 47

- The cover stops foreign parts or dirt getting into the guide
- The cover comes in different lengths and can be shortened as required by the customer

[3] Rough stroke adjustment → Page 10

- The end stop for the advanced end position can be adjusted mechanically, for example to shorten the stroke

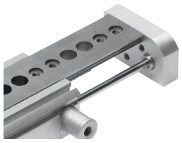
[4] Clamping unit → Page 40

- Mechanical clamping for fixing the slide in any position; frictional locking (C)

[4] End-position locking → Page 40

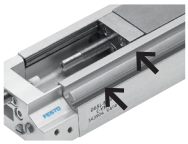
- Mechanical locking when the end position is reached, for fixing the slide in the unpressurised, retracted state; positive locking (E3)

[5] Innovative guide unit



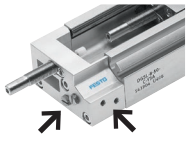
- Wide roller track, providing extremely high rigidity
- High load capacity
- High precision
- Housing and steel slide form a guide, there are no accumulative tolerances

[6] Position sensing



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

[7] Supply ports



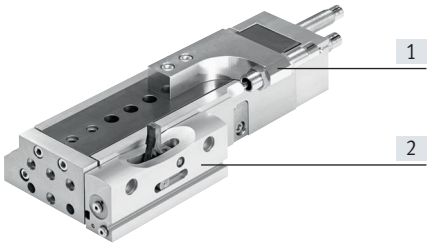
- Choice of two sides:
  – On the front
  – On the side

System example

The technology in detail

Intermediate-position module

→ Page 48

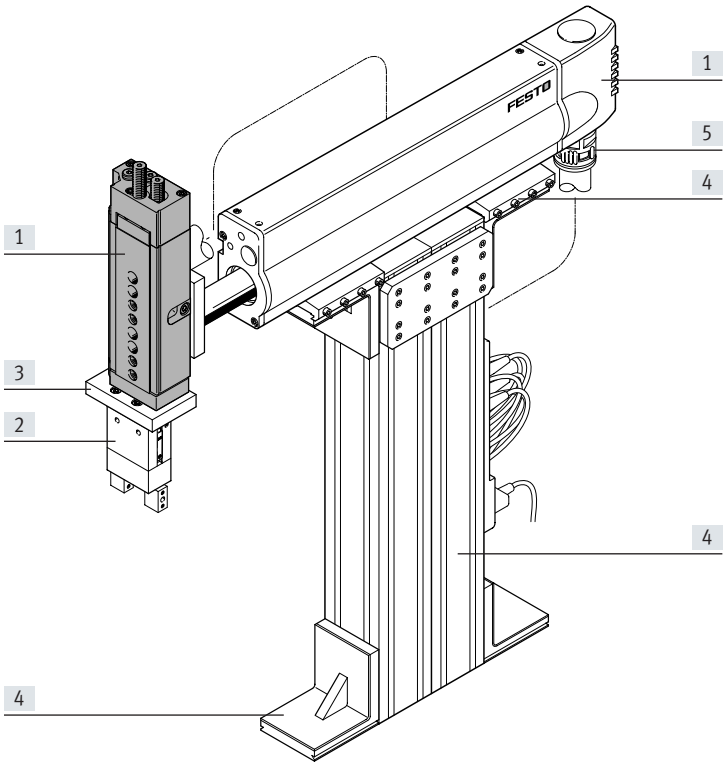


The intermediate-position module enables an additional adjustable position within the stroke range.

[1] Shock absorber retainer
[2] Intermediate-position module

- The symmetrical design means that the intermediate position can be approached when advancing or retracting, depending on the assembly
- Can be travelled through from the end position
- Possible to continue on directly from the intermediate position
- Easy to assemble
- Sensing of the stop lever position is possible

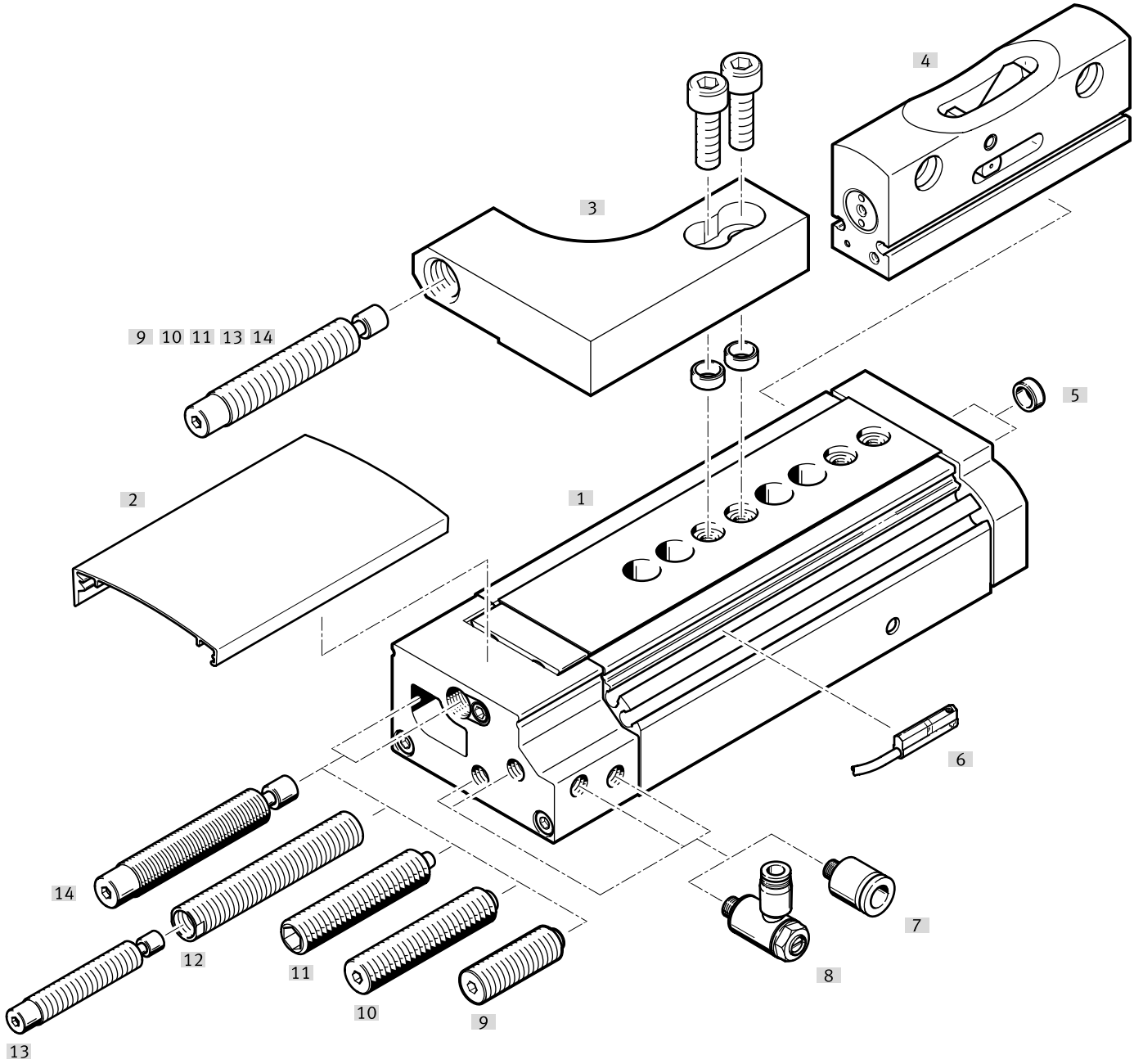
System product for handling and assembly technology



System components and accessories

		Description	→ Page/Internet
[1]	Drives	Wide range of combinations possible within handling and assembly systems	drive
[2]	Gripper	Wide range of variations possible within handling and assembly technology	gripper
[3]	Adapter	For drive/drive connections	adapter kit
		For drive/gripper connections	
[4]	Basic components	Profiles and profile connections as well as profile/drive connections	basic component
[5]	Installation components	For a clear, safe installation of electrical cables and tubes	installation component
–	Axes	Wide range of combinations possible within handling and assembly systems	axis
–	Motors	Servo and stepper motors, with or without gear unit	motor

Peripherals overview



Note

Operation without cushioning components is not permitted.

Peripherals overview

Accessories			
		Description	→ Page/Internet
[1]	Mini slide DGSL	Double-acting	
[2]	Covering DADS	• For protection, to stop foreign parts or dirt getting into the guide • The cover can be shortened as required by the customer	47
[3]	Shock absorber retainer DADP	• Attachment for the shock absorber • For positioning and cushioning the intermediate position	50
[4]	Intermediate-position module DADM	With stop lever for the intermediate position	48
[5]	Centring sleeve ZBH	For centring loads and attachments (centring sleeves are included in the scope of delivery of the mini slide)	52
[6]	Proximity switch SME/SMT-10	For position sensing Can be integrated in the sensor slot, so it does not protrude	52
[7]	Push-in fitting QSM	For connecting tubing with standard O.D.	52
[8]	One-way flow control valve GRLA	For regulating speed	52
[9]	Cushioning E	Elastic stop for medium loads at medium speed	51
[10]	Cushioning P	Elastic stop for medium loads at medium speed	51
[11]	Cushioning with stop P1	Precision metal stop for small loads at low speed	51
[12]	Reducing sleeve DAYH	For installing a smaller shock absorber. For applications in which the cushioning energy is between cushioning Y3 and P1	51
[13]	Shock absorber DYSW	→ Page (shock absorber selection)	51
[14]	Cushioning with shock absorber Y3	For large loads and high speed. Ensures precise, metal-to-metal contact after the cushioning	51
–	Distance sensor SOIA	For monitoring the condition of the damping elements	51

Type codes

001	Series	
DGSL	Mini slide, double-acting	

002	Size	
4	4	
6	6	
8	8	
10	10	
12	12	
16	16	
20	20	
25	25	

003	Stroke	
...	10 ... 200	

004	Clamping unit	
	None	
C	Attached	

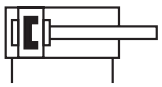
005	End-position locking	
	None	
E3	With retracted piston rod	

006	Cushioning	
N	No cushioning	
P	Elastic cushioning rings/plates on both sides	
P1	Elastomer cushioning, adjustable on both sides, with fixed stop	
Y3	Shock absorber, self-adjusting, progressive, at both ends	
E	Elastomer cushioning, short, on both sides	
Y11	Shock absorber, self-adjustable, progressive at both ends, with reducing sleeve	

007	Position sensing	
A	For proximity sensor	

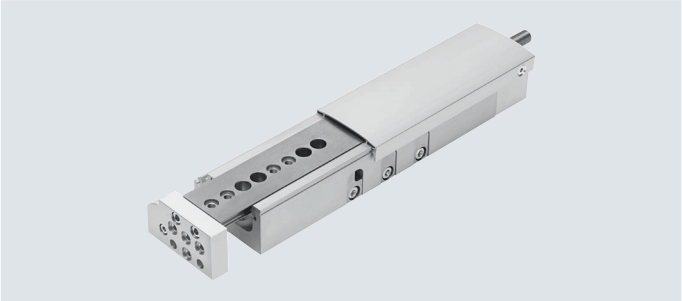
Datasheet

Function



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

Sets of wearing parts
➔ Page 45



General technical data										
Size			4	6	8	10	12	16	20	25
Pneumatic connection			M3			M5			G1/8	
Design			Scotch yoke system							
Guide			Ball bearing cage guide							
Type of mounting			With through-hole							
			With female thread							
Cushioning		P	Elastic cushioning without metal end position, at both ends							
		E	Elastic cushioning without metal end position, at both ends, short design							
		P1	Elastic cushioning with metal end position, at both ends, adjustable							
		Y3	–		Progressive shock absorber, at both ends					
		Y11	–			Progressive shock absorber with reducing sleeve, at both ends				
		N	No cushioning							
Position sensing			Via proximity switch							
Mounting 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			Compressed air to ISO 8573-1:2010 [7:4:4]							
Note on the operating/pilot medium			Lubricated operation possible (in which case lubricated operation will always be required)							
Min. operating pressure										
		[MPa]	0.25	0.15			0.1			
		[bar]	2.5	1.5			1			
Max. operating pressure1)										
		[MPa]	0.8							
		[bar]	8							
Ambient temperature2)		[°C]	0 ... +60							

1) Note max. operating pressure in combination with the intermediate-position module DADM-EP ➔ Internet: dadma
2) Note operating range of proximity switches

Piston diameter, forces and impact energy										
Size			4	6	8	10	12	16	20	25
Piston Ø		[mm]	6	8	10	12	16	20	25	32
Theoretical force at 0.6 MPa (6 bar), advancing		[N]	17	30	47	68	121	188	295	483
Theoretical force at 0.6 MPa (6 bar), retracting		[N]	13	23	40	51	104	158	247	415
Impact energy in the end positions	P, E	[Nm]	0.015	0.05	0.08	0.12	0.25	0.35	0.45	0.55
	P1	[Nm]	0.005	0.02	0.03	0.04	0.06	0.12	0.2	0.25
	Y3	[Nm]	–	–	0.8	1.3	2.5	4	8	12
	1)	[Nm]	–	–	–	0.8	1.3	2.5	4	8

1) With reducing sleeve and next smaller shock absorber.

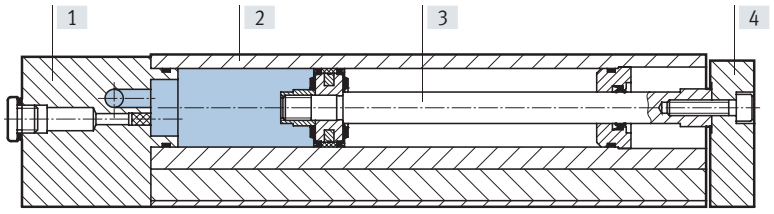
Datasheet

Weight [g]									
Size	Stroke	4	6	8	10	12	16	20	25
Product weight without cushioning component									
	10	82	158	235	396	604	896	1535	2520
	20	93	179	263	434	660	954	1649	2670
	30	104	197	289	470	711	1008	1746	2824
	40	–	215	313	507	762	1072	1857	2983
	50	–	232	370	548	813	1143	1991	3137
	80	–	–	454	727	1112	1 365	2295	4019
	100	–	–	–	813	1229	1712	2921	4519
	150	–	–	–	–	1499	2034	3620	5344
	200	–	–	–	–	–	–	4248	6139
Moving mass without cushioning component									
	10	31	68	101	163	256	403	660	998
	20	34	76	111	180	279	432	710	1052
	30	38	83	121	194	299	459	750	1115
	40	–	90	130	208	320	486	801	1181
	50	–	99	152	226	340	519	858	1244
	80	–	–	185	299	456	618	998	1567
	100	–	–	–	334	507	776	1254	1761
	150	–	–	–	–	614	910	1566	2102
	200	–	–	–	–	–	–	1807	2432
Cushioning component									
	P	2	3.6	6	14	23	45.6	82.4	106
	E	1	2	3	9	12	15	31	40
	P1	1.6	3	5	12	19.7	39.6	77.3	104
	Y3	–	–	6	11	21	42	67	91
	1)	–	–	–	18	33	52	91	131

1) With reducing sleeve and next smaller shock absorber.

Materials

Sectional view

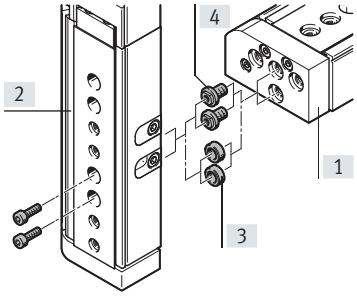


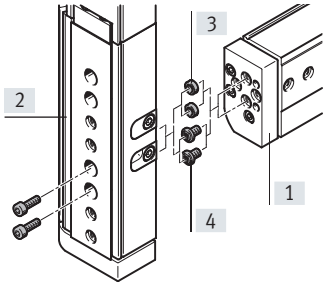
Mini slide		
[1]	Cover	Anodised aluminium
[2]	Housing	Anodised aluminium
[3]	Piston rod	High-alloy steel
[4]	Yoke plate	Anodised aluminium
–	Guide	Tempered steel
	Seals	Thermoplastic rubber, hydrogenated nitrile rubber, nitrile rubber
	Cleanroom class	Class 7 to ISO 14644-1
	LABS (PWIS) conformity	VDMA24364-B1/B2-L

Datasheet

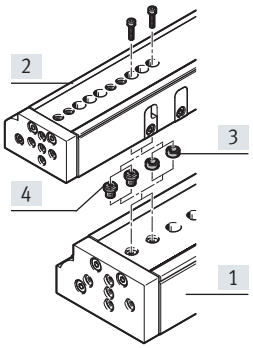
Possible combinations without adapter plate

Pick and place



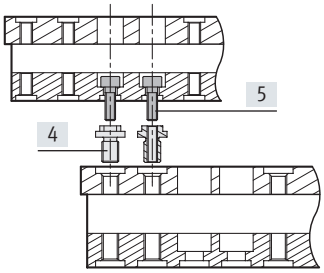


Piggy-back assembly



[3] Centring sleeve ZBH
[4] Connector sleeve ZBV

Mounting example with connector sleeve ZBV



[4] Connector sleeve ZBV2)
[5] Screw

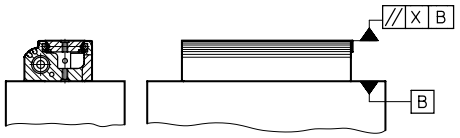
	[1] Base drive							
	Size	4	6	8	10	12	16	20	25
[2] Assembly drive	4	2x M3x7 2x ZBH-5[1)]	2x M3x10 2x ZBH-5[1)]	ZBV-M4-7[2)]	ZBV-M4-7[2)]	–	–	–	–
	6	–	2x M3x10 2x ZBH-5[1)]	ZBV-M4-7[2)]	ZBV-M4-7[2)]	–	–	–	–
	8	–	–	2x M4x12 2x ZBH-7[1)]	2x M4x12 2x ZBH-7[1)]	ZBV-M5-7[2)]	ZBV-M5-7[2)]	–	–
	10	–	–	–	2x M4x14 2x ZBH-7[1)]	ZBV-M5-7[2)]	ZBV-M5-7[2)]	–	–
	12	–	–	–	–	2x M5x14 2x ZBH-7[1)]	2x M5x16 2x ZBH-7[1)]	ZBV-M6-9[2)]	ZBV-M6-9[2)]
	16	–	–	–	–	–	2x M5x18 2x ZBH-7[1)]	ZBV-M6-9[2)]	ZBV-M6-9[2)]
	20	–	–	–	–	–	–	2x M6x20 2x ZBH-9[1)]	2x M6x20 2x ZBH-9[1)]
	25	–	–	–	–	–	–	–	2x M6x30 2x ZBH-9[1)]

1) Centring sleeves ZBH are included in the scope of delivery of the mini slide DGSL
2) Connector sleeves ZBV ➔ Page 52

Datasheet

Parallelism [mm]

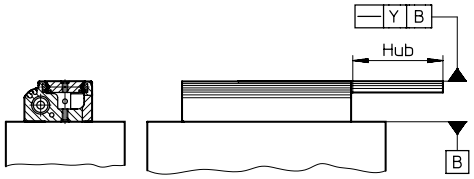
The term parallelism refers to the alignment accuracy between the mounting surface and the slide surface.



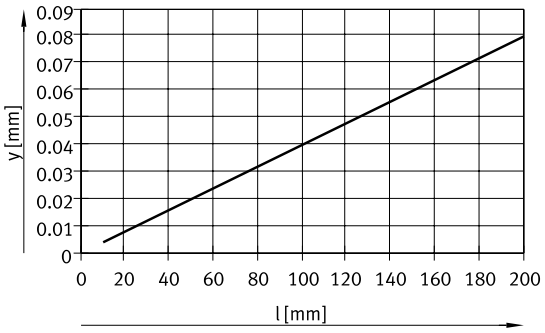
Size	Stroke [mm]	4	6	8	10	12	16	20	25
Parallelism X	10	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
	20	0.02	0.02	0.02	0.02	0.025	0.025	0.025	0.025
	30	0.025	0.025	0.025	0.025	0.025	0.025	0.03	0.03
	40	–	0.025	0.025	0.025	0.03	0.03	0.035	0.035
	50	–	0.03	0.03	0.03	0.035	0.035	0.04	0.04
	80	–	–	0.035	0.035	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 [mm]

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



Linear travel accuracy y as a function of stroke length l



Datasheet

Adjustable end-position range

Rough adjustment of the front end position

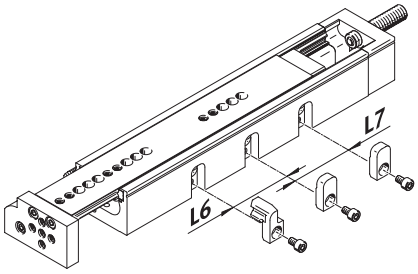
With the mini slide DGSL, the advanced fixed stop can be relocated by swapping it with the cover.
This permits a stroke reduction down to the next but one smaller standard stroke through a combination of rough and precision adjustments.

Advantages:

- Can be flexibly adapted to the application
- Integrated, which means reduced conversion effort and costs
- Large adjustment range

Note

Removal of the fixed stops can severely damage the mini slide DGSL.



Size	4		6		8		10		12		16		20		25	
Stroke [mm]	L6	L7	L6	L7	L6	L7	L6	L7	L6	L7	L6	L7	L6	L7	L6	L7
10	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
20	10	–	14	–	10	–	–	–	–	–	–	–	–	–	–	–
30	10	–	14	–	16	–	–	–	–	–	–	–	–	–	–	–
40	–	–	14	–	16	–	–	–	–	–	–	–	–	–	–	–
50	–	–	14	14	16	–	–	–	–	–	–	–	–	–	–	–
80	–	–	–	–	16	16	24	–	29	–	35	–	–	–	55	–
100	–	–	–	–	–	–	24	24	29	–	35	–	44	–	55	–
150	–	–	–	–	–	–	–	–	29	29	35	–	44	–	55	–
200	–	–	–	–	–	–	–	–	–	–	–	–	44	44	55	–

Example:
DGSL-12-150-...
Max. stroke = 150 mm

By repositioning the fixed stop by the dimension L6:
Stroke = 150 – 29 =121 mm

By repositioning the fixed stop by the dimension L6 and L7:
Stroke = 150 – 29 – 29 = 92 mm

In addition, the stroke can be reduced through a precision adjustment:
Stroke = 150 – 29 – 29 – 29
= 63 mm

Precision adjustment of the advanced and retracted end position ➔ Page 11

Datasheet

Adjustable end-position range

Precision adjustment of the advanced and retracted end position

Precision adjustment of the required stroke reduction is possible using the cushioning components (on the slide and in the end cap).

Advantages:

- Precision adjustment is accurately fixed by the clamping component
- No readjustment required, position is fully retained under lock and load
- Quick and easy adjustment, only one tool required

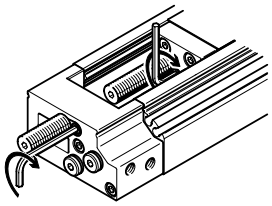
Step 1:
Loosen the clamping component

Step 2:
Position the slide by hand in the required end position

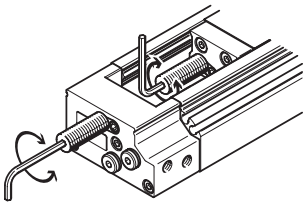
Step 3:
Turn the stop element with an Allen key until the end position is reached.

Step 4:
Tighten the clamping component

Step 1



Step 2 ... 4



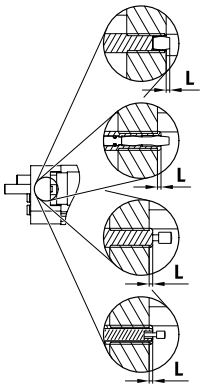
Adjustable end position range [mm] per end position / stroke reduction

Size		4	6	8	10	12	16	20	25
Front end position									
With cushioning	P	–14.5	–16.5	–19.5	–27.5	–29	–37.5	–50.5	–55
	E	–4.5	–5	–4.5	–13	–9	–3.5	–6.5	–11.5
	P1	–14.5	–16.5	–19.5	–27.5	–29	–37.5	–50.5	–55
	Y3	–	–	–15	–24	–29	–36.5	–44	–56
	1)	–	–	–	–24	–29	–36.5	–44	–56
Rear end position									
With cushioning	P	–13.5	–15	–18.5	–20	–25.5	–39.5	–49.5	–49
	E	–3.5	–3.5	–3.5	–5.5	–5.5	–5.5	–5.5	–5.5
	P1	–13.5	–15	–18.5	–20	–25.5	–39.5	–49.5	–49
	Y3	–	–	–14	–15	–25.5	–38.5	–42	–51.5
	1)	–	–	–	–15	–25.5	–38.5	–42	–51.5

1) With reducing sleeve and next smaller shock absorber.

Note

The distance L of the cushioning element (➔ operating manual) must be maintained at all times (factory setting).



DGSL-...-P/E

DGSL-...-P1

DGSL-...-Y3

DGSL-... with Reducing sleeve

Note

The adjustment range of the advanced and retracted end position is restricted when using the cushioning type "E".

Datasheet

Shock absorber selection

Payload load m as a function of impact velocity v

With the mini slide DGSL, shock absorbers can be replaced and the cushioning behaviour can thus be influenced (depending on the payload).

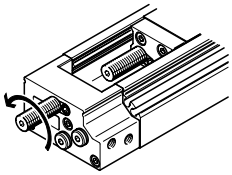
This is done by removing the existing shock absorbers on the DGSL and replacing them with a smaller shock absorber as appropriate to the application.
(➔ description below)

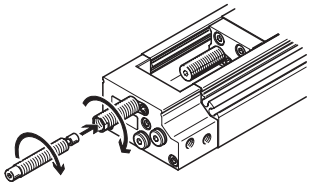
Graphs
For selecting a suitable shock absorber as a function of the mounting position of the mini slide
➔ from page 13

Ordering data
Shock absorbers DYSW, DYEF and reducing sleeve DAYH
➔ Page 51

For smaller loads:

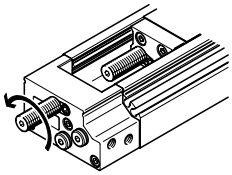
The next smaller shock absorber DYSW can be installed with the help of the reducing sleeve DAYH.

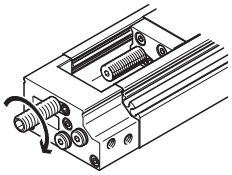




For very small loads:

The shock absorber DYEF can be installed.

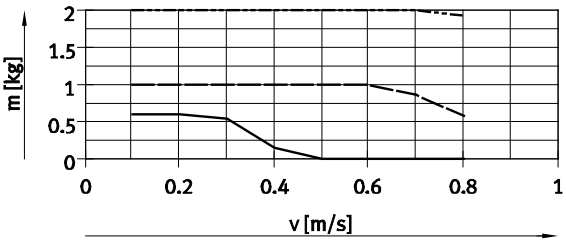




Selection example:

Current drive:
Mini slide: DGSL-10-...-Y3-A

Where:
Payload: 500 g
Impact velocity: 0.4 m/s
Mounting position: horizontal



DYSW-5-8 (cushioning Y3)
DYSW-4-6 with DAYH-4 (cushioning Y11)
DYEF-M8-Y1F

Results:
The first cushioning curve, which is positioned above the intersection point, is the most suitable for this case.
To improve the cushioning characteristics when the payload is of less than one kilogram, replace the shock absorber DYSW-5-8 integrated in the mini slide with the reducing sleeve DAYH-4 and the next smaller shock absorber DYSW-4-6.

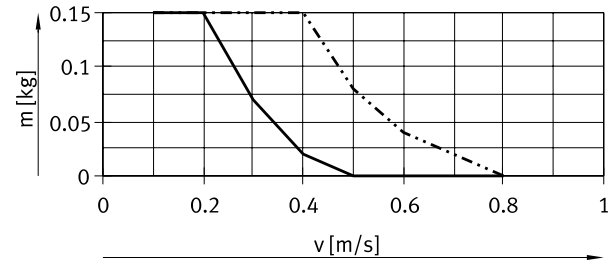
Basically, shock absorbers must be loaded.
Since the shock absorber DYSW-4-6 is more fully utilised in this case, both the service life of the shock absorber and the cushioning characteristics are improved.

Datasheet

Shock absorber selection

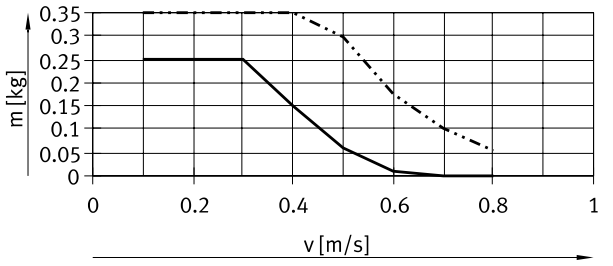
Payload m as a function of impact velocity v – horizontal mounting position

DGSL-4



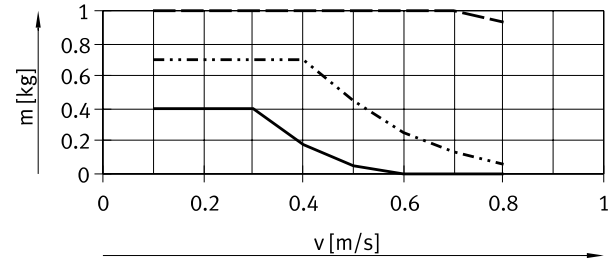
DYEF-M4-Y1F (cushioning P1)
DYEF-M4-Y1 (cushioning P)

DGSL-6



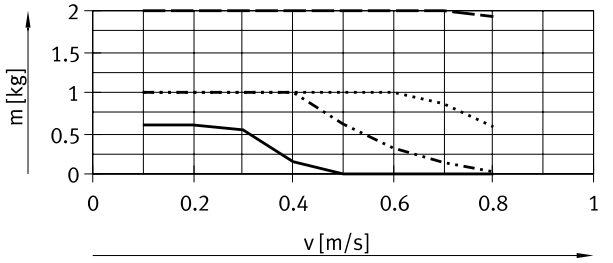
DYEF-M5-Y1F (cushioning P1)
DYEF-M5-Y1 (cushioning P)

DGSL-8



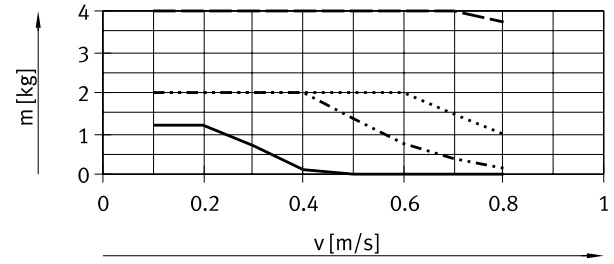
DYEF-M6-Y1F (cushioning P1)
DYEF-M6-Y1 (cushioning P)
DYSW-4-6 (cushioning Y3)

DGSL-10



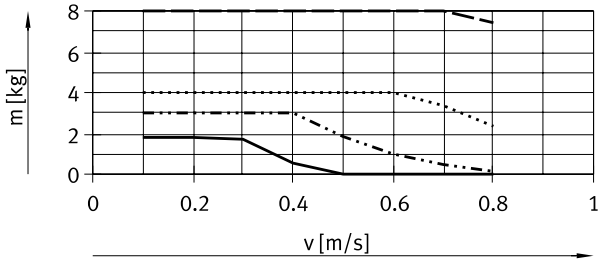
DYEF-M8-Y1F (cushioning P1)
DYEF-M8-Y1 (cushioning P)
DYSW-5-8 (cushioning Y3)
DYSW-4-6 with DAYH-4 (cushioning Y11)

DGSL-12



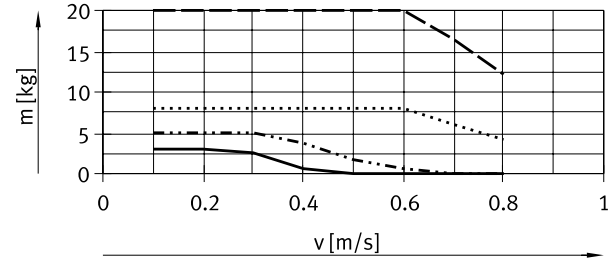
DYEF-M10-Y1F (cushioning P1)
DYEF-M10-Y1 (cushioning P)
DYSW-7-10 (cushioning Y3)
DYSW-5-8 with DAYH-5 (cushioning Y11)

DGSL-16



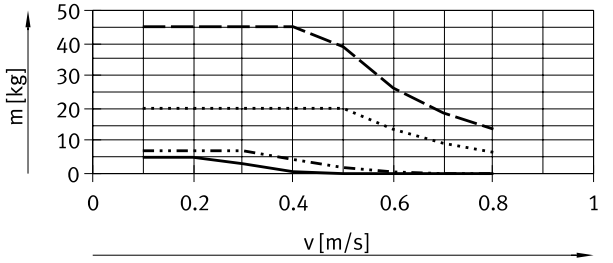
DYEF-M12-Y1F (cushioning P1)
DYEF-M12-Y1 (cushioning P)
DYSW-8-14 (cushioning Y3)
DYSW-7-10 with DAYH-7 (cushioning Y11)

DGSL-20



DYEF-M14-Y1F (cushioning P1)
DYEF-M14-Y1 (cushioning P)
DYSW-10-17 (cushioning Y3)
DYSW-8-14 with DAYH-8 (cushioning Y11)

DGSL-25



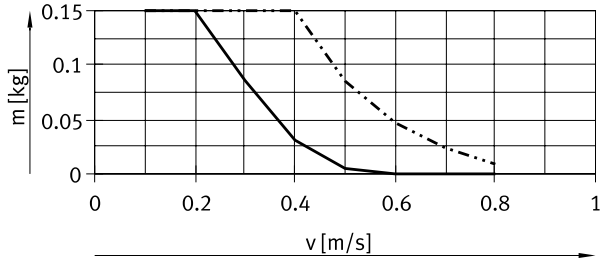
DYEF-M16-Y1F (cushioning P1)
DYEF-M16-Y1 (cushioning P)
DYSW-12-20 (cushioning Y3)
DYSW-10-17 with DAYH-10 (cushioning Y11)

Datasheet

Shock absorber selection

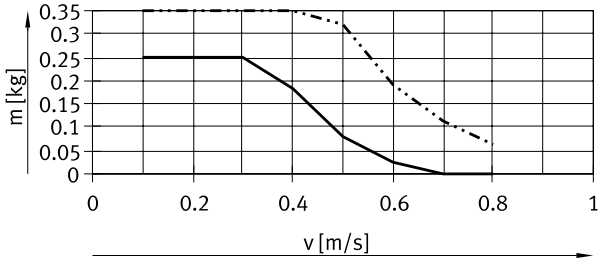
Payload m as a function of impact velocity v – vertical mounting position, payload moving upwards

DGSL-4



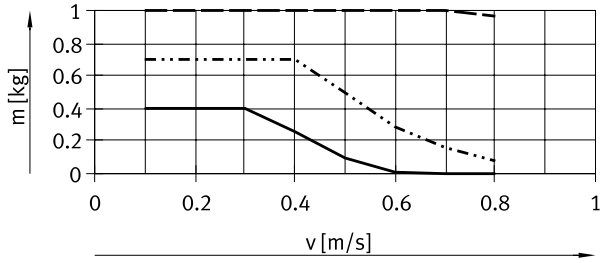
DYEF-M4-Y1F (cushioning P1)
DYEF-M4-Y1 (cushioning P)

DGSL-6



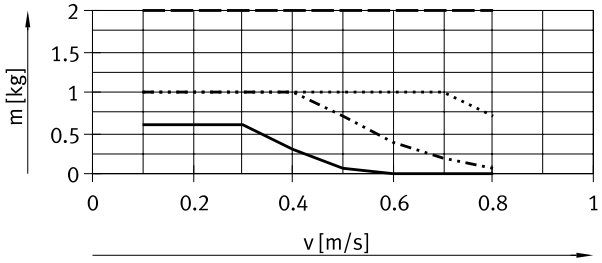
DYEF-M5-Y1F (cushioning P1)
DYEF-M5-Y1 (cushioning P)

DGSL-8



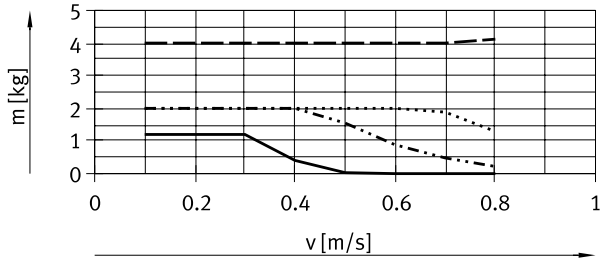
DYEF-M6-Y1F (cushioning P1)
DYEF-M6-Y1 (cushioning P)
DYSW-4-6 (cushioning Y3)

DGSL-10



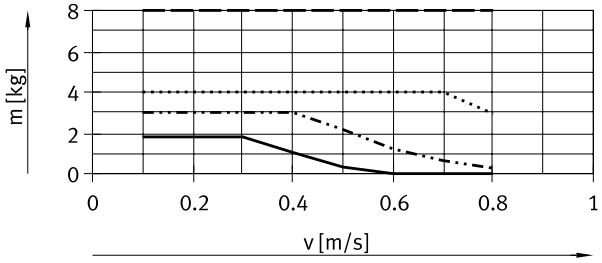
DYEF-M8-Y1F (cushioning P1)
DYEF-M8-Y1 (cushioning P)
DYSW-5-8 (cushioning Y3)
DYSW-4-6 with DAYH-4 (cushioning Y11)

DGSL-12



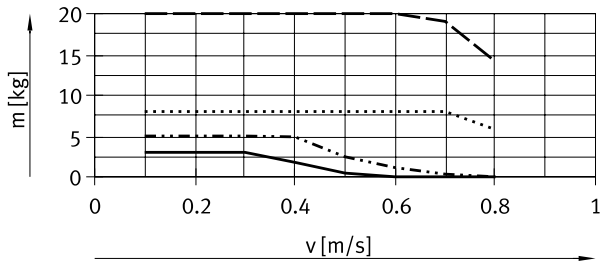
DYEF-M10-Y1F (cushioning P1)
DYEF-M10-Y1 (cushioning P)
DYSW-7-10 (cushioning Y3)
DYSW-5-8 with DAYH-5 (cushioning Y11)

DGSL-16



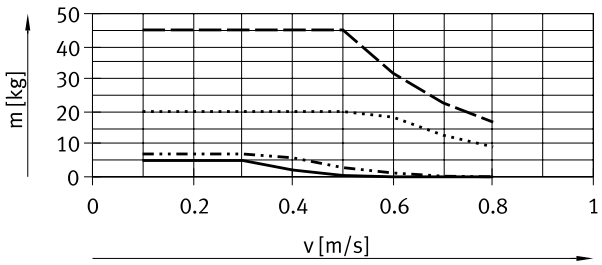
DYEF-M12-Y1F (cushioning P1)
DYEF-M12-Y1 (cushioning P)
DYSW-8-14 (cushioning Y3)
DYSW-7-10 with DAYH-7 (cushioning Y11)

DGSL-20



DYEF-M14-Y1F (cushioning P1)
DYEF-M14-Y1 (cushioning P)
DYSW-10-17 (cushioning Y3)
DYSW-8-14 with DAYH-8 (cushioning Y11)

DGSL-25



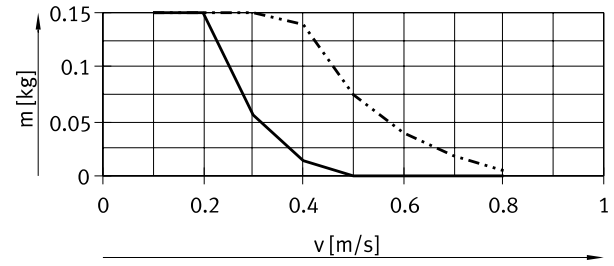
DYEF-M16-Y1F (cushioning P1)
DYEF-M16-Y1 (cushioning P)
DYSW-12-20 (cushioning Y3)
DYSW-10-17 with DAYH-10 (cushioning Y11)

Datasheet

Shock absorber selection

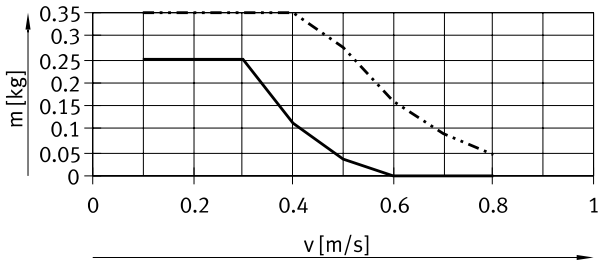
Payload m as a function of impact velocity v – vertical mounting position, payload moving downwards

DGSL-4



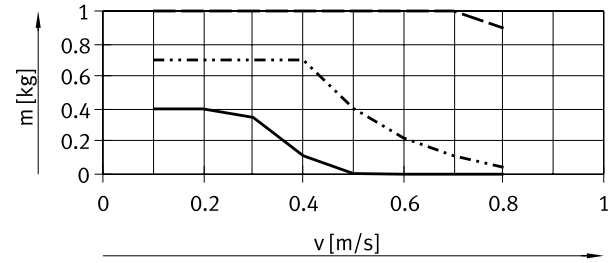
DYEF-M4-Y1F (cushioning P1)
DYEF-M4-Y1 (cushioning P)

DGSL-6



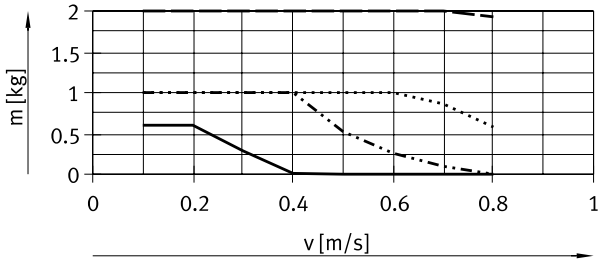
DYEF-M5-Y1F (cushioning P1)
DYEF-M5-Y1 (cushioning P)

DGSL-8



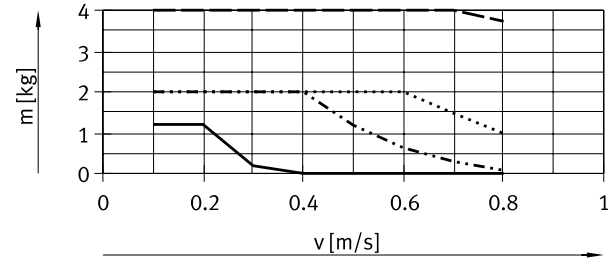
DYEF-M6-Y1F (cushioning P1)
DYEF-M6-Y1 (cushioning P)
DYSW-4-6 (cushioning Y3)

DGSL-10



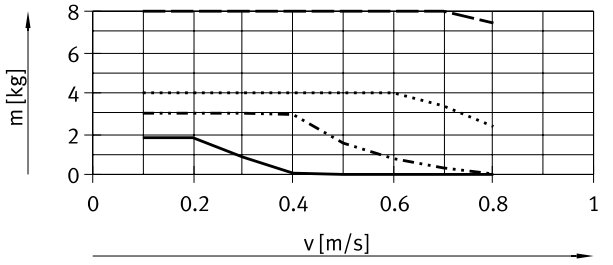
DYEF-M8-Y1F (cushioning P1)
DYEF-M8-Y1 (cushioning P)
DYSW-5-8 (cushioning Y3)
DYSW-4-6 with DAYH-4 (cushioning Y11)

DGSL-12



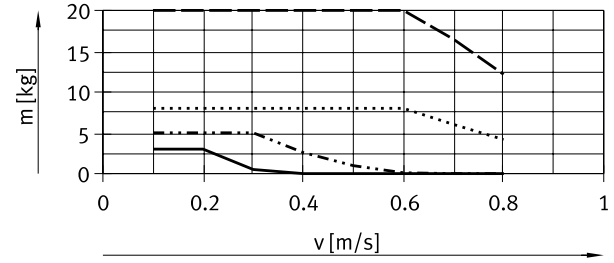
DYEF-M10-Y1F (cushioning P1)
DYEF-M10-Y1 (cushioning P)
DYSW-7-10 (cushioning Y3)
DYSW-5-8 with DAYH-5 (cushioning Y11)

DGSL-16



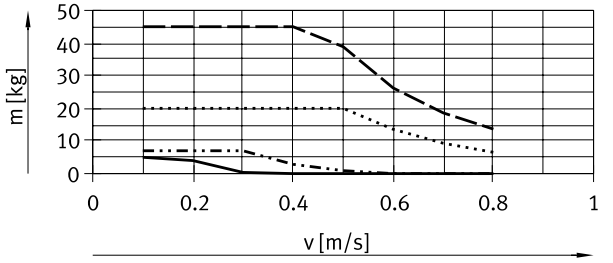
DYEF-M12-Y1F (cushioning P1)
DYEF-M12-Y1 (cushioning P)
DYSW-8-14 (cushioning Y3)
DYSW-7-10 with DAYH-7 (cushioning Y11)

DGSL-20



DYEF-M14-Y1F (cushioning P1)
DYEF-M14-Y1 (cushioning P)
DYSW-10-17 (cushioning Y3)
DYSW-8-14 with DAYH-8 (cushioning Y11)

DGSL-25

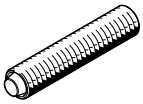


DYEF-M16-Y1F (cushioning P1)
DYEF-M16-Y1 (cushioning P)
DYSW-12-20 (cushioning Y3)
DYSW-10-17 with DAYH-10 (cushioning Y11)

Datasheet

Shock absorber selection

Travel time t as a function of payload m and cushioning P/E – horizontal mounting position

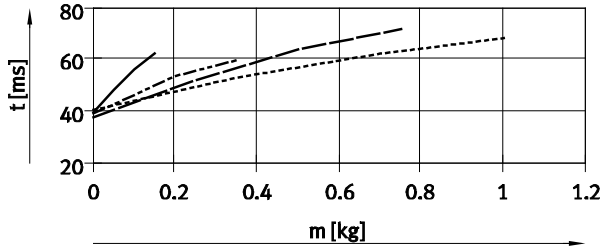


The values in the graphs are determined by calculation.
The travel time as a function of payload must not be reduced below the values shown, because the kinetic impact or residual energy in the end positions can result in damage to the drive.

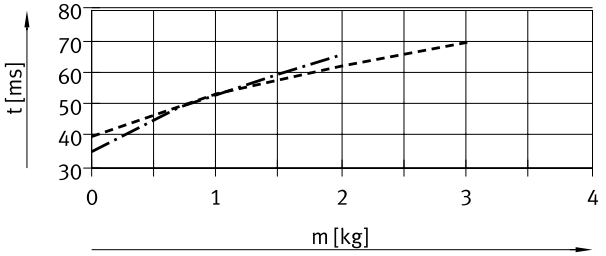
Vertical mounting position
➔ Page 19

Advancing

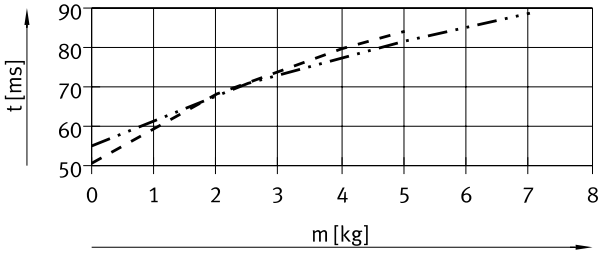
Stroke 10 mm, size 4 ... 10



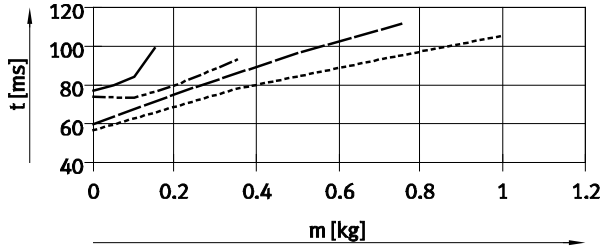
Stroke 10 mm, size 12 ... 16



Stroke 10 mm, size 20 ... 25

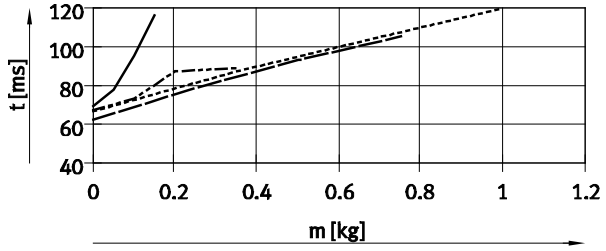


Stroke 30 mm, size 4 ... 10

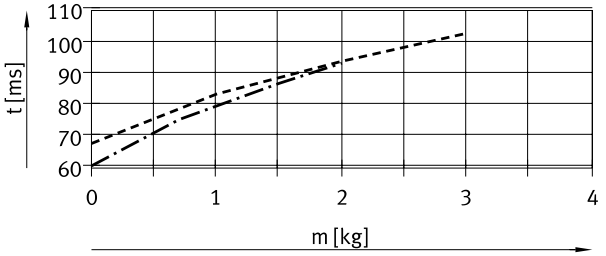


Retracting

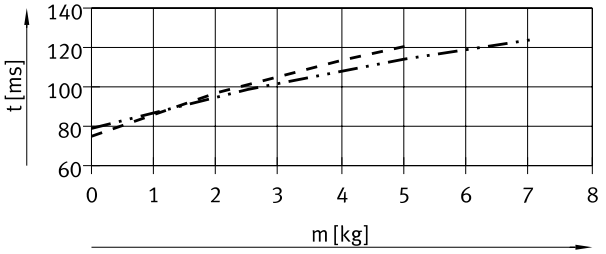
Stroke 10 mm, size 4 ... 10



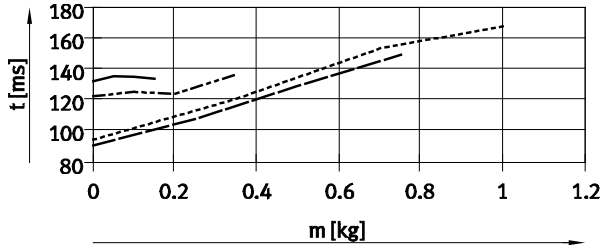
Stroke 10 mm, size 12 ... 16



Stroke 10 mm, size 20 ... 25



Stroke 30 mm, size 4 ... 10

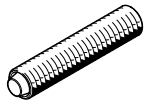


DGSL-4
DGSL-6
DGSL-8
DGSL-10
DGSL-12
DGSL-16
DGSL-20
DGSL-25

Datasheet

Shock absorber selection

Travel time t as a function of payload m and cushioning P/E – horizontal mounting position

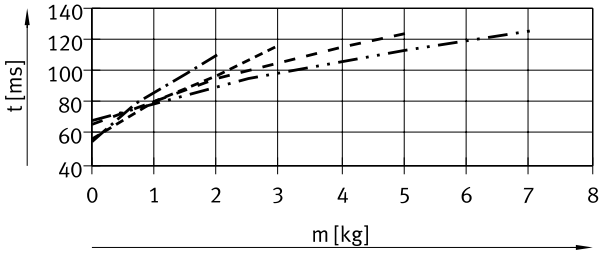


The values in the graphs are determined by calculation.
The travel time as a function of payload must not be reduced below the values shown, because the kinetic impact or residual energy in the end positions can result in damage to the drive.

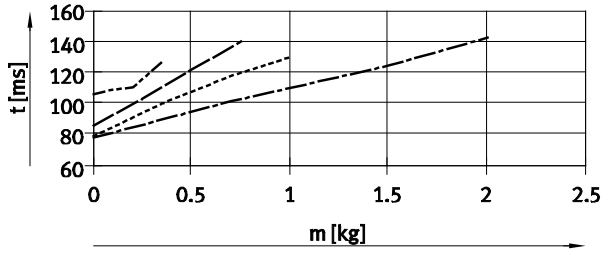
Vertical mounting position
→ Page 19

Advancing

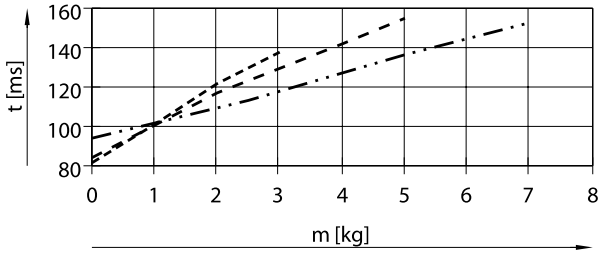
Stroke 30 mm, size 12 ... 25



Stroke 50 mm, size 6 ... 12



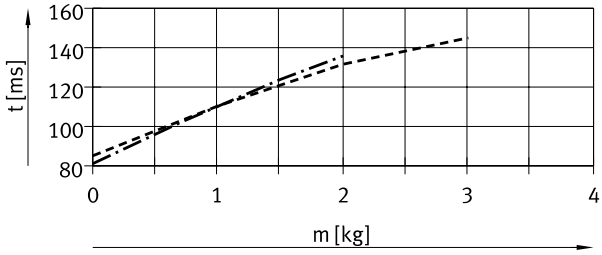
Stroke 50 mm, size 16 ... 25



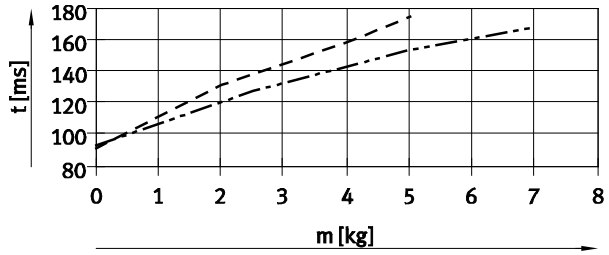
DGSL-4
DGSL-6
DGSL-8
DGSL-10
DGSL-12
DGSL-16
DGSL-20
DGSL-25

Retracting

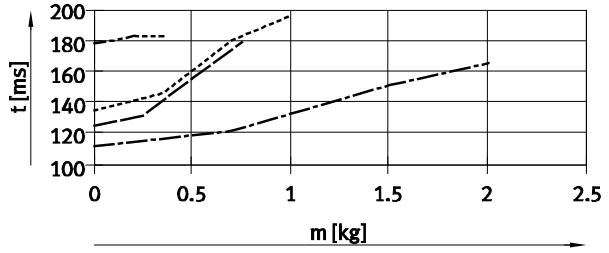
Stroke 30 mm, size 12 ... 16



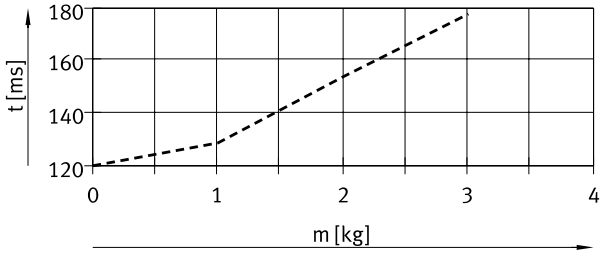
Stroke 30 mm, size 20 ... 25



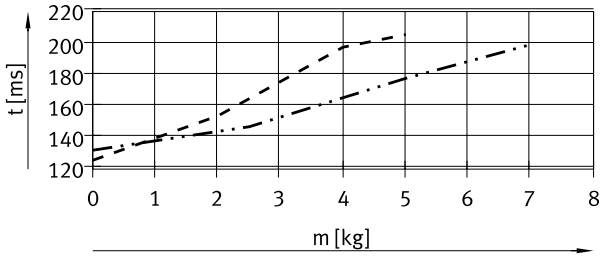
Stroke 50 mm, size 6 ... 12



Stroke 50 mm, size 16



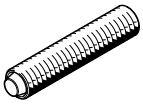
Stroke 50 mm, size 20 ... 25



Datasheet

Shock absorber selection

Travel time t as a function of payload m and cushioning P/E – horizontal mounting position

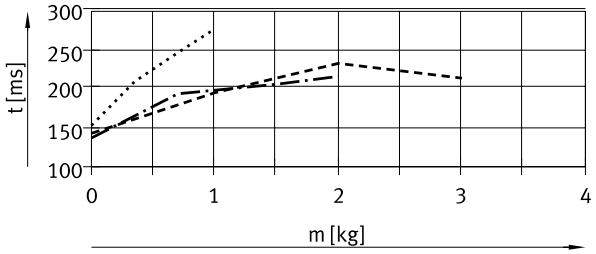


The values in the graphs are determined by calculation.
The travel time as a function of payload must not be reduced below the values shown, because the kinetic impact or residual energy in the end positions can result in damage to the drive.

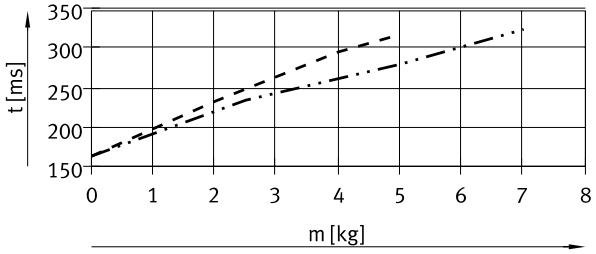
Vertical mounting position
➔ Page 19

Advancing

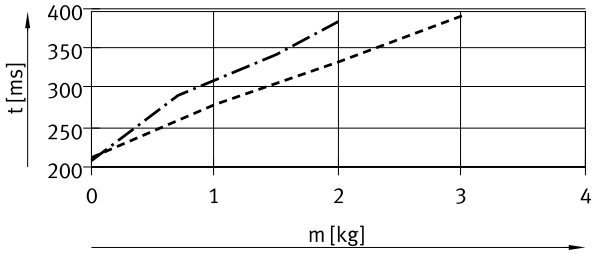
Stroke 100 mm, size 10 ... 16



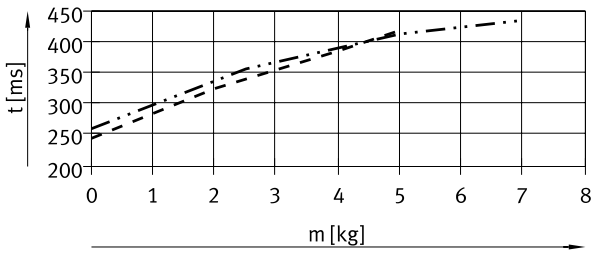
Stroke 100 mm, size 20 ... 25



Stroke 150 mm, size 12 ... 16

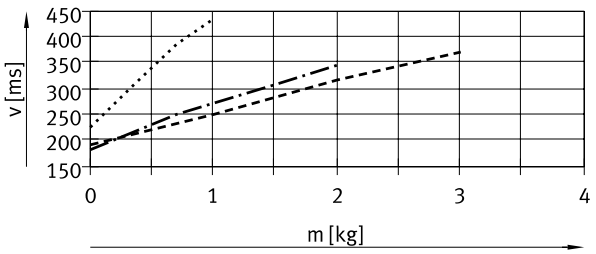


Stroke 150 mm, size 20 ... 25

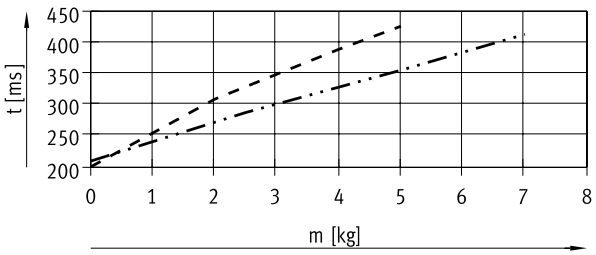


Retracting

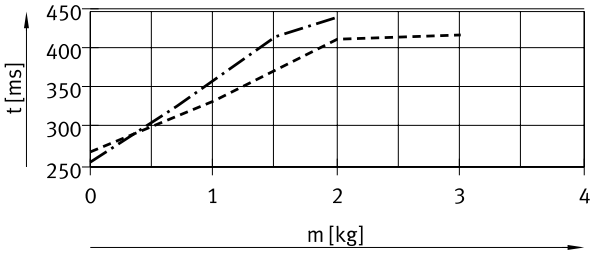
Stroke 100 mm, size 10 ... 16



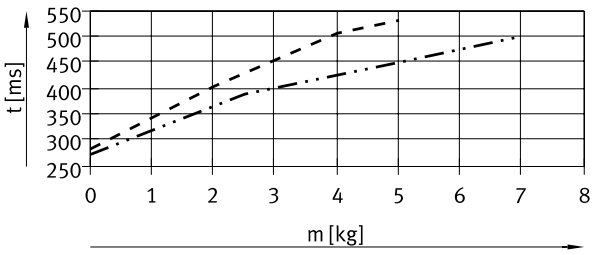
Stroke 100 mm, size 20 ... 25



Stroke 150 mm, size 12 ... 16



Stroke 150 mm, size 20 ... 25

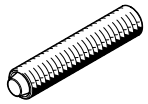


DGSL-10
DGSL-12
DGSL-16
DGSL-20
DGSL-25

Datasheet

Shock absorber selection

Travel time t as a function of payload m and cushioning P/E – horizontal mounting position

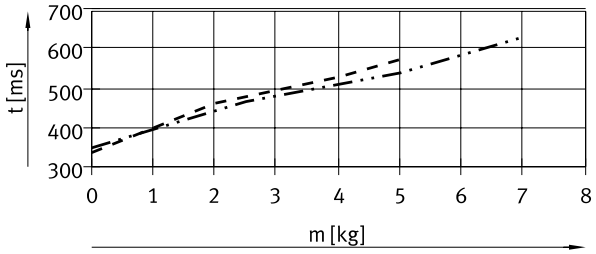


The values in the graphs are determined by calculation.
The travel time as a function of payload must not be reduced below the values shown, because the kinetic impact or residual energy in the end positions can result in damage to the drive.

Vertical mounting position
➔ Page 19

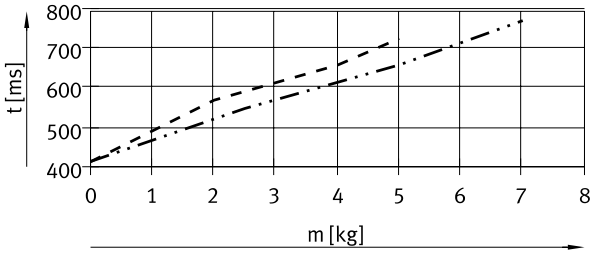
Advancing

Stroke 200 mm, size 20 ... 25



Retracting

Stroke 200 mm, size 20 ... 25



DGSL-20
DGSL-25

Vertical mounting position

The travel times for a vertical mounting position are calculated by multiplying the data for a horizontal mounting position by a correction factor ka (advancing) and ke (retracting), see adjacent table.

Where:
Stroke = 200 mm
Size = 20
Payload = 3 kg
Calculated travel time th (horizontal), see graph:
- Advancing = 500 ms
- Retracting = 600 ms

Calculated travel time tv (vertical):
- Advancing: tv = th x ka
  ts = 500 ms x 0.9 = 450 ms
- Retracting: tv = th x ke
  ts = 600 ms x 1.1 = 660 ms

Stroke [mm]	Size	Advancing (ka) 1)	Retracting (kr)
10	4, 6, 8, 10	0.95	1.1
	12, 16, 20, 25	0.95	1.2
30	4, 6, 8, 10	0.95	1.1
	12, 16, 20, 25	0.95	1.2
50	6, 8, 10, 12	0.9	1.1
	16, 20, 25	1.1	1.2
100	10, 12, 16, 20, 25	1	1.1
150	12, 16, 20, 25	1	1.1
200	20, 25	0.9	1.1

1) Downward.

Datasheet

Shock absorber selection

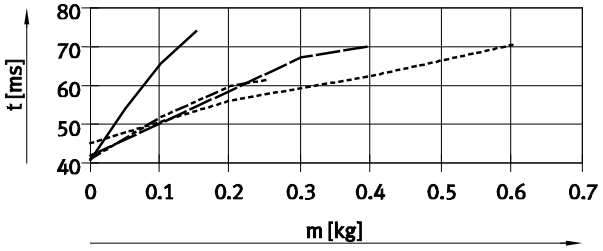
Travel time t as a function of payload m and cushioning P1 – horizontal mounting position

The values in the graphs are determined by calculation.
The travel time as a function of payload must not be reduced below the values shown, because the kinetic impact or residual energy in the end positions can result in damage to the drive.

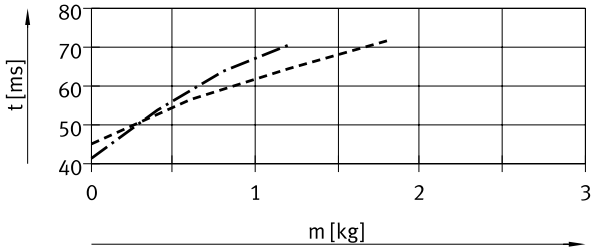
Vertical mounting position
➔ Page 23

Advancing

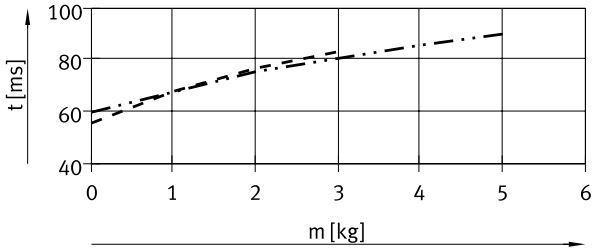
Stroke 10 mm, size 4 ... 10



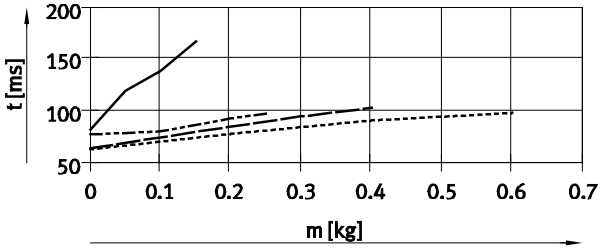
Stroke 10 mm, size 12 ... 16



Stroke 10 mm, size 20 ... 25

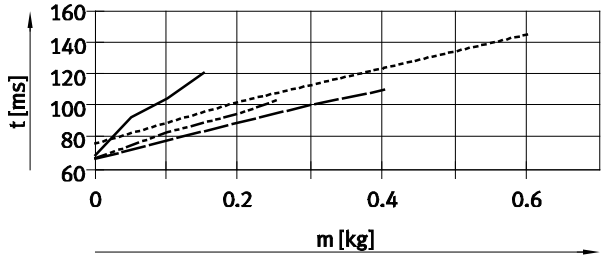


Stroke 30 mm, size 4 ... 10

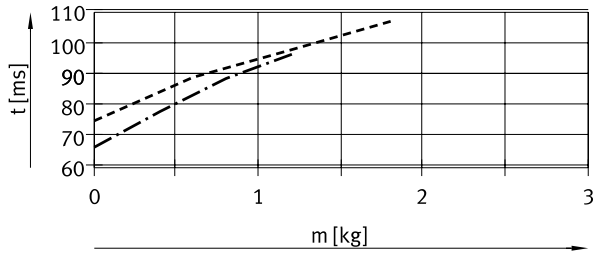


Retracting

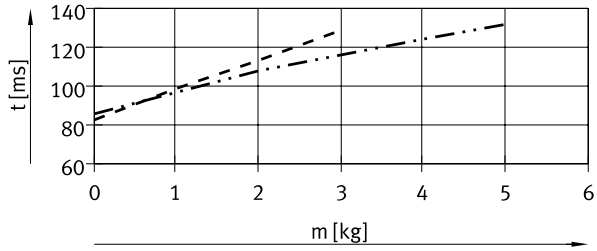
Stroke 10 mm, size 4 ... 10



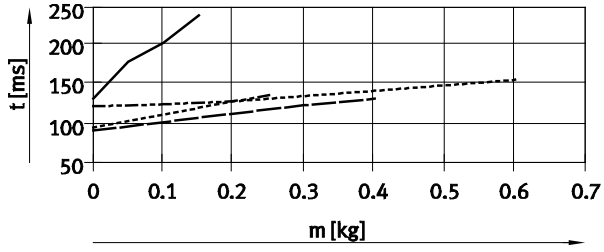
Stroke 10 mm, size 12 ... 16



Stroke 10 mm, size 20 ... 25



Stroke 30 mm, size 4 ... 10



DGSL-4
DGSL-6
DGSL-8
DGSL-10
DGSL-12
DGSL-16
DGSL-20
DGSL-25

Datasheet

Shock absorber selection

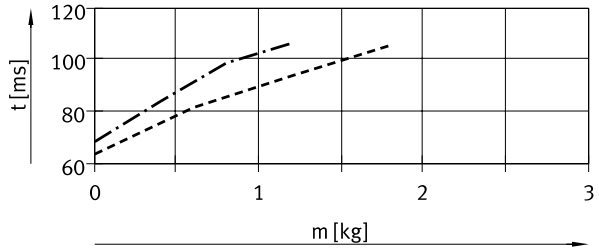
Travel time t as a function of payload m and cushioning P1 – horizontal mounting position

The values in the graphs are determined by calculation.
The travel time as a function of payload must not be reduced below the values shown, because the kinetic impact or residual energy in the end positions can result in damage to the drive.

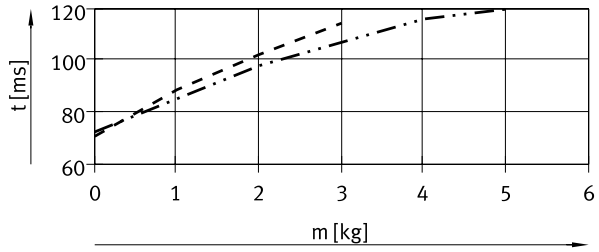
Vertical mounting position
→ Page 23

Advancing

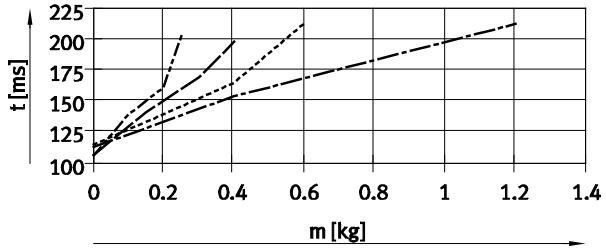
Stroke 30 mm, size 12 ... 16



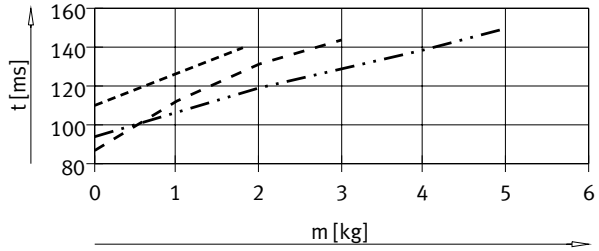
Stroke 30 mm, size 20 ... 25



Stroke 50 mm, size 6 ... 12

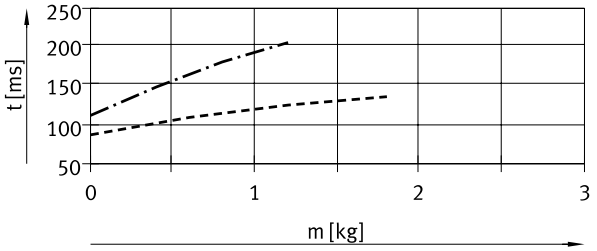


Stroke 50 mm, size 16 ... 25

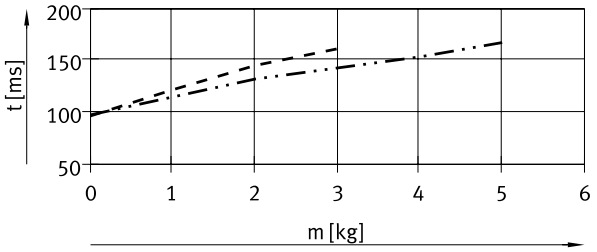


Retracting

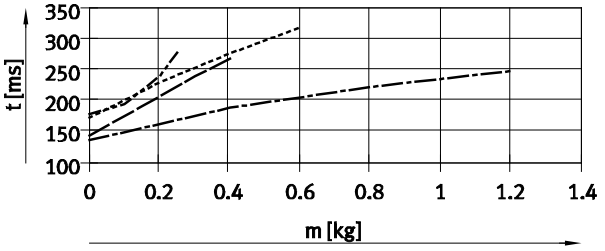
Stroke 30 mm, size 12 ... 16



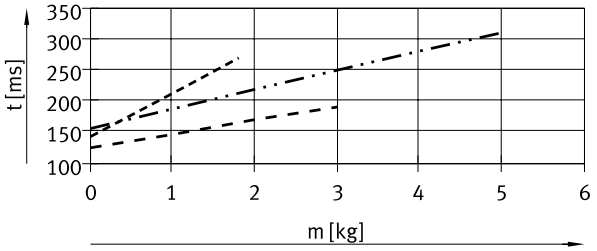
Stroke 30 mm, size 20 ... 25



Stroke 50 mm, size 6 ... 12



Stroke 50 mm, size 16 ... 25



DGSL-6
DGSL-8
DGSL-10
DGSL-12
DGSL-16
DGSL-20
DGSL-25

Datasheet

Shock absorber selection

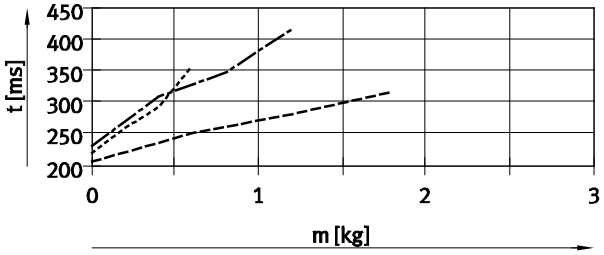
Travel time t as a function of payload m and cushioning P1 – horizontal mounting position

The values in the graphs are determined by calculation.
The travel time as a function of payload must not be reduced below the values shown, because the kinetic impact or residual energy in the end positions can result in damage to the drive.

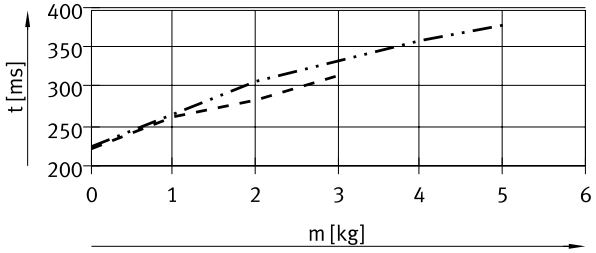
Vertical mounting position
➔ Page 23

Advancing

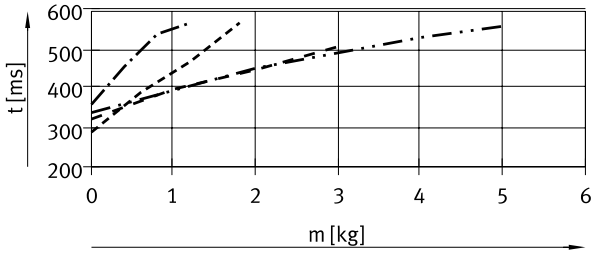
Stroke 100 mm, size 10 ... 16



Stroke 100 mm, size 20 ... 25

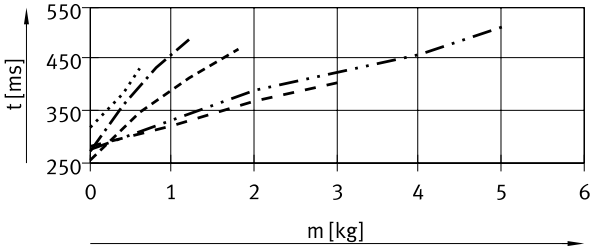


Stroke 150 mm, size 12 ... 25

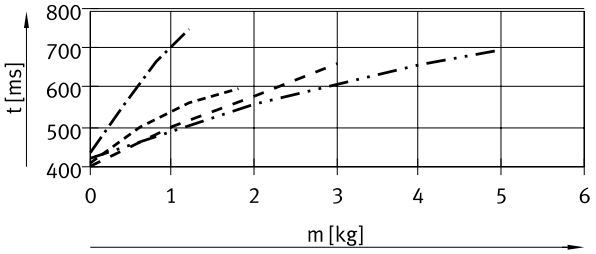


Retracting

Stroke 100 mm, size 10 ... 25



Stroke 150 mm, size 12 ... 25



DGSL-10
DGSL-12
DGSL-16
DGSL-20
DGSL-25

Datasheet

Shock absorber selection

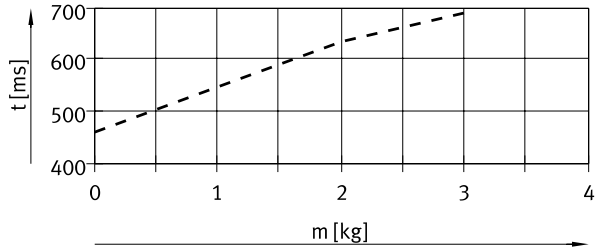
Travel time t as a function of payload m and cushioning P1 – horizontal mounting position

The values in the graphs are determined by calculation.
The travel time as a function of payload must not be reduced below the values shown, because the kinetic impact or residual energy in the end positions can result in damage to the drive.

Vertical mounting position
➔ Page 23

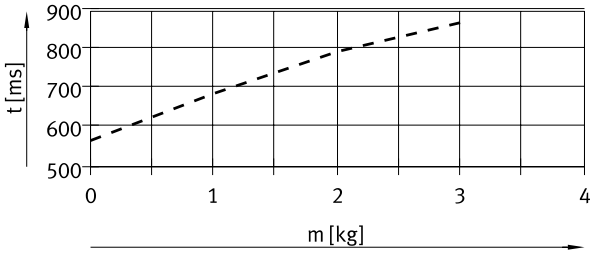
Advancing

Stroke 200 mm, size 20

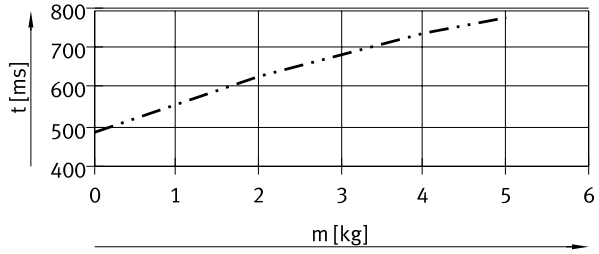


Retracting

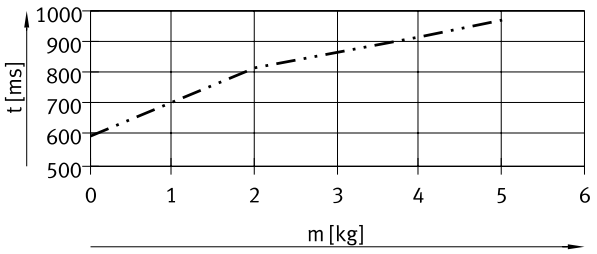
Stroke 200 mm, size 20



Stroke 200 mm, size 25



Stroke 200 mm, size 25



DGSL-20
DGSL-25

Vertical mounting position

The travel times for a vertical mounting position are calculated by multiplying the data for a horizontal mounting position by a correction factor ka (advancing) and ke (retracting), see adjacent table.

Where:
Stroke = 200 mm
Size = 20
Payload = 2 kg
Calculated travel time th (horizontal),
see graph:
- Advancing = 640 ms
- Retracting = 780 ms

Calculated travel time tv (vertical):
- Advancing: tv = th x ka
  ts = 640 ms x 0.9 = 576 ms
- Retracting: tv = th x ke
  ts = 780 ms x 1.1 = 858 ms

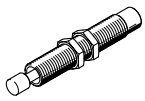
Stroke [mm]	Size	Advancing (ka) 1)	Retracting (kr)
10	4, 6, 8, 10	1	1.1
	12, 16, 20, 25	1.1	1.2
30	4, 6, 8, 10	1	1.1
	12, 16, 20, 25	1.1	1.2
50	6, 8, 10, 12	1	1.1
	16, 20, 25	0.9	1.1
100	10, 12, 16, 20, 25	0.95	1.1
150	12, 16, 20, 25	0.95	1.1
200	20, 25	0.9	1.1

1) Downward.

Datasheet

Shock absorber selection

Travel time t as a function of payload m and cushioning Y3 – horizontal mounting position

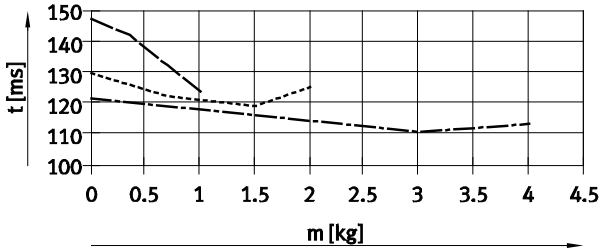


The values in the graphs are determined by calculation.
The travel time as a function of payload must not be reduced below the values shown, because the kinetic impact or residual energy in the end positions can result in damage to the drive.

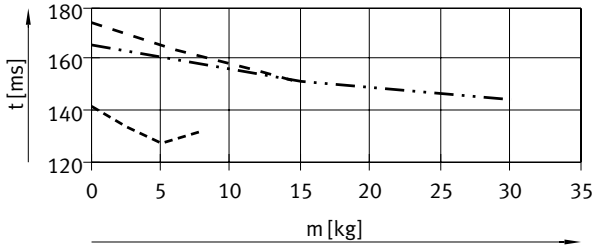
Vertical mounting position
➔ Page 25

Advancing

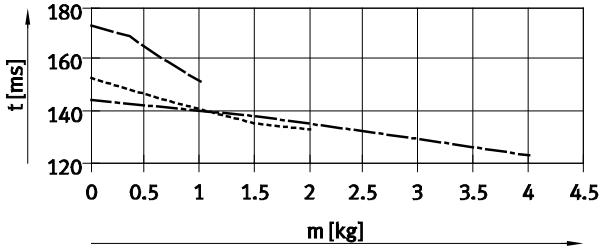
Stroke 30 mm, size 8 ... 12



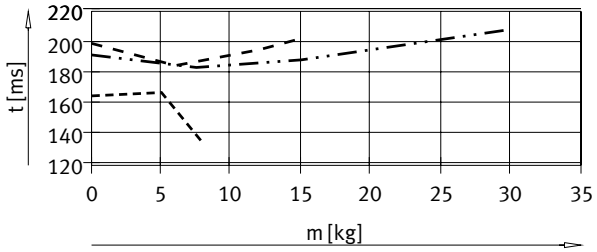
Stroke 30 mm, size 16 ... 25



Stroke 50 mm, size 8 ... 12

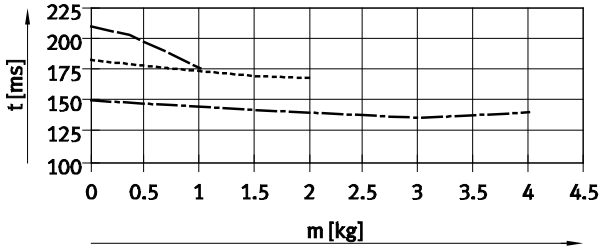


Stroke 50 mm, size 16 ... 25

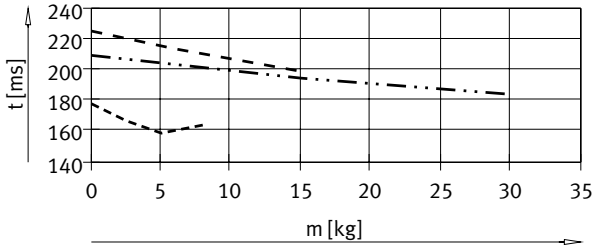


Retracting

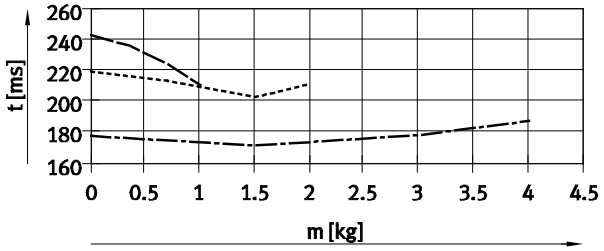
Stroke 30 mm, size 8 ... 12



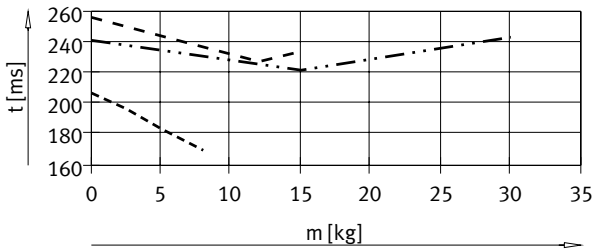
Stroke 30 mm, size 16 ... 25



Stroke 50 mm, size 8 ... 12



Stroke 50 mm, size 16 ... 25

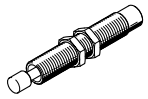


DGSL-10
DGSL-12
DGSL-16
DGSL-20
DGSL-25

Datasheet

Shock absorber selection

Travel time t as a function of payload m and cushioning Y3 – horizontal mounting position

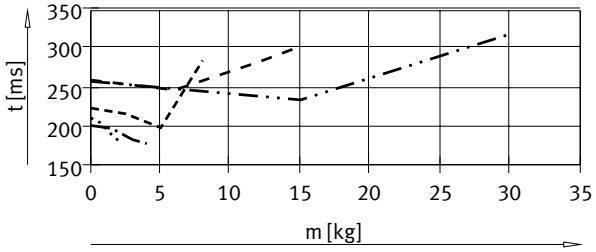


The values in the graphs are determined by calculation.
The travel time as a function of payload must not be reduced below the values shown, because the kinetic impact or residual energy in the end positions can result in damage to the drive.

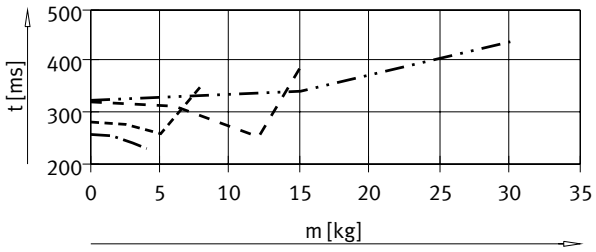
Vertical mounting position
➔ Page 25

Advancing

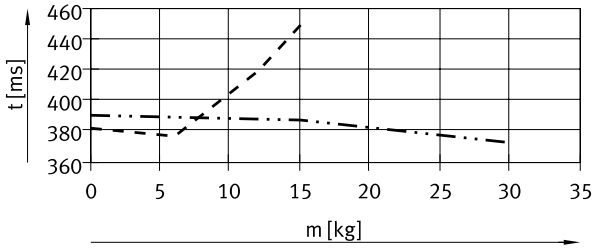
Stroke 100 mm, size 10 ... 25



Stroke 150 mm, size 12 ... 25

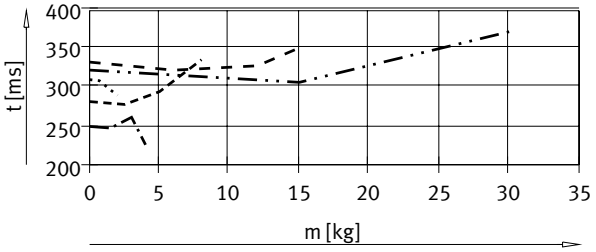


Stroke 200 mm, size 20 ... 25

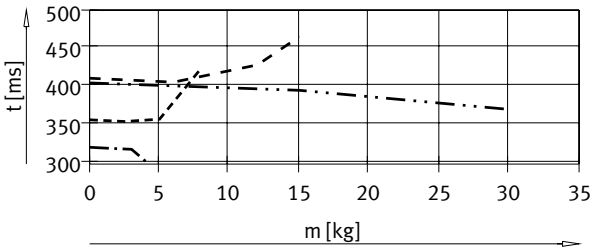


Retracting

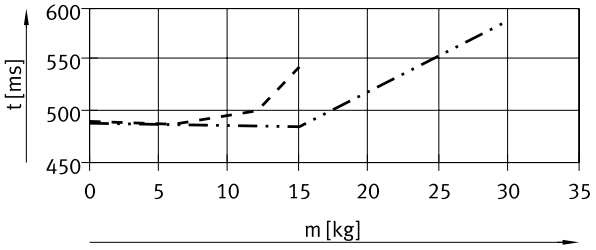
Stroke 100 mm, size 10 ... 25



Stroke 150 mm, size 12 ... 25



Stroke 200 mm, size 20 ... 25



DGSL-20
DGSL-25

Vertical mounting position

The travel times for a vertical mounting position are calculated by multiplying the data for a horizontal mounting position by a correction factor ka (advancing) and ke (retracting), see adjacent table.

Where:
Stroke = 200 mm
Size = 20
Payload = 10 kg
Calculated travel time th (horizontal), see graph:
- Advancing = 405 ms
- Retracting = 490 ms

Calculated travel time tv (vertical):
- Advancing: tv = th x ka
  ts = 405 ms x 0.9 = 365 ms
- Retracting: tv = th x ke
  ts = 490 ms x 1.5 = 735 ms

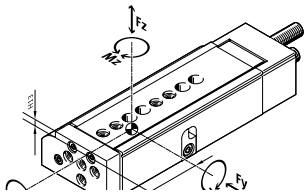
Stroke [mm]	Size	Advancing (ka) 1)	Retracting (kr)
30	8, 10, 12	0.95	1.2
	16, 20, 25	0.9	1.5
50	8, 10, 12	0.9	1.5
	16, 20, 25	0.9	1.5
100	10, 12, 16, 20, 25	0.8	1.5
150	12, 16, 20, 25	0.9	1.5
200	20, 25	0.9	1.5

1) Downward.

Datasheet

Dynamic load values

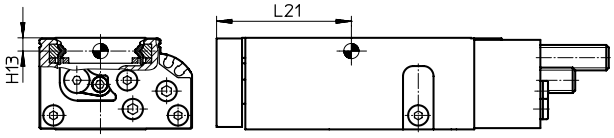
The indicated torques refer to the centre of the guide.
These values must not be exceeded during dynamic operation. Special attention must be paid to the deceleration phase.



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

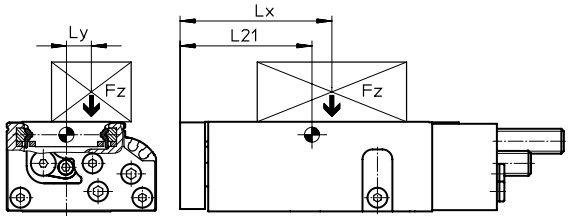
$$+\frac{7{,}848\ N}{1200\ N}+\frac{0{,}236\ Nm}{18\ \text{Nm}}+\frac{0{,}886\ \text{Nm}}{12\ Nm}+0\ \leq 1$$

Position of the guide centre



Calculation example

Where:



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

To be determined:
F_y, F_z, Mx, My, Mz and
Functional operation with combined load

Solution:

L21 = 83 mm from table

F_y = 0 N

F_z = m x g
= 0.8 kg x 9.81 m/s² = 7.848 N

M_x = m x g x L_y
= 0.8 kg x 9.81 m/s² x 30 mm = 0.236 Nm

M_y = m x g x [(L21+Hub)-L_x]
= 0.8 kg x 9.81 m/s² x [(83 mm + 80 mm) – 50 mm] = 0.886 Nm

M_z = 0 Nm

Combined load:

$$+\frac{7{,}848\ N}{1200\ N}+\frac{0{,}236\ Nm}{18\ \text{Nm}}+\frac{0{,}886\ \text{Nm}}{12\ Nm}+0\ \leq 1$$

$$0+\frac{7{,}848\ N}{1200\ N}+\frac{0{,}236\ Nm}{18\ \text{Nm}}+\frac{0{,}886\ \text{Nm}}{12\ Nm}+0\ \leq 1$$

Permissible forces and torques						Geometric characteristics	
Size	Stroke [mm]	Fy_{max} [N]	Fz_{max} [N]	Mx_{max} [Nm]	My_{max}, Mz_{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

Datasheet

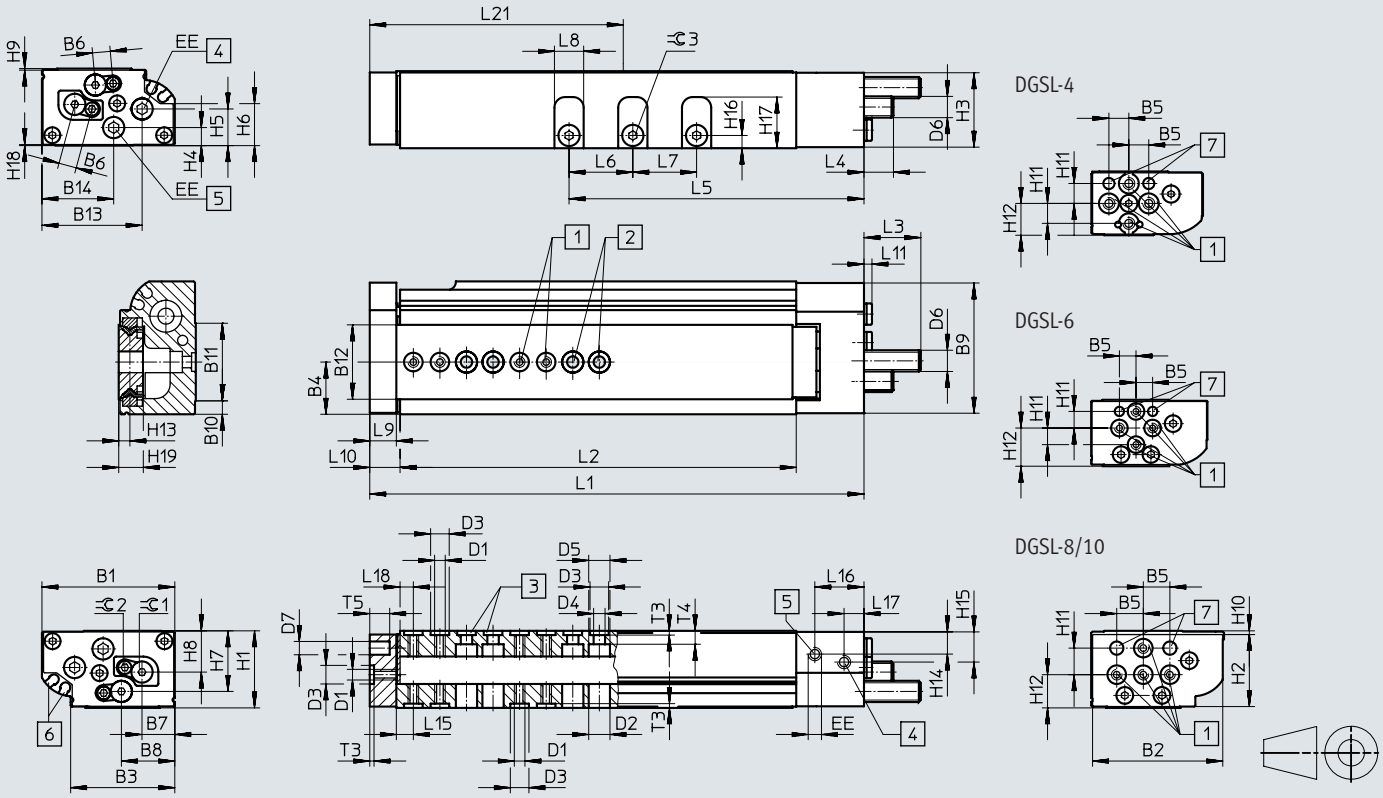
Permissible forces and torques						Geometric characteristics	
Size	Stroke [mm]	Fy_{max} [N]	Fz_{max} [N]	Mx_{max} [Nm]	My_{max}, Mz_{max} [Nm]	H13 [mm]	L21 [mm]
8							
	10	657	657	7	5.5	3.25	41
	20	745	745	8	5.5		46
	30	850	850	9	5.5		51
	40	934	934	10	5.5		56
	50	962	962	10	8		67
	80	971	971	10	8		82
10							
	10	927	927	15	6	4.2	43
	20	1003	1003	15	7		46
	30	1078	1078	15	8		51
	40	1152	1152	15	9		56
	50	1175	1175	18	9		61
	80	1200	1200	18	12		83
	100	1250	1250	18	12		96
12							
	10	942	942	15	8	5.2	44
	20	1006	1006	15	9		49
	30	1075	1075	15	10		54
	40	1142	1142	18	11		59
	50	1200	1200	18	12		64
	80	1280	1280	20	15		88
	100	1340	1340	20	15		98
	150	1400	1400	20	15		124
16							
	10	1769	1769	35	20	6.4	54
	20	2021	2021	35	22		59
	30	2274	2274	35	22		64
	40	2527	2527	40	25		69
	50	2780	2780	40	25		74
	80	2800	2800	50	27		89
	100	2850	2850	50	43		113
	150	2900	2900	50	43		138
20							
	10	2911	2911	60	30	7.55	56
	20	3143	3143	60	30		61
	30	3354	3354	60	30		66
	40	3612	3612	60	40		71
	50	3816	3816	70	50		76
	80	4032	4032	80	50		91
	100	4200	4200	85	80		121
	150	4400	4400	90	80		152
	200	4600	4600	90	80		177
25							
	10	3270	3270	100	60	8.55	64
	20	3744	3744	100	60		69
	30	4205	4205	100	60		74
	40	4643	4643	110	60		79
	50	4650	4650	120	60		84
	80	4700	4700	130	80		112
	100	4750	4750	130	80		129
	150	4800	4800	130	80		154
	200	4800	4800	130	80		179

Datasheet

Dimensions

Download CAD data ➔ www.festo.com

Size 4 ... 10



[1] Mounting thread (centring sleeves included in the scope of delivery)
[2] Through-holes for mounting the drive
[3] Centring holes (centring sleeves included in the scope of delivery)
[4] Supply port, advancing
[5] Supply port, retracting
[6] Sensor slots for proximity switch SME/SMT-10
[7] Centring hole

L10 Distance between outer edge of yoke plate and housing
L15 Distance between centre of centring hole and outer edge of slide
L18 Distance between centre of centring hole and outer edge of housing

General dimensions

Size	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	D1
4	28	27.4	18.35	9.4	5	3.55	6.3	11.95	27.5	2	17.2	12.4	23.15	16.15	M3
6	35	34.5	26.3	13.5	5	5	8.2	13.55	34.5	3.5	19.9	20	28.1	18.9	M3
8	42	41.3	31.45	16.6	10	6	10.3	16.25	41.5	4.57	24	24.1	33	24.4	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	D7 Ø	EE	H1 ±0.08	H2	H3	H4	H5	H6	H7	H8
4	6.3	5^{H7}	3.3	6.2	M4x0.5	3^{H7}	M3	16	15.4	15.1	3.85	6.25	8.55	8.1	8.4
6	6.3	5^{H7}	3.3	6.2	M5x0.5	3^{H7}	M3	20	19	19.25	4.7	7.8	10.2	16.05	10.55
8	8.2	7^{H7}	4.3	8	M6x0.5	5^{H7}	M3	24	22.7	23	6.46	10.63	14.06	18.9	13.3
10	8.2	7^{H7}	4.3	8	M8x1	5^{H7}	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	T5	⌀ 2 [1]	⌀ 3
4	0.65	0.3	5	8	2.7	5.35	5.85	3.1	10.6	0.25	5.28	1.3	2.25	4	1.5	2
6	0.45	0.5	5	11.5	3.38	6.5	7.2	3.7	13.1	0.3	6.68	1.3	3.7	6	1.5	2.5
8	0.64	0.9	10	8.7	3.28	7.8	10.5	4.1	16.8	0.36	6.7	1.6	3.8	7.5	2	2.5
10	0.6	1.4	10	12.5	4.2	8.76	11.76	4.8	19.25	0.41	9	1.6	5.35	7.5	2.5	3

1) With size 4, the scope of delivery of the drive includes an Allen key.

Datasheet

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	72.1	48	28.85	–	–	6.5	5.5	6.6	2.5	4	13.25	4.95	3	31
	20	81.2	57.1	37.95	10										36
	30	91.2	67.1	47.95	11										42
6	10	81.1	54	33.1	–		8	8	9.6	2.5	5.1	13.25	4.95	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											57
8	10	90.2	59.6	34.6	–	–	8	10	11.6	2.5	7	14.65	6.1	5.5	41
	20	100.2	69.6	44.6	10										46
	30	110.2	79.6	54.6	16										51
	40	120.2	89.6	64.6											56
	50	142.2	111.6	74.6											67
	80	172.2	141.6	104.6		16									82
10	10	103.1	66	41.3	–	–	11	10	11.6	2.5	6.4	18.5	7.5	5	43
	20	112.8	75.7	51											46
	30	122.8	85.7	61											51
	40	132.8	95.7	71											56
	50	142.8	105.7	81											61
	80	186.2	149.1	111	24										83
	100	206.2	169.1	131	24	24									96

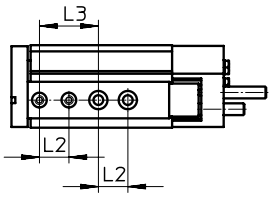
Cushioning-dependent dimensions

Size	Cushioning	L3 max.	L4 max.	⫷ 1	
				For adjusting the cushioning stroke	For adjusting the end position
4	P	15.2	7.8	–	1.5
	E	5.7	0	–	1.5
	P1	14	6	1.3	2.5
6	P	17.6	8.1	–	1.5
	E	6.6	0	–	1.5
	P1	15.5	5.8	1.5	3
8	P	21.1	10.7	–	2
	E	6.6	0	–	2
	P1	19	9.1	2	4
	Y3	24.3	23.9	–	2
10	P	22.8	12.5	–	2.5
	E	8.8	0	–	2.5
	P1	20.5	10.2	2.5	5
	Y3	25.5	14.9	–	2.5
	Y11	30.4	19.9	–	2

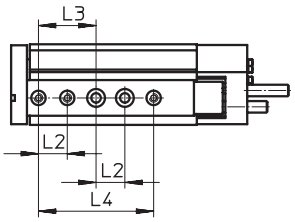
Datasheet

Hole pattern for mounting threads and centring holes

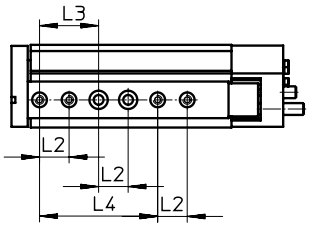
DGSL-4-10



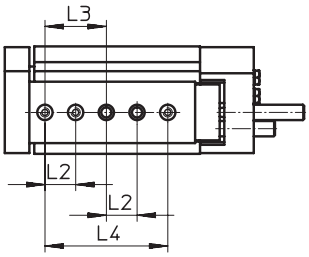
DGSL-4-20



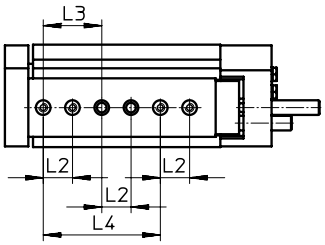
DGSL-4-30



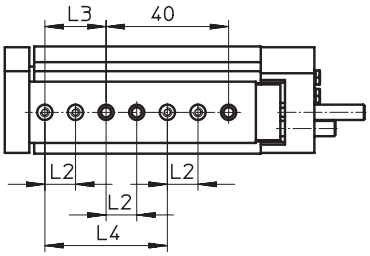
DGSL-6-10



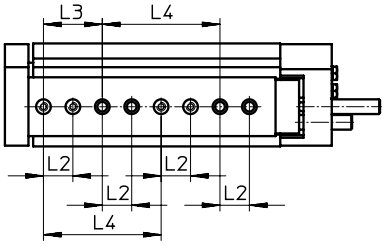
DGSL-6-20



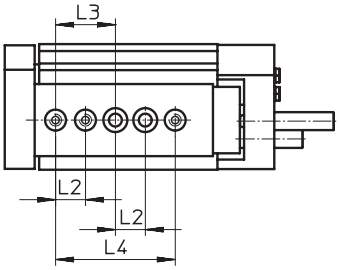
DGSL-6-30



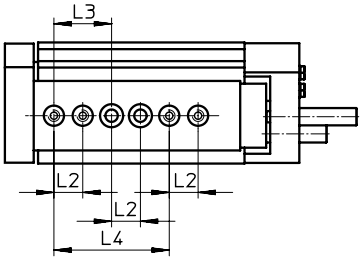
DGSL-6-40/50



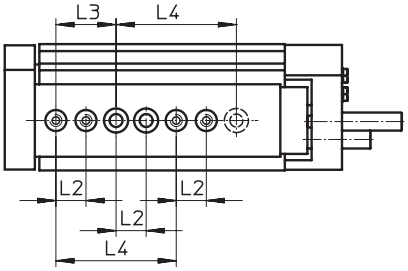
DGSL-8-10



DGSL-8-20



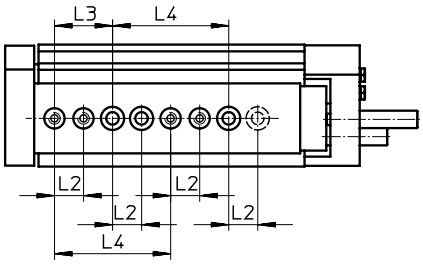
DGSL-8-30



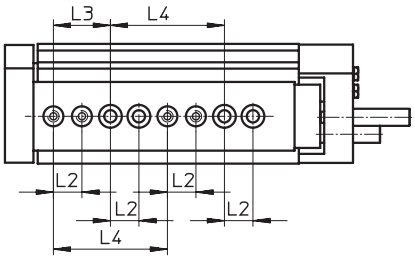
Datasheet

Hole pattern for mounting threads and centring holes

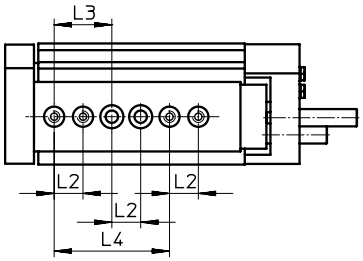
DGSL-8-40



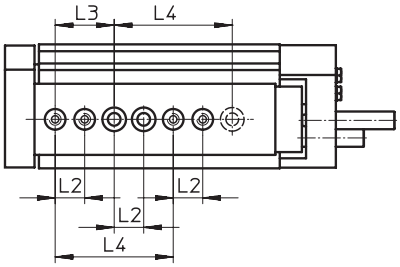
DGSL-8-50/80



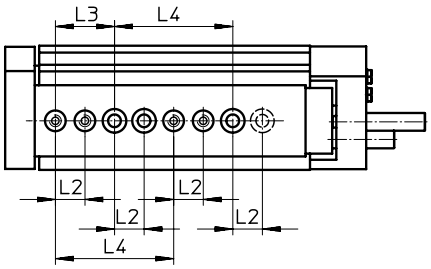
DGSL-10-10



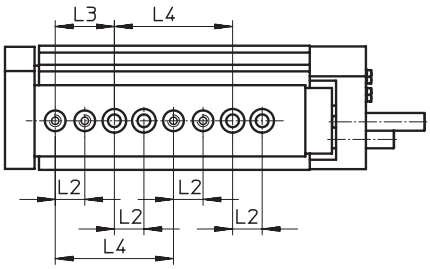
DGSL-10-20



DGSL-10-30

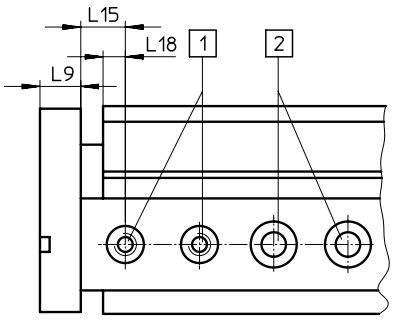


DGSL-10-40 ... 100



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

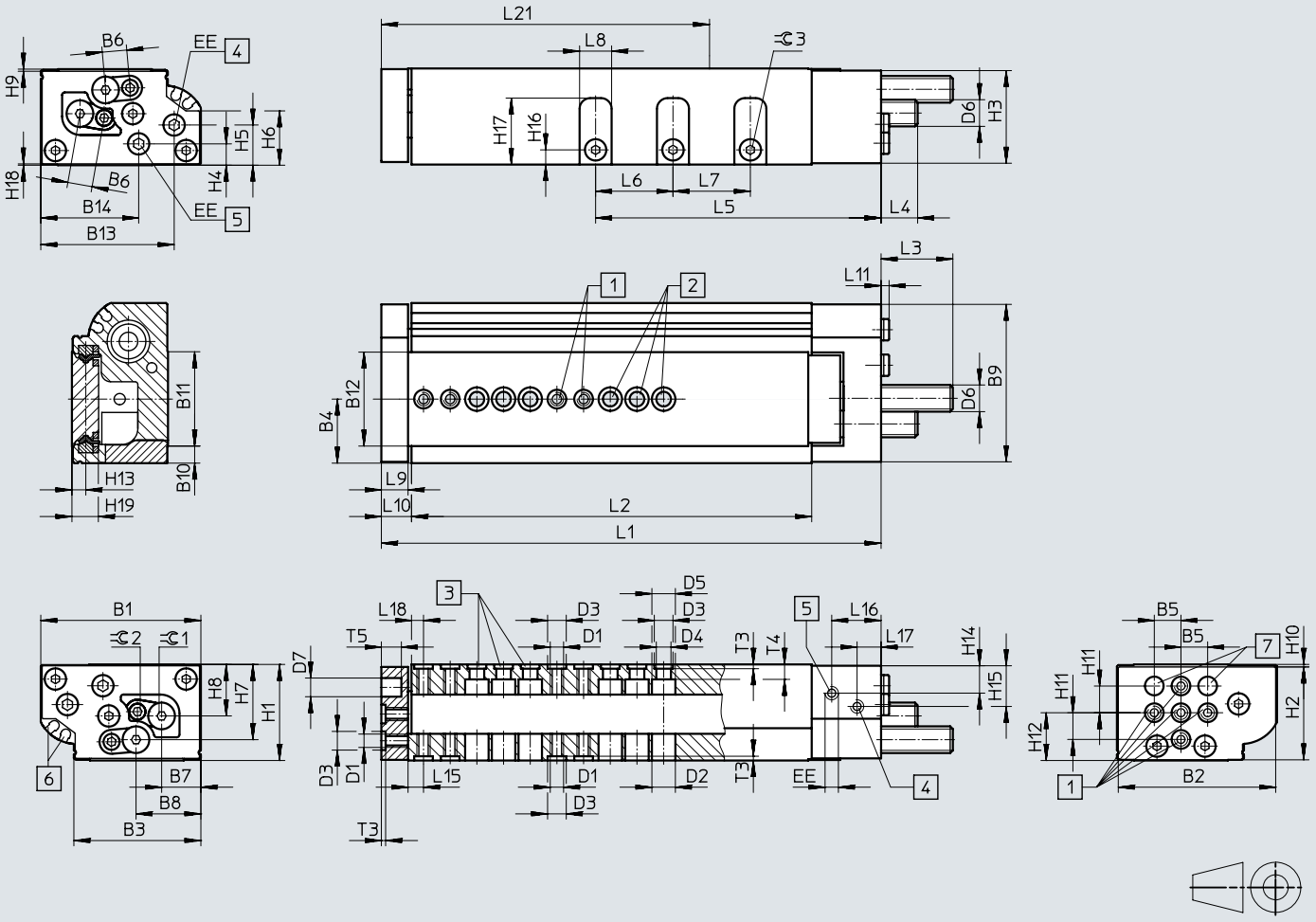
Size	L2[1)]	L3[1)]	L4[1)]	L9	L15 ±0.05	L18
4	10	20	40	5.5	4	3
6	10	20	40	8	5.1	3.5
8	10	20	40	10	7	5.5
10	10	20	40	10	6.4	5

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

Datasheet

Dimensions Download CAD data ➔ www.festo.com

Size 12/16



[1] Mounting thread (centring sleeves included in the scope of delivery)
[2] Through-holes for mounting the drive
[3] Centring holes (centring sleeves included in the scope of delivery)
[4] Supply port, advancing
[5] Supply port, retracting
[6] Sensor slots for proximity switch SME/SMT-10
[7] Centring hole
L10 Distance between outer edge of yoke plate and housing
L15 Distance between centre of centring hole and outer edge of slide
L18 Distance between centre of centring hole and outer edge of housing

General dimensions

Size	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	D1
12	60	59	47.6	24	10	9.2	14.7	24.3	59	6.45	35.25	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 ø	D3 ø	D4 ø	D5 ø	D6	D7 ø	EE	H1 ±0.08	H2	H3	H4	H5	H6	H7	H8
12	9	7^{H7}	5.5	9	M10x1	8^{H7}	M5	36	34.8	34.7	8	15.1	20.35	28.2	19.3
16	9	7^{H7}	5.5	9	M12x1	8^{H7}	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 +0.1	T4	T5	⌀ 2	⌀ 3
12	0.8	0.95	10	17.9	5.2	10.75	15.75	5.5	24.9	0.5	10.1	1.6	5.6	7.5	3	3
16	0.5	1.5	10	20	6.4	10.5	16.7	7	26.6	0.5	12.5	1.6	6.1	9	4	4

Datasheet

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	106.2	68.6	42.4	–	–	12	10	11.6	2.5	5.8	18.5	9	4.5	44
	20	116.2	78.6	52.4											49
	30	126.2	88.6	62.4											54
	40	136.2	98.6	72.4											59
	50	146.2	108.6	82.4											64
	80	197.6	160	112.4	29										88
	100	217.6	180	132.4											98
	150	267.6	230	182.4		29									124
16	10	124.1	82.5	45	–	–	14	12	13.6	2.5	6.8	21	10	5.5	54
	20	134.6	93	54.6											59
	30	144.6	103	64.6											64
	40	154.6	113	74.6											69
	50	164.6	123	84.6											74
	80	194.6	153	114.6	35										89
	100	243.6	202	134.6											113
	150	293.6	252	184.6											138

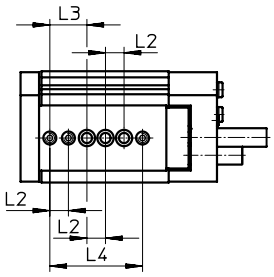
Cushioning-dependent dimensions

Size	Cushioning	L3 max.	L4 max.	⇙ 1	
				For adjusting the cushioning stroke	For adjusting the end position
12	P	28.1	14.9	–	3
	E	8.8	0	–	3
	P1	26	12.8	3	6
	Y3	36.9	23.7	–	3
	Y11	42.2	18.7	–	2.5
16	P	42.3	26.1	–	4
	E	8.8	0	–	4
	P1	40	23.8	4	8
	Y3	51.9	35.7	–	4
	Y11	55.4	38.9	–	3

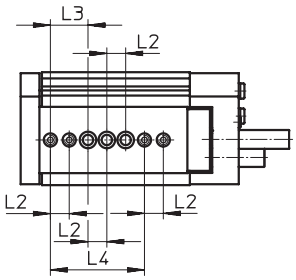
Datasheet

Hole pattern for mounting threads and centring holes

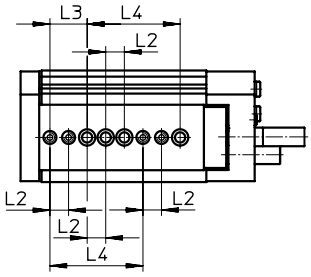
DGSL-12-10



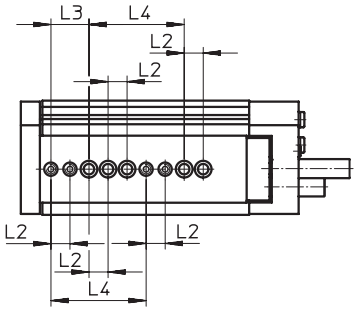
DGSL-12-20



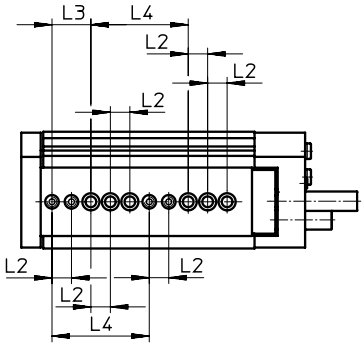
DGSL-12-30



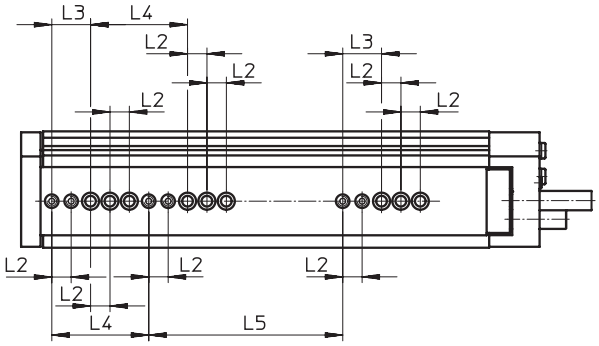
DGSL-12-40



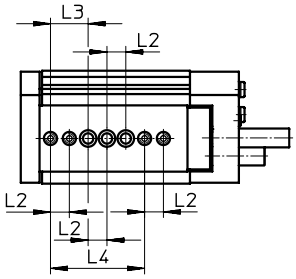
DGSL-12-50 ... 100



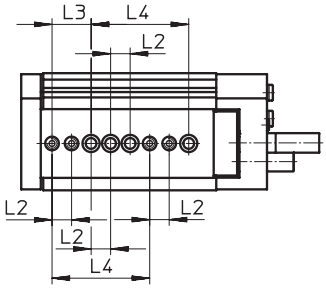
DGSL-12-150



DGSL-16-10



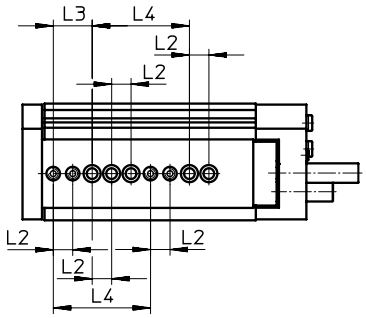
DGSL-16-20



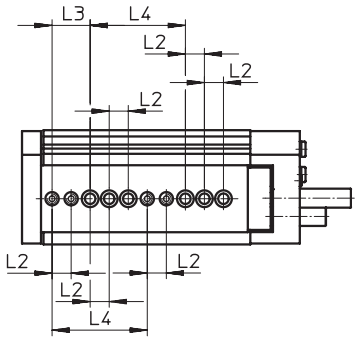
Datasheet

Hole pattern for mounting threads and centring holes

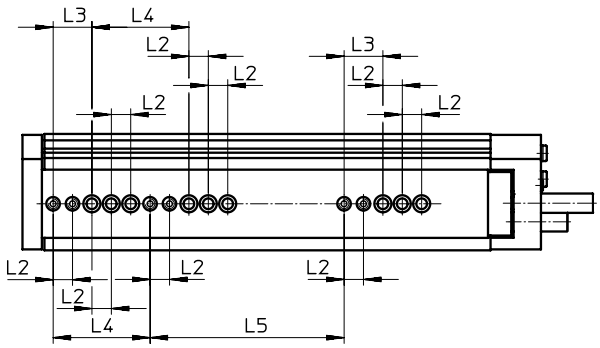
DGSL-16-30



DGSL-16-40 ... 100

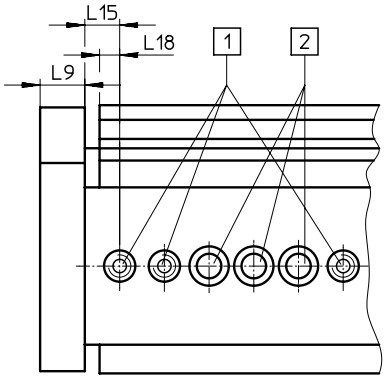


DGSL-16-150



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

DGSL-12/16



[1] Centring holes with thread

[2] Through-holes for mounting the drive

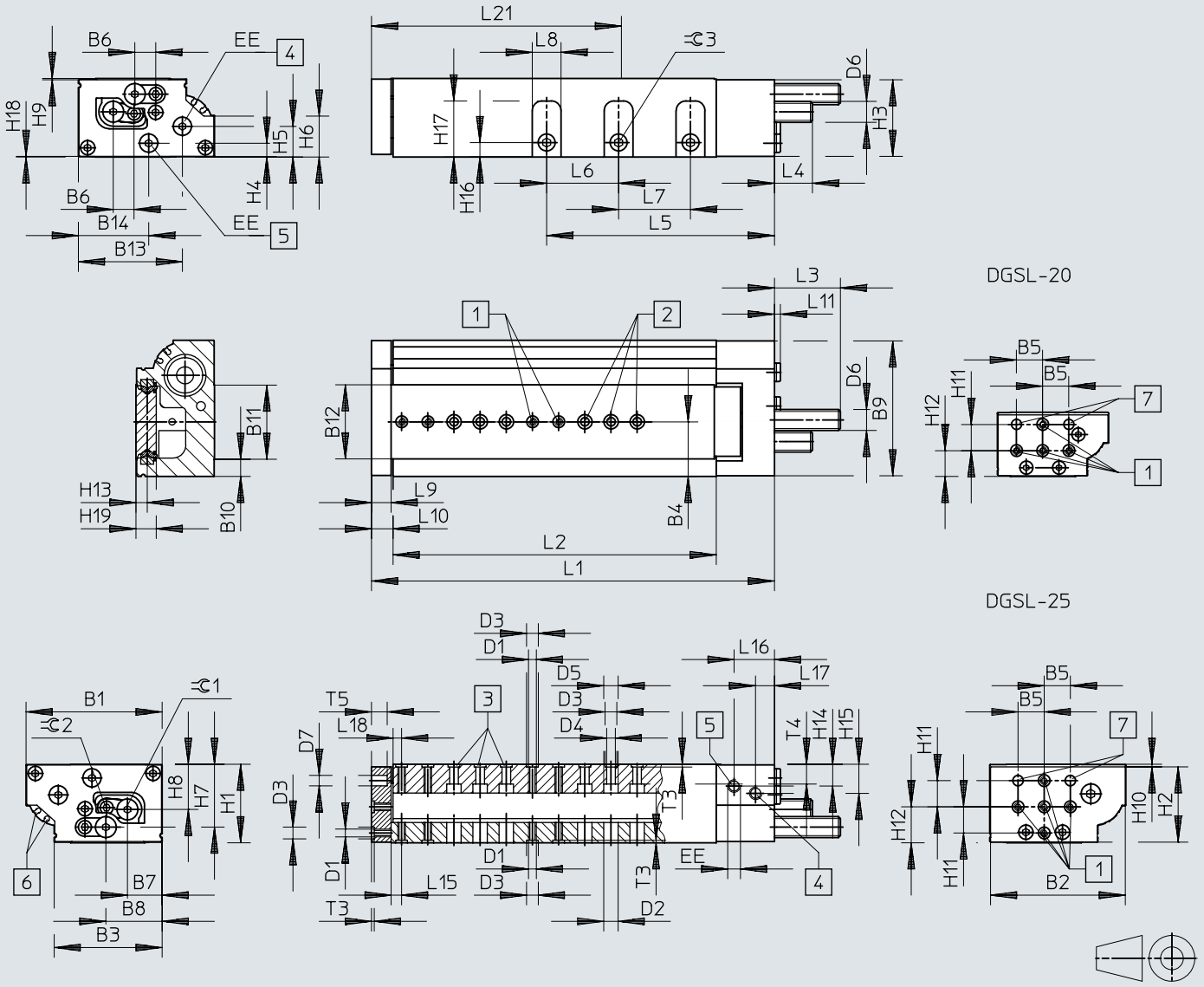
Size	L2[1)]	L3[1)]	L4[1)]	L5 ±0.03	L9	L15 ±0.05	L18 ±0.05
12	10	20	50	100	10	5.8	4.5
16	10	20	50	100	12	6.8	5.5

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

Datasheet

Dimensions Download CAD data ➔ www.festo.com

Size 20/25



[1] Mounting thread (centring sleeves included in the scope of delivery)
[2] Through-holes for mounting the drive
[3] Centring holes (centring sleeves included in the scope of delivery)
[4] Supply port, advancing
[5] Supply port, retracting
[6] Sensor slots for proximity switch SME/SMT-10
[7] Centring hole

L10 Distance between outer edge of yoke plate and housing
L15 Distance between centre of centring hole and outer edge of slide
L18 Distance between centre of centring hole and outer edge of housing

Datasheet

General dimensions

Size	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	D1
20	85	84	68.85	34.5	20	14.15	21.4	36.35	83.4	10	48.9	49.2	64.1	48.6	M6
25	104	103	82.6	41.6	20	16.2	26.4	43.05	103	13.25	56.5	56.7	79.3	53.65	M6

Size	D2 Ø	D3 Ø	D4 Ø	D5 Ø	D6	D7 Ø	EE	H1 ±0.08	H2	H3	H4	H5	H6	H7	H8
20	11.2	9^{H7}	6.6	11	M14x1	8^{H7}	G1/8	49	46.5	47.7	10.3	20.6	23.2	38.2	26.1
25	11.2	9^{H7}	6.6	11	M16x1	8^{H7}	G1/8	60	57.5	58.5	10.45	23.35	31.15	47.95	34.5

Size	H9	H10	H11	H12	H13	H14	H15	H16	H17	H18	H19	T3 +0.1	T4	T5	⊂ 2	⊂ 3
20	0.5	2	20	19.6	7.55	14.7	14.7	10	33.3	0.8	14.6	2.1	8.6	10	4	5
25	1	2	20	27.5	8.55	16.55	21.15	11	42.7	0.45	15.6	2.1	15	12	5	6

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	141.2	84.6	59.1	–	–	17	14	15.6	4.6	7.8	30.5	12	6.5	56
	20	151.2	94.6	69.1											61
	30	161.2	104.6	79.1											66
	40	171.2	114.6	89.1											71
	50	183.2	126.6	99.1											76
	80	211.2	154.6	129.1											91
	100	270.2	213.6	149.1	44										121
	150	333.2	276.6	199.1											152
	200	383.2	326.6	249.1		44									177
25	10	157.1	96	63.7	–	–	22	15	16.6	4.6	8	32.3	14.5	6.5	64
	20	167.1	106	72.2											69
	30	177.1	116	82.2											74
	40	187.1	126	92.2											79
	50	197.1	136	102.2											84
	80	253.1	192	132.2	55										112
	100	286.1	225	152.2											129
	150	338.1	277	202.2											154
	200	388.1	327	252.2											179

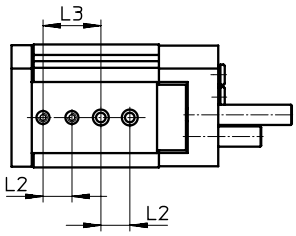
Cushioning-dependent dimensions

Size	Cushioning	L3 max.	L4 max.	⊂ 1	
				For adjusting the cushioning stroke	For adjusting the end position
20	P	52.4	31.2	–	4
	E	8.8	0	–	4
	P1	50.1	28.9	4	8
	Y3	55.5	34.3	–	4
	Y11	67.4	45.9	–	4
25	P	51.9	30.5	–	5
	E	8.8	0	–	5
	P1	49.6	28.2	5	10
	Y3	65.2	43.8	–	5
	Y11	78.4	56.9	–	4

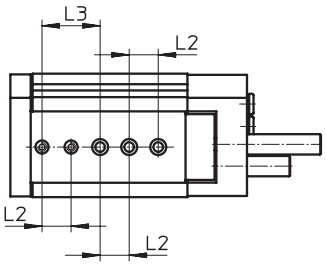
Datasheet

Hole pattern for mounting threads and centring holes

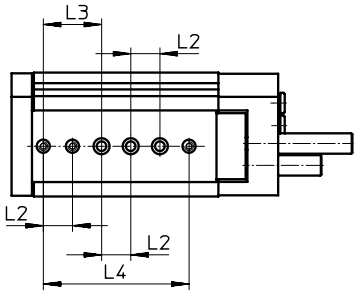
DGSL-20-10/20



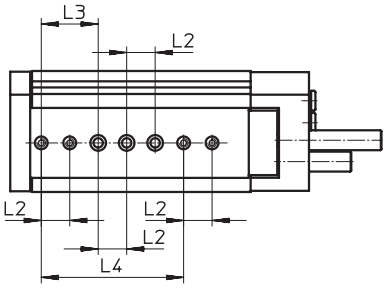
DGSL-20-30/40



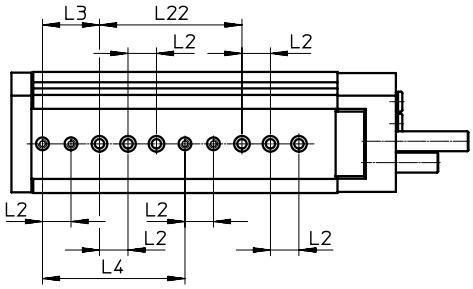
DGSL-20-50



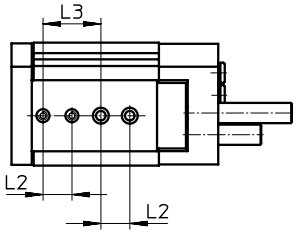
DGSL-20-80



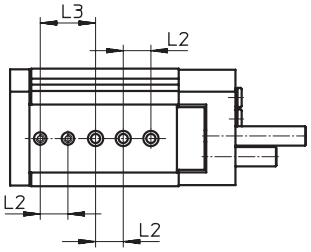
DGSL-20-100 ... 200



DGSL-25-10



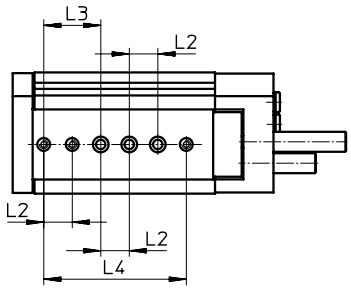
DGSL-25-20



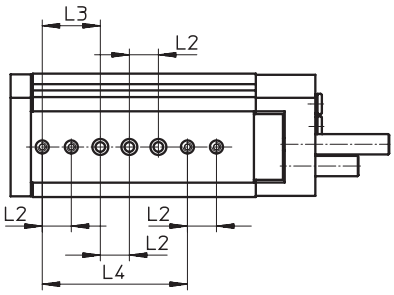
Datasheet

Hole pattern for mounting threads and centring holes

DGSL-25-30/40



DGSL-25-50



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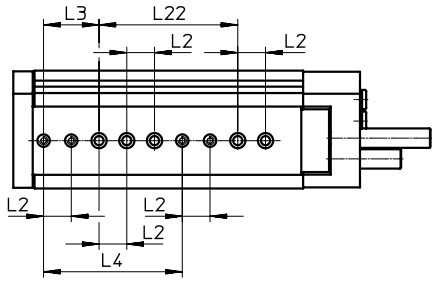
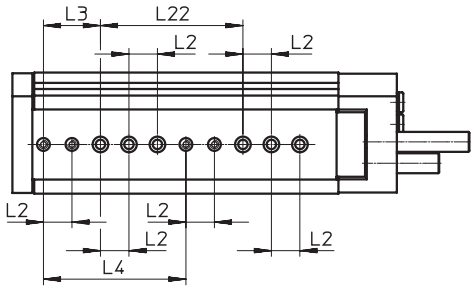
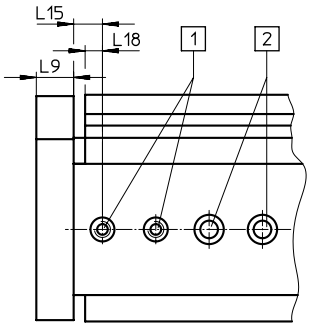


DGSL-25-100 ... 200



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

DGSL-20/25



[1] Centring holes with thread

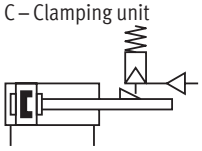
[2] Through-holes for mounting the drive

Size	L2[1)]	L3[1)]	L4	L9	L15 ±0.05	L18 +0.05	L22
20	20	40	100[1)]	14	7.8	6.5	100±0.03
25	20	40	100±0.03	15	8	6.5	100[1)]

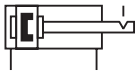
1) Tolerance for centring hole ±0.02
Tolerance for through-hole ±0.1

Datasheet

Function
C – Clamping unit

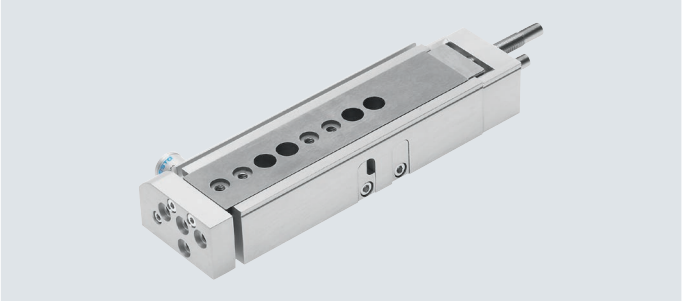


E3 – End-position locking



Size
6 ... 25

Sets of wearing parts
➔ Page 45



Note
Additional measures are required for use in safety-related applications; in Europe, for example, the standards listed under the EC Machinery Directive must be observed. Without additional measures in accordance with legally specified minimum requirements, the product is not suitable as a safety-related component in control systems.

General technical data – Clamping unit

Size		6	8	10	12	16	20	25
Function		• Mechanical clamping • For fixing the slide in any position • Frictional locking						
Clamping type with operating direction		At both ends						
		Clamping via spring force, release via compressed air						
Pneumatic connection		M5						
Mounting position		Any						
Static holding force	[N]	80	80	180	180	350	350	600
Product weight	[g]	10	10	15	15	50	50	50

Operating and environmental conditions – Clamping unit

Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]
Note on the operating/pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)
Min. release pressure		
	[MPa]	0.3
	[bar]	3
Max. operating pressure		
	[MPa]	≤ 1
	[bar]	≤ 10

General technical data – End-position locking

Size		6	8	10	12	16	20	25
Function		• Mechanical locking when the end position is reached • For fixing the slide in the unpressurised, retracted state • Form-fitting						
Clamping type with operating direction		At both ends						
		Clamping via spring force, unlock via compressed air						
Pneumatic connection		M5						
Mounting position		Any						
Static holding force	[N]	60	60	160	160	250	380	640
Product weight	[g]	13	13	26	26	64	64	65

Operating and environmental conditions – End-position locking

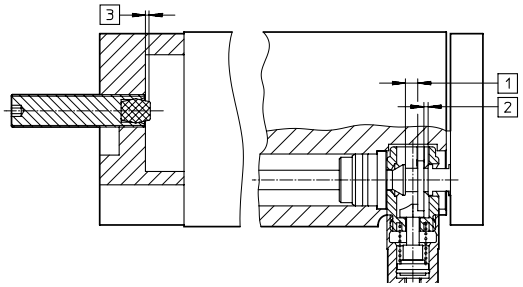
Operating medium		Compressed air to ISO 8573-1:2010 [7:4:4]
Note on the operating/pilot medium		Lubricated operation possible (in which case lubricated operation will always be required)
Operating pressure		
	[MPa]	0.3 ... 0.8
	[bar]	3 ... 8

Datasheet

Adjustable end-position range

When using end-position locking (E3), the adjustable end-position range, the retracted end position, is reduced by the following values.

[1] Axial adjustment range
[2] Max. cushioning stroke
[3] Adjustable end-position range

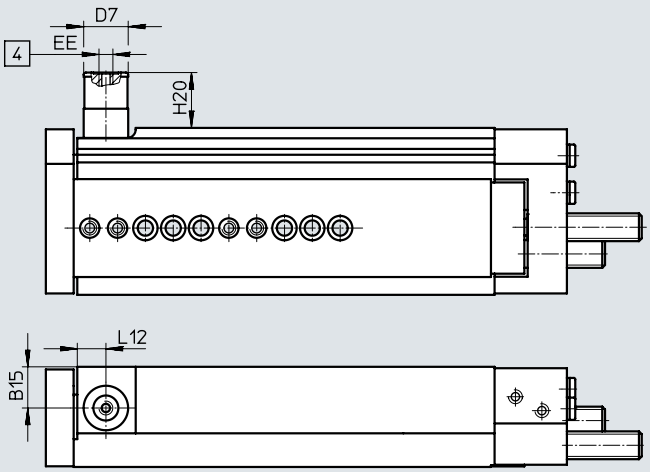


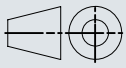
Size	[3]
6, 8	Max. 1.5 mm
10, 12	Max. 2.3 mm
16, 20, 25	Max. 2.7 mm

Dimensions

Download CAD data ➔ www.festo.com

C – Clamping unit / E3 – End-position locking





[4] Compressed air supply port

Size	B15	D7	EE	H20		L12
		ø		C	E3	
6	7.2	12	M5	10.7	21.2	7.3
8	9.9	12		10.5	21	7.3
10	11.2	16		11.8	21.2	10.5
12	14.8	16		10.5	19.9	10.3
16	14	20		27.5	30.5	13
20	17	20		21.3	24.3	14
25	22.55	20		17.75	20.65	14

Datasheet

Ordering data

Size	Stroke [mm]	Part no.	Type
With cushioning P			
4	10	**543910**	**DGSL-4-10-PA**
	20	**543911**	**DGSL-4-20-PA**
	30	**543912**	**DGSL-4-30-PA**
6	10	**543916**	**DGSL-6-10-PA**
	20	**543917**	**DGSL-6-20-PA**
	30	**543918**	**DGSL-6-30-PA**
	40	**543919**	**DGSL-6-40-PA**
	50	**543920**	**DGSL-6-50-PA**
8	10	**543926**	**DGSL-8-10-PA**
	20	**543927**	**DGSL-8-20-PA**
	30	**543928**	**DGSL-8-30-PA**
	40	**543929**	**DGSL-8-40-PA**
	50	**543930**	**DGSL-8-50-PA**
	80	**543931**	**DGSL-8-80-PA**
10	10	**543942**	**DGSL-10-10-PA**
	20	**543943**	**DGSL-10-20-PA**
	30	**543944**	**DGSL-10-30-PA**
	40	**543945**	**DGSL-10-40-PA**
	50	**543946**	**DGSL-10-50-PA**
	80	**543947**	**DGSL-10-80-PA**
	100	**543948**	**DGSL-10-100-PA**
12	10	**543961**	**DGSL-12-10-PA**
	20	**543962**	**DGSL-12-20-PA**
	30	**543963**	**DGSL-12-30-PA**
	40	**543964**	**DGSL-12-40-PA**
	50	**543965**	**DGSL-12-50-PA**
	80	**543966**	**DGSL-12-80-PA**
	100	**543967**	**DGSL-12-100-PA**
	150	**543968**	**DGSL-12-150-PA**
16	10	**543983**	**DGSL-16-10-PA**
	20	**543984**	**DGSL-16-20-PA**
	30	**543985**	**DGSL-16-30-PA**
	40	**543986**	**DGSL-16-40-PA**
	50	**543987**	**DGSL-16-50-PA**
	80	**543988**	**DGSL-16-80-PA**
	100	**543989**	**DGSL-16-100-PA**
	150	**543990**	**DGSL-16-150-PA**

Size	Stroke [mm]	Part no.	Type
With cushioning Y3			
4	10	–	
	20		
	30		
6	10	–	
	20		
	30		
	40		
	50		
8	10	–	
	20		
	30	**543938**	**DGSL-8-30-Y3A**
	40	**543939**	**DGSL-8-40-Y3A**
	50	**543940**	**DGSL-8-50-Y3A**
	80	**543941**	**DGSL-8-80-Y3A**
10	10	–	
	20		
	30	**543956**	**DGSL-10-30-Y3A**
	40	**543957**	**DGSL-10-40-Y3A**
	50	**543958**	**DGSL-10-50-Y3A**
	80	**543959**	**DGSL-10-80-Y3A**
	100	**543960**	**DGSL-10-100-Y3A**
12	10	–	
	20		
	30	**543977**	**DGSL-12-30-Y3A**
	40	**543978**	**DGSL-12-40-Y3A**
	50	**543979**	**DGSL-12-50-Y3A**
	80	**543980**	**DGSL-12-80-Y3A**
	100	**543981**	**DGSL-12-100-Y3A**
	150	**543982**	**DGSL-12-150-Y3A**
16	10	–	
	20		
	30	**543999**	**DGSL-16-30-Y3A**
	40	**544000**	**DGSL-16-40-Y3A**
	50	**544001**	**DGSL-16-50-Y3A**
	80	**544002**	**DGSL-16-80-Y3A**
	100	**544003**	**DGSL-16-100-Y3A**
	150	**544004**	**DGSL-16-150-Y3A**

Datasheet

Ordering data

Size	Stroke [mm]	Part no.	Type
With cushioning P			
20	10	**544005**	**DGSL-20-10-PA**
	20	**544006**	**DGSL-20-20-PA**
	30	**544007**	**DGSL-20-30-PA**
	40	**544008**	**DGSL-20-40-PA**
	50	**544009**	**DGSL-20-50-PA**
	80	**544010**	**DGSL-20-80-PA**
	100	**544011**	**DGSL-20-100-PA**
	150	**544012**	**DGSL-20-150-PA**
	200	**544013**	**DGSL-20-200-PA**
25	10	**544030**	**DGSL-25-10-PA**
	20	**544031**	**DGSL-25-20-PA**
	30	**544032**	**DGSL-25-30-PA**
	40	**544033**	**DGSL-25-40-PA**
	50	**544034**	**DGSL-25-50-PA**
	80	**544035**	**DGSL-25-80-PA**
	100	**544036**	**DGSL-25-100-PA**
	150	**544037**	**DGSL-25-150-PA**
	200	**544038**	**DGSL-25-200-PA**

Size	Stroke [mm]	Part no.	Type
With cushioning Y3			
20	10	–	
	20		
	30	**544023**	**DGSL-20-30-Y3A**
	40	**544024**	**DGSL-20-40-Y3A**
	50	**544025**	**DGSL-20-50-Y3A**
	80	**544026**	**DGSL-20-80-Y3A**
	100	**544027**	**DGSL-20-100-Y3A**
	150	**544028**	**DGSL-20-150-Y3A**
	200	**544029**	**DGSL-20-200-Y3A**
25	10	–	
	20		
	30	**544048**	**DGSL-25-30-Y3A**
	40	**544049**	**DGSL-25-40-Y3A**
	50	**544050**	**DGSL-25-50-Y3A**
	80	**544051**	**DGSL-25-80-Y3A**
	100	**544052**	**DGSL-25-100-Y3A**
	150	**544053**	**DGSL-25-150-Y3A**
	200	**544054**	**DGSL-25-200-Y3A**

Datasheet

Ordering data

Size	Stroke [mm]	Part no.	Type
With cushioning P1			
4	10	**543913**	**DGSL-4-10-P1A**
	20	**543914**	**DGSL-4-20-P1A**
	30	**543915**	**DGSL-4-30-P1A**
6	10	**543921**	**DGSL-6-10-P1A**
	20	**543922**	**DGSL-6-20-P1A**
	30	**543923**	**DGSL-6-30-P1A**
	40	**543924**	**DGSL-6-40-P1A**
	50	**543925**	**DGSL-6-50-P1A**
8	10	**543932**	**DGSL-8-10-P1A**
	20	**543933**	**DGSL-8-20-P1A**
	30	**543934**	**DGSL-8-30-P1A**
	40	**543935**	**DGSL-8-40-P1A**
	50	**543936**	**DGSL-8-50-P1A**
	80	**543937**	**DGSL-8-80-P1A**
10	10	**543949**	**DGSL-10-10-P1A**
	20	**543950**	**DGSL-10-20-P1A**
	30	**543951**	**DGSL-10-30-P1A**
	40	**543952**	**DGSL-10-40-P1A**
	50	**543953**	**DGSL-10-50-P1A**
	80	**543954**	**DGSL-10-80-P1A**
	100	**543955**	**DGSL-10-100-P1A**
12	10	**543969**	**DGSL-12-10-P1A**
	20	**543970**	**DGSL-12-20-P1A**
	30	**543971**	**DGSL-12-30-P1A**
	40	**543972**	**DGSL-12-40-P1A**
	50	**543973**	**DGSL-12-50-P1A**
	80	**543974**	**DGSL-12-80-P1A**
	100	**543975**	**DGSL-12-100-P1A**
	150	**543976**	**DGSL-12-150-P1A**

Size	Stroke [mm]	Part no.	Type
With cushioning E			
4	10	**570158**	**DGSL-4-10-EA**
	20	**570159**	**DGSL-4-20-EA**
	30	**570160**	**DGSL-4-30-EA**
6	10	**570161**	**DGSL-6-10-EA**
	20	**570162**	**DGSL-6-20-EA**
	30	**570163**	**DGSL-6-30-EA**
	40	**570164**	**DGSL-6-40-EA**
	50	**570165**	**DGSL-6-50-EA**
8	10	**570166**	**DGSL-8-10-EA**
	20	**570167**	**DGSL-8-20-EA**
	30	**570168**	**DGSL-8-30-EA**
	40	**570169**	**DGSL-8-40-EA**
	50	**570170**	**DGSL-8-50-EA**
	80	**570171**	**DGSL-8-80-EA**
10	10	**570172**	**DGSL-10-10-EA**
	20	**570173**	**DGSL-10-20-EA**
	30	**570174**	**DGSL-10-30-EA**
	40	**570175**	**DGSL-10-40-EA**
	50	**570176**	**DGSL-10-50-EA**
	80	**570177**	**DGSL-10-80-EA**
	100	**570178**	**DGSL-10-100-EA**
12	10	**570179**	**DGSL-12-10-EA**
	20	**570180**	**DGSL-12-20-EA**
	30	**570181**	**DGSL-12-30-EA**
	40	**570182**	**DGSL-12-40-EA**
	50	**570183**	**DGSL-12-50-EA**
	80	**570184**	**DGSL-12-80-EA**
	100	**570185**	**DGSL-12-100-EA**
	150	**570186**	**DGSL-12-150-EA**

Datasheet

Ordering data

Size	Stroke [mm]	Part no.	Type
16	10	**543991**	**DGSL-16-10-P1A**
	20	**543992**	**DGSL-16-20-P1A**
	30	**543993**	**DGSL-16-30-P1A**
	40	**543994**	**DGSL-16-40-P1A**
	50	**543995**	**DGSL-16-50-P1A**
	80	**543996**	**DGSL-16-80-P1A**
	100	**543997**	**DGSL-16-100-P1A**
	150	**543998**	**DGSL-16-150-P1A**
20	10	**544014**	**DGSL-20-10-P1A**
	20	**544015**	**DGSL-20-20-P1A**
	30	**544016**	**DGSL-20-30-P1A**
	40	**544017**	**DGSL-20-40-P1A**
	50	**544018**	**DGSL-20-50-P1A**
	80	**544019**	**DGSL-20-80-P1A**
	100	**544020**	**DGSL-20-100-P1A**
	150	**544021**	**DGSL-20-150-P1A**
	200	**544022**	**DGSL-20-200-P1A**
25	10	**544039**	**DGSL-25-10-P1A**
	20	**544040**	**DGSL-25-20-P1A**
	30	**544041**	**DGSL-25-30-P1A**
	40	**544042**	**DGSL-25-40-P1A**
	50	**544043**	**DGSL-25-50-P1A**
	80	**544044**	**DGSL-25-80-P1A**
	100	**544045**	**DGSL-25-100-P1A**
	150	**544046**	**DGSL-25-150-P1A**
	200	**544047**	**DGSL-25-200-P1A**

Size	Stroke [mm]	Part no.	Type
16	10	**570187**	**DGSL-16-10-EA**
	20	**570188**	**DGSL-16-20-EA**
	30	**570189**	**DGSL-16-30-EA**
	40	**570190**	**DGSL-16-40-EA**
	50	**570191**	**DGSL-16-50-EA**
	80	**570192**	**DGSL-16-80-EA**
	100	**570193**	**DGSL-16-100-EA**
	150	**570194**	**DGSL-16-150-EA**
20	10	**570195**	**DGSL-20-10-EA**
	20	**570196**	**DGSL-20-20-EA**
	30	**570197**	**DGSL-20-30-EA**
	40	**570198**	**DGSL-20-40-EA**
	50	**570199**	**DGSL-20-50-EA**
	80	**570200**	**DGSL-20-80-EA**
	100	**570201**	**DGSL-20-100-EA**
	150	**570202**	**DGSL-20-150-EA**
	200	**570203**	**DGSL-20-200-EA**
25	10	**570204**	**DGSL-25-10-EA**
	20	**570205**	**DGSL-25-20-EA**
	30	**570206**	**DGSL-25-30-EA**
	40	**570207**	**DGSL-25-40-EA**
	50	**570208**	**DGSL-25-50-EA**
	80	**570209**	**DGSL-25-80-EA**
	100	**570210**	**DGSL-25-100-EA**
	150	**570211**	**DGSL-25-150-EA**
	200	**570212**	**DGSL-25-200-EA**

Ordering data for modular products ➔ Page 46

Ordering data – Sets of wearing parts

Size	Part no.	Type
4	**713743**	**DGSL-4-...**
6	**713744**	**DGSL-6-...**
8	**713745**	**DGSL-8-...**
10	**713746**	**DGSL-10-...**

Size	Part no.	Type
12	**713747**	**DGSL-12-...**
16	**713748**	**DGSL-16-...**
20	**713749**	**DGSL-20-...**
25	**713750**	**DGSL-25-...**

Ordering data – Modular product system

Ordering table

Size	4	6	8	10	12	16	20	25	Conditions	Code	Enter code
Module no.	**543902**	**543903**	**543904**	**543905**	**543906**	**543907**	**543908**	**543909**			
Function	Mini slide with recirculating ball bearing guide									**DGSL**	DGSL
Size	4	6	8	10	12	16	20	25		**-...**	
Stroke [mm]	10									**-10**	
	20									**-20**	
	30									**-30**	
	–	40								**-40**	
	–	50								**-50**	
	–	–	80							**-80**	
	–	–	–	100						**-100**	
	–	–	–	–	150					**-150**	
	–	–	–	–	–	–	200			**-200**	
Clamping unit	–	Attached								**-C**	
End-position locking	–	With retracted piston rod							[1]	**-E3**	
Cushioning	Elastic cushioning rings/pads at both ends, end positions adjustable									**-P**	
	Elastic cushioning rings/pads at both ends, end positions adjustable, with fixed stop									**-P1**	
	–	Progressive shock absorber, at both ends							[2]	**-Y3**	
	Elastic cushioning rings/pads at both ends, end positions adjustable, short design									**-E**	
	–	Progressive shock absorber with reducing sleeve, at both ends							[2]	**-Y11**	
	No cushioning								[2]	**-N**	
Position sensing	Via proximity switch									**A**	A

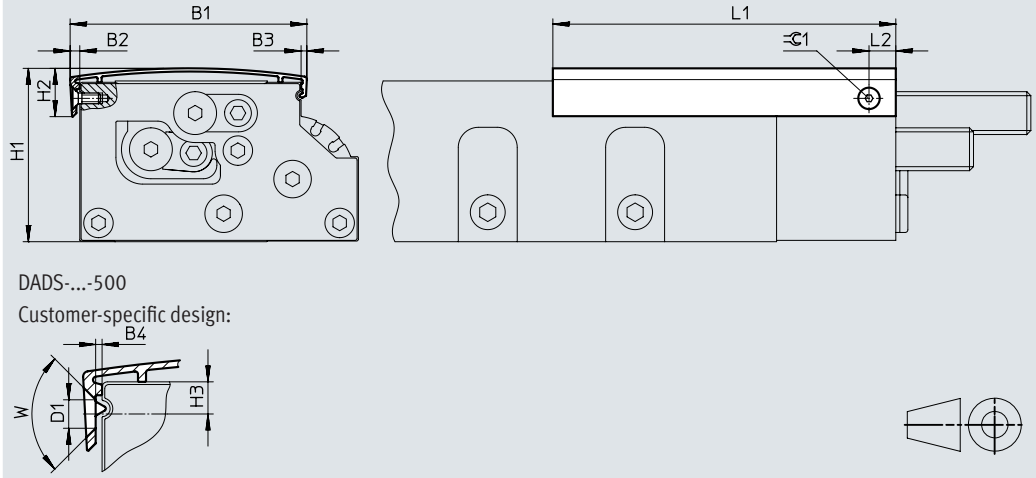
[1] **E3** Not with clamping unit C

[2] **Y3, Y11** Minimum stroke 30 mm

Accessories

Covering DADS

Material:
Anodised aluminium
RoHs-compliant



Dimensions and ordering data

For size	Length [mm]	B1	B2	B3	B4	D1	H1	H2	H3	L1	L2	W	⌭1	Weight [g]	Part no.	Type
4	30	22	1.9	–	0.4	2.8	17.9	7.5	2	40	4.5	90°	–	2	1086663	DADS-AB-G6-4-30
	500									500				27	1212468	DADS-AB-G6-4-500
6	50	31.2	1.4	–	0	2.8	22	8.2	2.5	63	6	90°	–	4	1066625	DADS-AB-G6-6-50
	500									500				33	1212476	DADS-AB-G6-6-500
8	80	36.3	1.9	–	0.3	2.8	26.5	8.2	2	93	7	90°	–	8	1087413	DADS-AB-G6-8-80
	500									500				42	1212478	DADS-AB-G6-8-500
10	50	43.6	2.8	2.2	1.2	3.4	32	12	3.4	70	10	90°	2	11	1162400	DADS-AB-G6-10-50
	100									120				18	1090689	DADS-AB-G6-10-100
	500									500				75	1212479	DADS-AB-G6-10-500
12	50	51.7	2.7	2	0.5	3.4	38.8	12.8	4.25	72	10	90°	2	12	1162406	DADS-AB-G6-12-50
	150									170				28	1090732	DADS-AB-G6-12-150
	500									500				82	1212480	DADS-AB-G6-12-500
16	50	60	4.3	3.1	2.25	3.4	43.7	15.2	5	73	10	90°	2	21	1162410	DADS-AB-G6-16-50
	150									173				49	1066591	DADS-AB-G6-16-150
	500									500				141	1212503	DADS-AB-G6-16-500
20	50	74.8	3.6	2.8	1.2	4.4	53.2	18.9	6.5	74	10	90°	2.5	28	1162412	DADS-AB-G6-20-50
	100									124				46	1162415	DADS-AB-G6-20-100
	200									224				83	1090823	DADS-AB-G6-20-200
	500									500				184	1212521	DADS-AB-G6-20-500
25	50	88.4	3.5	2.7	0.7	4.4	64.7	18.3	6	78	10	90°	2.5	34	1162417	DADS-AB-G6-25-50
	100									128				55	1162419	DADS-AB-G6-25-100
	200									228				98	1090895	DADS-AB-G6-25-200
	500									500				213	1212523	DADS-AB-G6-25-500

Note

With the 500 mm covers, the mounting hole must be made by the customer.

The cover can be shortened as required by the customer.

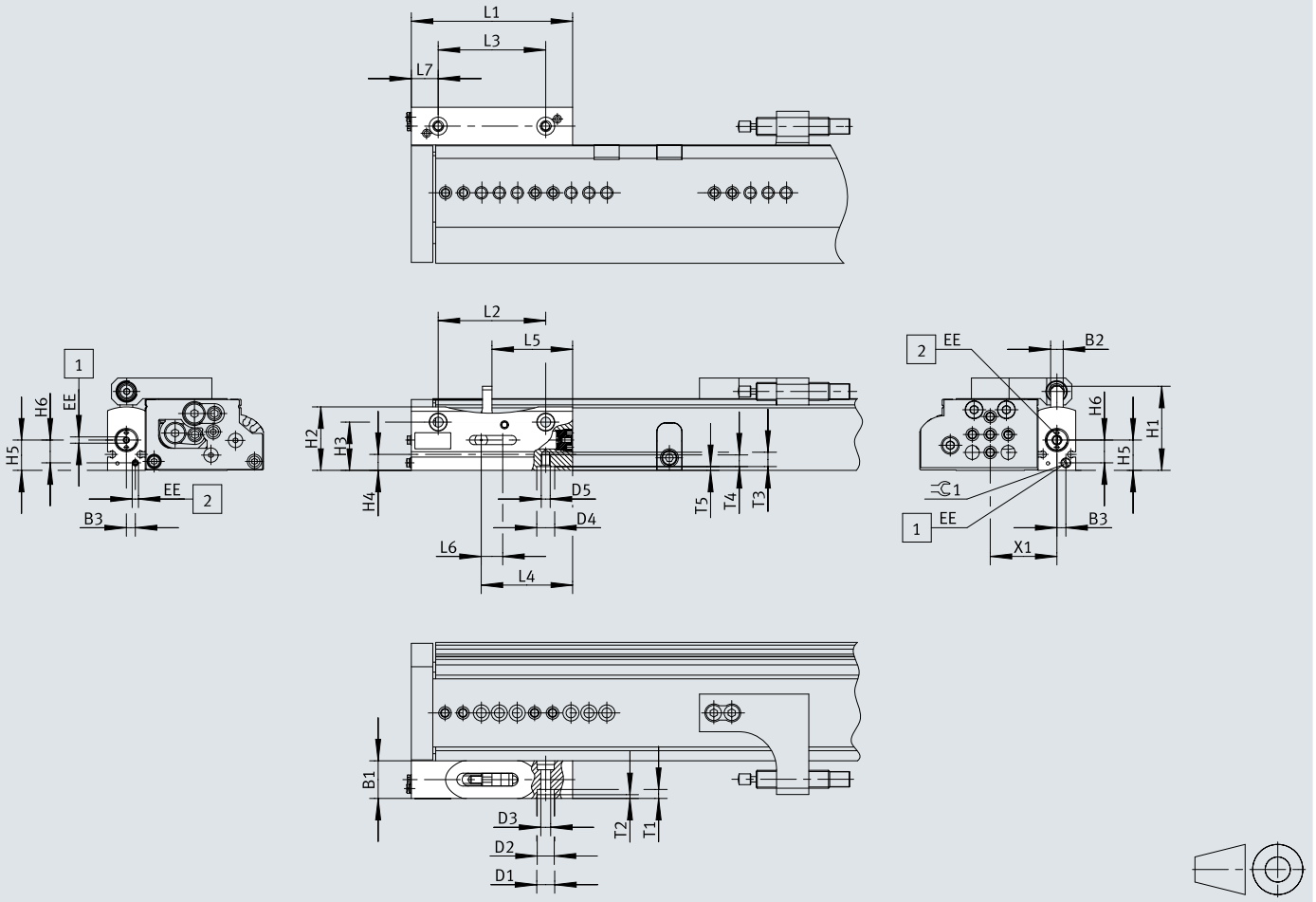
Accessories

Intermediate-position module DADM

- The intermediate-position module enables an additional adjustable position within the stroke range. The module is attached separately, directly next to the mini slide. It can be mounted anywhere along the mini slide.
- The associated shock absorber retainer ➔ page 50 can be attached at several points on the slide. The position can be precisely set with the help of the shock absorber.
- The stop lever positions can be sensed using proximity switches SME/SMT ➔ Page 52
- Push-in fittings are not included in the scope of delivery

Material:
Housing:
Wrought aluminium alloy
Lever:
High-alloy stainless steel
RoHs-compliant

Dimensions and ordering data Datasheets ➔ Internet: dadm



[1] Swivel stop lever inwards
[2] Swivel stop lever outwards

Note

With DADM-EP-G6-10: SME/SMT-10
With DADM-EP-G6-16: SME/SMT-8

For size	B1	B2	B3 ±0.1	D1 ø H7	D2 ø	D3 ø	D4 ø H7	D5	EE	H1	H2
12, 16	21	7	5	10	9.5	5.5	10	M5	M3	46.9	35.4
20, 25	26.5	9	5.5	12	11	6.6	12	M6	M5	65.2	47.4

Accessories

For size	H3 ±0.1	H4	H5 ±0.1	H6 ±0.1	L1	L2 ±0.1	L3 ±0.1	L4	L5	L6	L7 ±0.1
12, 16	26.9	8.9	16.9	12.7	90	60	60	51	45	12	15
20, 25	36.4	12.4	23.4	17	120	80	80	68	60	16	20

For size	T1	T2 ±0.05	T3	T4	T5 ±0.05	X1 +0.2	=⊂1	Weight [g]	Part no.	Type
12	5	2.15	8	6.5	2.15	34.4	4.5	154	**1492072**	**DADM-EP-G6-10**
16						37.8				
20	6.8	2.65	10	8	2.65	48.5	2.5	340	**1478121**	**DADM-EP-G6-16**
25						55.6				

Ordering data

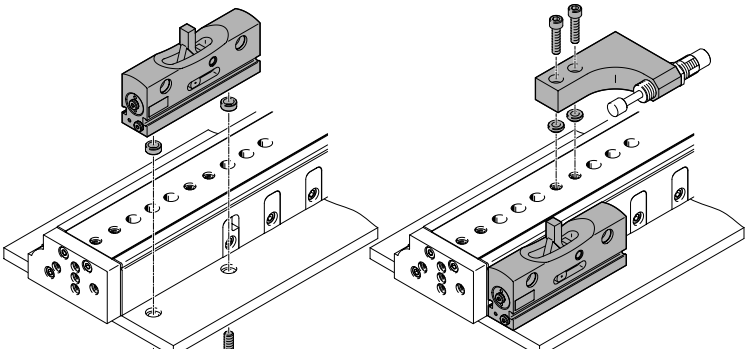
	For size	Description	Part no.	Type	PU[1]
Connector sleeve ZBV					Datasheets → Internet: zbv
	12, 16	For centring the intermediate-position module (2 pieces included in the scope of delivery of the intermediate-position module)	**560254**	**ZBV-10-9**	10
Centring sleeve ZBH					Datasheets → Internet: zbh
	20, 25	For centring the intermediate-position module (2 pieces included in the scope of delivery of the intermediate-position module)	**8137185**	**ZBH-12-B**	10

1) Packaging unit

Assembly

To ensure that the shock absorber strikes the stop lever in the centre, we recommended mounting the intermediate-position module directly next to the mini slide (without a gap). It is fastened on the mounting surface using 2 screws and centring sleeves. The shock absorber retainer is then attached to the slide of the mini slide, also using 2 screws and centring sleeves.

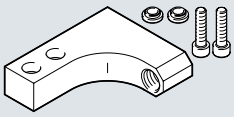
Precision adjustment:
The position can be precisely adjusted via the screw-in depth of the shock absorber. The shock absorber must protrude by at least 1.5 mm.

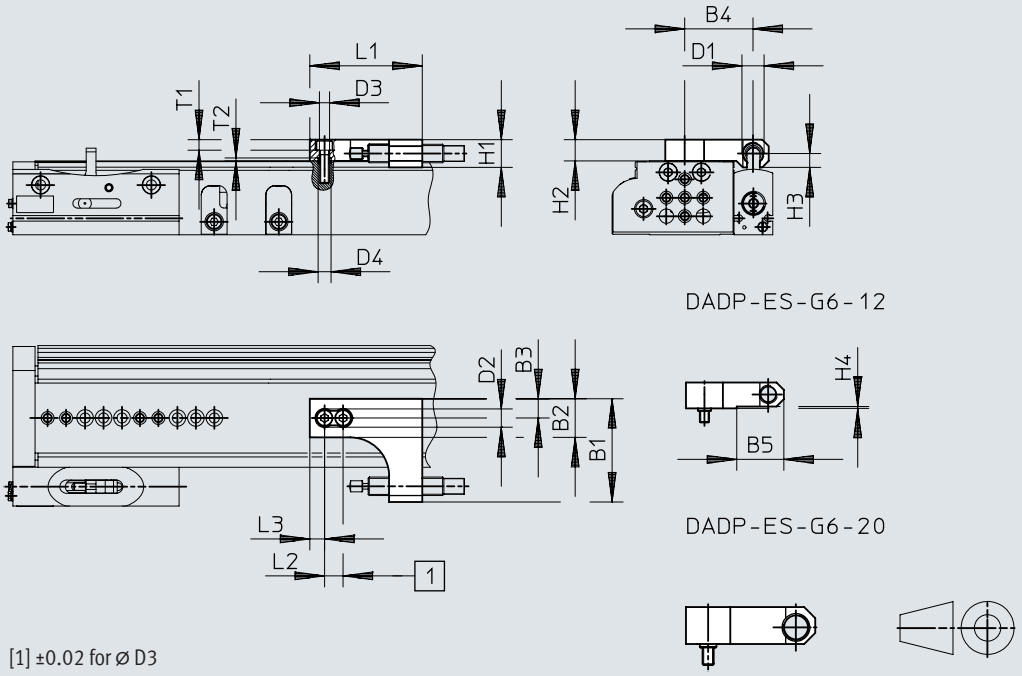


Accessories

Shock absorber retainer DADP

Material:
Anodised wrought aluminium alloy
RoHs-compliant





[1] ±0.02 for ø D3

Dimensions and ordering data

For size	B1	B2	B3	B4	B5	D1	D2 ø	D3 ø	D4 ø H7	H1	H2
12	53	20	10	34.5	25.5	M10x1	10	5.5	7	13	14
16	56	21	10.5	37	39.2	M12x1	10	5.5	7	15	12.2
20	70	24	12	47.5	–	M14x1	11	6.6	12	20	20
25	80	30	15	54.5	58	M16x1	11	6.6	12	25	14

For size	H3	H4	L1	L2	L3	T1	T2	Weight [g]	Part no.	Type
12	6.5	1	65	10	10	5.7	1.6	80	**1812471**	**DADP-ES-G6-12**
16	7.5	2.8	61	10	8	5.7	1.6	70	**1812472**	**DADP-ES-G6-16**
20	9	–	85	20	10	6.4	2.6	185	**1812473**	**DADP-ES-G6-20**
25	10	11	80	20	10	6.8	2.6	160	**1812550**	**DADP-ES-G6-25**

Ordering data

	For size	Description	Part no.	Type	PU[1]
Centring sleeve ZBH				Datasheets → Internet: zbh	
	12, 16	For centring the shock absorber retainer (2 pieces included in the scope of delivery of the shock absorber retainer)	**8146544**	**ZBH-7-B**	10
Connector sleeve ZBV				Datasheets → Internet: zbv	
	20, 25	For centring the shock absorber retainer (2 pieces included in the scope of delivery of the shock absorber retainer)	**548806**	**ZBV-12-9**	10

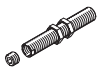
1) Packaging unit

Note

- A shock absorber retainer DADP-ES is additionally required when using an intermediate-position module
- Operation without cushioning components is not permitted
- Cushioning components are not included in the scope of delivery
- The size of the shock absorbers for the mini slides and for the relevant shock absorber retainer are identical. Shock absorber selection → Page 51
- The same cushioning component is used for cushioning the intermediate position as for the end positions of the mini slide

Accessories

Ordering data

	For size	For shock absorber retainer	Description	Order code	Part no.	Type	PU[1]
Shock absorber DYEF-...-Y1						Datasheets → Internet: dyef	
	4	–	Elastic cushioning, without metal stop	P	**1179810**	**DYEF-M4-Y1**	1
	6	–			**1179818**	**DYEF-M5-Y1**	
	8	–			**1179831**	**DYEF-M6-Y1**	
	10	–			**1179834**	**DYEF-M8-Y1**	
	12	DADP-ES-G6-12			**1179837**	**DYEF-M10-Y1**	
	16	DADP-ES-G6-16			**1179840**	**DYEF-M12-Y1**	
	20	DADP-ES-G6-20			**1179863**	**DYEF-M14-Y1**	
	25	DADP-ES-G6-25			**1179879**	**DYEF-M16-Y1**	
Shock absorber DYEF-S-...-Y1						Datasheets → Internet: dyef	
	4	–	Elastic cushioning, without metal stop, short design	E	**1152500**	**DYEF-S-M4-Y1**	1
	6	–			**1152507**	**DYEF-S-M5-Y1**	
	8	–			**1152524**	**DYEF-S-M6-Y1**	
	10	–			**1152536**	**DYEF-S-M8-Y1**	
	12	DADP-ES-G6-12			**1152959**	**DYEF-S-M10-Y1**	
	16	DADP-ES-G6-16			**1153004**	**DYEF-S-M12-Y1**	
	20	DADP-ES-G6-20			**1153017**	**DYEF-S-M14-Y1**	
	25	DADP-ES-G6-25			**1153023**	**DYEF-S-M16-Y1**	
Shock absorber DYEF-...-Y1F						Datasheets → Internet: dyef	
	4	–	Elastic cushioning, with metal stop	P1	**548370**	**DYEF-M4-Y1F**	1
	6	–			**548371**	**DYEF-M5-Y1F**	
	8	–			**548372**	**DYEF-M6-Y1F**	
	10	–			**548373**	**DYEF-M8-Y1F**	
	12	DADP-ES-G6-12			**548374**	**DYEF-M10-Y1F**	
	16	DADP-ES-G6-16			**548375**	**DYEF-M12-Y1F**	
	20	DADP-ES-G6-20			**548376**	**DYEF-M14-Y1F**	
	25	DADP-ES-G6-25			**548377**	**DYEF-M16-Y1F**	
Shock absorber DYSW						Datasheets → Internet: dysw	
	8	–	Progressive shock absorber, at both ends	Y3	**548070**	**DYSW-4-6-Y1F**	1
	10	–			**548071**	**DYSW-5-8-Y1F**	
	12	DADP-ES-G6-12			**548072**	**DYSW-7-10-Y1F**	
	16	DADP-ES-G6-16			**548073**	**DYSW-8-14-Y1F**	
	20	DADP-ES-G6-20			**548074**	**DYSW-10-17-Y1F**	
	25	DADP-ES-G6-25			**548075**	**DYSW-12-20-Y1F**	
Reducing sleeve DAYH						Datasheets → Internet: dayh	
	10	–	For DYSW-4-6	–	**1165476**	**DAYH-4**	1
	12	DADP-ES-G6-12	For DYSW-5-8		**1165480**	**DAYH-5**	
	16	DADP-ES-G6-16	For DYSW-7-10		**1165484**	**DAYH-7**	
	20	DADP-ES-G6-20	For DYSW-8-14		**1165488**	**DAYH-8**	
	25	DADP-ES-G6-25	For DYSW-10-17		**1165491**	**DAYH-10**	

1) Packaging unit

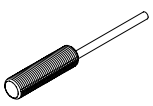
Monitoring with distance sensor SOIA

To monitor the application and condition of the damping elements. Enables predictive maintenance and increases reliability and accuracy.

The following parameters can be monitored:

- Impact velocity
- End position
- Energy consumption
- Residual energy
- Damping reserve

Distance sensor SOIA, inductive — Datasheets → Internet: soia

	Mounting type	Displacement measuring range	Switching output	Electrical connection	Part no.	Type
	Flush	0 ... 2 mm	PNP/NPN, switchable, Push-pull	Open end	**8161194**	**SOIA-M8PB-PNLK-LE**
		0 ... 4 mm			**8161198**	**SOIA-M12PB-PNLK-LE**
	Not flush				**8161196**	**SOIA-M8PNB-PNLK-LE**
		0 ... 7 mm			**8161200**	**SOIA-M12PNB-PNLK-LE**

Accessories

Ordering data

	For size	Description	Part no.	Type	PU[1]
Centring sleeve ZBH					Datasheets → Internet: zbh
	4, 6	For centring loads and attachments (6 centring sleeves are included in the scope of delivery of the mini slide)	**8146543**	**ZBH-5-B**	10
	8, 10, 12, 16		**8146544**	**ZBH-7-B**	
	20, 25		**8137184**	**ZBH-9-B**	
Connector sleeve ZBV					Datasheets → Internet: zbv
	8, 10	• For connecting two mini slides DGSL • Sizing information refers to the Y-axis	**548802**	**ZBV-M4-7**	3
	12, 16		**548803**	**ZBV-M5-7**	
	20, 25		**548804**	**ZBV-M6-9**	

1) Packaging unit

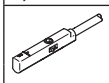
Ordering data

	For size	Description	Part no.	Type	PU[1]
One-way flow control valve GRLA					Datasheets → Internet: grla
	4, 6, 8	• For regulating speed • Only one GRLA-M3-QS-3 can be mounted on the front with size 4	**175041**	**GRLA-M3-QS-3**	1
			175038	**GRLA-M3**	
	10, 12, 16		**193137**	**GRLA-M5-QS-3-D**	
			193138	**GRLA-M5-QS-4-D**	
	20, 25		**193143**	**GRLA-1/8-QS-4-D**	
			193144	**GRLA-1/8-QS-6-D**	
	20, 25		**162965**	**GRLA-1/8-QS-6-RS-B**	
			162966	**GRLA-1/8-QS-8-RS-B**	
Push-in fitting QSM					Datasheets → Internet: qs
	4, 6, 8	For connecting tubing with standard O.D.	**153301**	**QSM-M3-3**	10
	10, 12, 16		**153304**	**QSM-M5-4**	
	20, 25		**153307**	**QSM-1/8-6**	

1) Packaging unit

Proximity switch for mini slide DGSL and intermediate-position module DADM-EP-G6-10

Ordering data – Proximity switch for C-slot, magneto-resistive Datasheets → Internet: smt

	Type of mounting	Switching output	Electrical connection, outlet direction of connection	Cable length [m]	Part no.	Type
N/O						
	Inserted in the slot from above	PNP	Cable, 3-core, lengthwise	2.5	**551373**	**SMT-10M-PS-24V-E-2.5-L-OE**
			Plug M8x1, 3-pin, lengthways	0.3	**551375**	**SMT-10M-PS-24V-E-0.3-L-M8D**
			Plug M8x1, 3-pin, crossways	0.3	**551376**	**SMT-10M-PS-24V-E-0.3-Q-M8D**

Ordering data – Proximity switch for C-slot, magnetic reed1) Datasheets → Internet: sme

	Type of mounting	Switching output	Electrical connection, outlet direction of connection	Cable length [m]	Part no.	Type
N/O						
	Inserted in the slot from above	Contacting	Plug M8x1, 3-pin, lengthways	0.3	**551367**	**SME-10M-DS-24V-E-0.3-L-M8D**
			Cable, 3-core, lengthwise	2.5	**551365**	**SME-10M-DS-24V-E-2.5-L-OE**
			Cable, 2-core, lengthwise	2.5	**551369**	**SME-10M-ZS-24V-E-2.5-L-OE**
	Inserted into the slot length-wise	Contacting	Plug M8x1, 3-pin, lengthways	0.3	**173212**	**SME-10-SL-LED-24**
			Cable, 3-core, lengthwise	2.5	**173210**	**SME-10-KL-LED-24**

1) Proximity switches are not permitted on the mini-slide DGSL-4.

Accessories

Proximity switch for intermediate-position module DADM-EP-G6-16

Ordering data – Proximity switch for T-slot, magneto-resistive

Datasheets ➔ Internet: smt

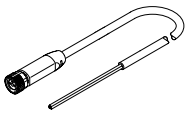
	Type of mounting	Switching output	Electrical connection	Cable length	Part no.	Type
N/O						
	Inserted in the slot from above, flush with the cylinder profile, short design	PNP	Cable, 3-core	2.5 m	**574335**	**SMT-8M-A-PS-24V-E-2.5-OE**
			Plug M8x1, 3-pin	0.3 m	**574334**	**SMT-8M-A-PS-24V-E-0.3-M8D**
			Plug M12x1, 3-pin	0.3 m	**574337**	**SMT-8M-A-PS-24V-E-0.3-M12**
		NPN	Cable, 3-core	2.5 m	**574338**	**SMT-8M-A-NS-24V-E-2.5-OE**
			Plug M8x1, 3-pin	0.3 m	**574339**	**SMT-8M-A-NS-24V-E-0.3-M8D**

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

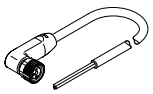
Datasheets ➔ Internet: sme

	Type of mounting	Switching output	Electrical connection	Cable length	Part no.	Type
N/O						
	Inserted in the slot from above, flush with the cylinder profile	Contacting	Cable, 3-core	2.5 m	**543862**	**SME-8M-DS-24V-K-2.5-OE**
				5.0 m	**543863**	**SME-8M-DS-24V-K-5.0-OE**
			Cable, 2-core	2.5 m	**543872**	**SME-8M-ZS-24V-K-2.5-OE**
			Plug M8x1, 3-pin	0.3 m	**543861**	**SME-8M-DS-24V-K-0.3-M8D**
	Inserted in the slot lengthwise, flush with the cylinder profile	Contacting	Cable, 3-core	2.5 m	**150855**	**SME-8-K-LED-24**
			Plug M8x1, 3-pin	0.3 m	**150857**	**SME-8-S-LED-24**

Connecting cables NEBA, straight

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

Connecting cables NEBA, angled

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