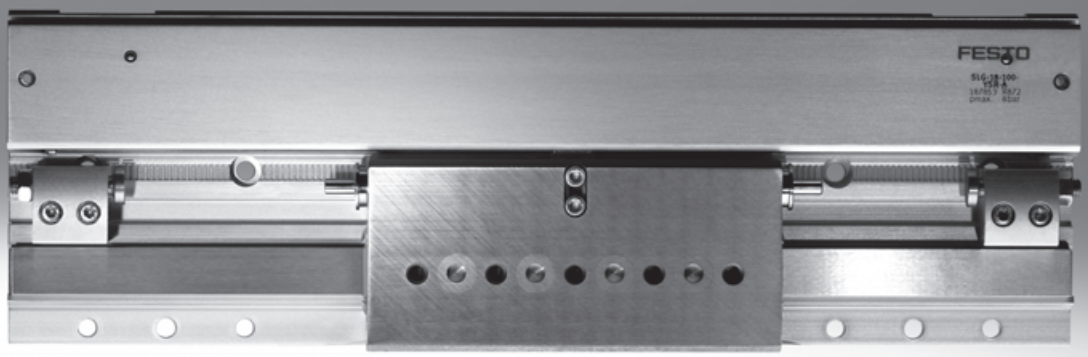
# Linear drives SLG, flat design

FESTO



# Linear drives SLG, flat design

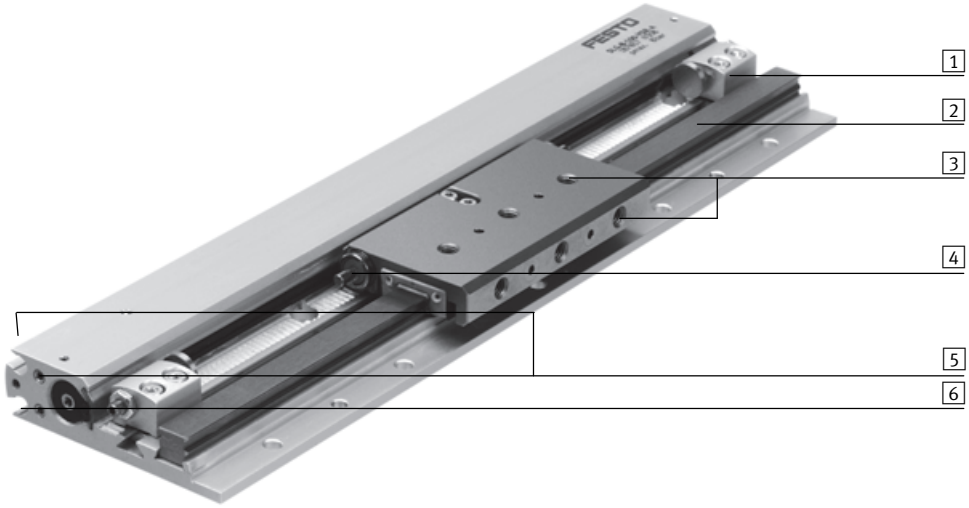
Features

## General information

- Piston ∅ 8, 12 and 18
- Stroke lengths of 100 ... 900 mm
- Two cushioning types selectable:
  - Elastic cushioning
  - Shock absorbers
- Direct mounting via centering holes
- Extremely flat design
- Built-in precision guide
- Slide with polished surface
- High load capacity
- Adjustable end stops
- Versatile supply port options
- Suitable for multiple-axis applications with other mini slides

## The technology in detail

➔ page 5




1 End stop
Finely-adjustable end stops over entire stroke range

2 Guide rail
Highly accurate, rigid precision guide unit: stainless steel roller track pressed into aluminum profile with ball bearing guide

3 Slide
Interface for attachments. Highly adaptable, thanks to wide choice of mounting and attachment options

4 Cushioning
With rubber buffers or with shock absorbers. The cushioning elements are inserted into the slide and fixed.

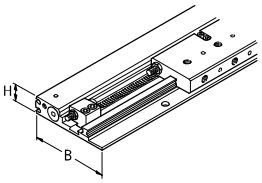
5 Supply port
Possible on three sides

6 Slot
for integrateable proximity sensors SME-/SMT-10

## Design

The flat linear drive SLG

The height H remains the same even if the intermediate position module is used.




| Piston ∅ | Width (B) | x **Height (H)** |
|---|---|---|
| 8 mm | 53.5 | x **15 mm** |
| 12 mm | 64.5 | x **18.5 mm** |
| 18 mm | 85.5 | x **25.5 mm** |

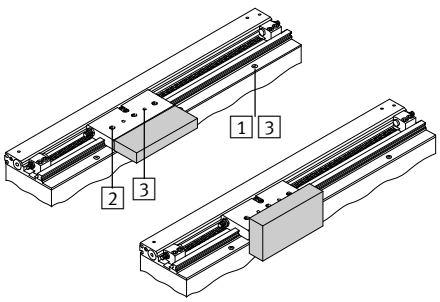
Mounting and assembly options

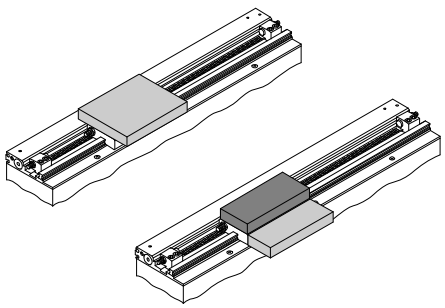
**Drive**

1 Through-holes
3 Locating hole for centering pin ZBS

**Slide**

2 Threaded holes
3 Locating hole for centering pin ZBS



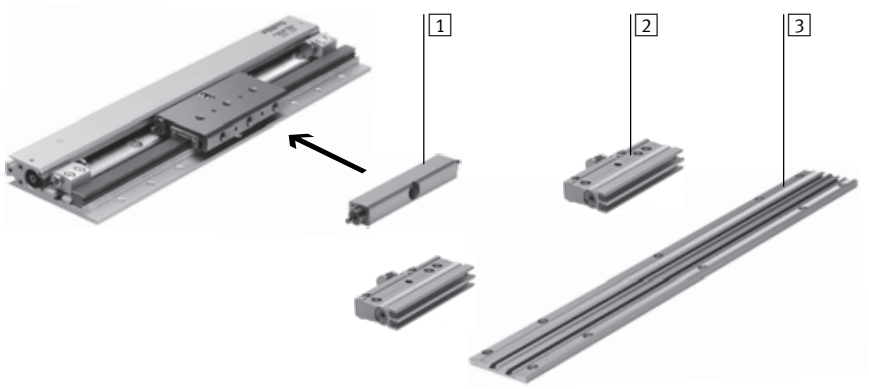
# Linear drives SLG, flat design

Features

**Intermediate positions – simple and inexpensive** ➔ page 16

- The intermediate position module can be used for advancing to one or more intermediate positions
- It is mounted parallel to the linear drive SLG via an additional mounting rail. This means that it can also be easily retrofitted.
- Fine adjustment of the intermediate position is effected via a stop screw with lock nut
- With two modules the same position can be approached from either direction
- The intermediate positions can be freely selected across the entire stroke range (observe minimum distances)
- The module's symmetry means that it can advance to its right or left once mounted
- It can be activated and sensed before the movement starts
- Integratable proximity switches in the module housing mean that the intermediate position (activated or initial position) can be sensed contactlessly
- Up to 4 modules can be ordered via the SLG modular product system
- The slide must be retracted once the intermediate position is reached. The stop on the module can then swivel back into its initial position

In combination with linear drive SLG



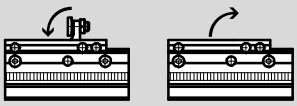

1 Shock absorber retainer SLG-D
The retainer accepts rubber buffers or shock absorbers and is attached to the slide of the SLG. The use of shock absorber YSRG (Accessories ➔ page 25) is recommended to ensure accurate positioning of stops and in the case of vertical assembly positions.

2 Intermediate position module SLG-Z
The stop with cushioning screw is retracted and extended by means of a 90° swivel motion based on a double-acting rotary drive (rack and pinion principle). The module is fastened to the mounting rail using screws and slot nuts.

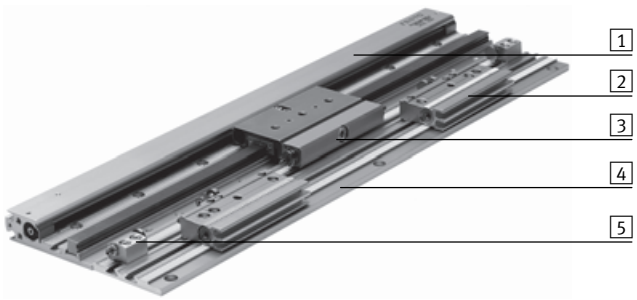
3 Mounting rail SLG-S
The rail is used for mounting the intermediate position modules. It can also accept the end stops of the linear drive SLG. The gear teeth on the rail and module permit rough pre-adjustment with respect to the drive part of the SLG.

- Note

The intermediate position module can also be used independently of the linear drive SLG. It is simply mounted on any even surface using mounting screws and locating pins and can then be used universally as an autonomous intermediate position module in numerous applications.



Completely assembled with two intermediate positions

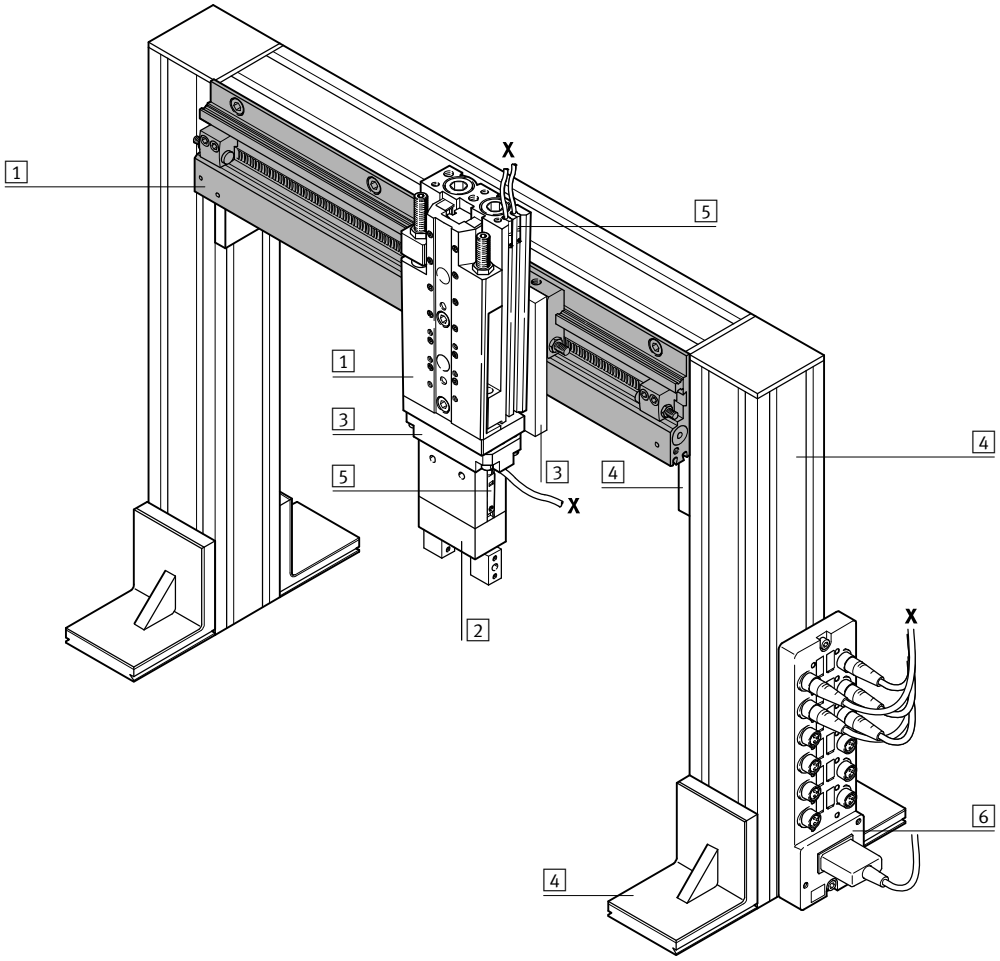



1 Linear drive SLG
2 Intermediate position module
3 Shock absorber retainer
4 Mounting rail
5 End stop

# Linear drives SLG, flat design

Features

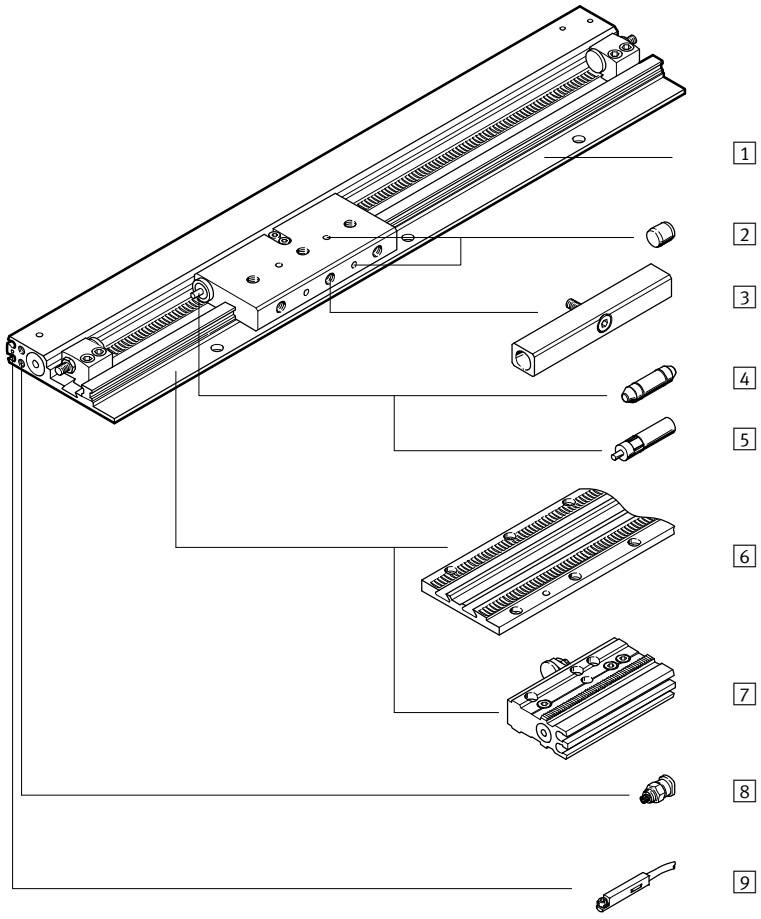
## System product for handling and assembly technology




| System elements and accessories | | | |
|---|---|---|---|
| | **Type** | **Description** | **➔ Page/Internet** |
| 1 | Drives | Diverse possible combinations in handling and assembly technology | drive |
| 2 | Grippers | Diverse variation options in handling and assembly technology | gripper |
| 3 | Adapters | For drive-drive and drive-gripper connections | adapter kit |
| 4 | Basic components | Profiles and profile connections | basic component |
| 5 | Proximity sensors | For position sensing | proximity sensor |
| 6 | Multi-pin plug distributor | For bundling individual cables to form a multi-pin cable | multi-pin plug distributor |

# Linear drives SLG, flat design

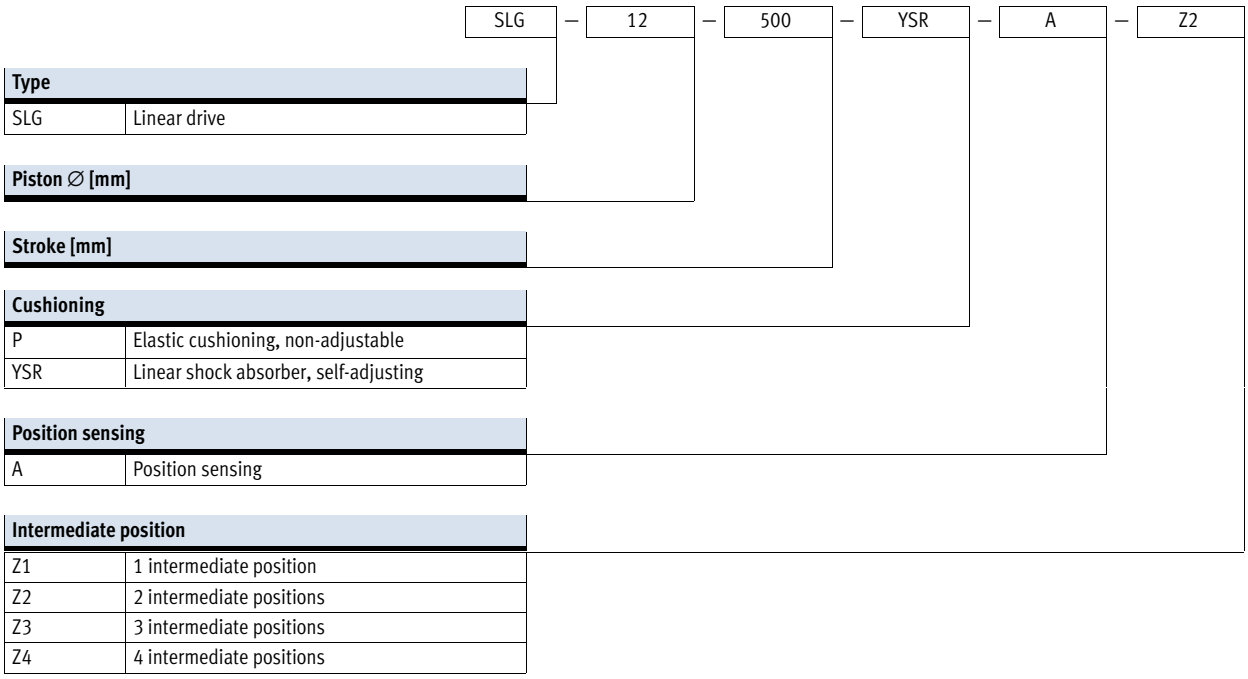
Peripherals overview




| Variants and accessories | | | |
|---|---|---|---|
| | **Type/Order code** | **Description** | **➔ Page/Internet** |
| 1 | Linear drive<br>SLG | Drive without accessories | 7 |
| 2 | Centering pin<br>ZBS | For centering loads and attachments on the slide | 25 |
| 3 | Shock absorber retainer<br>SLG-D | For fastening the rubber buffers or shock absorbers in combination with the intermediate position | 23 |
| 4 | Rubber buffer<br>SLG | Non-adjustable, elastic cushioning. Used only at low speeds | 25 |
| 5 | Shock absorber<br>YSRG | Self-adjusting hydraulic shock absorber with return spring and linear cushioning characteristic | 25 |
| 6 | Mounting rail<br>SLG-S | For fastening the intermediate position modules and end stops | 24 |
| 7 | Intermediate position module<br>SLG-Z | Fixed stop for the intermediate position | 23 |
| 8 | One-way flow control valve<br>GRLA | The small distance between the supply ports means that only certain one-way flow control valves can be used | 26 |
| 9 | Proximity sensors<br>SME-/SMT-10 | The proximity switches are fitted in the profile slot. The switches therefore do not project | 26 |

# Linear drives SLG, flat design

Type codes




| Type | |
|---|---|
| SLG | Linear drive |

| Piston ∅ [mm] | |
|---|---|

| Stroke [mm] | |
|---|---|

| Cushioning | |
|---|---|
| P | Elastic cushioning, non-adjustable |
| YSR | Linear shock absorber, self-adjusting |

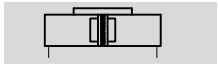
| Position sensing | |
|---|---|
| A | Position sensing |

| Intermediate position | |
|---|---|
| Z1 | 1 intermediate position |
| Z2 | 2 intermediate positions |
| Z3 | 3 intermediate positions |
| Z4 | 4 intermediate positions |

# Linear drives SLG, flat design

Technical data

Function



- Ø - Diameter
  8 … 18 mm
- I - Stroke length
  100 … 900 mm

| General technical data | | | | |
|---|---|---|---|---|
| Piston ∅ | | 8 | 12 | 18 |
| Stroke[1] | [mm] | 100 … 500 | 100 … 700 | 100 … 900 |
| Pneumatic connection | | M3 | | M5 |
| Mode of operation | | Double-acting | | |
| Operating medium | | Compressed air in accordance with ISO 8573-1:2010 [7:–:–] | | |
| Note on operating/pilot medium | | Operation with lubricated medium possible (in which case lubricated operation will always be required) | | |
| Constructional design | | Rodless drive | | |
| Cushioning | | Flexible cushioning rings/plates at both ends | | |
| ➔page 10 | | Self-adjusting at both ends | | |
| Position sensing | | For proximity sensing | | |
| Type of mounting | | Direct mounting | | |
| Mounting position | | Any | | |
| Driver principle | | Slotted cylinder, mechanically coupled | | |
| Guide | | Guide rail with slide | | |
| Max. speed | [m/s] | 1 | | 1.5 |

1) Intermediate strokes are infinitely adjustable with stops.

| Operating and environmental conditions | | | | |
|---|---|---|---|---|
| Piston ∅ | | 8 | 12 | 18 |
| Operating pressure | [bar] | 2.5 … 8 | 2 … 8 | 1 … 8 |
| Ambient temperature[1] | [°C] | –10 … +60 | | |

1) Note operating range of proximity switches.

| Forces [N] | | | |
|---|---|---|---|
| Piston ∅ | 8 | 12 | 18 |
| Theoretical force at 6 bar | 30 | 68 | 153 |

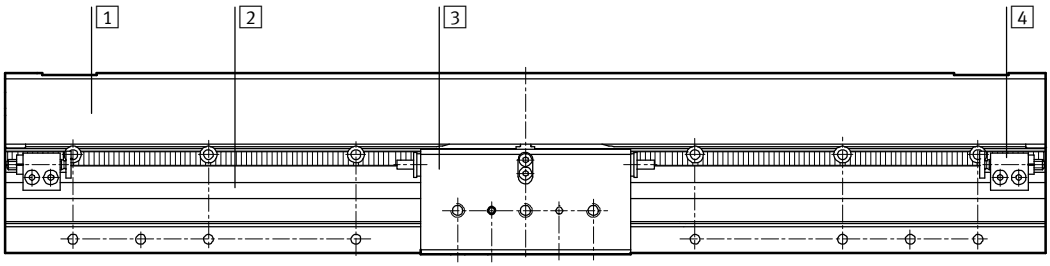
# Linear drives SLG, flat design

Technical data

| Weights [g] | | | |
|---|---|---|---|
| Piston ∅ | 8 | 12 | 18 |
| Basic weight per 0 mm stroke with P cushioning | 215 | 410 | 965 |
| Basic weight per 0 mm stroke with YSR cushioning | 225 | 420 | 995 |
| Additional weight per 10mm stroke | 11.5 | 17.5 | 29.5 |
| Moving load with P cushioning | 80 | 160 | 440 |
| Moving load with YSR cushioning | 90 | 170 | 470 |

**Materials**

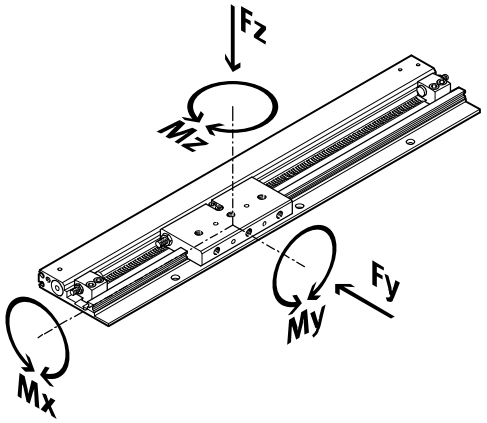
Sectional view




| Linear drives | | |
|---|---|---|
| 1 | Profile barrel | Anodized aluminum |
| 2 | Guide | High-alloy steel |
| 3 | Slide | High-alloy steel |
| 4 | Stop sleeve | Anodized aluminum |
| – | Seals | Polyurethane |
| | Material note | Free of copper and PTFE |

## Characteristic load values

The forces and torques specified refer to the centre of the guide rail.




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

$$\frac{Fy}{Fy_{max.}} + \frac{Fz}{Fz_{max.}} + \frac{Mx}{Mx_{max.}} + \frac{My}{My_{max.}} + \frac{Mz}{Mz_{max.}} \leq 1$$

| Permissible forces [N] and torques [Nm] | | | | |
|---|---|---|---|---|
| Piston ∅ | | 8 | 12 | 18 |
| $Fy_{max.}$ | [N] | 255 | 565 | 930 |
| $Fz_{max.}$ | [N] | 255 | 565 | 930 |
| | | | | |
| $Mx_{max.}$ | [Nm] | 1 | 3 | 7 |
| $My_{max.}$ | [Nm] | 3.5 | 9 | 23 |
| $Mz_{max.}$ | [Nm] | 3.5 | 9 | 23 |

| Torsional backlash [°] at the respective torques | | | |
|---|---|---|---|
| Piston ∅ | 8 | 12 | 18 |
| at $Mx_{max.}$ | ±0.03 | ±0.04 | ±0.05 |
| at $My_{max.}$ | ±0.005 | ±0.007 | ±0.007 |
| at $Mz_{max.}$ | ±0.005 | ±0.007 | ±0.007 |

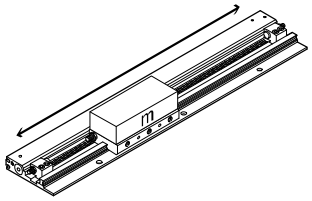
Note

Sizing software
ProDrive
➔www.festo.com

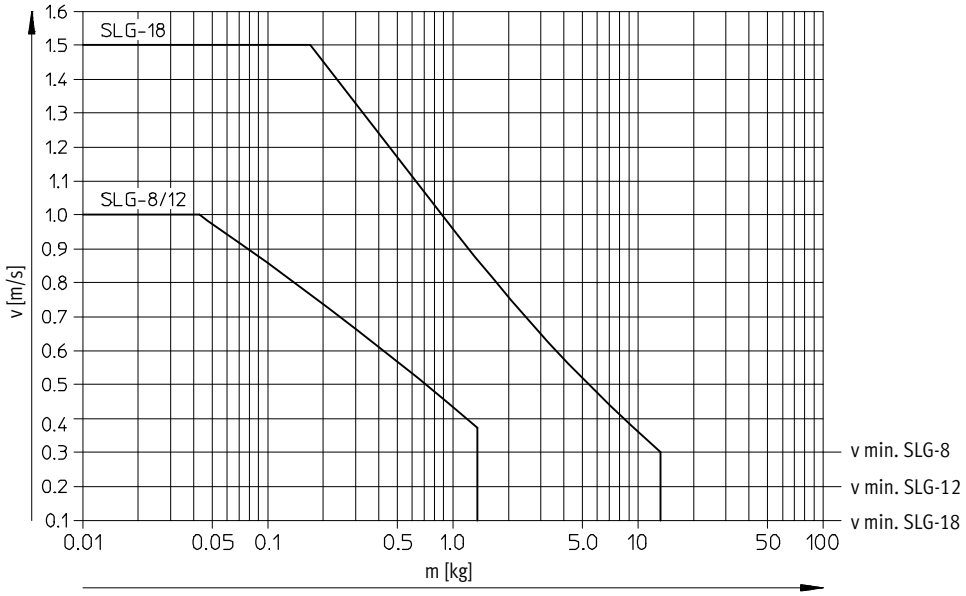
## Maximum permissible piston speed v as a function of useful load m when the unit is operated horizontally

As a function of operating pressure and end-position cushioning system

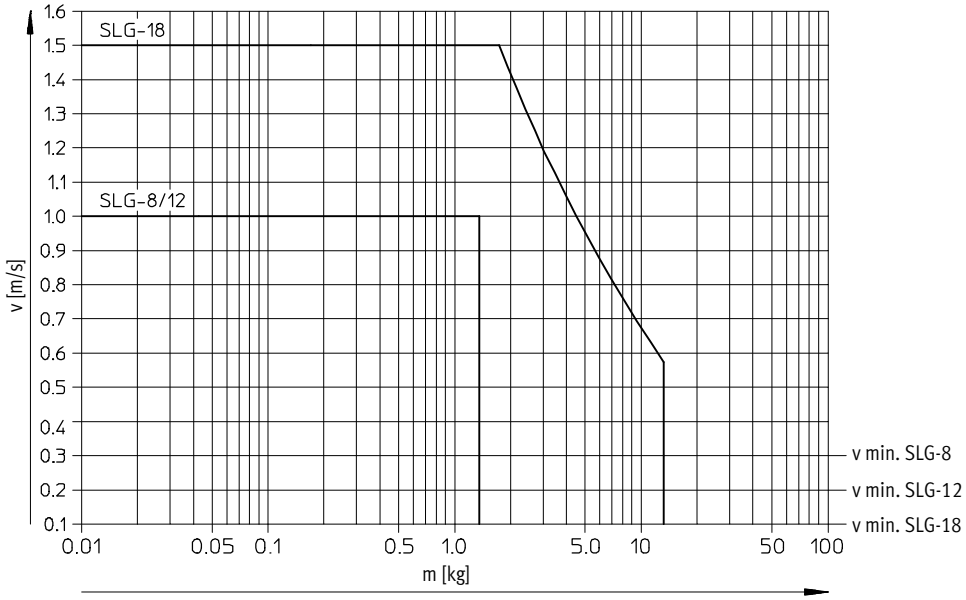
A linear drive SLG with YSR cushioning (YSRG shock absorbers) must be used in applications requiring very high repetition accuracy.



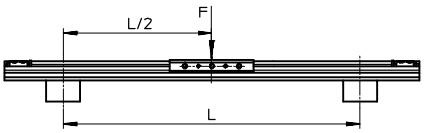

### Cushioning P

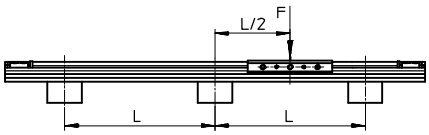



### YSR cushioning



## Determination of required points of support as a function of applied load F

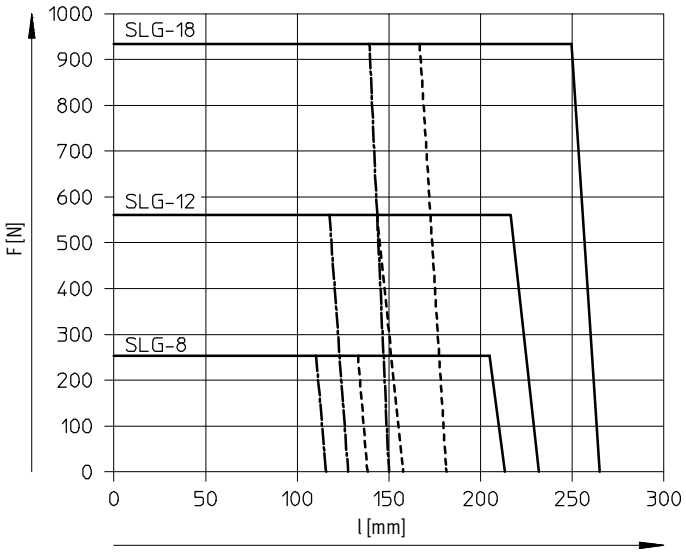


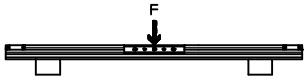

- - Note

The support spacings L must be laid out in such a way that the mounting profile for the intermediate position module will exhibit less deflection than the drive itself.

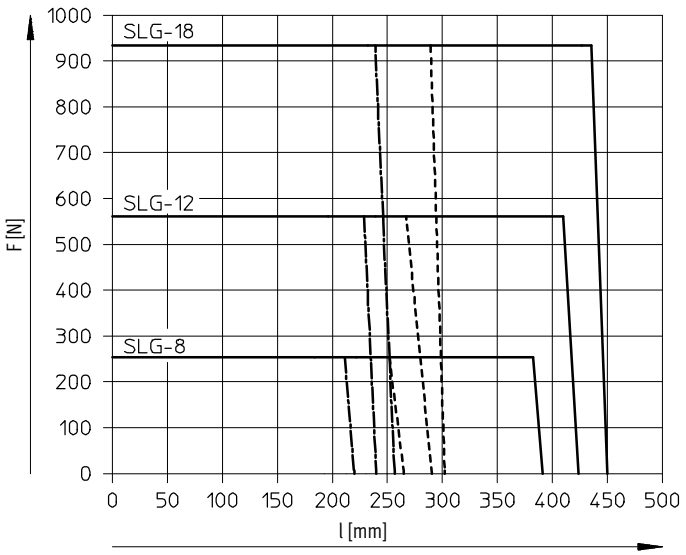
### Deflection around the X axis



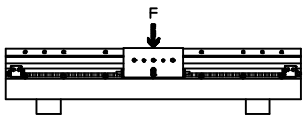

f = 0.5 mm
f = 0.1 mm
f = 0.05 mm




### Deflection around the Y axis



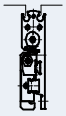
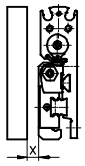
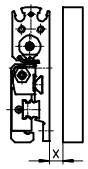
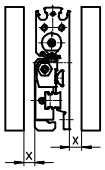
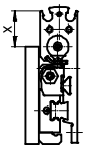
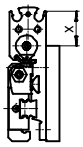
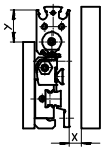

f = 0.5 mm
f = 0.1 mm
f = 0.05 mm



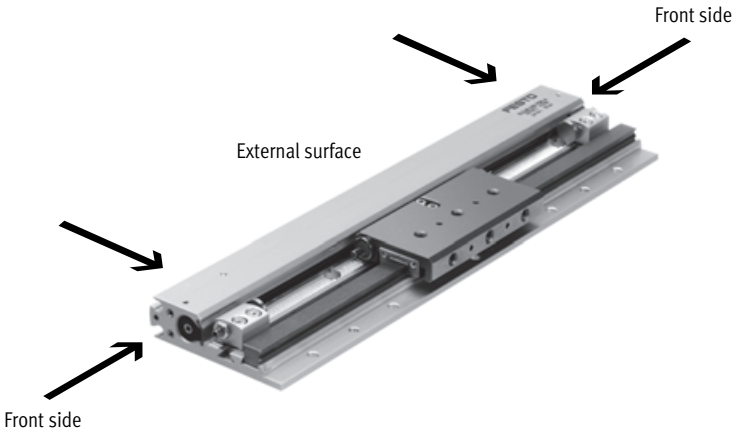

### Flatness of the bearing surface

Contact surfaces which support the linear drive SLG should be no farther than 100 mm apart, or over its entire length and should be flat to within at least 0.1 mm. The support surface for the load on the slide should be flat to within at least 0.05 mm.

**Minimum clearances for linear drives SLG to ferrite materials for reliable proximity switch functioning**

| | | Slot 1 Slot 2  Slot | Minimum clearances in mm x | y |
|---|---|---|---|---|
|  | SLG-8 | 1 | 5 | – |
| | | 2 | 5 | – |
| | SLG-12 | 1 | 6 | – |
| | | 2 | 5 | – |
| | SLG-18 | 1 | 5 | – |
| | | 2 | 5 | – |
|  | SLG-8 | 1 | 5 | – |
| | | 2 | 10 | – |
| | SLG-12 | 1 | 5 | – |
| | | 2 | 6 | – |
| | SLG-18 | 1 | 5 | – |
| | | 2 | 5 | – |
|  | SLG-8 | 1 | 7 | – |
| | | 2 | 10 | – |
| | SLG-12 | 1 | 10 | – |
| | | 2 | 10 | – |
| | SLG-18 | 1 | 5 | – |
| | | 2 | 5 | – |
|  | SLG-8 | 1 | 14 | – |
| | | 2 | 12 | – |
| | SLG-12 | 1 | 16 | – |
| | | 2 | 1 | – |
| | SLG-18 | 1 | 2 | – |
| | | 2 | 2 | – |
|  | SLG-8 | 1 | 7 | – |
| | | 2 | 17 | – |
| | SLG-12 | 1 | 1 | – |
| | | 2 | 17 | – |
| | SLG-18 | 1 | 1 | – |
| | | 2 | 12 | – |
|  | SLG-8 | 1 | 11 | 17 |
| | | 2 | 15 | 17 |
| | SLG-12 | 1 | 7 | 16 |
| | | 2 | 10 | 16 |
| | SLG-18 | 1 | 5 | 12 |
| | | 2 | 5 | 12 |

## Permissible spanner widths for the compressed air connectors




### In general

The following spanner widths can be used on the external surface and front side:

SLG-8: ⊂ 5.5 ... 8
SLG-12: ⊂ 5.5 ... 8
SLG-18: ⊂ 8 ... 10

### Restrictions on the front sides

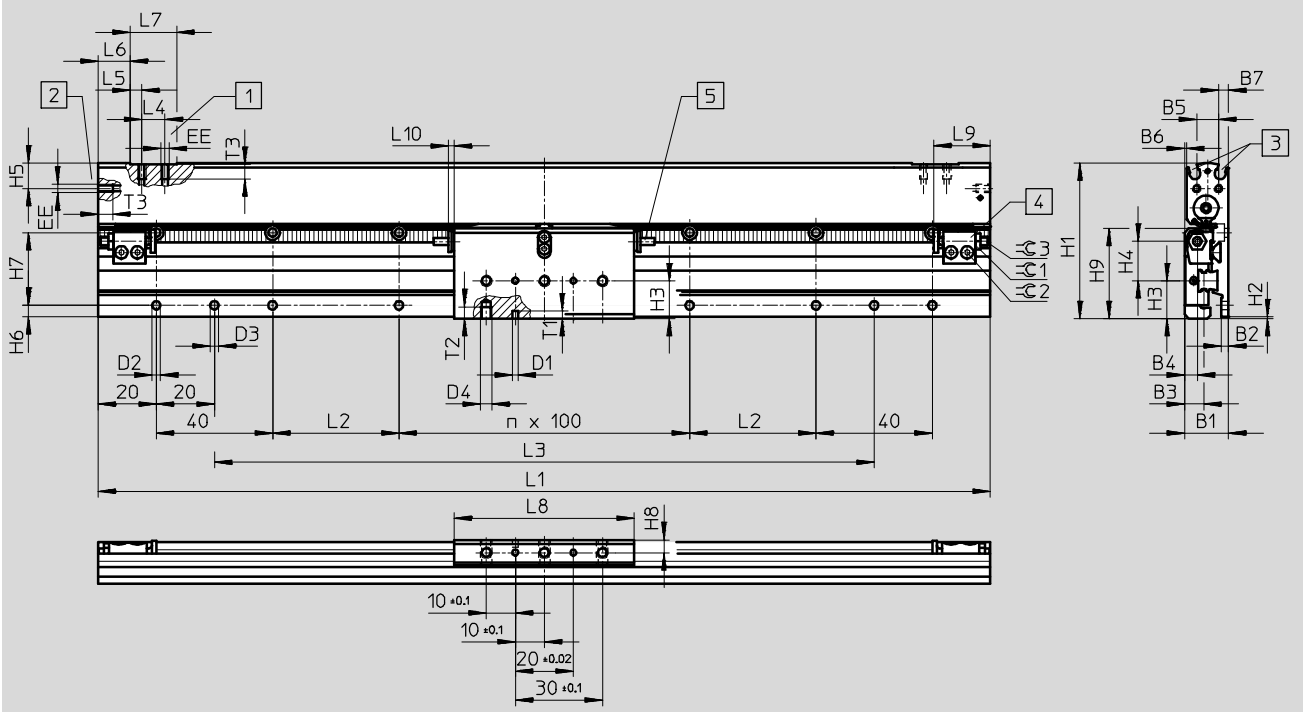
The threaded connectors protrude from the top or bottom of the profile with compressed air connections at both ends. The connector threads are too close to one another for the threaded fittings with compressed air connections at one end only.

For this reason, the following spanner widths can only be used in certain conditions:

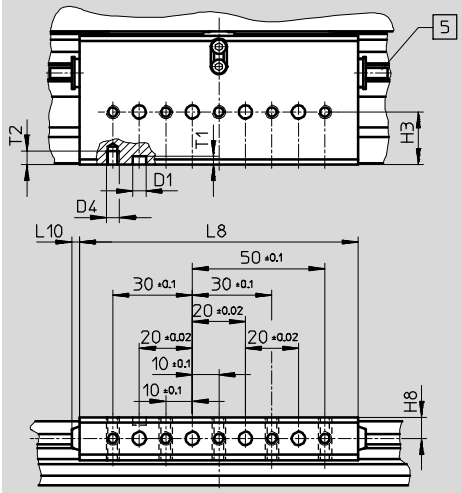
SLG-8: ⊂ 8
SLG-12: ⊂ 8
SLG-18: ⊂ 10

**Dimensions** Download CAD data ➔ **www.festo.com**

SLG-8/-12/-18




Slide SLG-18




1 Supply port, external surface
2 Supply port, front side
3 Slot for proximity sensor SME-/SMT-10
4 Stop
5 Shock absorber YSR or rubber buffer (P cushioning)

# Linear drives SLG, flat design

Technical data

| | B1 | B2 | B3 | B4 | B5 | B6 | B7 | D1[1] ∅ H7 | D2 ∅ | D3[1] ∅ H7 | D4 | EE | H1 | H2 | H3 | H4 | H5 | H6 | H7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SLG-8 | 15 | 2.5 | 6.6 | 4.4 | 7.5 | 0.65 | 3.5 | 2 | 3.4 | 3 | M4 | M3 | 53.5 | 0.5 | 13 | 13.6 | 8.8 | 3.9 | 25 |
| SLG-12 | 18.5 | 2.6 | 7.9 | 5.2 | 8.5 | 0.5 | 4.75 | 2 | 3.4 | 3 | M4 | M3 | 64.5 | 0.5 | 15.9 | 16.5 | 9.5 | 4.3 | 30 |
| SLG-18 | 25.5 | 3.5 | 13.3 | 8 | 13.2 | 1.6 | 5.4 | 5 | 4.5 | 5 | M5 | M5 | 85.5 | 0.5 | 19.8 | 21.7 | 11.5 | 4.1 | 40 |

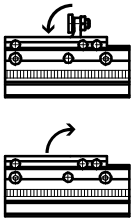
| | H8 | H9 | n | L1 | L2 | L3 | L4 | L5 | L6 | L7 | L8 | L9 min. | L10 | T1 | T2 min. | T3 | ⫧1 | ⫧2 | ⫧3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SLG-8-100 | 4.4 | 31 | 0 | 207 | 43.5 | 127 | 10 | 5 | 10 | 20 | 62 | 20 | 2 | 2.5 | 4 | 4.5 | 5.5 | 1.5 | 1.5 |
| SLG-8-200 | | | 1 | 307 | | 227 | | | | | | | | | | | | | |
| SLG-8-300 | | | 2 | 407 | | 327 | | | | | | | | | | | | | |
| SLG-8-400 | | | 3 | 507 | | 427 | | | | | | | | | | | | | |
| SLG-8-500 | | | 4 | 607 | | 527 | | | | | | | | | | | | | |
| SLG-12-100 | 5.25 | 36.7 | 0 | 233 | 56.5 | 153 | 10 | 5 | 10 | 20 | 80 | 23.5 | 2 | 2.5 | 4 | 4.5 | 7 | 2 | 2 |
| SLG-12-200 | | | 1 | 333 | | 253 | | | | | | | | | | | | | |
| SLG-12-300 | | | 2 | 433 | | 353 | | | | | | | | | | | | | |
| SLG-12-400 | | | 3 | 533 | | 453 | | | | | | | | | | | | | |
| SLG-12-500 | | | 4 | 633 | | 553 | | | | | | | | | | | | | |
| SLG-12-600 | | | 5 | 733 | | 653 | | | | | | | | | | | | | |
| SLG-12-700 | | | 6 | 833 | | 753 | | | | | | | | | | | | | |
| SLG-18-100 | 8 | 48.5 | 0 | 271 | 75.5 | 191 | 12 | 6 | 13 | 24 | 105 | 29 | 3 | 3 | 5 | 6 | 8 | 2.5 | 2.5 |
| SLG-18-200 | | | 1 | 371 | | 291 | | | | | | | | | | | | | |
| SLG-18-300 | | | 2 | 471 | | 391 | | | | | | | | | | | | | |
| SLG-18-400 | | | 3 | 571 | | 491 | | | | | | | | | | | | | |
| SLG-18-500 | | | 4 | 671 | | 591 | | | | | | | | | | | | | |
| SLG-18-600 | | | 5 | 771 | | 691 | | | | | | | | | | | | | |
| SLG-18-700 | | | 6 | 871 | | 791 | | | | | | | | | | | | | |
| SLG-18-800 | | | 7 | 971 | | 891 | | | | | | | | | | | | | |
| SLG-18-900 | | | 8 | 1071 | | 991 | | | | | | | | | | | | | |

1) Locating hole for ZBS centering pins

# Linear drives SLG, flat design

Technical data – Intermediate position module SLG-Z

Function



| General technical data | | | | |
|---|---|---|---|---|
| Piston ∅ | | 8 | 12 | 18 |
| Pneumatic connection | | M3 | | |
| Mode of operation | | Double-acting | | |
| Operating medium | | Compressed air in accordance with ISO 8573-1:2010 [7:–:–] | | |
| Note on operating/pilot medium | | Operation with lubricated medium possible (in which case lubricated operation will always be required) | | |
| Constructional design | | Stop in the form of a semi-rotary device in accordance with the rack and pinion principle | | |
| Fine adjustment of the intermediate position | [mm] | 1.7 | | |
| Cushioning[1] | | ➔page 10 | | |
| Position sensing | | For proximity sensor | | |
| Type of mounting | | Direct mounting | | |
| Assembly position[2] | | Any | | |
| Min. swivel time at 6 bar | [ms] | 30 | | 50 |
| Max. frequency at 6 bar | [1/s] | 16 | | 10 |
| Max. permissible impact velocity | [m/s] | 1 | | 1.5 |
| Max. perm. end-stop impact force[3] | [N] | 320 | | 600 |

1) The end position of the slide or another drive is not exactly defined when rubber buffers are used. Shock absorbers YSRG-... must be used for high repetition accuracy.
2) Shock absorbers YSRG-... must be used for high repetition accuracy as well as in non-horizontal movements.
With vertical installation (where the stop moves upwards), it must be ensured that no foreign objects enter the swivel range of the stop.
3) The max. stop force must act on the centre of the cushioning screw disk. Lateral forces on the cushioning screw are not permissible.

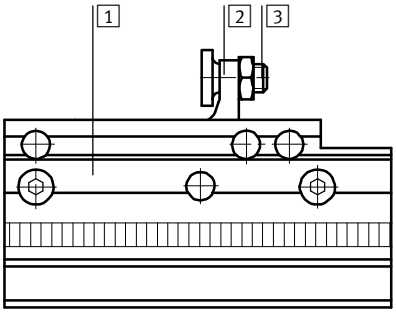
| Operating and environmental conditions | | | | |
|---|---|---|---|---|
| Piston ∅ | | 8 | 12 | 18 |
| Operating pressure | [bar] | 1 ... 8 | | |
| Ambient temperature[1] | [°C] | –10 ... +60 | | |

| Max. permissible energy in the intermediate position | | | | |
|---|---|---|---|---|
| Piston ∅ | | 8 | 12 | 18 |
| With P cushioning | [Nm] | 0.1 | | 0.6 |
| With YSR cushioning | [Nm] | 1 | | 3 |

| Weights [g] | | | |
|---|---|---|---|
| Piston ∅ | 8 | 12 | 18 |
| Basic weight | 33.5 | | 75 |
| Moving load | 6 | | 14.5 |

**Materials**

Sectional view




| Intermediate position module | | |
|---|---|---|
| 1 | Housing | Hard anodized aluminum |
| 2 | Stop | Nickel plated steel |
| 3 | Cushioning screw | High-alloy steel |
| – | Seals | Polyurethane |

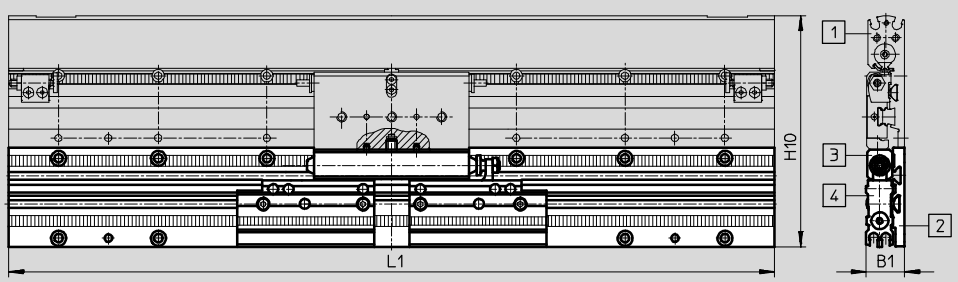
| Mounting options on linear drive | | | | |
|---|---|---|---|---|
| Piston ∅ | | 8 | 12 | 18 |
| Through-holes for direct mounting with screws to DIN 912 | Intermediate position module | M2.5 | | M3 |
| | Shock absorber retainer | M4 | | M5 |
| | Mounting rail | M3 | | M4 |
| Centering pins | Intermediate position module | ∅ 4H7 | | ∅ 5H7 |
| | Shock absorber retainer | ∅ 2H7 | | ∅ 5H7 |
| | Mounting rail | ∅ 3H7 | | ∅ 5H7 |

Note

The module's symmetric design makes it suitable for both approach directions.

**Dimensions** Download CAD data ➔ **www.festo.com**

SLG-Z-.../SLG-D-.../SLG-S-...

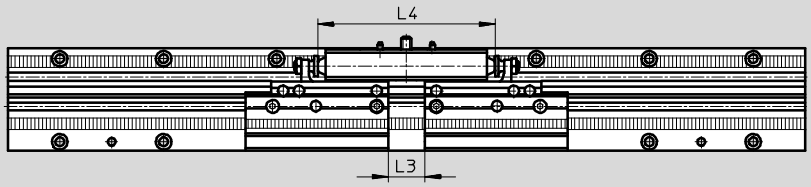



1 Linear drive SLG
2 Mounting rail SLG-S
3 Shock absorber retainer SLG-D
4 Intermediate position module SLG-Z

| Type | B1 | H10 | L1 |
|---|---|---|---|
| SLG-8-100 | 15 | 93.1 | 207 |
| SLG-8-200 | | | 307 |
| SLG-8-300 | | | 407 |
| SLG-8-400 | | | 507 |
| SLG-8-500 | | | 607 |
| SLG-12-100 | 18.5 | 104.1 | 233 |
| SLG-12-200 | | | 333 |
| SLG-12-300 | | | 433 |
| SLG-12-400 | | | 533 |
| SLG-12-500 | | | 633 |
| SLG-12-600 | | | 733 |
| SLG-12-700 | | | 833 |
| SLG-18-100 | 25.5 | 135.5 | 271 |
| SLG-18-200 | | | 371 |
| SLG-18-300 | | | 471 |
| SLG-18-400 | | | 571 |
| SLG-18-500 | | | 671 |
| SLG-18-600 | | | 771 |
| SLG-18-700 | | | 871 |
| SLG-18-800 | | | 971 |
| SLG-18-900 | | | 1071 |

**Dimensions** Download CAD data ➔ **www.festo.com**

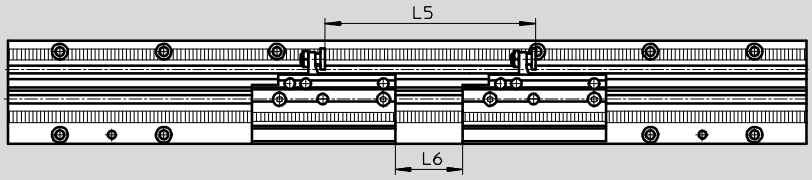
The same position approached from two directions




| Piston ∅ | L3[1] | | L4 |
|---|---|---|---|
| | min. | max. | |
| 8[2] | 21 | 27 | 68 |
| 12 | 39 | 45 | 86 |
| 18 | 50 | 56.5 | 111 |

1) Depends on the fine adjustment
2) Due to the narrowness of the space L3 only the following threaded connectors can be used for the compressed air connections:
30 491 LCN-M3-PK-2-B

Two positions approached from the same direction



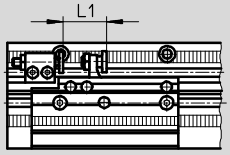

- - Note

The space for 2 intermediate positions can be reduced to 0 mm by turning the second module by 90° in the same plane (➔ page 21).

| Piston ∅ | L5<br>min. | L6[3] |
|---|---|---|
| 8 | 90 | 32 |
| 12 | 90 | |
| 18 | 97 | |

3) The space between the modules is such that the following threaded connectors can be used for the compressed air connections:
153 330 QSML-M3-3
153 332 QSML-M3-4
30 491 LCN-M3-PK-2-B
30 984 LCN-M3-PK-2

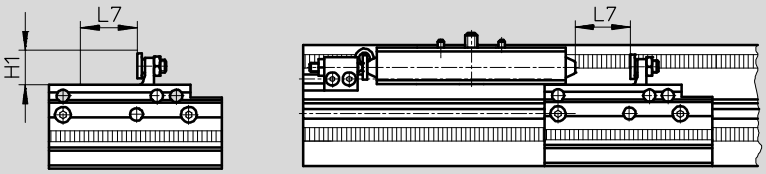
Space between end stop and intermediate position module




| Piston ∅ | L1<br>min. |
|---|---|
| 8 | 20 |
| 12 | |
| 18 | |

**Dimensions** Download CAD data ➔ **www.festo.com**

In different mounting planes




Note

Care must be taken to ensure that each intermediate position module has sufficient space for the swivel movement in the specified range (both outwards and inwards) while it is swivelling. This corresponds to the distance (stroke) that the shock absorber retainer must travel from the intermediate position to ensure safe inward or outward swivelling of the stop (➔ page 21).

| Piston ∅ | H1 | L7 | |
|---|---|---|---|
| | | Cushioning P | YSR cushioning |
| 8 | 11 | 18 | 23 |
| 12 | 11 | 18 | 23 |
| 18 | 16 | 23 | 31 |

Maximum number of intermediate position modules on one mounting rail

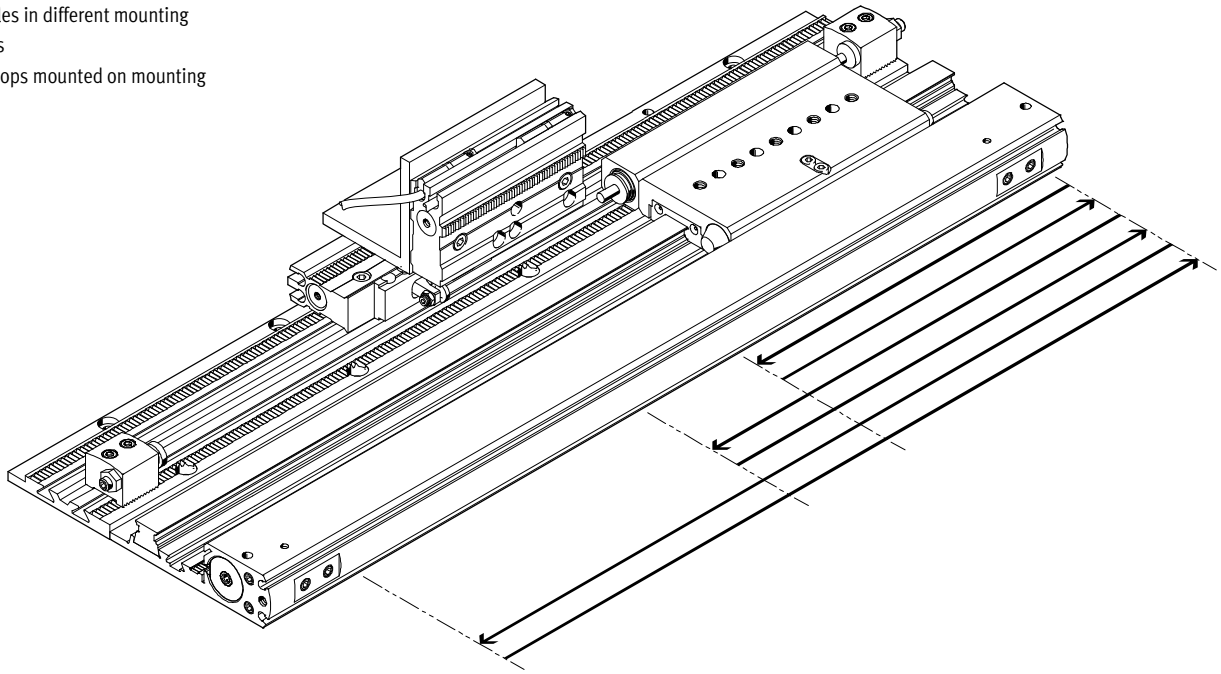
The number of intermediate position modules that can be ordered via the linear drive SLG modular product system is restricted to max. 4.

If additional intermediate positions are required, further modules can be ordered separately (➔ page 23) and fitted in another mounting plane.

| Piston ∅ | Stroke length of the mounting rail [mm] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 |
| 8 | 2 | | 3 | 4 | | – | – | – | – |
| 12 | | | | | | 4 | | – | – |
| 18 | | | | | | | | 4 | |

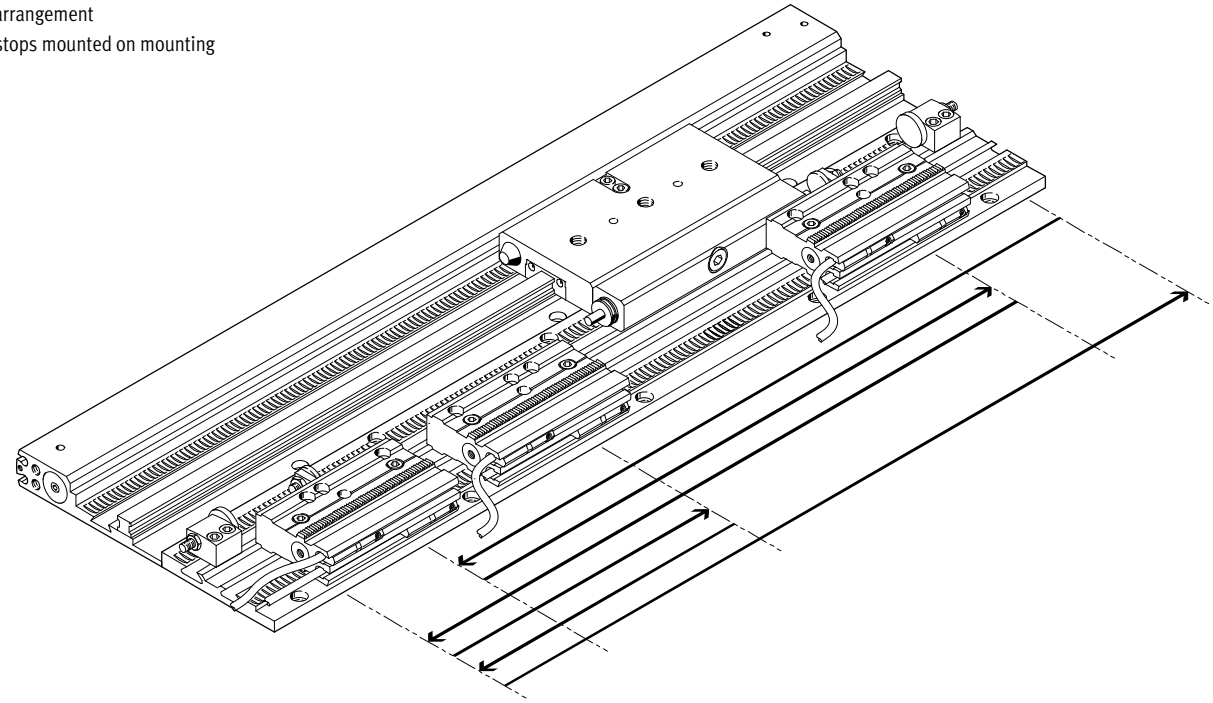
## Linear drive SLG with 2 intermediate positions

- Modules in different mounting planes
- End stops mounted on mounting rail



## Linear drive SLG with 3 intermediate positions

- Flat arrangement
- End stops mounted on mounting rail



# Linear drives SLG, flat design

Ordering data – Modular product system

FESTO

| Ordering table | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Size | | 8 | 12 | 18 | Condi-tions | Code | | Enter code |
| M | Module No. | **187857** | **187855** | **187853** | | | | |
| | Drive function | Rodless linear drive unit | | | | **SLG** | | SLG |
| | Size [mm] | 8 | 12 | 18 | | **-...** | | |
| | Stroke [mm] | 100 | 100 | 100 | 1 | **-100** | | |
| | | 200 | 200 | 200 | 1 | **-200** | | |
| | | 300 | 300 | 300 | 2 | **-300** | | |
| | | 400 | 400 | 400 | | **-400** | | |
| | | 500 | 500 | 500 | | **-500** | | |
| | | – | 600 | 600 | | **-600** | | |
| | | – | 700 | 700 | | **-700** | | |
| | | – | – | 800 | | **-800** | | |
| | | – | – | 900 | | **-900** | | |
| | Cushioning | Flexible cushioning rings in the end positions | | | | **-P** | | |
| | | Shock absorbers in the end positions | | | | **-YSR** | | |
| | Position sensing | For proximity sensing | | | | **-A** | | -A |
| O | Intermediate position | 1 intermediate position | | | | **-Z1** | | |
| | | 2 intermediate positions | | | | **-Z2** | | |
| | | 3 intermediate positions | | | | **-Z3** | | |
| | | 4 intermediate positions | | | | **-Z4** | | |

1 **100, 200** Max. 2 intermediate positions.

2 **300** Max. 3 intermediate positions.

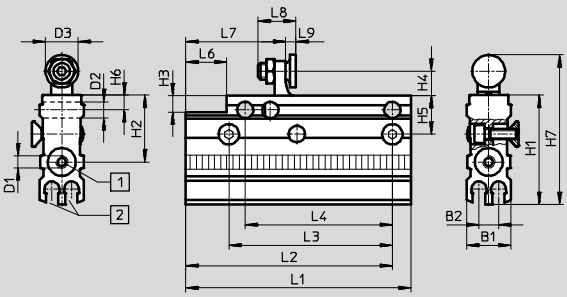
M Mandatory data

O Options

**Transfer order code**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **SLG** | – | | – | | – | | – | **A** | – | | |

**Intermediate position module SLG-Z** Technical data ➔ page 16



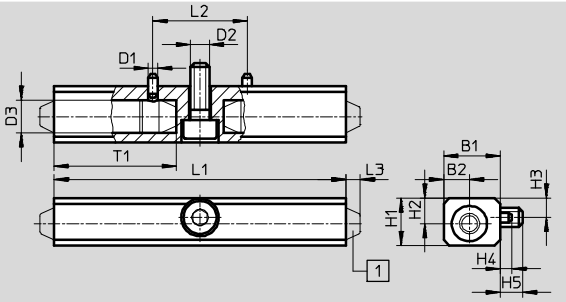

1 Air connections on both sides
2 Slot for proximity sensor SME-/SMT-10

**Dimensions and ordering data**

| For ∅ | B1 | B2 | D1 | D2 ∅ H7 | D3 ∅ | H1 | H2 | H3 | H4 | H5 | H6 | H7 | L1 +0.3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8, 12 | 10.8 | 4.8 | M3 | 4 | 8 | 26.6 | 16.2 | 4 | 6 | 9.5 | 3.5 | 36.6 | 55 |
| 18 | 15.6 | 4.8 | M3 | 5 | 10 | 29.6 | 19.2 | – | 9.6 | 11.5 | 4.3 | 44.2 | 62 |

| For ∅ | L2 ±0.1 | L3 ±0.1 | L4 ±0.02 | L6 | L7 | L8 | L9 min. | L9 max. | Weights [g] | Part No. | Type |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8, 12 | 50.5 | 40 | 36 | 10 | 24.4 | 9.25 | 2.5 | 4.2 | 39.5 | **525680** | **SLG-Z-8/12-A** |
| 18 | 57.5 | 50 | 50 | – | 21.6 | 12 | 3.7 | 5.4 | 89.5 | **525681** | **SLG-Z-18-A** |

**Shock absorber retainer SLG-D** Material: Hard anodized aluminum




1 Rubber buffer or shock absorber

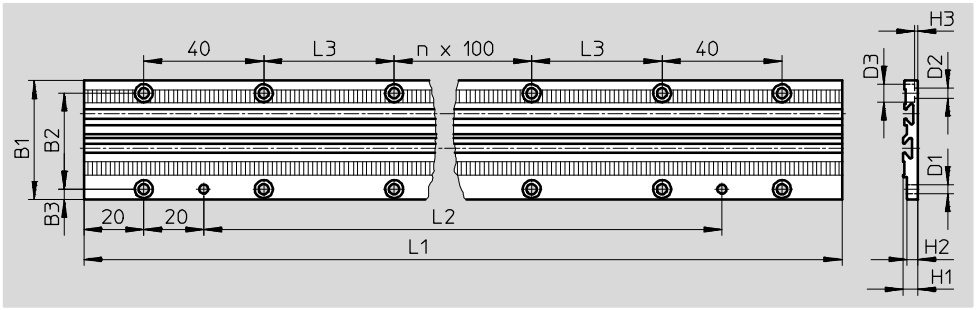
**Dimensions and ordering data**

| For ∅ | B1 | B2 | D1 ∅ H7/h8 | D2 | D3 ∅ | H1 | H2 | H3 –0.1 |
|---|---|---|---|---|---|---|---|---|
| 8 | 11.5 | 5 | 2 | M4 | $7.5_{+0.05}$ | 10 | 5.4 | 4.1 |
| 12 | | | | | | | | |
| 18 | 17 | 8 | 5 | M5 | $10_{+0.02}$ | 15 | 7.5 | 7.75 |

| For ∅ | H4 | H5 | L1 | L2 ±0.02 | L3 | T1 | Weights [g] | Part No. | Type |
|---|---|---|---|---|---|---|---|---|---|
| 8 | 2.25 | 4.8 | 62 | 20 | 3 | 26 | 17/27.5 2) | **525703** | **SLG-D-8 1)** |
| 12 | | | 80 | | | | 22.5/33 2) | **525704** | **SLG-D-12 1)** |
| 18 | 2 | 4.7 | 105 | 60 | 3 | 43 | 60/104 2) | **525705** | **SLG-D-18 1)** |

1) Shock absorber elements are not included in the scope of delivery
2) With P cushioning/with YSR cushioning

**Mounting rail SLG-S** Material: Hard anodized aluminum




**Dimensions and ordering data**

| For ∅ | Stroke [mm] | B1 | B2 | B3 | D1 ∅ H7 | D2 ∅ | D3 ∅ | H1 | H2 | H3 | n | L1 | L2 | L3 | Weights [g] | Part No. | Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | 100 | | | | | | | | | | 0 | 207 | 127 | | 73.5 | **525682** | **SLG-S-8-100** |
| | 200 | | | | | | | | | | 1 | 307 | 227 | | 109 | **525683** | **SLG-S-8-200** |
| | 300 | 39.6 | 32 | 3.4 | 3 | 3.4 | 6 | 4.8 | 3.5 | 0.9 | 2 | 407 | 327 | 43.5 | 144.5 | **525684** | **SLG-S-8-300** |
| | 400 | | | | | | | | | | 3 | 507 | 427 | | 180 | **525685** | **SLG-S-8-400** |
| | 500 | | | | | | | | | | 4 | 607 | 527 | | 215.5 | **525686** | **SLG-S-8-500** |
| 12 | 100 | | | | | | | | | | 0 | 233 | 153 | | 110.4 | **525687** | **SLG-S-12-100** |
| | 200 | | | | | | | | | | 1 | 333 | 253 | | 157.8 | **525688** | **SLG-S-12-200** |
| | 300 | | | | | | | | | | 2 | 433 | 353 | | 205.2 | **525689** | **SLG-S-12-300** |
| | 400 | 39.6 | 32 | 3.5 | 3 | 3.4 | 6 | 7.2 | 1.9 | 1.9 | 3 | 533 | 453 | 56.5 | 252.6 | **525690** | **SLG-S-12-400** |
| | 500 | | | | | | | | | | 4 | 633 | 553 | | 300 | **525691** | **SLG-S-12-500** |
| | 600 | | | | | | | | | | 5 | 733 | 653 | | 347.4 | **525692** | **SLG-S-12-600** |
| | 700 | | | | | | | | | | 6 | 833 | 753 | | 394.8 | **525693** | **SLG-S-12-700** |
| 18 | 100 | | | | | | | | | | 0 | 271 | 191 | | 245.6 | **525694** | **SLG-S-18-100** |
| | 200 | | | | | | | | | | 1 | 371 | 291 | | 336.2 | **525695** | **SLG-S-18-200** |
| | 300 | | | | | | | | | | 2 | 471 | 391 | | 426.8 | **525696** | **SLG-S-18-300** |
| | 400 | | | | | | | | | | 3 | 571 | 491 | | 517.4 | **525697** | **SLG-S-18-400** |
| | 500 | 50 | 40 | 4.75 | 5 | 4.5 | 7.5 | 10.3 | 9 | 2.5 | 4 | 671 | 591 | 75.5 | 608 | **525698** | **SLG-S-18-500** |
| | 600 | | | | | | | | | | 5 | 771 | 691 | | 698.6 | **525699** | **SLG-S-18-600** |
| | 700 | | | | | | | | | | 6 | 871 | 791 | | 789.2 | **525700** | **SLG-S-18-700** |
| | 800 | | | | | | | | | | 7 | 971 | 891 | | 879.8 | **525701** | **SLG-S-18-800** |
| | 900 | | | | | | | | | | 8 | 1071 | 991 | | 970.4 | **525702** | **SLG-S-18-900** |

**Rubber buffer SLG**

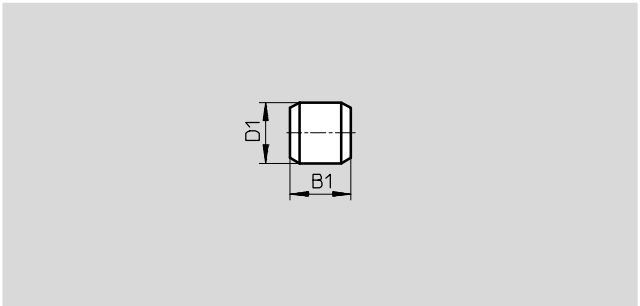
| Ordering data | | | |
|---|---|---|---|
| For ∅ | Weights [g] | Part No. | Type |
| 8, 12 | 1.5 | **379802** | **SLG-8/12** |
| 18 | 6 | **381219** | **SLG-18** |

**Shock absorber YSRG**

| Ordering data | | | |
|---|---|---|---|
| For ∅ | Weights [g] | Part No. | Type |
| 8, 12 | 7 | **381042** | **YSRG-5-5-C** |
| 18 | 27 | **384581** | **YSRG-8-8-C** |

**Centering pin ZBS**

Material:
Stainless steel



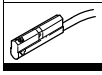

| Dimensions and ordering data | | | | | | |
|---|---|---|---|---|---|---|
| For ∅ [mm] | B1 −0.2 | D1 ∅ h8 | Weights [g] | Part No. | Type | PE[1] |
| 8, 12 | 5 | 2 | 1 | **525273** | **ZBS-2** | 10 |
| 18 | 5 | 5 | 1 | **150928** | **ZBS-5** | 10 |

1) Packaging unit quantity

**Ordering data – Proximity sensors for C-slot, magneto-resistive** — Technical data ➔ Internet: smt

| | Type of mounting | Switch output | Electrical connection, connection direction | Cable length [m] | Part No. | Type |
|---|---|---|---|---|---|---|
| N/O contact | | | | | | |
|  | Insertable in the slot from above | PNP | Cable, 3-wire, in-line | 2.5 | **551373** | **SMT-10M-PS-24V-E-2,5-L-OE** |
| | | | Plug M8x1, 3-pin, in-line | 0.3 | **551375** | **SMT-10M-PS-24V-E-0,3-L-M8D** |
| | | | Plug M8x1, 3-pin, lateral | 0.3 | **551376** | **SMT-10M-PS-24V-E-0,3-Q-M8D** |

**Ordering data – Proximity sensors for C-slot, magnetic reed** — Technical data ➔ Internet: sme

| | Type of mounting | Switch output | Electrical connection, connection direction | Cable length [m] | Part No. | Type |
|---|---|---|---|---|---|---|
| N/O contact | | | | | | |
|  | Insertable in the slot from above | Contacting | Plug M8x1, 3-pin, in-line | 0.3 | **551367** | **SME-10M-DS-24V-E-0,3-L-M8D** |
| | | | Cable, 3-wire, in-line | 2.5 | **551365** | **SME-10M-DS-24V-E-2,5-L-OE** |
| | | | Cable, 2-wire, in-line | 2.5 | **551369** | **SME-10M-ZS-24V-E-2,5-L-OE** |
|  | Insertable in the slot lengthwise | Contacting | Plug M8x1, 3-pin, in-line | 0.3 | **173212** | **SME-10-SL-LED-24** |
| | | | Cable, 3-wire, in-line | 2.5 | **173210** | **SME-10-KL-LED-24** |

**Ordering data – Connecting cables** — Technical data ➔ Internet: nebu

| | Electrical connection, left | Electrical connection, right | Cable length [m] | Part No. | Type |
|---|---|---|---|---|---|
|  | Straight socket, M8x1, 3-pin | Cable, open end, 3-wire | 2.5 | **541333** | **NEBU-M8G3-K-2.5-LE3** |
| | | | 5 | **541334** | **NEBU-M8G3-K-5-LE3** |
|  | Angled socket, M8x1, 3-pin | Cable, open end, 3-wire | 2.5 | **541338** | **NEBU-M8W3-K-2.5-LE3** |
| | | | 5 | **541341** | **NEBU-M8W3-K-5-LE3** |

**Ordering data – One-way flow control valves** — Technical data ➔ Internet: grla

| | Connection | | Material | Part No. | Type |
|---|---|---|---|---|---|
| | Thread | For tubing OD | | | |
|  | M3 | 3 | Metal design | **175041** | **GRLA-M3-QS-3** |
| | M5 | 4 | | **193138** | **GRLA-M5-QS-4-D** |

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