

**CHARACTERISTICS**

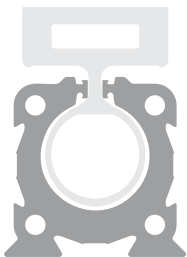
|                      |   |
|----------------------|---|
| Ambient temperature  | -20 ÷ 80 °C                               |
| Fluid                | filtered air, with or without lubrication |
| Working pressure     | 3 ÷ 10 bar                                |
| End-caps             | die-cast light alloy                      |
| Barrel               | anodized aluminium                        |
| Piston               | aluminium                                 |
| Guide slide          | acetalic resin                            |
| Piston seal          | NBR                                       |
| Shock absorber seals | mechanical                                |
| Cushionings          | pneumatic adjustable (standard supplied)  |
| Magnet               | upon request                              |



**CODIFICATION KEY**

|   |   |   |   |   |   |   |   |   |   |   |  |
|---|---|---|---|---|---|---|---|---|---|---|--|
| S | 1 | 0 | 1 | 1 | 2 | 5 | 0 | 8 | 5 | 0 |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |   |   |   |   |  |

|  |   |  |   |
|--|---|--|---|
| <b>1 Series</b><br>S1 = Ø 16÷50 mm - Rodless Cylinders standard version  | <b>2 Carriage type</b><br>0 = Standard carriage<br>2 = Medium carriage (except for Ø16)<br>3 = Long carriage (except for Ø16) | <b>3 Left end-cap supply port</b><br>0 = No supply port (both chambers are supplied from the right end-cap)<br>1 = Side supply port (except for Ø16)<br>2 = Bottom supply port (except for Ø16)<br>3 = Rear supply port (except for Ø16) |   |
| <b>4 Right end-cap supply port</b><br>1 = Side supply port (except for Ø16)<br>2 = Bottom supply port (except for Ø16)<br>3 = Rear supply port (except for Ø16)<br>4 = Rear supply ports for both chambers on the right end-cap<br>5 = Side supply ports for both chambers on the right end-cap (only for Ø16) | <b>5 Bore (mm)</b><br>16 = Ø18<br>25 = Ø25<br>32 = Ø32<br>40 = Ø40<br>50 = Ø50  | <b>6 Stroke (mm)</b><br>Up to <b>5000</b> (Ø 16)<br>Up to <b>6000</b> (Ø 25÷50)  | <b>7 Magnetic</b><br>M = Magnetic version standard supplied (Ø 16) upon request (Ø 25÷50) |



**S1**

- Extruded aluminium profile Ø 16 ÷ 50 mm
- Stroke up to 6 m
- Different supply port configurations available
- Different carriage types
- High translation speed 1 ÷ 3 m/s

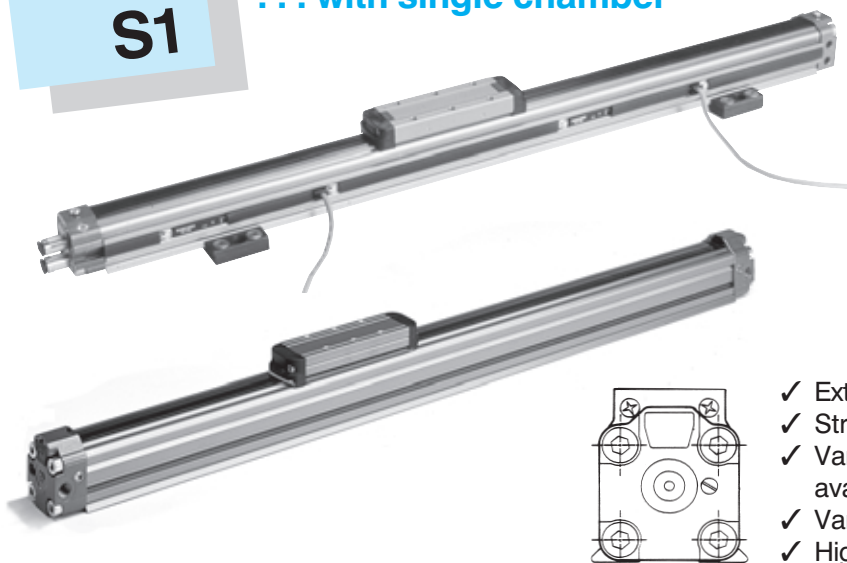
**FIXING ELEMENTS AND ACCESSORIES**

| Ø  | Bracket for Ø16 | Angle bracket for Ø25 ÷ 50 | Fixing plate | Oscillating bracket | Female threaded connection | Male threaded pin | Female connection without thread | DF sensor and DHF covering strip | Cable clamping for DF sensor | DH sensor | Bracket for DH sensor |
|----|-----------------|----------------------------|--------------|---------------------|----------------------------|-------------------|----------------------------------|----------------------------------|------------------------------|-----------|-----------------------|
| 16 | SF-13016        | -                          | SF-12016     | SF-24016            | SF-26016                   | SF-27016          | SF-28016                         | DF                               | DF-001                       | -         | -                     |
| 25 | -               | SF-13025                   | SF-12025     | SF-24025            | SF-26025                   | SF-27025          | SF-28025                         | -                                | -                            | DH        | DH-S025               |
| 32 | -               | SF-13032                   | SF-12032     | SF-24032            | SF-26032                   | SF-27032          | SF-28032                         | -                                | -                            |           | DH-S032               |
| 40 | -               | SF-13040                   | SF-12040     | SF-24032            | SF-26032                   | SF-27032          | SF-28032                         | -                                | -                            |           | DH-S040               |
| 50 | -               | SF-13050                   | SF-12050     | -                   | -                          | -                 | -                                | -                                | -                            |           | DH-S050               |

Series

**S1**

... with single chamber

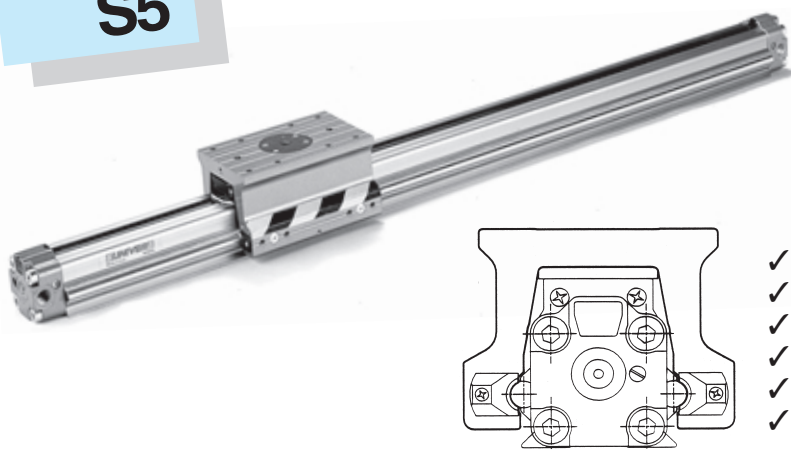


- ✓ Extruded profile in aluminium Ø 16 ÷ 50 mm.
- ✓ Stroke to 5 m.
- ✓ Various supply port configurations available.
- ✓ Various carriage types.
- ✓ High translation speed 1 ÷ 3 m/s.

Series

**S5**

... with integrated guides

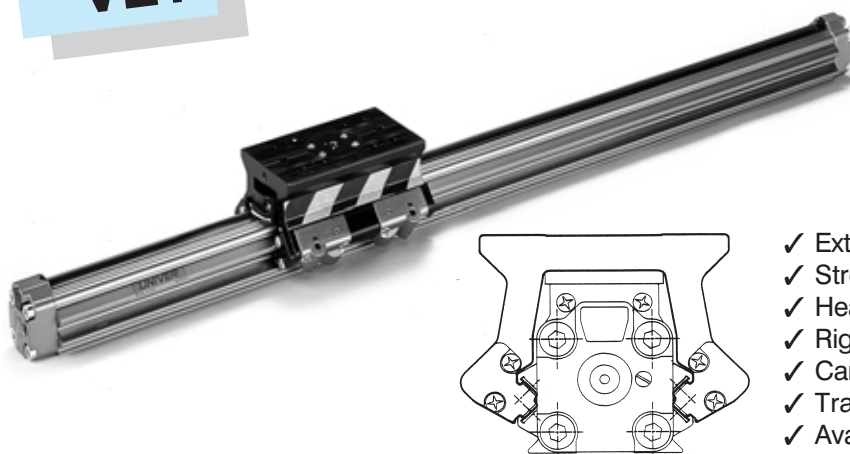


- ✓ Extruded profile in aluminium Ø 25 ÷ 50 mm.
- ✓ Stroke to 6 m.
- ✓ Flexible bearing system.
- ✓ Plastic bearings reduce noise.
- ✓ Translation speed 0,2 ÷ 1,5 m/s.
- ✓ Available with locking unit.

Series

**VL1**

... with integrated guides 90°



- ✓ Extruded profile in aluminium Ø 25 ÷ 50 mm.
- ✓ Stroke to 6 m.
- ✓ Heavy duty precision series.
- ✓ Rigid ball bearing system.
- ✓ Carriage slide on ball bearings.
- ✓ Translation speed 0,2 ÷ 2 m/s.
- ✓ Available with locking unit.

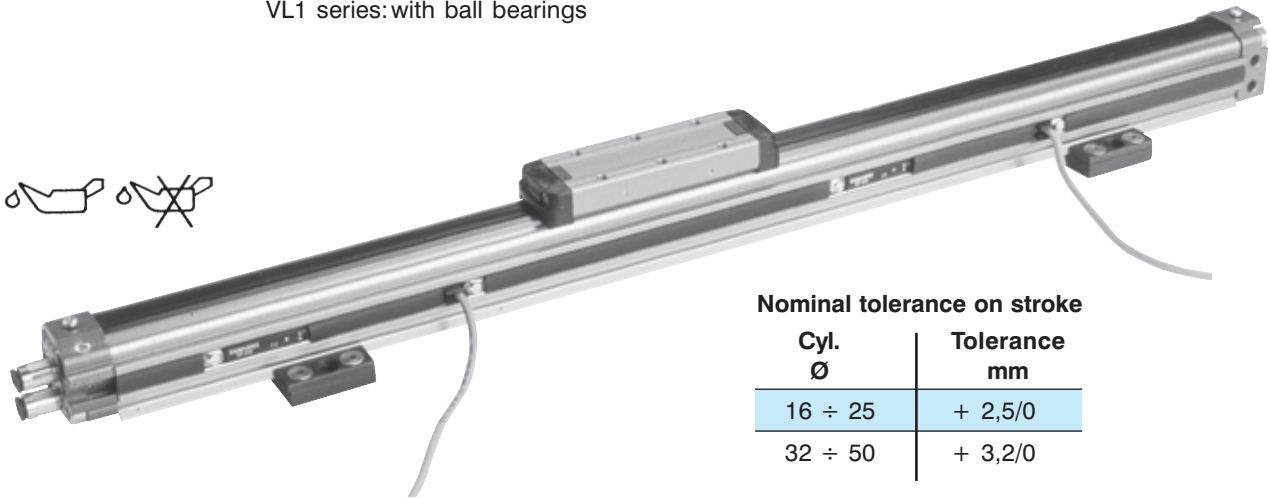


TECHNICAL CHARACTERISTICS

Working pressure: 3-10 bar  
 Ambient temperature: -20°C ÷ +80°C  
 Fluid: filtered air, **with or without lubrication**  
 up to 500 mm  
 Bore size: Ø 16-25-32-40-50 mm  
 Standard strokes: up to 5 meters (Ø 16 mm)  
 up to 6 meters (Ø 25 ÷ 50 mm)  
 Min. speed required for regular translation: 7 ÷ 20 mm/s.  
 Translation speed: 3 m/s max.  
 Carriage types: standard, medium, long, double medium  
 Integrated guides: S5 series: round steel shafts  
 VL1 series: steel foils at 90°  
 External carriage slide: S5 series: with plastic  
 sliding shoes  
 VL1 series: with ball bearings

Upon request

- Magnetic version for S1 series (except for Ø 16 magnetic version standard); for S5 series a special magnetic sensor holder extrusion DKS series is foreseen (section accessories page 6-V).
- Magnetic sensor DH-series - DF-series (Ø 16) (section accessories page 2-V).
- Slide units with standard or long carriage for S1 series (J30 - J31 series) page 47.
- Locking unit for S5 - VL1 series (L6 series) page 7.

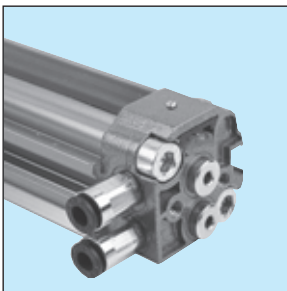


Nominal tolerance on stroke

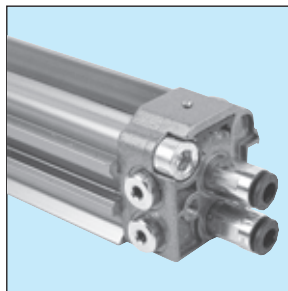
| Cyl. Ø  | Tolerance mm |
|---------|--------------|
| 16 ÷ 25 | + 2,5/0      |
| 32 ÷ 50 | + 3,2/0      |

**End-caps** in die-cast light alloy with various supply port options (see picture below). The unique method of stripseal attachment permits easy assembly and disassembly, without needing tools or continuous adjustment.

Ø 16 mm

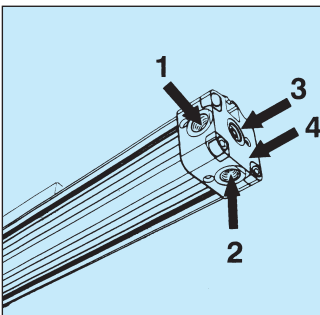


Double side supply



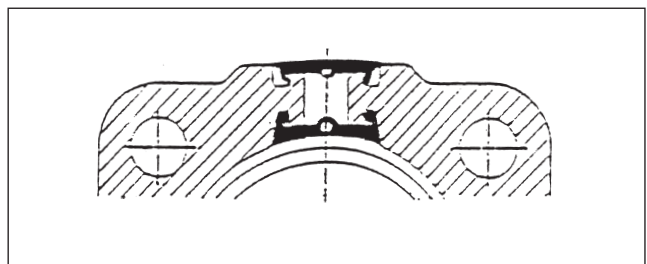
Double rear supply

Ø 25 ÷ 50 mm



- 0 = no supply port (left end-cap only, when both chambers are supplied from the right end-cap)
- 1 = side
- 2 = dorsal
- 3 = rear
- 4 = both chambers supplied from one end-cap

**Slideway sealing.** The pneumatic sealing is achieved through an elastomer stripseal reinforced with Kevlar. This system guarantees dimensional stability even with high translation speeds. The external protection seal consists of a thermoplastic stripseal reinforced with Kevlar.



**Piston - Carriage assembly** in extruded aluminium alloy with thermoplastic guide bearings. The piston is fitted with double lip seals which automatically self-compensate against wear; upon request it is possible to fit it with permanent magnets (S1 series).

**Cylinder barrel** in extruded aluminium alloy with internal and external anodisation.

**Pneumatic adjustable cushions** with two regulation screws in each end-cap allow an improved regulation of piston deceleration.

**Mechanical rubber shock absorbers** avoid mechanical stress and reduce machinery noise (below 50 dB).



### Examination and verification of the cushioning

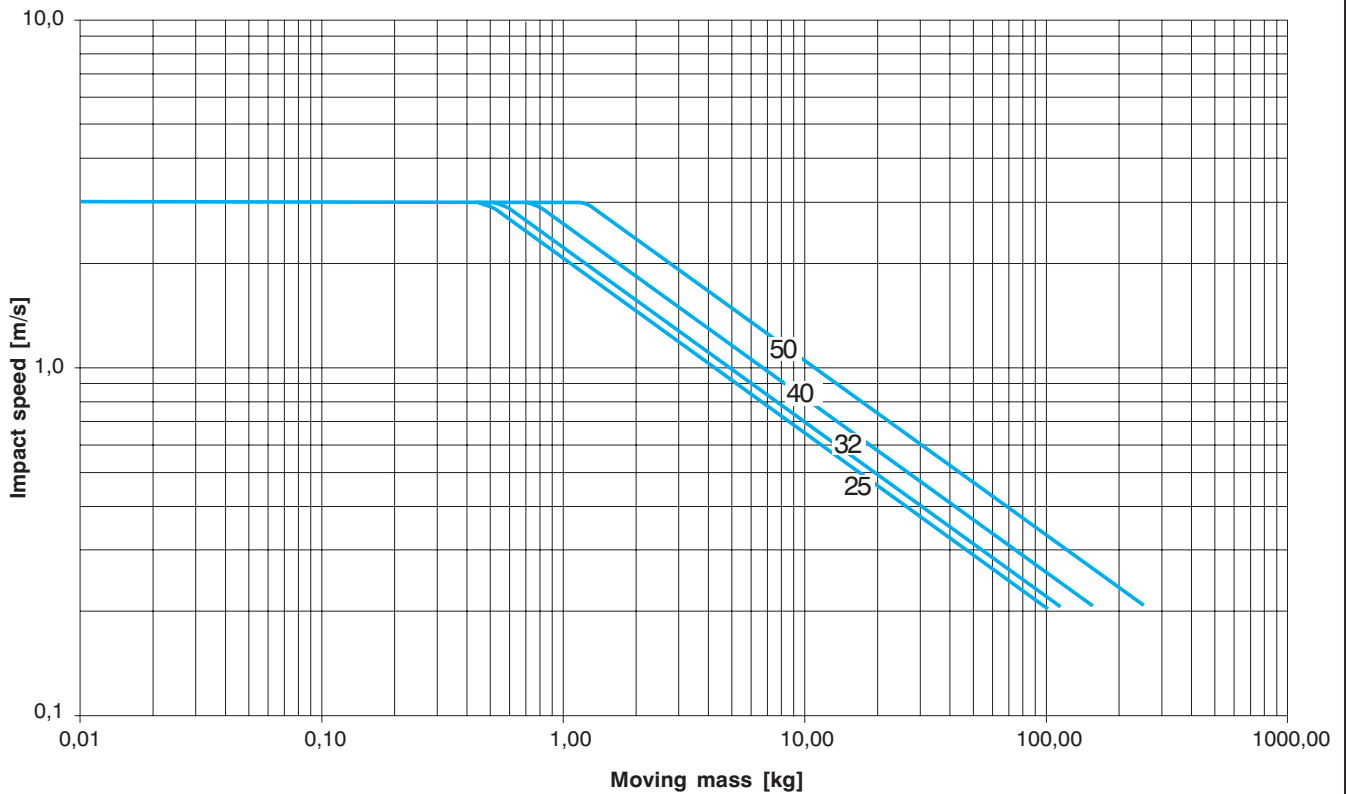
In a system with moving masses, as in the case of rodless cylinders, it is essential to control the dissipation of the system's kinetic energy as it is brought to a stop.

It is necessary, first of all, to establish and verify the most suitable method of cushioning the system, in order to avoid the moving mass (carriage with load) striking against the end-caps and compromising the life of the cylinder. If the point corresponding to a given load and speed lies **beneath** the appropriate curve, the cushioning is able to absorb the kinetic energy of the system.

Vice versa if the point lies **above** the curve, the cushioning **is not able to absorb the kinetic energy**, in which case you must:

- a) decrease the load and maintain the translation speed
- b) decrease the speed and maintain the load
- c) select a cylinder with a bigger bore.

The cushioning capacity is shown in the diagram below, referenced to the final speed as the carriage approaches the end-caps, for S1 - S5 - VL1 series.





If it is not possible to absorb the kinetic energy with the cushioned end-caps and modify the parameters (a-b-c shown at page 11), an additional cushioning is necessary to reduce the load speed before the cylinder strikes the cushion.

The additional cushion can be:

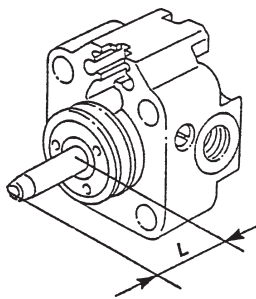
- a **pneumatic cushion** with electronic control;
- a **hydraulic cushion**, available on the market.

The mass movement generates loads to the cylinder, connected both to the weight forces (load values are constant) and to the inertia forces which originate in the acceleration or deceleration phases of the piston at the beginning and at the end of the stroke.

A typical fatigue stress arises in which the load value affects the life of the structure. The following acceptable loads refer to a life expectancy of 20000 km.

The indicated values (in the corresponding pages of each series) represent the maximum values of the forces and of the torques which can be developed in acceleration phases. Thus, in order to evaluate if an application is correct, the generated inertia forces and the corresponding torque should be calculated.

To calculate the inertia forces, the length L of the deceleration distance must be known. If the pneumatic cushion of the cylinder head is used, the values are:



| Ø (mm) | L (mm) |
|--------|--------|
| 16     | 16,5   |
| 25     | 25,0   |
| 32     | 32,5   |
| 40     | 41,5   |
| 50     | 52,0   |

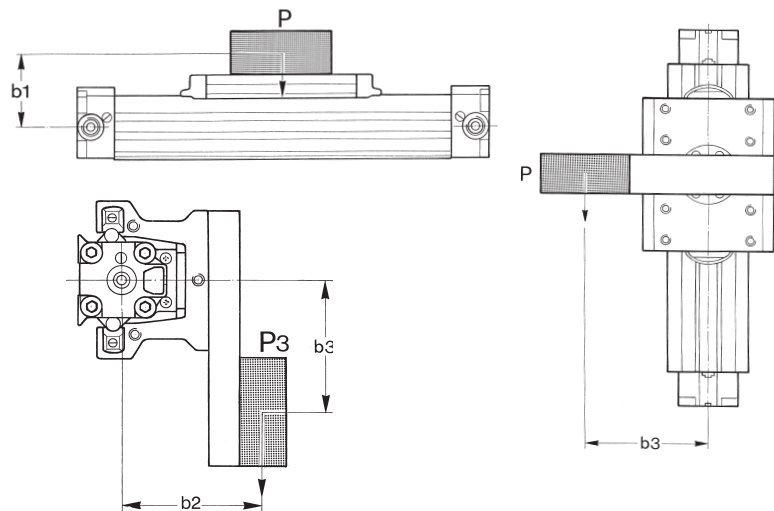
The usual formulas of mechanics are then applied. For instance, when moving a mass M (kg) at an impact speed V (m/s) with b1, b2 and b3 (mm) arms to the longitudinal axis of the piston, the inertia force F, in longitudinal direction and the corresponding torques are calculated as follows:

$$F (N) = M \cdot a = M \cdot \frac{V^2}{2 \cdot (L \cdot 10^{-3})}$$

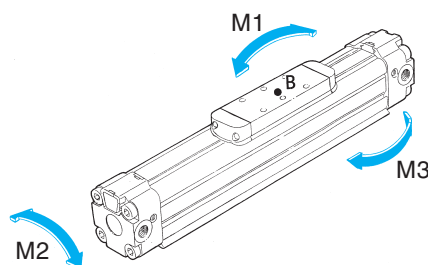
$$M_1 (Nm) = F \cdot (b_1 \cdot 10^{-3})$$

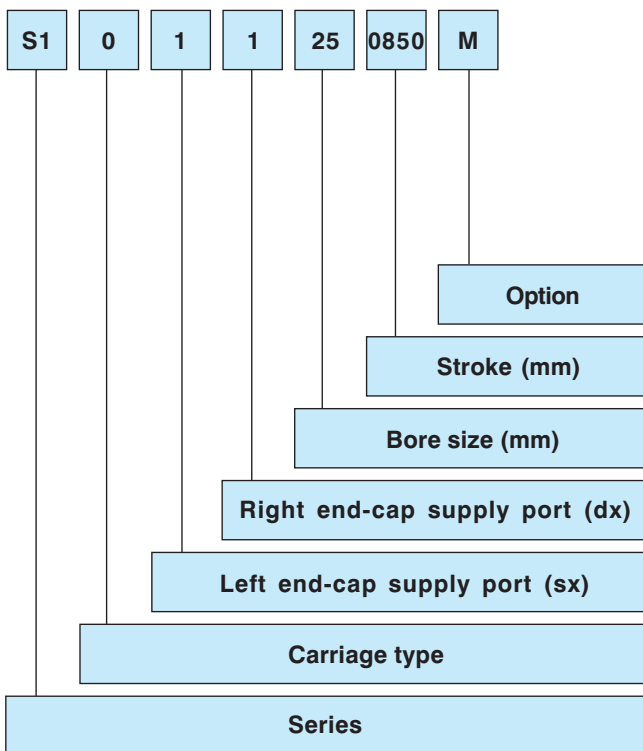
$$M_2 (Nm) = M \cdot g \cdot (b_2 \cdot 10^{-3})$$

$$M_3 (Nm) = F \cdot (b_3 \cdot 10^{-3})$$



While F, M1 and M3 can have both static and inertia components, M2 is a static component only.





**SERIES**

S1 = Single chamber  
 S5 = Integrated guides/plastic bearings

**CARRIAGE TYPE**

- 0 = Standard carriage (for S5 series except Ø 40 and 50 mm)
- 2 = Medium carriage \*
- 3 = Long carriage \*

**LEFT END-CAP SUPPLY PORT**

- 0 = No supply port (when both chambers are supplied from the right end-cap)
- 1 = Side supply port \*
- 2 = Bottom supply port \*
- 3 = Rear supply port \*

**RIGHT END-CAP SUPPLY PORT**

- 1 = Side supply port (twin Ø 16 mm)
- 2 = Bottom supply port \*
- 3 = Rear supply port (twin Ø 16 mm)
- 4 = Both chambers supplied from the right end-cap

**BORE SIZE**

16 - 25 - 32 - 40 - 50

**STROKE**

Up to 5000 mm Ø 16 mm  
 Up to 6000 mm Ø 25 ÷ 50 mm

**OPTION**

M = Magnetic version standard for Ø 16 mm, upon request for Ø 25 ÷ 50 mm (for version S1 only).  
 For S5 Series, the magnetic option is obtained by means of a magnetic switch mounting rail (DKS Series) which is to be ordered separately (Section accessories page 6).

\* = Except Ø 16 mm

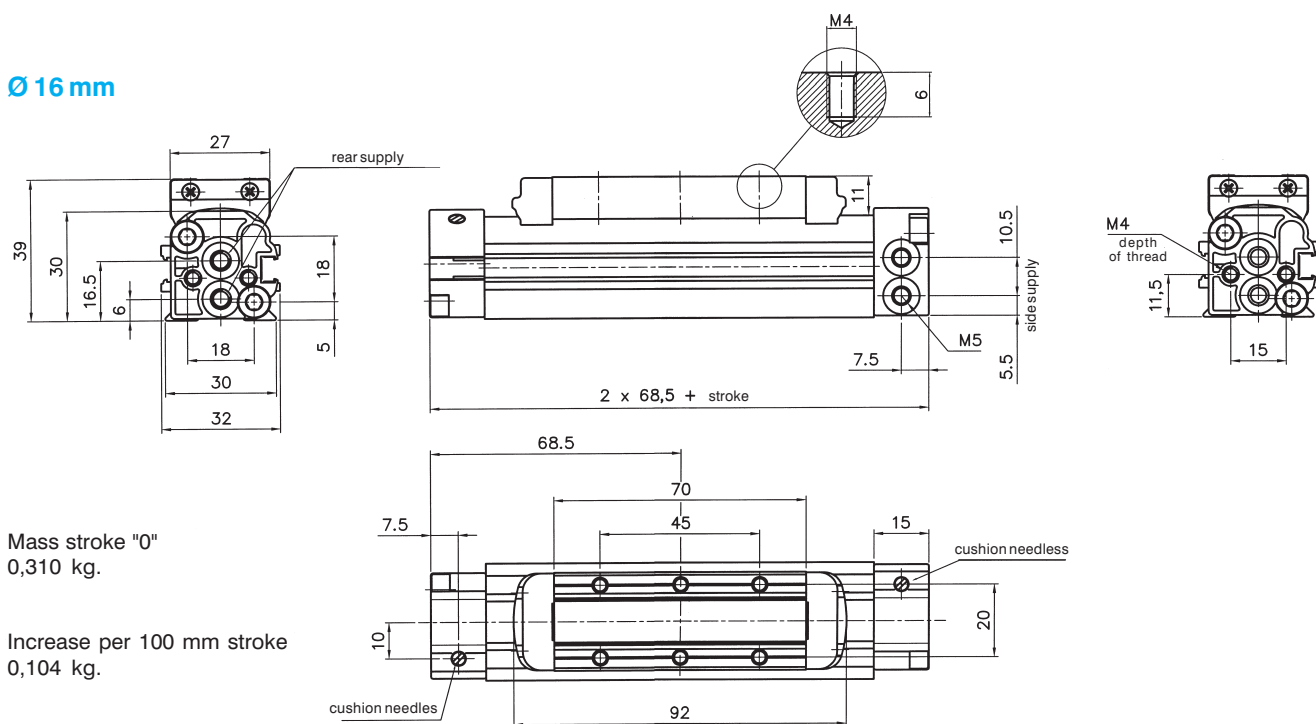






Rodless cylinders with standard carriage - 6 fixing holes

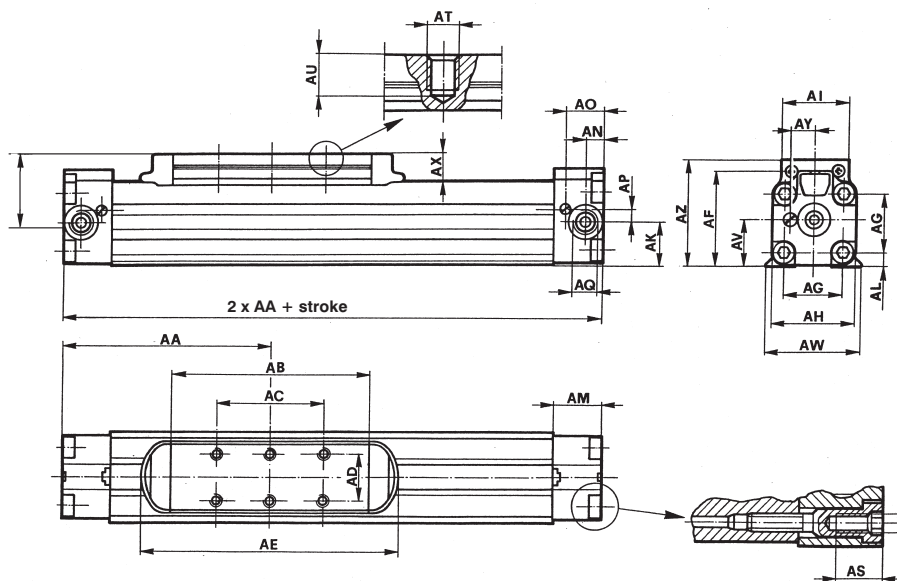
Ø 16 mm



Mass stroke "0"  
0,310 kg.

Increase per 100 mm stroke  
0,104 kg.

Ø 25 ÷ 50 mm



| Cyl Ø | AA  | AB  | AC  | AD | AE  | AF   | AG | AH   | AI | AK   | AL   | AM | AN   | AO   | AP   | AQ   | AR  | AS   | AT |
|-------|-----|-----|-----|----|-----|------|----|------|----|------|------|----|------|------|------|------|-----|------|----|
| 25    | 100 | 95  | 50  | 24 | 130 | 48,3 | 28 | 40,5 | 33 | 20,2 | 7    | 24 | 7,4  | 18,2 | 5,7  | G1/8 | M5  | 12   | M5 |
| 32    | 125 | 118 | 65  | 31 | 156 | 57   | 35 | 50   | 40 | 25,3 | 8    | 29 | 10,3 | 22,5 | 7,3  | G1/4 | M6  | 15,5 | M6 |
| 40    | 150 | 134 | 65  | 31 | 177 | 74   | 44 | 64   | 44 | 33,8 | 11,8 | 33 | 12,5 | 26,5 | 8,7  | G3/8 | M8  | 20   | M6 |
| 50    | 175 | 164 | 105 | 39 | 211 | 90,7 | 55 | 80   | 54 | 41,4 | 14,7 | 33 | 14,2 | 25,7 | 11,8 | G3/8 | M10 | 20   | M8 |

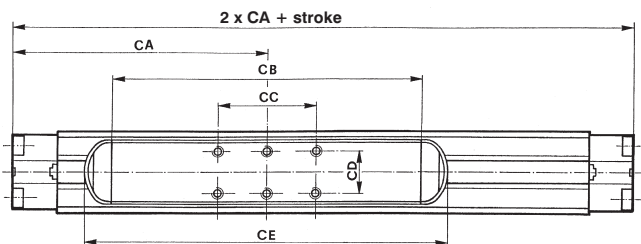
| Cyl Ø | AU | AV   | AW   | AX   | AY   | AZ   | Mass (kg) at "0" stroke | Weight increase (kg) per additional 100mm stroke |
|-------|----|------|------|------|------|------|-------------------------|--|
| 25    | 9  | 22,8 | 42,8 | 16   | 12,2 | 57,6 | 0,750                   | 0,210  |
| 32    | 9  | 28   | 54,5 | 16   | 14,2 | 66,2 | 1,310                   | 0,325  |
| 40    | 11 | 37   | 67   | 19,5 | 16,5 | 85,8 | 2,600                   | 0,555  |
| 50    | 12 | 47,7 | 86   | 20,5 | 19,1 | 103  | 4,785                   | 0,955  |

Values of the static load; please note that under dynamic conditions the load must be reduced due to the effects associated with the speed. The torque is the product of load (Newton) per arm (meters), i.e. the distance between the center of gravity of the load and the longitudinal axis of the piston (technical characteristics see page 11-12-II).

| Force (at 6 bar) |       | Load   |        |        | Bending moment    |           |         | Torque          |           |         | Bending moment |         |         |
|------------------|-------|--------|--------|--------|-------------------|-----------|---------|-----------------|-----------|---------|----------------|---------|---------|
|                  |       |        |        |        |                   |           |         |                 |           |         |                |         |         |
| Cyl. Ø           |       |        |        |        | Standard carriage |           |         | Medium carriage |           |         | Long carriage  |         |         |
|                  | F (N) | P1 (N) | P2 (N) | P3 (N) | M1 (Nm)           | M2 ♦ (Nm) | M3 (Nm) | M1 (Nm)         | M2 ♦ (Nm) | M3 (Nm) | M1 (Nm)        | M2 (Nm) | M3 (Nm) |
| 16               | 125   | 100    | 100    | 25     | 5                 | 0,2       | 0,8     | -               | -         | -       | -              | -       | -       |
| 25               | 250   | 200    | 200    | 50     | 8                 | 2         | 3       | 14              | 3         | 5       | 25             | 6       | 9       |
| 32               | 420   | 250    | 250    | 65     | 9                 | 3         | 4       | 15              | 4         | 7       | 28             | 8       | 12      |
| 40               | 640   | 350    | 350    | 90     | 11                | 9         | 14      | 16              | 14        | 20      | 31             | 27      | 39      |
| 50               | 1050  | 500    | 500    | 125    | 19                | 13        | 19      | 29              | 20        | 30      | 52             | 36      | 53      |

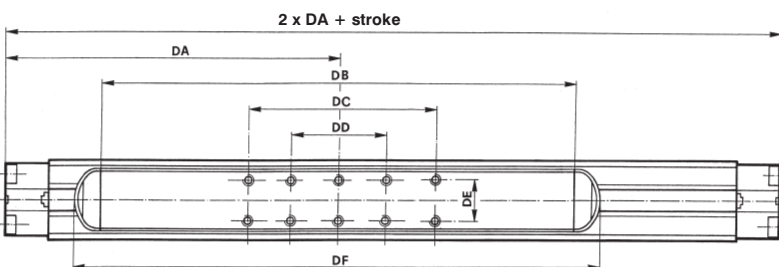
♦ It is not advisable to use the cylinder in applications with high stress.

Medium carriage - 6 fixing holes for cylinders Ø 25 ÷ 50 mm



| Cyl. Ø | CA    | CB  | CC  | CD | CE  | Mass (kg) at "0" stroke |
|--------|-------|-----|-----|----|-----|-------------------------|
| 25     | 114,5 | 125 | 50  | 24 | 160 | 0,84                    |
| 32     | 142,5 | 153 | 65  | 31 | 191 | 1,48                    |
| 40     | 169   | 172 | 65  | 31 | 215 | 2,91                    |
| 50     | 205   | 224 | 105 | 39 | 271 | 5,55                    |

Long carriage - 10 fixing holes for cylinders Ø 25 ÷ 50 mm



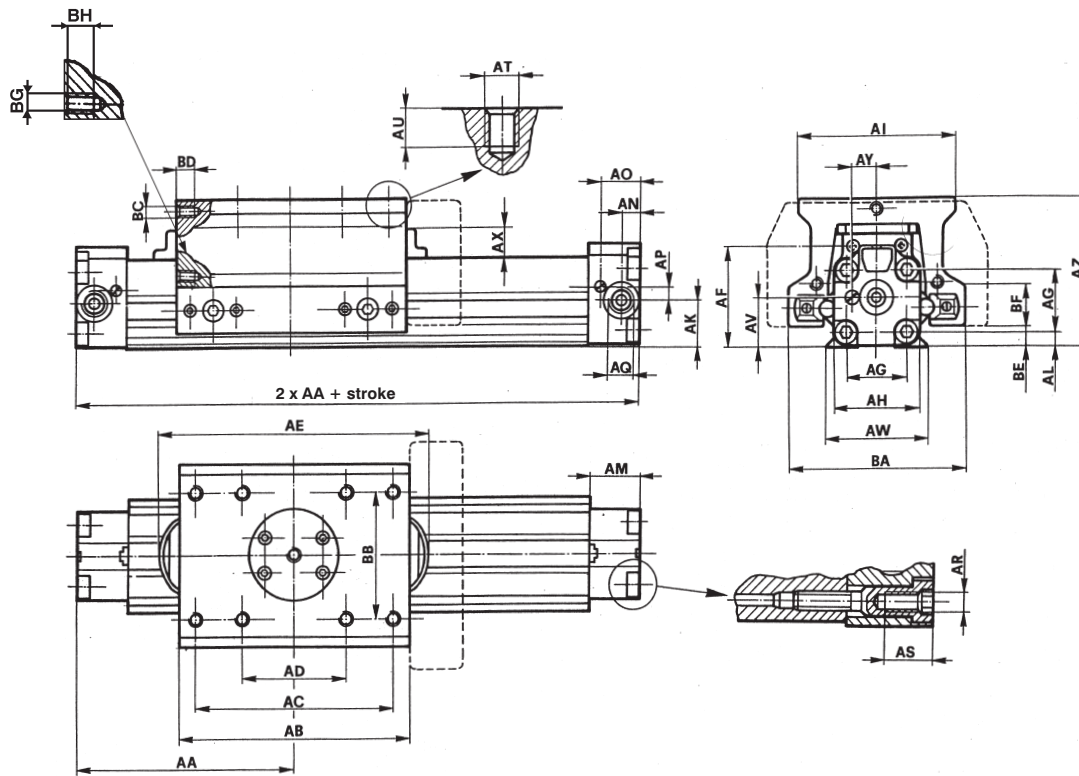
| Cyl.Ø | DA    | DB  | DC  | DD  | DE | DF  | Mass (kg) at "0" stroke |
|-------|-------|-----|-----|-----|----|-----|-------------------------|
| 25    | 147,5 | 190 | 100 | 50  | 24 | 225 | 1,05                    |
| 32    | 190   | 248 | 130 | 65  | 31 | 286 | 1,93                    |
| 40    | 225   | 284 | 130 | 65  | 31 | 327 | 3,80                    |
| 50    | 277   | 364 | 315 | 105 | 39 | 411 | 7,33                    |

**N.B.** in cases where the rodless cylinder is mounted on external rigid guides, it is necessary to fit the oscillating mounting bracket onto the carriage (SF- 24 . . . series, see page 23-II), in order to isolate the cylinder from the rigid structure.  
Other accessories from page 22-II.





Rodless cylinders with integrated guides and standard carriage - 8 fixing holes

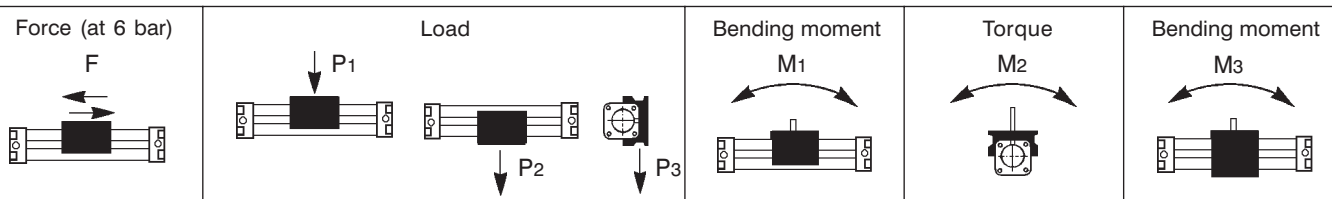


| Cyl. Ø | AA  | AB  | AC  | AD | AE  | AF   | AG | AH   | AI  | AK   | AL   | AM | AN   | AO   | AP   | AQ    | AR  | AS   | AT |
|--------|-----|-----|-----|----|-----|------|----|------|-----|------|------|----|------|------|------|-------|-----|------|----|
| 25     | 100 | 106 | 90  | 50 | 130 | 48,3 | 28 | 40,5 | 70  | 20,2 | 7    | 24 | 7,4  | 18,2 | 5,7  | G 1/8 | M5  | 12   | M6 |
| 32     | 125 | 140 | 115 | 55 | 156 | 57,0 | 35 | 50   | 88  | 25,3 | 8    | 29 | 10,3 | 22,5 | 7,3  | G 1/4 | M6  | 15,5 | M8 |
| 40     |     |     |     |    |     |      | 44 | 64   | 90  | 33,8 | 11,8 | 33 | 12,5 | 26,5 | 8,7  | G 3/8 | M8  | 20   | M8 |
| 50     |     |     |     |    |     |      | 55 | 80   | 100 | 41,4 | 14,7 | 33 | 14,2 | 25,7 | 11,8 | G 3/8 | M10 | 20   | M8 |

| Cyl. Ø | AU | AV   | AW   | AX   | AY   | AZ    | BA  | BB   | BC | BD | BE  | BF   | BG | BH | Mass (kg) at "0" stroke | Weight increase (kg) per additional 100 mm stroke |
|--------|----|------|------|------|------|-------|-----|------|----|----|-----|------|----|----|-------------------------|---|
| 25     | 10 | 22,8 | 42,8 | 16   | 12,2 | 71,8  | 85  | 50   | M6 | 15 | 5,7 | 24   | M6 | 15 | 1,625                   | 0,365   |
| 32     | 12 | 28   | 57   | 16   | 14,2 | 82,5  | 100 | 67,5 | M6 | 15 | 7   | 24,5 | M6 | 15 | 2,775                   | 0,495   |
| 40     | 14 | 37   | 67   | 19,5 | 16,5 | 106,6 | 135 | 65   | M6 | 15 | 7   | 39   | M6 | 15 |                         | 0,92  |
| 50     | 16 | 47,7 | 86   | 20,5 | 19,1 | 123,7 | 149 | 76,5 | M8 | 16 | 7,2 | 41   | M6 | 15 |                         | 1,28  |

The dotted line indicates the overall dimensions of the locking unit; fixing holes of the locking unit see page 8-II.

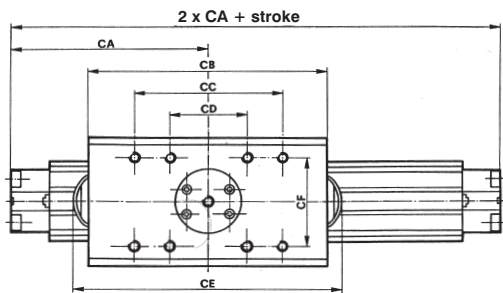
Values of the static load; please note that under dynamic conditions the load must be reduced due to the effects associated with the speed. The torque is the product of load (Newton) per arm (meters), i.e. the distance between the center of gravity of the load and the longitudinal axis of the piston.



| Cyl. Ø | Standard carriage |        |        | Medium carriage |              |         | Long carriage |         |         |         |     |    |     |
|--------|-------------------|--------|--------|-----------------|--------------|---------|---------------|---------|---------|---------|-----|----|-----|
|        | F (N)             | P1 (N) | P2 (N) | P3 (N)          | M1 (Nm)      | M2 (Nm) | M3 (Nm)       | M1 (Nm) | M2 (Nm) | M3 (Nm) |     |    |     |
| 25     | 250               |        | 400    |                 | 13           | 8       | 16            | 20      | 10      | 25      | 40  | 15 | 50  |
| 32     | 420               |        | 400    |                 | 20           | 9       | 27            | 30      | 12      | 40      | 55  | 18 | 75  |
| 40     | 640               |        | 600    |                 | not foreseen |         |               | 60      | 30      | 80      | 110 | 45 | 150 |
| 50     | 1050              |        | 800    |                 | not foreseen |         |               | 85      | 50      | 110     | 150 | 75 | 210 |

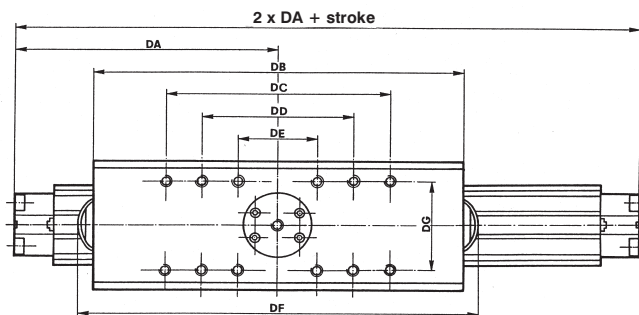


Medium carriage - 8 fixing holes



| Cyl. Ø | CA    | CB  | CC  | CD | CE  | CF   | Mass (kg) at "0" stroke |
|--------|-------|-----|-----|----|-----|------|-------------------------|
| 25     | 114,5 | 136 | 90  | 50 | 160 | 50   | 1,93                    |
| 32     | 142,5 | 175 | 115 | 55 | 191 | 67,5 | 3,265                   |
| 40     | 169   | 205 | 180 | 75 | 215 | 65   | 6,095                   |
| 50     | 205   | 258 | 190 | 80 | 271 | 76,5 | 10,03                   |

Long carriage - 12 fixing holes



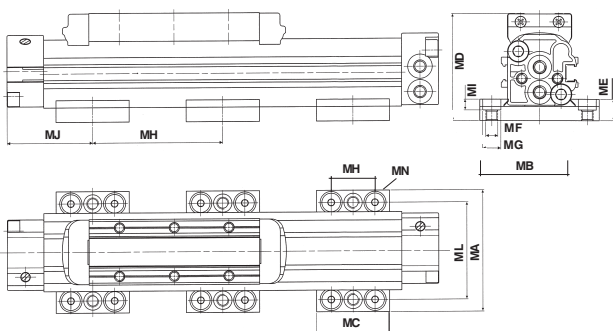
| Cyl. Ø | DA    | DB  | DC  | DD  | DE | DF  | DG   | Mass (kg) at "0" stroke |
|--------|-------|-----|-----|-----|----|-----|------|-------------------------|
| 25     | 147,5 | 201 | 130 | 90  | 50 | 225 | 50   | 2,64                    |
| 32     | 190   | 270 | 175 | 115 | 55 | 286 | 67,5 | 4,65                    |
| 40     | 225   | 317 | 280 | 185 | 75 | 327 | 65   | 8,60                    |
| 50     | 277   | 398 | 320 | 200 | 80 | 411 | 76,5 | 14,04                   |

Accessories from page 22.

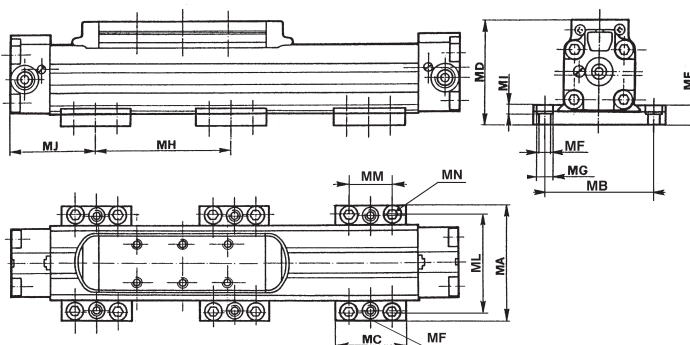


### Mounting plate for S1 series

Ø 16 mm



Ø 25 ÷ 50 mm

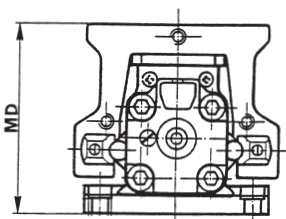


| Cyl. Ø | MA   | MB   | MC | MD   |       |       | ME | MF  | MG | MH  | MI  | MJ | ML*  | MM   | MN | Mass (kg) | Part number |
|--------|------|------|----|------|-------|-------|----|-----|----|-----|-----|----|------|------|----|-----------|-------------|
|        |      |      |    | S1   | S5    | VL1   |    |     |    |     |     |    |      |      |    |           |             |
| 16     | 50   | 40   | 30 | 44,8 | -     | -     | 9  | M5  | 8  | 400 | 4,5 | 35 | 40   | -    | M6 | 0,083     | SF - 12016  |
| 25     | 78,5 | 63,5 | 50 | 65,6 | 79,8  | 82,3  | 12 | M8  | 11 | 500 | 6,5 | 55 | 65,5 | 30   | M6 | 0,310     | SF - 12025  |
| 32     | 92   | 77,5 | 50 | 74,2 | 90,5  | 90,5  | 12 | M8  | 11 | 600 | 5,5 | 60 | 79,5 | 30   | M6 | 0,340     | SF - 12032  |
| 40     | 117  | 96   | 60 | 95,8 | 116,6 | 116   | 15 | M10 | 14 | 700 | 8   | 70 | 96   | 37,5 | M8 | 0,660     | SF - 12040  |
| 50     | 136  | 115  | 60 | 113  | 133,7 | 136,2 | 15 | M10 | 14 | 800 | 8   | 70 | 115  | 37,5 | M8 | 0,700     | SF - 12050  |

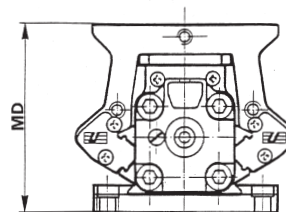
♦ Max. dimensions in order to limit the deflection of the cylinder according to the stroke and in order to ensure a correct fixing.

\* For Ø 16-40-50 mm, MB and ML have the same value.

### Mounting plate for S5 Series



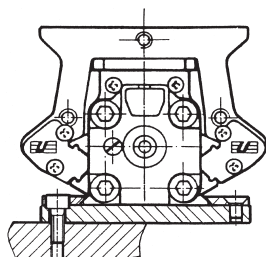
### Mounting plate for VL1 Series



#### How to mount plates:

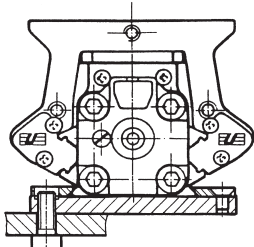
Plates are mounted by means of standard screws without disassembling any part of the cylinder (for all series).

Upper mounting

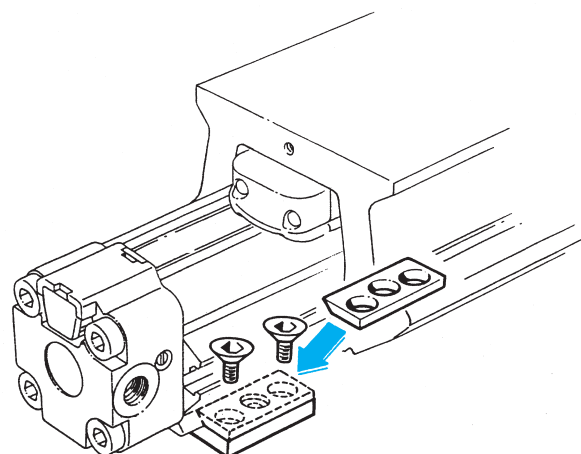


| Cyl. Ø  |    |
|---------|----|
| 25 - 32 | M6 |
| 40 - 50 | M8 |

Lower mounting



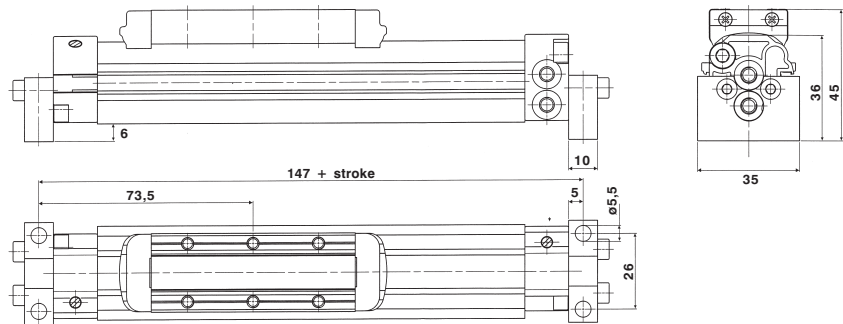
| Cyl. Ø  |     |
|---------|-----|
| 25 - 32 | M8  |
| 40 - 50 | M10 |



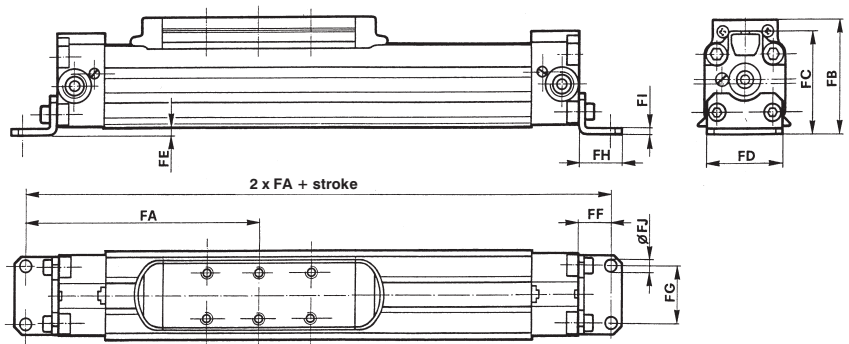


**Mounting bracket for Ø 16 mm rodless cylinder**  
Part num. SF-13016

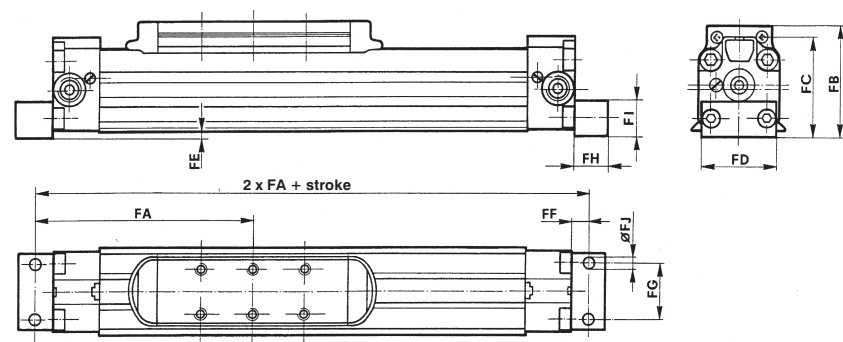
Mass kg 0,015



**Mounting bracket for Ø 25 - 32 mm rodless cylinder**



**Mounting bracket for Ø 40 - 50 mm rodless cylinder**



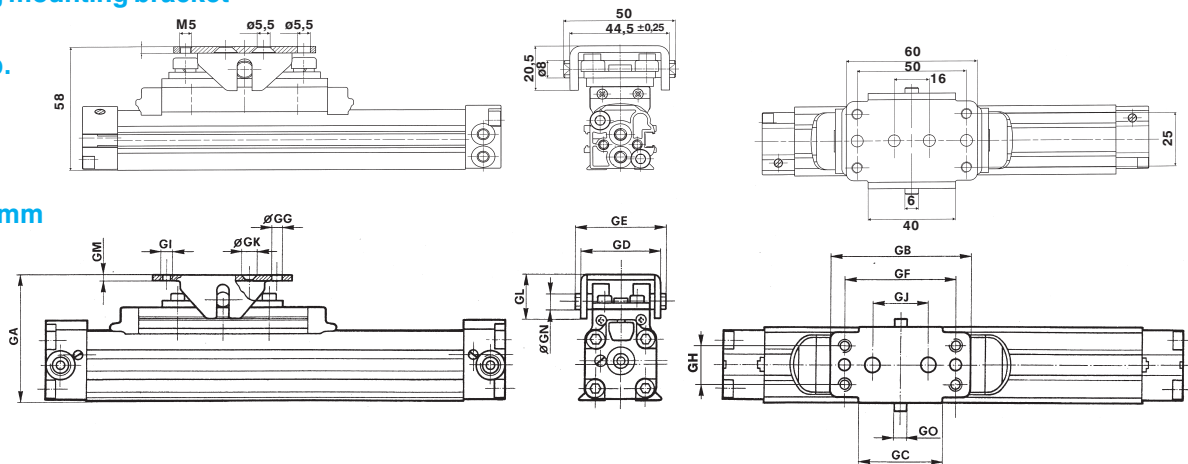
| Cyl. Ø | FA    | FB    | FC   | FD | FE  | FF   | FG | FH | FI  | FJ  | Mass (kg) | Part number |
|--------|-------|-------|------|----|-----|------|----|----|-----|-----|-----------|-------------|
| 25     | 116   | 58,1  | 48,8 | 40 | 0,5 | 16   | 27 | 22 | 2,5 | 5,5 | 0,034     | SF - 13025  |
| 32     | 143,5 | 68,7  | 59,2 | 48 | 2,5 | 18,5 | 36 | 26 | 3   | 6,5 | 0,053     | SF - 13032  |
| 40     | 162,5 | 86,5  | 74,9 | 63 | 0,7 | 12,5 | 30 | 25 | 25  | 9   | 0,116     | SF - 13040  |
| 50     | 189,5 | 104,3 | 92,4 | 79 | 1,3 | 12,5 | 40 | 25 | 30  | 9,3 | 0,170     | SF - 13050  |

Mounting brackets are ONLY recommended for short strokes i.e. less than 400 mm

**Oscillating mounting bracket**

**Ø 16 mm**  
Part num. SF-24016

Mass Kg 0,195



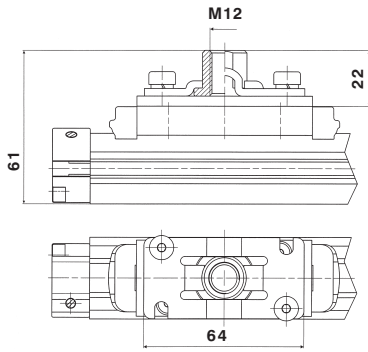
**Ø 25 ÷ 50 mm**

| Cyl. Ø | GA           | GB  | GC | GD        | GE | GF | GG  | GH | GI | GJ | GK  | GL   | GM | GN | GO   | Mass (kg) | Part number |
|--------|--------------|-----|----|-----------|----|----|-----|----|----|----|-----|------|----|----|------|-----------|-------------|
| 25     | 73,5/±2,5    | 60  | 40 | 44,5/±2,5 | 50 | 50 | 5,5 | 25 | M5 | 16 | 5,5 | 20,5 | 3  | 8  | 6,15 | 0,142     | SF - 24025  |
| 32     | 89/±4        | 100 | 60 | 56/±4     | 64 | 80 | 5,5 | 30 | M6 | 40 | 6,5 | 30   | 4  | 12 | 8,2  | 0,362     | SF - 24032  |
| 40     | 108,5/±4     | 100 | 60 | 56/±4     | 64 | 80 | 5,5 | 30 | M6 | 40 | 6,5 | 30   | 4  | 12 | 8,2  | 0,362     | SF - 24032  |
| 50     | not foreseen |     |    |           |    |    |     |    |    |    |     |      |    |    |      |           |             |

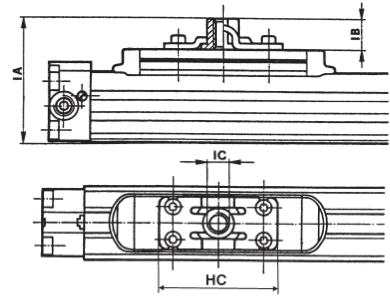
### Female threaded connection

Ø 16 mm

Mass  
Kg 0,132



Ø 25 ÷ 50 mm

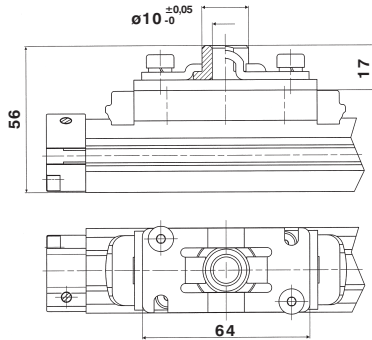


| Cyl. Ø | IA           | IB | IC  | HC | Mass (kg) | Part number |
|--------|--------------|----|-----|----|-----------|-------------|
| 25     | 75,6         | 18 | M12 | 64 | 0,076     | SF-26025    |
| 32     | 87,2         | 21 | M14 | 84 | 0,157     | SF-26032    |
| 40     | 106,8        | 21 | M14 | 84 | 0,157     | SF-26032    |
| 50     | not foreseen |    |     |    |           |             |

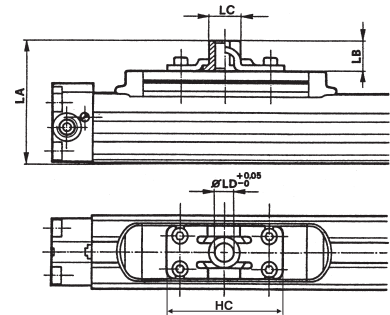
### Female connection without thread

Ø 16 mm

Mass  
Kg 0,129



Ø 25 ÷ 50 mm

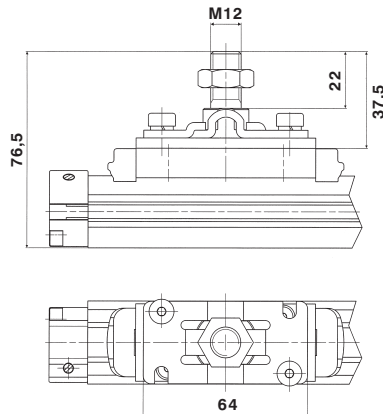


| Cyl. Ø | LA           | LB   | LC | LD | HC | Mass (kg) | Part number |
|--------|--------------|------|----|----|----|-----------|-------------|
| 25     | 70,6         | 13   | 18 | 10 | 64 | 0,073     | SF-28025    |
| 32     | 83,4         | 17,2 | 22 | 12 | 84 | 0,152     | SF-28032    |
| 40     | 103          | 17,2 | 22 | 12 | 84 | 0,152     | SF-28032    |
| 50     | not foreseen |      |    |    |    |           |             |

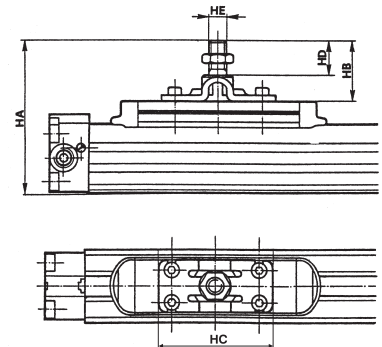
### Male threaded pin

Ø 16 mm

Mass  
Kg 0,160



Ø 25 ÷ 50 mm



| Cyl. Ø | HA           | HB   | HC | HD   | HE  | Mass (kg) | Part number |
|--------|--------------|------|----|------|-----|-----------|-------------|
| 25     | 91,1         | 33,5 | 64 | 22   | M12 | 0,105     | SF-27025    |
| 32     | 107,7        | 41,5 | 84 | 24,3 | M14 | 0,26      | SF-27032    |
| 40     | 127,3        | 41,5 | 84 | 24,3 | M14 | 0,26      | SF-27032    |
| 50     | not foreseen |      |    |      |     |           |             |