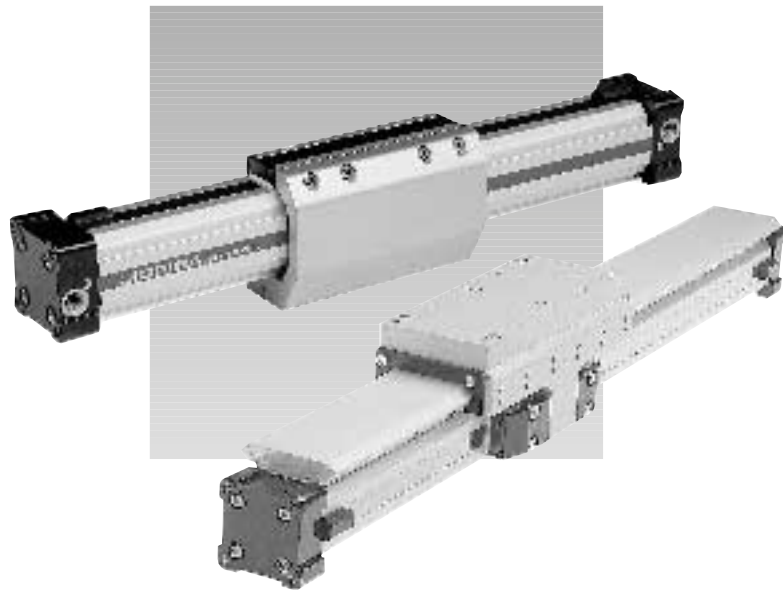


**PNEUMATIC  
GROUP**

**Brakes**

**ORIGA SYSTEM PLUS**

**HOLDING DEVICES AND BRAKES  
FOR OSP-P**



**HOERBIGER**  
**ORIGA**

## Holding Devices and Brakes

### Versions:

- ACTIVE Brake
- Plain bearing guide with integrated Holding Device
- Aluminium roller guide with integrated Holding Device
- Plain bearing guide with PASSIVE Brake
- Aluminium roller guide with PASSIVE Brake

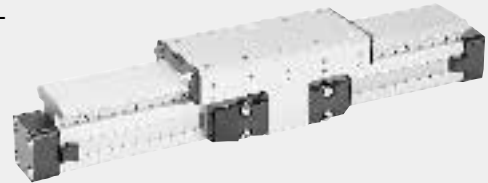
### Holding Device

for pneumatic linear drive  
Series OSP-P  
Piston diameters 25 - 80 mm.  
See page 39



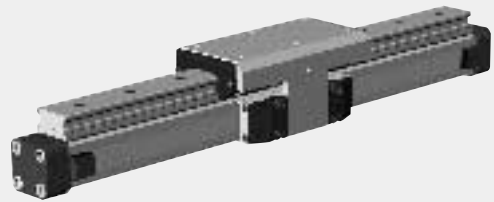
### Slideline with Brake

Plain bearing guide Slideline - SL  
with integrated Active Brake  
Piston diameters 25 - 50 mm.  
See page 25



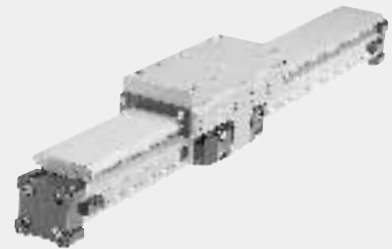
### Proline with Brake

Aluminium roller guide  
Proline - PL with  
integrated Active Brake  
Piston diameters 25 - 50 mm.  
See page 35



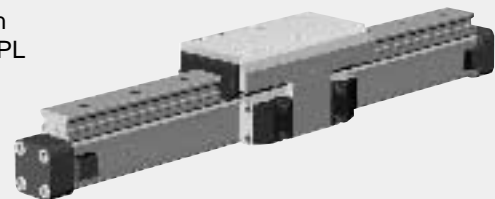
### Multibrake with Slideline

Multi-Brake – Passive Brake  
with plainbearing guide  
Slideline - SL  
Piston diameter 25 - 80 mm.  
See page 43

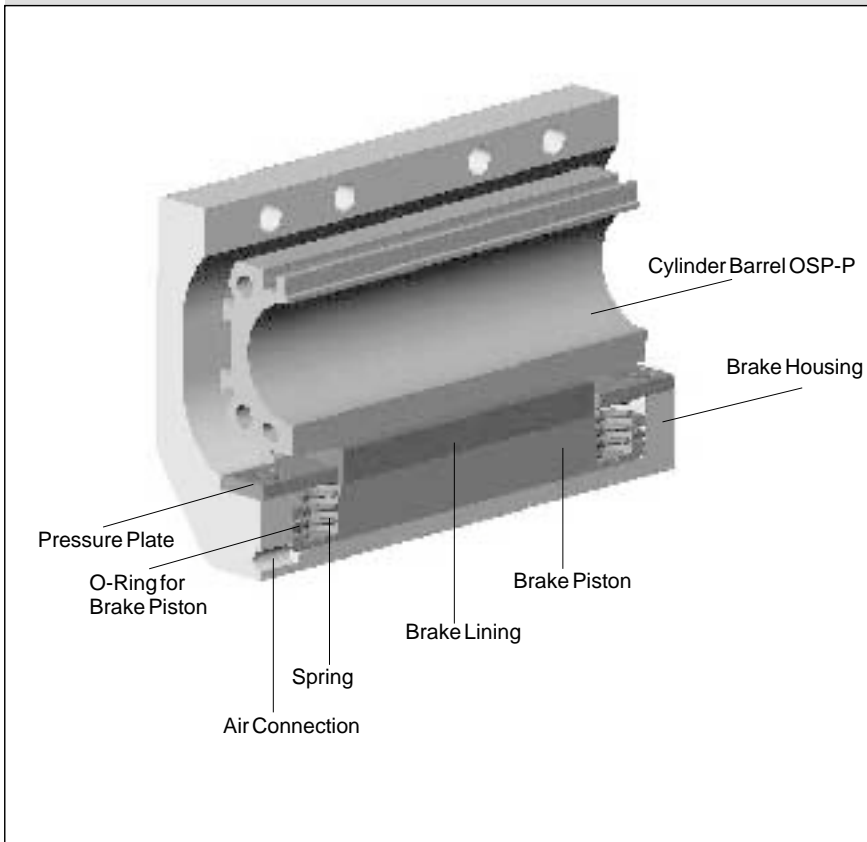


### Multibrake with Proline

Multi-Brake – Passive Brake with  
aluminium roller guide Proline - PL  
Piston diameters 25 - 50 mm.  
See page 47



## Function



# Position Holding Device

**OSP**  
— ORIGA  
— SYSTEM  
— PLUS

**Series AB 25 to 80  
for linear drive**  
• **Series OSP-P**

### Features:

- Actuated by pressurization
- Released by spring actuation
- Completely stainless version
- Holds position, even under changing load conditions

For further technical data, please refer to the data sheets for linear drives OSP-P (page 13)

## Forces and Weights

| Series       | For linear drive | Max. braking force [N] <sup>(1)</sup> | Brake pad way [mm] | Mass [kg]                |                                      |        |
|--------------|------------------|---------------------------------------|--------------------|--------------------------|--------------------------------------|--------|
|              |                  |                                       |                    | Linear drive 0 mm stroke | with brake increase per 100mm stroke | brake* |
| <b>AB 25</b> | OSP-P25          | 350                                   | 2.5                | 1.0                      | 0.197                                | 0.35   |
| <b>AB 32</b> | OSP-P32          | 590                                   | 2.5                | 2.02                     | 0.354                                | 0.58   |
| <b>AB 40</b> | OSP-P40          | 900                                   | 2.5                | 2.83                     | 0.415                                | 0.88   |
| <b>AB 50</b> | OSP-P50          | 1400                                  | 2.5                | 5.03                     | 0.566                                | 1.50   |
| <b>AB 63</b> | OSP-P63          | 2170                                  | 3.0                | 9.45                     | 0.925                                | 3.04   |
| <b>AB 80</b> | OSP-P80          | 4000                                  | 3.0                | 18.28                    | 1.262                                | 5.82   |

<sup>(1)</sup> – at 6 bar  
both chambers pressurized with 6 bar  
Braking surface dry  
– oil on the braking surface will reduce the braking force

**\* Please Note:**  
The mass of the brake has to be added to the total moving mass when using the cushioning diagram.

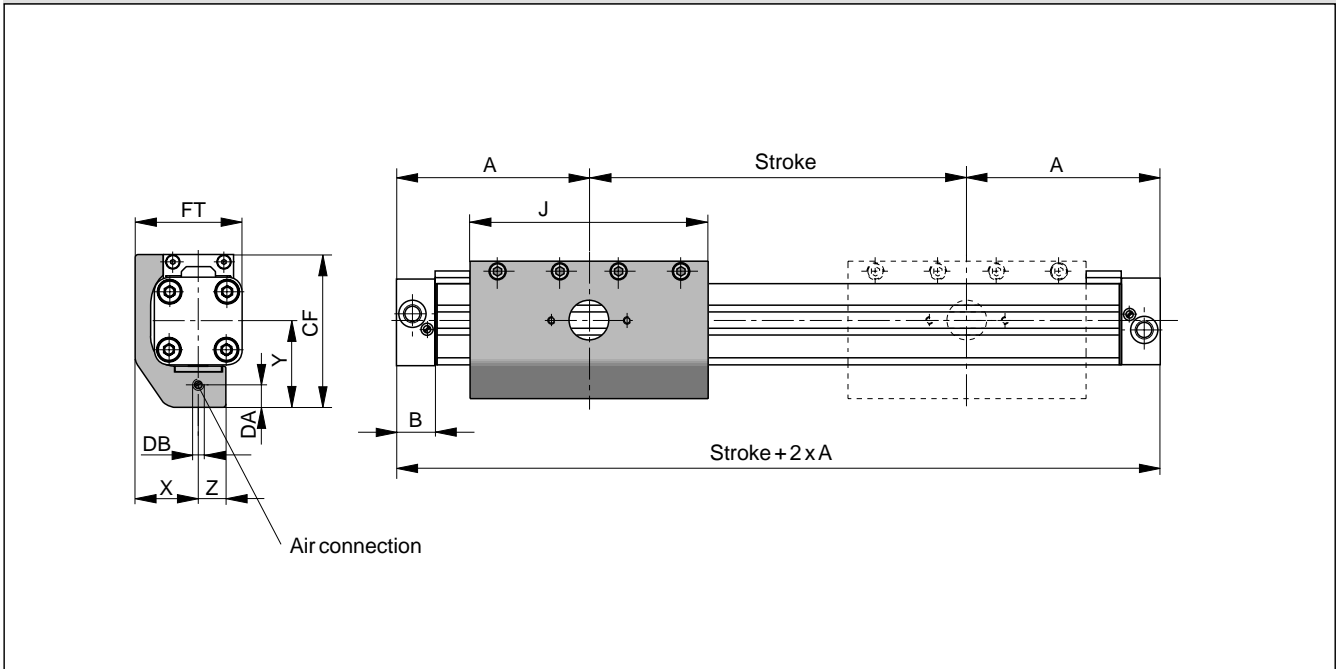


The right to introduce technical modifications is reserved

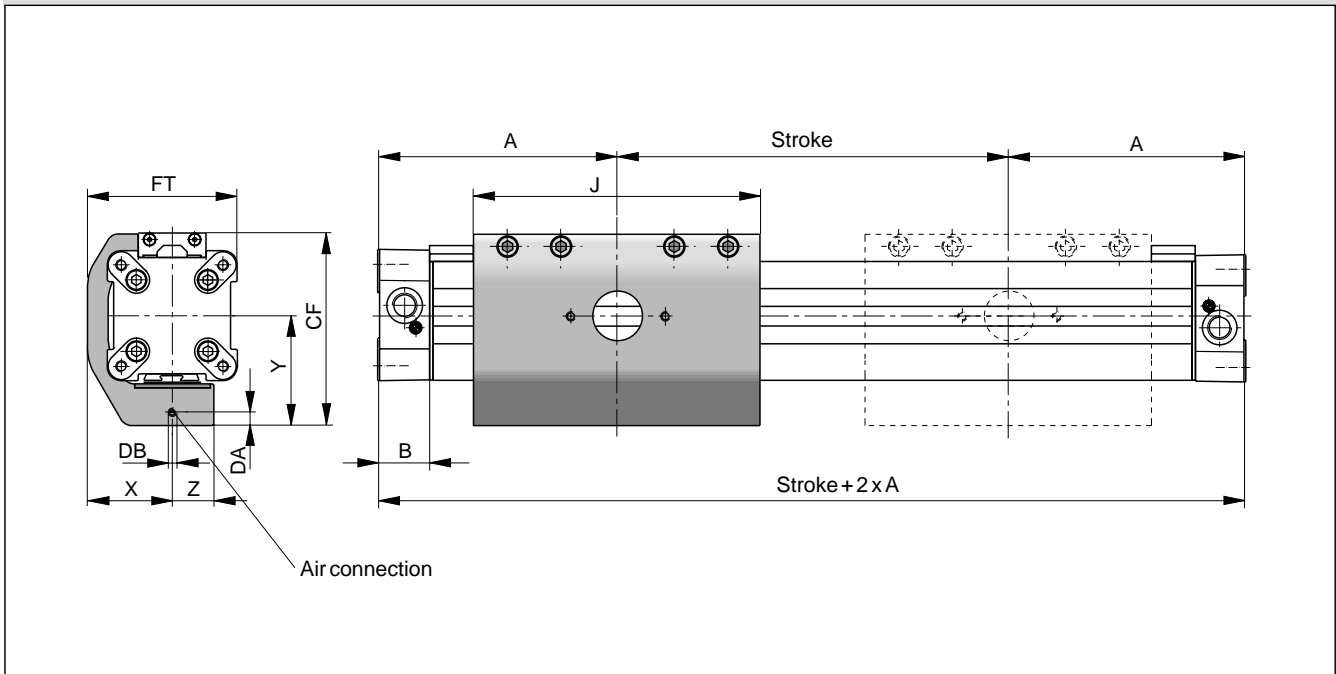
For additional information on loads, forces and moment, please refer to page 14

**HOERBIGER**  
**ORIGA**

**Series OSP-P25 and P32 with Holding Device**



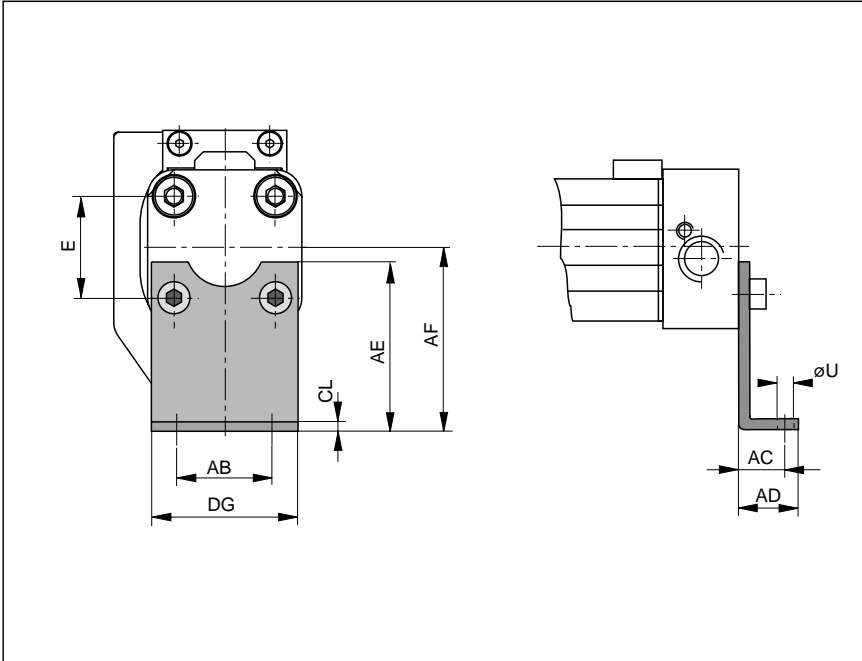
**Series OSP-P40, P50, P63, P80 with Holding Device**



**Dimension Table (mm)**

| Series | A   | B    | J     | X    | Y    | Z  | CF    | DA  | DB   | FT   |
|--------|-----|------|-------|------|------|----|-------|-----|------|------|
| AB 25  | 100 | 22   | 117   | 29.5 | 43   | 13 | 74    | 4   | M5   | 50   |
| AB 32  | 125 | 25.5 | 151.4 | 36   | 50   | 15 | 88    | 4   | M5   | 62   |
| AB 40  | 150 | 28   | 151.4 | 45   | 58   | 22 | 102   | 7   | M5   | 79.5 |
| AB 50  | 175 | 33   | 200   | 54   | 69.5 | 23 | 118.5 | 7.5 | M5   | 97.5 |
| AB 63  | 215 | 38   | 256   | 67   | 88   | 28 | 151   | 9   | G1/8 | 120  |
| AB 80  | 260 | 47   | 348   | 83   | 105  | 32 | 185   | 10  | G1/8 | 149  |

**Series OSP – P25 and P32 with Holding Device: Type A3**



**End Cap Mountings**

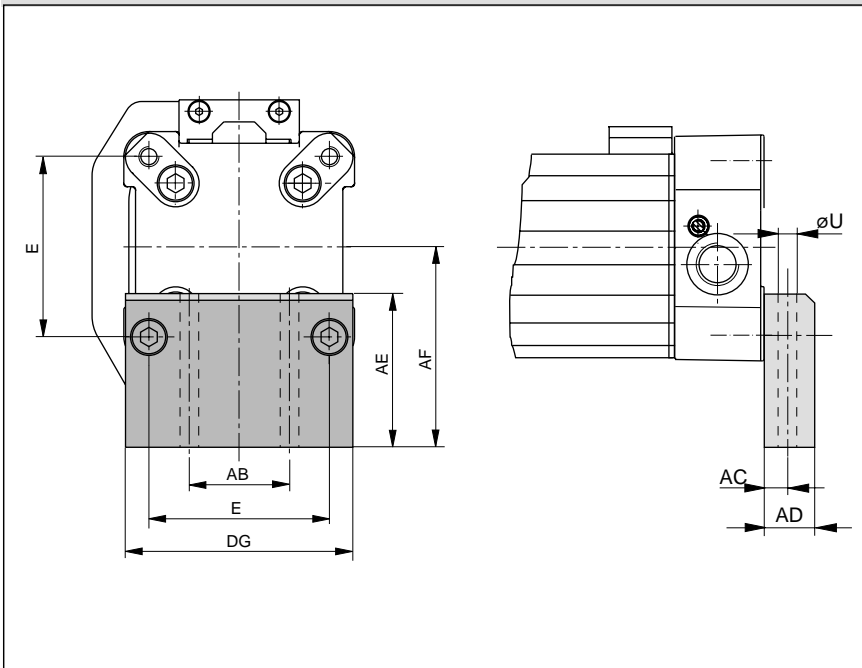
On the end-face of each cylinder end cap there are four threaded holes for mounting the cylinder. The hole layout is square, so that the mounting can be fitted to the bottom, top or either side.

Material: Series OSP-P25, P32:  
Galvanized steel

The mountings are supplied in pairs.



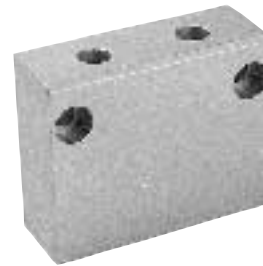
**Series OSP – P40, P50, P63, P80 with Holding Device AB: Type C3**



Material: Series OSP-P40,P50,  
P63, P80:  
Anodized aluminium

The mountings are supplied in pairs.

Stainless steel version on request.

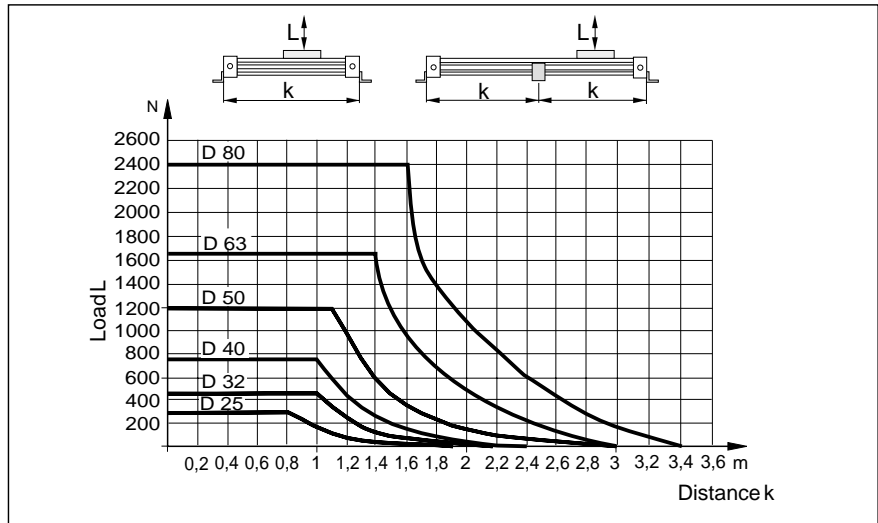


**Dimension Table (mm)**

| Series       | E  | øU  | AB | AC   | AD | AE | AF  | CL  | DG  | Order No.<br>Type A3 | Type C3      |
|--------------|----|-----|----|------|----|----|-----|-----|-----|----------------------|--------------|
| <b>AB 25</b> | 27 | 5.8 | 27 | 16   | 22 | 45 | 49  | 2.5 | 39  | <b>2060</b>          | –            |
| <b>AB 32</b> | 36 | 6.6 | 36 | 18   | 26 | 42 | 52  | 3   | 50  | <b>3060</b>          | –            |
| <b>AB 40</b> | 54 | 9   | 30 | 12.5 | 24 | 46 | 60  | –   | 68  | –                    | <b>20339</b> |
| <b>AB 50</b> | 70 | 9   | 40 | 12.5 | 24 | 54 | 72  | –   | 86  | –                    | <b>20350</b> |
| <b>AB 63</b> | 78 | 11  | 48 | 15   | 30 | 76 | 93  | –   | 104 | –                    | <b>20821</b> |
| <b>AB 80</b> | 96 | 14  | 60 | 17.5 | 35 | 88 | 110 | –   | 130 | –                    | <b>20822</b> |

## Mid Section Support

Mid-section supports are required from a certain stroke length to prevent excessive deflection and vibration of the linear drive. The diagrams show the maximum permissible unsupported length in relation to loading. Deflection of 0.5mm max. between supports is permissible. The mid section supports are attached to the dovetail rails, and can take axial loads.



## Mid Section Supports

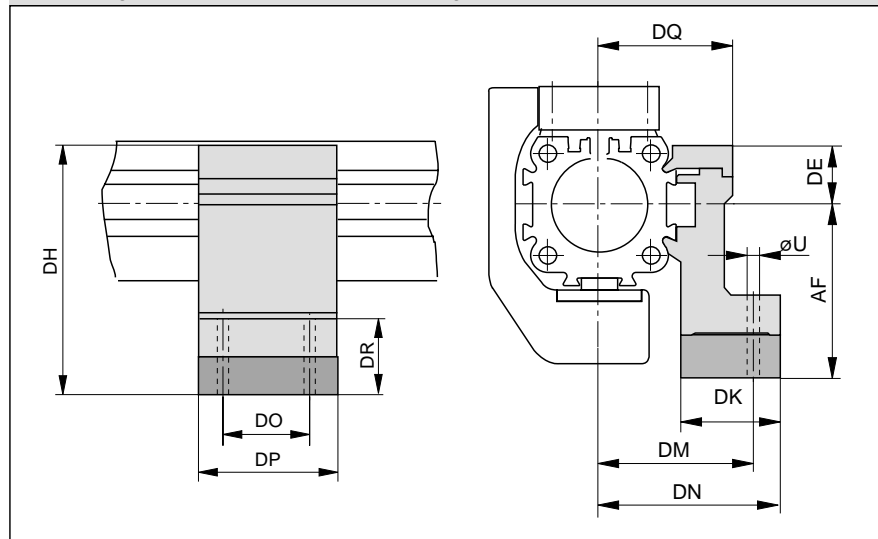
Note to Type E3:

Mid-section supports can only be mounted opposite of the brake housing.

Stainless steel version available on request.



### Series OSP-P25 to P80 with Holding Device: Type E3 (Mounting from above / below with through-bolt)



Dimension Table (mm)

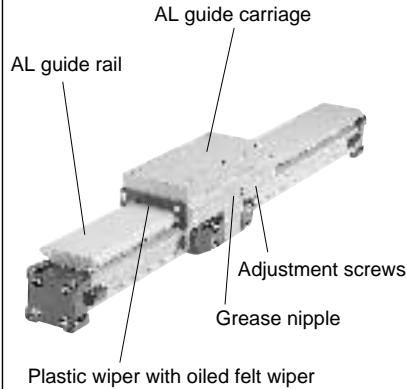
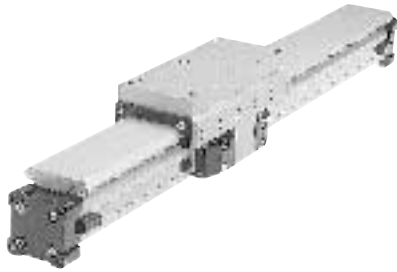
| Series | U   | AF  | DE   | DH    | DK | DM | DN   | DO | DP | DQ   | DR | Order No.<br>Type 3 |
|--------|-----|-----|------|-------|----|----|------|----|----|------|----|---------------------|
| AB 25  | 5,5 | 49  | 16   | 65    | 26 | 40 | 47,5 | 36 | 50 | 34,5 | 35 | 20353               |
| AB 32  | 5,5 | 52  | 16   | 68    | 27 | 46 | 54,5 | 36 | 50 | 40,5 | 32 | 20356               |
| AB 40  | 7   | 60  | 23   | 83    | 34 | 53 | 60   | 45 | 60 | 45   | 32 | 20359               |
| AB 50  | 7   | 72  | 23   | 95    | 34 | 59 | 67   | 45 | 60 | 52   | 31 | 20362               |
| AB 63  | 9   | 93  | 34   | 127   | 44 | 73 | 83   | 45 | 65 | 63   | 48 | 20453               |
| AB 80  | 11  | 110 | 39,5 | 149,5 | 63 | 97 | 112  | 55 | 80 | 81   | 53 | 20819               |

### Accessories for linear drives with Holding Device – please order separately

| Description  | For details information, see page |
|--|-----------------------------------|
| Clevis mounting  | 53                                |
| Adaptor profile  | 60                                |
| T-Nut profile  | 61                                |
| Sensors (can <b>only</b> be mounted opposite of the brake housing) | 66                                |

## Versions

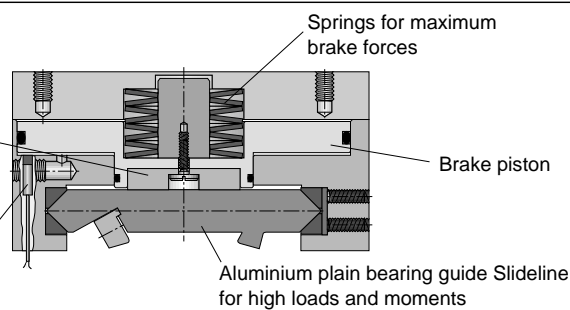
for pneumatic Linear Drive:  
Series OSP-P



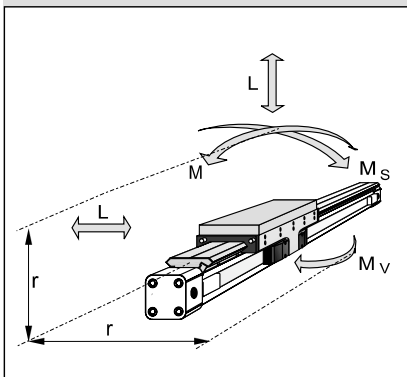
## Function

Wear resistant brake lining, for long service life

Sensor for wear indication (option)



## Loads, Forces and Moments



## Technical Data:

The table shows the maximum values for light, shock-free operation, which must not be exceeded even in dynamic operation.

Load and moment data are based on speeds  $v < 0.2$  m/s.

Operating pressure 4,5 - 8 bar  
A pressure of 4,5 bar is required to release the brake.

For further technical information, please refer to the data sheets for linear drives OSP-P (page 13)

# Multi-Brake with plain bearing guide Slideline SL

**OSP**  
— ORIGA  
— SYSTEM  
— PLUS

**Series MB-SL 25 to 80  
for Linear Drive**  
• Series OSP-P

## Features:

- Brake operated by spring actuation
- Brake release by pressurization
- Corrosion resistant as standard
- Optional sensor to indicate brake lining wear
- Anodized aluminium rail, with prism shaped slide elements
- Adjustable plastic slide elements
- Composite sealing system with plastic and felt wiper elements to remove dirt and lubricate the slideway
- Replenishable guide lubrication by integrated grease nipples
- Blocking function in case of pressure loss
- Intermediate stops possible

## Function:

The Multi-Brake is a passive device. When the air pressure is removed the brake is actuated and movement of the cylinder is blocked. The brake is released by pressurization.

The high friction, wear resistant brake linings allow the Multi-Brake to be used as a dynamic brake to stop cylinder movement in the shortest possible time. The powerful springs also allow the Multi-Brake to be used effectively in positioning applications.

| Series          | For linear drive | Max. moments [Nm] |     |     | Max. loads [N]<br>L | Max. brake force [N] <sup>1)</sup> | Mass of linear drive with guide [kg] |                          | Mass* guide carriage [kg] |
|-----------------|------------------|-------------------|-----|-----|---------------------|------------------------------------|--------------------------------------|--------------------------|---------------------------|
|                 |                  | M                 | Ms  | Mv  |                     |                                    | with 0mm stroke                      | increase pro 100 mm str. |                           |
| <b>MB-SL 25</b> | OSP-P25          | 34                | 14  | 34  | 675                 | 470                                | 2.04                                 | 0.39                     | 1.10                      |
| <b>MB-SL 32</b> | OSP-P32          | 60                | 29  | 60  | 925                 | 790                                | 3.82                                 | 0.65                     | 1.79                      |
| <b>MB-SL 40</b> | OSP-P40          | 110               | 50  | 110 | 1500                | 1200                               | 5.16                                 | 0.78                     | 2.34                      |
| <b>MB-SL 50</b> | OSP-P50          | 180               | 77  | 180 | 2000                | 1870                               | 8.29                                 | 0.97                     | 3.63                      |
| <b>MB-SL 63</b> | OSP-P63          | 260               | 120 | 260 | 2500                | 2900                               | 13.31                                | 1.47                     | 4.97                      |
| <b>MB-SL 80</b> | OSP-P80          | 260               | 120 | 260 | 2500                | 2900                               | 17.36                                | 1.81                     | 4.97                      |

<sup>1)</sup> Braking surface dry – oil on the braking surface will reduce the braking force

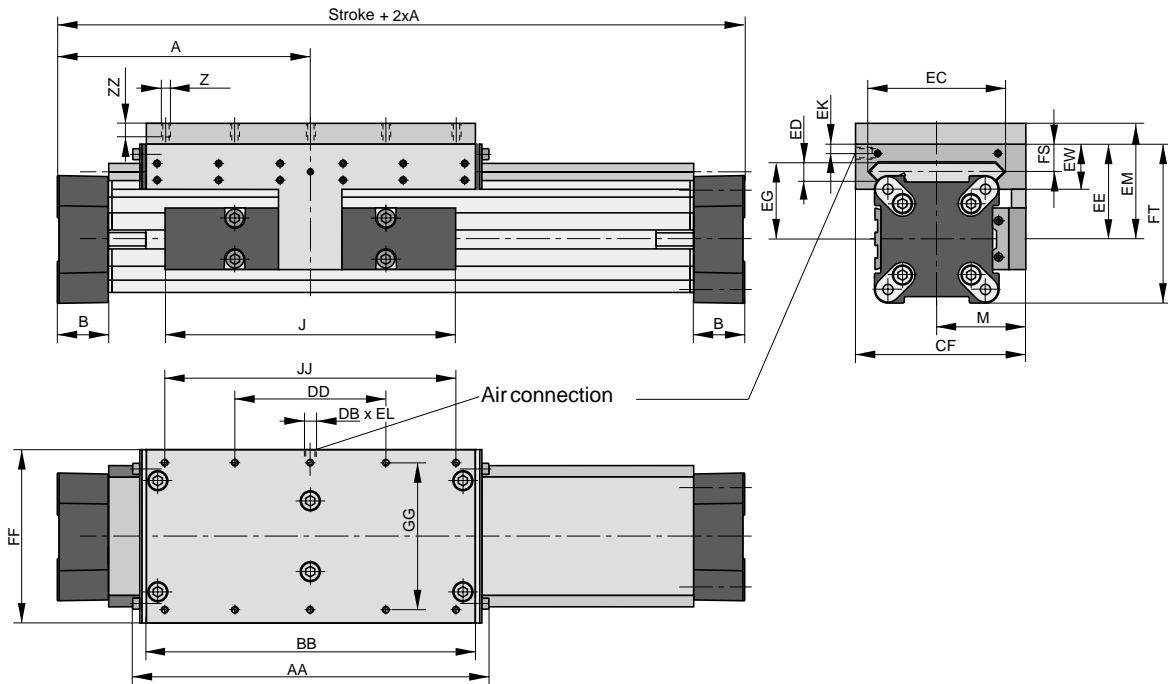
\* **Please note:**

in the cushioning diagram, the mass of the guide carriage has to be added to the total moving mass.

The right to introduce technical modifications is reserved

**HOERBIGER**  
**ORIGA**

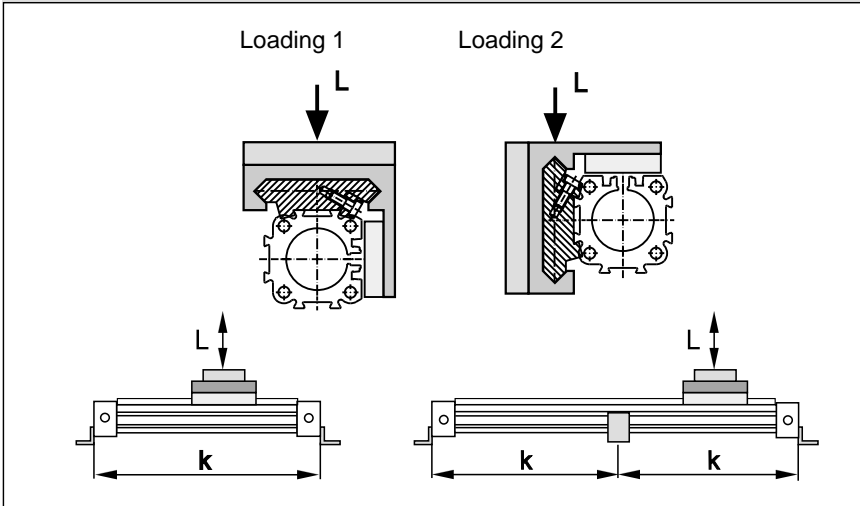
**Series OSP-P with Passive Brake MB**



**Dimension Table (mm)**

| Series          | A   | B    | J   | M    | Z  | AA  | BB  | DB   | DD  | CF   | EC  | ED | EE | EG | EK  | EL | EM  | EW | FF  | FT    | FS   | GG  | JJ  | ZZ |
|-----------------|-----|------|-----|------|----|-----|-----|------|-----|------|-----|----|----|----|-----|----|-----|----|-----|-------|------|-----|-----|----|
| <b>MB-SL 25</b> | 100 | 22   | 117 | 40,5 | M6 | 162 | 142 | M5   | 60  | 72.5 | 47  | 12 | 53 | 39 | 9   | 5  | 73  | 30 | 64  | 73.5  | 20   | 50  | 120 | 12 |
| <b>MB-SL 32</b> | 125 | 25.5 | 152 | 49   | M6 | 205 | 185 | G1/8 | 80  | 91   | 67  | 14 | 62 | 48 | 7   | 10 | 82  | 33 | 84  | 88    | 21   | 64  | 160 | 12 |
| <b>MB-SL 40</b> | 150 | 28   | 152 | 55   | M6 | 240 | 220 | G1/8 | 100 | 102  | 77  | 14 | 64 | 50 | 6.5 | 10 | 84  | 34 | 94  | 98.5  | 21.5 | 78  | 200 | 12 |
| <b>MB-SL 50</b> | 175 | 33   | 200 | 62   | M6 | 284 | 264 | G1/8 | 120 | 117  | 94  | 14 | 75 | 56 | 10  | 12 | 95  | 39 | 110 | 118.5 | 26   | 90  | 240 | 12 |
| <b>MB-SL 63</b> | 215 | 38   | 256 | 79   | M8 | 312 | 292 | G1/8 | 130 | 152  | 116 | 18 | 86 | 66 | 11  | 12 | 106 | 46 | 152 | 139   | 29   | 120 | 260 | 13 |
| <b>MB-SL 80</b> | 260 | 47   | 348 | 96   | M8 | 312 | 292 | G1/8 | 130 | 169  | 116 | 18 | 99 | 79 | 11  | 12 | 119 | 46 | 152 | 165   | 29   | 120 | 260 | 13 |

## Loading



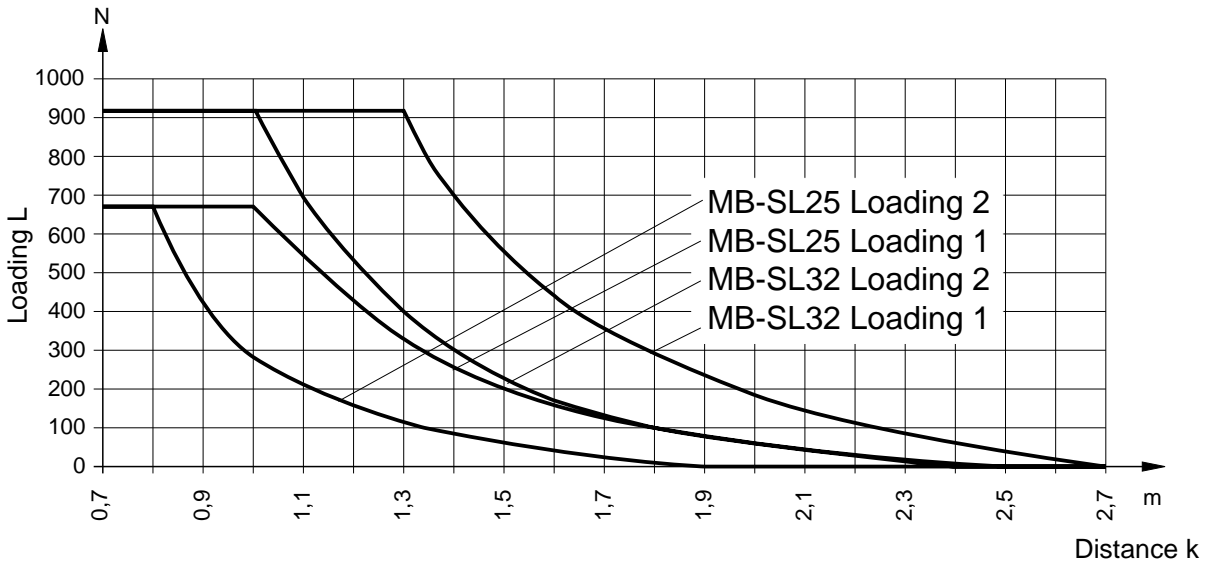
## Mid Section Support

Mid-section supports are required from a certain stroke length to prevent excessive deflection and vibration of the linear drive. The diagrams show the maximum permissible unsupported length in relation to loading. A distinction must be drawn between loading 1 and loading 2. Deflection of 0.5 mm max. between supports is permissible.

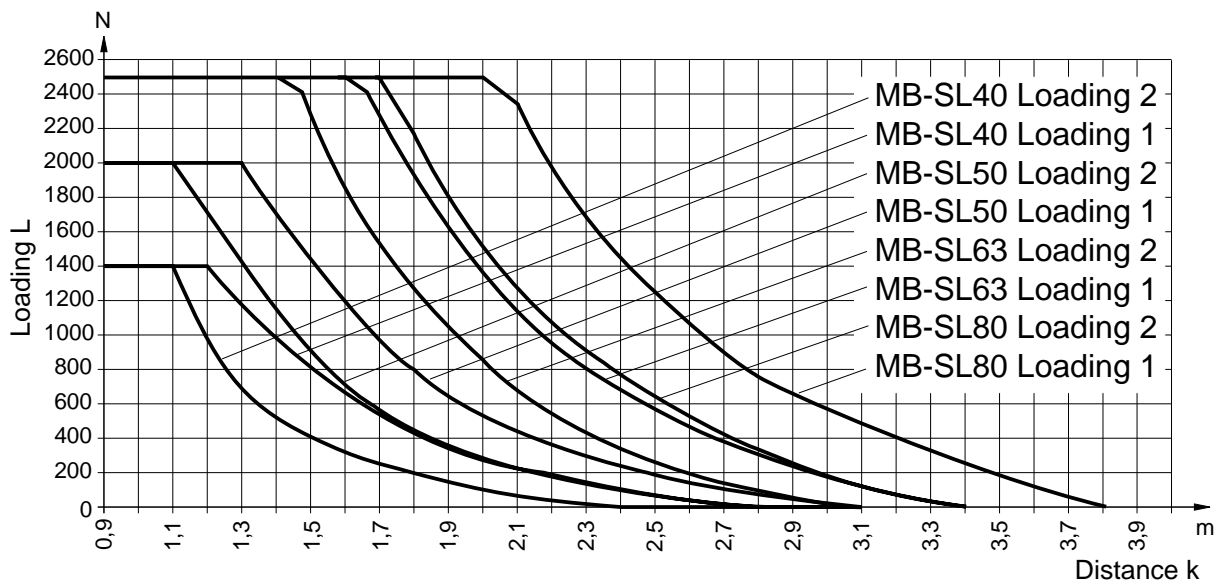
### Note:

For speeds  $v > 0,5$  m/s the distance between supports should not exceed 1 m.

### Permissible Unsupported Length MB-SL25, MB-SL32

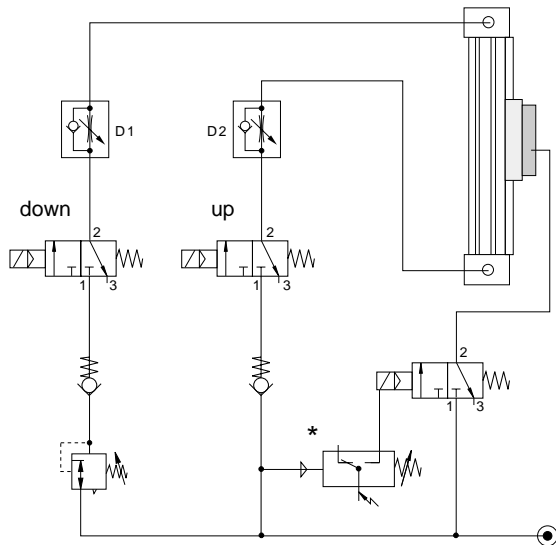


### Permissible Unsupported Length MB-SL40, MB-SL50, MB-SL63 und MB-SL80

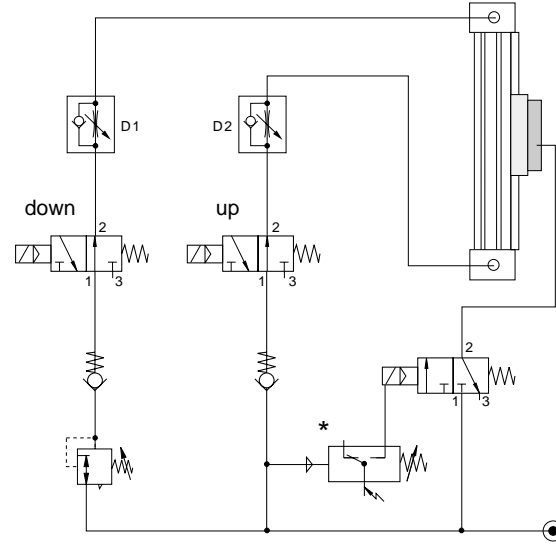


## Application Example - Vertical Application

Control of a cylinder with 3/2 way valves.  
Basic position – **exhausted**



Control of a cylinder with 3/2 way valves.  
Basic position – **pressurized**



### Control Examples

Under normal operating circumstances the pressure switch is closed and the air flows through the 3/2 way solenoid valves from port 1 to 2, thus lifting the brake from the rail (operating condition). The brake is pressurized by means of a 3/2 way valve in combination with a pressure switch. When there is a pressure loss, the brake is actuated by the pressure switch.

When the air pressure is restored to both cylinder chambers, the brake is lifted and the linear drive can be moved again.

The speed regulating valves D1 and D2 control the speed of the linear drive, and have no influence on the brake. The two non-return valves give the system a higher stability.

The pressure regulating valve is used to compensate for the downward force in this vertical application.

#### Please note:

Before the brake is lifted, make sure that both air chambers of the linear drive are pressurized. Small diameter tubing, fittings and valves with a nominal diameter, and tubing that is too long all change the reaction time of the brake!

#### \* Tip:

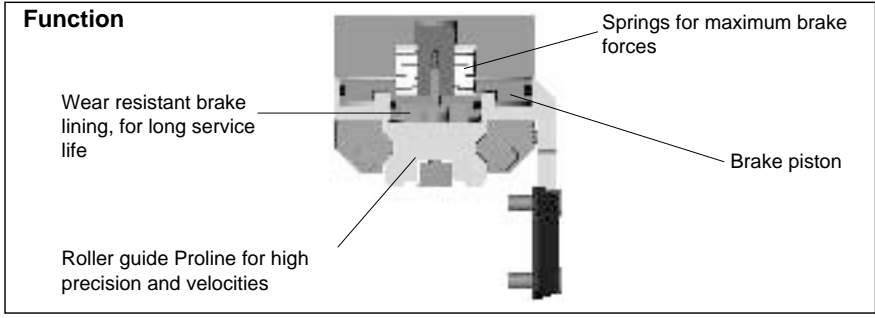
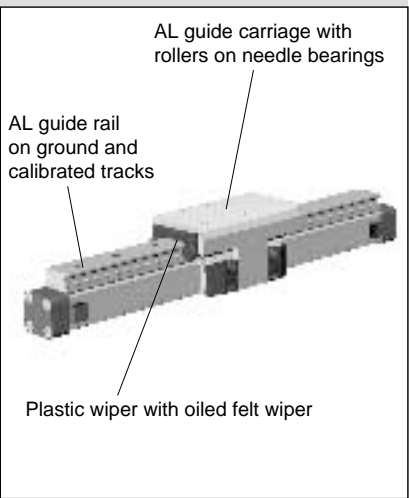
The pressure switch actuates the brake when the pressure drops below the set value.

For accessories, such as tubing and fittings, please refer to our separate catalogue.

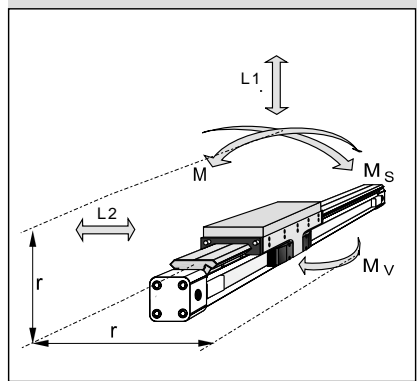
### Required Components

|                                  |
|----------------------------------|
| Way Valves                       |
| Port size                        |
| M5                               |
| G1/8                             |
| G1/4                             |
| G1/2                             |
| Pressure Regulating Valve        |
| G1/8 - G3/8                      |
| P/E-Converter                    |
| Non-Return Valves                |
| G1/8, G1/4                       |
| G3/8                             |
| Screw-in Speed Regulating Valves |
| M5 - G1/4                        |

**Versions**



**Loads, Forces and Moments**



**Technical Data**

The table shows the maximal permissible loads. If multiple moments and forces act upon the cylinder simultaneously, the following equation applies:

$$\frac{M}{M_{\max}} + \frac{M_s}{M_{s \max}} + \frac{M_v}{M_{v \max}} + \frac{L_1}{L_{1 \max}} + \frac{L_2}{L_{2 \max}} \leq 1$$

The sum of the loads should not exceed >1

The table shows the maximum permissible values for light, shock-free operation, which must not be exceeded even under dynamic conditions.

| Series          | For linear drive | Max. moments [Nm] |     |     | Max. loads [N] L1, L2 | Max. brake force [N] <sup>1)</sup> | Mass of linear drive with guide [kg] |                            | Mass* guide carriage [kg] |
|-----------------|------------------|-------------------|-----|-----|-----------------------|------------------------------------|--------------------------------------|----------------------------|---------------------------|
|                 |                  | M                 | Ms  | Mv  |                       |                                    | with 0 mm stroke                     | increase pro 100 mm stroke |                           |
| <b>MB-PL 25</b> | OSP-P25          | 55                | 23  | 55  | 1210                  | 315                                | 2.14                                 | 0.40                       | 1.24                      |
| <b>MB-PL 32</b> | OSP-P32          | 91                | 36  | 91  | 1460                  | 490                                | 4.08                                 | 0.62                       | 2.02                      |
| <b>MB-PL 40</b> | OSP-P40          | 198               | 72  | 198 | 2600                  | 715                                | 5.46                                 | 0.70                       | 2.82                      |
| <b>MB-PL 50</b> | OSP-P50          | 313               | 139 | 313 | 3890                  | 1100                               | 8.60                                 | 0.95                       | 4.07                      |

<sup>1)</sup> Braking surface dry – oil on the braking surface will reduce the braking force  
 \* Please note:  
 In the cushioning diagram, the mass of the guide carriage has to be added to the total moving mass.

# Multi-Brake with Aluminium Roller Guide Proline PL



Series MB-PL 25 to 50 for Linear Drive · Series OSP-P

- Features:**
- Brake operated by spring actuation
  - Brake release by pressurization
  - Corrosion resistant as standard
  - Optional sensor to indicate brake lining wear
  - Composite sealing system with plastic and felt wiper elements to remove dirt and lubricate the slideway
  - Blocking function in case of pressure loss
  - Intermediate stops possible

**Function:**

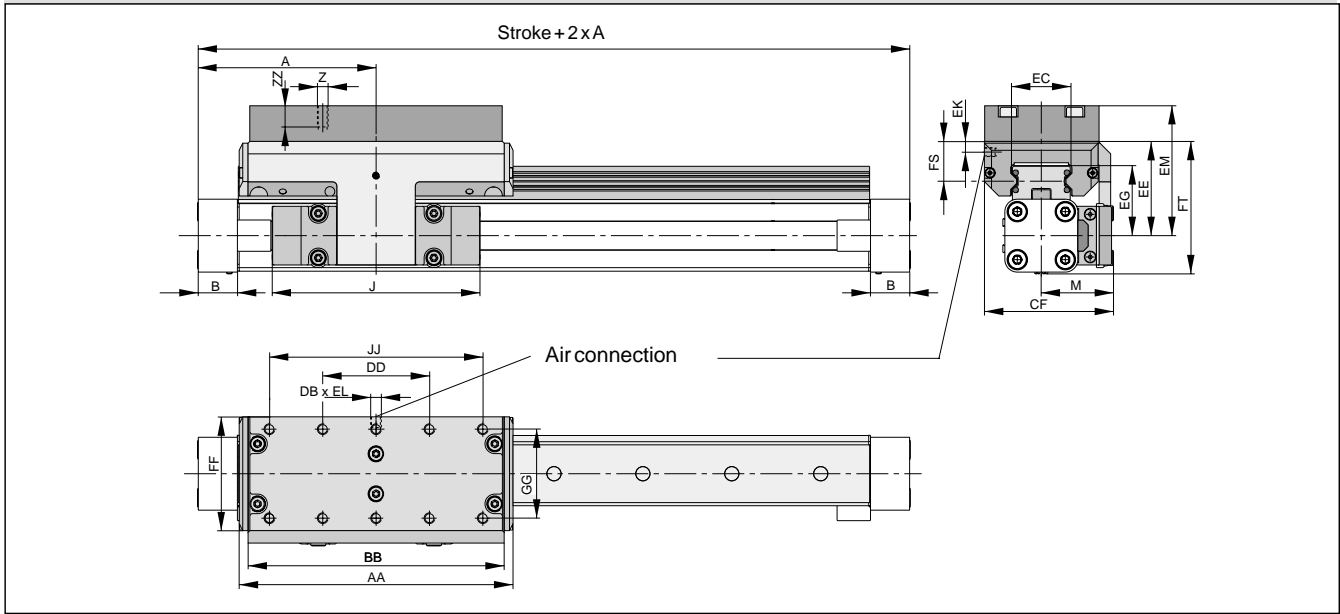
The Multi-Brake is a passive device. When the air pressure is removed the brake is actuated and movement of the cylinder is blocked. The brake is released by pressurization. The high friction, wear resistant brake linings allow the Multi-Brake to be used as a dynamic brake to stop cylinder movement in the shortest possible time. The powerful springs also allow the Multi-Brake to be used effectively in positioning applications.

Operating Pressure 4,5 - 8 bar.  
 A pressure of min. 4,5 bar release the brake.

The right to introduce technical modifications is reserved



## Series OSP-P with Passive Brake MB-PL

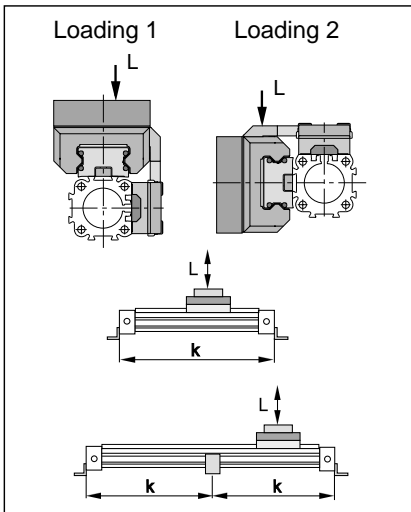


Dimension Table (mm) Series OSP-P MB-PL25, MB-PL32, MB-PL40, MB-PL50

| Series  | A   | B    | J   | M    | Z  | AA  | BB  | DB   | DD  | CF   | EC   | EE | EG   | EK  | EL | EM | FF  | FS   | FT    | GG | JJ  | ZZ |
|---------|-----|------|-----|------|----|-----|-----|------|-----|------|------|----|------|-----|----|----|-----|------|-------|----|-----|----|
| MB-PL25 | 100 | 22   | 117 | 40.5 | M6 | 154 | 144 | M5   | 60  | 72.5 | 32.5 | 53 | 39   | 9   | 5  | 73 | 64  | 23   | 73.5  | 50 | 120 | 12 |
| MB-PL32 | 125 | 25.5 | 152 | 49   | M6 | 197 | 187 | G1/8 | 80  | 91   | 42   | 62 | 48   | 7   | 10 | 82 | 84  | 25   | 88    | 64 | 160 | 12 |
| MB-PL40 | 150 | 28   | 152 | 55   | M6 | 232 | 222 | G1/8 | 100 | 102  | 47   | 64 | 50.5 | 6.5 | 10 | 84 | 94  | 23.5 | 98.5  | 78 | 200 | 12 |
| MB-PL50 | 175 | 33   | 200 | 62   | M6 | 276 | 266 | G1/8 | 120 | 117  | 63   | 75 | 57   | 10  | 12 | 95 | 110 | 29   | 118.5 | 90 | 240 | 16 |

## Mid Section Support

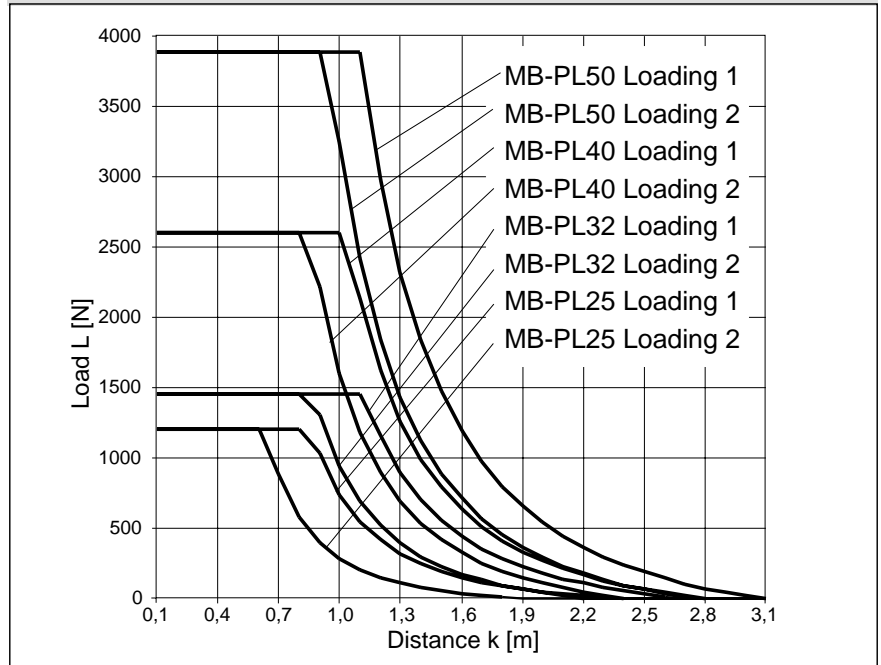
(for versions see page 56)  
 Mid-section supports are required from a certain stroke length to prevent excessive deflection and vibration of the linear drive. The diagrams show the maximum permissible unsupported length in relation to loading. A distinction must be drawn between loading 1 and loading 2. Deflection of 0.5 mm max. between supports is permissible.



### Note:

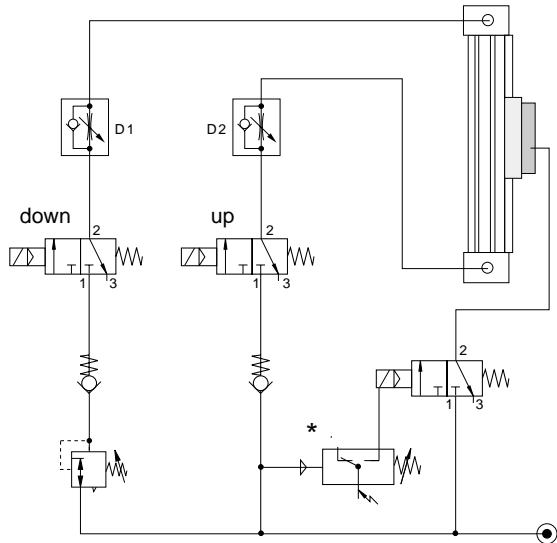
For speeds  $v > 0,5$  m/s the distance between supports should not exceed 1 m.

Permissible Unsupported Length OSP-P MB-PL25, MB-PL32, MB-PL40, MB-PL50

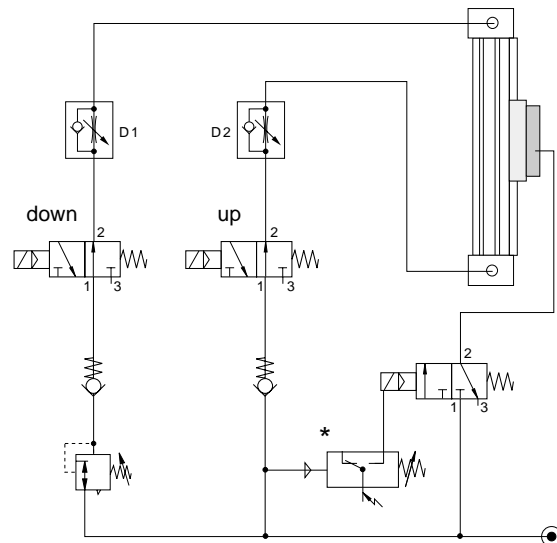


## Application Example - Vertical Application

Control of a cylinder with 3/2 way valves.  
Basic position – **exhausted**



Control of a cylinder with 3/2 way valves.  
Basic position – **pressurized**



### Control Examples

Under normal operating circumstances the pressure switch is closed and the air flows through the 3/2 way solenoid valves from port 1 to 2, thus lifting the brake from the rail (operating condition). The brake is pressurized by means of a 3/2 way valve in combination with a pressure switch. When there is a pressure loss, the brake is actuated by the pressure switch.

When the air pressure is restored to both cylinder chambers, the brake is lifted and the linear drive can be moved again.

The speed regulating valves D1 and D2 control the speed of the linear drive, and have no influence on the brake. The two non-return valves give the system a higher stability.

The pressure regulating valve is used to compensate for the downward force in this vertical application.

#### Please note:

Before the brake is lifted, make sure that both air chambers of the linear drive are pressurized. Small diameter tubing, fittings and valves with a nominal diameter, and tubing that is too long all change the reaction time of the brake!

#### \* Tip:

The pressure switch actuates the brake when the pressure drops below the set value.

### Required Components

|                                  |
|----------------------------------|
| Way Valves                       |
| Port size                        |
| M5                               |
| G1/8                             |
| G1/4                             |
| G1/2                             |
| Pressure Regulating Valve        |
| G1/8 - G3/8                      |
| P/E-Converter                    |
| Non-Return Valves                |
| G1/8, G1/4                       |
| G3/8                             |
| Screw-in Speed Regulating Valves |
| M5 - G1/4                        |

