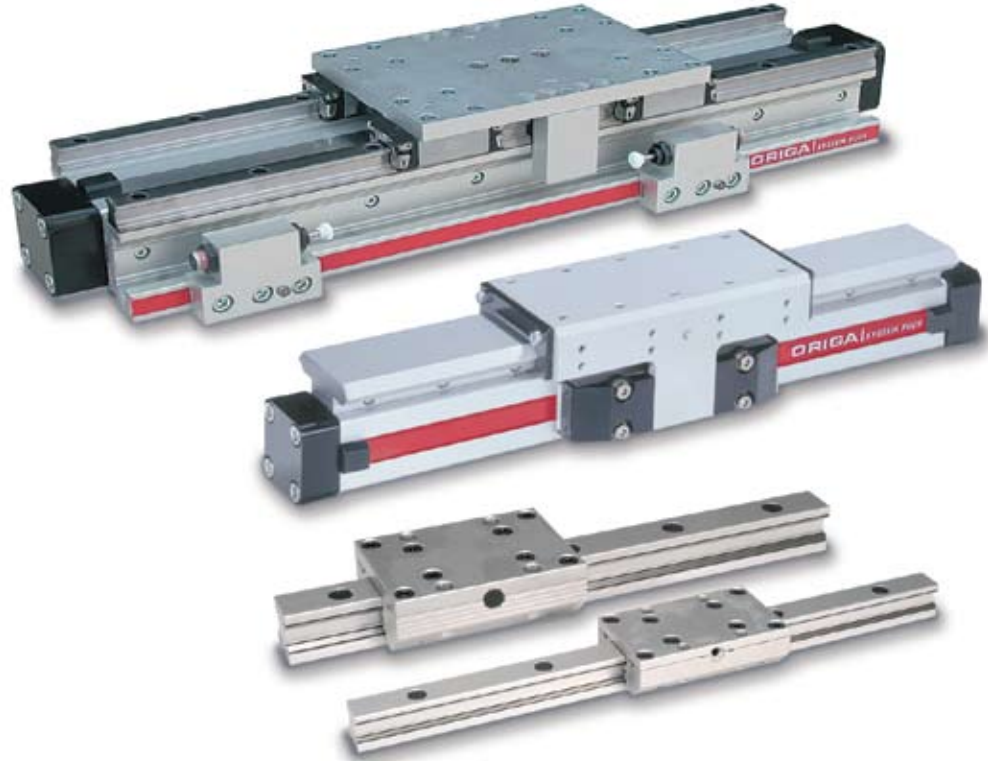




aerospace  
climate control  
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filtration  
fluid & gas handling  
hydraulics  
**pneumatics**  
process control  
sealing & shielding



# OSP-P Pneumatic Rodless Cylinders and Linear Guides

Catalog 0980



ENGINEERING YOUR SUCCESS.

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**Warning, Offer of Sale**

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 **WARNING**

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**Parker Hannifin Corporation**  
Parker-Origa  
Glendale Heights, Illinois  
[www.parker.com/pneu/rodless](http://www.parker.com/pneu/rodless)

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**Conversion Table****A****OSP**

— ORIGA

— SYSTEM

— PLUS

—  
*ELECTRIC ACTUATOR*

**2D & 3D  
CAD Drawings  
can be downloaded  
from website  
[www.parker.com/pneu/rodless](http://www.parker.com/pneu/rodless)**

**ATTENTION!**

Contact PARKER-ORIGA for sizing software  
and/or technical assistance  
630-871-8300

All dimensions are in European-Standard.  
Please convert all in US-Standard.

**Conversion Table**

<b>Multiply</b>	<b>By</b>	<b>To Obtain</b>
Millimeters	.03937	Inches
Newtons	.2248	Lbs.(F)
Newton-Meters	8.8512	In-Lbs
Kilograms	2.205	Lbs.
<hr/>		
Inches	25.4	Millimeters
Lbs.(F)	4.448	Newtons
In-Lbs	.113	Newtons-Meters
Lbs.	.45359	Kilograms

**Certifications**

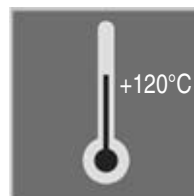
PARKER-ORIGA rodless pneumatic cylinders are the first rodless cylinders that have been approved for use in potentially explosive atmospheres in Equipment Group II, Category 2 GD

The Cylinders are to the ATEX Certification 94/9/EG (ATEX 95) for Pneumatic Components.

For ATEX Certification, consult factory for ordering assistance.



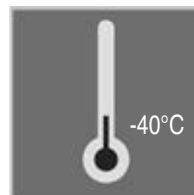
for use in Ex-Areas



High Temperature Version  
for temperatures up to +120°C



for Clean Room Applications  
certified to  
DIN EN ISO 14644-1



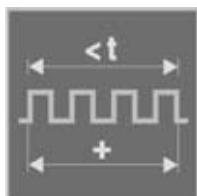
Low Temperature Version  
for temperatures up to  
-40°C



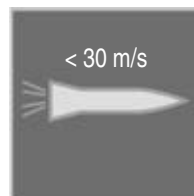
Stainless steel version  
for special applications



Slow Speed Version  
 $v = 0.005 - 0.2 \text{ m/s}$



with special pneumatic  
cushioning system for cycle  
time optimization,  
for  $\varnothing 16$  to  $50 \text{ mm}$   
– on request



High Speed Version  
 $v_{\text{max.}} = 30 \text{ m/s}$

## The System Concept

## One Concept – Three Drive Options

A

Based on the ORIGA rodless cylinder, proven in world wide markets, PARKER-ORIGA now offers the complete solution for linear drive systems. Designed for absolute reliability, high performance, ease of use and optimized engineering the ORIGA SYSTEM PLUS satisfies even the most demanding applications.

### ORIGA SYSTEM PLUS

is a totally modular concept which offers the choice of pneumatic or electric actuation, with guidance and control modules to suit the exact needs of individual installations.

The actuators at the core of the system all have a common aluminum extruded profile, with double dovetail mounting rails on three sides, these

are the principle building blocks of the system to which all modular options are directly attached.



### SYSTEM MODULARITY

#### • Pneumatic Drive

– For all round versatility and convenience, combining ease of control and broad performance capability. Ideally suited for point-to point operations, reciprocating movements and simple traverse / transfer applications.

#### • Electric Screw Drive

– For high force capability and accurate path and position control.

#### • Electric Belt Drive

– For high speed applications, accurate path and position control and longer strokes.

**For additional information on electric linear actuators, please contact factory for OSP-E literature.**


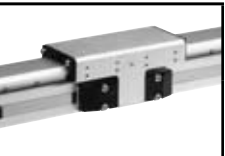
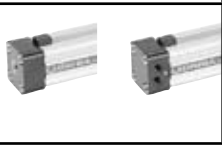
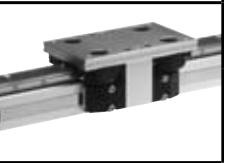

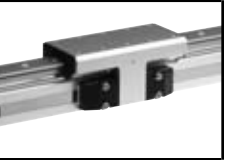
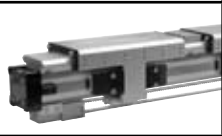


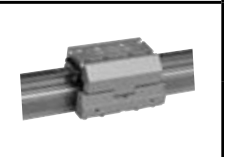
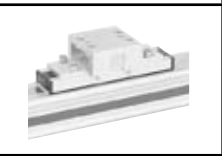
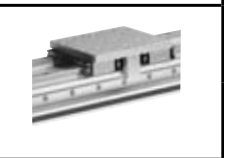

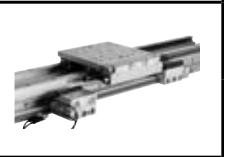


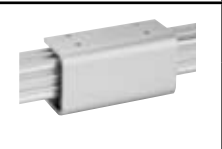


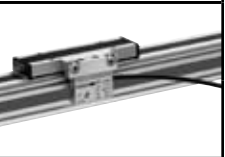

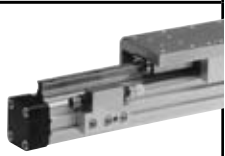
• Different guidance options provide the necessary level of precision, performance and duty for various applications.

• Compact solutions, which are simple to install and can be easily retrofitted.

• Valves and control options can be directly mounted to the actuator system.

• Diverse mounting options to provide total installation flexibility.

\* For information on Electric Linear Drives, contact factory for literature

<p><b>Basic Linear Drive</b> Standard Version</p> <ul style="list-style-type: none"> <li>• Series OSP-P</li> <li>• Series OSP-E* Belt drive Belt drive with integrated Guides Vertical belt drive with recirculating ball bearing guide</li> <li>• Series OSP-E* Screw drive (Ball Screw, Trapezoidal Screw)</li> </ul>		<p>Linear Guides – SLIDELINE</p> <ul style="list-style-type: none"> <li>• Series OSP-P</li> <li>• Series OSP-E Screw drive*</li> </ul>	
<p>Air Connection on the End-face or both at One End</p> <ul style="list-style-type: none"> <li>• Series OSP-P</li> </ul>		<p>Linear Guides – POWERSLIDE</p> <ul style="list-style-type: none"> <li>• Series OSP-P</li> <li>• Series OSP-E Belt drive*</li> <li>• Series OSP-E Screw drive*</li> </ul>	
<p>Clean Room Cylinder certified to DIN EN ISO 146644-1</p> <ul style="list-style-type: none"> <li>• Series OSP-P</li> <li>• Series OSP-E..SB</li> </ul>		<p>Linear Guides – PROLINE</p> <ul style="list-style-type: none"> <li>• Series OSP-P</li> <li>• Series OSP-E Belt drive*</li> <li>• Series OSP-E Screw drive*</li> </ul>	
<p>Bi-parting Version</p> <ul style="list-style-type: none"> <li>• Series OSP-P</li> </ul>		<p>Linear Guides – STARLINE</p> <ul style="list-style-type: none"> <li>• Series OSP-P</li> </ul>	
<p>Integrated 3/2 Way Valves</p> <ul style="list-style-type: none"> <li>• Series OSP-P</li> </ul>		<p>Linear Guides – KF</p> <ul style="list-style-type: none"> <li>• Series OSP-P</li> </ul>	
<p>Clevis Mounting</p> <ul style="list-style-type: none"> <li>• Series OSP-P</li> <li>• Series OSP-E Belt drive*</li> <li>• Series OSP-E Screw drive*</li> </ul>		<p>Heavy Duty Linear Guides – HD</p> <ul style="list-style-type: none"> <li>• Series OSP-P</li> <li>• Series OSP-E Screw drive*</li> </ul>	
<p>End Cap Mounting</p> <ul style="list-style-type: none"> <li>• Series OSP-P</li> <li>• Series OSP-E Belt drive*</li> <li>• Series OSP-E Screw drive*</li> </ul>		<p>Intermediate Stop Module – ZSM</p> <ul style="list-style-type: none"> <li>• Series OSP-P</li> </ul>	
<p>Mid-Section Support</p> <ul style="list-style-type: none"> <li>• Series OSP-P</li> <li>• Series OSP-E Belt drive*</li> <li>• Series OSP-E Screw drive*</li> </ul>		<p>Brakes</p> <ul style="list-style-type: none"> <li>• Active Brakes</li> <li>• Passive Brakes</li> </ul>	
<p>Inversion Mounting</p> <ul style="list-style-type: none"> <li>• Series OSP-P</li> <li>• Series OSP-E Belt drive*</li> <li>• Series OSP-E Screw drive*</li> </ul>		<p>Magnetic Switches</p> <ul style="list-style-type: none"> <li>• Series OSP-P</li> <li>• Series OSP-E Belt drive*</li> <li>• Series OSP-E Screw drive*</li> </ul>	
<p>Standard Version</p> <ul style="list-style-type: none"> <li>• Series OSP-P</li> </ul>		<p>SENSOFLEX – Measuring System</p> <ul style="list-style-type: none"> <li>• Series SFI-plus</li> </ul>	
<p>Multiplex Connection</p> <ul style="list-style-type: none"> <li>• Series OSP-P</li> </ul>		<p>Variable Stop VS</p> <ul style="list-style-type: none"> <li>• Series OSP-P with Linear Guide STL, KF, HD</li> </ul>	

**A**

**Modular Components Overview**

**A**

Linear Drives	OSP-P10	OSP-P16	OSP-P25	OSP-P32	OSP-P40	OSP-P50	OSP-P63	OSP-P80
Theoretical Force at 6 bar (N)	47	120	295	483	754	1178	1870	3010
Effective Force at 6 bar (N)	32	78	250	420	640	1000	1550	2600
Velocity v (m/s)	> 0.005	> 0.005	> 0.005	> 0.005	> 0.005	> 0.005	> 0.005	> 0.005
Magnetic Piston (three sides)	X	□	□	□	□	□	□	□
Lubrication - Prelubricated	□	□	□	□	□	□	□	□
Multiple Air Ports ( 4 x 90° )	X	□	□	□	□	□	□	□
Both Air Connections at End-face	X	○	○	○	○	○	○	○
Air Connection on the End-face	X	○	○	○	○	○	○	○
Cushioning	□	□	□	□	□	□	□	□
Cushioning Length (mm)	2,50	11	17	20	27	30	32	39
Stroke Length (mm) ▲	1 - 6000	1 - 6000	1 - 6000	1 - 6000	1 - 6000	1 - 6000	1 - 6000	1 - 6000
Pressure Range pmax (bar)	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Temperature Range (°C) *	-10 – + 80	-10 – + 80	-10 – + 80	-10 – + 80	-10 – + 80	-10 – + 80	-10 – + 80	-10 – + 80
Viton / Chemical Resistance	○	○	○	○	○	○	○	○
Stainless Steel Parts	○	○	○	○	○	○	○	○
Clevis Mounting	○	○	○	○	○	○	○	○
Slow Speed Lubrication	○	○	○	○	○	○	○	○
Duplex Connection / Multiplex Connection	X	on request	○	○	○	○	on request	on request
Tandem Piston	○	○	○	○	○	○	○	○
<b>Basic Cylinder</b>								
F (N)	20	120	300	450	750	1200	1650	2400
Mx (Nm)	0.2	0.45	1.5	3	6	10	12	24
My (Nm)	1	4	15	30	60	115	200	360
Mz (Nm)	0.3	0.5	3	5	8	15	24	48
<b>SLIDELINE</b>								
F (N)	X	325	675	925	1500	2000	2500	2500
Mx (Nm)	X	6	14	29	50	77	120	120
My (Nm)	X	11	34	60	110	180	260	260
Mz (Nm)	X	11	34	60	110	180	260	260
<b>PROLINE</b>								
F (N)	X	542	857	1171	2074	3111	X	X
Mx (Nm)	X	8	16	29	57	111	X	X
My (Nm)	X	12	39	73	158	249	X	X
Mz (Nm)	X	12	39	73	158	249	X	X
<b>POWERSLIDE</b>								
F (N)	X	1400	1400 - 3000	1400 - 3000	3000	3000 - 4000	X	X
Mx (Nm)	X	14	14 - 65	20 - 65	65 - 90	90 - 140	X	X
My (Nm)	X	45	63 - 175	70 - 175	175 - 250	250 - 350	X	X
Mz (Nm)	X	45	63 - 175	70 - 175	175 - 250	250 - 350	X	X
<b>STARLINE</b>								
F (N)	X	1000	3100	3100	4000-7500	4000-7500	X	X
Mx (Nm)	X	15	50	62	150	210	X	X
My (Nm)	X	30	110	160	400	580	X	X
Mz (Nm)	X	30	110	160	400	580	X	X
- Variable Stop	X	○	○	○	○	○	X	X
<b>KF Guide</b>								
F (N)	X	1000	3100	3100	4000-7500	4000-7500	X	X
Mx (Nm)	X	12	35	44	119	170	X	X
My (Nm)	X	25	90	133	346	480	X	X
Mz (Nm)	X	25	90	133	346	480	X	X
- Variable Stop	X	○	○	○	○	○	X	X





## Modular Components Overview

Linear Drives	OSP-P10	OSP-P16	OSP-P25	OSP-P32	OSP-P40	OSP-P50	OSP-P63	OSP-P80
<b>HD Heavy Duty Guide</b>								
F (N)	X	X	6000	6000	15000	18000	X	X
Mx (Nm)	X	X	260	285	800	1100	X	X
My (Nm)	X	X	320	475	1100	1400	X	X
Mz (Nm)	X	X	320	475	1100	1400	X	X
– Variable Stop	X	X	○	○	○	○	X	X
– Intermediate Stop Module	X	X	○	X	X	X	X	X
<b>Active Brake</b>								
Braking Force at 6 bar (brake surface dry) (N)	X	X	350	590	900	1400	2170	4000
<b>SLIDELINE SL / PROLINE PL with Brakes</b>								
<b>Active Brake</b>								
SL Braking Force at 6 bar (brake surface dry) (N)	X	X	325	545	835	1200	X	X
PL Braking Force at 6 bar (brake surface dry) (N)	X	X	on request	on request	on request	on request	X	X
<b>Passive Brake Multibrake</b>								
SL Braking Force at 6 bar (brake surface dry) (N)	X	X	470	790	1200	1870	2900	2900
PL Braking Force at 6 bar (brake surface dry) (N)	X	X	315	490	715	1100	–	–
<b>Magnetic Switches</b>								
Standard Version	○	○	○	○	○	○	○	○
T-Nut Version	○	○	○	○	○	○	○	○
<b>Displacement Measuring Systems</b>								
SFI-plus Incremental	X	X	○	○	○	○	○	○
Integrated Valves 3/2 WV NO VOE	X	X	○	○	○	○	on request	on request
<b>Mountings</b>								
End Cap Mounting / Mid-Section Support	○	○	○	○	○	○	○	○
Inversion Mounting	X	○	○	○	○	○	○	○
Shock Absorber for Intermediate Positioning	X	X	on request	on request	on request	on request	X	X
Adaptor Profile / T-Nut Profile	X	○	○	○	○	○	X	X
<b>Special Cylinders</b>								
Special Pneumactical Cushioning System	X	on request	on request	on request	on request	on request	X	X
Clean Room Cylinders to DIN EN ISO 14644-1	X	○	○	○	X	X	X	X
Bi-parting Version	X	X	X	X	○	X	X	X
High-Speed up to 30 m/s	X	on request	on request	on request	X	X	X	X

□ = Standard Version

▲ = Longer Strokes on Request

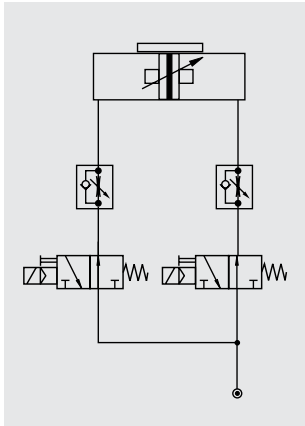
\* = other temperature Ranges on Request

○ = Option

X = Not Applicable

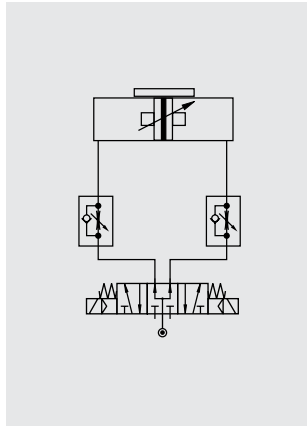
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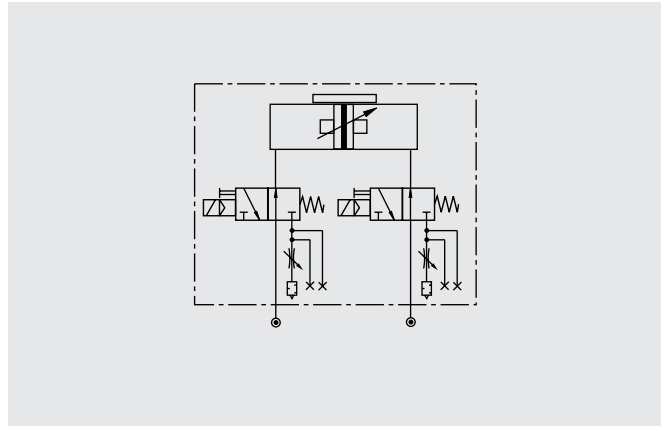
Circuit diagram for end of stroke application. Intermediate positioning is also possible.

The cylinder is controlled by two 3/2-way valves (normally open). The speed can be adjusted independently for both directions.

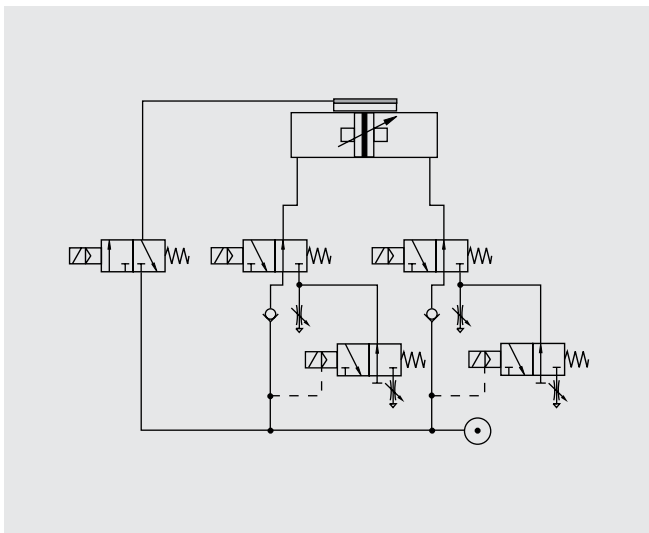


Circuit diagram for end of stroke application. Intermediate positioning is also possible.

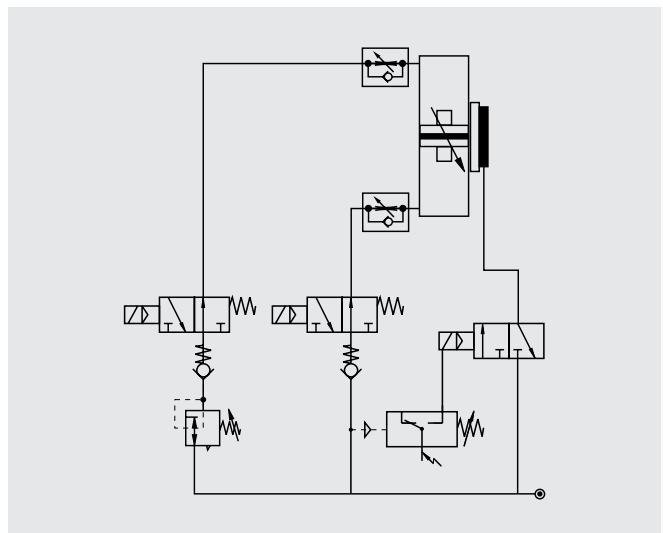
The cylinder is controlled by a 5/3-way valve (middle position pressurized). The speed can be adjusted independently for both directions.



The optional integrated VOE Valves offer optimal control, and allow accurate positioning of intermediate positions and the lowest possible speeds.

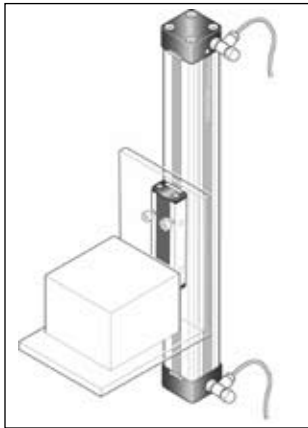


Fast/Slow speed cycle control with pneumatic brake for accurate positioning at high velocities. Additional 3/2-way valves with adjustable throttle valves at the exhaust of the standard directional control valves for two displacement speeds in each direction of the piston's travel. The valve controlling the brake is activated after the slow speed cycle is activated.

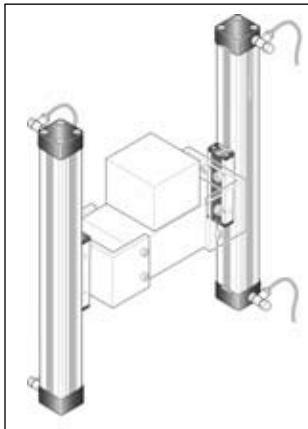
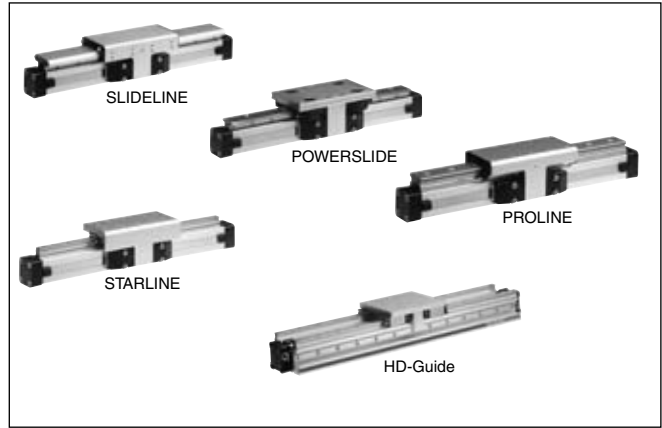


The combination of an OSP-cylinder with the passive MULTIBRAKE as shown here, allows accurate positioning and safety in case of loss of pneumatic air pressure.

**ORIGA SYSTEM PLUS – rodless linear drives offer maximum flexibility for any application.**



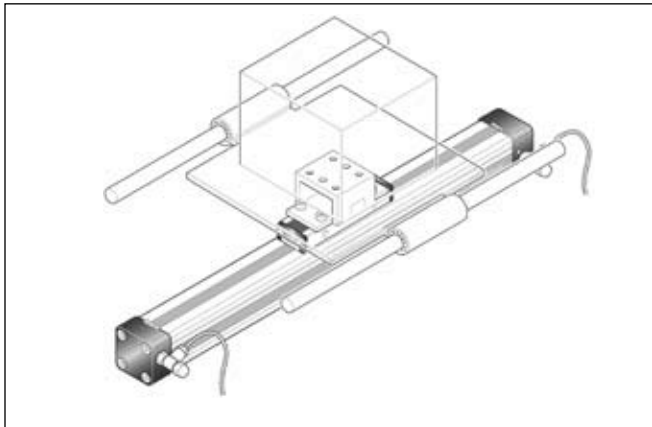
The high load capacity of the piston can cope with high bending moments without additional guides.



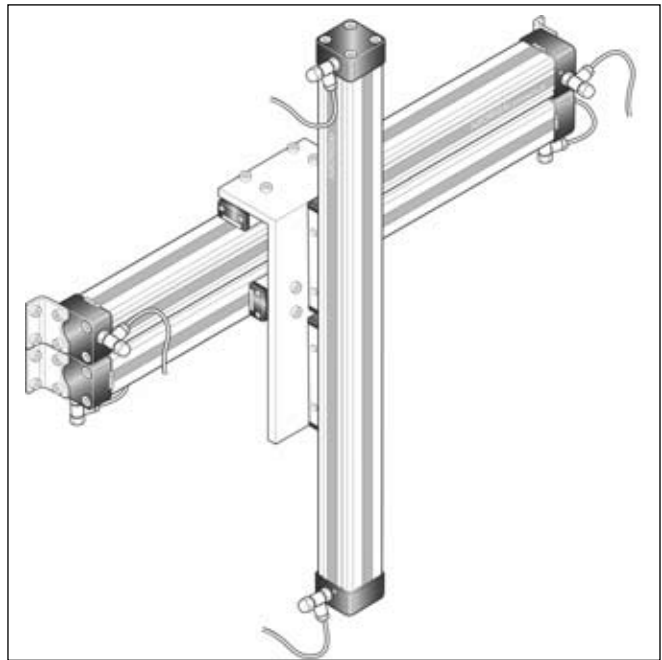
The mechanical design of the OSP-P allows synchronized movement of two cylinders.

Integrated guides offer optimal guidance for applications requiring high performance, easy assembly and maintenance free operation.

Optimal system performance by combining multi-axis cylinder combinations.



When using external guides, the clevis mounting is used to compensate for deviations in parallelism.



For further information and assembly instructions, please contact your local PARKER-ORIGA dealer.



**Notes**

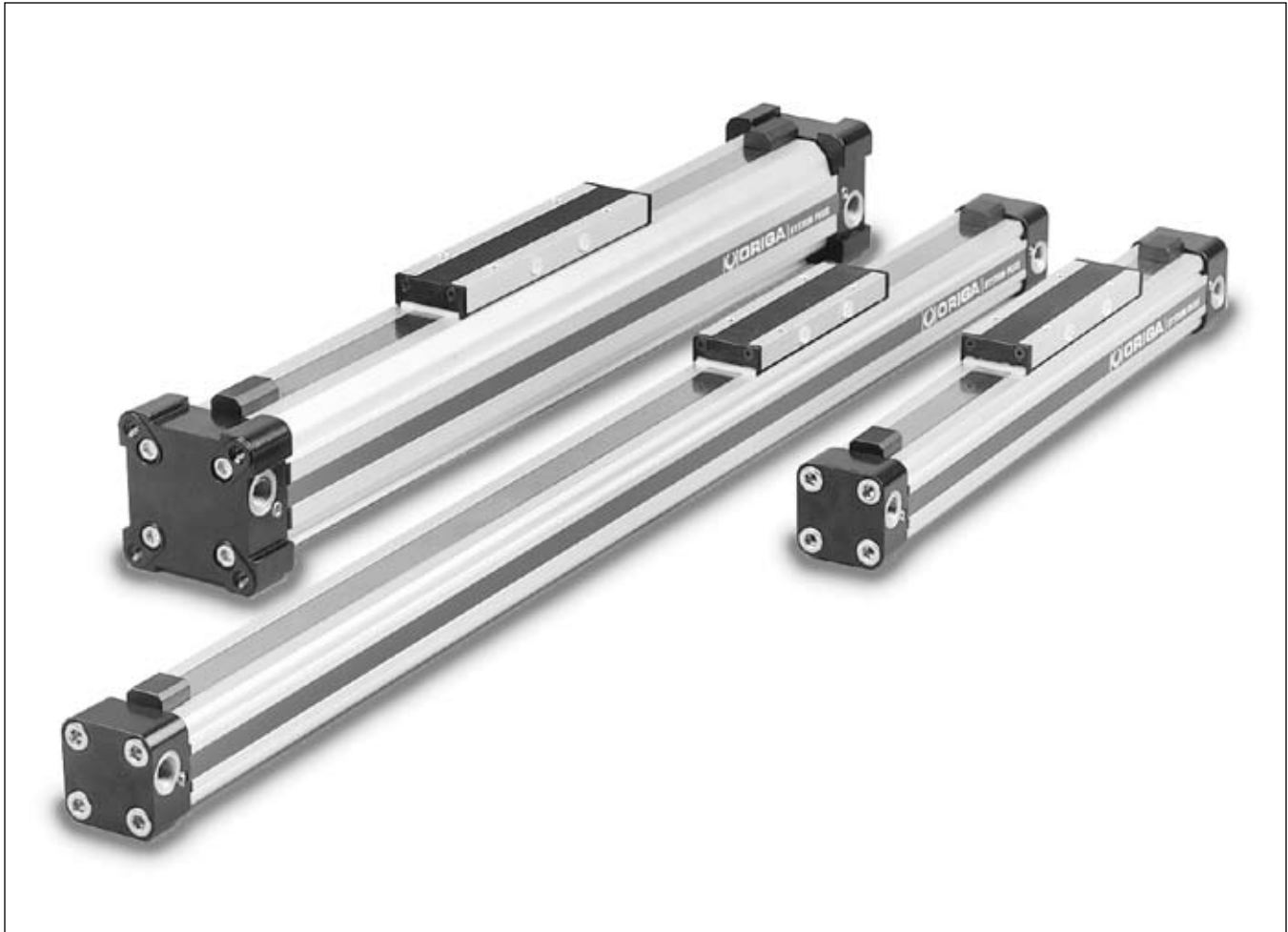
---

**A**



# Rodless Pneumatic Cylinders Series OSP-P

**B**



## Standard Rodless Pneumatic Cylinders

System Concepts & Components .....	B2-B5
Technical Data .....	B7-B9
Dimensions.....	B10-B15
Active Brakes.....	B16-B19
Accessories (Mounts & Supports).....	B20-B29
Ordering Information .....	B30

## Clean Room Cylinders

Technical Data .....	B31-B32
Dimensions.....	B33
Ordering Information .....	B34

## Bi-parting Rodless Cylinders

Technical Data .....	B35
Dimensions.....	B36
Ordering Information .....	B37



B1

[www.comoso.com](http://www.comoso.com)

**Parker Hannifin Corporation**  
Parker-Origa  
Glendale Heights, Illinois  
[www.parker.com/pneu/rodless](http://www.parker.com/pneu/rodless)

# ORIGA SYSTEM PLUS

## – INNOVATION FROM A PROVEN DESIGN

**A completely new generation of linear drives which can be simply and neatly integrated into any machine layout.**

**B**

### A NEW MODULAR LINEAR DRIVE SYSTEM

With this second generation linear drive PARKER-ORIGA offers design engineers complete flexibility. The well known ORIGA cylinder has been further developed into a combined linear actuator, guidance and control package. It forms the basis for the new, versatile ORIGA SYSTEM PLUS linear drive system.

All additional functions are designed into modular system components which replace the previous series of cylinders.

### MOUNTING RAILS ON 3 SIDES

Mounting rails on 3 sides of the cylinder enable modular components such as linear guides, brakes, valves, magnetic switches etc. to be fitted to the cylinder itself. This solves many installation problems, especially where space is limited.

The modular system concept forms an ideal basis for additional customer-specific functions.

**Magnetic piston as standard - for contactless position sensing on three sides of the cylinder.**

**Corrosion resistant steel outer sealing band and robust wiper system on the carrier for use in aggressive environments.**

**Proven corrosion resistant steel inner sealing band for optimum sealing and extremely low friction.**

**Combined clamping for inner and outer sealing band with dust cover.**

**Stainless steel screws optional.**

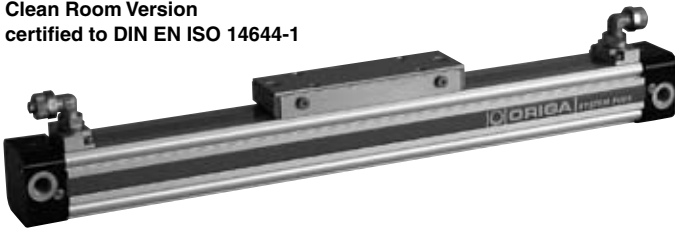
**Low friction piston seals for optimized running characteristics**

**Optimized cylinder profile for maximum stiffness and minimum weight. Integral air passages enable both air connections to be positioned at one end, if desired.**

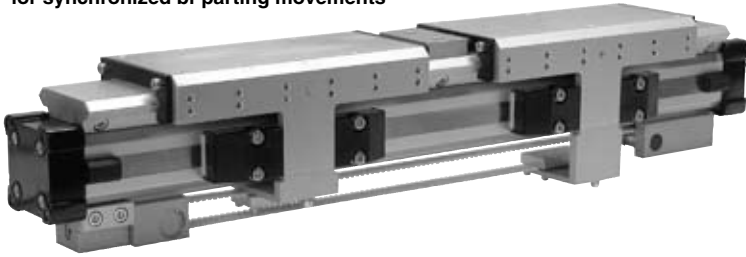
**End cap can be rotated to any one of the four positions (before or after delivery) so that the air connection can be in any desired position.**



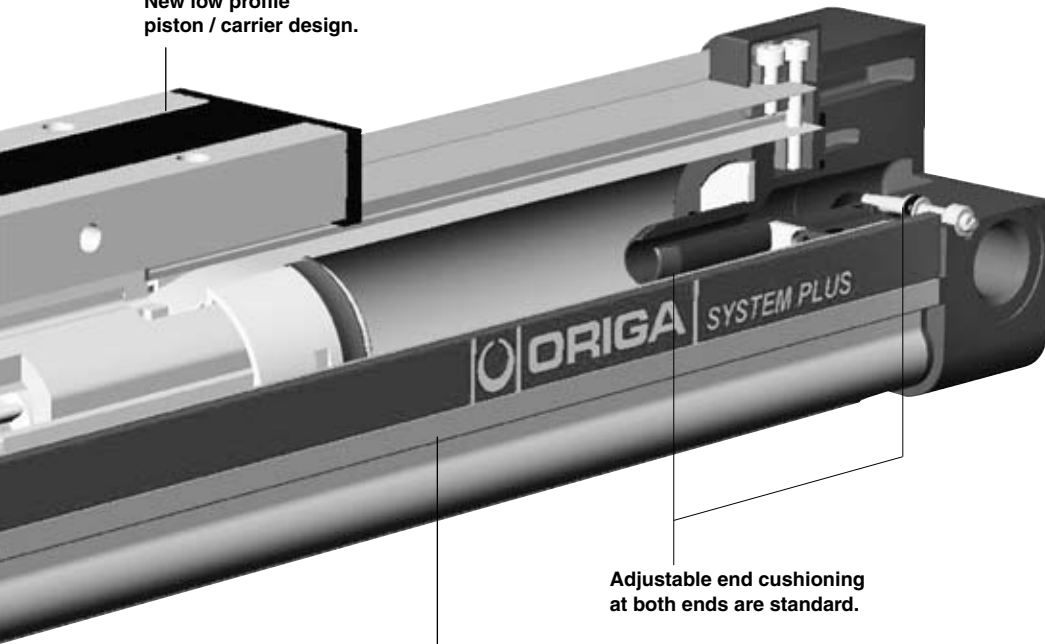
Clean Room Version  
certified to DIN EN ISO 14644-1



Rodless Cylinder  
for synchronized bi-parting movements



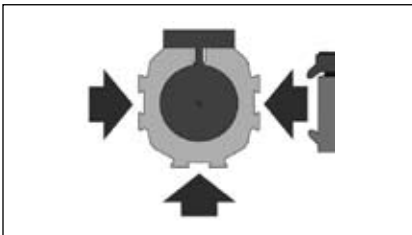
New low profile  
piston / carrier design.



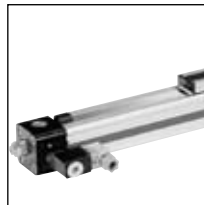
Adjustable end cushioning  
at both ends are standard.

Integral dovetail rails on three sides  
provide many adaptation possibilities  
(linear guides, magnetic switches, etc.).

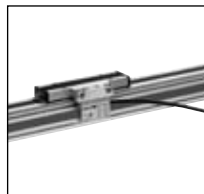
Modular system components  
are simply clamped on.



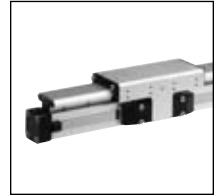
**INTEGRATED  
VOE VALVES**  
The complete  
compact solution  
for optimal cylinder  
control.



**SENSOFLEX  
SFI-plus**  
incremental  
measuring system  
with 0.1 (1.0) mm  
resolution



**SLIDELINE**  
Combination with  
linear guides  
provides for  
heavier loads.



**POWERSLIDE**  
Roller bearing  
precision guidance  
for smooth travel  
and high dynamic  
or static loads.



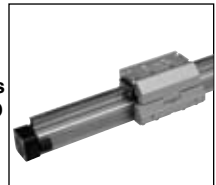
**PROLINE**  
The compact  
aluminum roller  
guide for high loads  
and velocities.



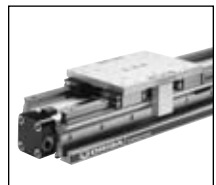
**STARLINE**  
Recirculating ball  
bearing guide for  
very high loads  
and precision



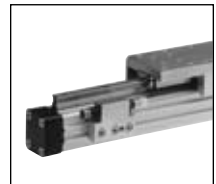
**KF GUIDE**  
Recirculating ball  
bearing guide – the  
mounting dimensions  
correspond to FESTO  
Type: DGPL-KF



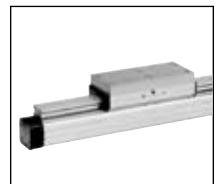
**HEAVY DUTY  
GUIDE HD**  
for heavy duty  
applications.



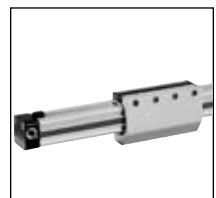
**VARIABLE STOP VS**  
The variable stop  
provides simple  
stroke limitation.



Passive pneumatic  
brake reacts  
automatically to  
pressure failure.



Active pneumatic  
brake for secure,  
positive stopping  
at any position.



**B**

## OPTIONS AND ACCESSORIES FOR SYSTEM VERSATILITY

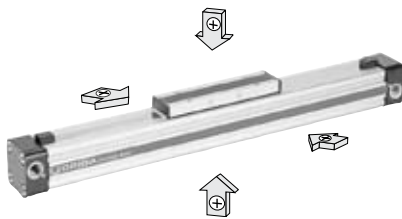
### SERIES OSP-P

#### STANDARD VERSIONS OSP-P10 to P80

Pages B7-B15

Standard carrier with integral guidance. End cap can be rotated 4 x 90° to position air connection on any side.

Magnetic piston as standard. Dovetail profile for mounting of accessories and the cylinder itself.



#### BASIC CYLINDER OPTIONS

##### CLEAN ROOM CYLINDERS

Page B31-B34

For use in clean room applications, certified with the IPA-Certificate (to DIN EN ISO 14644-1).

The special design of the linear drive enables all emissions to be led away.



##### STAINLESS VERSION

For use in constantly damp or wet environments. All screws are A2 quality stainless steel



##### SLOW SPEED OPTIONS

Specially formulated grease lubrication facilitates slow, smooth and uniform piston travel in the speed range from 0.005 to 0.2 m/s.



Minimum achievable speeds are dependent on several factors. Please consult our technical department.

Slow speed lubrication in combination with Viton® on demand.

Oil free operation preferred.

##### VITON® VERSION

For use in an environment with high temperatures or in chemically aggressive areas.



All seals are made of Viton®.

Sealing bands: Stainless steel

##### END-FACE AIR CONNECTION

Page B12

To solve special installation problems.



##### BOTH AIR CONNECTIONS AT ONE END

Page B13

For simplified tubing connections and space saving.



##### INTEGRATED VOE VALVES

Page B14

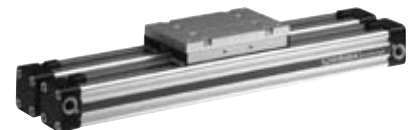
The complete compact solution for optimal cylinder control.



##### JOINT CLAMP CONNECTION

Page B28

The joint clamp connection combines two OSP-P cylinders of the same size into a compact unit with high performance.



##### MULTIPLEX CONNECTION

Page B29

The multiplex connection combines two or more OSP-P cylinders of the same size into one unit.

The orientation of the carriers can be freely selected.





## ACCESSORIES

MAGNETIC SWITCHES  
TYPE RS, ES, RST, EST  
Pages B102-B108

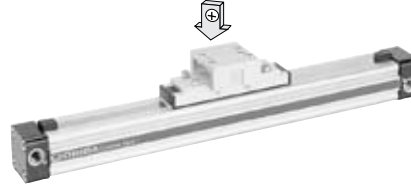
For electrical sensing of end and intermediate piston positions, also in EX-Areas.



## CLEVIS MOUNTING

Page B20-B21

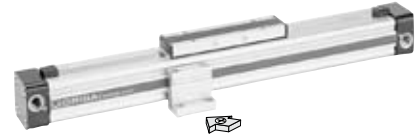
Carrier with tolerance and parallelism compensation for driving loads supported by external linear guides.



## END CAP MOUNTING

Page B23

For end-mounting of the cylinder.



## INVERSION MOUNTING

Page B22

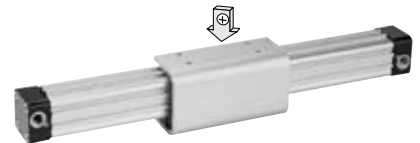
The inversion mounting transfers the driving force to the opposite side, e. g. for dirty environments.



## MID-SECTION SUPPORT

Page B24

For supporting long cylinders or mounting the cylinder by its dovetail rails.



**B**

**B**

Characteristics		Pressures quoted as gauge pressure		
Characteristics	Symbol	Unit	Description	
<b>General Features</b>				
Type			Rodless cylinder	
Series			OSP-P	
System			Double-acting, with cushioning, position sensing capability	
Mounting			See drawings	
Air Connection			Threaded	
Ambient temperature range	T <sub>min</sub> T <sub>max</sub>	°C °C	-10 +80	Other temperature ranges on request
Weight (mass)		kg	See table below	
Installation			In any position	
Medium			Filtered, unlubricated compressed air (other media on request)	
Lubrication			Permanent grease lubrication (additional oil mist lubrication not required) Option: special slow speed grease	
Material	Cylinder Profile		Anodized aluminum	
	Carrier (piston)		Anodized aluminum	
	End caps		Aluminum, lacquered / Plastic (P10)	
	Sealing bands		Corrosion resistant steel	
	Seals		NBR (Option: Viton®)	
	Screws		Galvanized steel Option: stainless steel	
	Dust covers, wipers		Plastic	
Max. operating pressure	p <sub>max</sub>	bar	8	

Weight (mass) kg		
Cylinder series (Basic cylinder)	Weight (Mass) kg	
	At 0 mm stroke	per 100 mm stroke
OSP-P10	0.087	0.052
OSP-P16	0.22	0.1
OSP-P25	0.65	0.197
OSP-P32	1.44	0.354
OSP-P40	1.95	0.415
OSP-P50	3.53	0.566
OSP-P63	6.41	0.925
OSP-P80	12.46	1.262

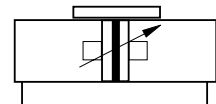
Size Comparison							
P10	P16	P25	P32	P40	P50	P63	P80

# Rodless Pneumatic Cylinder

ø 10-80 mm



Series OSP-P..



**Standard Versions:**

- Double-acting with adjustable end cushioning
- With magnetic piston for position sensing
- Long-Stroke Cylinders for stroke lengths up to 41 m (consult factory)

**Special Versions:**

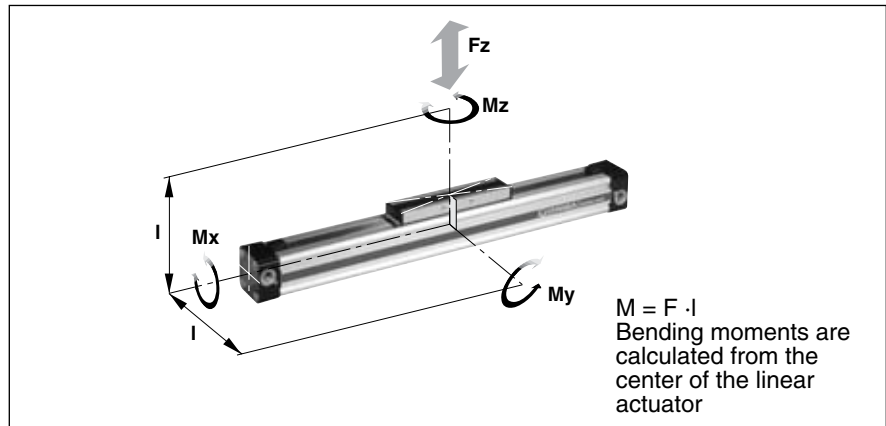
- With special pneumatic cushioning system (on request)
- Clean room cylinders (see page B31-B34)
- Stainless steel screws
- Slow speed lubrication
- Viton® seals
- Both air connections on one end
- Air connection on the end-face
- Integrated Valves
- End cap can be rotated 4 x 90° to position air connection as desired
- Free choice of stroke length up to 6000 mm, Long-Stroke version (Ø50-80mm) for stroke lengths up to 41 m



## Loads, Forces and Moments

Choice of cylinder is decided by:

- Permissible loads, forces and moments
- Performance of the pneumatic end cushions. The main factors here are the mass to be cushioned and the piston speed at start of cushioning (unless external cushioning is used, e. g. hydraulic shock absorbers).



The adjacent 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  $v \leq 0.5$  m/s.**

When working out the action force required, it is essential to take into account the friction forces generated by the specific application or load.

Cylinder Series (mm Ø)	Theoretical Action Force at 6 bar (N)	Effective Action Force $F_A$ at 6 bar (N)	max. Moments			max. Load F (N)	Cushion Length (mm)
			Mx (Nm)	My (Nm)	Mz (Nm)		
OSP-P10	47	32	0.2	1	0.3	20	2.5 *
OSP-P16	120	78	0.45	4	0.5	120	11
OSP-P25	295	250	1.5	15	3	300	17
OSP-P32	483	420	3	30	5	450	20
OSP-P40	754	640	6	60	8	750	27
OSP-P50	1178	1000	10	115	15	1200	30
OSP-P63	1870	1550	12	200	24	1650	32
OSP-P80	3016	2600	24	360	48	2400	39

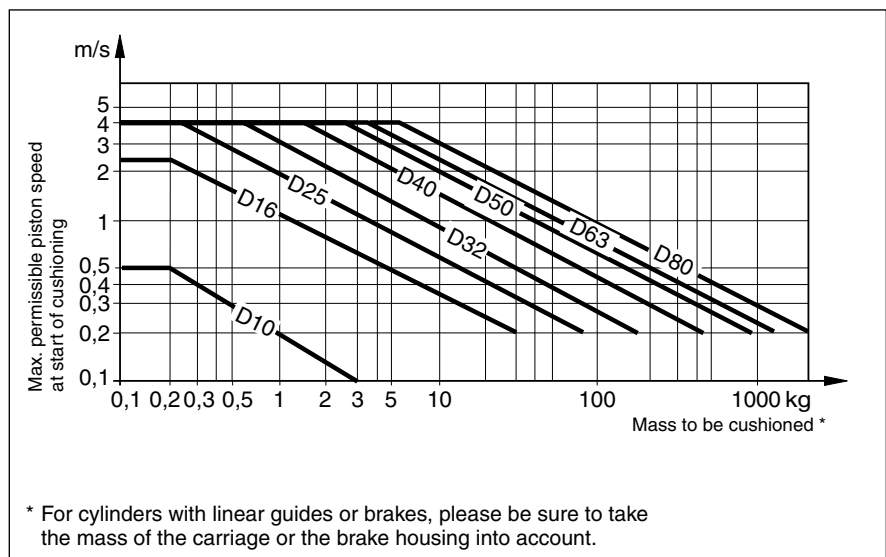
\* A rubber element (non-adjustable) is used for end cushioning. To deform the rubber element enough to reach the absolute end position would require a  $\Delta p$  of 4 bar!

## Cushioning Diagram

Work out your expected moving mass and read off the maximum permissible speed at start of cushioning.

Alternatively, take your desired speed and expected mass and find the cylinder size required.

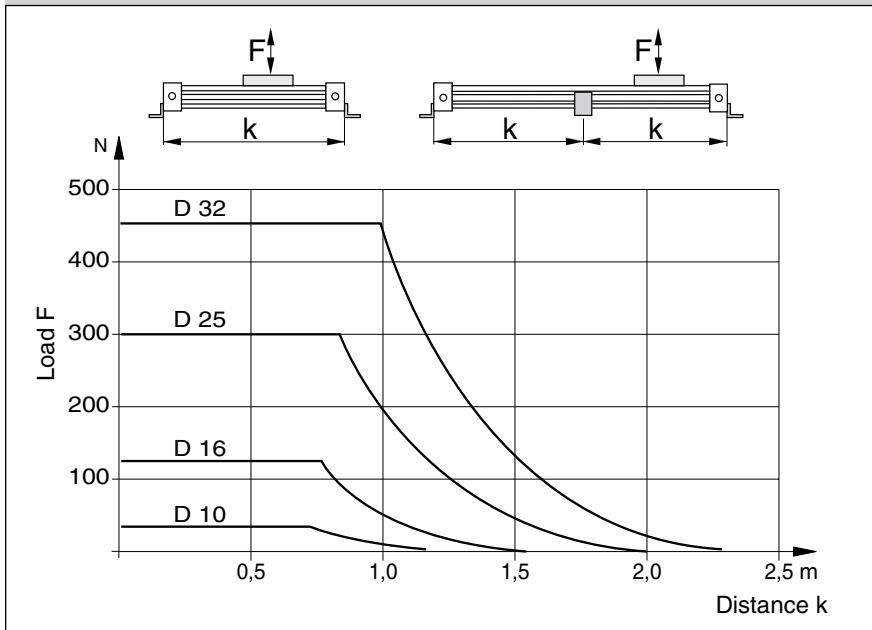
Please note that piston speed at start of cushioning is typically ca. 50% higher than the average speed, and that it is this higher speed which determines the choice of cylinder. If these maximum permissible values are exceeded, additional shock absorbers must be used.



**If the permitted limit values are exceeded, either additional shock absorbers should be fitted in the area of the center of gravity or you can consult us about our special cushioning system – we shall be happy to advise you on your specific application.**

**B**

**Permissible Support Spacings: OSP - P10 - P32**



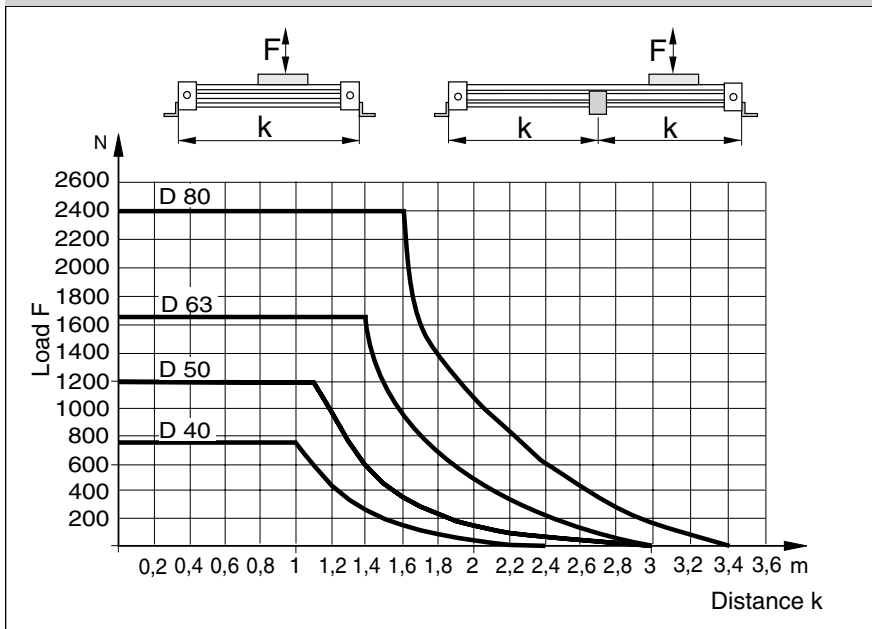
## Mid-Section Supports

To avoid excessive bending and oscillation of the cylinder, mid-section supports are required dependent on specified stroke lengths and applied loads. The diagrams show the maximum possible support spacings depending on the load.

Bending up to max. 0.5 mm is permissible between supports. The mid-section supports are clamped on to the dovetail profile of the cylinder tube. They are also able to take the axial forces.

**B**

**Permissible Support Spacings: OSP - P40 - P80**



**Dimensions**

**Cylinder Stroke and Dead Length A**

- Free choice of stroke length up to 6000 mm in 1 mm steps.
- Longer strokes on request.

**B**

**Tandem Cylinder**

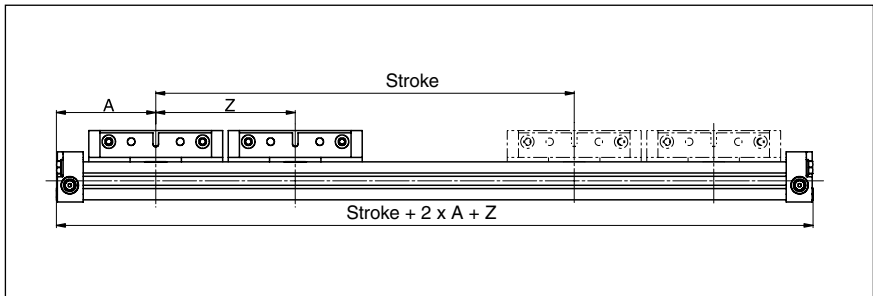
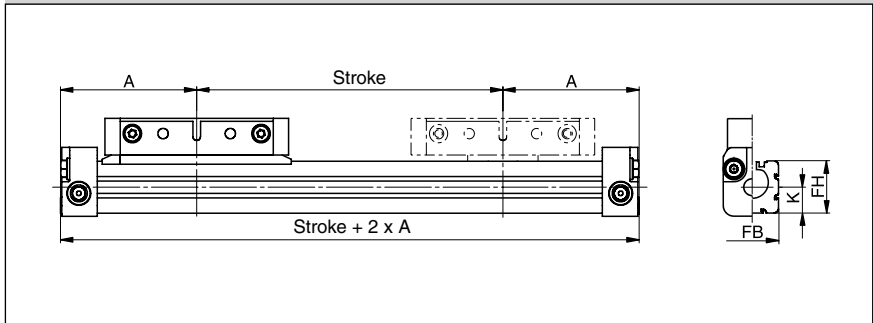
Two pistons are fitted: dimension "Z" is optional. (Please note minimum distance "Zmin").

- Free choice of stroke length up to 6000 mm in 1 mm steps.
- Longer strokes on request.
- **Stroke length to order is stroke + dimension "Z"**

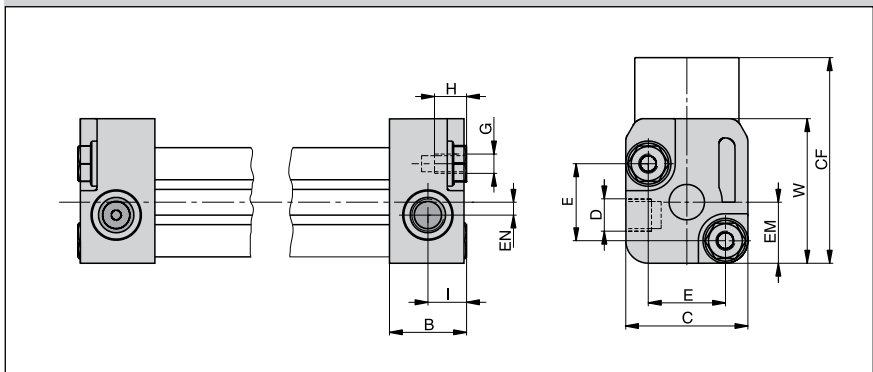
**Please note:**

To avoid multiple actuation of magnetic switches, the second piston is not equipped with magnets.

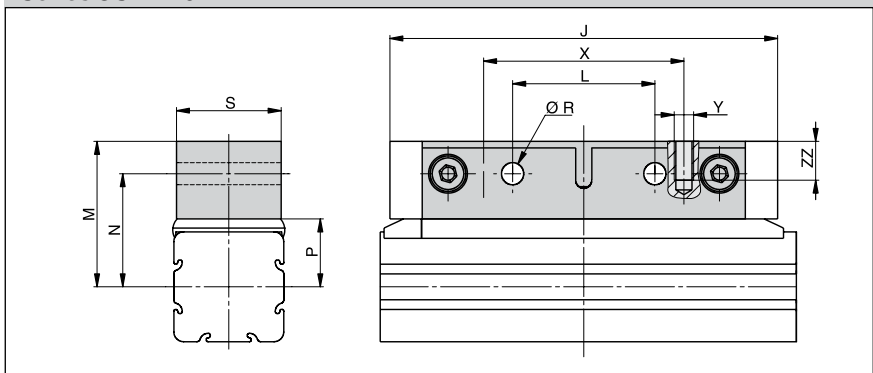
**Dimensions of Basic Cylinder OSP-P10**



**End Cap/Air Connection Series OSP-P10**



**Carrier Series OSP-P10**



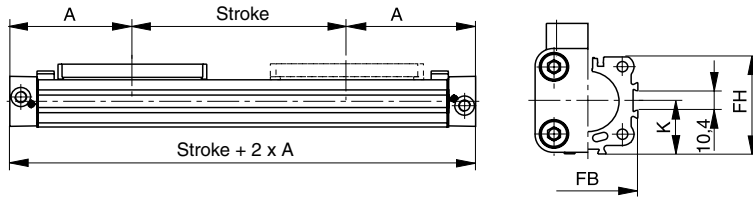
**Dimension Table (mm)**

Cylinder Series	A	B	C	D	E	G	H	I	J	K	L	M	N	P	R	S	W	X	Y	Z <sub>min</sub>	CF	EM	EN	FB	FH	ZZ
OSP-P10	44.5	12	19	M5	12	M3	5	6	60	8.5	22	22.5	17.5	10.5	3.4	16	22.5	31	M3	64	32	9.5	2	17	17	6



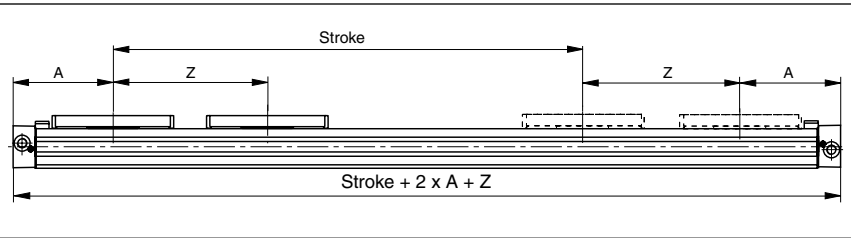
**Dimensions**

**Dimensions of Basic Cylinder OSP - P16-P80**



**Cylinder Stroke and Dead Length A**

- Free choice of stroke length up to 6000 mm in 1 mm steps.
- Longer strokes on request.

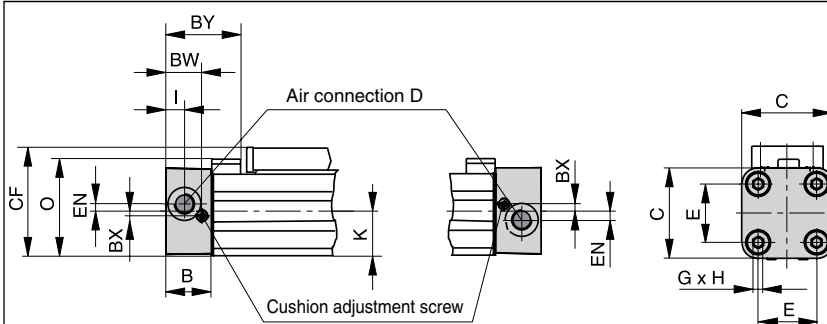


**Tandem Cylinder**

Two pistons are fitted: dimension "Z" is optional. (Please note minimum distance "Zmin").

- Free choice of stroke length up to 6000 mm in 1 mm steps.
- Longer strokes on request.
- **Stroke length to order is stroke + dimension "Z"**

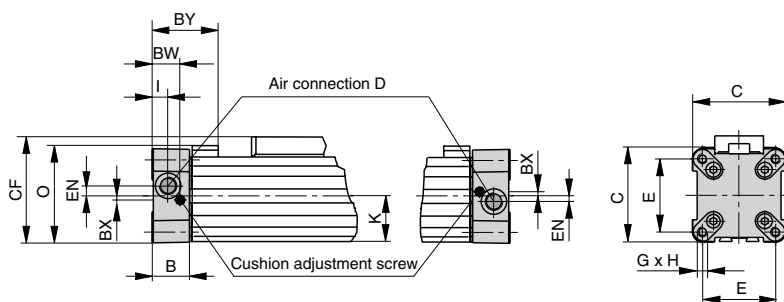
**End Cap/Air Connection can be rotated 4 x 90° Series OSP-P16 to P32**



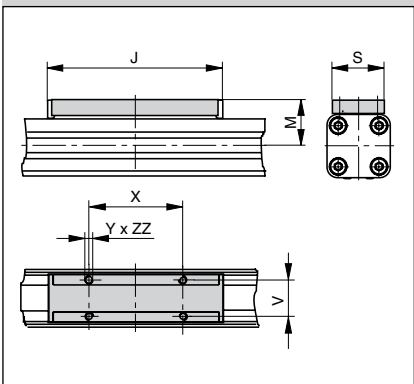
**Please note:**

To avoid multiple actuation of magnetic switches, the second piston is not equipped with magnets.

**End Cap/Air Connection can be rotated 4 x 90° Series OSP-P40 to P80**



**Carrier Series OSP-P16 to P80**



**Dimension Table (mm)**

Cylinder Series	A	B	C	D	E	G	H	I	J	K	M	O	S	V	X	Y	Z	BW	BX	BY	CF	EN	FB	FH	ZZ
OSP-P16	65	14	30	M5	18	M3	9	5.5	69	15	23	33.2	22	16.5	36	M4	81	10.8	1.8	28.4	38	3	30	27.2	7
OSP-P25	100	22	41	G1/8	27	M5	15	9	117	21.5	31	47	33	25	65	M5	128	17.5	2.2	40	52.5	3.6	40	39.5	8
OSP-P32	125	25.5	52	G1/4	36	M6	15	11.5	152	28.5	38	59	36	27	90	M6	170	20.5	2.5	44	66.5	5.5	52	51.7	1
OSP-P40	150	28	69	G1/4	54	M6	15	12	152	34	44	72	36	27	90	M6	212	21	3	54	78.5	7.5	62	63	10
OSP-P50	175	33	87	G1/4	70	M6	15	14.5	200	43	49	86	36	27	110	M6	251	27	-	59	92.5	11	76	77	10
OSP-P63	215	38	106	G3/8	78	M8	21	14.5	256	54	63	107	50	34	140	M8	313	30	-	64	117	12	96	96	16
OSP-P80	260	47	132	G1/2	96	M10	25	22	348	67	80	133	52	36	190	M10	384	37.5	-	73	147	16.5	122	122	20

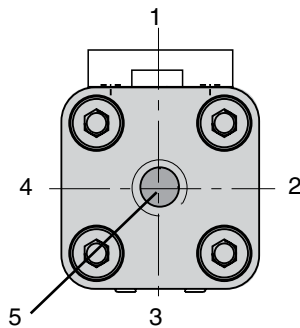


**B**

## Air Connection on the End-Face #5

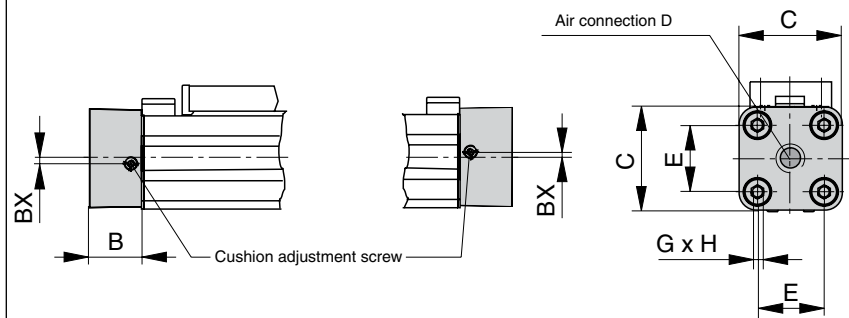
In some situations it is necessary or desirable to fit a special end cap with the air connection on the end-face instead of the standard end cap with the air connection on the side. The special end cap can also be rotated 4 x 90° to locate the cushion adjustment screw as desired. Supplied in pairs.

**B**

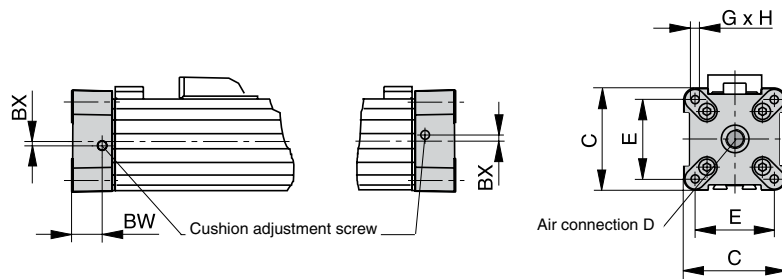


**Note: Position #2 is the standard location.**

### Series OSP-P16 to P32



### Series OSP-P40 to P80

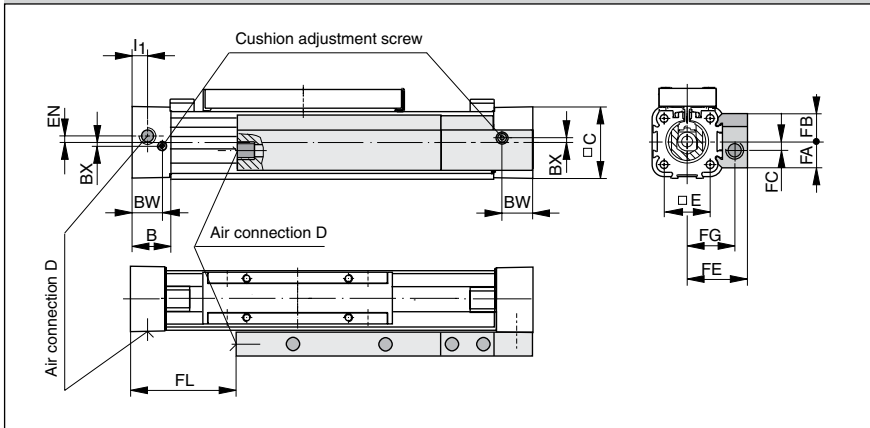


**Dimension Table (mm)**

Cylinder Series	B	C	D	E	G	H	BX	BW
OSP-P16	14	30	M5	18	M3	9	1.8	10.8
OSP-P25	22	41	G1/8	27	M5	15	2.2	17.5
OSP-P32	25.5	52	G1/4	36	M6	15	2.5	20.5
OSP-P40	28	69	G1/4	54	M6	15	3	21
OSP-P50	33	87	G1/4	70	M6	15	—	27
OSP-P63	38	106	G3/8	78	M8	21	—	30
OSP-P80	47	132	G1/2	96	M10	25	—	37.5



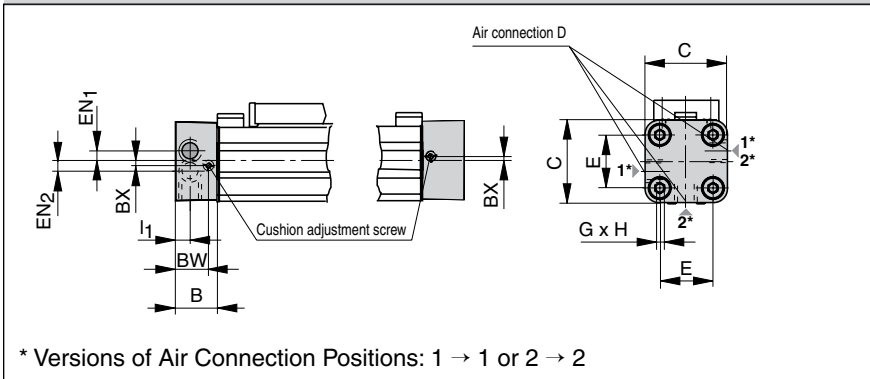
Series OSP-P16



Single End Porting

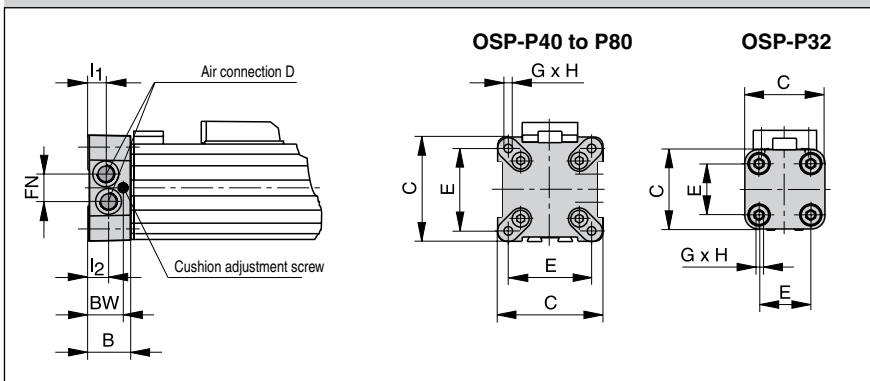
A special end cap with both air connections on one side is available for situations where shortage of space, simplicity of installation or the nature of the process make it desirable. Air supply to the other end is via internal air passages (OSP-P25 to P80) or via a hollow aluminum profile fitted externally (OSP-P16). **In this case the end caps cannot be rotated.**

Series OSP-P25



**Please note:**  
When combining the OSP-P16 single end porting with inversion mountings, RS magnetic switches can only be mounted directly opposite to the external air-supply profile.

Series OSP-P32 to P80



Dimension Table (mm)

Cylinder Series	B	C	D	E	G	H	I <sub>1</sub>	I <sub>2</sub>	BX	BW	EN	EN <sub>1</sub>	EN <sub>2</sub>	FA	FB	FC	FE	FG	FL	FN
OSP-P16	14	30	M5	18	M3	9	5.5	-	1.8	10.8	3	-	-	12.6	12.6	4	27	21	36	-
OSP-P25	22	41	G1/8	27	M5	15	9	-	2.2	17.5	-	3.6	3.9	-	-	-	-	-	-	-
OSP-P32	25.5	52	G1/8	36	M6	15	12.2	10.5	-	20.5	-	-	-	-	-	-	-	-	-	15.2
OSP-P40	28	69	G1/8	54	M6	15	12	12	-	21	-	-	-	-	-	-	-	-	-	17
OSP-P50	33	87	G1/4	70	M6	15	14.5	14.5	-	27	-	-	-	-	-	-	-	-	-	22
OSP-P63	38	106	G3/8	78	M8	21	16.5	13.5	-	30	-	-	-	-	-	-	-	-	-	25
OSP-P80	47	132	G1/2	96	M10	25	22	17	-	37.5	-	-	-	-	-	-	-	-	-	34.5



## Integrated 3/2 Way Valves VOE

For optimal control of the OSP-P cylinder, 3/2 way valves integrated into the cylinder's end caps can be used as a compact and complete solution. They allow for easy positioning of the cylinder, smooth operation at the lowest speeds and fast response, making them ideally suited for the direct control of production and automation processes.

### Integrated 3/2 Way Valves VOE Series OSP-P25, P32, P40 and P50



### Characteristics 3/2 Way Valves VOE

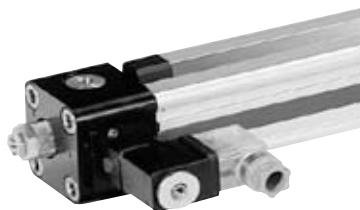
#### Characteristics:

- Complete compact solution
- Various connection possibilities:  
Free choice of air connection with rotating end caps with VOE valves, Air connection can be rotated 4 x 90°, Solenoid can be rotated 4 x 90°, Pilot Valve can be rotated 180°
- High piston velocities can be achieved with max. 3 exhaust ports
- Minimal installation requirements
- Requires just one air connection per valve
- Optimal control of the OSP-P cylinder
- Excellent positioning characteristics
- Integrated operation indicator
- Integrated exhaust throttle valve
- Manual override - indexed
- Adjustable end cushioning
- Easily retrofitted – please note the increase in the overall length of the cylinder!

#### Characteristics 3/2 Way Valves with spring return

Characteristics	3/2 Way Valves with spring return			
Pneumatic diagram				
Type	VOE-25	VOE-32	VOE-40	VOE-50
Actuation	electrical			
Basic position	P → A open, R closed			
Type	Poppet valve, non overlapping			
Mounting	integrated in end cap			
Installation	in any position			
Port size	G 1/8	G 1/4	G 3/8	G 3/8
Temperature	-10°C to +50°C *			
Operating pressure	2-8 bar			
Nominal voltage	24 V DC / 230 V AC, 50 Hz			
Power consumption	2,5 W / 6 VA			
Duty cycle	100%			
Electrical Protection	IP 65 DIN 40050			

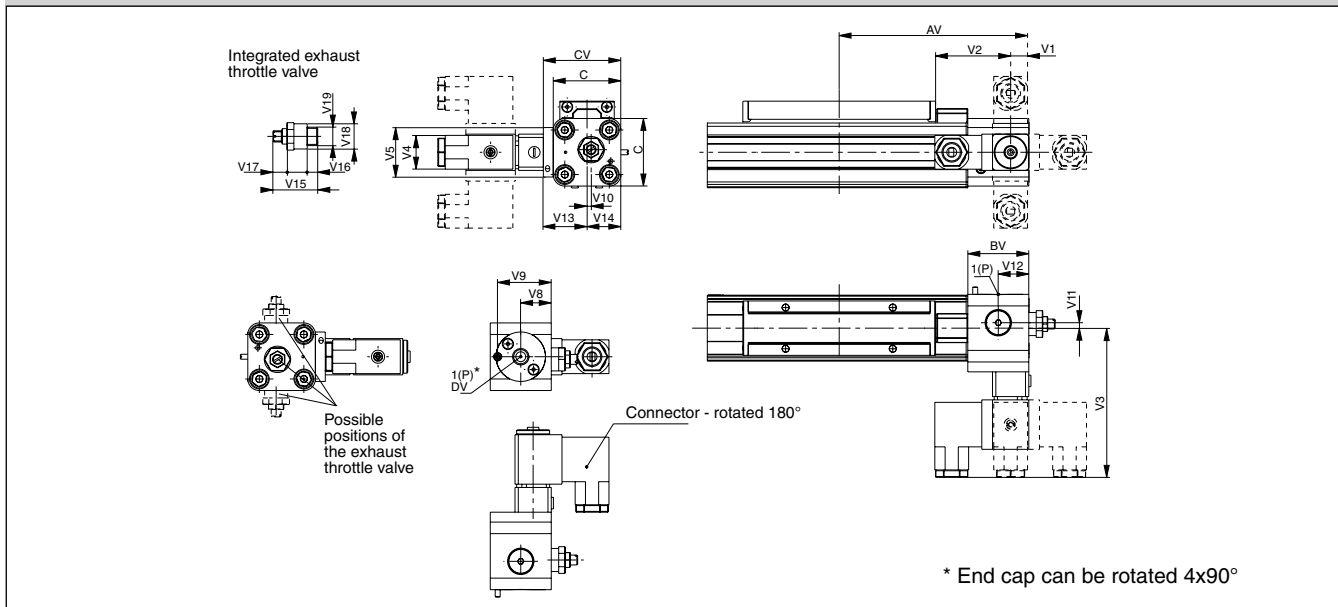
\* other temperature ranges on request



**B**

**B**

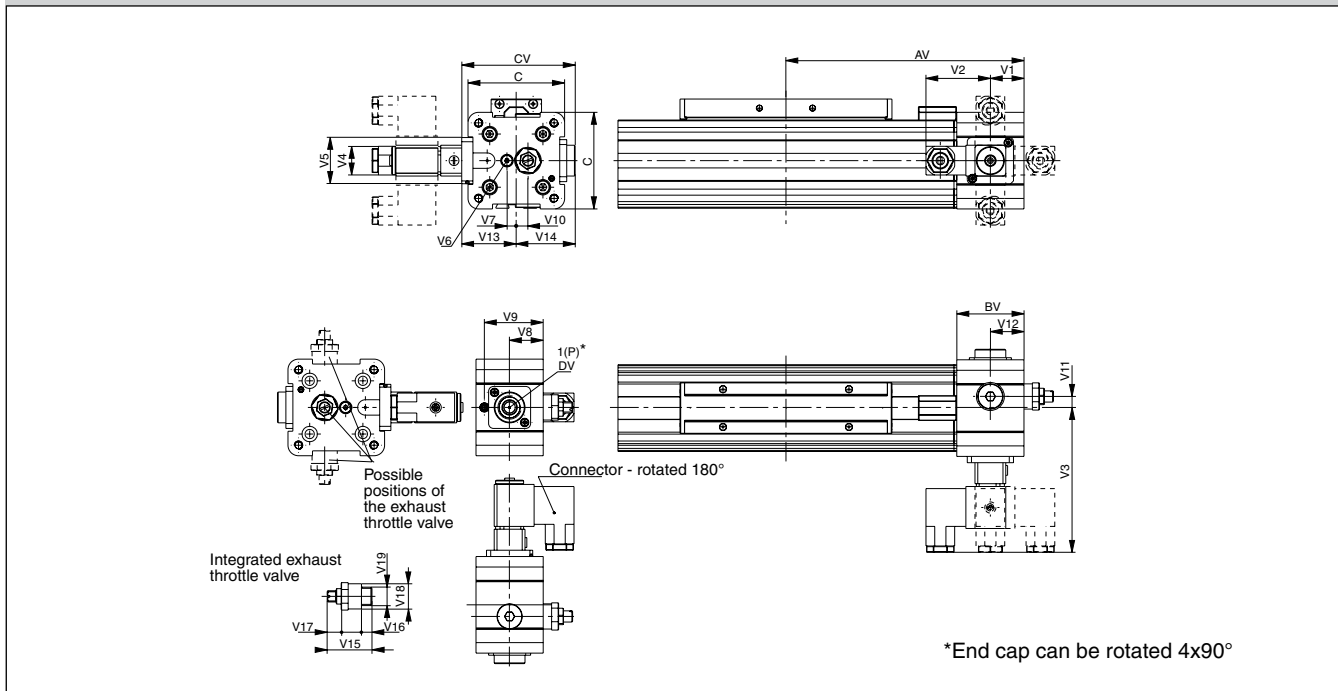
**Dimensions VOE Valves OSP-P25 and P32**



**Dimension Table (mm)**

Cylinder Series	AV	BV	C	CV	DV	V1	V2	V3	V4	V5	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19
OSP-P25	115	37	41	47	G1/8	11	46	90.5	22	30	18.5	32.5	2.5	3.3	18.5	26.5	20.5	24	5	4	14	G1/8
OSP-P32	139	39.5	52	58	G1/4	20.5	46	96	22	32	20.5	34.7	6	5	20.5	32	26	32	7.5	6	18	G1/4

**Dimensions VOE Valves OSP-P40 and P50**



**Dimension Table (mm)**

Cylinder Series	AV	BV	C	CV	DV	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19
OSP-P40	170	48	69	81	G3/8	24	46	103	22	33	M5	6.7	24	42	8.3	8.3	24	39	42	32	7.5	6	18	G1/4
OSP-P50	190	48	87	82	G3/8	24	46	102	22	33	M5	4.5	24	42	12.2	12.2	24	38	44	32	7.5	6	18	G1/4



# Active Brake



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

**B**

**Features:**

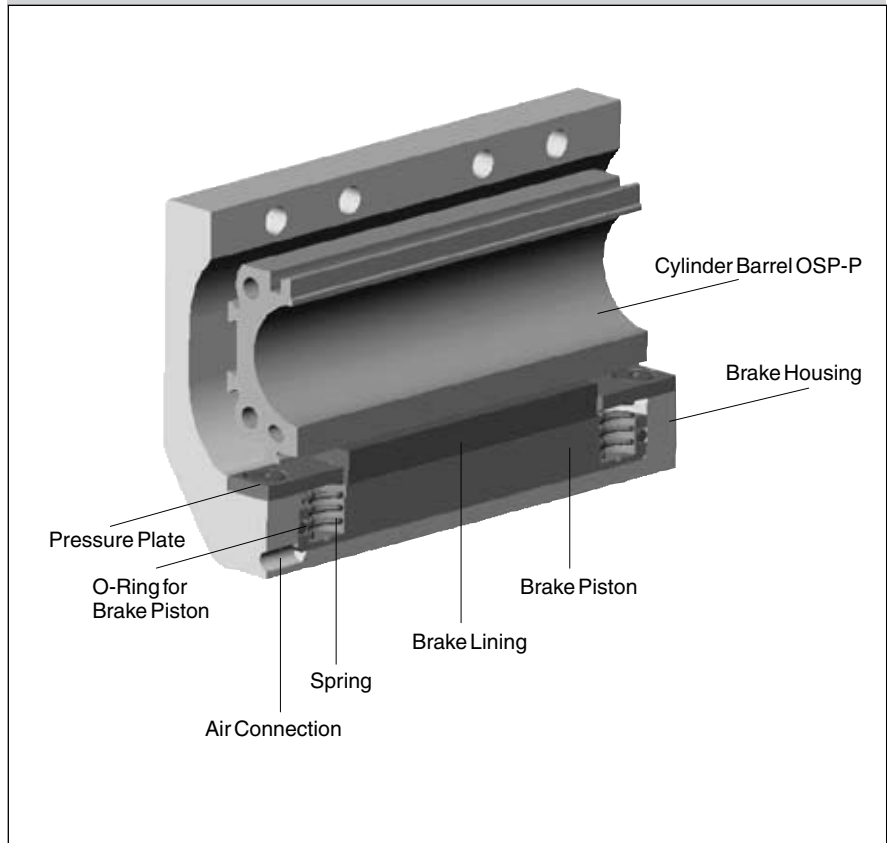
- Actuated by pressurization
- Released by spring actuation
- Completely stainless version
- Holds position, even under changing load conditions

For further technical data, please refer to the data sheets for linear drives OSP-P (page B7)

**Note:**

For combinations Active Brake AB + SFI-plus + Magnetic Switch contact our technical department please.

**Function**



**Forces and Weights**

Series	For linear drive	Max. braking force (N) <sup>(1)</sup>	Brake pad way (mm)	Mass (kg)		Order No. Active brake	
				Linear drive with brake 0 mm stroke	increase per 100mm stroke		
<b>AB 25</b>	OSP-P25	350	2.5	1.0	0.197	0.35	<b>20806</b>
<b>AB 32</b>	OSP-P32	590	2.5	2.02	0.354	0.58	<b>20807</b>
<b>AB 40</b>	OSP-P40	900	2.5	2.83	0.415	0.88	<b>20808</b>
<b>AB 50</b>	OSP-P50	1400	2.5	5.03	0.566	1.50	<b>20809</b>
<b>AB 63</b>	OSP-P63	2170	3.0	9.45	0.925	3.04	<b>20810</b>
<b>AB 80</b>	OSP-P80	4000	3.0	18.28	1.262	5.82	<b>20811</b>

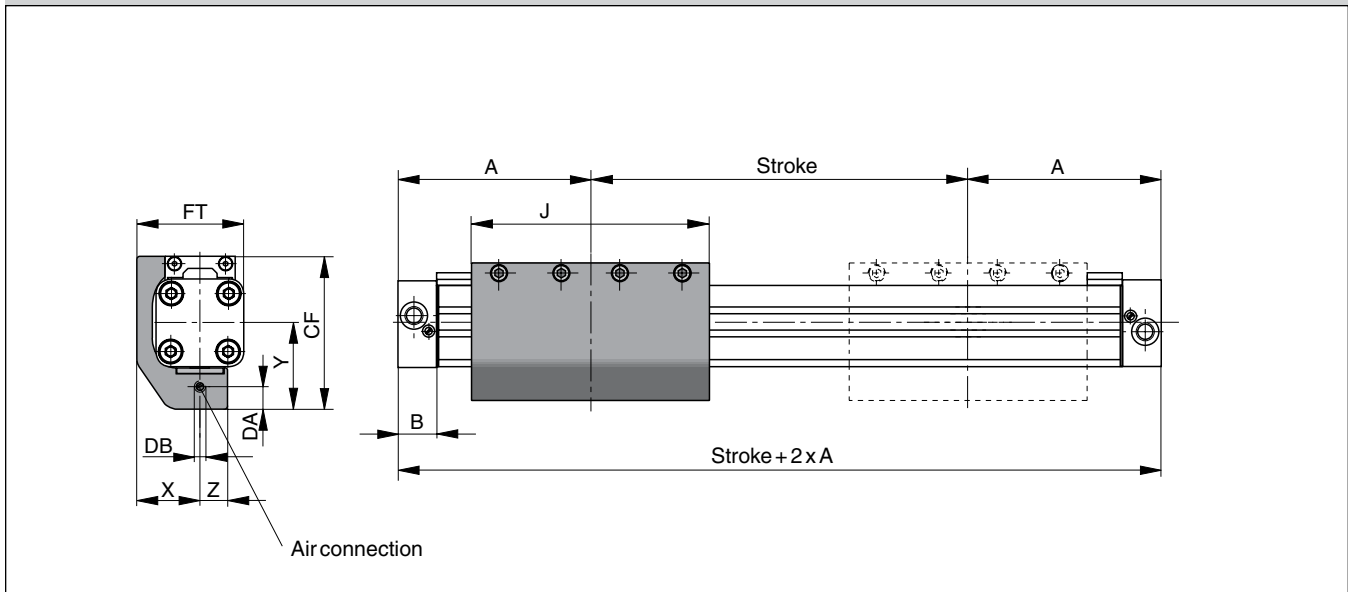
<sup>(1)</sup> – at 6 bar  
 both chambers pressurized with 6 bar  
 Braking surface dry  
 – oil on the braking surface will reduce the braking force

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

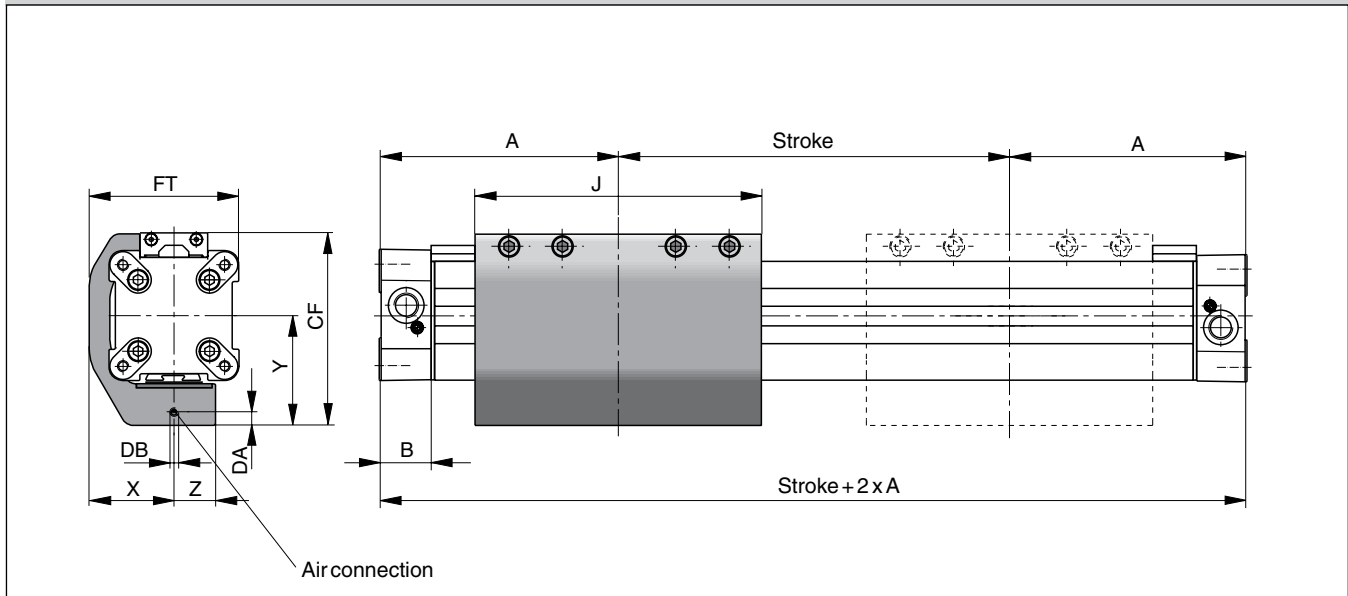


**B**

**Series OSP-P25 and P32 with Active Brake AB**



**Series OSP-P40, P50, P63, P80 with Active Brake AB**



**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

Dimensions

# 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.

**B**

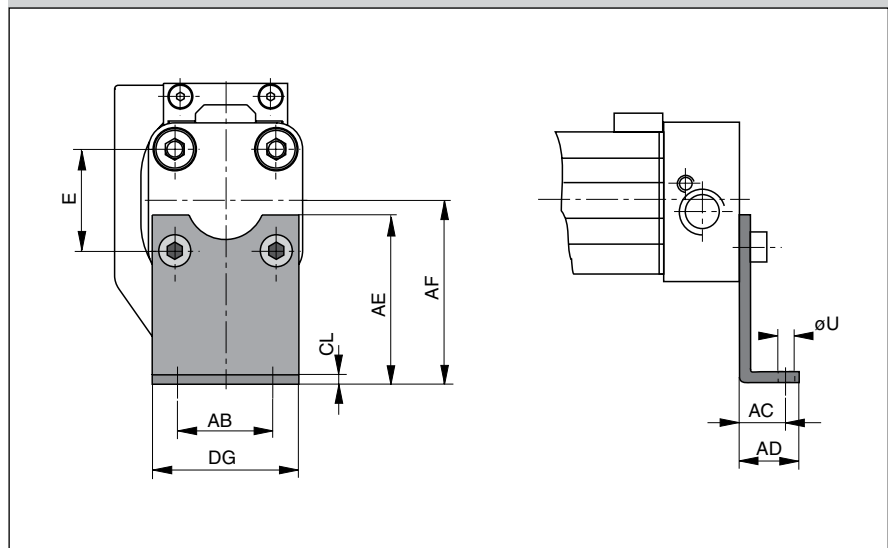
**Material:**

Series OSP-P25, P32:  
Galvanized steel

The mountings are supplied in pairs.



Series OSP – P25 and P32 with Active Brake AB:Type A3



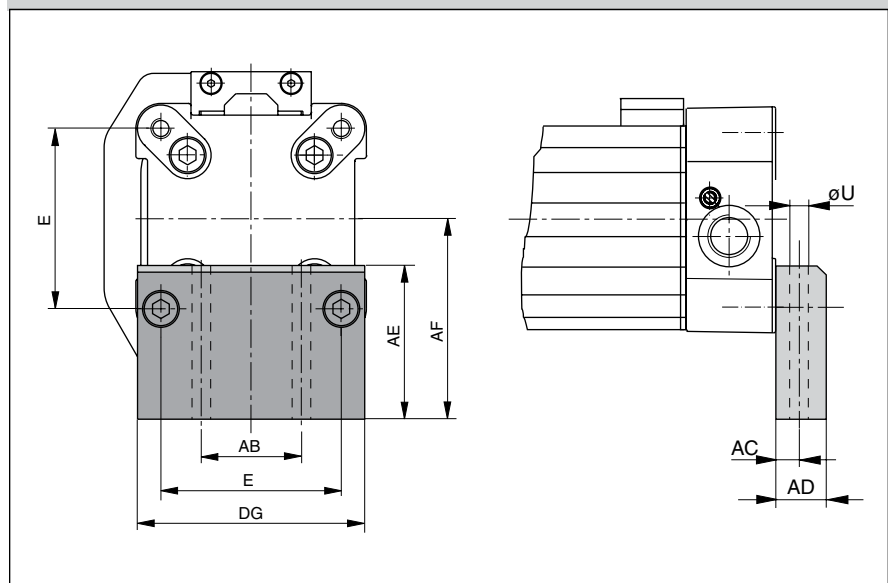
**Material:**

Series OSP-P40,P50, P63, P80:  
Anodized aluminum

The mountings are supplied in pairs.  
Stainless steel version on request.



Series OSP – P40 , P50, P63, P80 with Active Brake AB:Type C3



Dimension Table (mm)

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



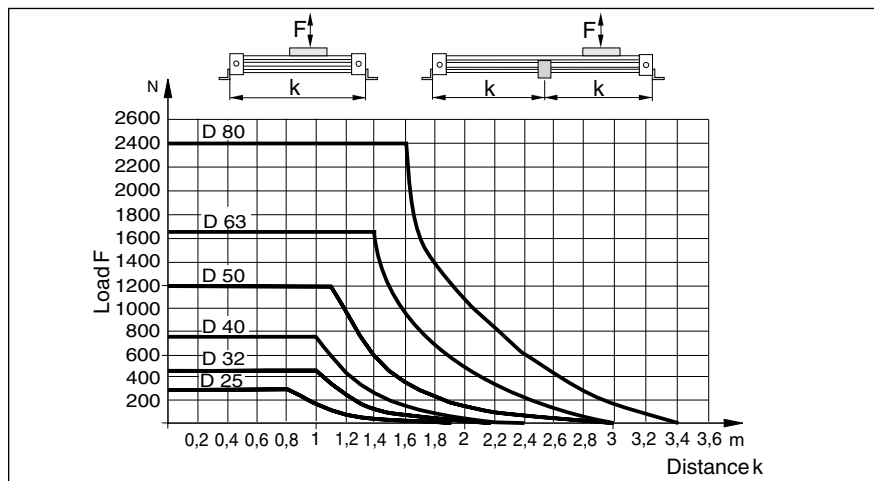
Mid-Section Supports

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 0.5 mm max. between supports is permissible.

The Mid-Section supports are attached to the dovetail rails, and can take axial loads.



Mid-Section Supports

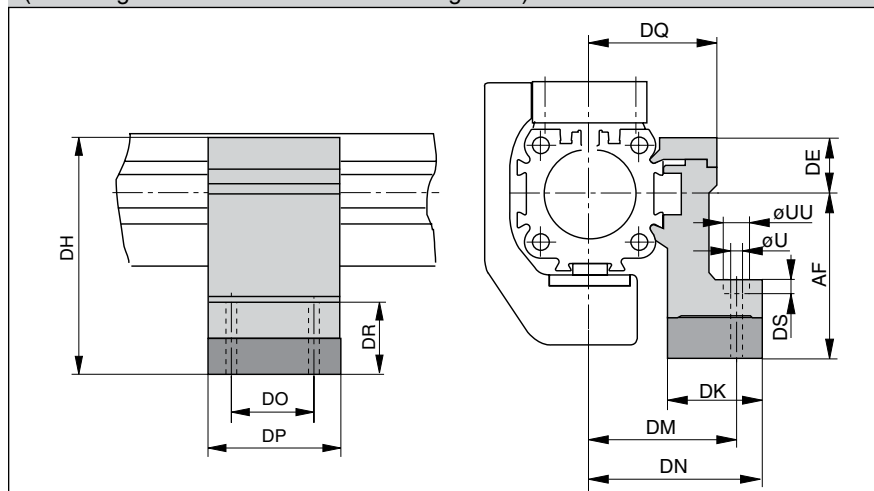
Note to Type E3:

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

Stainless steel version available on request.



Series OSP-P25 to P80 with Active Brake AB: Type E3  
(Mounting from above / below with through-bolt)



Dimension Table (mm)

Series	U	UU	AF	DE	DH	DK	DM	DN	DO	DP	DQ	DR	DS	Order No. Type E3
AB 25	5.5	10	49	16	65	26	40	47.5	36	50	34.5	35	5.7	20353
AB 32	5.5	10	52	16	68	27	46	54.5	36	50	40.5	32	5.7	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 Active Brakes – please order separately

Description	For detailed information, see page no.
Clevis mounting	B21
Adaptor profile	B25
T-groove profile	B26
Connection profile	B27
Magnetic switch (can <b>only</b> be mounted opposite of the brake housing)	B102-B108
Incremental displacement measuring system SFI-plus	B113-B115



# Linear Drive Accessories

## ø 10 mm

### Clevis Mounting

**B**



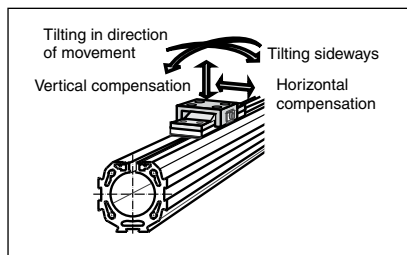
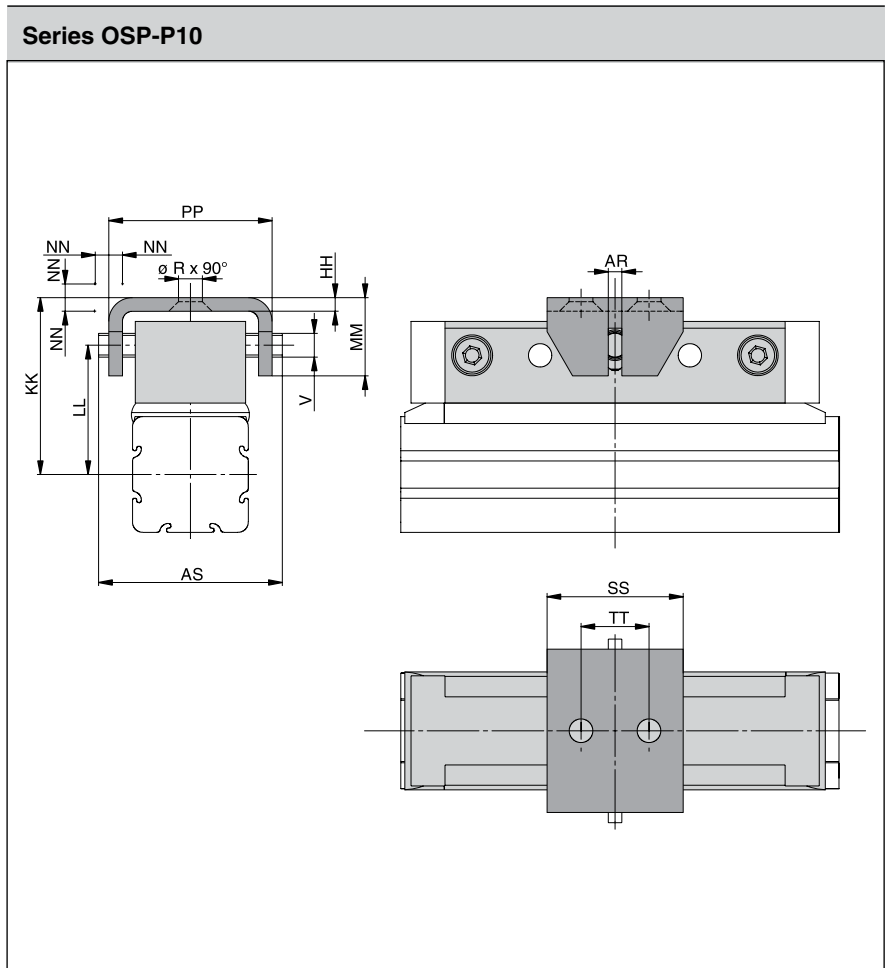
For Linear-drive  
 • Series OSP-P

When external guides are used, parallelism deviations can lead to mechanical strain on the piston. This can be avoided by the use of a clevis mounting.

In the drive direction, the mounting has very little play.

Freedom of movement is provided as follows:

- Tilting in direction of movement
- Vertical compensation
- Tilting sideways
- Horizontal compensation



DimensionTable (mm)													Order No.	
Series	øR	V	AR	AS	HH	KK	LL	MM	NN*	PP	SS	TT	Standard	Stainless
OSP-P10	3.4	3.5	2	27	2	26	19	11.5	1	24	20	10	20971	-

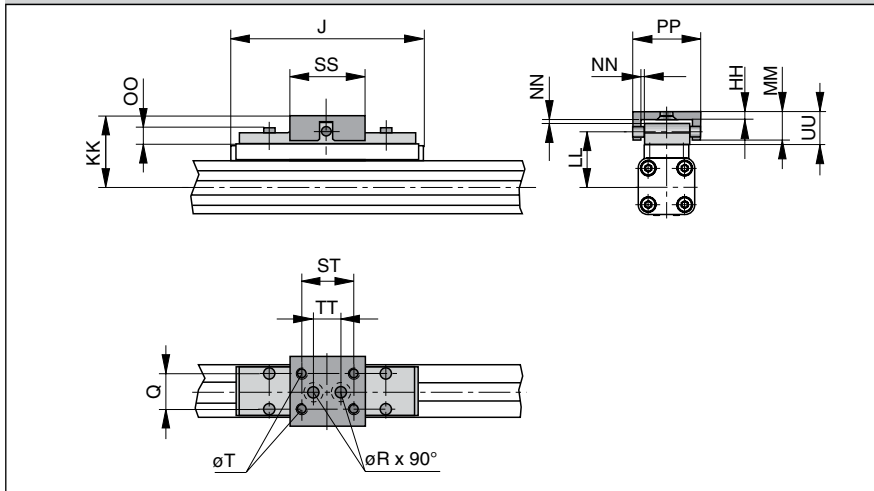
\* Dimension NN gives the possible plus and minus play in horizontal and vertical movement, which also makes tilting sideways possible.



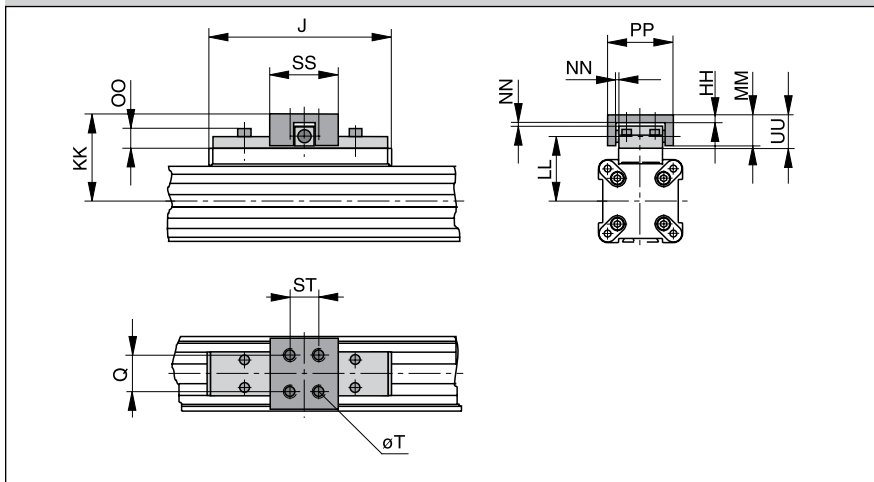


**Clevis Mountings**

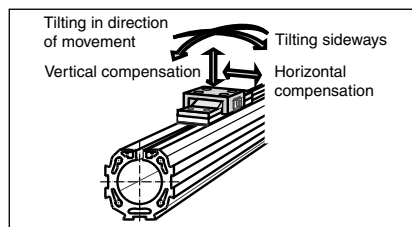
**Series OSP-P16 to 32**



**Series OSP-P40 to 80**



**Please note:**  
When using additional inversion mountings, take into account the dimensions in page B22.



# Linear Drive Accessories

## ø 16-80 mm

### Clevis Mounting



For Linear-drive  
• Series OSP-P

When external guides are used, parallelism deviations can lead to mechanical strain on the piston. This can be avoided by the use of a clevis mounting.

In the drive direction, the mounting has very little play.

Freedom of movement is provided as follows:

- Tilting in direction of movement
- Vertical compensation
- Tilting sideways
- Horizontal compensation

A stainless steel version is also available.



**Dimension Table (mm)**

Series	J	Q	T	øR	HH	KK	LL	MM	NN*	OO	PP	SS	ST	TT	UU	Order No.	
																Standard	Stainless
OSP-P16	69	10	M4	4.5	3	34	26.6	10	1	8.5	26	28	20	10	11	20462	20463
OSP-P25	117	16	M5	5.5	3.5	52	39	19	2	9	38	40	30	16	21	20005	20092
OSP-P32	152	25	M6	6.6	6	68	50	28	2	13	62	60	46	40	30	20096	20094
OSP-P40	152	25	M6	—	6	74	56	28	2	13	62	60	46	—	30	20024	20093
OSP-P50	200	25	M6	—	6	79	61	28	2	13	62	60	46	—	30	20097	20095
OSP-P63	256	37	M8	—	8	100	76	34	3	17	80	80	65	—	37	20466	20467
OSP-P80	348	38	M10	—	8	122	96	42	3	16	88	90	70	—	42	20477	20478

\* Dimension NN gives the possible plus and minus play in horizontal and vertical movement, which also makes tilting sideways possible.



# Linear Drive Accessories

## ∅ 16-80 mm

### Inversion Mounting

**B**



For Linear-drive  
• Series OSP-P

In dirty environments, or where there are special space problems, inversion of the cylinder is recommended.

The inversion bracket transfers the driving force to the opposite side of the cylinder. The size and position of the mounting holes are the same as on the standard cylinder.

Stainless steel version on demand.

**Please note:**

Other components of the OSP system such as **mid-section supports**, **magnetic switches** and **the external air passage for the P16**, can still be mounted on the free side of the cylinder.

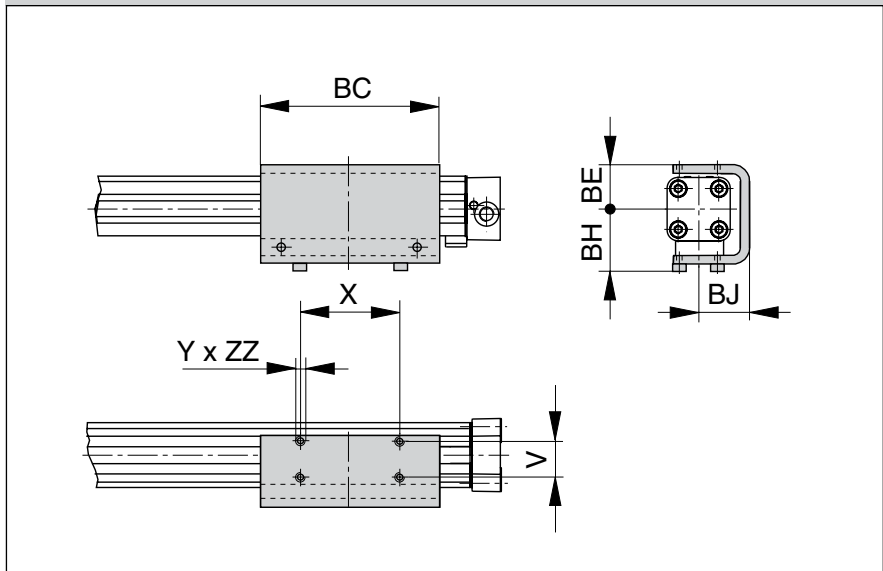
When combining single end porting with inversion mountings, RS magnetic switches can only be mounted directly opposite to the external air-supply profile.

**Important Note:**

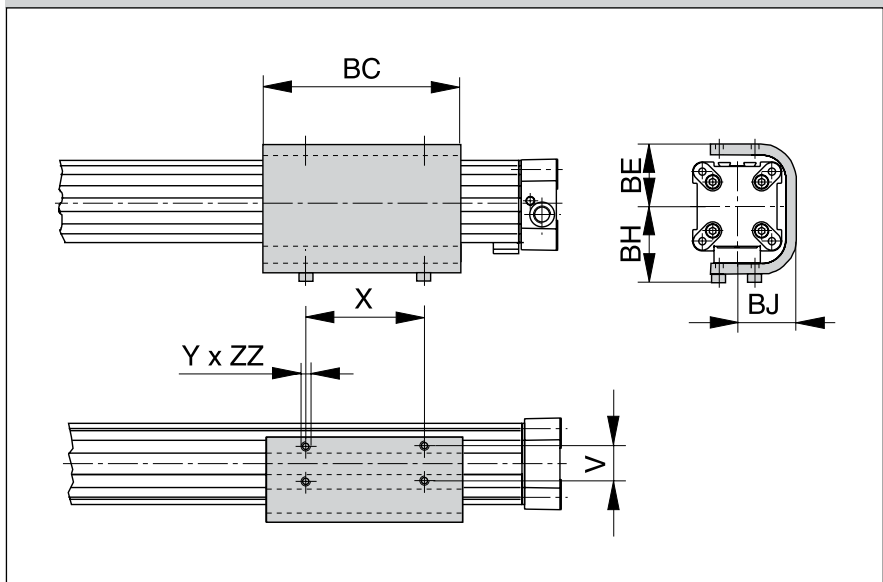
May be used in combination with **Clevis Mounting**, ref. dimensions in pages B20-B21.



Series OSP-P16 to 32



Series OSP-P40 to 80

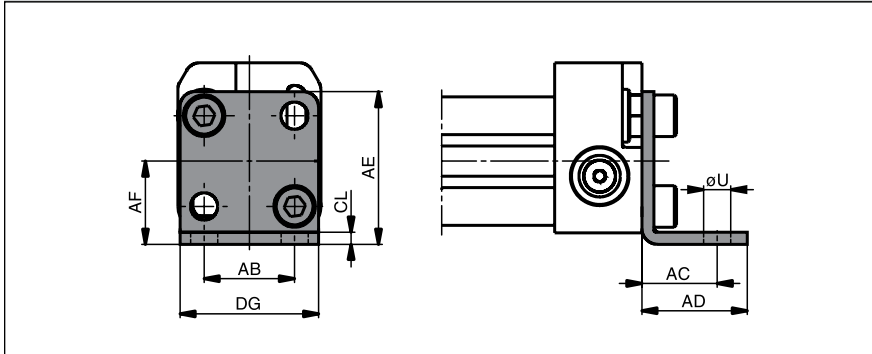


Dimension Table (mm)

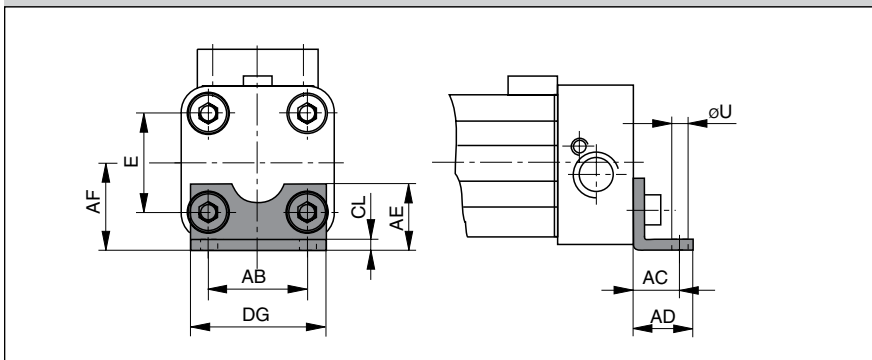
Series	V	X	Y	BC	BE	BH	BJ	ZZ	Order No.
OSP-P16	16.5	36	M4	69	23	33	25	4	20446
OSP-P25	25	65	M5	117	31	44	33.5	6	20037
OSP-P32	27	90	M6	150	38	52	39.5	6	20161
OSP-P40	27	90	M6	150	46	60	45	8	20039
OSP-P50	27	110	M6	200	55	65	52	8	20166
OSP-P63	34	140	M8	255	68	83.5	64	10	20459
OSP-P80	36	190	M10	347	88	107.5	82	15	20490



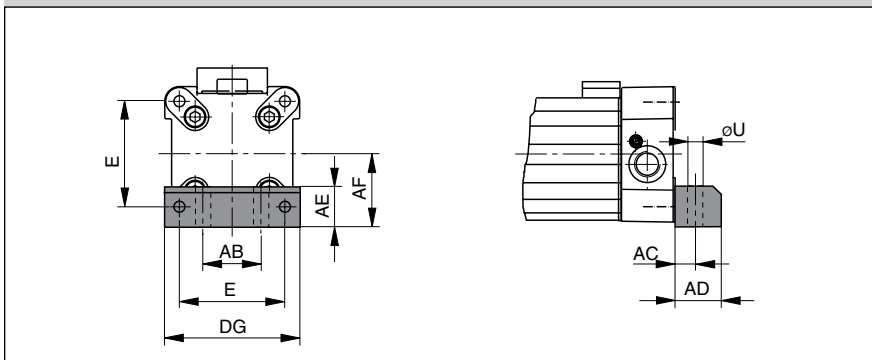
**Series OSP-P10: Type A1**



**Series OSP-P16 to 32: Type A1**



**Series OSP-P40 to 80: Type C1**



# Linear Drive Accessories

## ø 10-80 mm

### End Cap Mountings



**B**

**For Linear-drive**  
 • **Series OSP-P**

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

**Material:**

- Series OSP-P10 – P32: Galvanized steel.
- Series OSP-P40 – P80: Anodized aluminum.

The mountings are supplied in pairs.



**Dimension Table (mm)**

Series	E	ØU	AB	AC	AD	AE	AF	CL	DG	Order No. (*	
										Type A1	Type C1
OSP-P10	-	3.6	12	10	14	20.2	11	1.6	18.4	0240	–
OSP-P16	18	3.6	18	10	14	12.5	15	1.6	26	20408	–
OSP-P25	27	5.8	27	16	22	18	22	2.5	39	2010	–
OSP-P32	36	6.6	36	18	26	20	30	3	50	3010	–
OSP-P40	54	9	30	12.5	24	24	38	–	68	–	4010
OSP-P50	70	9	40	12.5	24	30	48	–	86	–	5010
OSP-P63	78	11	48	15	30	40	57	–	104	–	6010
OSP-P80	96	14	60	17.5	35	50	72	–	130	–	8010

(\*= Pair)

# Linear Drive Accessories

## ∅ 10-80 mm

### Mid-Section Support

**B**



For Linear-drive  
 • Series OSP-P

Note on Types E1 and D1

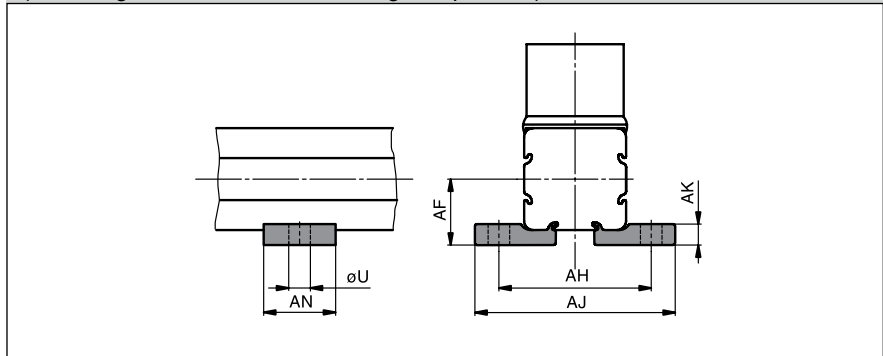
(P16 – P80):

The mid-section support can also be mounted on the underside of the actuator, in which case its distance from the center of the actuator is different.

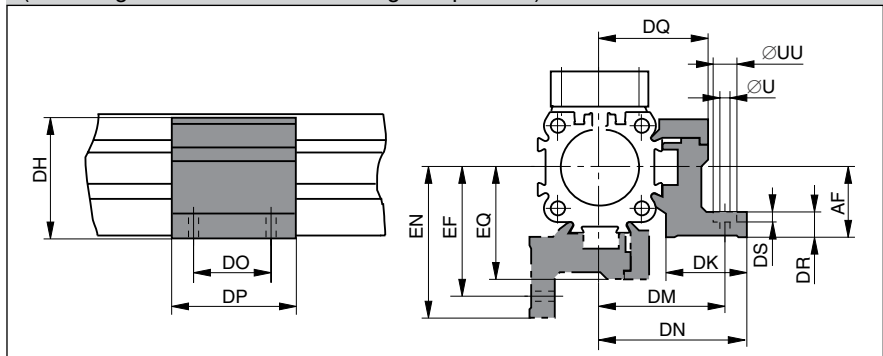
Stainless steel version on demand.



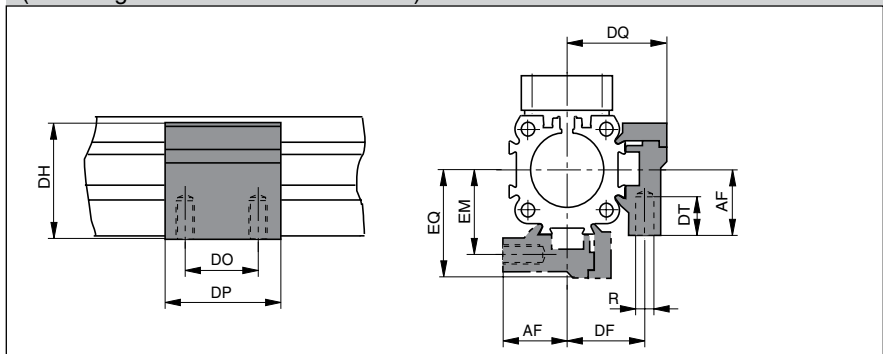
**Series OSP-10, Type E1**  
 (Mounting from above / below using a cap screw)



**Series OSP-P16 to P80: Type E1**  
 (Mounting from above / below using a cap screw)



**Series OSP-16 to 80, Type D1**  
 (Mountings from below with 2 screws)



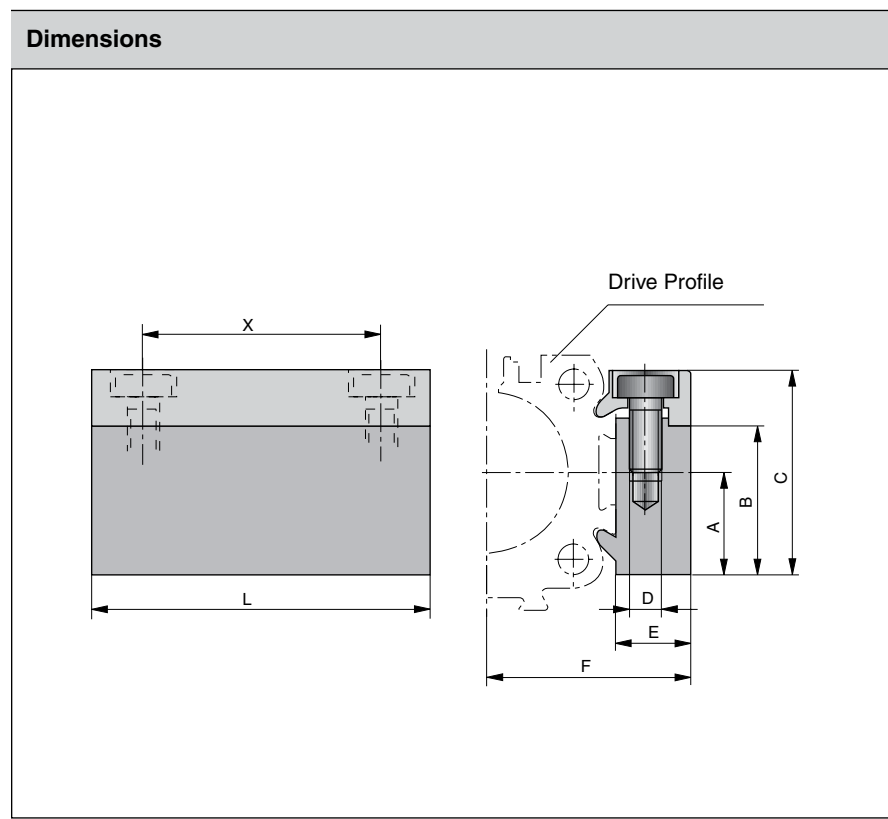
**Dimension Table (mm) Series OSP-P10**

Series	U	AF	AH	AJ	AK	AN	Order No.	
							Type E1	Type D1
OSP-P10	3.6	11	25.4	33.4	3.5	12	0250	-

**Dimension Table (mm) – Series OSP-P16 to P80**

Series	R	U	UU	AF	DF	DH	DK	DM	DN	DO	DP	DQ	DR	DS	DT	EF	EM	EN	EQ	Order No.	
																				Type E1	Type D1
OSP-P16	M3	3.4	6	15	20	29.2	24	32	36.4	18	30	27	6	3.4	6.5	32	20	36.4	27	20435	20434
OSP-P25	M5	5.5	10	22	27	38	26	40	47.5	36	50	34.5	8	5.7	10	41.5	28.5	49	36	20009	20008
OSP-P32	M5	5.5	10	30	33	46	27	46	54.5	36	50	40.5	10	5.7	10	48.5	35.5	57	43	20158	20157
OSP-P40	M6	7	-	38	35	61	34	53	60	45	60	45	10	-	11	56	38	63	48	20028	20027
OSP-P50	M6	7	-	48	40	71	34	59	67	45	60	52	10	-	11	64	45	72	57	20163	20162
OSP-P63	M8	9	-	57	47.5	91	44	73	83	45	65	63	12	-	16	79	53.5	89	69	20452	20451
OSP-P80	M10	11	-	72	60	111.5	63	97	112	55	80	81	15	-	25	103	66	118	87	20482	20480





# Linear Drive Accessories

## ∅ 16-50 mm

### Adaptor Profile



**For Linear-drive**  
• **Series OSP-P**

**Adaptor Profile OSP**

- A universal attachment for mounting of valves etc.
- Solid material



**Dimension Table (mm)**

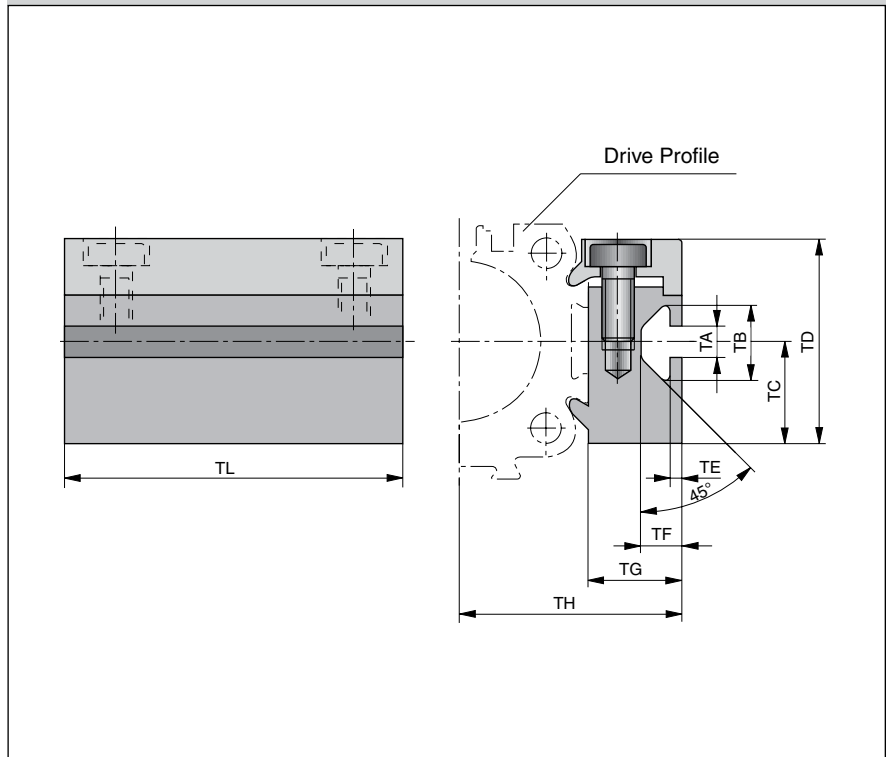
Series	A	B	C	D	E	F	L	X	Order No.	
									Standard	Stainless
<b>OSP-P16</b>	14	20.5	28	M3	12	27	50	38	<b>20432</b>	<b>20438</b>
<b>OSP-P25</b>	16	23	32	M5	10.5	30.5	50	36	<b>20006</b>	<b>20186</b>
<b>OSP-P32</b>	16	23	32	M5	10.5	36.5	50	36	<b>20006</b>	<b>20186</b>
<b>OSP-P40</b>	20	33	43	M6	14	45	80	65	<b>20025</b>	<b>20267</b>
<b>OSP-P50</b>	20	33	43	M6	14	52	80	65	<b>20025</b>	<b>20267</b>



# Linear Drive Accessories

## ∅ 16-50 mm T-Slot Profile

### Dimensions



**B**



For Linear-drive  
 • Series OSP-P

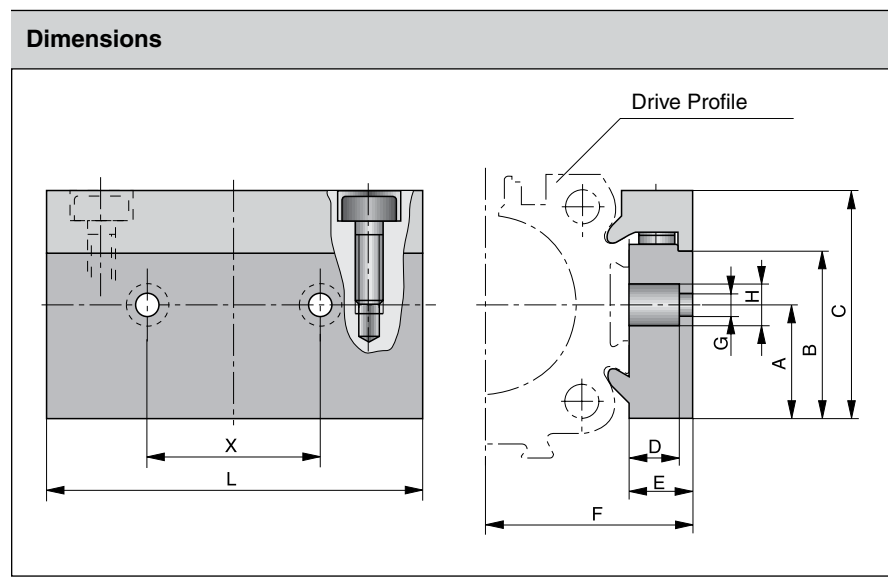
#### T-Slot Profile OSP

- A universal attachment for mounting with standard T-Nuts

#### Dimension Table (mm)

Series	TA	TB	TC	TD	TE	TF	TG	TH	TL	Order No.	
										Standard	Stainless
OSP-P16	5	11.5	14	28	1.8	6.4	12	27	50	20433	20439
OSP-P25	5	11.5	16	32	1.8	6.4	14.5	34.5	50	20007	20187
OSP-P32	5	11.5	16	32	1.8	6.4	14.5	40.5	50	20007	20187
OSP-P40	8.2	20	20	43	4.5	12.3	20	51	80	20026	20268
OSP-P50	8.2	20	20	43	4.5	12.3	20	58	80	20026	20268





# Linear Drive Accessories

ø 16-50 mm  
Connection Profile



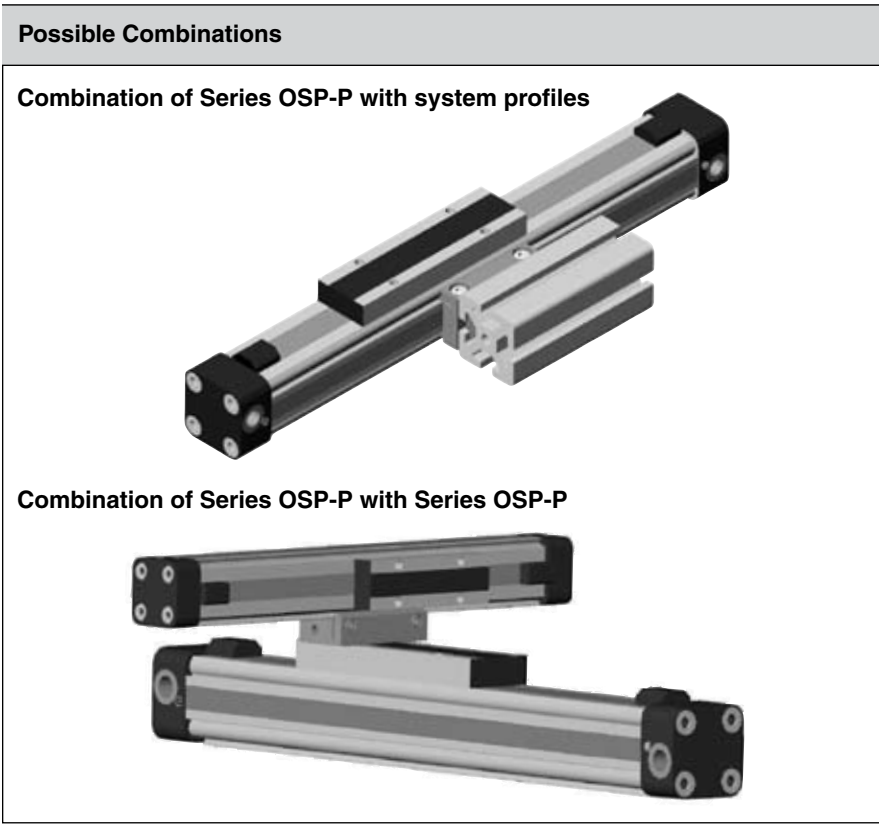
For combining

- Series OSP-P with system profiles
- Series OSP-P with Series OSP-P



**Dimension Table (mm)**

Cylinder Series	for mounting on the carrier of	A	B	C	D	E	F	G	H	L	X	Order No.
OSP-P16	OSP25	14	20.5	28	8.5	12	27	5.5	10	50	25	20849
OSP-P25	OSP32-50	16	23	32	8.5	10.5	30.5	6.6	11	60	27	20850
OSP-P32	OSP32-50	16	23	32	8.5	10.5	36.5	6.6	11	60	27	20850
OSP-P40	OSP32-50	20	33	43	8	14	45	6.6	11	60	27	20851
OSP-P50	OSP32-50	20	33	43	8	14	52	6.6	11	60	27	20851



# Linear Drive Accessories

Ø 25-50 mm

## Joint Clamp Connection

**B**



For connection of cylinders of the Series OSP-P

The joint clamp connection combines two OSP-P cylinders of the same size into a compact unit with high performance.

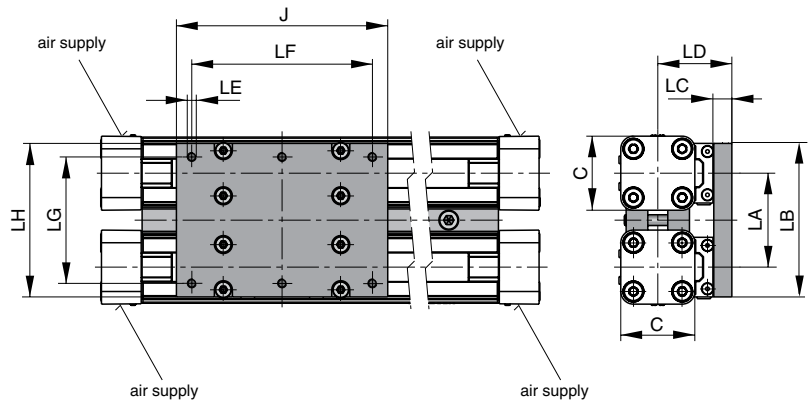
### Features

- Increased load and torque capacity
- Higher driving forces

### Included in delivery:

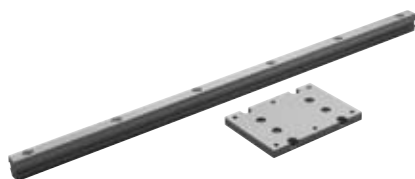
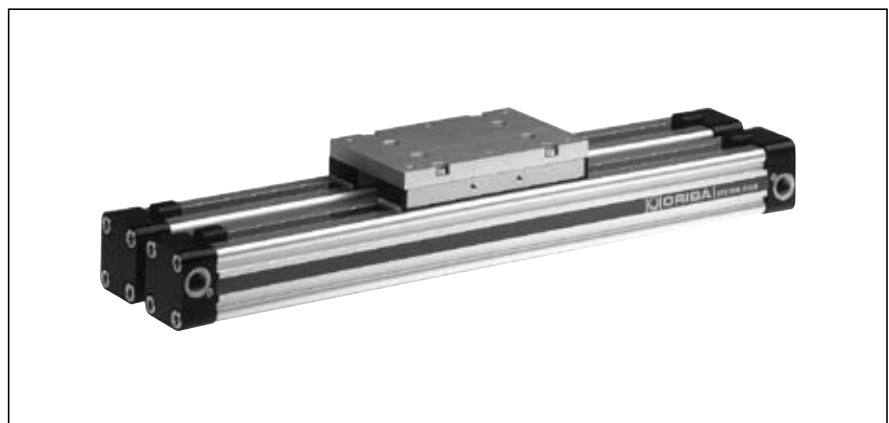
- 2 clamping profiles with screws
- 1 mounting plate with fixings

### Dimensions



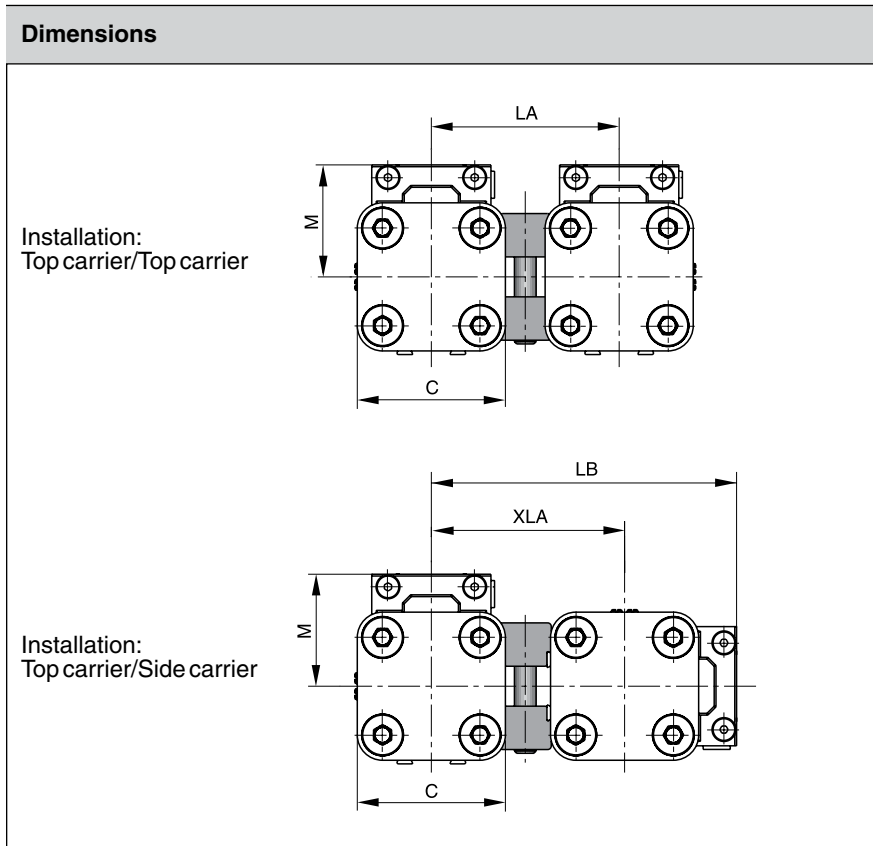
### Dimension Table (mm)

Cylinder Series	C	J	LA	LB	LC	LD	LE	LF	LG	LH
OSP-P25	41	117	52	86	10	41	M5	100	70	85
OSP-P32	52	152	64	101	12	50	M6	130	80	100
OSP-P40	69	152	74	111	12	56	M6	130	90	110
OSP-P50	87	200	88	125	12	61	M6	180	100	124





**B**



# Linear Drive Accessories

## ø 25-50 mm Multiplex Connection



**For connection of cylinders of the Series OSP-P**

The multiplex connection combines two or more OSP-P cylinders of the same size into one unit.

**Features**

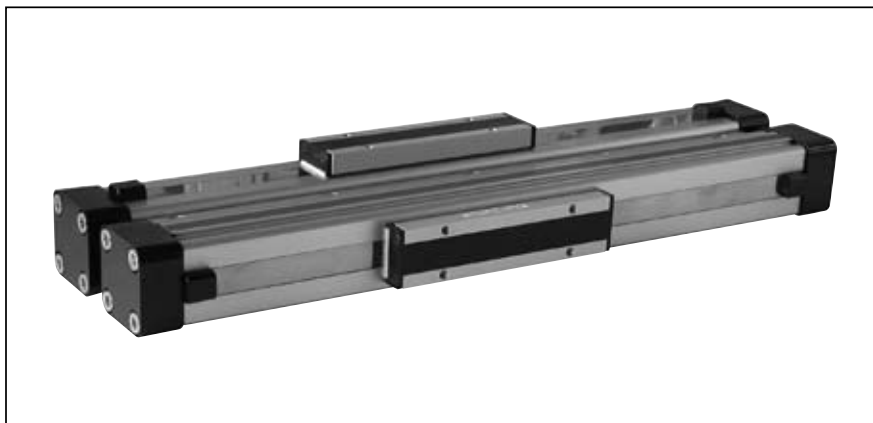
- The orientation of the carriers can be freely selected

**Included in delivery:**

2 clamping profiles with clamping screws

**Dimension Table (mm)**

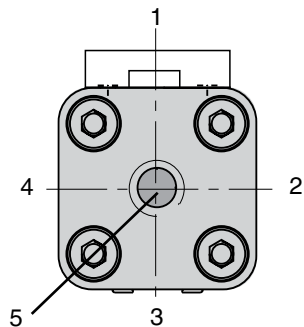
Cylinder Series	C	M	LA	LE	XLA	Order No.	
						Standard	Stainless
OSP-P25	41	31	52	84.5	53.5	20035	20193
OSP-P32	52	38	64	104.5	66.5	20167	20265
OSP-P40	69	44	74	121.5	77.5	20036	20275
OSP-P50	87	49	88	142.5	93.5	20168	20283



# Ordering Instructions / Part Numbering System for OSP-P Rodless Basic Pneumatic Series

**B**

6	7	8	9	10	11	12-16	17	18	19	20	21	22	23	24	25								
OSPP	25	0	0	1	0	0	01100	0	0	1	0	0	0	0	0								
	<b>Bore</b>			<b>Seals</b>		<b>Stroke</b>		<b>Piston Mountings</b>		<b>Dovetail Cover</b>				<b>Version</b>									
	10 16 25 32 40 50 63 80			0 Standard 1 Viton S Special		x x x x x		0 None Floating 1 Mount (NR25) Joint 8 Clamp Plate (NR24) S Special		0 Standard X Without Cover Rail S Special													
		<b>Piston Style</b>			<b>Lubrication</b>						<b>add. Carriage</b>												
		0 Standard 1 Tandem S Special			0 Standard 1 Slow Speed 4 Food 5 Clean Room S Special						0 Without S Special												
						<b>Corrosion Resist. Hardware</b>						<b>End Cap Mounts</b>											
						0 Standard 1 Stainless S Special						0 Without 1 A1 (10,16,25,32) 2 A2 (16,25,32) 3 A3 (25,32) 4 B1 (25,32) 6 B3 (16) 7 B4 (25,32) 8 B5 (32) 9 C1 (40,50,63,80) A C2 (40,50) B C3 (40,50,63,80) C C4 (40,50)											
		<b>Air Connections / Porting</b>					<b>Guides / Brakes / Inversion Mounts</b>																
		0 Standard (position #2) 1 End Face (position #5) 2 Single End Porting 3 Left Stand (pos #2), Right End Face (pos #5) 4 Right Stand (pos #2), Left End Face (pos #5) 6 Single End Porting End Face A 3/2 Way Valve VOE 24V = (25,32,40,50) B 3/2 Way Valve VOE 220V~/110V= (25,32,40,50) C 3/2 Way Valve VOE 48V=(25,32,40,50) E 3/2 Way Valve VOE 110V~ (25,32,40,50) S Special					0 Non e A AB Activebrake M Inversion (NR30) N Joint Clamp (25,32,40,50) S Special																
								<b>Cushioning / Stops</b>															
								0 Standard S Special															
									<b>End Cap Position</b>														
									0 l+r 0° = In Front (pos #2) 1 l+r 90° = Underneath (pos #3) 2 l+r 180° = At the Back (pos # 4) 3 l+r 270° = Same Face as Outerband (pos #2,1) 4 l 90° = Underneath; r 0° = In Front (pos #3,2) 5 l 180° = At the Back; r 0° = In Front (pos #4,2) 6 l 270° = Same Face as Outerband; r 0° = In Front (pos #1,2) 7 l 0° = In Front; r 90° = Underneath (pos #2, 3) 8 l 180° = At the Back; r 90° = Underneath (pos #4,3) 9 l 270° = Same Face as Outerband; r 90° = Underneath (pos #1,3) A l 0° = In Front; r 180° = At the Back (pos #2,4) B l 90° = Underneath; r 180° = At the Back (pos #3,4) C l 270° = Same Face as Outerband; r 180° = At the Back (pos #1,4) D l 0° = In Front; r 270° = Same Face as Outerband (pos #2,1) E l 90° = Underneath; r 270° = Same Face as Outerband (pos #3,1) F l 180° = At the Back; r 270° = Same Face as Outerband (pos #4,1) S Special														
															<b>Switches / Measuring System</b>								
															0 none 1 NO Reed-KL3045 (All except 10mm) Qty. 2 2 NC Reed-KL3048 (All except 10mm) Qty. 2 3 PNP KL3054+4041 (All except 10mm) Qty. 2 4 NPN KL3060+4041 (All except 10mm) Qty. 2 5 NO Reed-KL3045 (10mm only) 6 PNP 3049+4041 (10mm only) Qty. 2 7 PNP 3753+4041 (10mm only) Qty. 2 X 21240 SFI 0,1mm Y 21241 SFI 1mm Z 4650 SFA S Special								
															Note: Comes in pairs								
															Note: 2 switches will be supplied. For different quantity, please order as a separate line item.								



**Note: Position #2 is the standard location.**

