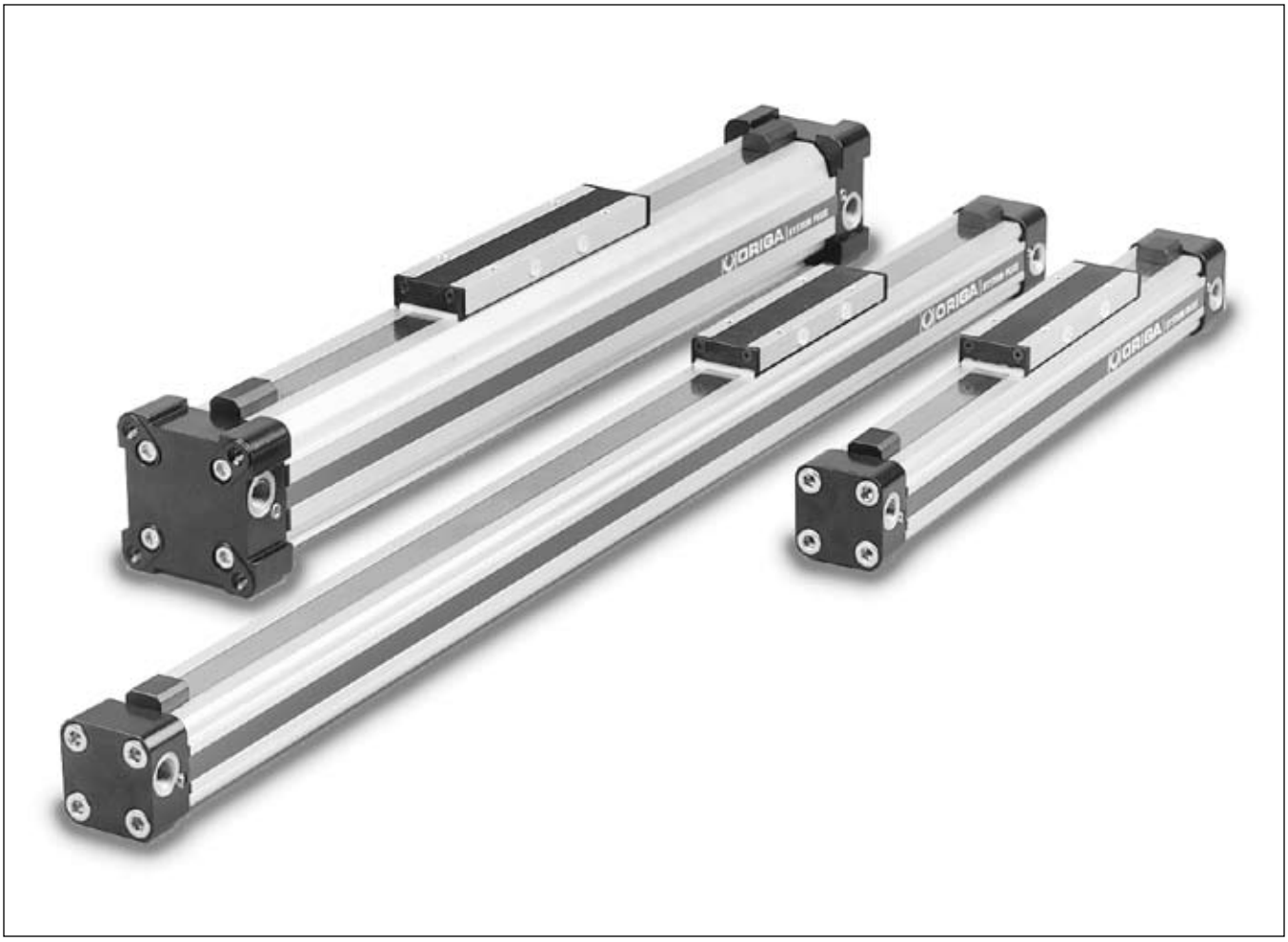
Rodless Pneumatic Cylinders Series OSP-P

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
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Clean Room Cylinders
- Technical Data B31-B32
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Bi-parting Rodless Cylinders
- Technical Data B35
- Dimensions..... B36
- Ordering Information B37

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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

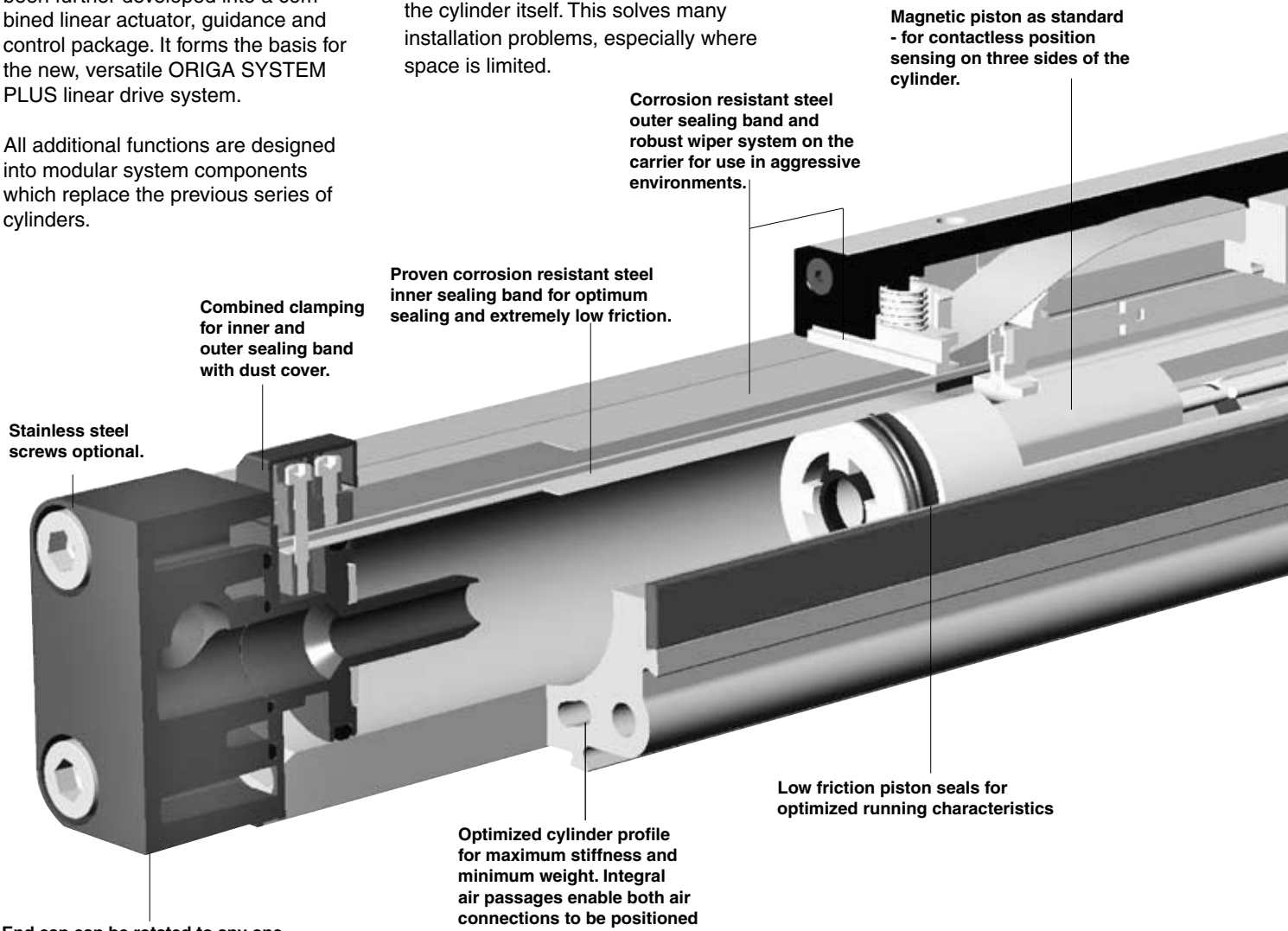
With this second generation linear drive PARKER-ORIGA offers design engineers complete flexibility. The well known ORIGA cylinder has been further developed into a combined linear actuator, guidance and control package. It forms the basis for the new, versatile ORIGA SYSTEM PLUS linear drive system.

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.



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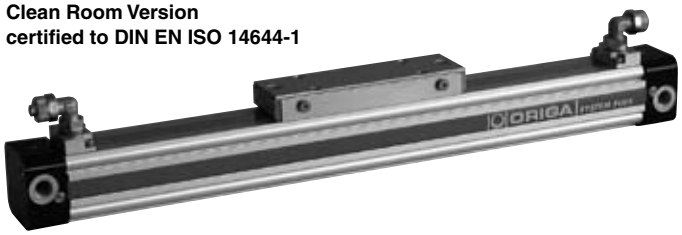
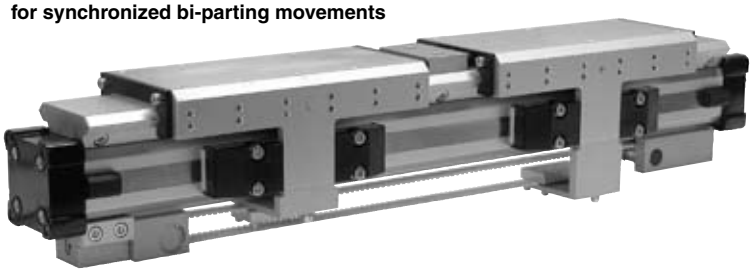
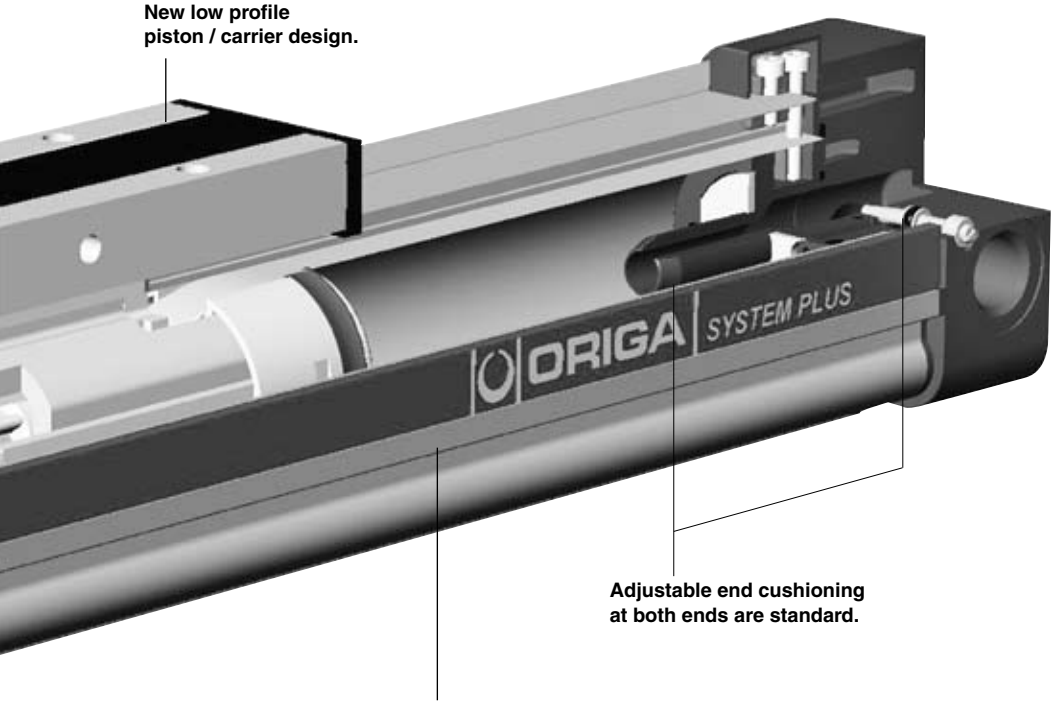
Clean Room Version
certified to DIN EN ISO 14644-1



Rodless Cylinder
for synchronized bi-parting movements



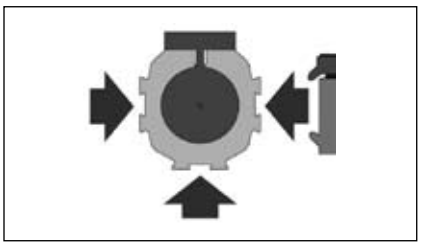
New low profile
piston / carrier design.



Adjustable end cushioning
at both ends are standard.

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

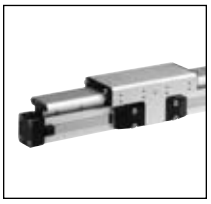
Modular system components are simply clamped on.



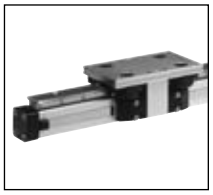
INTEGRATED VOE VALVES
The complete compact solution for optimal cylinder control.

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

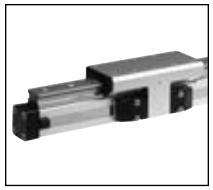
SLIDELINE
Combination with linear guides provides for heavier loads.



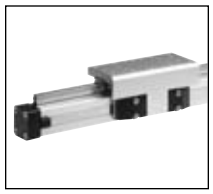
POWERSLIDE
Roller bearing precision guidance for smooth travel and high dynamic or static loads.



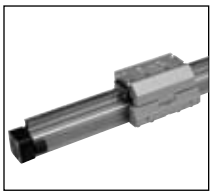
PROLINE
The compact aluminum roller guide for high loads and velocities.



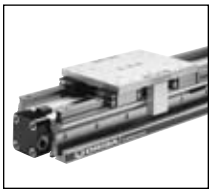
STARLINE
Recirculating ball bearing guide for very high loads and precision



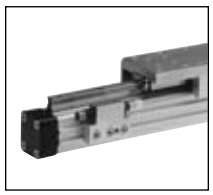
KF GUIDE
Recirculating ball bearing guide – the mounting dimensions correspond to FESTO Type: DGPL-KF



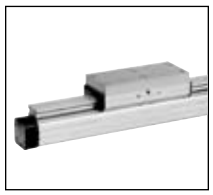
HEAVY DUTY GUIDE HD
for heavy duty applications.



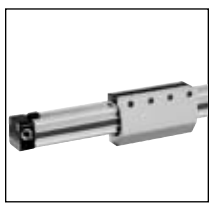
VARIABLE STOP VS
The variable stop provides simple stroke limitation.



Passive pneumatic brake reacts automatically to pressure failure.



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



B

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OPTIONS AND ACCESSORIES FOR SYSTEM VERSATILITY

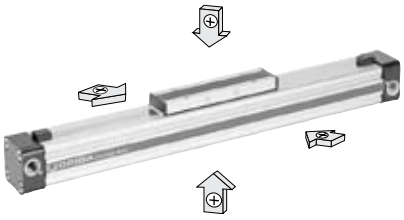
SERIES OSP-P

B

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).

CLEAN ROOM

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.

0.005 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

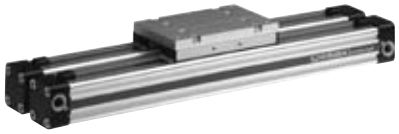
Page B14

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.

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B

ACCESSORIES

MAGNETIC SWITCHES
TYPE RS, ES, RST, EST

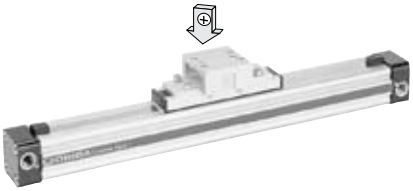
Pages B102-B108

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.



INVERSION MOUNTING

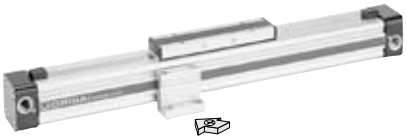
Page B22

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

END CAP MOUNTING

Page B23

For end-mounting of the cylinder.



MID-SECTION SUPPORT

Page B24

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

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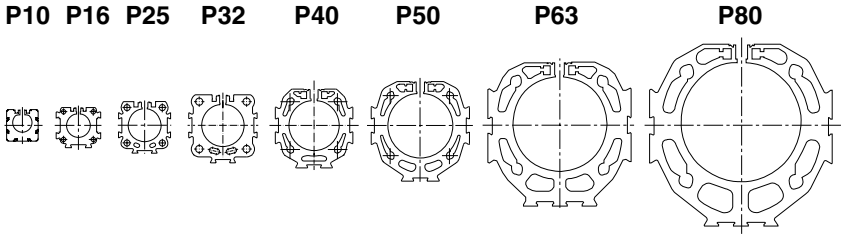
Characteristics				Pressures quoted as gauge pressure
Characteristics		Symbol	Unit	Description
General Features				
Type				Rodless cylinder
Series				OSP-P
System				Double-acting, with cushioning, position sensing capability
Mounting				See drawings
Air Connection				Threaded
Ambient temperature range		T_{min} T_{max}	°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_{max}	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

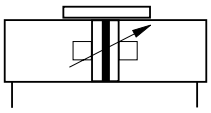


Rodless Pneumatic Cylinder

ø 10-80 mm

OSP
ORIGA SYSTEM PLUS

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 41m (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 41m

B

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B

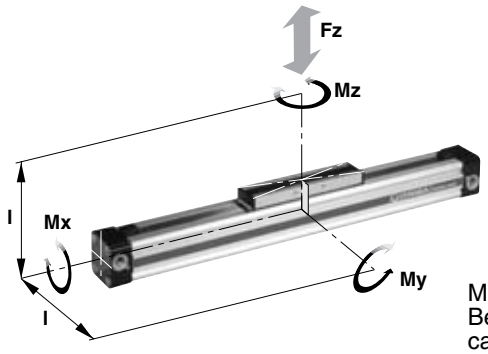
Loads, Forces and Moments

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 ≤ 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.



M = F ·l
Bending moments are calculated from the center of the linear actuator

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

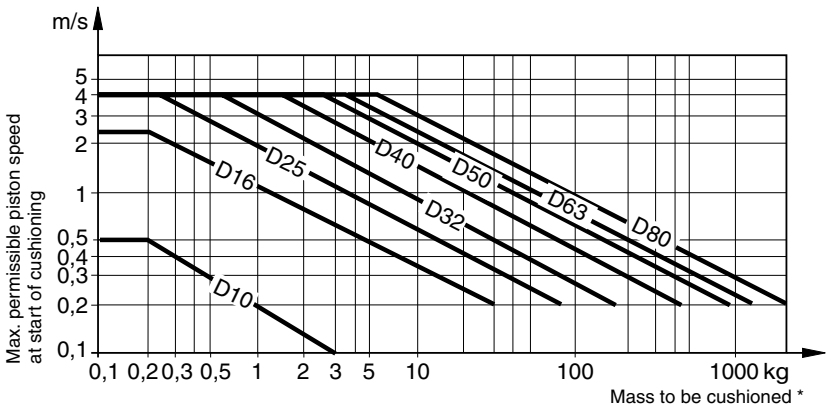
* A rubber element (non-adjustable) is used for end cushioning.
To deform the rubber element enough to reach the absolute end position would require a Δp of 4 bar!

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.



* For cylinders with linear guides or brakes, please be sure to take the mass of the carriage or the brake housing into account.

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.

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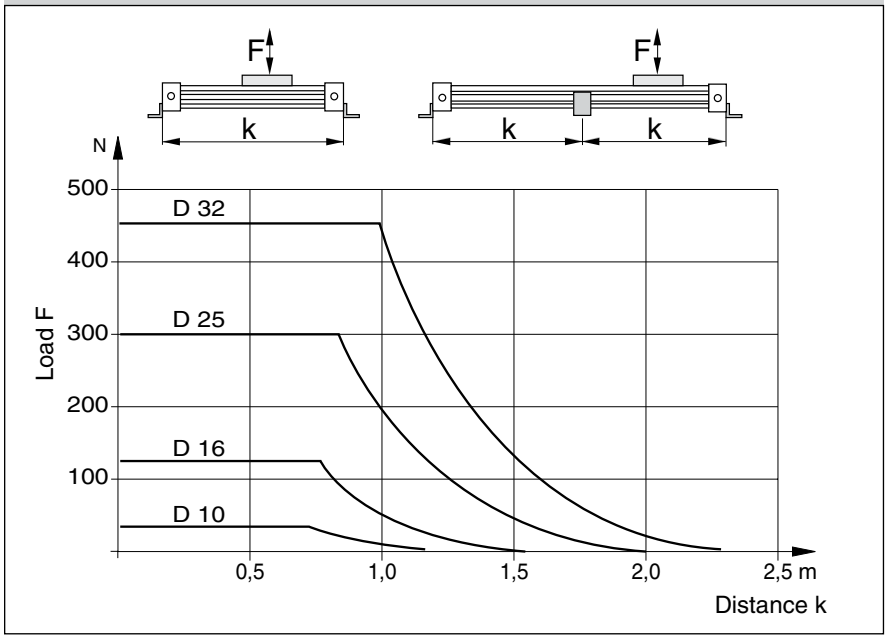
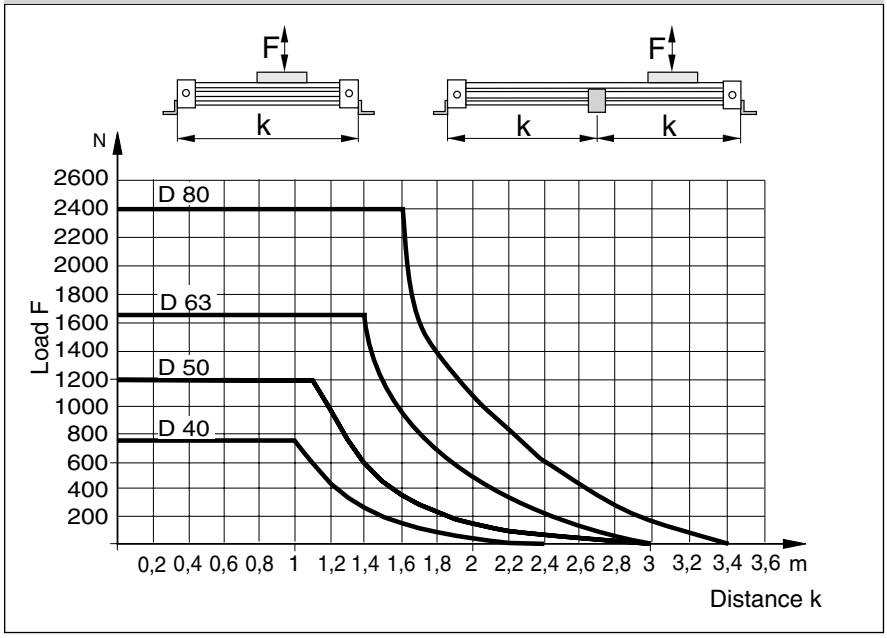
Permissible Support Spacings: OSP - P10 - P32



Permissible Support Spacings: OSP - P40 - P80



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

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B

Cylinder Stroke and Dead Length A

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

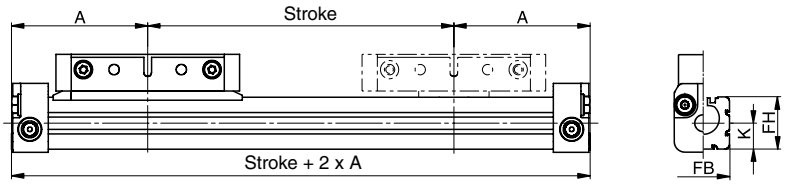
Tandem Cylinder

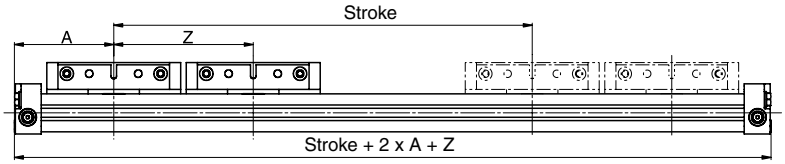
Two pistons are fitted: dimension "Z" is optional. (Please note minimum distance "Zmin").

- 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"**

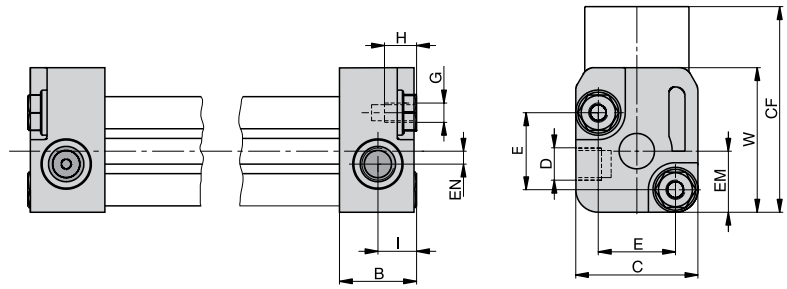
Please note:
To avoid multiple actuation of magnetic switches, the second piston is not equipped with magnets.

Dimensions of Basic Cylinder OSP-P10

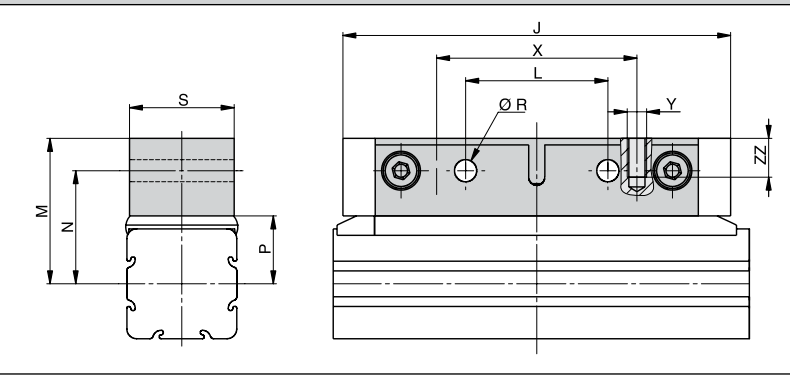




End Cap/Air Connection Series OSP-P10



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_{min}	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

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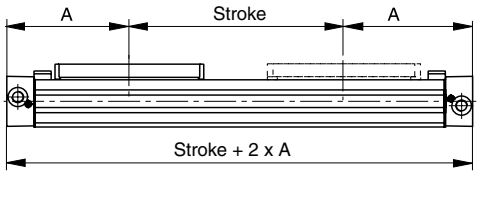
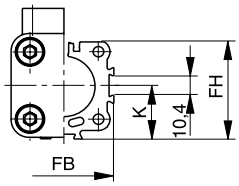
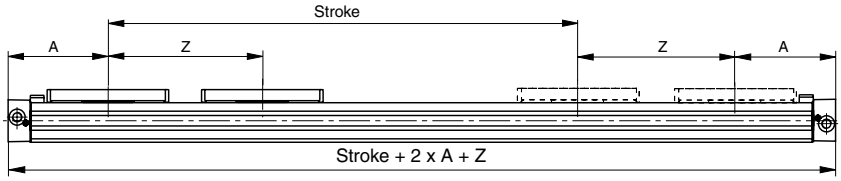
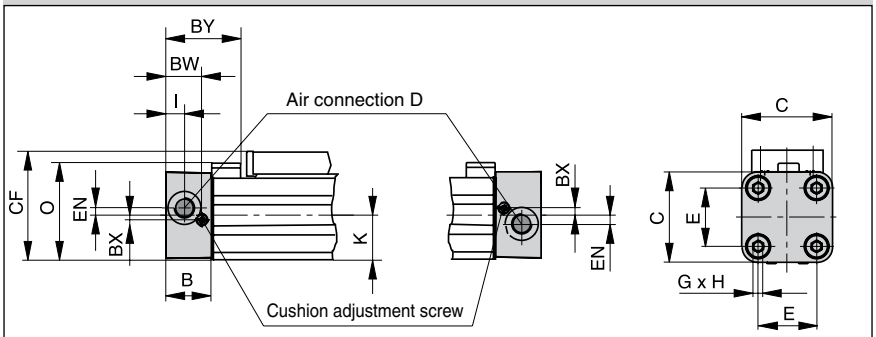
Dimensions of Basic Cylinder OSP - P16-P80



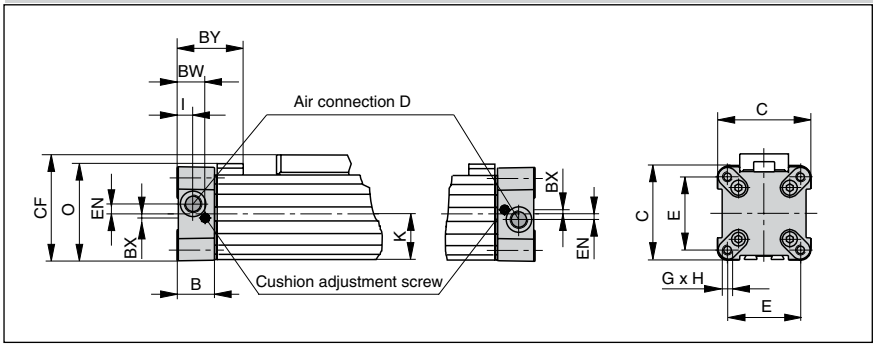




End Cap/Air Connection can be rotated 4 x 90°
Series OSP-P16 to P32



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



Cylinder Stroke and Dead Length A

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

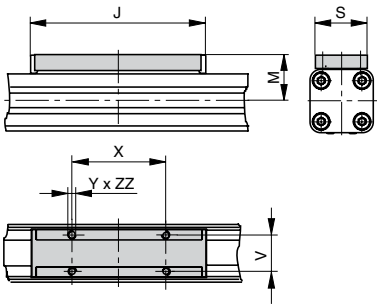
Tandem Cylinder

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”**

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

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

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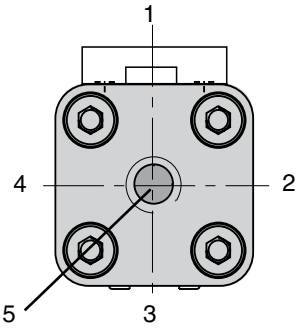
B

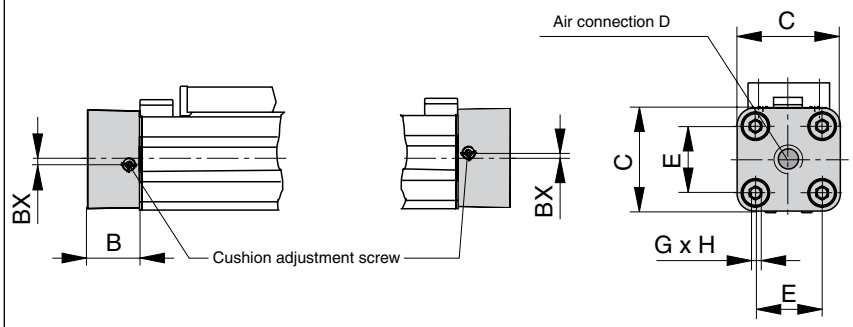
Air Connection on the End-Face #5

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.

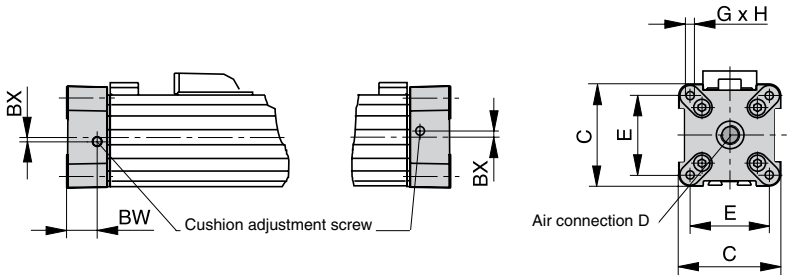


Note: Position #2 is the standard location.

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

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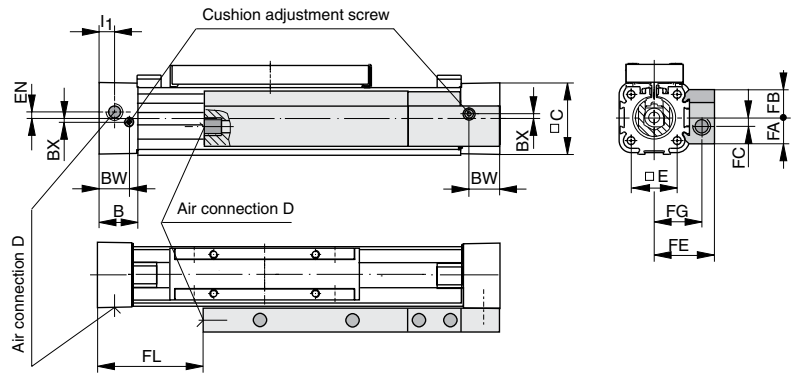
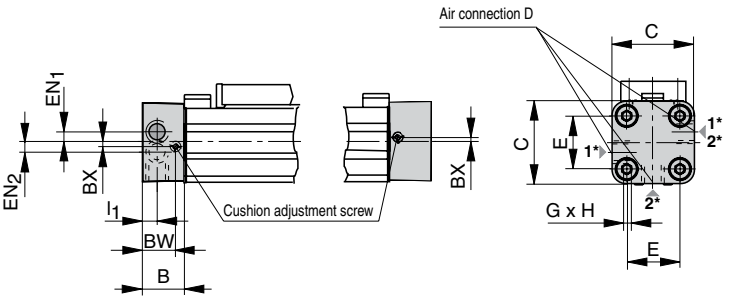
Series OSP-P16

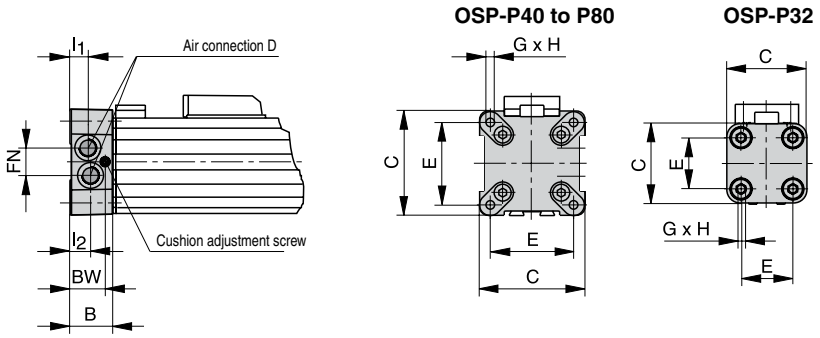


Series OSP-P25



* Versions of Air Connection Positions: 1 → 1 or 2 → 2

Series OSP-P32 to P80



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.

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.

Dimension Table (mm)

Cylinder Series	B	C	D	E	G	H	l_1	l_2	BX	BW	EN	EN_1	EN_2	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

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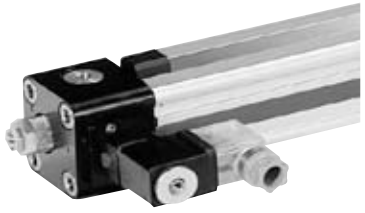
B

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.

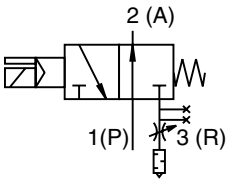
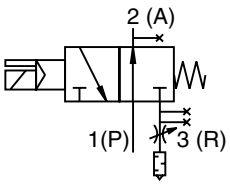
Characteristics:

- 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!



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

Characteristics 3/2 Way Valves VOE

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

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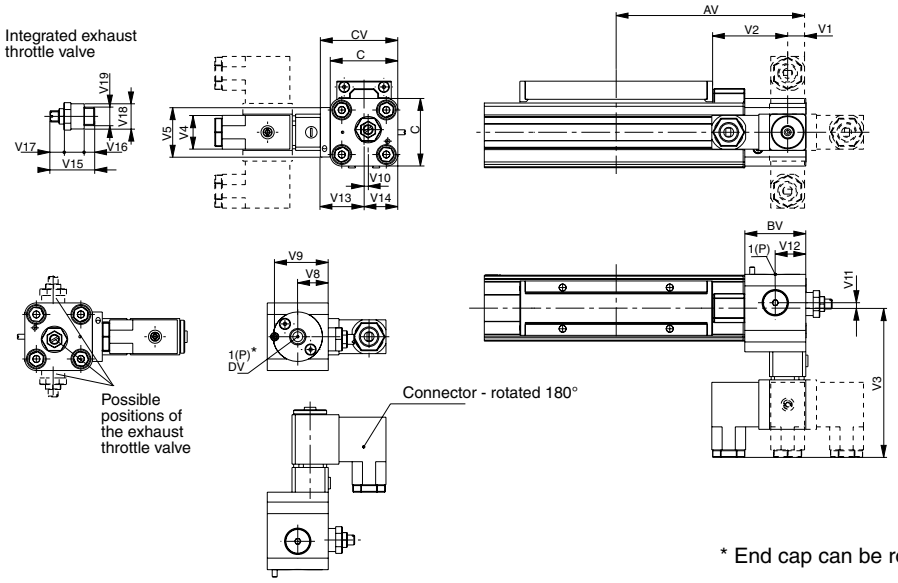
Dimensions VOE Valves OSP-P25 and P32

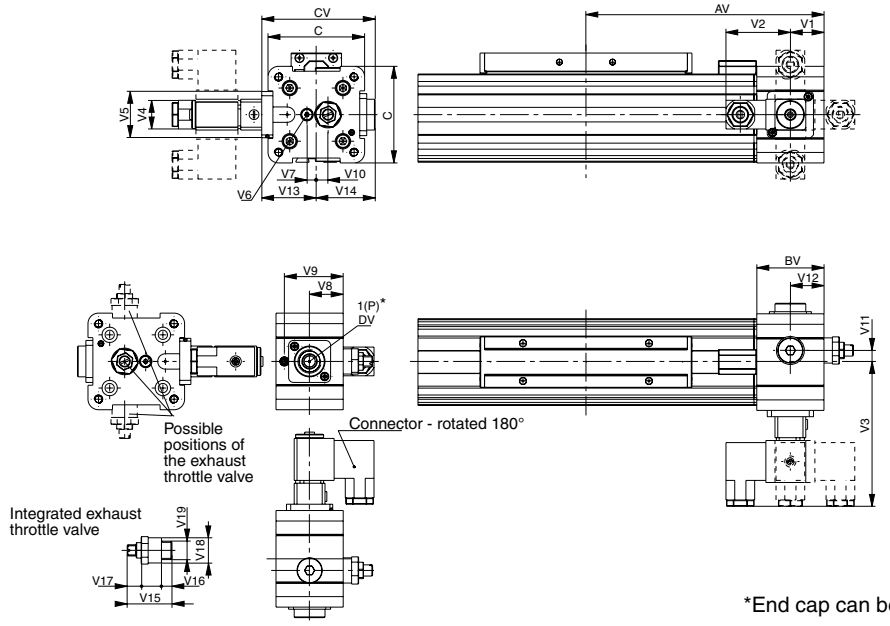


* End cap can be rotated 4x90°

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



*End cap can be rotated 4x90°

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

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Active Brake

OSP
ORIGA SYSTEM PLUS

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

B

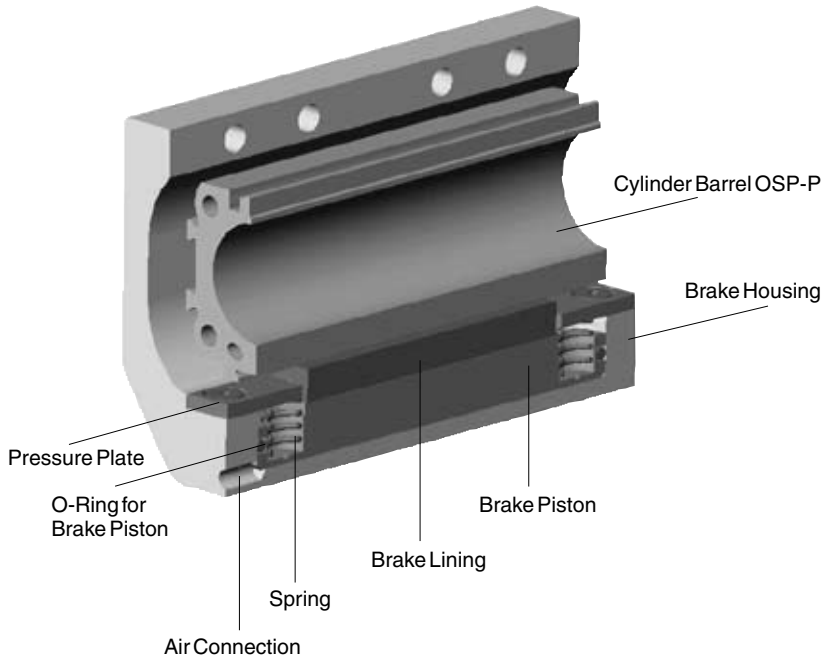
Features:

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

(1 – 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.

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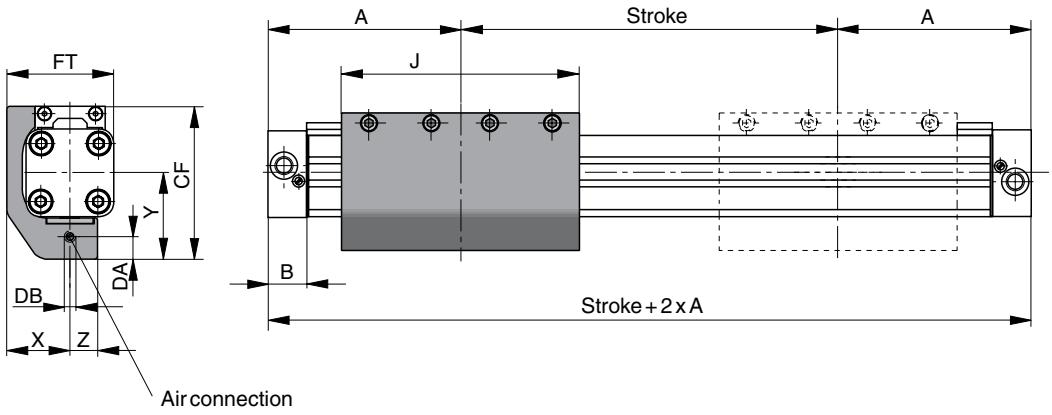
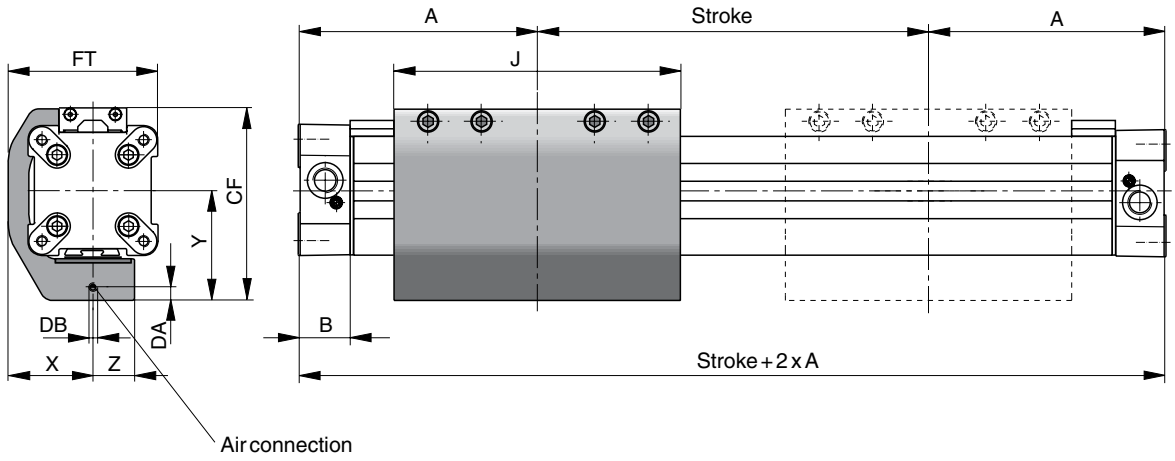
B

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

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End Cap Mountings

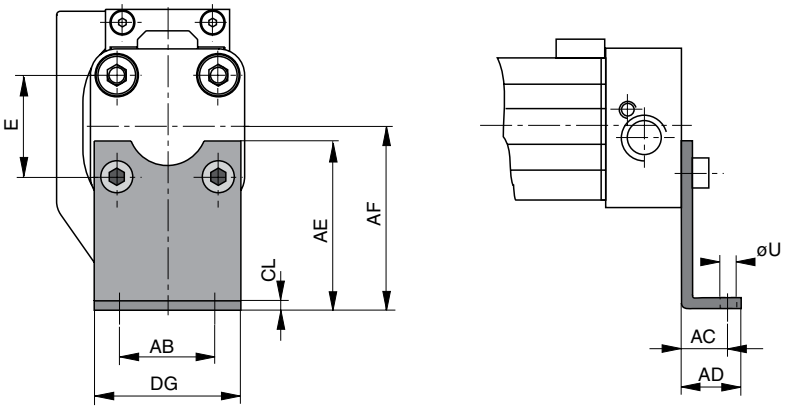
On the end-face of each cylinder end cap there are four threaded holes for mounting the cylinder. The hole layout is square, so that the mounting can be fitted to the bottom, top or either side.

B

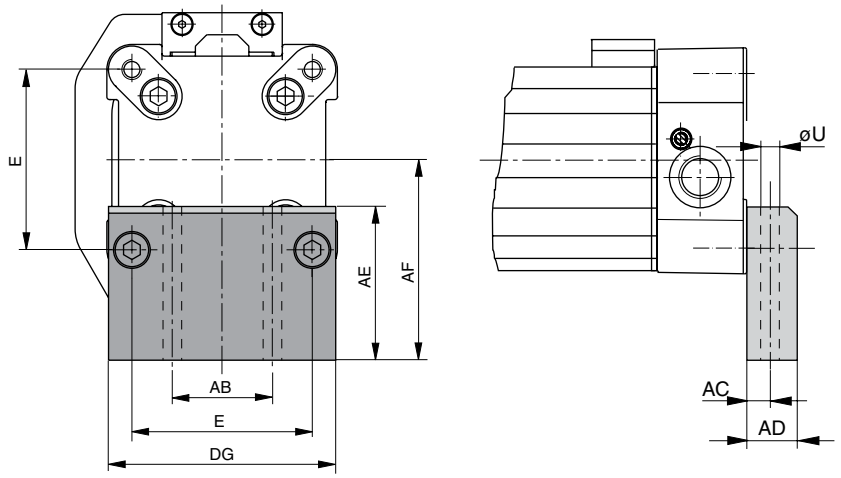
Material:
Series OSP-P25, P32:
Galvanized steel
The mountings are supplied in pairs.

Material:
Series OSP-P40,P50, P63, P80:
Anodized aluminum
The mountings are supplied in pairs.
Stainless steel version on request.

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



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**

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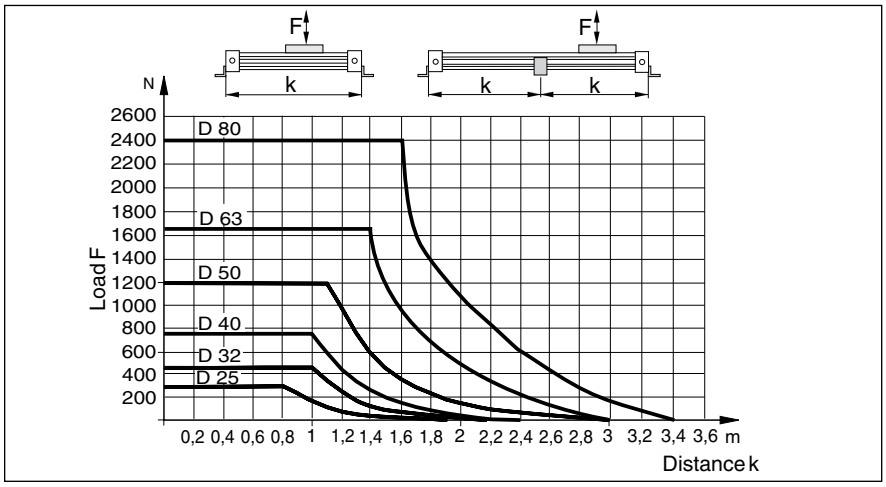
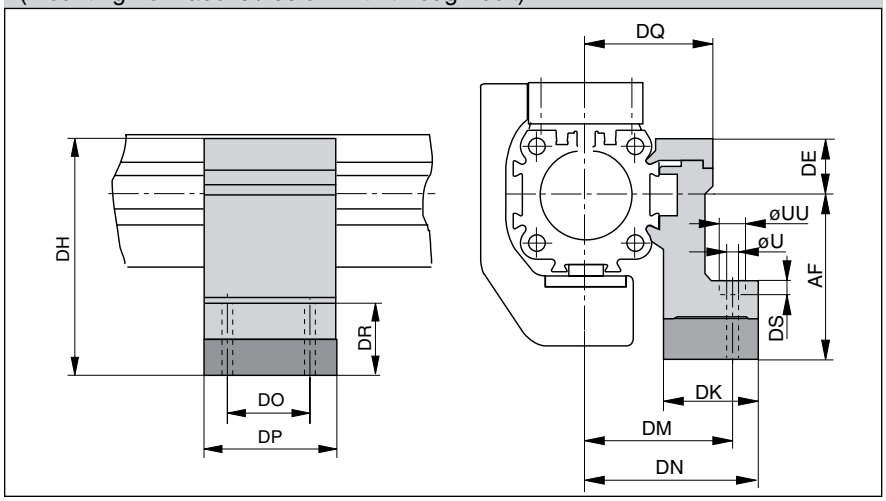


Series OSP-P25 to P80 with Active Brake AB: Type E3
(Mounting from above / below with through-bolt)



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.

B

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.

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 **only** be mounted opposite of the brake housing)	**B102-B108**
Incremental displacement measuring system SFI-plus	**B113-B115**

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Linear Drive Accessories

ø 10 mm
Clevis Mounting

B

OSP
ORIGA SYSTEM PLUS

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

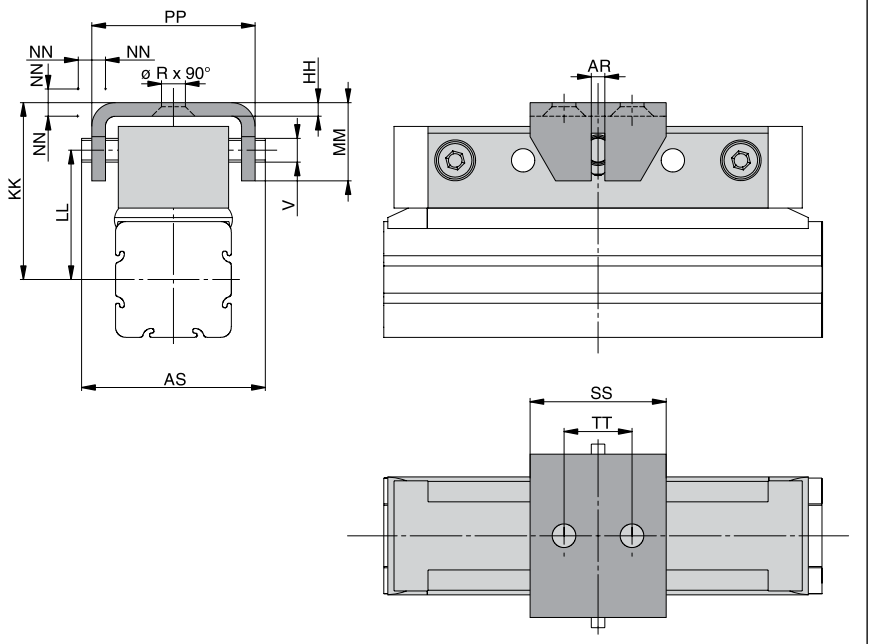
When external guides are used, parallelism deviations can lead to mechanical strain on the piston. This can be avoided by the use of a clevis mounting.

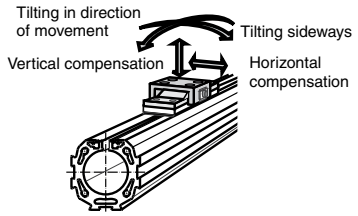
In the drive direction, the mounting has very little play.

Freedom of movement is provided as follows:

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

Series OSP-P10





Dimension Table (mm)

Series	ø R	V	AR	AS	HH	KK	LL	MM	NN*	PP	SS	TT	Order No. Standard	Order No. 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.

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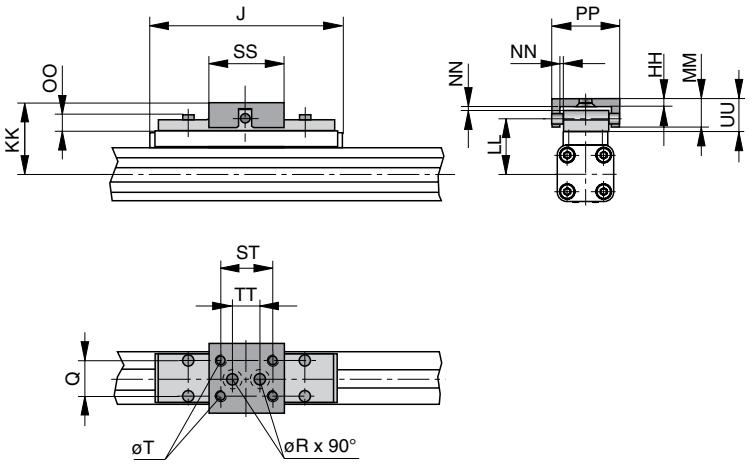
Linear Drive Accessories

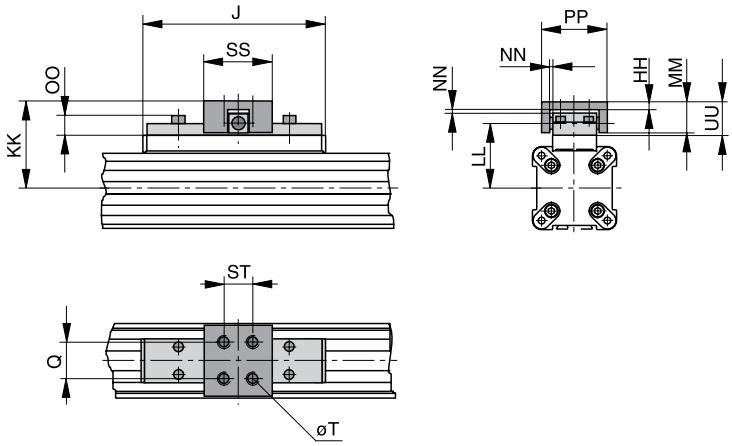
ø 16-80 mm
Clevis Mounting

B

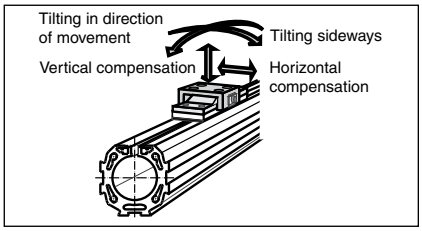
Series OSP-P16 to 32



Series OSP-P40 to 80



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



OSP
ORIGA SYSTEM PLUS

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	ø R	HH	KK	LL	MM	NN*	OO	PP	SS	ST	TT	UU	Order No. Standard	Order No. 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.

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Linear Drive Accessories

ø 16-80 mm
Inversion Mounting

B

OSP
ORIGA SYSTEM PLUS

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:

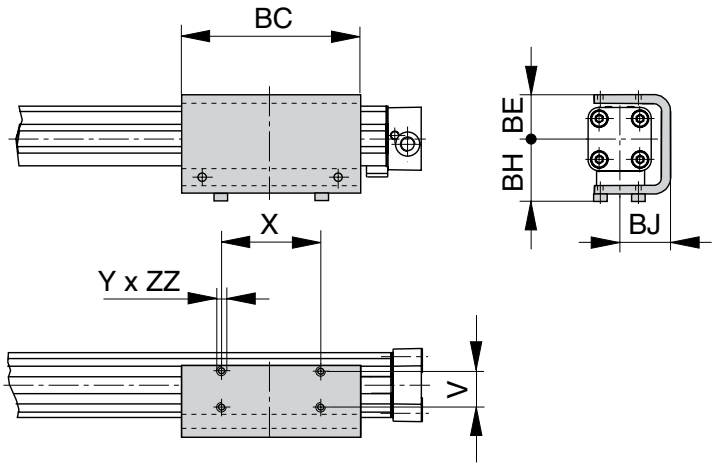
Other components of the OSP system such as **mid-section supports, magnetic switches** and **the external air passage for the P16,** can still be mounted on the free side of the cylinder.

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

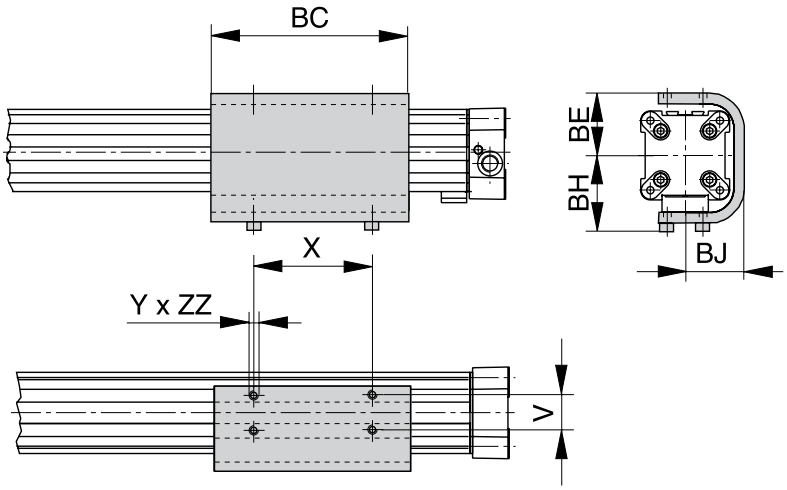
Important Note:

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

Series OSP-P16 to 32



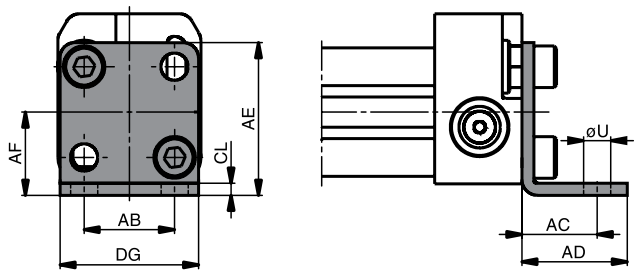
Series OSP-P40 to 80



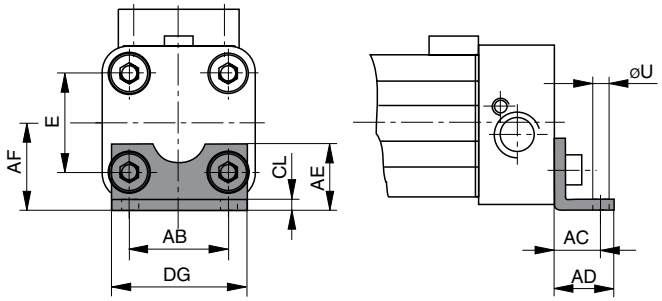
Dimension Table (mm)

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**

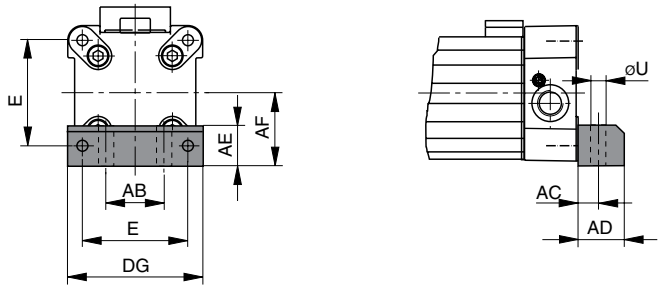
Series OSP-P10 : Type A1



Series OSP-P16 to 32: Type A1



Series OSP-P40 to 80: Type C1



Linear Drive Accessories

ø 10-80 mm
End Cap Mountings

OSP
ORIGA SYSTEM PLUS

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	Order No. (* Type C1
OSP-P10	-	3.6	12	10	14	20.2	11	1.6	18.4	**0 240**	**–**
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

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Linear Drive Accessories

ø 10-80 mm
Mid-Section Support

B

OSP
ORIGA SYSTEM PLUS

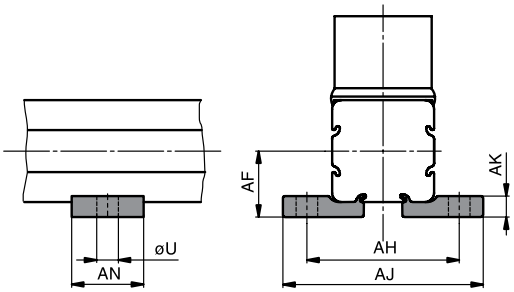
For Linear-drive
- **Series OSP-P**

Note on Types E1 and D1 (P16 – P80):

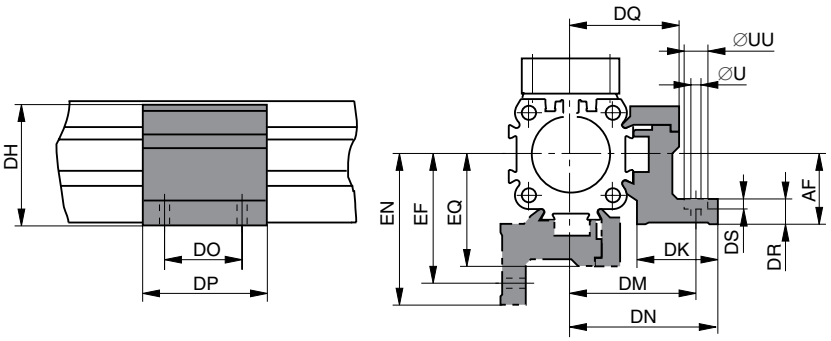
The mid-section support can also be mounted on the underside of the actuator, in which case its distance from the center of the actuator is different.

Stainless steel version on demand.

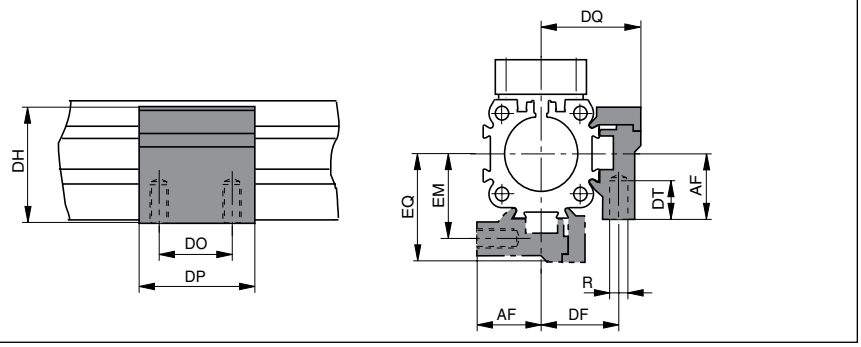
Series OSP-10, Type E1
(Mounting from above / below using a cap screw)



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)



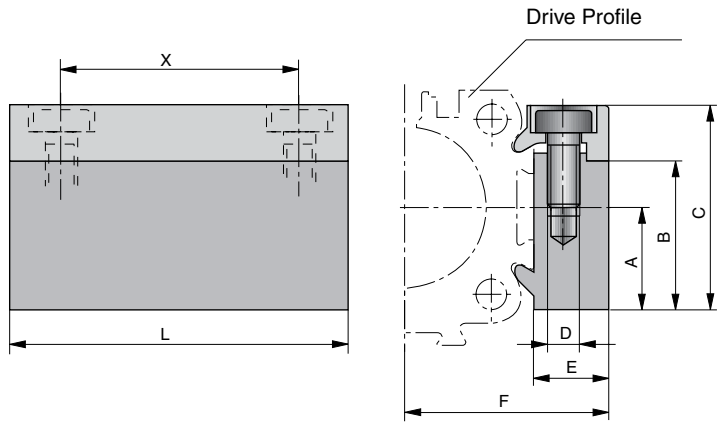
Dimension Table (mm) Series OSP-P10

Series	U	AF	AH	AJ	AK	AN	Order No. Type E1	Order No. 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	Order No. 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**

Dimensions



Linear Drive Accessories

ø 16-50 mm
Adaptor Profile

OSP
ORIGA SYSTEM PLUS

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

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

B

Dimension Table (mm)

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

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Linear Drive Accessories

ø 16-50 mm
T-Slot Profile

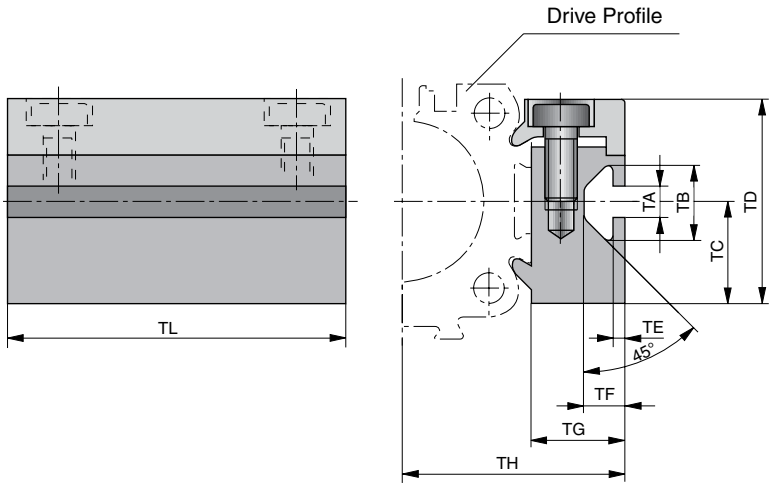
B

OSP
ORIGA SYSTEM PLUS

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

T-Slot Profile OSP
- A universal attachment for mounting with standard T-Nuts

Dimensions



Dimension Table (mm)

Series	TA	TB	TC	TD	TE	TF	TG	TH	TL	Order No. Standard	Order No. 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**

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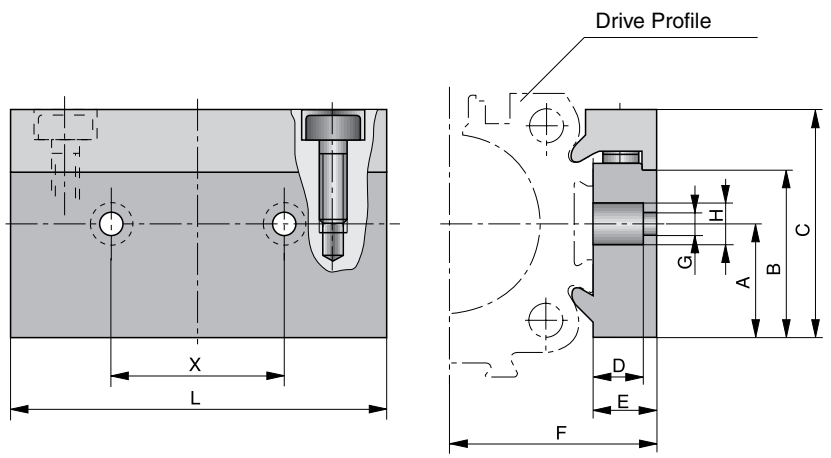
Dimensions



Linear Drive Accessories

ø 16-50 mm
Connection Profile

OSP
ORIGA SYSTEM PLUS

For combining

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

B

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**

Possible Combinations

Combination of Series OSP-P with system profiles

Combination of Series OSP-P with Series OSP-P

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Linear Drive Accessories

ø 25-50 mm Joint Clamp Connection

B

OSP
ORIGA SYSTEM PLUS

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

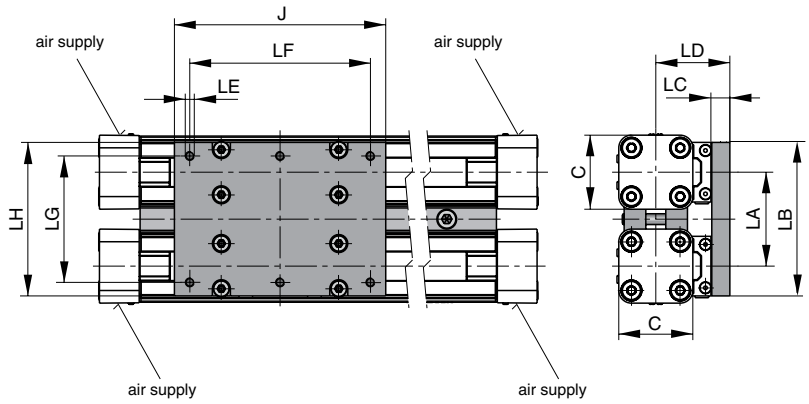
- Increased load and torque capacity
- Higher driving forces

Included in delivery:

2 clamping profiles with screws

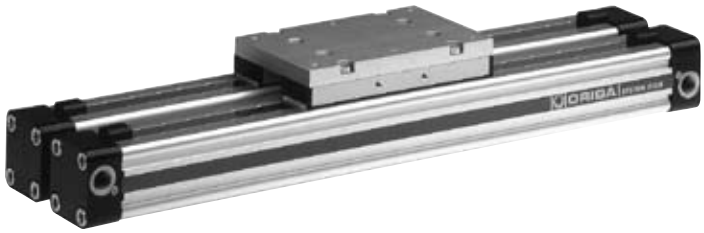
1 mounting plate with fixings

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



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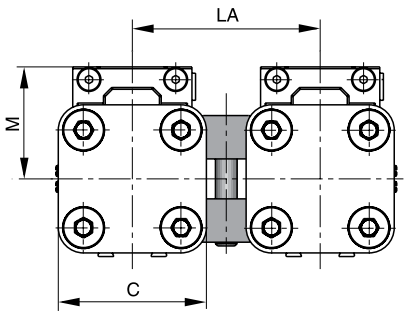
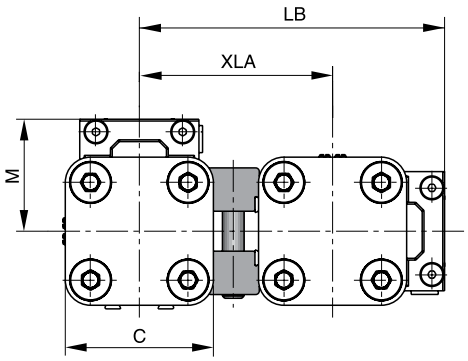
Dimensions

Installation:
Top carrier/Top carrier

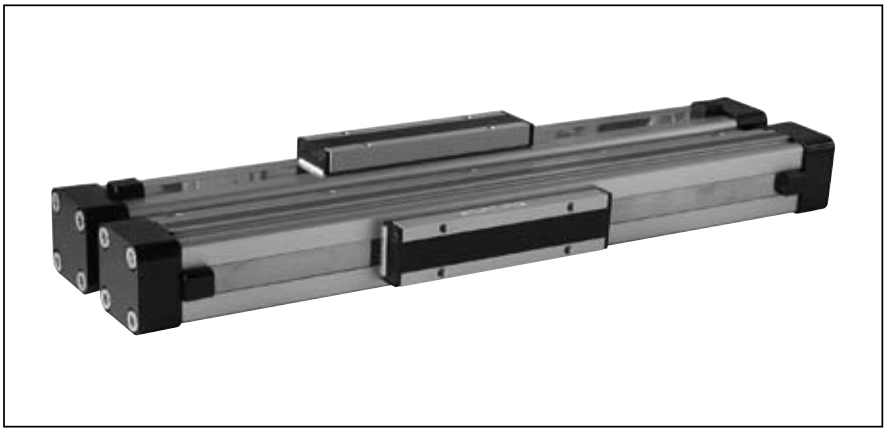


Installation:
Top carrier/Side carrier



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**



Linear Drive Accessories

ø 25-50 mm Multiplex Connection

OSP
ORIGA SYSTEM PLUS

For connection of cylinders of the Series OSP-P

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

Features

- The orientation of the carriers can be freely selected

Included in delivery:

2 clamping profiles with clamping screws

B

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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	0

Bore

10
16
25
32
40
50
63
80

Piston Style

0	Standard
1	Tandem
S	Special

Air Connections / Porting

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

Notes: 10mm bore can only have standard port locations.
Single End Porting on 16mm bore, then end caps cannot be rotated.

Seals

0	Standard
1	Viton
S	Special

Lubrication

0	Standard
1	Slow Speed
4	Food
5	Clean Room
S	Special

Corrosion Resist, Hardware

0	Standard
1	Stainless
S	Special

Stroke

x x x x x

End Cap Position

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

Cushioning / Stops

0	Standard
S	Special

Piston Mountings

0	None
1	Floating Mount (NR25)
8	Joint Clamp Plate (NR24)
S	Special

Guides / Brakes / Inversion Mounts

0	Non e
A	AB Activebrake
M	Inversion (NR30)
N	Joint Clamp (25,32,40,50)
S	Special

add. Carriage

0	Without
S	Special

Dovetail Cover

0	Standard
X	Without Cover Rail
S	Special

End Cap Mounts

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)

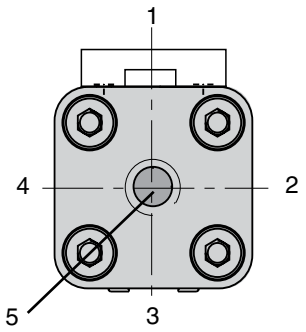
Note: Comes in pairs

Version

Switches / Measuring System

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: 2 switches will be supplied. For different quantity, please order as a separate line item.



Note: Position #2 is the standard location.

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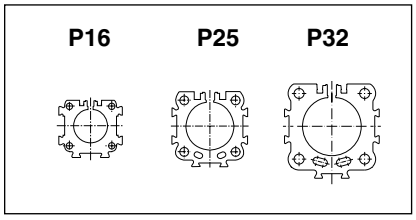
Characteristics				Pressure quoted as gauge pressure
Characteristics		Symbol	Unit	Description
General Features				
Type				Rodless Cylinder
Series				OSP-P
System				Double-acting, with cushioning, position sensing capability
Mounting				see drawings
Air connection				Threaded
Ambient and medium temperature range		T_{min} T_{max}	°C °C	-10 – other temperature ranges +80 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
	Sealing bands			Corrosion resistant steel
	Seals			NBR (Option: Viton®)
	Screws			Stainless steel
	Covers			Anodized aluminum
	Guide plate			Plastic
Max. operating pressure*		p_{max}	bar	8

* Pressure quoted as gauge pressure

Weight (Mass) kg

Cylinder series (basic cylinder)	Weight (Mass) kg	
	at 0 mm stroke	per 100 mm stroke
OSP-P16	0.22	0.1
OSP-P25	0.65	0.197
OSP-P32	1.44	0.354

Size Comparison



Clean Room Cylinder

ø 16 – 32 mm

Rodless Cylinder

certified to DIN EN ISO 14644-1

B

OSP
ORIGA SYSTEM PLUS

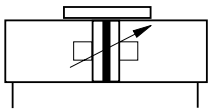
Standard Versions:

- Double-acting with adjustable end cushioning
- With magnetic piston for position sensing
- Stainless steel screws

Special Versions:

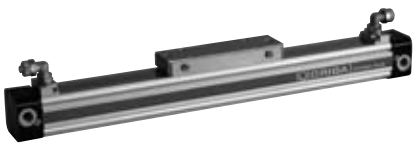
- Slow speed lubrication
- Viton® seals

Series OSP-P..



Features:

- Clean room classification
  ISO Class 4 at v_m = 0.14 m/s
  ISO Class 5 at v_m = 0.5 m/s
- Suitable for smooth slow speed operation up to v_{min} = 0.005 m/s
- Optional stroke length up to 1200 mm (longer strokes on request)
- Low maintenance
- Compact design with equal force and velocity in both directions
- Aluminum piston with bearing rings to support high direct and cantilever loads



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B

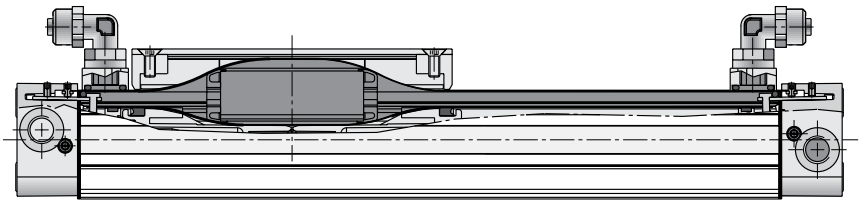
Certification

Based on the PARKER-ORIGA rodless cylinder, proven in world wide markets, PARKER-ORIGA now offers the only rodless cylinder on the market with a certification from IPA Institute for the cleanroom specification according to DIN EN ISO 14644-1.

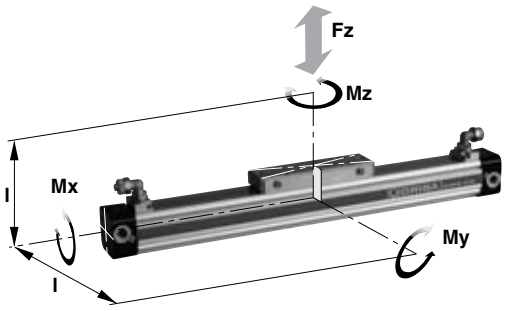
Function:

The clean room cylinders of the ORIGA SYSTEM PLUS (OSP-P) combines the efficiency of the PARKER-ORIGA slot seal system with vacuum protection against progressive wear and contamination from the sliding components. A partial vacuum drawn between inner and outer sealing bands prevents emission into the clean room. To achieve the necessary vacuum a suction flow of ca. 4 m^3/h is required.

Function Diagram



Loads, Forces and Moments



Mx = F · l
My = F · l
Mz = F · l

Cylinder Series (mm Ø)	Effective Force at 6 bar (N)	Max. Moment Mx (Nm)	My (Nm)	Mz (Nm)	Max. Load Fz (N)	Cushion length (mm)
OSP-P16	78	0.45	4	0.5	120	11
OSP-P25	250	1.5	15	3.0	300	17
OSP-P32	420	3.0	30	5.0	450	20

Load and moment data are based on speeds v ≤ 0.2 m/s.
The adjacent table shows the maximum values for light, shock-free operation which must not be exceeded even in dynamic operation.

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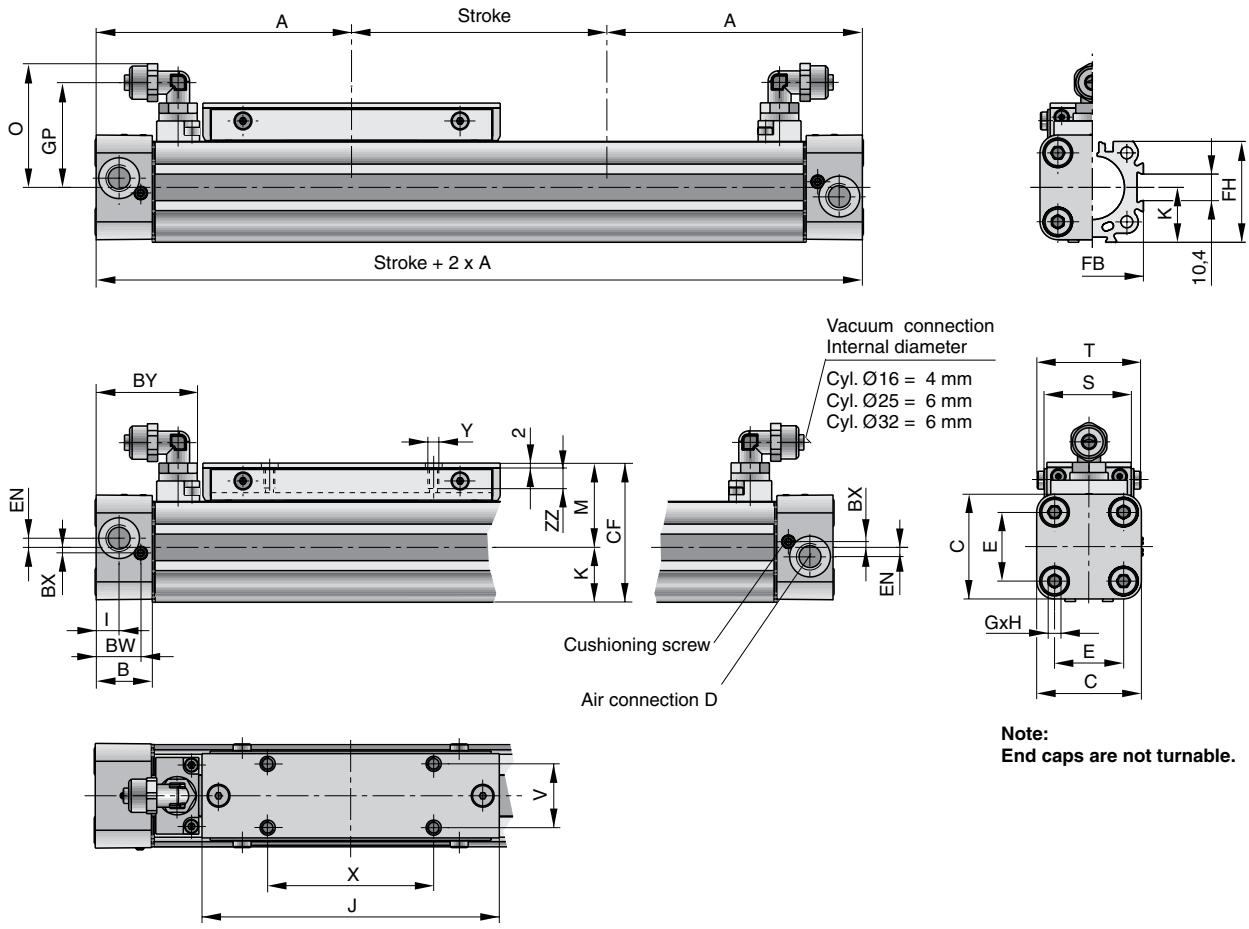
Dimensions (mm)



Note:
End caps are not turnable.

Dimension Table (mm)

Cylinder Series	A	B	C	D	E	G	H	I	J	K	M	O	S
OSP-P16	65	14	30	M5	18	M3	9	5.5	69	15	25	31	24
OSP-P25	100	22	41	G1/8	27	M5	15	9	117	21.5	33	48.5	35
OSP-P32	125	25.5	52	G1/4	36	M6	15	11.5	152	28.5	40	53.6	38

Cylinder Series	T	V	X	Y	BW	BX	BY	CF	EN	FB	FH	GP	ZZ
OSP-P16	29.6	16.5	36	M4	10.8	1.8	28.5	40	3	30	27.2	25.7	7
OSP-P25	40.6	25	65	M5	17.5	2.2	40.5	54.5	3.6	40	39.5	41	8
OSP-P32	45	27	90	M6	20.5	2.5	47.1	68.5	5.5	52	51.7	46.2	10

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Ordering Instructions / Part Numbering System for OSP-P Clean Room Series

6	7	8	9	10	11	12-16	17	18	19	20	21	22	23	24	25
OSPP	32	0	0	0	0	S	02500	0	0	0	G	0	0	2	0	0

Bore (6 / 32)
16
25
32

Piston Style (7 / 0)
0 Standard

Air Connection / Porting (8 / 0)
7 Clean Room

Seals (9 / 0)
0 Standard
1 Viton
S Special

Lubrication (10 / 0)
0 Standard
1 Slow Speed
4 Food
5 Clean Room
S Special

Corrosion Resist, Hardware (11 / S)
0 Standard
1 Stainless
S Special

Stroke (12-16 / 02500)
x x x x x

End Cap Position (17 / 0)
0 I+r 0° = In Front (pos #2)

Cushioning / Stops (18 / 0)
0 Standard

Piston Mountings (19 / 0)
0 None

Guides / Brakes (20 / G)
0 None

add. Carriage (21 / 0)
0 Without

Dovetail Cover (22 / 0)
0 Standard
X Without Cover Rail
S Special

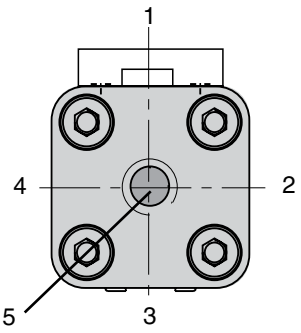
End Cap Mounts (23 / 2)
0 Without
1 A1 (16,25,32)
2 A2 (16,25,32)
3 A3 (25,32)
4 B1 (25,32)
6 B3 (16)
7 B4 (25,32)
8 B5 (32)

Note: Comes in pairs

Version (24 / 0)

Switches / Measuring System (25 / 0)
0 none
1 NO Reed-KL3045 Qty. 2
2 NC Reed-KL3048 Qty. 2
3 PNP KL3054+4041 Qty. 2
4 NPN KL3060+4041 Qty. 2

Note: 2 switches will be supplied. For different quantity, please order as a separate line item.



Note: Position #2 is the standard location.

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Rodless Cylinder Ø 40 mm

for synchronized bi-parting movements

Type OSP-P40-SL-BP

B

OSP
ORIGA SYSTEM PLUS

Features:

- Accurate bi-parting movement through toothed belt synchronization
- Optimum slow speed performance
- Increased action force
- Anodized aluminum guide rail with prism-form slideway arrangement
- Adjustable polymer slide units
- Combined sealing system with polymer and felt elements to remove dirt and lubricate the slideway
- Integrated grease nipples for guide lubrication

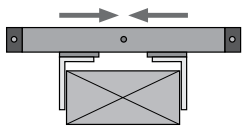
Applications:

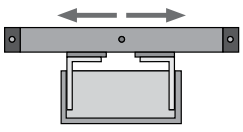
- Opening and closing operations
- Gripping of workpieces – outside
- Gripping of hollow workpieces – inside
- Gripping underneath larger objects
- Clamping force adjustable via pressure regulator

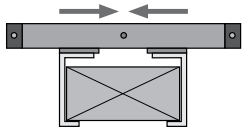
Characteristics

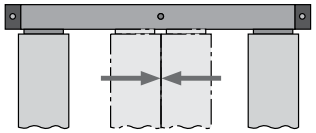
Characteristics	Symbol	Unit	Description
General Features			
Type			Rodless cylinder for synchronized bi-parting movements
Series			OSP-P
System			Double acting with end cushioning. For contactless position sensing
Guide			Slideline SL40
Synchronization			Toothed belt
Mounting			See drawings
Ambient temperature range	T_{min} T_{max}	°C °C	-10 +60
Weight (Mass)		kg	see table page B36
Medium			Filtered, unlubricated compressed air (other media on request)
Lubrication			Special slow speed grease – additional oil mist lubrication not required
Material			
Toothed Belt			Steel-corded polyurethane
Belt wheel			Aluminum
Operating pressure range	p_{max}	bar	6
Cushioning middle position			Elastic buffer
Max. Speed	v_{max}	m/s	0.2
Max. stroke of each stroke		mm	500
Max. mass per guide carrier		kg	25
Max. moments on guide carrier			
lateral moment	Mx_{max}	Nm	25
axial moment	My_{max}	Nm	46
rotating moment	Mz_{max}	Nm	46
For more technical information see pages B41			

Applications


Gripping – outside


Gripping – inside


Gripping – underneath


Door opening and closing

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Weight (mass) kg		
Cylinder series (Basic cylinder)	Weight (Mass) kg	
	At 0 mm stroke	per 100 mm stroke
OSP-P40-SL-BP	10.334	2.134

Function:

The OSP-P40-SL-BP bidirectional linear drive is based on the OSP-P40 rodless pneumatic cylinder and adapted SLIDELINE SL40 polymer plain-bearing guides.

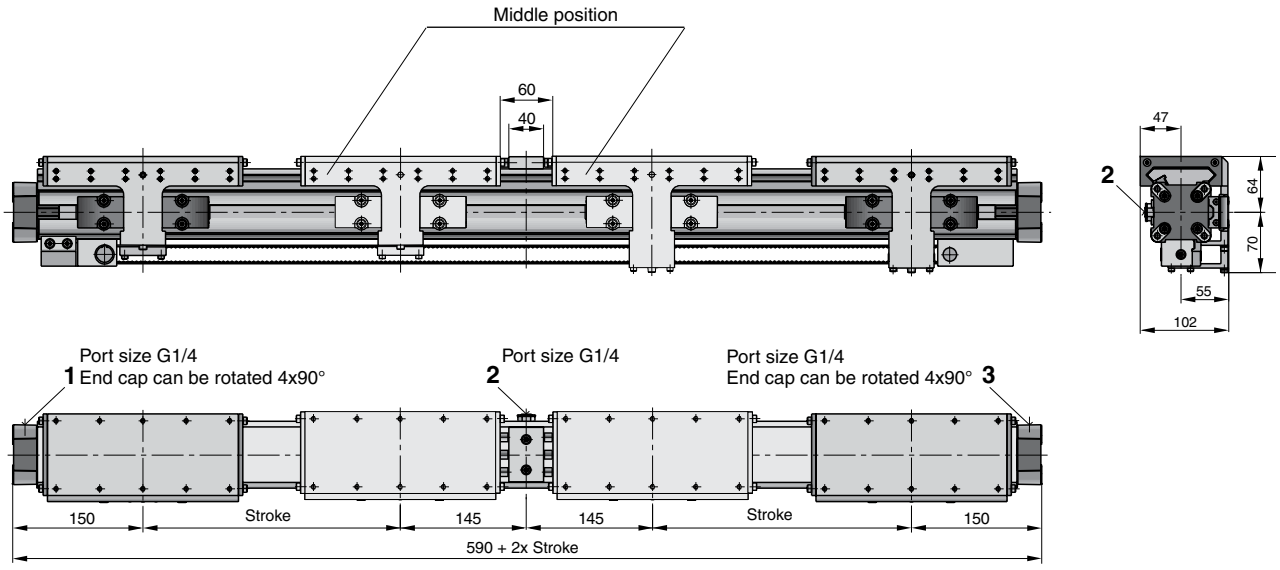
Two pistons in the cylinder bore are connected via yokes and carriers to the SLIDELINE guide carriers, which handle the forces and moments generated.

The bi-parting movements of the guide carriers are accurately synchronized by a recirculating toothed belt.

The two pistons are driven from the middle to the end positions via a common G1/4 air connection in the middle of the cylinder, and are driven from the end positions to the middle via an air connection in each end cap.

End position cushioning is provided by adjustable air cushioning in the end caps, and middle position cushioning by rubber buffers.

Dimensions (mm)



Air connections:

To drive the guide carriers to the middle position: pressurize ports 1 and 3.

To drive the guide carriers to the end positions: pressurize port 2.

For more dimensions see pages B11 and B42

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Ordering Instructions / Part Numbering System for OSP-P Bi-Parting Rodless Cylinders Series

6	7	8	9	10	11	12-16	17	18	19	20	21	22	23	24	25
OSPP	40	N	7	0	5	0	01000	0	0	0	0	0	0	9	0	0

Bore
40

Piston Style
N Bi-Parting

Air Connections / Porting
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
S Special

Seals
0 Standard

Lubrication
0 Standard

Corrosion Resist, Hardware
0 Standard
1 Stainless
S Special

Stroke
x x x x x

End Cap Position
0 I+r 0° = In Front (pos #2)
1 I+r 90° = Underneath (pos #3)
2 I+r 180° = At the Back (pos # 4)
3 I+r 270° = Same Face as Outerband (pos #2,1)
4 I 90° = Underneath; r 0° = In Front (pos #3,2)
5 I 180° = At the Back; r 0° = In Front (pos #4,2)
6 I 270° = Same Face as Outerband; r 0° = In Front (pos #1,2)
7 I 0° = In Front; r 90° = Underneath (pos #2, 3)
8 I 180° = At the Back; r 90° = Underneath (pos #4,3)
9 I 270° = Same Face as Outerband; r 90° = Underneath (pos #1,3)
A I 0° = In Front; r 180° = At the Back (pos #2,4)
B I 90° = Underneath; r 180° = At the Back (pos #3,4)
C I 270° = Same Face as Outerband; r 180° = At the Back (pos #1,4)
D I 0° = In Front; r 270° = Same Face as Outerband (pos #2,1)
E I 90° = Underneath; r 270° = Same Face as Outerband (pos #3,1)
F I 180° = At the Back; r 270° = Same Face as Outerband (pos #4,1)
S Special

Cushioning / Stops
0 Standard

Piston Mountings
0 None

Guides / Brakes
0 None

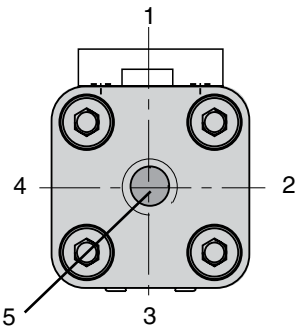
add. Carriage
0 Without

Dovetail Cover
0 Standard
X Without Cover Rail
S Special

End Cap Mounts
0 Without
9 C1
A C2
B C3
C C4
Note: Comes in pairs

Version

Switches / Measuring System
0 none
1 NO Reed-KL3045 Qty. 2
2 NC Reed-KL3048 Qty. 2
3 PNP KL3054+4041 Qty. 2
4 NPN KL3060+4041 Qty. 2
Note: 2 switches will be supplied. For different quantity, please order as a separate line item.



Note: Position #2 is the standard location.

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