



ORIGA SYSTEM PLUS OSP-P

The “**ORIGINAL**” rodless pneumatic cylinders



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.

- Completely modular design
- Compact design
- Widest capability for speed, load and movement profiles
- End caps can be rotated 4 x 90°
- High loads and moments
- High service life up to 8,000km
- Low friction forces $\geq$ high action forces
- Wide speed range (0.005 – 30m/s)
- Modular System – easy to mount guides, brakes and displacement measuring system

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 full details and information on OSP-P range of rodless cylinders please see catalogue no.: P-A4P011GB

Products for
Potentially Explosive Atmospheres

ORIGA – simply the first



Special Versions



for use in Ex-Areas



Low Temperature Version
for temperatures down to
-40°C



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



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



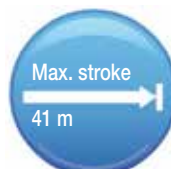
Stainless steel version
for special applications



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



with special pneumatic
cushioning system for cycle
time optimization,
for Ø 16 to 50 mm
– on request



Cylinders with extreme long
strokes
Stroke length up to 41 m



High Temperature Version
for temperatures up to
+120°C

* Information on electrical linear drives series OSP-E, please refer to catalogue P-A4P017GB

Basic Linear Drive Standard Version - Series OSP-P - Series OSP-E* Belt drive Belt drive with integrated Guides Vertical belt drive with recirculating ball bearing guide - Series OSP-E* Screw drive (Ball Screw, Trapezoidal Screw)		BASIC GUIDE Series OSPP-BG	
Air Connection on the End-face or both at One End Series OSP-P		Duplex Connection Series OSP-P	
Long-Stroke Cylinders for strokes up to 41 m Series OSP-P		Multiplex Connection Series OSP-P	
Clean Room Cylinder certified to DIN EN ISO 14644-1 - Series OSP-P - Series OSP-E..SB		Linear Guides – SLIDELINE - Series OSP-P - Series OSP-E Screw drive*	
Products for ATEX Areas Series OSP-P Rodless Cylinders 		Linear Guides – POWERSLIDE - Series OSP-P - Series OSP-E Belt drive* - Series OSP-E Screw drive*	
Products for ATEX Areas Series OSP-P Rodless Cylinders with Linear Guide BASIC GUIDE 		Linear Guides – PROLINE - Series OSP-P - Series OSP-E Belt drive* - Series OSP-E Screw drive*	
Products for ATEX Areas Series OSP-P Rodless Cylinders with Linear Guide SLIDELINE 		Linear Guides – STARLINE Series OSP-P	
Products for ATEX Areas Series OSP-P Rodless Cylinders with Linear Guide BASIC GUIDE 		Linear Guides – KF Series OSP-P	
Products for ATEX Areas Series OSP-P Rodless Cylinders with Linear Guide SLIDELINE 		Heavy Duty Linear Guides – HD - Series OSP-P - Series OSP-E Screw drive*	
Bi-parting Version Series OSP-P		Intermediate stop module – ZSM Series OSP-P	
Integrated 3/2 Way Valves Series OSP-P		Brakes - Active Brakes - Passive Brakes	
Clevis Mounting - Series OSP-P - Series OSP-E Belt drive* - Series OSP-E Screw drive*		Magnetic Switches - Series OSP-P - Series OSP-E Belt drive* - Series OSP-E Screw drive* - ATEX-Versions 	
End Cap Mounting - Series OSP-P - Series OSP-E Belt drive* - Series OSP-E Screw drive*		SENSOFLEX-Measuring system Series SFI-plus	
Mid-Section Support - Series OSP-P - Series OSP-E Belt drive* - Series OSP-E Screw drive*		Variable Stop VS Series OSP-P with Linear Guide STL, KF, HD	
Inversion Mounting - Series OSP-P - Series OSP-E Belt drive* - Series OSP-E Screw drive*			

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.

A NEW MODULAR LINEAR DRIVE SYSTEM

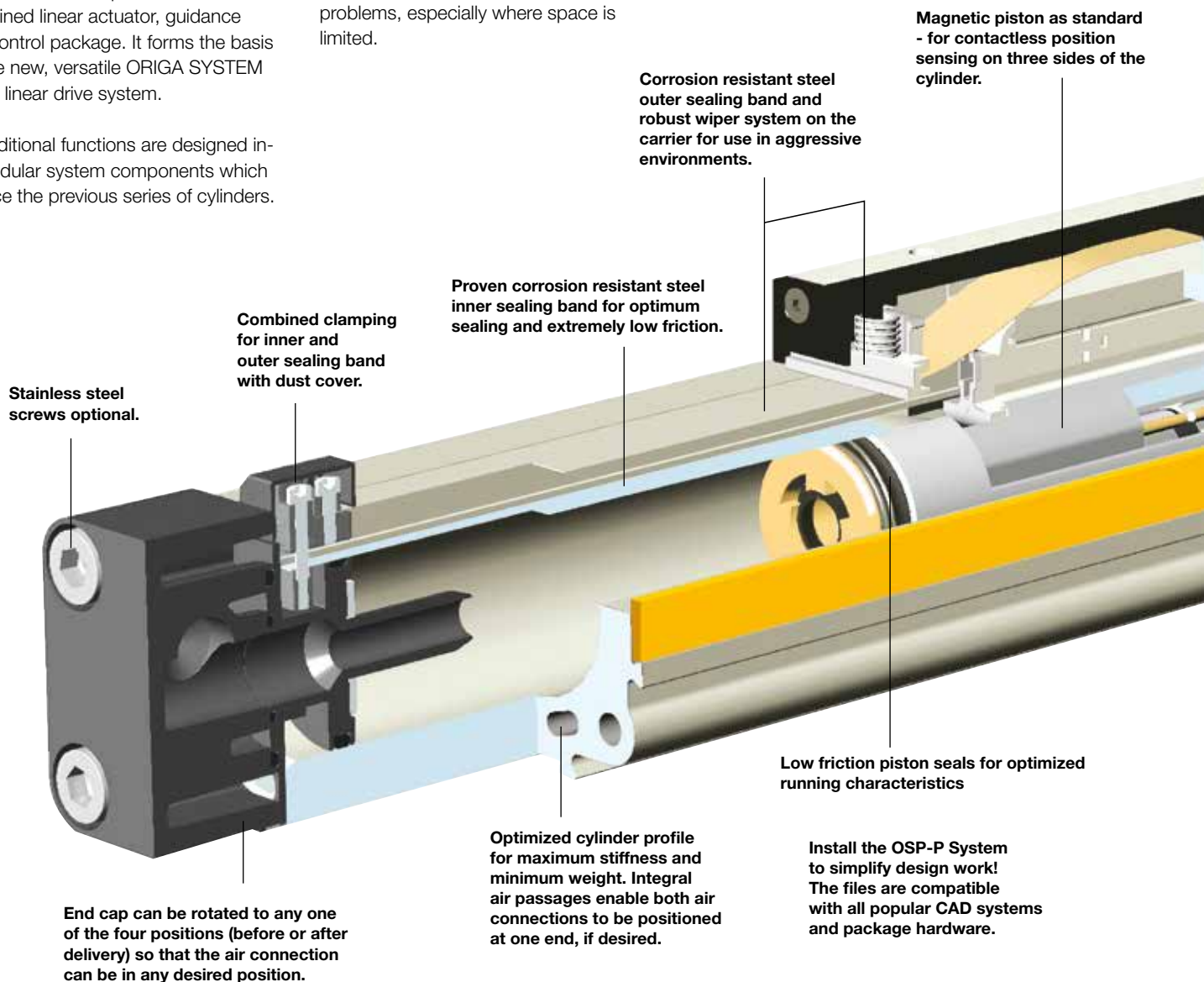
With this second generation linear drive Parker Origa offers design engineers complete flexibility. The well known ORIGA cylinder has been further developed into a combined linear actuator, guidance and control package. It forms the basis for the new, versatile ORIGA SYSTEM PLUS linear drive system.

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.

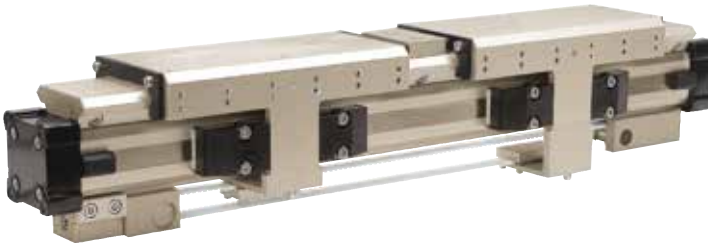
The modular system concept forms an ideal basis for additional customer-specific functions.



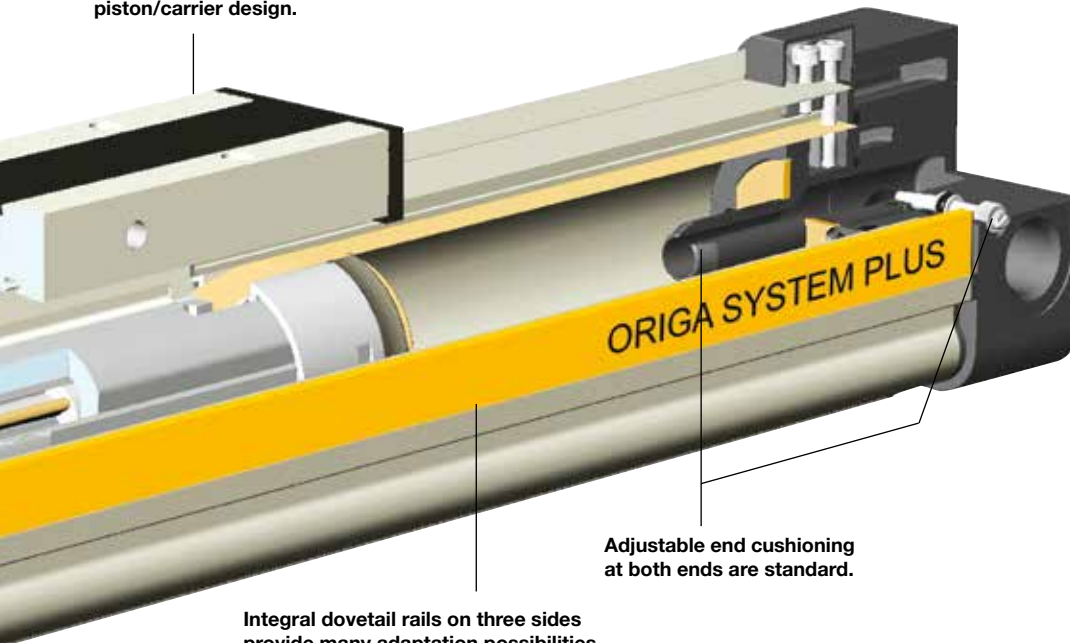
Clean Room Version
 certified to DIN EN ISO 14644-1



Rodless Cylinder
 for synchronized bi-parting movements



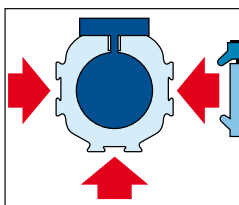
New low profile
 piston/carrier design.



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.



BASIC GUIDE
 Compact, robust
 plain bearing
 guide for medium
 loads.



SLIDELINE
 Guide system for
 moderate loads.
 Optional with
 Active- / Passive-
 Brake.



POWERSLIDE
 Roller guide for
 high loads and
 rough conditions.



PROLINE
 The compact
 aluminium roller
 guide for high loads
 and velocities.
 Optional with
 Active- / Passive-
 Brake.



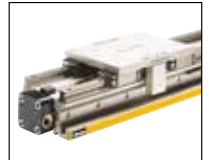
STARLINE
 Recirculating ball
 bearing guide for
 very high loads
 and precision.



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 BRAKE
 reacts automatically
 to pressure failure.



ACTIVE BRAKE
 pneumatic brake
 for secure, positive
 stopping at any
 position.



Options and Accessories for system versatility

Series OSP-P

STANDARD VERSIONS OSP-P10 to P80

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.



LONG-STROKE VERSION

For extremely long strokes up to max. 41m



BASIC CYLINDER OPTIONS

CLEAN ROOM CYLINDERS

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.



ATEX-Version

For use in Ex-Areas



BOTH AIR CONNECTIONS AT ONE END

For simplified tubing connections and space saving.



STAINLESS VERSION

For use in constantly damp or wet environments. All screws are A2 quality stainless steel (material no.1.4301 / 1.4303)



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.



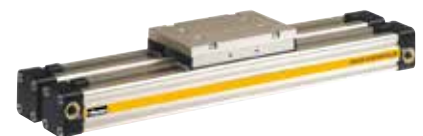
INTEGRATED VOE VALVES

The complete compact solution for optimal cylinder control.



DUPLEX CONNECTION

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



VITON® VERSION

For use in an environment with high temperatures or in chemically aggressive areas.
All seals are made of Viton®.
Corrosion resistant steel sealing bands.



END-FACE AIR CONNECTION

To solve special installation problems.



MULTIPLEX CONNECTION

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

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



MOUNTING FOR OSP-P10 UP TO P80

CLEVIS MOUNTING

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



MID-SECTION SUPPORT

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



END CAP MOUNTING

For end-mounting of the cylinder.



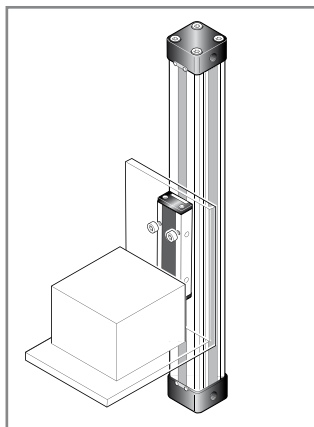
INVERSION MOUNTING

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

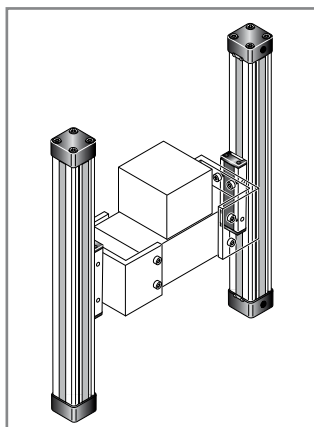
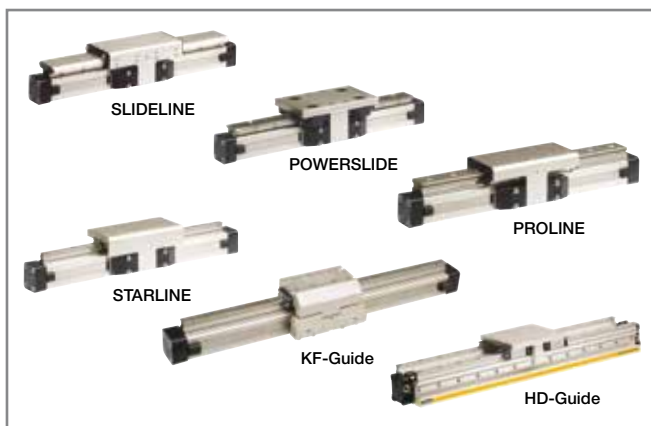


OSP-P Application examples

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



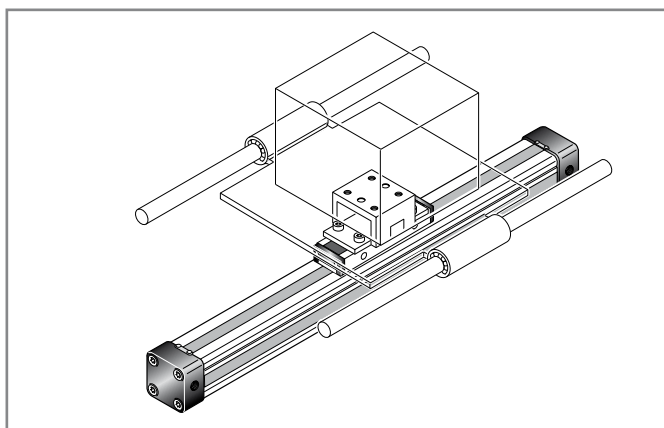
The high load capacity of the piston can cope with high bending moments without additional guides.



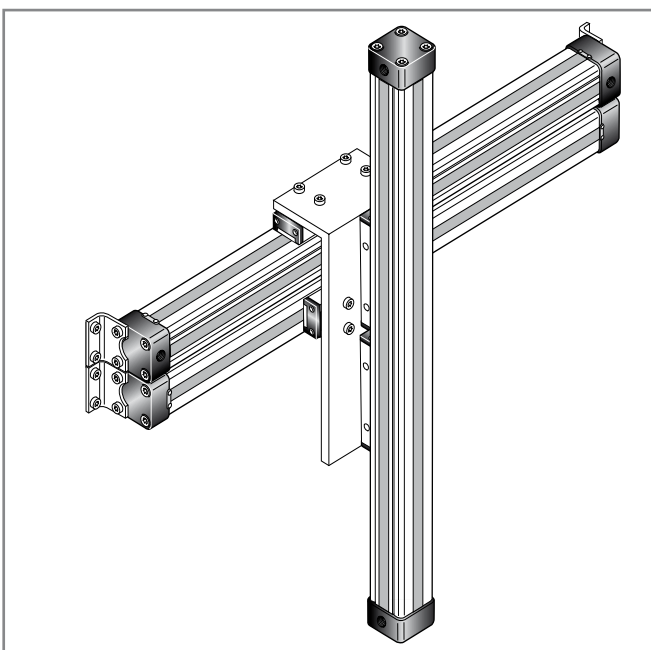
The mechanical design of the OSP-P allows synchronised movement of two cylinders.

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.

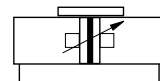


When using external guides, the clevis mounting is used to compensate for deviations in parallelism.



For further information and assembly instructions, please contact your local Parker Origa dealer.

Rodless Pneumatic Cylinder Ø 10-80 mm



Standard Versions:

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

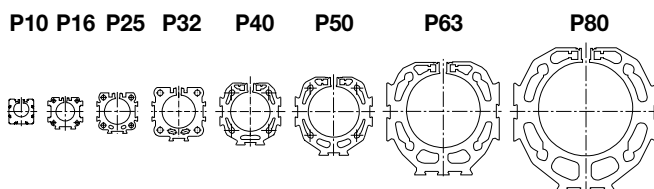
Long-Stroke Cylinders for stroke lengths up to 41 m
See page 133



Special Versions:

- Cushioning system for cycle time optimization (on request)
- Clean room cylinders
- ATEX-Version 
- 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

Size Comparison



Characteristics	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} to T_{max}	-10 °C Other temperature ranges +80 °C on request
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 aluminium
Carrier (piston)	Anodized aluminium
End caps	Aluminium, 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}	8 bar

Loads, Forces and Moments

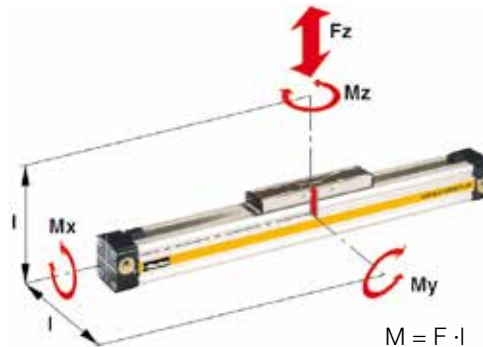
Choice of cylinder is decided by:

- 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.



$M = F \cdot l$
Bending moments are calculated from the centre of the linear actuator

Cylinder- Series Ø [mm]	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.



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

* 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 centre of gravity or you can consult us about our special cushioning system – we shall be happy to advise you on your specific application.

Integrated 3/2 Way Valves

VOE

Series OSP-P25, P32, P40 and P50

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.



Features:

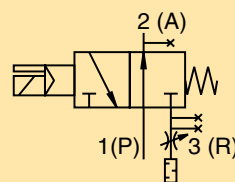
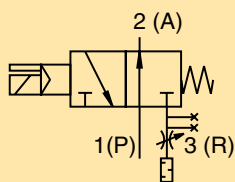
- Complete compact solution
- Various connection possibilities:
Free choice of air connection with rotating end caps with VOE valves, Air connection can be rotated 4 x 90°
- Solenoid can be rotated 4 x 90°
- Pilot valve can be rotated 180°
- High piston velocities can be achieved with max. 3 exhaust 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 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

For further technical information see catalogue P-A4P011GB

Order Instructions - Basic Cylinder

1-4	5+6	7	8	9	10	11	12-16	17	18	19	20	21	22	23	24	25
OSPP	25	0	0	0	0	0	01100	0	0	0	0	0	0	0	0	0

Piston-Ø	
10	
16	
25	
32	
40	
50	
63	
80	

Stroke Length	
In mm	
(5 digits)	

Piston Mounting	
0	without
1	clevis mounting

add. Guide Carriage	
0	without

Measuring system	
0	without
X	SFI 0.1 mm
Y	SFI 1 mm

Screws	
0	standard
1	Stainless

Cushioning	
0	standard
1	max. length ³⁾

Version / Piston	
0	standard
1	Tandem

Lubrication	
0	standard
1	slow speed ²⁾³⁾

End cap position	
0	l+r 0° = in front
1	l+r 90° = underneath
2	l+r 180° = at the back
3	l+r 270° = same side as outerband
4	l 90° = underneath; r 0° = in front
5	l 180° = at the back; r 0° = in front
6	l 270° = same side as outerband; r 0° = in front
7	l 0° = in front; r 90° = underneath
8	l 180° = at the back; r 90° = underneath
9	l 270° = same side as outerband; r 90° = underneath
A	l 0° = in front; r 180° = at the back
B	l 90° = underneath; r 180° = at the back
C	l 270° = same side as outerband; r 180° = at the back
D	l 0° = in front; r 270° = same side as outerband
E	l 90° = underneath; r 270° = same side as outerband
F	l 180° = at the back; r 270° = same side as outerband

Guides/Brakes/Inversion	
0	without
A	Activebrake AB Ø 25-80
M	Inversion Ø 16-80
N	Duplex Ø 25,32,40,50

Cover / Cable Channel	
0	standard
1	Cable channel
2	Cable channel two-sided
X	without cover rail

Air Connection	
0	standard
1	end face
2	both at one end
3	left stand. right end face
4	right stand. left end face
A	3/2 Way valve VOE 24 V = Ø 25,32,40,50
B	3/2 Way valve VOE 230 V~ / 110 V= Ø 25,32,40,50
C	3/2 Way valve VOE 48 V = Ø 25,32,40,50
E	3/2 Way valve VOE 110 V~ Ø 25,32,40,50

Seals	
0	standard (NBR)
1	Viton ^{®1)}

End cap position (air connection)

Cylinder L (left end side)

Cylinder R (right end side)

¹⁾ Viton with VOE not available.

²⁾ Slow speed lubrication in combination with Viton[®] seals on demand

³⁾ „Lubrication slow speed“ in combination with „max. cushioning length“ not possible.

Long Stroke Cylinder Ø 50-80 mm for strokes up to 41 m

Standard Versions:

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

Special Versions:

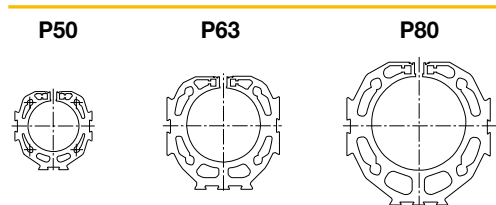
- Stainless steel screws
- Slow speed lubrication
- Viton® seals

Options:

- Displacement measuring system SFI-plus
- Active brake AB..



Size Comparison



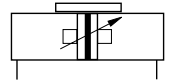
Weight (mass) [kg]

Cylinder series (Basic cylinder)	Weight (Mass) [kg]	
	At 0 mm stroke	per 100 mm stroke
OSP-P50LS	3.53	0.566
OSP-P63LS	6.41	0.925
OSP-P80LS	12.46	1.262

Characteristics	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} to T_{max}	10 °C Other temperature ranges +40 °C on request
Installation	Vertical, horizontal (piston at top or at bottom)
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 aluminium
Carrier (piston)	Anodized aluminium
End caps	Anodized aluminium
Sealing bands	Corrosion resistant steel
Seals	NBR (Option: Viton®)
Screws	Galvanized steel Option: stainless steel
Dust covers, wipers	Plastic
Max. operating pressure p_{max}	8 bar
Max. speed v	2 m/s

For further technical information see catalogue P-A4P011GB

Clean Room Cylinder Ø 16-32 mm Certified to DIN EN ISO 14644-1



Standard Versions:

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

Special Versions:

- Slow speed lubrication
- Viton® seals

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 down 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
- Aluminium piston with bearing rings to support high direct and cantilever loads

Size Comparison

P16



P25



P32



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

For further technical information see catalogue P-A4P011GB



Characteristics	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} to T_{max}	-10 °C Other temperature ranges +80 °C on request
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 aluminium
Carrier (piston)	Anodized aluminium
End caps	Aluminium, lacquered
Sealing bands	Corrosion resistant steel
Seals	NBR (Option: Viton®)
Screws	Stainless steel
Covers	Anodised aluminium
Guide plate	Plastic
Max. operating pressure p_{max}	8 bar

Order Instructions - Clean Room Cylinder

1-4	5+6	7	8	9	10	11	12-16	17	18	19	20	21	22	23	24	25
OSPP	25	4	7	0	0	1	01100	0	0	0	0	0	0	0	0	0

Piston-Ø																
16																
25																
32																

Stroke Length																
in mm																
(5 digits) ²⁾																

Piston Mounting																
0																
without																

add. Guide Carriage																
0																
without																

Measuring system																
0																
without																

Screws																
1																
Stainless																

Cushioning																
0																
Standard																

Version / Piston																
4																
Clean room																

Lubrication																
0																
Standard																
1																
Slow speed ¹⁾																

End cap position																
0																
L+R 0° = in front																

Guides/ Brakes/ Inversion																
0																
without																

Cover / Cable Channel																
0																
Standard																
1																
Cable channel																
2																
Cable channel two-sided																
X																
without Cover rail																

Air Connection																
7																
End cap Clean room																

Seals																
0																
Standard (NBR)																
1																
Viton®																

¹⁾ The combination „Slow speed lubrication“ and „Viton® sealings“ are available on request.

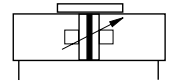
²⁾ max. stroke lengths 1200 mm, longer strokes on request.

Components for EX-Areas

Information for ATEX-Directives

The rodless pneumatic cylinders of Parker Origa are the first linear drive unit, for that Ex range in the group of equipment II, Category 2 GD are certified.

Detail informations for use pneumatic components in Ex-Areas see leaflet PDE2584TCUK „EU Directive 94/9/EG (ATEX 95) for Pneumatic Components“.



Rodless Cylinder Ø 10-80 mm

Basic Cylinder - Series: OSP-P .. ATEX



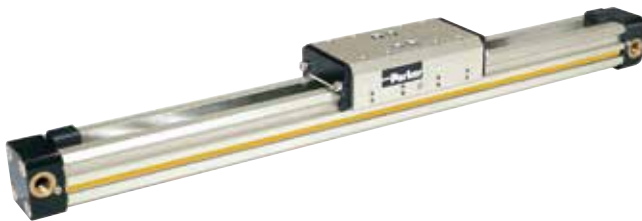
Plain Bearing Guide Ø 16-80 mm

SLIDELINE - Series: SL .. ATEX



BASIC GUIDE Ø 25-50 mm

Basic Guide - Series: BG .. ATEX



Technical Data (deviant to the Standard Cylinder)

Characteristics	Description
General Features	
Ambient temperature range T_{min} to T_{max}	-10 °C to +60 °C
Max. switching frequency	1 (double stroke/s) Basic cylinder 0.5 (1stroke/s) Cylinder with guide
Operating pressure range p_{max}	Max. 8 bar
Max. speed v_{max}	3 (Basic cylinder) 2 (Cylinder with guide SLIDELINE and cylinder with guide BASIC GUIDE)
Medium	Filtered, unlubricated compressed air – free from water and dirt to ISO 8573-1
	Solids: Class 7 particle size < 40 µm for Gas
	Water content: pressure dew point +3 °C, class 4, but at least 5 °C below minimum operating temperature
Noise level	70 dB (A)
Information for materials	
Aluminium	See data sheet "Material"
Lubrication	See security data sheet "Grease for use in Cylinder with guides"
Sealing bands	Corrosion resistant steel

Equipment Group II Categorie 2GD

Rodless cylinder: II 2GD c T4 T135°C -10°C ≤ Ta ≤ +60°C

Series	Size	Stroke range	Accessories
OSP-P	Ø 10 to 80	1– 6000 mm	Mountings programme
BASIC GUIDE	Ø 25 to 50	1– 6000 mm	Mountings programme
SLIDELINE	Ø 16 to 80	1– 5500 mm	Mountings programme

For further technical information see catalogue P-A4P011GB

Synchronised Rodless Cylinder

Ø 40 mm

For synchronised bi-parting movements

Type OSP-P40-SL-BP

Applications:

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

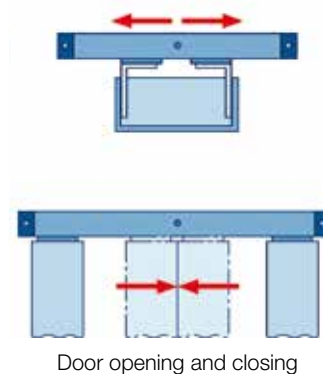
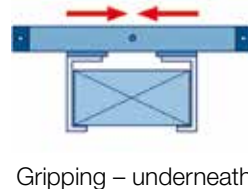
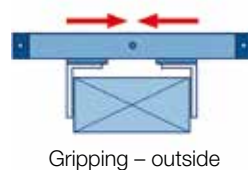
Features:

- Accurate bi-parting movement through toothed belt synchronization
- Optimum slow speed performance
- Increased action force
- Anodized aluminium 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

OSP
— ORIGA
— SYSTEM
— PLUS



Applications:



Characteristics	Description
General Features	
Type	Rodless cylinder for synchronised bi-parting movements
Series	OSP-P
System	Double-acting with end cushioning for contactless position sensing
Guide	Slideline SL40
Synchronisation	Toothed belt
Mounting	See drawings
Ambient temperature range	-10 °C to +60 °C
Installation	In any position
Medium	Filtered, unlubricated compressed air (other media on request)
Lubrication	Special slow speed grease - additional oil mist lubrication not required
Operating pressure p_{max}	6 bar
Cushioning middle position	Elastic buffer
Max. speed v_{max}	0.2 m/s
Max. stroke of each stroke	500 mm
Max. mass per guide carrier	25 kg
Max. moments on guide carrier	
Lateral moment Mx_{max}	25 Nm
Axial moment My_{max}	46 Nm
Rotating moment Mz_{max}	46 Nm
Material	
Toothed belt	Steel-corded polyurethane
Belt wheel	Aluminium

For further technical information see catalogue P-A4P011GB

OSP

— ORIGA
— SYSTEM
— PLUS

Adaptive modular system

The Origa system plus – OSP – provides a comprehensive range of linear guides for the pneumatic and electric linear drives.

Advantages:

- Takes high loads and forces
- High precision
- Smooth operation
- Can be retrofitted
- Can be installed in any position

Rodless Pneumatic Cylinder Series OSP - P

Piston diameters 10 – 80 mm

See page 129 (Standard)

See page 136 (ATEX-Version)



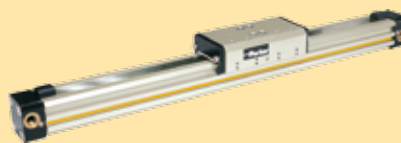
BASIC GUIDE

Compact, robust plain bearing guide for medium loads.

Piston diameters 25 – 50 mm

See page 139 (Standard)

See page 136 (ATEX-Version)



Linear Guides

SLIDELINE

The cost-effective plain bearing guide for medium loads. Active/ Passive Brake optional.

Piston diameters 16 – 80 mm

See page 141 (Standard)

See page 136 (ATEX-Version)



POWERSLIDE

The roller guide for heavy loads and hard application conditions

Piston diameters 16 – 50 mm

See page 143



PROLINE

The compact aluminium roller guide for high loads and velocities.

Active/ Passive Brake optional.

Piston diameters 16 – 50 mm

See page 145



STARLINE

Recirculating ball bearing guide for very high loads and precision

Piston diameters 16 – 50 mm

See page 147



KF GUIDE

Recirculating ball bearing guide. Correspond to FESTO dimensions (Type DGPL-KF)

Piston diameters 16 – 50 mm

See page 151



HD HEAVY DUTY GUIDE

Recirculating ball bearing guide for highest loads and greatest accuracy.

Piston diameters 25 – 50 mm

See page 153



Plain Bearing Guide

BASIC GUIDE

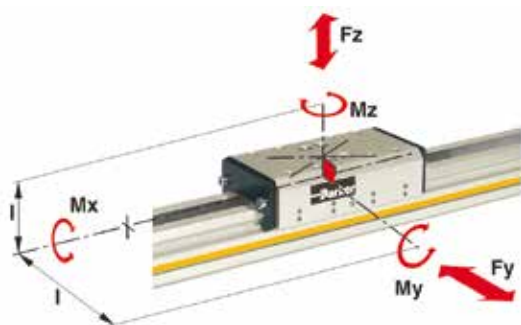
Series BG 25 to 50 for Linear Drive

Compact, robust plain bearing guide
for medium loads

Features:

- Compact: guide rail integrated in cylinder profile tube
- Robust: wiper system and grease nipples for long service life
- smooth operation
- simple to (re-) adjust
- Integrated grease nipples
- Any length of stroke up to 6000 mm (longer strokes on request)

Loads, Forces and Moments



Technical Data

The table shows the maximum permissible values for smooth operation, which should not be exceeded even under dynamic conditions.

The load and moment figures apply to speeds $v < 0.2$ m/s.

For further technical information see catalogue P-A4P011GB

* Please note:

In the cushioning diagram, add the mass of the guide carriage to the mass to be cushioned.

$$\frac{M_x}{M_{x_{max}}} + \frac{M_y}{M_{y_{max}}} + \frac{M_z}{M_{z_{max}}} + \frac{F_y}{F_{y_{max}}} + \frac{F_z}{F_{z_{max}}} \leq 1$$

The sum of the loads should not exceed >1.

Series	Max. Moments [Nm]			Max. Load [Nm]	Mass of Basic Guide [kg]		Mass* of guide carriage [kg]	Cushion Length [mm]
	Mx	My	Mz		at 0 mm stroke	per 100 mm stroke		
BG25	10	28	28	590	1.09	0.22	0.29	17
BG32	17	43	43	850	2.26	0.38	0.69	20
BG40	39	110	110	1600	3.52	0.41	1.37	27
BG50	67	165	165	2000	5.30	0.58	1.91	30

OSP
ORIGA
SYSTEM
PLUS



Options:

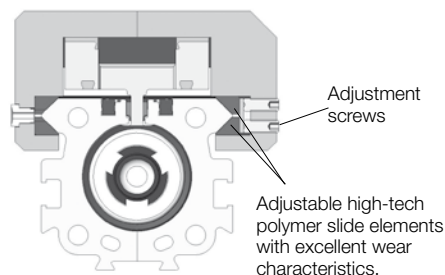
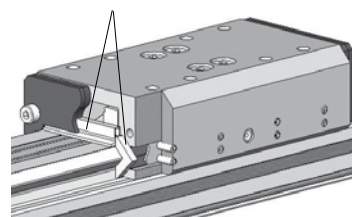
- Corrosion resistant version available on request
- VOE-Valves

Accessories:

- Mid-Section Support
- End Cap Mountings
- Magnetic Switches

Loads, Forces and Moments

Composite sealing system with high-tech polymer and felt wiper elements to remove dirt and lubricate the slideways.



Adjustment screws

Adjustable high-tech polymer slide elements with excellent wear characteristics.

Order Instructions- BASIC GUIDE

1-6	7+8	9	10	11	12	13	14-18	19	20	21	22	23	24	25
OSPPBG	25	0	0	0	0	0	01100	0	0	0	0	0	0	0

Piston-Ø
25
32
40
50

Version / Piston
0 Standard
1 Tandem
* 6 ATEX Standard ³⁾

Stroke
Input in mm (5 digits)

Screws
0 standard
1 stainless

Cushioning
0 standard

Piston Mounting
0 without

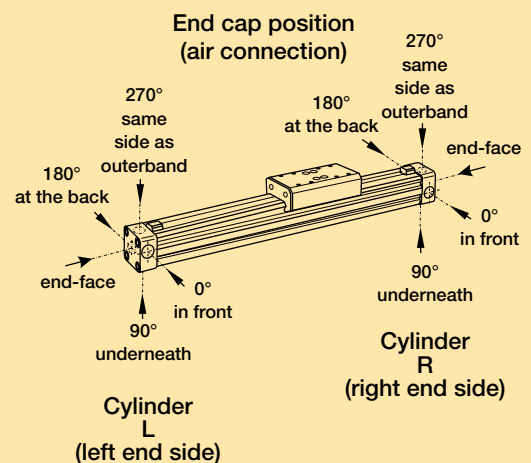
Cover / Cable Channel
0 standard
1 cable channel dove tail Ø 32, 40, 50
2 cable channel dove tail two-sided Ø 32, 40, 50

Lubrication
0 standard
1 slow speed ²⁾

End cap position
0 l+r 0° = in front
1 l+r 90° = underneath
2 l+r 180° = at the back
3 l+r 270° = same side as outerband
4 l 90° = underneath; r 0° = in front
5 l 180° = at the back; r 0° = in front
6 l 270° = same side as outerband; r 0° = in front
7 l 0° = in front; r 90° = underneath
8 l 180° = at the back; r 90° = underneath
9 l 270° = same side as outerband; r 90° = underneath
A l 0° = in front; r 180° = at the back
B l 90° = underneath; r 180° = at the back
C l 270° = same side as outerband; r 180° = at the back
D l 0° = in front; r 270° = same side as outerband
E l 90° = underneath; r 270° = same side as outerband
F l 180° = at the back; r 270° = same side as outerband

Air Connection
0 standard
1 on the end face
2 both at one end (not turnable)
3 left standard right end face
4 right standard left end face
A 3/2 way valve VOE 24 V = Ø 25, 32, 40, 50
B 3/2 way valve VOE 230 V~/110 V= Ø 25, 32, 40, 50
C 3/2 way valve VOE 48 V= Ø 25, 32, 40, 50
E 3/2 way valve VOE 110 V~ Ø 25, 32, 40, 50

Seals
0 standard (NBR)
1 Viton ^{® 1)}



¹⁾ Viton with VOE not possible.

²⁾ "Slow speed lubrication" in combination with „Viton[®]“ seals on demand.

³⁾ ATEX with VOE not possible.

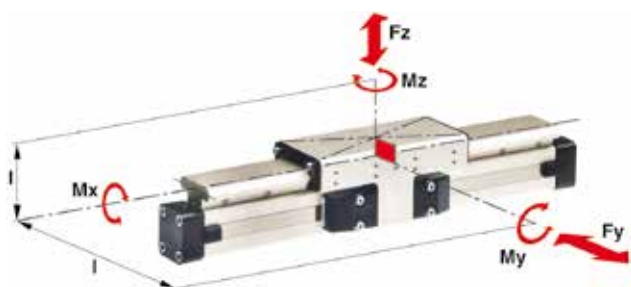
Plain Bearing Guide SLIDELINE

Series SL 16 to 80 for Linear Drive

Features:

- ATEX-version (without brake) is also available
See page 136
- Anodised aluminium guide rail with prism-shaped slideway arrangement
- Adjustable plastic slide elements – optional with integral brake
- Composite sealing system with plastic and felt wiper elements to remove dirt and lubricate the slideways
- Corrosion resistant version available on request
- Any length of stroke up to 5500 mm
(longer strokes on request)

Loads, Forces and Moments



Technical Data

The table shows the maximum permissible values for smooth operation, which should not be exceeded even under dynamic conditions.

The load and moment figures apply to speeds $v < 0.2$ m/s.

For further technical information see catalogue P-A4P011GB

* Please note:

In the cushioning diagram, add the mass of the guide carriage to the mass to be cushioned.

- 1) Only with integrated brake: Braking force on dry oil-free surface. Values are decreased for lubricated slideways
- 2) Corrosion resistant fixtures available on request

Series	For linear drive	Max. moments [Nm]			Max. loads [N] Fy, Fz	Maximum braking force at 6 bar [N] ¹⁾	Mass of linear drive with guide [kg]		Mass* of guide carriage [kg]	Order-No.** SLIDELINE ²⁾ Guide without cylinder	
		Mx	My	Mz			with 0 mm stroke	increase per 100 mm stroke		without brake	with brake
SL16	OSP-P16	6	11	11	325	-	0.57	0.22	0.23	20341	-
SL25	OSP-P25	14	34	34	675	325	1.55	0.39	0.61	20342	20409
SL32	OSP-P32	29	60	60	925	545	2.98	0.65	0.95	20196	20410
SL40	OSP-P40	50	110	110	1600	835	4.05	0.78	1.22	20343	20411
SL50	OSP-P50	77	180	180	2000	1200	6.72	0.97	2.06	20195	20412
SL63	OSP-P63	120	260	260	2500	-	11.66	1.47	3.32	20853	-
SL80	OSP-P80	120	260	260	2500	-	15.71	1.81	3.32	21000	-

** Please use this order pattern: Order-No. + „stroke in mm“ (5 digits)
Example: SLIDELINE guide without brake D25 mm, stroke 1000 mm: 20342-01000

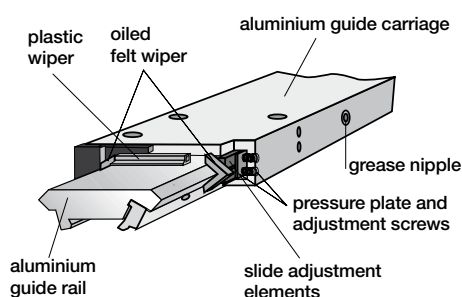


Integrated Brake (optional) for series OSP-P25 to OSP-P50:

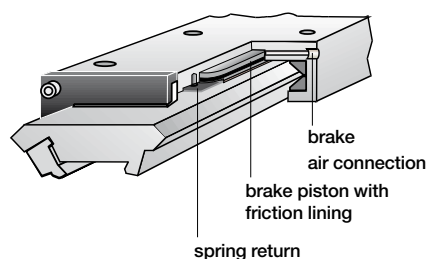
- Actuated by pressure
- Released by exhausting and spring return

For further technical information see catalogue P-A4P011GB

Carriage Without Brake



Option - Integrated Brake



Order Instructions- SLIDELINE

1-4	5+6	7	8	9	10	11	12-16	17	18	19	20	21	22	23	24	25
OSPP	25	0	0	0	0	0	01100	0	0	0	0	0	0	0	0	0

Piston-Ø
16
25
32
40
50
63
80

Stroke
Input in mm (5 digits)

Piston Mounting
0 without

Measuring system
0 without
X SFI 0.1 mm
Y SFI 1 mm

Screws
0 standard
1 stainless

Cushioning
0 standard

Version / Piston
0 standard
1 Tandem

Lubrication
0 standard
1 slow speed ²⁾

End cap position
0 l+r 0° = in front
1 l+r 90° = underneath
2 l+r 180° = at the back
3 l+r 270° = same side as outerband
4 l 90° = underneath; r 0° = in front
5 l 180° = at the back; r 0° = in front
6 l 270° = same side as outerband; r 0° = in front
7 l 0° = in front; r 90° = underneath
8 l 180° = at the back; r 90° = underneath
9 l 270° = same side as outerband; r 90° = underneath
A l 0° = in front; r 180° = at the back
B l 90° = underneath; r 180° = at the back
C l 270° = same side as outerband; r 180° = at the back
D l 0° = in front; r 270° = same side as outerband
E l 90° = underneath; r 270° = same side as outerband
F l 180° = at the back; r 270° = same side as outerband

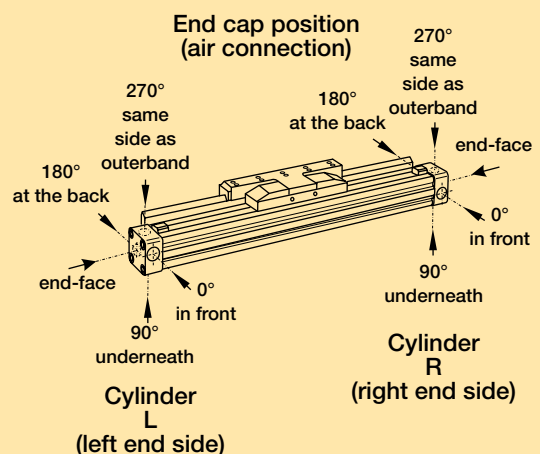
Guides/ Brakes/ Inversion
0 without
2 Slideline SL Ø 16-80
3 Slideline with Activebrake SL-AB Ø 25-50
4 Slideline with Multibrake SL-MB Ø 25-80

Cover / Cable Channel
0 standard
1 cable channel
2 cable channel two-sided
X without Cover rail

Air Connection
0 standard
1 on the end face
2 both at one end (not turnable)
3 left standard right end face
4 right standard left end face
A 3/2 way valve VOE 24 V= Ø 25,32,40,50
B 3/2 way valve VOE 230 V~/110 V= Ø 25,32,40,50
C 3/2 way valve VOE 48 V= Ø 25,32,40,50
E 3/2 way valve VOE 110 V~ Ø 25,32,40,50

Seals
0 standard (NBR)
1 Viton® ¹⁾

add. Guide Carriage
0 without
2 Guide Carriage Slideline SL Ø 16-80
3 Guide Carriage Slideline Activebrake SL-AB Ø 26-50
4 Guide Carriage Slideline Multibrake SL-MB Ø 25-80
M Guide Carriage Slideline Multibrake SL-MB without brakefunction Ø 25-80



¹⁾ Viton with VOE not possible.

²⁾ "Slow speed lubrication" in combination with „Viton®“ seals on demand.

Roller Guide POWERSLIDE Series PS 16 to 50 for Linear Drive

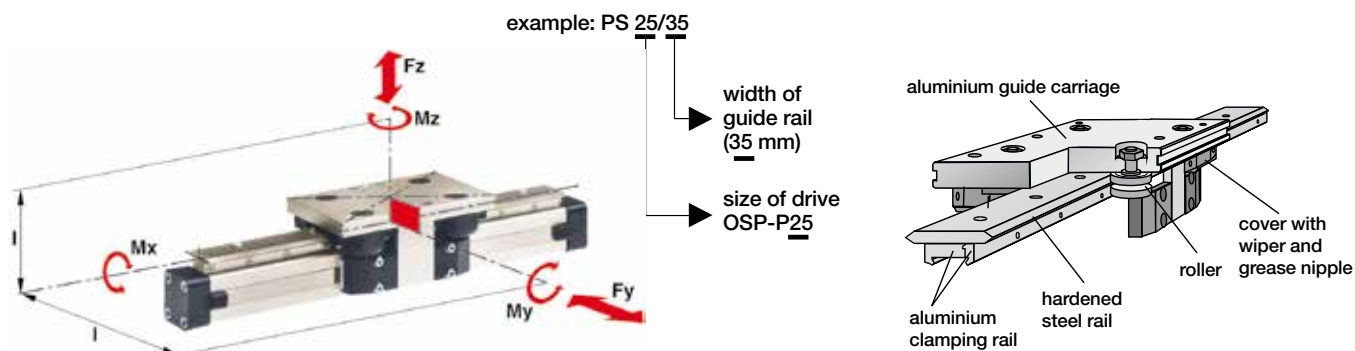


Features:

- Anodised aluminium guide carriage with vee rollers having 2 rows of ball bearings
- Hardened steel guide rail
- Several guide sizes can be used on the same drive
- Corrosion resistance version available on request
- Max. speed $v = 3 \text{ m/s}$,
- Tough roller cover with wiper and grease nipple
- Any length of stroke up to 3500 mm, (longer strokes on request)



Loads, Forces and Moments



Technical Data

The table shows the maximum permissible values for smooth operation, which should not be exceeded even under dynamic conditions.

* Please note:

In the cushioning diagram, add the mass of the guide carriage to the mass to be cushioned.

For further technical information see catalogue P-A4P011GB

Series	For linear drive	Max. Moment [Nm]			Max. loads [N] F_y, F_z	Mass of linear drive with guide [kg]		Mass* guide carriage [kg]	Order-No** POWERSLIDE Guide without cylinder ¹⁾
		M_x	M_y	M_z		with 0 mm stroke	increase per 100 mm stroke		
PS 16/25	OSP-P16	14	45	45	1400	0.93	0.24	0.7	20285
PS 25/25	OSP-P25	14	63	63	1400	1.5	0.4	0.7	20015
PS 25/35	OSP-P25	20	70	70	1400	1.7	0.4	0.8	20016
PS 25/44	OSP-P25	65	175	175	3000	2.6	0.5	1.5	20017
PS 32/35	OSP-P32	20	70	70	1400	2.6	0.6	0.8	20286
PS 32/44	OSP-P32	65	175	175	3000	3.4	0.7	1.5	20287
PS 40/44	OSP-P40	65	175	175	3000	4.6	1.1	1.5	20033
PS 40/60	OSP-P40	90	250	250	3000	6	1.3	2.2	20034
PS 50/60	OSP-P50	90	250	250	3000	7.6	1.4	2.3	20288
PS 50/76	OSP-P50	140	350	350	4000	11.5	1.8	4.9	20289

¹⁾ corrosion resistance version available on request (max. loads and moments are 25% lower)

** Please use this order pattern: Order-No. + „stroke in mm“ (5 digits)

Example: PS25/25 Guide D25 mm, stroke 1000 mm: 20015-01000

Order Instructions- POWERSLIDE

1-4	5+6	7	8	9	10	11	12-16	17	18	19	20	21	22	23	24	25
OSPP	25	0	0	0	0	0	01100	0	0	0	0	0	0	0	0	0

Piston-Ø	
16	
25	
32	
40	
50	

Stroke	
Input in mm (5 digits)	

Screws	
0	standard
1	stainless

Cushioning	
0	standard
1	max. length ³⁾

Piston Mounting	
0	without

Measuring system	
0	without
X	SFI 0.1 mm
Y	SFI 1 mm

Version / Piston	
0	standard
1	Tandem

Lubrication	
0	standard
1	Slow speed ²⁾

End cap position	
0	l+r 0° = in front
1	l+r 90° = underneath
2	l+r 180° = at the back
3	l+r 270° = same side as outerband
4	l 90° = underneath; r 0° = in front
5	l 180° = at the back; r 0° = in front
6	l 270° = same side as outerband; r 0° = in front
7	l 0° = in front; r 90° = underneath
8	l 180° = at the back; r 90° = underneath
9	l 270° = same side as outerband; r 90° = underneath
A	l 0° = in front; r 180° = at the back
B	l 90° = underneath; r 180° = at the back
C	l 270° = same side as outerband; r 180° = at the back
D	l 0° = in front; r 270° = same side as outerband
E	l 90° = underneath; r 270° = same side as outerband
F	l 180° = at the back; r 270° = same side as outerband

Guides/ Brakes/ Inversion	
0	without
E	PSXX/25 Powerslide Ø 16, 25
F	PSXX/35 Powerslide Ø 25, 32
G	PSXX/44 Powerslide Ø 25, 32, 40
H	PSXX/60 Powerslide Ø 40, 50
I	PSXX/76 Powerslide Ø 50

Cover / Cable Channel	
0	standard
1	cable channel
2	cable channel two-sided
X	without Cover rail

Air Connection	
0	standard
1	on the end face
2	both at one end (not turnable)
3	left standard right end face
4	right standard left end face
A	3/2 way valve VOE 24 V = Ø 25, 32, 40, 50
B	3/2 way valve VOE 230 V~/110 V = Ø 25, 32, 40, 50
C	3/2 way valve VOE 48 V = Ø 25, 32, 40, 50
E	3/2 way valve VOE 110 V = Ø 25, 32, 40, 50

Seals	
0	standard (NBR)
1	Viton ^{® 1)}

add. Guide Carriage	
0	without
E	Guide Carriage Powerslide PSXX/25 Ø 16, 25
F	Guide Carriage Powerslide PSXX/35 Ø 25, 32
G	Guide Carriage Powerslide PSXX/44 Ø 25, 32, 40
H	Guide Carriage Powerslide PSXX/60 Ø 40, 50
I	Guide Carriage Powerslide PSXX/76 Ø 50

End cap position (air connection)

270° same side as outerband

180° at the back

90° underneath

0° in front

end-face

Cylinder R (right end side)

Cylinder L (left end side)

¹⁾ Viton with VOE not possible.

²⁾ "Slow speed lubrication" in combination with „Viton[®]“ seals on demand.

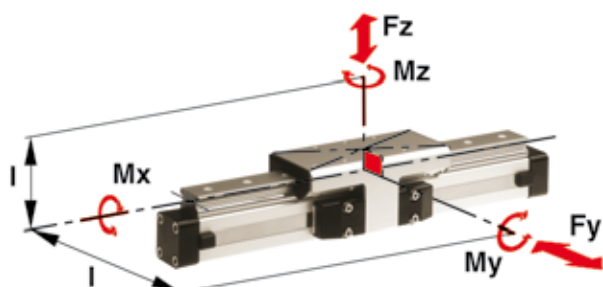
³⁾ „Lubrication slow speed“ in combination with „max. cushioning length“ not possible.

Aluminium Roller Guide PROLINE Series PL 16 to 50 for Linear Drive

Features:

- High precision
- High velocities (10 m/s)
- Smooth operation - low noise
- Integrated wiper system
- Long life lubrication
- Compact dimensions - compatible to Slideline plain bearing guide
- Any length of stroke up to 3750 mm

Loads, Forces and Moments



Technical Data

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

$$\frac{M_x}{M_{x_{max}}} + \frac{M_y}{M_{y_{max}}} + \frac{M_z}{M_{z_{max}}} + \frac{F_y}{F_{y_{max}}} + \frac{F_z}{F_{z_{max}}} \leq 1$$

The sum of the loads should not exceed >1. With a load factor of less than 1, service life is 8000 km

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

For further technical information see catalogue P-A4P011GB

* Please note:

The mass of the carriage has to be added to the total moving mass when using the cushioning diagram

Series	For linear drive	Max. Moment [Nm]			Max. loads [N] Fy, Fz	Maximum braking force at 6 bar [N] ¹⁾	Mass of linear drive with guide [kg]		Mass * guide carriage [kg]	Order-No ** PROLINE Guide without cylinder	
		Mx	My	Mz			with 0 mm stroke	increase per 100 mm stroke		without Brake	with Brake
PL 16	OSP-P16	8	12	12	542	-	0.55	0.19	0.24	20855	-
PL 25	OSP-P25	16	39	39	857	on request	1.65	0.40	0.75	20856	20860
PL 32	OSP-P32	29	73	73	1171	on request	3.24	0.62	1.18	20857	20861
PL 40	OSP-P40	57	158	158	2074	on request	4.35	0.70	1.70	20858	20862
PL 50	OSP-P50	111	249	249	3111	on request	7.03	0.95	2.50	20859	20863

** Please use this order pattern: Order-No. + „stroke in mm“ (5 digits)

Example: PROLINE guide without brake D16 mm, stroke 1000 mm: 20855-01000

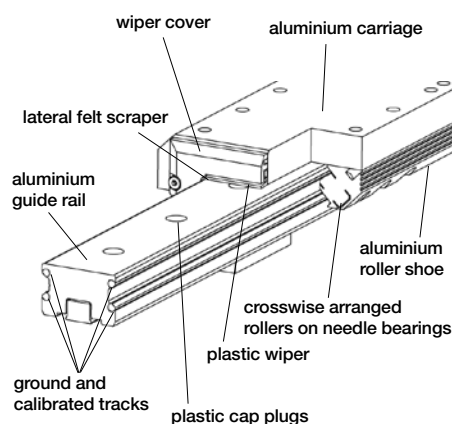
OSP
ORIGA
SYSTEM
PLUS



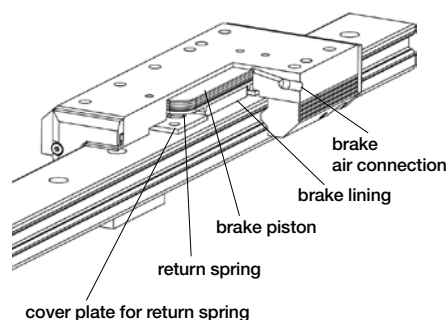
Integrated Brake (optional) for series OSP-P25 to OSP-P50:

- Actuated by pressurisation
- Released by depressurisation and spring actuation

Carriage Without Brake



Option - Integrated Brake



Order Instructions- PROLINE

1-4	5+6	7	8	9	10	11	12-16	17	18	19	20	21	22	23	24	25
OSPP	25	0	0	0	0	0	01100	0	0	0	0	0	0	0	0	0

Piston-Ø
16
25
32
40
50

Stroke
Input in mm (5 digits)

Piston Mounting
0 without

Measuring system
0 without
X SFI 0.1 mm
Y SFI 1 mm

Screws
0 standard

Cushioning
0 standard
1 max. length ³⁾

Version / Piston
0 standard
1 Tandem

Lubrication
0 standard
1 Slow speed ²⁾³⁾

End cap position
0 l+r 0° = in front

Guides/ Brakes/ Inversion
0 without

Cover / Cable Channel
0 standard

Air Connection
0 standard
1 on the end face
2 both at one end (not turnable)
3 left standard right end face
4 right standard left end face
A 3/2 way valve VOE 24 V = Ø 25, 32, 40, 50
B 3/2 way valve VOE 230 V~/110 V = Ø 25, 32, 40, 50
C 3/2 way valve VOE 48 V = Ø 25, 32, 40, 50
E 3/2 way valve VOE 110 V~ Ø 25, 32, 40, 50

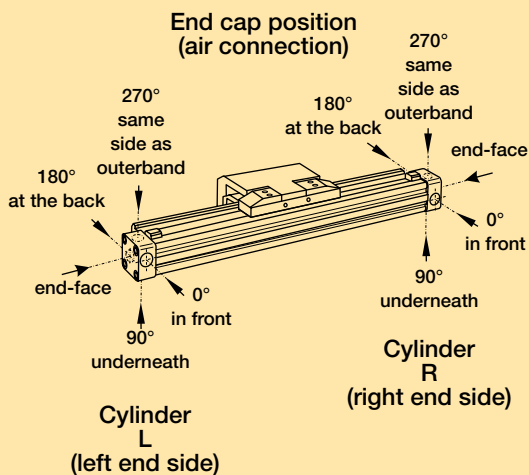
Seals
0 standard (NBR)
1 Viton ^{® 1)}

1 l+r 90° = underneath
2 l+r 180° = at the back
3 l+r 270° = same side as outerband
4 l 90° = underneath; r 0° = in front
5 l 180° = at the back; r 0° = in front
6 l 270° = same side as outerband; r 0° = in front
7 l 0° = in front; r 90° = underneath
8 l 180° = at the back; r 90° = underneath
9 l 270° = same side as outerband; r 90° = underneath
A l 0° = in front; r 180° = at the back
B l 90° = underneath; r 180° = at the back
C l 270° = same side as outerband; r 180° = at the back
D l 0° = in front; r 270° = same side as outerband
E l 90° = underneath; r 270° = same side as outerband
F l 180° = at the back; r 270° = same side as outerband

6 Proline PL Ø 16-50
7 Proline with Activebrake PL-AB Ø 25-50
8 Proline with Multibrake PL-MB Ø 25-50

1 cable channel
2 cable channel two-sided
X without Cover rail

add. Guide Carriage
0 without
6 Guide Carriage Proline PL Ø 16-50
7 Guide Carriage Proline Activebrake PL-AB Ø 25-50
8 Guide Carriage Proline Multibrake PL-MB Ø 25-50
N Guide Carriage Proline Multibrake PL-MB without brake function Ø 25-50



¹⁾ Viton with VOE not possible.

²⁾ "Slow speed lubrication" in combination with „Viton[®]“ seals on demand.

³⁾ „Lubrication slow speed“ in combination with „max. cushioning length“ not possible.

Recirculating Ball Bearing Guide STARLINE

Series STL 16 to 50 for Linear Drive

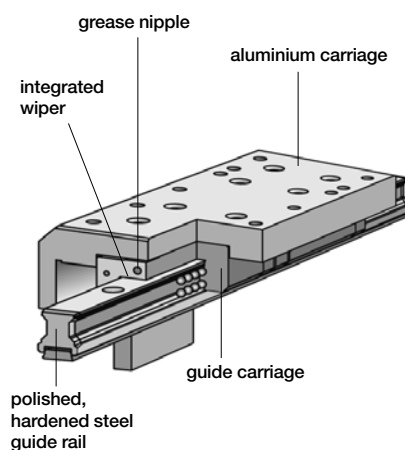
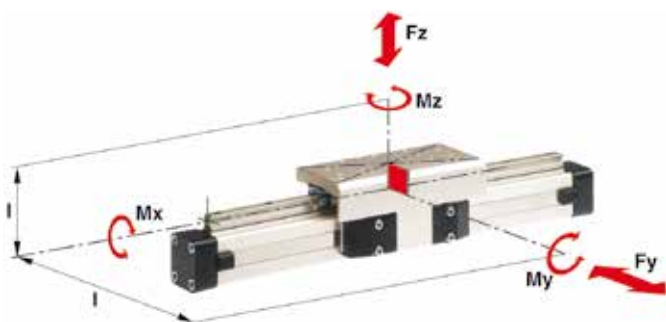
Features:

- Polished and hardened steel guide rail
- For very high loads in all directions
- High precision
- Integrated wiper system
- Integrated grease nipples
- Any length of stroke up to 3700 mm
- Anodized aluminium guide carriage – dimensions compatible with OSP guides SLIDELINE and PROLINE
- Installation height (STL16 - 32) compatible with OSP guides SLIDELINE and PROLINE



- Maximum speed
STL16: $v = 3 \text{ m/s}$
STL25 to 50: $v = 5 \text{ m/s}$

Loads, Forces and Moments



Technical Data

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

$$\frac{M_x}{M_{x_{\max}}} + \frac{M_y}{M_{y_{\max}}} + \frac{M_z}{M_{z_{\max}}} + \frac{F_y}{F_{y_{\max}}} + \frac{F_z}{F_{z_{\max}}} \leq 1$$

The sum of the loads should not exceed >1.

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

For further technical information see catalogue P-A4P011GB

* Please note:

The mass of the carriage has to be added to the total moving mass when using the cushioning diagram

Series	For linear drive	Max. Moment [Nm]			Max. loads [N]		Mass of linear drive with guide [kg]		Mass * guide carriage [kg]	Order-No ** STARLINE Guide without cylinder
		Mx	My	Mz	Fy	Fz	with 0 mm stroke	increase per 100 mm stroke		
STL 16	OSP-P16	15	30	30	1000	1000	0.598	0.210	0.268	21111
STL 25	OSP-P25	50	110	110	3100	3100	1.733	0.369	0.835	21112
STL 32	OSP-P32	62	160	160	3100	3100	2.934	0.526	1.181	21113
STL 40	OSP-P40	150	400	400	4000	7500	4.452	0.701	1.901	21114
STL 50	OSP-P50	210	580	580	4000	7500	7.361	0.936	2.880	21115

** Please use this order pattern: Order-No. + „stroke in mm“ (5 digits)
Example: STARLINE guide D16 mm, stroke 1000 mm: 21111-01000

Variable Stop

Type VS16 to VS50

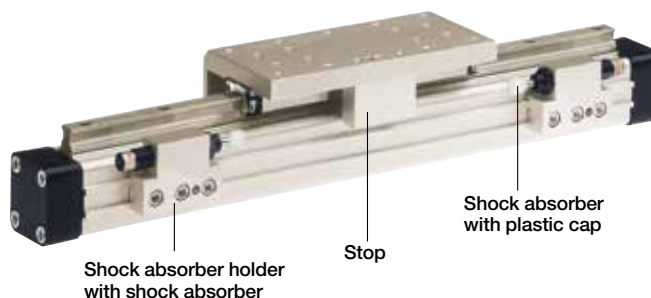
Arrangement with two variable stops

The variable stop Type VS provides simple stroke limitation. It can be retrofitted and positioned anywhere along the stroke length.

For every cylinder diameter two types of shock absorber are available – see „Shock Absorber Selection“.

Mid-section supports and magnetic switches can still be fitted on the same side as the variable stop.

Depending on the application, two variable stops can be fitted if required.

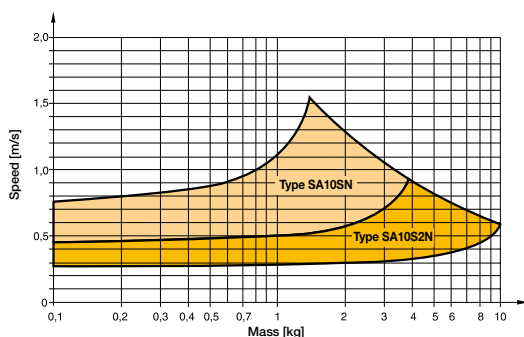


Shock Absorber Selection

The shock absorber is selected in dependence on the mass and speed.

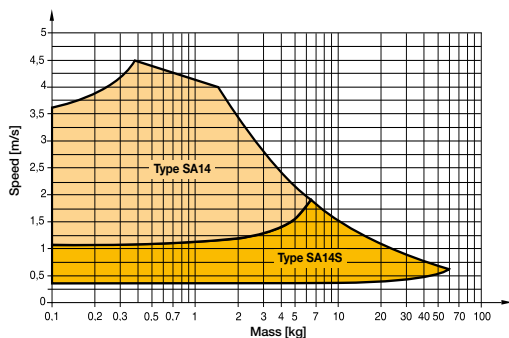
The mass of the carrier itself must be taken into account.

Shock Absorber Selection in Dependence on Mass and Speed for Series OSP-STL16



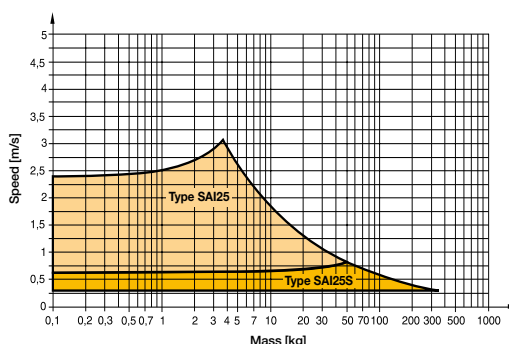
The values relate to an effective driving force of 78 N (6 bar)

Shock Absorber Selection in Dependence on Mass and Speed for Series OSP-STL32



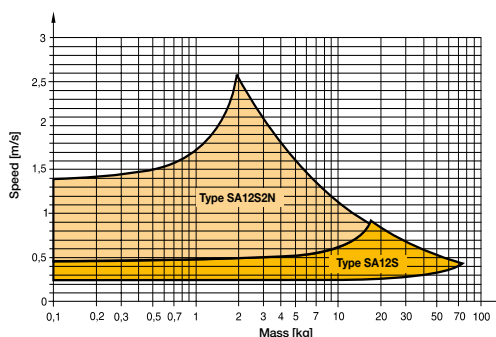
The values relate to an effective driving force of 420 N (6 bar)

Shock Absorber Selection in Dependence on Mass and Speed for Series OSP-STL50



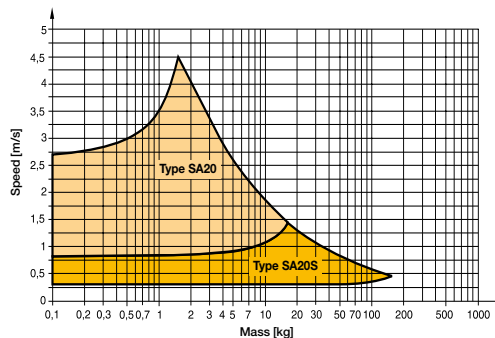
The values relate to an effective driving force of 1000 N (6 bar)

Shock Absorber Selection in Dependence on Mass and Speed for Series OSP-STL25



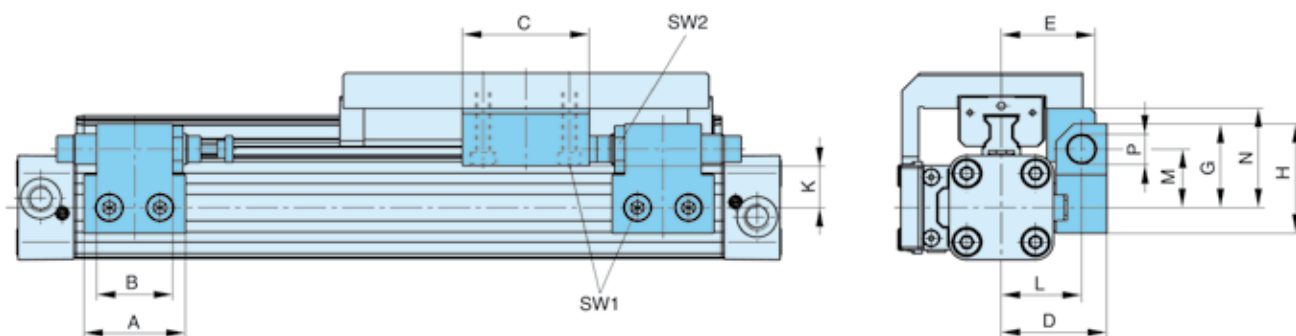
The values relate to an effective driving force of 250 N (6 bar)

Shock Absorber Selection in Dependence on Mass and Speed for Series OSP-STL40



The values relate to an effective driving force of 640 N (6 bar)

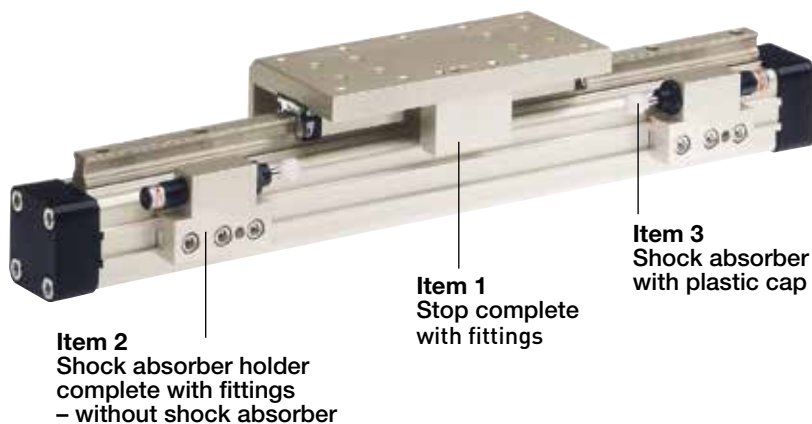
Dimensions - Variable Stop Type VS16 to VS50



Dimension Table [mm] – Variable Stop Type VS16 to VS50

Series	Type	A	B	C	D	E	G	H	K	L	M	N	P	SW1	SW2
OSP-STL16	VS16	30	14	25	33	30	28	38	16.2	25.5	20.5	30	M10x1	4	12.5
OSP-STL25	VS25	40	30	50	41.5	37	33	43	18	31.5	23	39	M12x1	5	16
OSP-STL32	VS32	60	40	50	45.5	42	35	45	19	35.5	25	48	M14x1.5	5	17
OSP-STL40	VS40	84	52	60	64	59	48	63	25.6	50	34	58.6	M20x1.5	5	24
OSP-STL50	VS50	84	-	60	75	69	55	70	26.9	57	38	66.9	M25x1.5	5	30

Order information - Variable Stop Type VS16 to VS50 - without cylinder and without guide



Item	Description	Size									
		VS16		VS25		VS32		VS40		VS50	
		Type	Order No.	Type	Order No.	Type	Order No.	Type	Order No.	Type	Order No.
1	Stop, complete	-	21196FIL	-	21197FIL	-	21198FIL	-	21199FIL	-	21200FIL
2	Shock absorber holder complete	-	21201FIL	-	21202FIL	-	21203FIL	-	21204FIL	-	21205FIL
3*	Shock absorber, soft	SA10SN	7718FIL	SA12S2N	7723FIL	SA14	7708FIL	SA20	7710FIL	SAI25	7712FIL
	Shock absorber, hard	SA10S2N	7721FIL	SA12S	7707FIL	SA14S	7709FIL	SA20S	7711FIL	SAI25S	7713FIL

* Shock absorber with plastic cap

Note: Order instructions for VS in combination with the cylinder and guide see page 150, pos.18

Order Instructions- STARLINE

1-4	5+6	7	8	9	10	11	12-16	17	18	19	20	21	22	23	24	25
OSPP	25	0	0	0	0	0	01100	0	0	0	0	0	0	0	0	0

Piston-Ø	
16	
25	
32	
40	
50	

Stroke	
Input in mm (5 digits)	

Piston Mounting	
0	without

Measuring system	
0	without
X	SFI 0.1 mm
Y	SFI 1 mm

Screws	
0	standard

Cushioning	
0	standard
1	max. length ³⁾
2	VS variable stop, soft left for Starline
3	VS variable stop, hard, left for Starline
4	VS variable stop, soft, right for Starline
5	VS variable stop, hard, right for Starline
6	VS variable stop, soft, both sides for Starline
7	VS variable stop, hard, both sides for Starline

Version / Piston	
0	standard
1	Tandem

Lubrication	
0	standard
1	Slow speed ²⁾³⁾

Cover / Cable Channel	
0	standard
1	cable channel
2	cable channel two-sided
X	without Cover rail

Air Connection	
0	standard
1	on the end face
2	both at one end (not turnable)
3	left standard right end face
4	right standard left end face
A	3/2 way valve VOE 24 V = Ø 25, 32, 40, 50
B	3/2 way valve VOE 230 V~/110 V = Ø 25, 32, 40, 50
C	3/2 way valve VOE 48 V = Ø 25, 32, 40, 50
E	3/2 way valve VOE 110 V~ Ø 25, 32, 40, 50

Seals	
0	standard (NBR)
1	Viton ^{® 1)}

End cap position	
0	l+r 0° = in front
1	l+r 90° = underneath
2	l+r 180° = at the back
3	l+r 270° = same side as outerband
4	l 90° = underneath; r 0° = in front
5	l 180° = at the back; r 0° = in front
6	l 270° = same side as outerband; r 0° = in front
7	l 0° = in front; r 90° = underneath
8	l 180° = at the back; r 90° = underneath
9	l 270° = same side as outerband; r 90° = underneath
A	l 0° = in front; r 180° = at the back
B	l 90° = underneath; r 180° = at the back
C	l 270° = same side as outerband; r 180° = at the back
D	l 0° = in front; r 270° = same side as outerband
E	l 90° = underneath; r 270° = same side as outerband
F	l 180° = at the back; r 270° = same side as outerband

Guides/ Brakes/ Inversion	
0	without
B	Starline STL

add. Guide Carriage	
0	without
B	Guide Carriage Starline STL

End cap position (air connection)

270° same side as outerband
180° at the back
end-face
0° in front
90° underneath

Cylinder R (right end side)

270° same side as outerband
180° at the back
end-face
0° in front
90° underneath

Cylinder L (left end side)

270° same side as outerband
180° at the back
end-face
0° in front
90° underneath

¹⁾ Viton with VOE not possible.

²⁾ "Slow speed lubrication" in combination with „Viton[®]“ seals on demand.

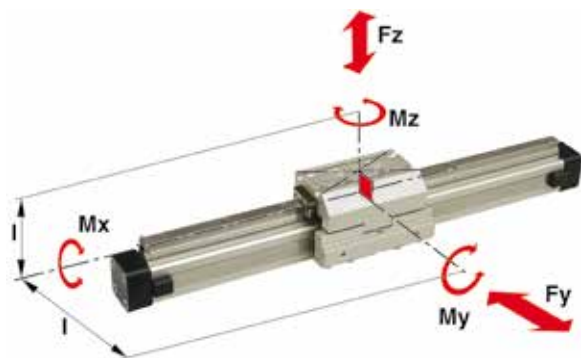
³⁾ „Lubrication slow speed“ in combination with „max. cushioning length“ not possible.

Recirculating Ball Bearing Guide Series KF 16 to 50 for Linear Drive

Features:

- Anodized aluminium guide carriage, the mounting dimensions correspond to FESTO Type: DGPL-KF
- Polished and hardened steel guide rail
- For high loads in all directions
- High precision
- Integrated wiper system
- Integrated grease nipples
- Any length of stroke up to 3700 mm

Loads, Forces and Moments



Technical Data

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

$$\frac{M_x}{M_{x_{\max}}} + \frac{M_y}{M_{y_{\max}}} + \frac{M_z}{M_{z_{\max}}} + \frac{F_y}{F_{y_{\max}}} + \frac{F_z}{F_{z_{\max}}} \leq 1$$

The sum of the loads should not exceed >1.

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

For further technical information see catalogue P-A4P011GB

Series	For linear drive	Max. moment [Nm]			Max. loads [N]		Mass of linear drive with guide [kg]		Mass* guide carriage [kg]	Groove stone	Order-No.	
		Mx	My	Mz	Fy	Fz	with 0 mm stroke	increase per 100 mm stroke			Groove Stone	Guide KF without cylinder**
KF16	OSP-P16	12	25	25	1000	1000	0.558	0.21	0.228	-	-	21101
KF25	OSP-P25	35	90	90	3100	3100	1.522	0.369	0.607	M5	13508FIL	21102
KF32	OSP-P32	44	133	133	3100	3100	2.673	0.526	0.896	M5	13508FIL	21103
KF40	OSP-P40	119	346	346	4000	7100	4.167	0.701	1.531	M6	13509FIL	21104
KF50	OSP-P50	170	480	480	4000	7500	7.328	0.936	2.760	M8	13510FIL	21105

** Please use this order pattern: Order-No. + „stroke in mm“ (5 digits)
Example: KF guide D16 mm, stroke 1000 mm: 21101-01000

OSP
— ORIGA
— SYSTEM
— PLUS



- Maximum speed

KF16, KF40: v = 3 m/s

KF25, KF32, KF50: v = 5 m/s

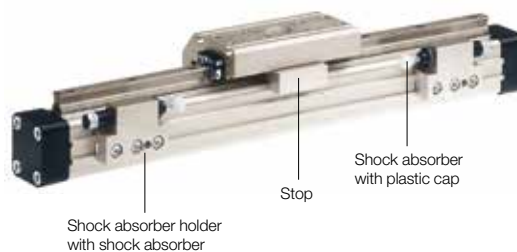
Variable Stop

The variable stop Type VS provides simple stroke limitation. It can be retrofitted and positioned anywhere along the stroke length. For every cylinder diameter two types of shock absorber are available. Mid-section supports and magnetic switches can still be fitted on the same side as the variable stop.

Depending on the application, two variable stops can be fitted if required.

Variable Stop Type VS16 to VS50

Arrangement with two variable stops



For shock absorber selection in dependence on mass and speed see page 148.

* Please note:

The mass of the carriage has to be added to the total moving mass when using the cushioning diagram

Note: Order instructions for VS in combination with the cylinder and guide see page 152, pos.18

Order Instructions- KF

1-4	5+6	7	8	9	10	11	12-16	17	18	19	20	21	22	23	24	25
OSPP	25	0	0	0	0	0	01100	0	0	0	0	0	0	0	0	0

16
25
32
40
50

Input in mm (5 digits)

0	without
---	---------

0	without
X	SFI 0.1 mm
Y	SFI 1 mm

0	standard
---	----------

0	standard
1	max. length ³⁾
2	VS variable stop, soft left for KF
3	VS variable stop, hard, left for KF
4	VS variable stop, soft, right for KF
5	VS variable stop, hard, right for KF
6	VS variable stop, soft, both sides for KF
7	VS variable stop, hard, both sides for KF

0	standard
1	cable channel
2	cable channel two-sided
X	without Cover rail

C	Classic
T	Classic Tandem

0	standard
1	Slow speed ²⁾³⁾

0	standard
1	on the end face
2	both at one end (not turnable)
3	left standard right end face
4	right standard left end face
A	3/2 way valve VOE 24 V = Ø 25, 32, 40, 50
B	3/2 way valve VOE 230 V~ / 110 V = Ø 25, 32, 40, 50
C	3/2 way valve VOE 48 V = Ø 25, 32, 40, 50
E	3/2 way valve VOE 110 V~ Ø 25, 32, 40, 50

0	standard (NBR)
1	Viton ^{® 1)}

0	l+r 0° = in front
1	l+r 90° = underneath
2	l+r 180° = at the back
3	l+r 270° = same side as outerband
4	l 90° = underneath; r 0° = in front
5	l 180° = at the back; r 0° = in front
6	l 270° = same side as outerband; r 0° = in front
7	l 0° = in front; r 90° = underneath
8	l 180° = at the back; r 90° = underneath
9	l 270° = same side as outerband; r 90° = underneath
A	l 0° = in front; r 180° = at the back
B	l 90° = underneath; r 180° = at the back
C	l 270° = same side as outerband; r 180° = at the back
D	l 0° = in front; r 270° = same side as outerband
E	l 90° = underneath; r 270° = same side as outerband
F	l 180° = at the back; r 270° = same side as outerband

0	without
C	KF

0	without
C	Guide Carriage KF

End cap position (air connection)

Cylinder L (left end side)

Cylinder R (right end side)

¹⁾ Viton with VOE not possible.

²⁾ "Slow speed lubrication" in combination with „Viton[®]“ seals on demand.

³⁾ „Lubrication slow speed“ in combination with „max. cushioning length“ not possible.

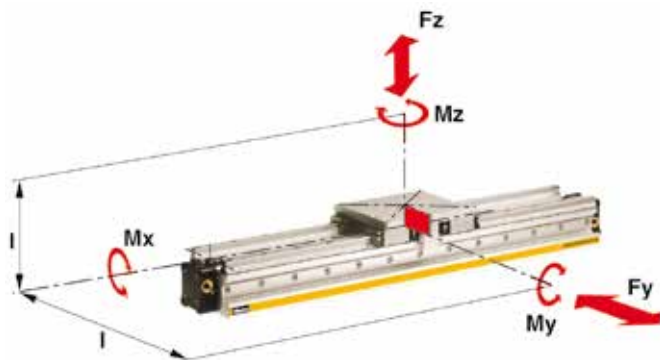
Heavy Duty Guide HD

Series HD 25 to 50 for Linear Drive

Features:

- Guide system: 4-row recirculating ball bearing guide
- Polished and hardened steel guide rail
- For highest loads in all directions
- Highest precision
- Integrated wiper system
- Integrated grease nipples
- Any lengths of stroke up to 3700 mm (longer strokes on request)
- Anodized aluminium guide carriage - dimensions compatible with OSP guide GUIDELINE
- Maximum speed $v = 5 \text{ m/s}$

Loads, Forces and Moments



Technical Data

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

$$\frac{M_x}{M_{x_{\max}}} + \frac{M_y}{M_{y_{\max}}} + \frac{M_z}{M_{z_{\max}}} + \frac{F_y}{F_{y_{\max}}} + \frac{F_z}{F_{z_{\max}}} \leq 1$$

The sum of the loads should not exceed >1.

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

For further technical information see catalogue P-A4P011GB

Series	For linear drive	Max. moment [Nm]			Max. loads [N]		Mass of linear drive with guide carriage [kg]		Mass* guide [kg]	Order-No. ** HD Guide without cylinder
		Mx	My	Mz	Fy	Fz	with 0 mm stroke	increase per 100 mm stroke		
HD 25	OSP-P25	260	320	320	6000	6000	3.065	0.924	1.289	21246
HD 32	OSP-P32	285	475	475	6000	6000	4.308	1.112	1.367	21247
HD 40	OSP-P40	800	1100	1100	15000	15000	7.901	1.748	2.712	21248
HD 50	OSP-P50	1100	1400	1400	18000	18000	11.648	2.180	3.551	21249

** Please use this order pattern: Order-No. + „stroke in mm“ (5 digits)
Example: HD Guide D25 mm, stroke 1000 mm: 21246-01000

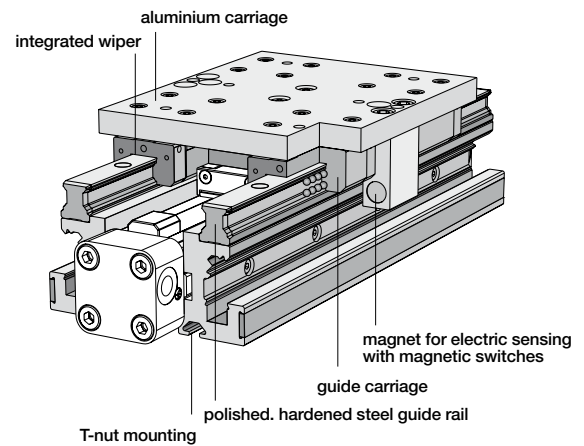
OSP
ORIGA
SYSTEM
PLUS



Options:

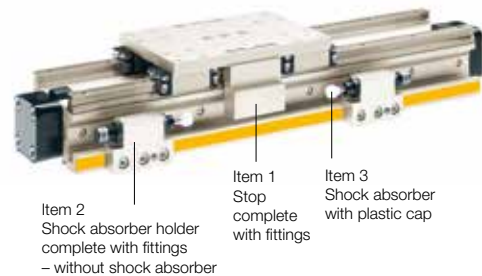
- With variable stop
- With intermediate stop module

Version with pneumatic linear drive series OSP-P



Variable Stop

Variable Stop Type VS25 to VS50



For shock absorber selection in dependence on mass and speed see page 148.

* Please note:

The mass of the carriage has to be added to the total moving mass when using the cushioning diagram

Order Instructions- HEAVY DUTY - HD

1-4	5+6	7	8	9	10	11	12-16	17	18	19	20	21	22	23	24	25
OSPP	25	0	0	0	0	0	01100	0	0	0	0	0	0	0	0	0

25
32
40
50

Input in mm (5 digits)

0	without
---	---------

0	without
X	SFI 0.1 mm
Y	SFI 1 mm

0	standard
---	----------

0	standard
1	max. length ³⁾
2	VS variable stop, soft left for HD
3	VS variable stop, hard, left for HD
4	VS variable stop, soft, right for HD
5	VS variable stop, hard, right for HD
6	VS variable stop, soft, both sides for HD
7	VS variable stop, hard, both sides for HD

0	standard
1	Tandem

0	standard
1	Slow speed ²⁾³⁾

0	standard
1	cable channel
2	cable channel two-sided
X	without Cover rail

0	standard
1	on the end face
2	both at one end (not turnable)
3	left standard right end face
4	right standard left end face
A	3/2 way valve VOE 24 V= Ø25, 32, 40, 50
B	3/2 way valve VOE 230 V~/110 V= Ø25, 32, 40, 50
C	3/2 way valve VOE 48 V= Ø25, 32, 40, 50
E	3/2 way valve VOE 110 V~ Ø25, 32, 40, 50

0	standard (NBR)
1	Viton ^{® 1)}

0	l+r 0° = in front
1	l+r 90° = underneath
2	l+r 180° = at the back
3	l+r 270° = same side as outerband
4	l 90° = underneath; r 0° = in front
5	l 180° = at the back; r 0° = in front
6	l 270° = same side as outerband; r 0° = in front
7	l 0° = in front; r 90° = underneath
8	l 180° = at the back; r 90° = underneath
9	l 270° = same side as outerband; r 90° = underneath
A	l 0° = in front; r 180° = at the back
B	l 90° = underneath; r 180° = at the back
C	l 270° = same side as outerband; r 180° = at the back
D	l 0° = in front; r 270° = same side as outerband
E	l 90° = underneath; r 270° = same side as outerband
F	l 180° = at the back; r 270° = same side as outerband

0	without
D	HD

0	without
D	Guide Carriage HD

End cap position (air connection)

Cylinder L (left end side)

Cylinder R (right end side)

¹⁾ Viton with VOE not possible.

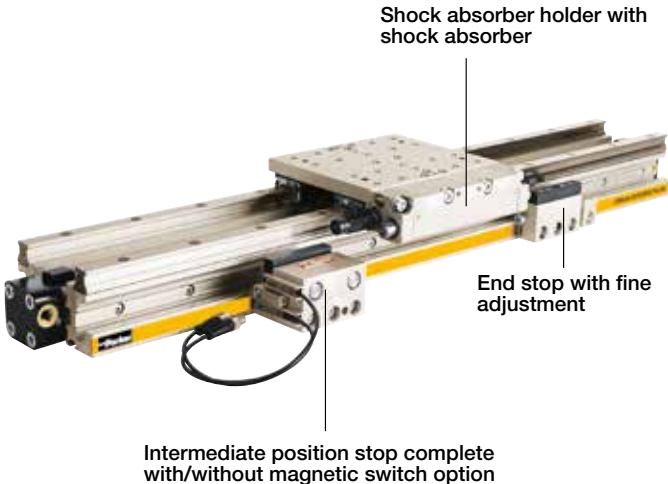
²⁾ "Slow speed lubrication" in combination with „Viton[®]“ seals on demand.

³⁾ „Lubrication slow speed“ in combination with „max. cushioning length“ not possible.

Intermediate Stop Module

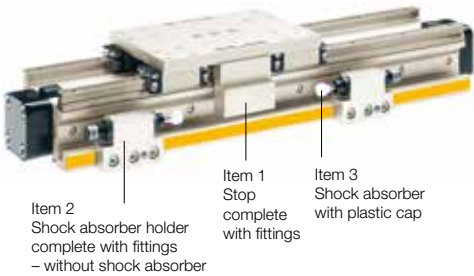
Type ZSM .. HD

The intermediate stop module ZSM allows the guide carriage to stop at any desired intermediate positions with high accuracy. It can be retrofitted. Depending on the application, i.e. the number of intermediate stops, one or more intermediate position stops can be used. The intermediate position stops can be retracted and extended without the need for the guide carriage to be moved back out of position. Therefore the guide carriage can be made to stop at the defined intermediate positions in any order.



ORIGA intermediate stop module ZSM:

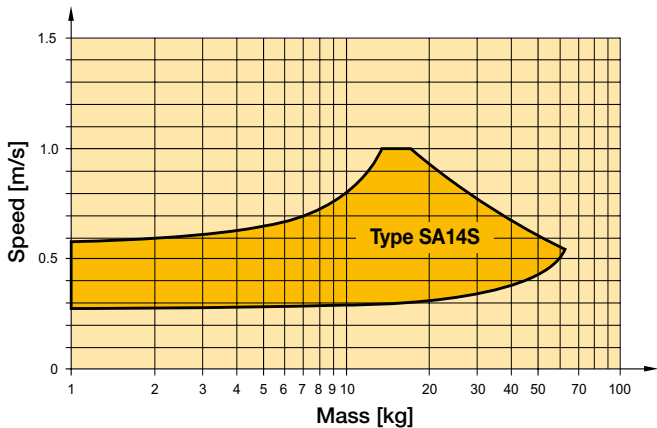
- Allows stopping at any intermediate positions
- Intermediate position stops can be located steplessly anywhere along the whole stroke length
- Movement to the next position without reverse stroke
- Compact unit
- Cost-effective positioning module without electrical or electronic components
- Option: end stop with fine adjustment



Operating information

Operating pressure range:	4 - 8 bar
Temperature range:	-10°C to +70°C
Intermediate position grid	85 mm

Shock Adsorbers Type SA14S



The values relate to an effective driving force of 250 N (6 bar)

Order Instructions - Intermediate Stop Module - Type ZSM..HD

Item	Description	For intermediate stop module	Order-No.
1*	Shock absorber holder with shock absorber SA14S, both sides	ZSM25HD	21342BFIL
2*	Shock absorber holder with shock absorber SA14S, left	ZSM25HD	21342LFIL
3*	Shock absorber holder with shock absorber SA14S, right	ZSM25HD	21342RFIL
4	Intermediate position stop complete, without magnetic switch option	ZSM25HD	21343FIL
5	Intermediate position stop complete, with magnetic switch option	ZSM25HD	21344FIL
6	End stop with fine adjustment	ZSM25HD	21346FIL

* The shock absorbers are installed in the shock absorber holder and adjusted in our workshop.

Note:

For movement onwards from the intermediate position, the intermediate position stop must advance. The intermediate position stop can only advance if both cylinder chambers of the OSP-P cylinder are pressurized. For further technical information see catalogue P-A4P011GB



Active Brakes and Passive Brakes

Active Brake
for pneumatic linear drive
Series OSP-P
Piston diameters 25 - 80 mm.

See page 157



Versions:

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

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

See page 141



Proline with Active Brake
Aluminium roller guide
PROLINE - PL with
integrated ACTIVE Brake
Piston diameters 25 - 50 mm.

See page 145



Multibrake with Slideline
MULTI BRAKE – PASSIVE Brake
with plainbearing guide
SLIDELINE - SL
Piston diameter 25 - 80 mm.

See page 158



Multibrake with Proline
MULTI BRAKE – PASSIVE Brake
with aluminium roller guide
PROLINE - PL
Piston diameters 25 - 50 mm.

See page 159



Active Brake

Series AB 25 to 80 for Linear Drive

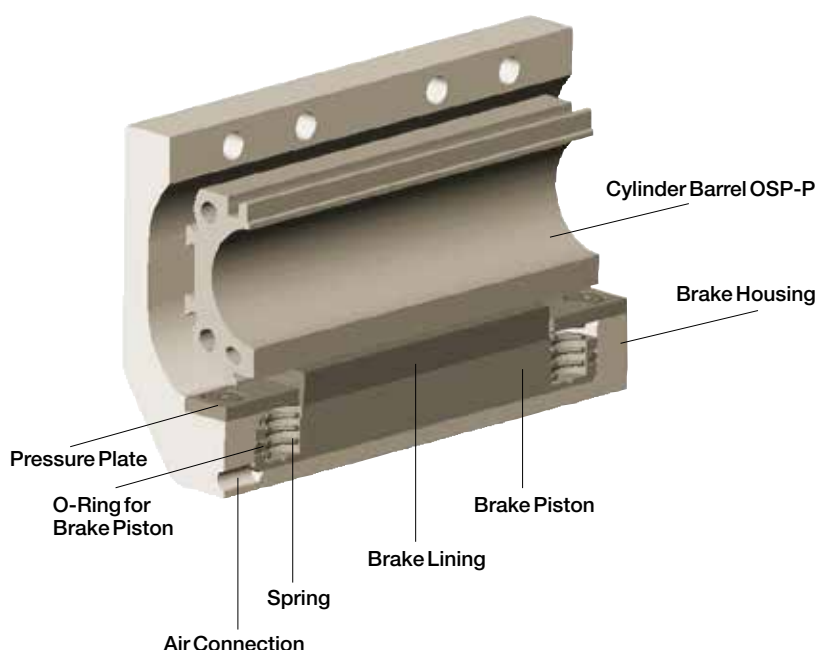


Features:

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



Function



Forces and Weights

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

⁽¹⁾ – at 6 bar
both chambers pressurised 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.

For further technical information see catalogue P-A4P011GB

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

Active brake in combination with Basic Cylinder see page 132, pos.20

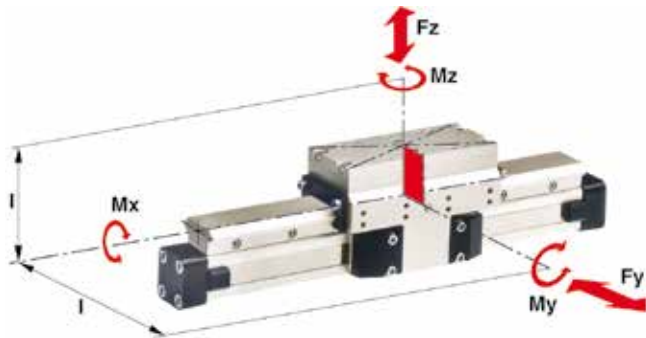
Multi-Brake Passive Brake

with plain bearing guide Slideline SL
Series MB-SL 25 to 80 for Linear Drive

Features:

- Brake operated by spring actuation
- Brake release by pressurisation
- Anodised aluminium rail, with prism shaped slide elements
- Adjustable plastic slide elements
- Composite sealing system with plastic and felt wiper elements to remove dirt and lubricate the slideway
- Replenishable guide lubrication by integrated grease nipples
- Blocking function in case of pressure loss
- Intermediate stops possible

Loads, Forces and Moments



Technical Data

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

Load and moment data are based on speeds $v < 0.2$ m/s.
Operating pressure 4.5 - 8 bar
A pressure of 4.5 bar is required to release the brake.

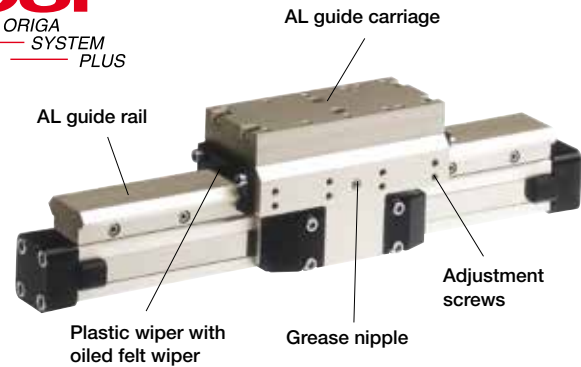
For further technical information see catalogue P-A4P011GB

Series	For linear drive	Max. moments [Nm]			Max. loads [N] Fy, Fz	Max. brake force [N] ¹⁾	Mass of linear drive with guide [kg]		Mass ²⁾ guide carriage [kg]	Order-No. ** MB-SL Guide with passive brake without cylinder *
		Mx	My	Mz			with 0 mm stroke	increase per 100 mm stroke		
MB-SL 25	OSP-P25	14	34	34	675	470	2.04	0.39	1.10	20796
MB-SL 32	OSP-P32	29	60	60	925	790	3.82	0.65	1.79	20797
MB-SL 40	OSP-P40	50	110	110	1600	1200	5.16	0.78	2.34	20798
MB-SL 50	OSP-P50	77	180	180	2000	1870	8.29	0.97	3.63	20799
MB-SL 63	OSP-P63	120	260	260	2500	2900	13.31	1.47	4.97	20800
MB-SL 80	OSP-P80	120	260	260	2500	2900	17.36	1.81	4.97	20846

** Please use this order pattern: Order-No. + „stroke in mm“ (5 digits)

Example: MB-SL guide with passive brake D 25 mm, stroke 1000 mm: 20796-01000

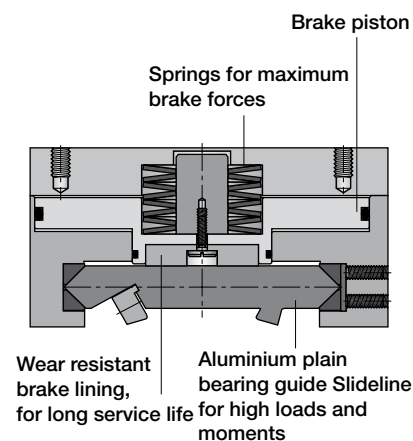
OSP
ORIGA
SYSTEM
PLUS



Function:

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

Function



* Please note:

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

¹⁾ Braking surface dry – oil on the braking surface will reduce the braking force

**MB-SL in combination with cylinder
see page 142, pos. 20**

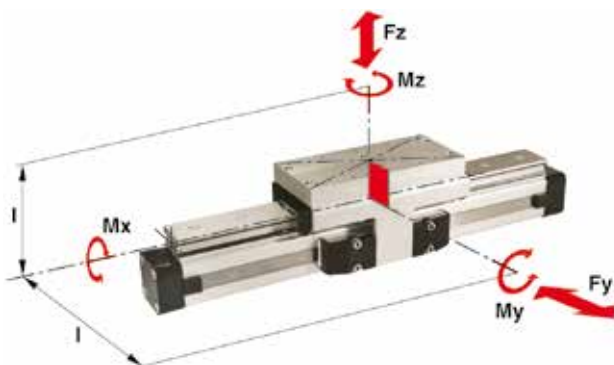
Multi-Brake Passive Brake

with Aluminium Roller Guide Proline PL
Series MB-PL 25 to 50 for Linear Drive

Features:

- Brake operated by spring actuation
- Brake release by pressurisation
- Composite sealing system with plastic and felt wiper elements to remove dirt and lubricate the slideway
- Blocking function in case of pressure loss
- Intermediate stops possible

Loads, Forces and Moments



Technical Data

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

$$\frac{M_x}{M_{x_{max}}} + \frac{M_y}{M_{y_{max}}} + \frac{M_z}{M_{z_{max}}} + \frac{F_y}{F_{y_{max}}} + \frac{F_z}{F_{z_{max}}} \leq 1$$

The sum of the loads should not exceed >1.
With a load factor of less than 1, service life is 8000 km

OSP
— ORIGA
— SYSTEM
— PLUS

AL guide rail
on ground and
calibrated tracks

AL guide carriage with
rollers on needle bearings

Plastic wiper with
oiled felt wiper

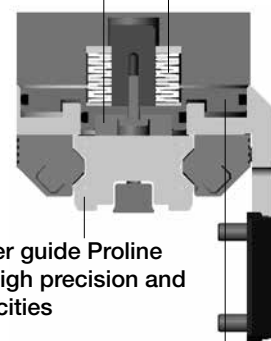
Function:

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

Function

Wear resistant
brake lining,
for long service life

Springs for
maximum
brake forces



Roller guide Proline
for high precision and
velocities

Brake piston

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

Operating Pressure 4.5 - 8 bar. A pressure of min. 4.5 bar release the brake.

For further technical information see catalogue P-A4P011GB

Series	For linear drive	Max. moments [Nm]			Max. loads [N] Fy, Fz	Max. brake force [N] ¹⁾	Mass of linear drive with guide [kg]		Mass ²⁾ guide carriage [kg]	Order-No. ** MB-PL Guide with passive brake without cylinder*
		Mx	My	Mz			with 0 mm stroke	increase per 100 mm stroke		
MB-PL25	OSP-P25	16	39	39	857	315	2.14	0.40	1.24	20864
MB-PL32	OSP-P32	29	73	73	1171	490	4.08	0.62	2.02	20865
MB-PL40	OSP-P40	57	158	158	2074	715	5.46	0.70	2.82	20866
MB-PL50	OSP-P50	111	249	249	3111	1100	8.60	0.95	4.07	20867

** Please use this order pattern: Order-No. + „stroke in mm“ (5 digits)

Example: MB-PL guide with passive brake, D25 mm, stroke 1000 mm: 20864-01000

**MB-PL in combination with cylinder
see page 146, pos. 20**

Linear Drive Accessories

(Mountings and Magnetic Switches)

Series OSP-P

Description

Overview

Clevis Mounting

End Cap Mountings

End Cap Mountings (for Linear Drives with guides)

Mid-Section Support

Mid-Section Support (for Linear Drives with guides)

Inversion Mounting

Adaptor Profile

T-Slot Profile

Connection Profile

Duplex Connection

Multiplex Connection

Magnetic Switch, standard version

Magnetic Switch for T-Nut mounting

Magnetic Switch ATEX-version 

Cable Cover



See
Catalogue
P-A4P011GB

Origa - Sensoflex

Displacement measuring system for
automated movement

Series SFI-plus
(Incremental measuring system)



Characteristics:

- Contactless magnetic displacement measurement system
- Displacement length up to 32 m
- Resolution 0.1 mm (option: 1 mm)
- Displacement speed up to 10m/s
- For linear and non-linear rotary motion
- Suitable for almost any control or display unit with a counter input

The SFI-plus magnetic displacement measuring system consists of 2 main components.

- Measuring Scale
Self-adhesive magnetic measuring scale
- Sensing Head
Converts the magnetic poles into electrical signals which are then processed by counter inputs down stream
(e.g. PLC, PC, digital counter)

For further technical information see catalogue P-A4P011GB

Note: Order instructions in combination with basic cylinder see page 132, pos.25