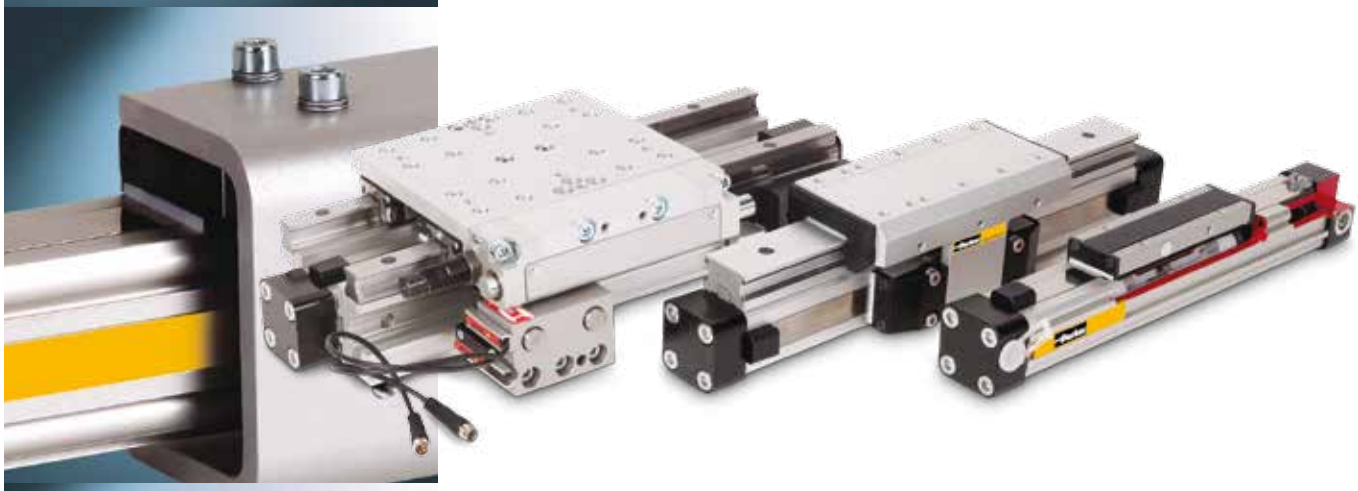
ORIGA SYSTEM PLUS OSP-P

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 ≥ 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

Special Versions

for use in Ex-Areas

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

Stainless steel version for special applications

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

High Temperature Version for temperatures up to +120°C

Low Temperature Version for temperatures down to -40°C

Slow Speed Version v = 0.005 – 0.2 m/s

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

Cylinders with extreme long strokes
Stroke length up to 41 m

*** 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)	
Air Connection on the End-face or both at One End • Series OSP-P	
Long-Stroke Cylinders for strokes up to 41 m • Series OSP-P	
Clean Room Cylinder certified to DIN EN ISO 14644-1 • Series OSP-P • Series OSP-E..SB	
Products for ATEX Areas • Series OSP-P Rodless Cylinders	
Products for ATEX Areas • Series OSP-P Rodless Cylinders with Linear Guide BASIC GUIDE	
Products for ATEX Areas • Series OSP-P Rodless Cylinders with Linear Guide SLIDELINE	
Bi-parting Version • Series OSP-P	
Integrated 3/2 Way Valves • Series OSP-P	
Clevis Mounting • Series OSP-P • Series OSP-E Belt drive* • Series OSP-E Screw drive*	
End Cap Mounting • Series OSP-P • Series OSP-E Belt drive* • Series OSP-E Screw drive*	
Mid-Section Support • Series OSP-P • Series OSP-E Belt drive* • Series OSP-E Screw drive*	
Inversion Mounting • Series OSP-P • Series OSP-E Belt drive* • Series OSP-E Screw drive*	

BASIC GUIDE • Series OSPP-BG	
Duplex Connection • Series OSP-P	
Multiplex Connection • Series OSP-P	
Linear Guides – SLIDELINE • Series OSP-P • Series OSP-E Screw drive*	
Linear Guides – POWERSLIDE • Series OSP-P • Series OSP-E Belt drive* • Series OSP-E Screw drive*	
Linear Guides – PROLINE • Series OSP-P • Series OSP-E Belt drive* • Series OSP-E Screw drive*	
Linear Guides – STARLINE • Series OSP-P	
Linear Guides – KF • Series OSP-P	
Heavy Duty Linear Guides – HD • Series OSP-P • Series OSP-E Screw drive*	
Intermediate stop module – ZSM • Series OSP-P	
Brakes • Active Brakes • Passive Brakes	
Magnetic Switches • Series OSP-P • Series OSP-E Belt drive* • Series OSP-E Screw drive* • ATEX-Versions	
SENSOFLEX-Measuring system • Series SFI-plus	
Variable Stop VS • Series OSP-P with Linear Guide STL, KF, HD	

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

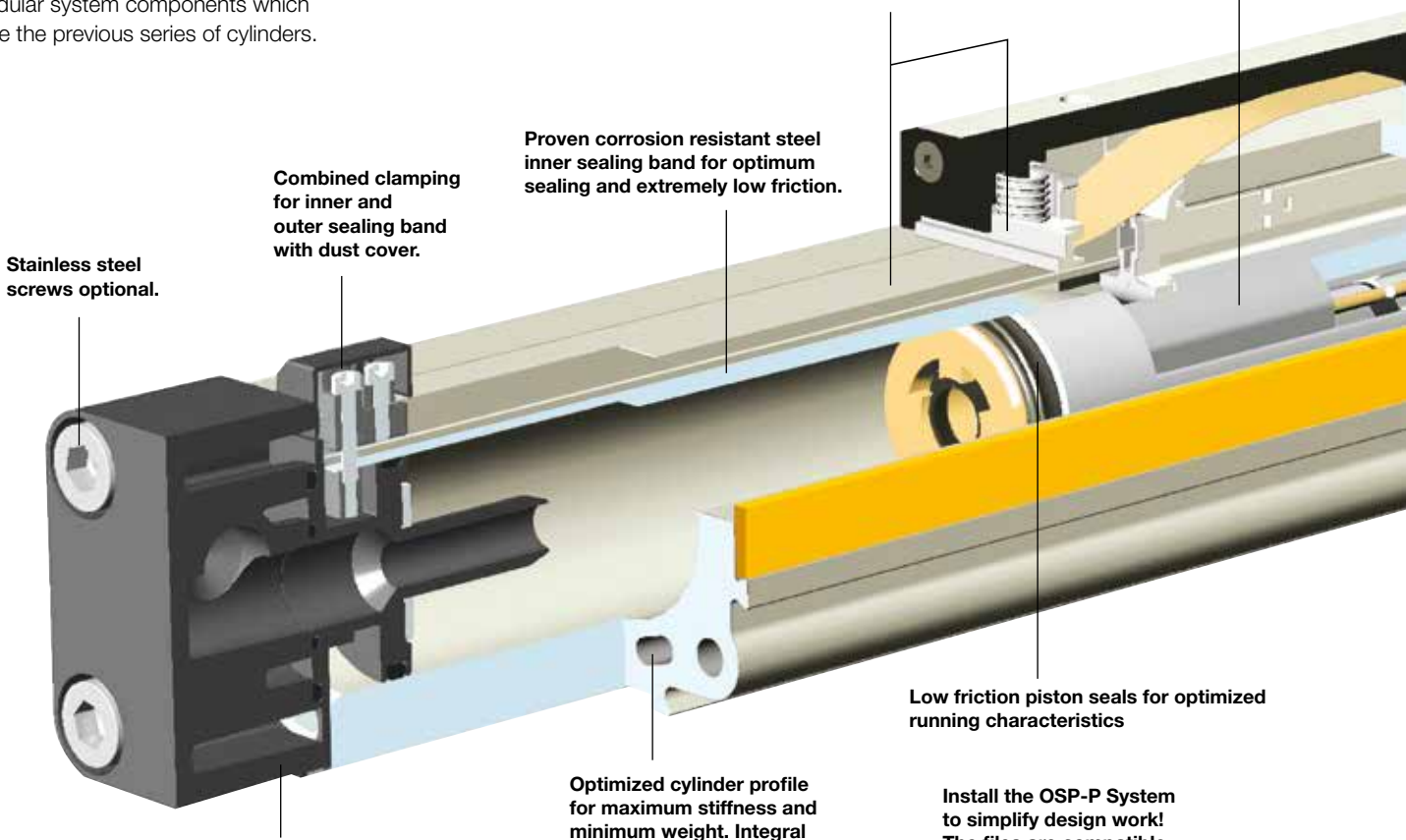
With this second generation linear drive Parker Origa offers design engineers complete flexibility.
The well known ORIGA cylinder has been further developed into a combined linear actuator, guidance and control package. It forms the basis for the new, versatile ORIGA SYSTEM PLUS linear drive system.

All additional functions are designed in-to 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.

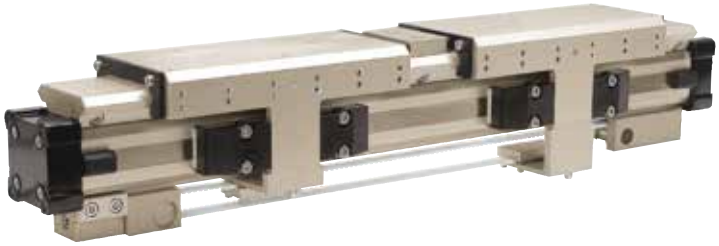
The modular system concept forms an ideal basis for additional customer-specific functions.



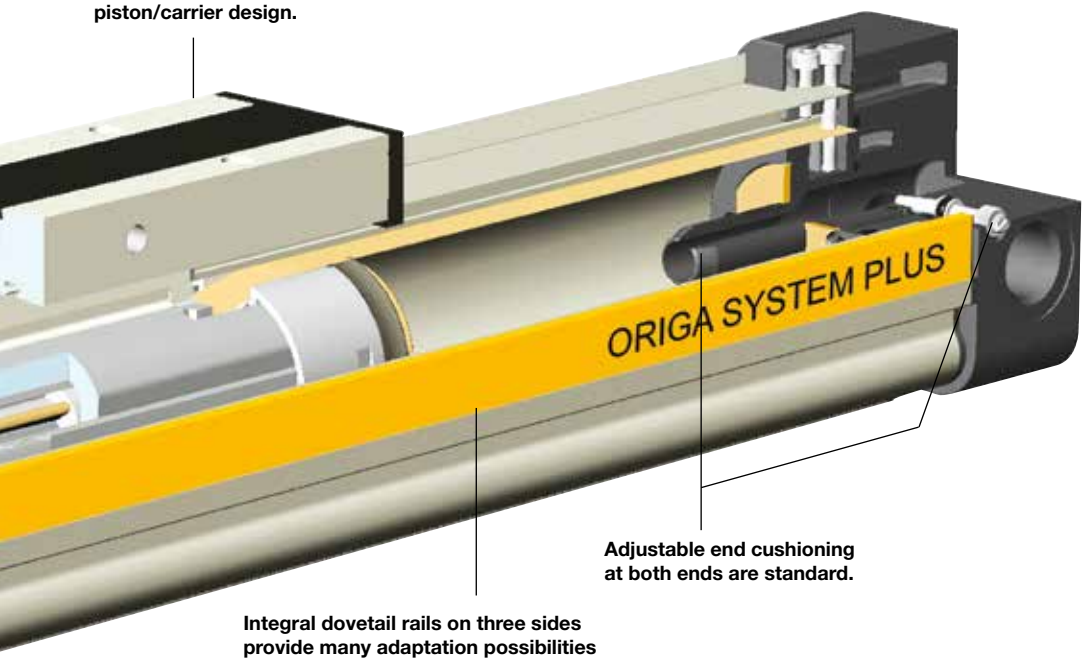
Install the OSP-P System to simplify design work! The files are compatible with all popular CAD systems and package hardware.

Clean Room Version
certified to DIN EN ISO 14644-1

Rodless Cylinder
for synchronized bi-parting movements



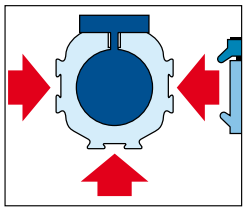
New low profile piston/carrier design.



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.



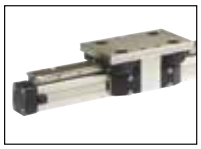
INTEGRATED VOE VALVES
The complete compact solution for optimal cylinder control.

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

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

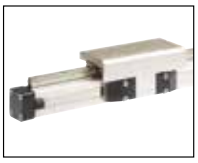
SLIDELINE
Guide system for moderate loads. Optional with Active- / Passive-Brake.

POWERSLIDE
Roller guide for high loads and rough conditions.



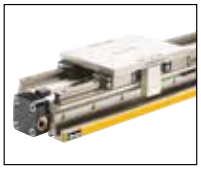
PROLINE
The compact aluminium roller guide for high loads and velocities. Optional with Active- / Passive-Brake.

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

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.

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.

BOTH AIR CONNECTIONS AT ONE END

For simplified tubing connections and space saving.

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.

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

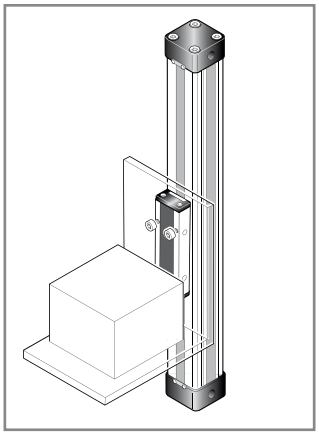
For end-mounting of the cylinder.

INVERSION MOUNTING

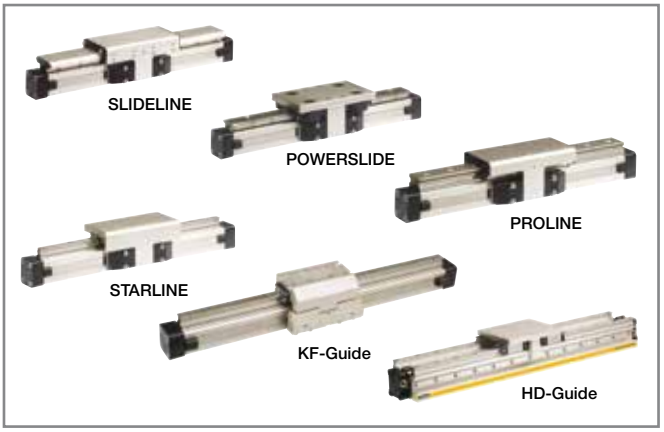
The inversion mounting transfers the driving force to the opposite side, e.g. for dirty environments.

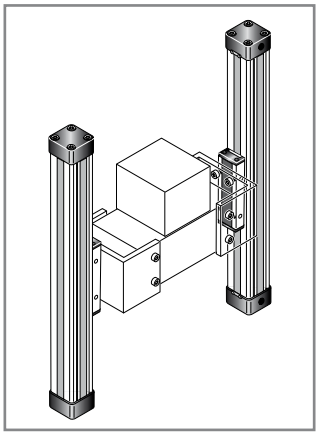
OSP-P Application examples

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.



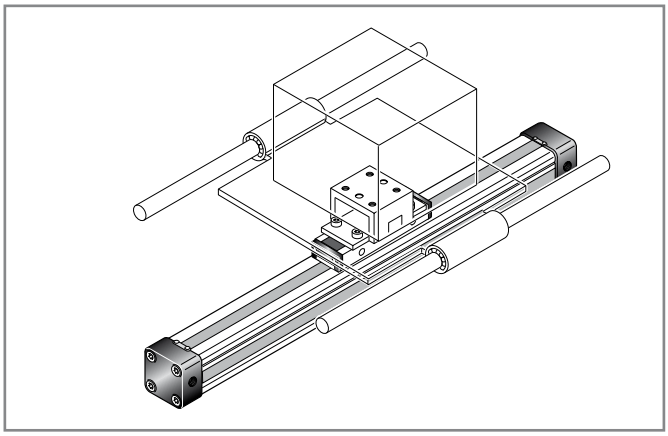


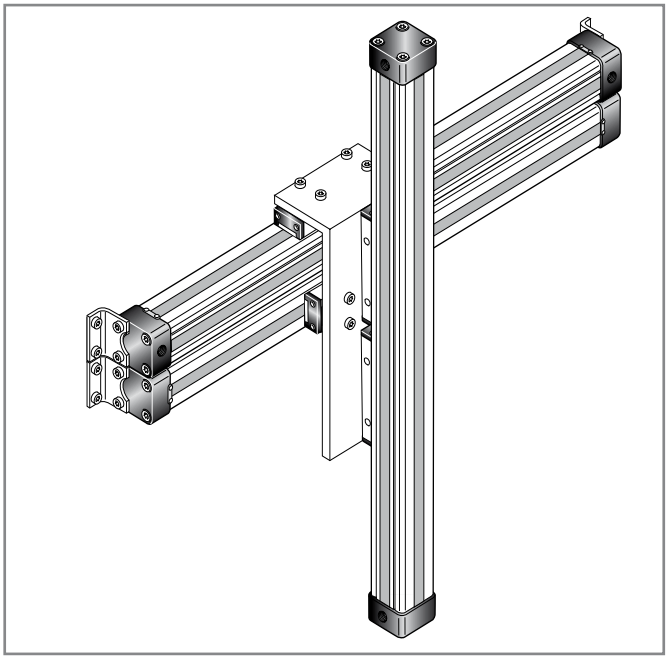
The mechanical design of the OSP-P allows synchronised movement of two cylinders.

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.

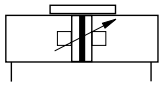




For further information and assembly instructions, please contact your local Parker Origa dealer.

Rodless Pneumatic Cylinder Ø 10-80 mm

OSP ORIGA SYSTEM PLUS



Standard Versions:

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

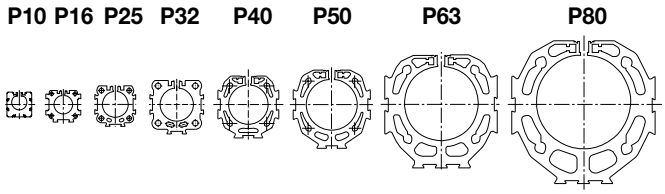
Long-Stroke Cylinders for stroke lenghts up to 41 m
See page 133

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}	-10 °C Other temperature ranges
T_{max}	+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

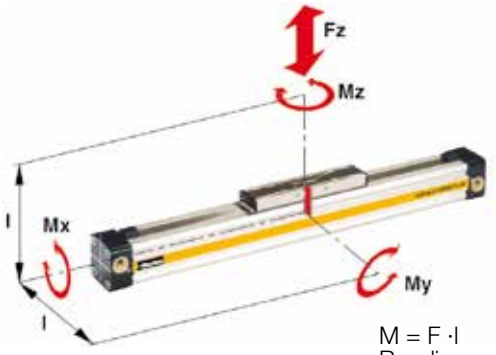
Choice of cylinder is decided by:

- 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 ≤ 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 centre of the linear actuator

Cylinder-Series Ø [mm]	Theoretical Action Force at 6 bar [N]	effektive Action Force F_A at 6 bar [N]	max. Moments Mx [Nm]	My [Nm]	Mz [Nm]	max. Load F [N]	Cushion Length [mm]
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

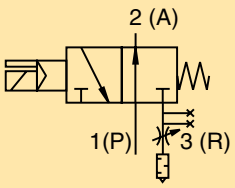
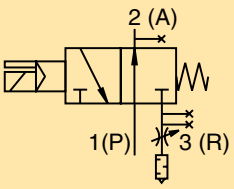
OSP ORIGA SYSTEM PLUS

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

Version / Piston

0	standard
1	Tandem

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]

Lubrication

0	standard
1	slow speed [2] [3]

Screws

0	standard
1	Stainless

Stroke Length

In mm (5 digits)

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

Cushioning

0	standard
1	max. length [3]

Piston Mounting

0	without
1	clevis mounting

Guides/ Brakes/ Inversion

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

add. Guide Carriage

0	without

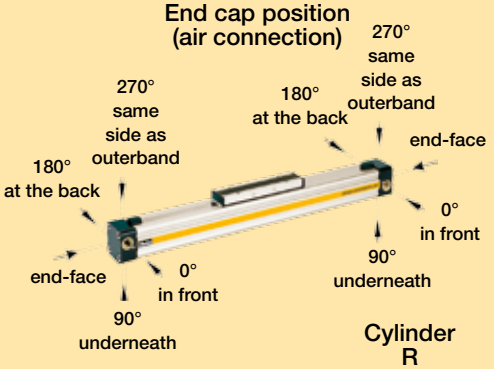
Cover / Cable Channel

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

Measuring system

0	without
X	SFI 0.1 mm
Y	SFI 1 mm

End cap position (air connection)



Cylinder R (right end side)

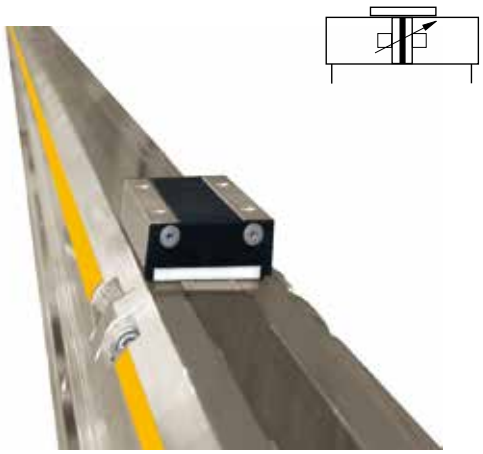
Cylinder L (left end side)

[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

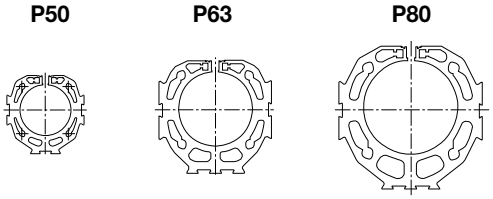


Standard Versions:
- Double-acting with adjustable end cushioning
- With magnetic piston for position sensing

Special Versions:
- Stainless steel screws
- Slow speed lubrication
- Viton® seals

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

Size Comparison



Weight (mass) [kg]

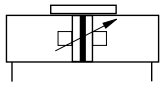
Cylinder series (Basic cylinder)	Weight (Mass) [kg] At 0 mm stroke	per 100 mm stroke
OSP-P50LS	3.53	0.566
OSP-P63LS	6.41	0.925
OSP-P80LS	12.46	1.262

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}	10 °C Other temperature ranges
T_{max}	+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

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

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} 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

Version / Piston
- 4 Clean room

Air Connection
- 7 End cap Clean room

Seals
- 0 Standard (NBR)
- 1 Viton®

Lubrication
- 0 Standard
- 1 Slow speed [1]

Screws
- 1 Stainless

Stroke Length
in mm (5 digits) [2]

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

Cushioning
- 0 Standard

Piston Mounting
- 0 without

Guides/ Brakes/ Inversion
- 0 without

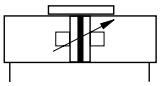
add. Guide Carriage
- 0 without

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

Measuring system
- 0 without

[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.

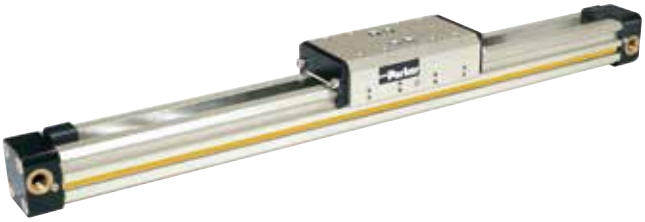
Detail informations for use pneumatic components in Ex-Areas see leaflet PDE2584TCUK „EU Directive 94/9/EG (ATEX 95) for Pneumatic Components“.

Rodless Cylinder Ø 10-80 mm

Basic Cylinder - Series: OSP-P .. ATEX

BASIC GUIDE Ø 25-50 mm

Basic Guide - Series: BG .. ATEX



Plain Bearing Guide Ø 16-80 mm

SLIDELINE - Series: SL .. ATEX

Technical Data (deviant to the Standard Cylinder)

Characteristics	Description
General Features	
Ambient T_{min}	-10 °C
temperature range T_{max}	+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: Ⓔx 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:

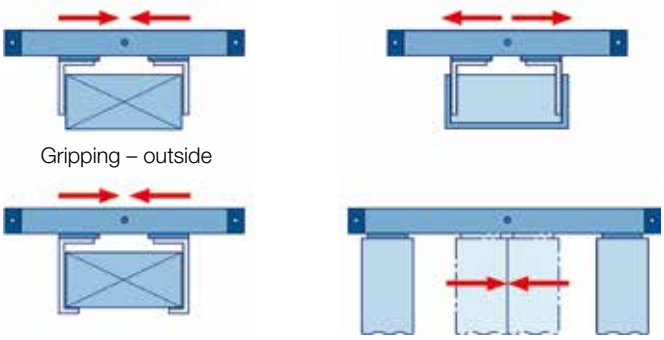
- Opening and closing operations
- Gripping of workpieces – outside
- Gripping of hollow workpieces – inside
- Gripping underneath larger objects
- Clamping force adjustable via pressure regulator

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:



Gripping – outside

Gripping – underneath

Door opening and closing

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 temperture 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

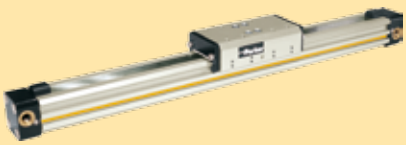
Piston diameters 10 – 80 mm

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

OSP
ORIGA SYSTEM PLUS

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)

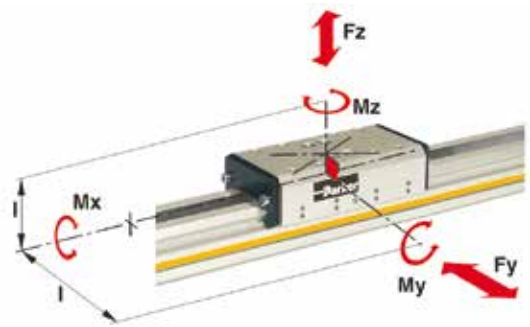
Options:

- Corrosion resistant version available on request
- VOE-Valves

Accessories:

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

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

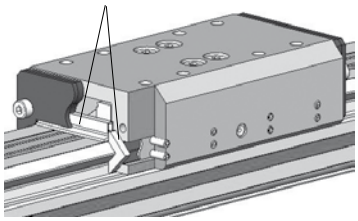
* **Please note:**
In the cushioning diagram, add the mass of the guide carriage to the mass to be cushioned.

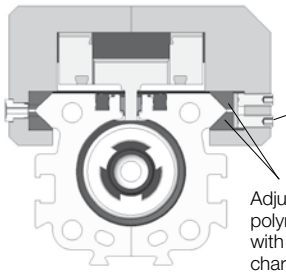
$$\frac{Mx}{Mx_{max}} + \frac{My}{My_{max}} + \frac{Mz}{Mz_{max}} + \frac{Fy}{Fy_{max}} + \frac{Fz}{Fz_{max}} \leq 1$$

The sum of the loads should not exceed >1.

Loads, Forces and Moments

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





Series	Max. Moments [Nm]			Max. Load [Nm]	Mass of Basic Guide [kg]		Mass * of guide carriage [kg]	Cushion Length [mm]
	Mx	My	Mz	Fy, Fz	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

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]

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]

Lubrication

0	standard
1	slow speed [2]

Screws

0	standard
1	stainless

Stroke

Input in mm (5 digits)

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

Cushioning

0	standard

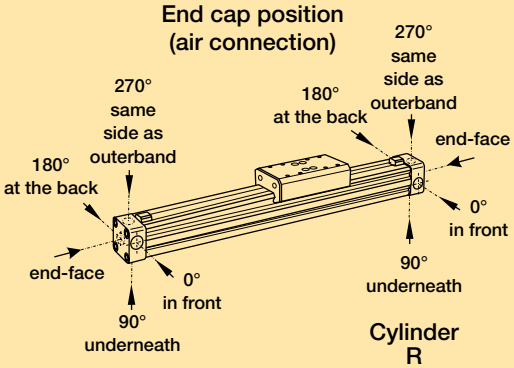
Piston Mounting

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

End cap position (air connection)



[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

OSP
ORIGA
SYSTEM
PLUS

Features:

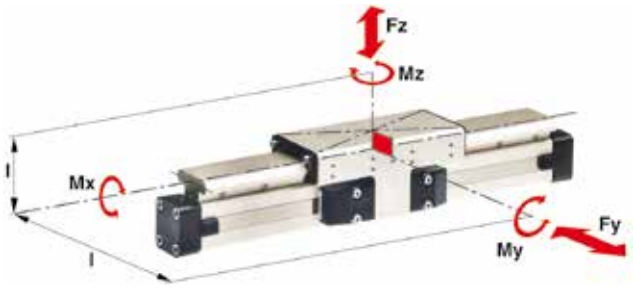
- ATEX-version (without brake) is also available See page 136
- Anodised aluminium guide rail with prism-shaped slideway arrangement
- Adjustable plastic slide elements – optional with integral brake
- Composite sealing system with plastic and felt wiper elements to remove dirt and lubricate the slideways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

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

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.

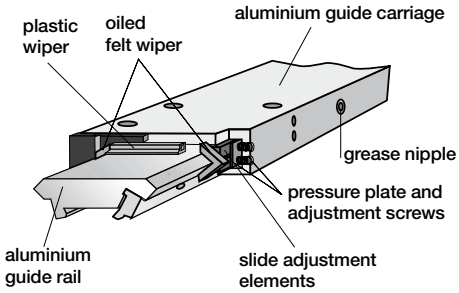
For further technical information see catalogue P-A4P011GB

* **Please note:**
In the cushioning diagram, add the mass of the guide carriage to the mass to be cushioned.

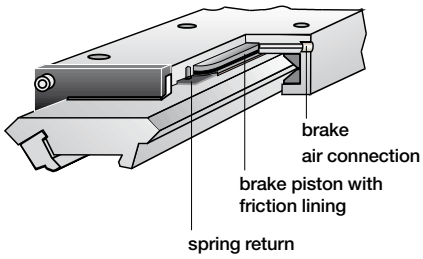
1) Only with integrated brake: Braking force on dry oil-free surface Values are decreased for lubricated slideways

2) Corrosion resistant fixtures available on request

Carriage Without Brake



Option - Integrated Brake



Series	For linear drive	Max. moments [Nm]			Max. loads [N]	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	Fy, Fz		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

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

Version / Piston

0	standard
1	Tandem

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]

Lubrication

0	standard
1	slow speed [2]

Screws

0	standard
1	stainless

Stroke

Input in mm (5 digits)

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

Cushioning

0	standard

Piston Mounting

0	without

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

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

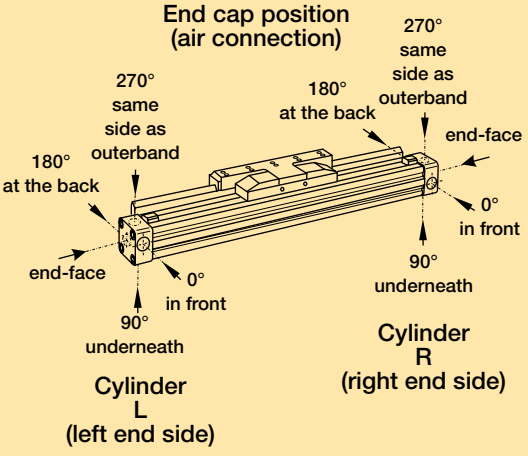
Cover / Cable Channel

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

Measuring system

0	without
X	SFI 0.1 mm
Y	SFI 1 mm

End cap position (air connection)



[1] Viton with VOE not possible.

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

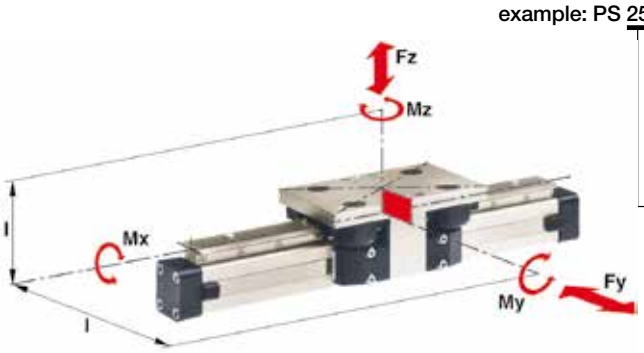
Roller Guide
POWERSLIDE
Series PS 16 to 50 for Linear Drive

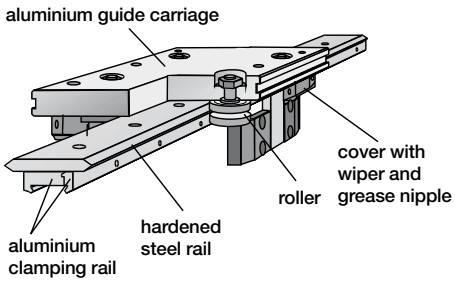
OSP
ORIGA SYSTEM PLUS

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 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 per-missible values for smooth operation, which should not be exceeded even under dynamic conditions.

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.

Series	For linear drive	Max. Moment [Nm]			Max. loads [N]	Mass of linear drive with guide [kg]		Mass * guide carriage [kg]	**Order-No ** POWERSLIDE** Guide without cylinder [1]
		Mx	My	Mz	Fy, Fz	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

Version / Piston

0	standard
1	Tandem

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]

Lubrication

0	standard
1	Slow speed [2][3]

Screws

0	standard
1	stainless

Stroke

Input in mm (5 digits)

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

Cushioning

0	standard
1	max. length [3]

Piston Mounting

0	without

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

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

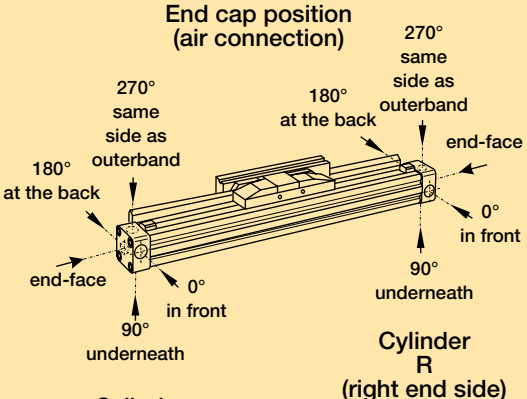
Cover / Cable Channel

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

Measuring system

0	without
X	SFI 0.1 mm
Y	SFI 1 mm

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.

Aluminium Roller Guide PROLINE

Series PL 16 to 50 for Linear Drive

Features:

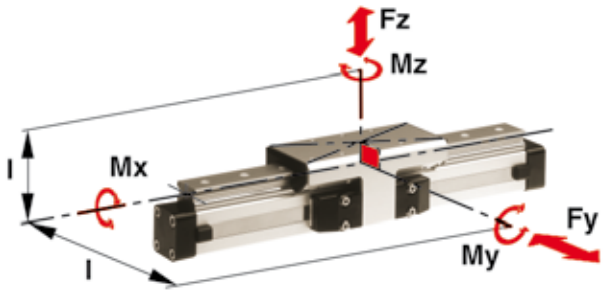
- High precision
- High velocities (10 m/s)
- Smooth operation - low noise
- Integated wiper system
- Long life lubrication
- Compact dimensions - compatible to Slideline plain bearing guide
- Any length of stroke up to 3750 mm

OSP
ORIGA SYSTEM PLUS

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

- Actuated by pressurisation
- Released by depressurisation and spring actuation

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:

$$\frac{Mx}{Mx_{max}} + \frac{My}{My_{max}} + \frac{Mz}{Mz_{max}} + \frac{Fy}{Fy_{max}} + \frac{Fz}{Fz_{max}} \leq 1$$

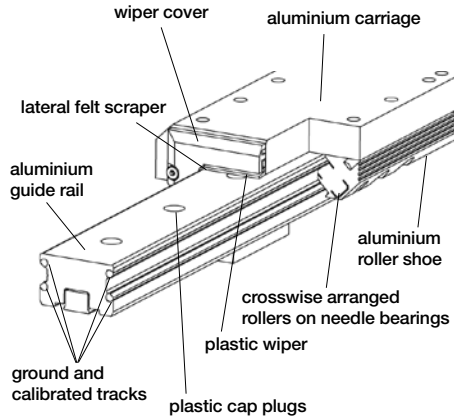
The sum of the loads should not exceed >1. With a load factor of less than 1, service life is 8000 km

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

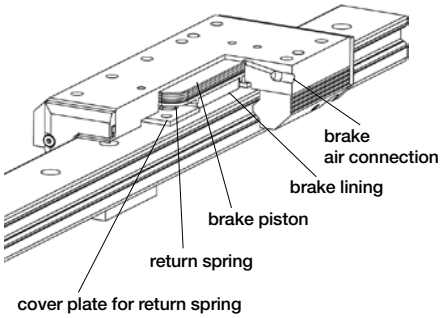
For further technical information see catalogue P-A4P011GB

* **Please note:**
The mass of the carriage has to be added to the total moving mass when using the cushioning diagram

Carriage Without Brake



Option - Integrated Brake



Series	For linear drive	Max. Moment [Nm]			Max. loads [N]	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	Fy, Fz		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

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

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

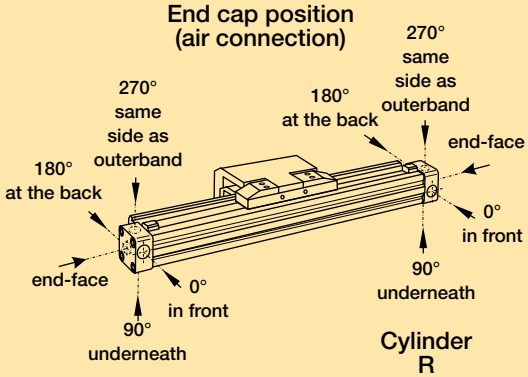
Seals

0	standard (NBR)
1	Viton® [1]

add. Guide Carriage

0	without
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

End cap position (air connection)



Cylinder L (left end side)

Cylinder R (right end side)

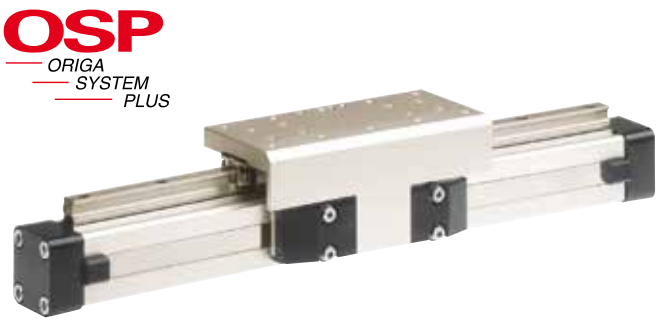
[1] Viton with VOE not possible.

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

[3] „Lubrication slow speed" in combination with „max. cushioning length" not possible.

Recirculating Ball Bearing Guide STARLINE

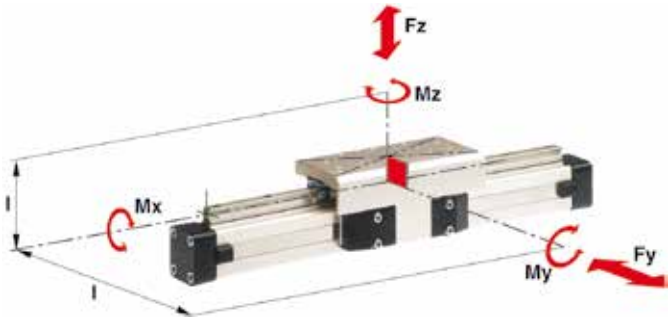
Series STL 16 to 50 for Linear Drive

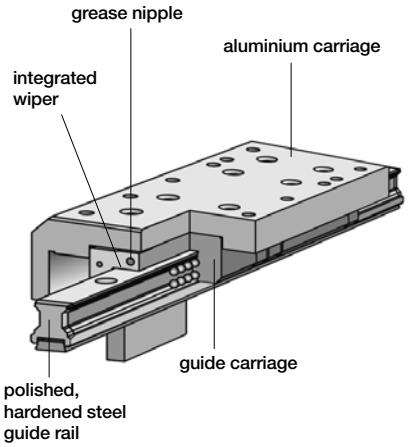


Features:

- 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 m/s
  STL25 to 50: v = 5 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:

$$\frac{Mx}{Mx_{max}} + \frac{My}{My_{max}} + \frac{Mz}{Mz_{max}} + \frac{Fy}{Fy_{max}} + \frac{Fz}{Fz_{max}} \leq 1$$

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

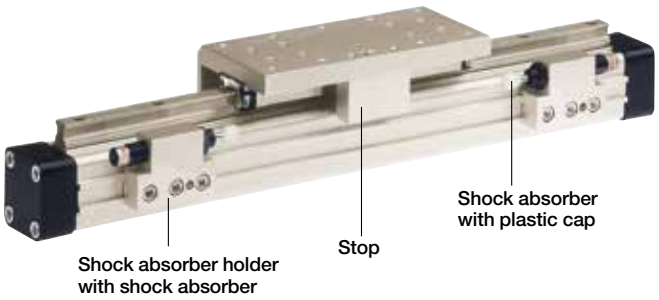
Arrangement with two variable stops

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.

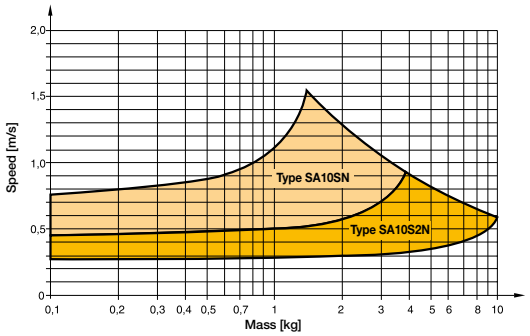


Shock Absorber Selection

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

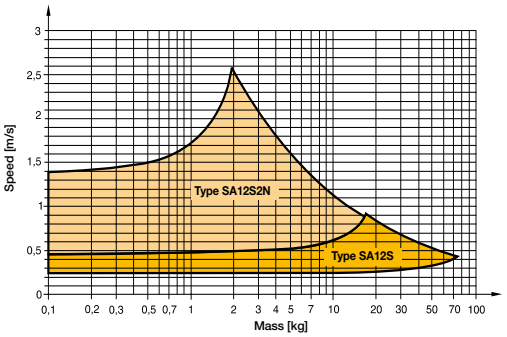
The mass of the carrier itself must be taken into account.

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



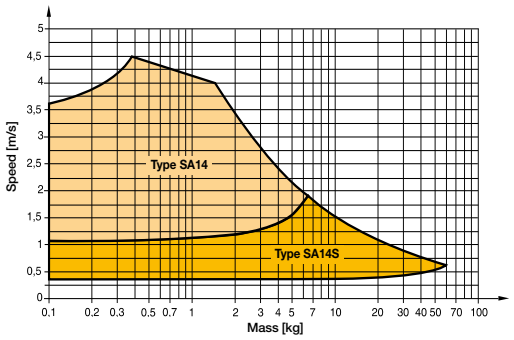
The values relate to an effective driving force of 78 N (6 bar)

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



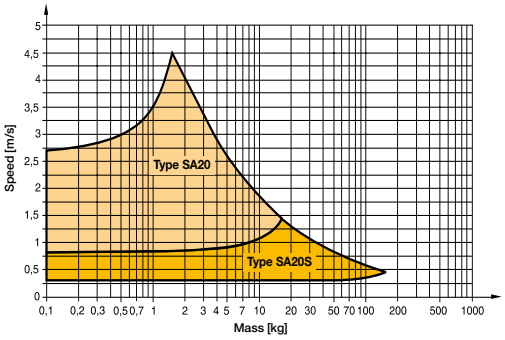
The values relate to an effective driving force of 250 N (6 bar)

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



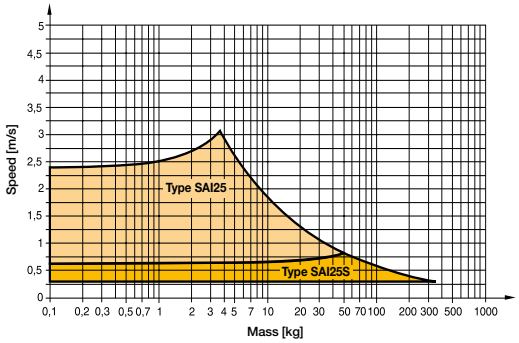
The values relate to an effective driving force of 420 N (6 bar)

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



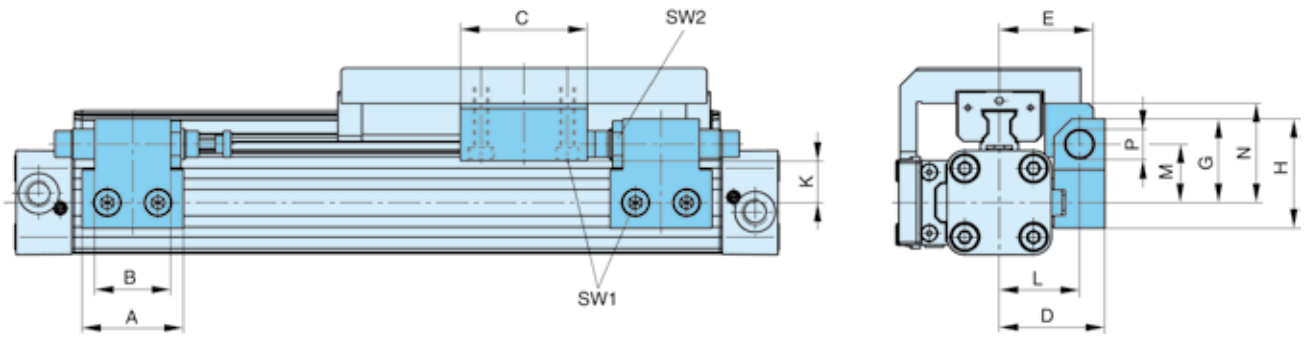
The values relate to an effective driving force of 640 N (6 bar)

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)

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 2
Shock absorber holder complete with fittings – without shock absorber

Item 1
Stop complete with fittings

Item 3
Shock absorber with plastic cap

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

Version / Piston

0	standard
1	Tandem

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]

Lubrication

0	standard
1	Slow speed [2] [3]

Screws

0	standard

Stroke

Input in mm (5 digits)

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

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

Piston Mounting

0	without

Guides/ Brakes/ Inversion

0	without
B	Starline STL

add. Guide Carriage

0	without
B	Guide Carriage Starline STL

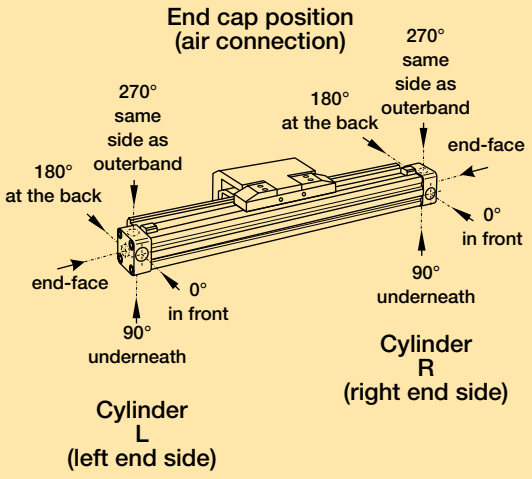
Measuring system

0	without
X	SFI 0.1 mm
Y	SFI 1 mm

Cover / Cable Channel

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

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.

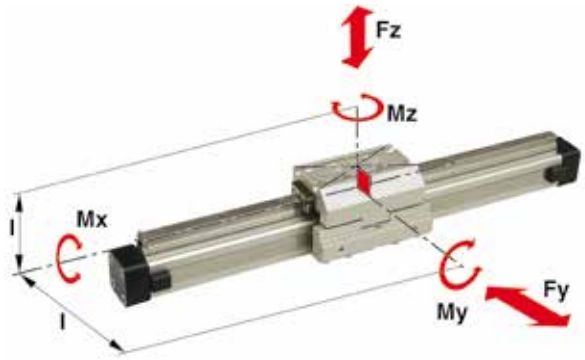
Recirculating Ball Bearing Guide
Series KF 16 to 50 for Linear Drive

OSP
ORIGA SYSTEM PLUS

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
- Maximum speed
  KF16, KF40: v = 3 m/s
  KF25, KF32, KF50: v = 5 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:

$$\frac{Mx}{Mx_{max}} + \frac{My}{My_{max}} + \frac{Mz}{Mz_{max}} + \frac{Fy}{Fy_{max}} + \frac{Fz}{Fz_{max}} \leq 1$$

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

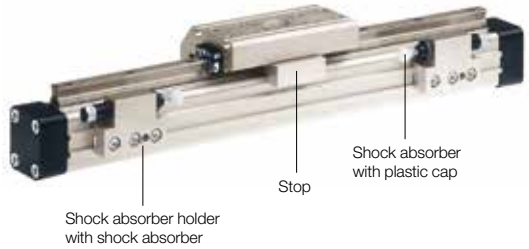
Variable Stop

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

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		Thread size	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

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

Piston-Ø

16
25
32
40
50

Version / Piston

C	Classic
T	Classic Tandem

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]

Lubrication

0	standard
1	Slow speed [2][3]

Screws

0	standard

Stroke

Input in mm (5 digits)

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

Cushioning

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

Piston Mounting

0	without

Guides/ Brakes/ Inversion

0	without
C	KF

add. Guide Carriage

0	without
C	Guide Carriage KF

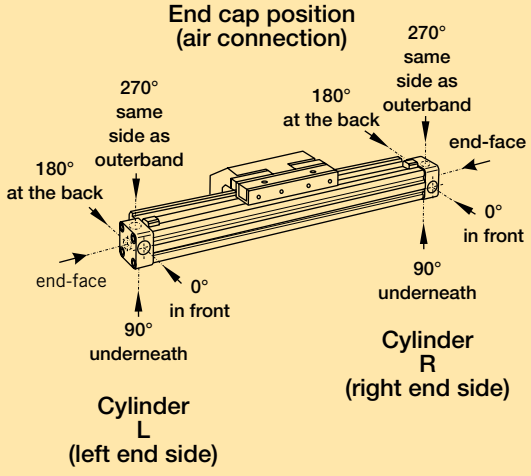
Measuring system

0	without
X	SFI 0.1 mm
Y	SFI 1 mm

Cover / Cable Channel

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

End cap position (air connection)



[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:

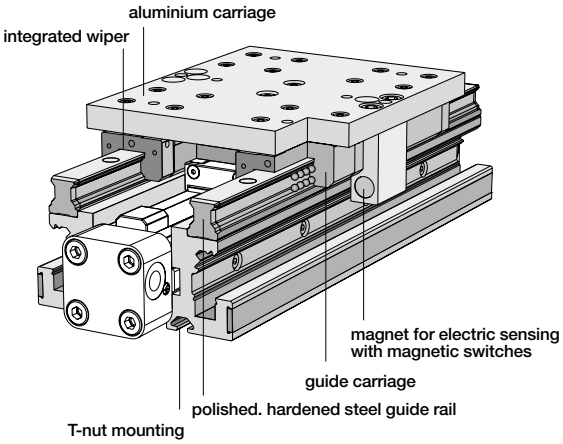
- Guide system: 4-row recirculating ball bearing guide
- Polished and hardened steel guide rail
- For highest loads in all directions
- Highest precision
- Integrated wiper system
- Integrated grease nipples
- Any lengths of stroke up to 3700 mm (longer strokes on request)
- Anodized aluminium guide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

OSP
ORIGA SYSTEM PLUS

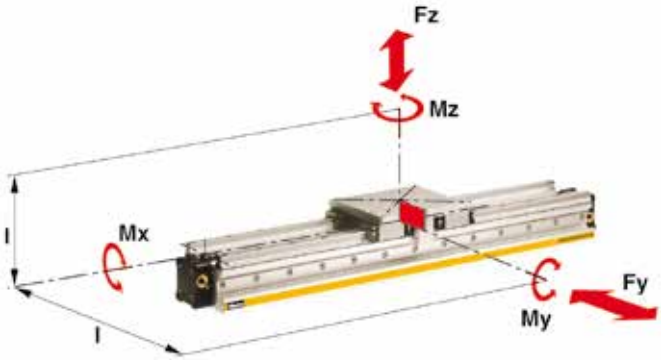
Options:

- With variable stop
- With intermediate stop module

Version with pneumatic linear drive series OSP-P



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:

$$\frac{Mx}{Mx_{max}} + \frac{My}{My_{max}} + \frac{Mz}{Mz_{max}} + \frac{Fy}{Fy_{max}} + \frac{Fz}{Fz_{max}} \leq 1$$

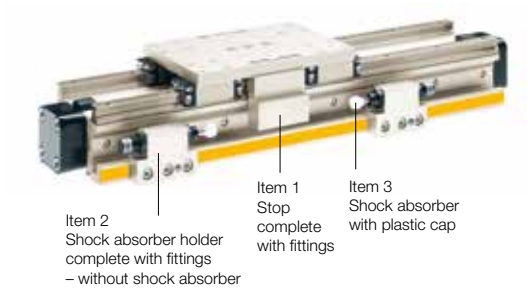
The sum of the loads should not exceed >1.

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

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

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

Note: Order instructions for VS in combination with HD guide see page 154, pos.18

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

Piston-Ø

25
32
40
50

Version / Piston

0	standard
1	Tandem

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

Lubrication

0	standard
1	Slow speed [2)3)]

Seals

0	standard (NBR)
1	Viton® [1)]

Screws

0	standard

Stroke

Input in mm (5 digits)

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

Cushioning

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

Piston Mounting

0	without

Guides/ Brakes/ Inversion

0	without
D	HD

add. Guide Carriage

0	without
D	Guide Carriage HD

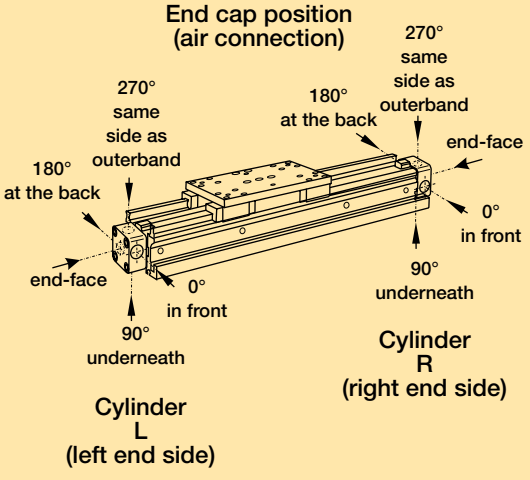
Cover / Cable Channel

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

Measuring system

0	without
X	SFI 0.1 mm
Y	SFI 1 mm

End cap position (air connection)



[1)] Viton with VOE not possible.

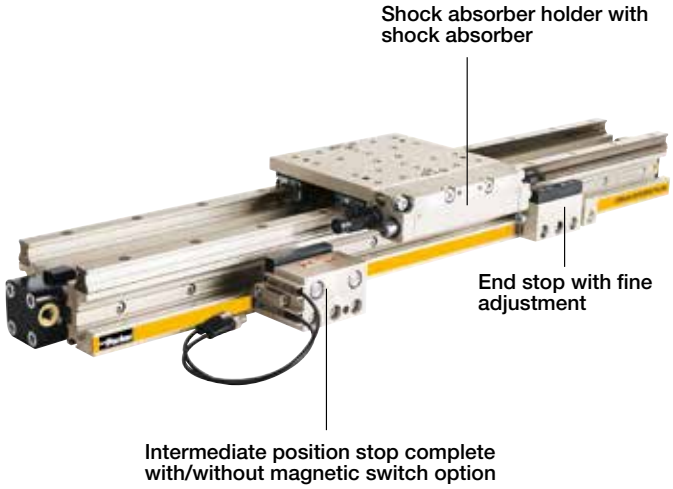
[2)] "Slow speed lubrication" in combination with „Viton®" seals on demand.

[3)] „Lubrication slow speed" in combination with „max. cushioning length" not possible.

Intermediate Stop Module

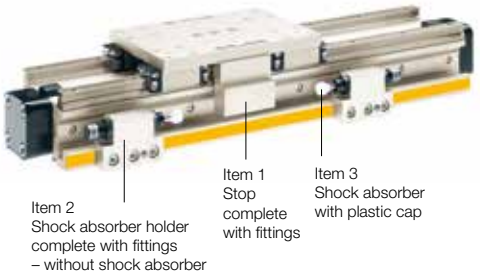
Type ZSM .. HD

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:

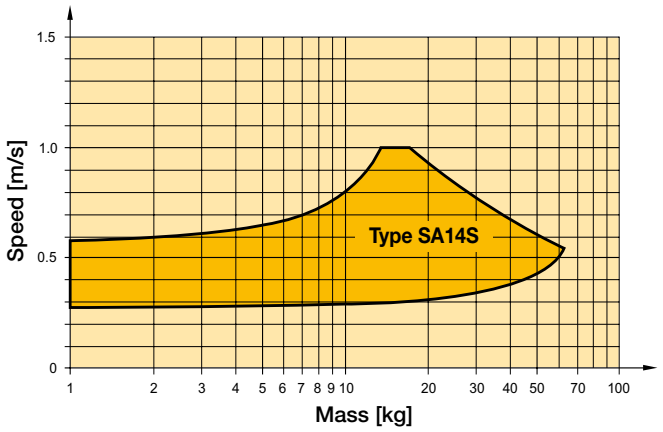
- Allows stopping at any intermediate positions
- Intermediate position stops can be located steplessly anywhere along the whole stroke length
- Movement to the next position without reverse stroke
- Compact unit
- Cost-effective positioning module without electrical or electronic components
- Option: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

OSP
ORIGA
SYSTEM
PLUS

Active Brakes and Passive Brakes

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

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

See page 157

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

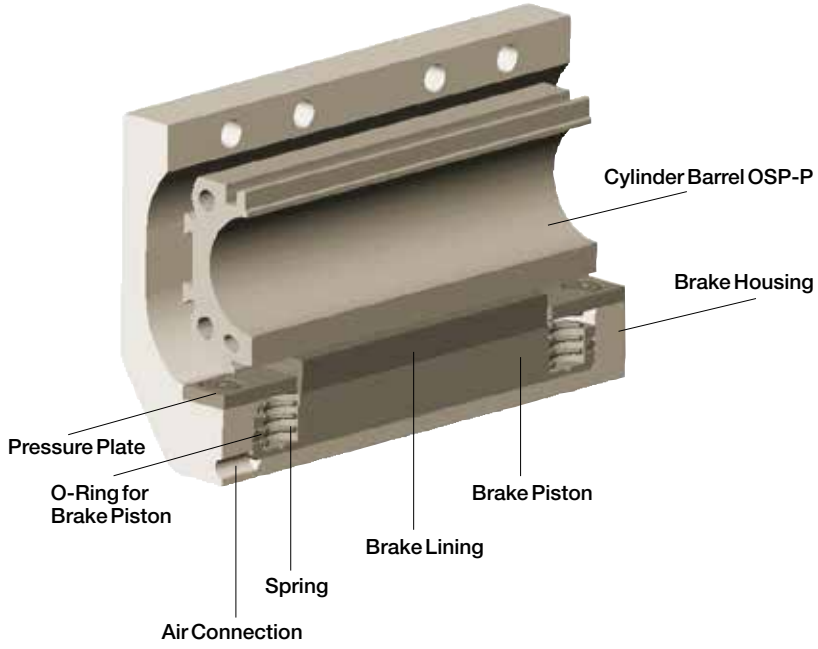
Series AB 25 to 80 for Linear Drive

OSP ORIGA SYSTEM PLUS

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 0 mm stroke	Linear drive with brake increase per 100 mm stroke	Brake *
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

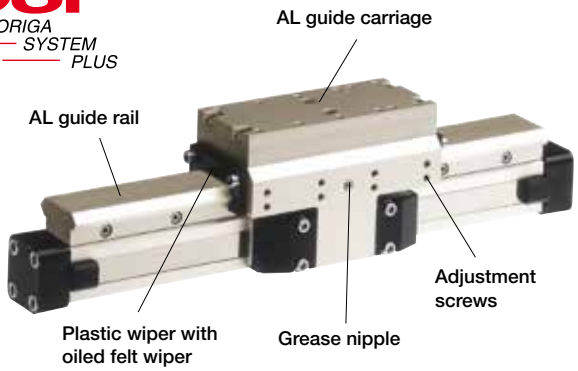
Multi-Brake
Passive Brake

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

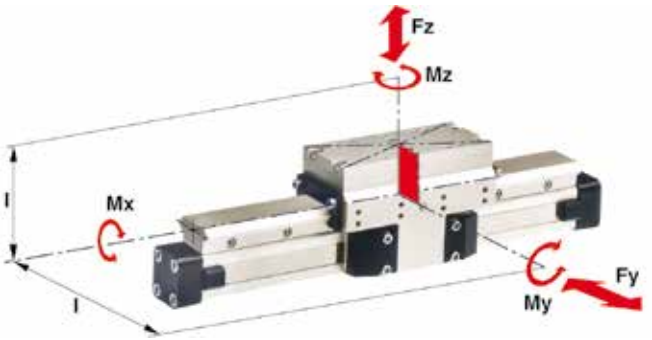
OSP
ORIGA SYSTEM PLUS



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.

Loads, Forces and Moments



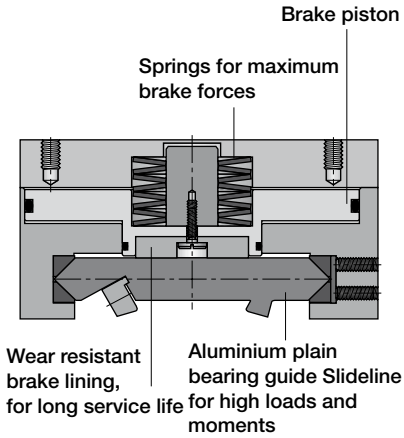
Technical Data

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

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

Series	For linear drive	Max. moments [Nm]			Max. loads [N]	Max. brake force [N] [1]	Mass of linear drive with guide [kg]		Mass [2] guide carriage [kg]	**Order-No.**** MB-SL Guide with passivebrake without cylinder *
		Mx	My	Mz	Fy, Fz		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

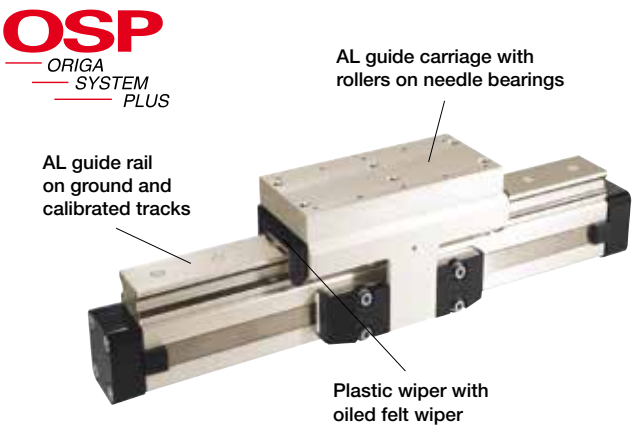
MB-SL in combination with cylinder see page142, pos. 20

Multi-Brake
Passive Brake

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

Features:

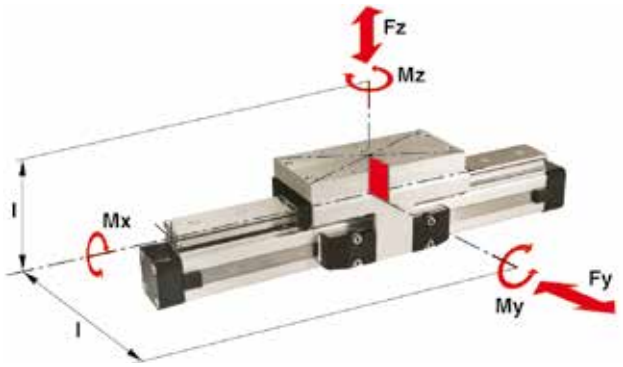
- Brake operated by spring actuation
- Brake release by pressurisation
- Composite sealing system with plastic and felt wiper elements to remove dirt and lubricate the slideway
- Blocking function in case of pressure loss
- Intermediate stops possible



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.

Loads, Forces and Moments



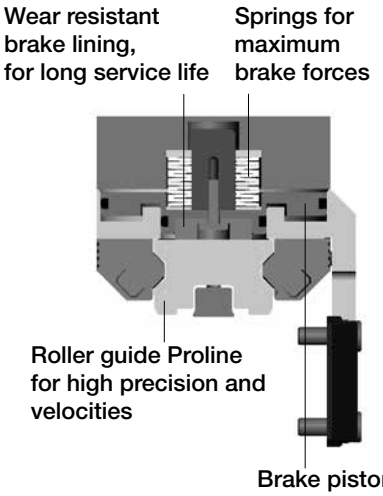
Technical Data

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

$$\frac{Mx}{Mx_{max}} + \frac{My}{My_{max}} + \frac{Mz}{Mz_{max}} + \frac{Ly}{Ly_{max}} + \frac{Lz}{Lz_{max}} \leq 1$$

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

Function



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] Mx	My	Mz	Max. loads [N] Fy, Fz	Max. brake force [N] [1]	Mass of linear drive with guide [kg] with 0 mm stroke	increase per 100 mm stroke	Mass [2] guide carrriage [kg]	**Order-No. **** MB-PL Guide with passivebrake without cylinder *
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 ⟨Ex⟩
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