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.

- Compact: guide rail integrated in the cylinder profile
- Long lifetime and high service intervals
- High loads and moments
- Easy to re-adjust through simple design => easy to maintain
- Integrated scraper system and grease nipples
- High service life ≥ 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-A4P011

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 up to -40°C
- Slow Speed Version \( v = 0.005 \text{ m/s} \) – 0.2 m/s
- High Speed Version \( \text{Vmax.} = 30 \text{ m/s} \)
- Cylinders with extreme long strokes, Stroke length up to 41 m
**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 14664-4**
- Series OSP-P
- Series OSP-E-BB

**Products for ATEX Areas**
- Series OSP-P Rodless Cylinders
- Series OSP-E Belt drive*

**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*

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**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*

**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 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.

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

Stainless steel screws optional.

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

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

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

Low friction piston seals for optimized running characteristics.

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

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

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.

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

**Modular system components**
are simply clamped on.

**Adjustable end cushioning**
at both ends are standard.

**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**
React automatically to pressure failure.

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

**PARKER**
Pneumatic

**Origa OSP-P Rodless Cylinders**
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.

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

Optimal system performance by combining multi-axis cylinder combinations.

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

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.

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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.

VITON® VERSION
For use in an environment with high temperatures or in chemically aggressive areas. All seals are made of Viton®. Sealing bands: Stainless steel.

END-FACE AIR CONNECTION
To solve special installation problems.

ATEX-Version
For use in Ex-Areas

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.

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.
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.
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 152

Special Versions:
• with special pneumatical cushioning system (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

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

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>OSP-P10</td>
<td>47</td>
<td>32</td>
<td>0.2</td>
<td>1</td>
<td>0.3</td>
<td>20</td>
<td>2.5 *</td>
</tr>
<tr>
<td>OSP-P16</td>
<td>120</td>
<td>78</td>
<td>0.45</td>
<td>4</td>
<td>0.5</td>
<td>120</td>
<td>11</td>
</tr>
<tr>
<td>OSP-P25</td>
<td>295</td>
<td>250</td>
<td>1.5</td>
<td>15</td>
<td>3</td>
<td>300</td>
<td>17</td>
</tr>
<tr>
<td>OSP-P32</td>
<td>483</td>
<td>420</td>
<td>3</td>
<td>30</td>
<td>5</td>
<td>450</td>
<td>20</td>
</tr>
<tr>
<td>OSP-P40</td>
<td>754</td>
<td>640</td>
<td>6</td>
<td>60</td>
<td>8</td>
<td>750</td>
<td>27</td>
</tr>
<tr>
<td>OSP-P50</td>
<td>1178</td>
<td>1000</td>
<td>10</td>
<td>115</td>
<td>15</td>
<td>1200</td>
<td>30</td>
</tr>
<tr>
<td>OSP-P63</td>
<td>1870</td>
<td>1550</td>
<td>12</td>
<td>200</td>
<td>24</td>
<td>1650</td>
<td>32</td>
</tr>
<tr>
<td>OSP-P80</td>
<td>3016</td>
<td>2600</td>
<td>24</td>
<td>360</td>
<td>48</td>
<td>2400</td>
<td>39</td>
</tr>
</tbody>
</table>

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

Cushioning Diagram

Work out your expected moving mass and read off the maximum permissible speed at start of cushioning. Alternatively, take your desired speed and expected mass and find the cylinder size required.

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

Weight (mass) kg

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

* 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.
Options - Basic Cylinder

- **Piston Ø**
  - 10
  - 16
  - 25
  - 32
  - 40
  - 50
  - 63
  - 80

- **Stroke Length**
  - In mm
  - (5 digits)

- **Piston Mounting**
  - 0 without clevis mounting

- **Cushioning**
  - 0 standard
  - 1 Stainless

- **Stroke Length**
  - 01100

- **Add. Guide Carriage**
  - 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

- **Seals**
  - 0 standard (NBR)
  - 1 Viton

- **Air Connection**
  - 0 standard
  - 1 end face
  - 2 both at one end
  - 3 left stand. right end face
  - 4 right stand. left end face

- **End cap position**
  - 0 l° = in front
  - 1 r° = underneath
  - 2 l 90° = at the back
  - 3 r 270° = same side as outerband
  - 4 l 180° = at the back; r 0° = in front
  - 5 l 0° = in front; r 180° = at the back
  - 6 l 270° = same side as outerband; r 0° = in front
  - 7 l 0° = in front; r 90° = underneath
  - 8 l 270° = same side as outerband; r 90° = underneath
  - 9 l 180° = at the back; r 0° = in front

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

- **Screws**
  - 0 standard
  - 1 Stainless

- **Cylinder L**
  - (left end side)

- **Cylinder R**
  - (right end side)

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

- **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

<table>
<thead>
<tr>
<th>Cylinder series</th>
<th>Weight (mass) kg At 0 mm stroke</th>
<th>Weight (mass) kg per 100 mm stroke</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSP-P50LS</td>
<td>3.53</td>
<td>0.566</td>
</tr>
<tr>
<td>OSP-P63LS</td>
<td>6.41</td>
<td>0.925</td>
</tr>
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<td>OSP-P80LS</td>
<td>12.46</td>
<td>1.262</td>
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Characteristics

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: $T_{\text{min}}$ 10 °C, $T_{\text{max}}$ +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 $p_{\text{max}}$: 8 bar
- Max. speed $v$: 2 m/s
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 \( v_m = 0.14 \text{ m/s} \)
  ISO Class 5 at \( v_m = 0.5 \text{ m/s} \)
- Suitable for smooth slow speed operation up to \( v_{min} = 0.005 \text{ m/s} \)
- 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

<table>
<thead>
<tr>
<th>Size</th>
<th>P16</th>
<th>P25</th>
<th>P32</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (mass)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>kg</td>
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Weight (mass) kg

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<th>Cylinder series (Basic cylinder)</th>
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<td>0.1</td>
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<td>OSP-P25</td>
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<td>0.197</td>
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<tr>
<td>Mounting</td>
<td>See drawings</td>
</tr>
<tr>
<td>Air Connection</td>
<td>Threaded</td>
</tr>
<tr>
<td>Ambient T\text{_min}</td>
<td>-10 °C Other temperature ranges</td>
</tr>
<tr>
<td>temperature range T\text{_max}</td>
<td>+80 °C on request</td>
</tr>
<tr>
<td>Installation</td>
<td>In any position</td>
</tr>
<tr>
<td>Medium</td>
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</tr>
<tr>
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<td>Permanent grease lubrication (additional oil mist lubrication not required) Option: special slow speed grease</td>
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<td><strong>Material</strong></td>
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<tr>
<td>Cylinder Profile</td>
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</tr>
<tr>
<td>Carrier (piston)</td>
<td>Anodized aluminium</td>
</tr>
<tr>
<td>End caps</td>
<td>Aluminium, lacquered</td>
</tr>
<tr>
<td>Sealing bands</td>
<td>Corrosion resistant steel</td>
</tr>
<tr>
<td>Seals</td>
<td>NBR (Option: Viton®)</td>
</tr>
<tr>
<td>Screws</td>
<td>Stainless steel</td>
</tr>
<tr>
<td>Covers</td>
<td>Anodised aluminium</td>
</tr>
<tr>
<td>Guide plate</td>
<td>Plastic</td>
</tr>
<tr>
<td>Max. operating pressure ( p_{max} )</td>
<td>8 bar</td>
</tr>
</tbody>
</table>
Options - Clean Room Cylinders

<table>
<thead>
<tr>
<th>1-4</th>
<th>5+6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12-16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
<th>21</th>
<th>22</th>
<th>23</th>
<th>24</th>
<th>25</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSPP</td>
<td>25</td>
<td>4</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>01000</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Piston-Ø**
- 16
- 25
- 32

**Version / Piston**
- 4 Clean room

**Air Connection**
- 7 End cap Clean room

**Seals**
- 0 Standard (NBR)
- 1 Viton®

**Stroke Length**
- in mm (5 digits)

**Screws**
- 1 Stainless

**Lubrication**
- 0 Standard
- 1 Slow speed

**Cushioning**
- 0 Standard

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

**Guides / Brakes / Inversion**
- 0 without

**Measuring system**
- 0 without

**Piston Mounting**
- 0 without

**add. Guide Carriage**
- 0 without

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

---

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 P-A5P060 „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

Technical Data (deviant to the Standard Cylinder)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Features</td>
<td></td>
</tr>
<tr>
<td>Ambient temperature range</td>
<td>-10 °C</td>
</tr>
<tr>
<td>Max. switching frequency</td>
<td>1 Hz (double stroke/s) Basic cylinder 0.5 Hz (1 stroke/s) Cylinder with guide</td>
</tr>
<tr>
<td>Operating pressure range</td>
<td>Max. 8 bar</td>
</tr>
<tr>
<td>Max. speed vₘₐₓ</td>
<td>3 m/s Basic cylinder, 2 m/s Cylinder with guide</td>
</tr>
<tr>
<td>Medium</td>
<td>Filtered, unlubricated compressed air – free from water and dirt to ISO 8573-1</td>
</tr>
<tr>
<td></td>
<td>Solids: Class 7 particle size &lt; 40 µm for Gas</td>
</tr>
<tr>
<td></td>
<td>Water content: pressure dew point +3 °C, class 4, but at least 5 °C below minimum operating temperature</td>
</tr>
<tr>
<td>Noise level</td>
<td>70 dB (A)</td>
</tr>
<tr>
<td>Information for materials</td>
<td></td>
</tr>
<tr>
<td>Aluminium</td>
<td>See data sheet &quot;Material&quot;</td>
</tr>
<tr>
<td>Lubrication</td>
<td>See security data sheet &quot;Grease for use in Cylinder with guides&quot;</td>
</tr>
<tr>
<td>Sealing bands</td>
<td>Corrosion resistant steel</td>
</tr>
</tbody>
</table>

Equipment Group II Categorie 2GD

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

<table>
<thead>
<tr>
<th>Series</th>
<th>Size</th>
<th>Stroke range</th>
<th>Accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSP-P</td>
<td>Ø 10 to 80</td>
<td>1– 6000 mm</td>
<td>Mountings</td>
</tr>
<tr>
<td></td>
<td>programme</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SLIDELINE</td>
<td>Ø 16 to 80</td>
<td>1– 5500 mm</td>
<td>Mountings</td>
</tr>
<tr>
<td></td>
<td>programme</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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

### Characteristics

<table>
<thead>
<tr>
<th>General Features</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Rodless cylinder for synchronised bi-parting movements</td>
</tr>
<tr>
<td>Series</td>
<td>OSP-P</td>
</tr>
<tr>
<td>System</td>
<td>Double-acting with end cushioning for contactless position sensing</td>
</tr>
<tr>
<td>Guide</td>
<td>Slideline SL40</td>
</tr>
<tr>
<td>Synchronisation</td>
<td>Toothed belt</td>
</tr>
<tr>
<td>Mounting</td>
<td>See drawings</td>
</tr>
<tr>
<td>Ambient temperature range</td>
<td>-10 °C to +60 °C</td>
</tr>
<tr>
<td>Installation</td>
<td>In any position</td>
</tr>
<tr>
<td>Medium</td>
<td>Filtered, unlubricated compressed air (other media on request)</td>
</tr>
<tr>
<td>Lubrication</td>
<td>Special slow speed grease - additional oil mist lubrication not required</td>
</tr>
<tr>
<td>Operating pressure $p_{\text{max}}$</td>
<td>6 bar</td>
</tr>
<tr>
<td>Cushioning middle position</td>
<td>Elastic buffer</td>
</tr>
<tr>
<td>Max. speed $v_{\text{max}}$</td>
<td>0.2 m/s</td>
</tr>
<tr>
<td>Max. stroke of each stroke</td>
<td>500 mm</td>
</tr>
<tr>
<td>Max. mass per guide carrier</td>
<td>25 kg</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Max. moments on guide carrier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lateral moment $M_x_{\text{max}}$</td>
</tr>
<tr>
<td>Axial moment $M_y_{\text{max}}$</td>
</tr>
<tr>
<td>Rotating moment $M_z_{\text{max}}$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toothed belt</td>
</tr>
<tr>
<td>Belt wheel</td>
</tr>
</tbody>
</table>

For more technical information see catalogue P-A4P011GB
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

**Linear Guides**

**SLIDELINE**
The cost-effective plain bearing guide for medium loads.
Active/Passive Brake optional.
Piston diameters 16 – 80 mm
See page 159 (Standard)
See page 155 (ATEX-Version)

**POWERSLIDE**
The roller guide for heavy loads and hard application conditions
Piston diameters 16 – 50 mm
See page 160

**PROLINE**
The compact aluminium roller guide for high loads and velocities.
Active/Passive Brake optional.
Piston diameters 16 – 50 mm
See page 161

**STARLINE**
Recirculating ball bearing guide for very high loads and precision
Piston diameters 16 – 50 mm
See page 162

**KF GUIDE**
Recirculating ball bearing guide.
Correspond to FESTO dimensions (Type DGPL-KF)
Piston diameters 16 – 50 mm
See page 163

**HD HEAVY DUTY GUIDE**
Recirculating ball bearing guide for highest loads and greatest accuracy.
Piston diameters 25 – 50 mm
See page 164
Plain Bearing Guide

BASIC GUIDE
Series BG 25 to 40 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)

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.

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

\[
\frac{M_x}{M_{x \text{ max}}} + \frac{M_y}{M_{y \text{ max}}} + \frac{M_z}{M_{z \text{ max}}} + \frac{F_y}{F_{y \text{ max}}} + \frac{F_z}{F_{z \text{ max}}} \leq 1
\]

The sum of the loads should not exceed >1.

<table>
<thead>
<tr>
<th>Series</th>
<th>Max. load [Nm]</th>
<th>Mass of Basic guide at stroke</th>
<th>Mass* of guide carriage [kg]</th>
<th>Cushion stone (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BG25</td>
<td>10</td>
<td>590</td>
<td>0.22</td>
<td>0.29</td>
</tr>
<tr>
<td>BG32</td>
<td>17</td>
<td>850</td>
<td>0.38</td>
<td>0.69</td>
</tr>
<tr>
<td>BG40</td>
<td>39</td>
<td>1600</td>
<td>0.41</td>
<td>1.37</td>
</tr>
</tbody>
</table>
Plain Bearing Guide
SLIDELINE
Series SL 16 to 80 for Linear Drive

Features:
- ATEX-version (without brake) is also available
  See page 155
- 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.

* 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

### Integrated Brake (optional)
for series OSP-P25 to OSP-P50:
- Actuated by pressure
- Released by exhausting and spring return

For further technical data see also Linear Drives
OSP-P catalogue P-A4P011GB

### Option - Integrated Brake

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SL16</td>
<td>OSP-P16</td>
<td>6</td>
<td>11</td>
<td>11</td>
<td>325</td>
<td>–</td>
<td>0.57</td>
<td>0.22</td>
</tr>
<tr>
<td>SL25</td>
<td>OSP-P25</td>
<td>14</td>
<td>34</td>
<td>34</td>
<td>675</td>
<td>325</td>
<td>1.55</td>
<td>0.39</td>
</tr>
<tr>
<td>SL32</td>
<td>OSP-P32</td>
<td>29</td>
<td>60</td>
<td>60</td>
<td>925</td>
<td>545</td>
<td>2.98</td>
<td>0.65</td>
</tr>
<tr>
<td>SL40</td>
<td>OSP-P40</td>
<td>50</td>
<td>110</td>
<td>110</td>
<td>1500</td>
<td>835</td>
<td>4.05</td>
<td>0.78</td>
</tr>
<tr>
<td>SL50</td>
<td>OSP-P50</td>
<td>77</td>
<td>180</td>
<td>180</td>
<td>2000</td>
<td>1200</td>
<td>6.72</td>
<td>0.97</td>
</tr>
<tr>
<td>SL63</td>
<td>OSP-P63</td>
<td>120</td>
<td>260</td>
<td>260</td>
<td>2500</td>
<td>–</td>
<td>11.66</td>
<td>1.47</td>
</tr>
<tr>
<td>SL80</td>
<td>OSP-P80</td>
<td>120</td>
<td>260</td>
<td>260</td>
<td>2500</td>
<td>–</td>
<td>15.71</td>
<td>1.81</td>
</tr>
</tbody>
</table>
### 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**

![Image](image.png)

**Technical Data**

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

For further information and technical data see data sheets for linear drives OSP-P see catalogue P-A4P011GB.

<table>
<thead>
<tr>
<th>Series</th>
<th>For linear drive</th>
<th>Max. moments ([\text{Nm}])</th>
<th>Max. load ([\text{N}])</th>
<th>Mass of linear drive with guide ([\text{kg}]) increase per 100 mm stroke</th>
<th>Mass of guide carriage ([\text{kg}])</th>
<th>Order-No. Powerslide Guide without cylinder(^1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS16/25</td>
<td>OSP-P16</td>
<td>Mx 14</td>
<td>My 45</td>
<td>Mz 45</td>
<td>1400</td>
<td>0.93</td>
</tr>
<tr>
<td>PS25/25</td>
<td>OSP-P25</td>
<td>Mx 14</td>
<td>My 63</td>
<td>Mz 63</td>
<td>1400</td>
<td>1.5</td>
</tr>
<tr>
<td>PS25/35</td>
<td>OSP-P25</td>
<td>Mx 20</td>
<td>My 70</td>
<td>Mz 70</td>
<td>1400</td>
<td>1.7</td>
</tr>
<tr>
<td>PS25/44</td>
<td>OSP-P25</td>
<td>Mx 65</td>
<td>My 175</td>
<td>Mz 175</td>
<td>3000</td>
<td>2.6</td>
</tr>
<tr>
<td>PS32/35</td>
<td>OSP-P32</td>
<td>Mx 20</td>
<td>My 70</td>
<td>Mz 70</td>
<td>1400</td>
<td>2.6</td>
</tr>
<tr>
<td>PS32/44</td>
<td>OSP-P32</td>
<td>Mx 65</td>
<td>My 175</td>
<td>Mz 175</td>
<td>3000</td>
<td>3.4</td>
</tr>
<tr>
<td>PS40/44</td>
<td>OSP-P40</td>
<td>Mx 65</td>
<td>My 175</td>
<td>Mz 175</td>
<td>3000</td>
<td>4.6</td>
</tr>
<tr>
<td>PS40/60</td>
<td>OSP-P40</td>
<td>Mx 90</td>
<td>My 250</td>
<td>Mz 250</td>
<td>3000</td>
<td>6.0</td>
</tr>
<tr>
<td>PS50/60</td>
<td>OSP-P50</td>
<td>Mx 90</td>
<td>My 250</td>
<td>Mz 250</td>
<td>3000</td>
<td>7.6</td>
</tr>
<tr>
<td>PS50/76</td>
<td>OSP-P50</td>
<td>Mx 140</td>
<td>My 350</td>
<td>Mz 350</td>
<td>4000</td>
<td>11.5</td>
</tr>
</tbody>
</table>

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

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:

\[
\frac{M_x}{M_{x\text{ max}}} + \frac{M_y}{M_{y\text{ max}}} + \frac{M_z}{M_{z\text{ max}}} + \frac{F_y}{F_{y\text{ max}}} + \frac{F_z}{F_{z\text{ max}}} \leq 1
\]

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.

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

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PL 16</td>
<td>OSP-P16</td>
<td>8</td>
<td>12</td>
<td>12</td>
<td>542</td>
<td>0.55</td>
<td>20855FIL -</td>
</tr>
<tr>
<td>PL 25</td>
<td>OSP-P25</td>
<td>16</td>
<td>39</td>
<td>39</td>
<td>857</td>
<td>1.65</td>
<td>20856FIL 20860FIL</td>
</tr>
<tr>
<td>PL 32</td>
<td>OSP-P32</td>
<td>29</td>
<td>73</td>
<td>73</td>
<td>1171</td>
<td>3.24</td>
<td>20857FIL 20861FIL</td>
</tr>
<tr>
<td>PL 40</td>
<td>OSP-P40</td>
<td>57</td>
<td>158</td>
<td>158</td>
<td>2074</td>
<td>4.35</td>
<td>20858FIL 20862FIL</td>
</tr>
<tr>
<td>PL 50</td>
<td>OSP-P50</td>
<td>111</td>
<td>249</td>
<td>249</td>
<td>3111</td>
<td>7.03</td>
<td>20859FIL 20863FIL</td>
</tr>
</tbody>
</table>

1) Only for version with brake:
Braking surface dry – oiled surface reduces the effective braking force.

Integrated Brake (optional) for series OSP-P25 to OSP-P50:
- Actuated by pressurisation
- Released by depressurisation and spring actuation

Option - Integrated Brake
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:

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

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.

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

<table>
<thead>
<tr>
<th>Series</th>
<th>For linear drive</th>
<th>Max. moments [Nm]</th>
<th>Max. loads [N]</th>
<th>Mass of linear drive with guide [kg] with 0 mm stroke and increase per 100 mm stroke</th>
<th>Mass of guide carriage [kg]</th>
<th>Order No. STARLINE Guide without cylinder</th>
</tr>
</thead>
<tbody>
<tr>
<td>STL16</td>
<td>OSP-P16</td>
<td>15 30 30</td>
<td>1000 1000</td>
<td>0.598 0.210</td>
<td>0.268</td>
<td>21111FIL</td>
</tr>
<tr>
<td>STL25</td>
<td>OSP-P25</td>
<td>50 110 110</td>
<td>3100 3100</td>
<td>1.733 0.369</td>
<td>0.835</td>
<td>21112FIL</td>
</tr>
<tr>
<td>STL32</td>
<td>OSP-P32</td>
<td>62 160 160</td>
<td>3100 3100</td>
<td>2.934 0.526</td>
<td>1.181</td>
<td>21113FIL</td>
</tr>
<tr>
<td>STL40</td>
<td>OSP-P40</td>
<td>150 400 400</td>
<td>4000 7500</td>
<td>4.452 0.701</td>
<td>1.901</td>
<td>21114FIL</td>
</tr>
<tr>
<td>STL50</td>
<td>OSP-P50</td>
<td>210 580 580</td>
<td>4000 7500</td>
<td>7.361 0.936</td>
<td>2.880</td>
<td>21115FIL</td>
</tr>
</tbody>
</table>
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
- Maximum speed
  KF16, KF40: \( v = 3 \text{ m/s} \)
  KF25, KF32, KF50: \( v = 5 \text{ m/s} \)

Loads, Forces and Moments

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.

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

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>KF16</td>
<td>OSP-P16</td>
<td>12 25 25</td>
<td>1000 1000</td>
<td>0.558 0.21</td>
<td>0.228</td>
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<td>21101FIL</td>
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<tr>
<td>KF25</td>
<td>OSP-P25</td>
<td>35 90 90</td>
<td>3100 3100</td>
<td>1.522 0.369</td>
<td>0.607</td>
<td>M5</td>
<td>13508FIL</td>
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<td>KF32</td>
<td>OSP-P32</td>
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<td>3100 3100</td>
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<td>0.896</td>
<td>M5</td>
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<td>KF40</td>
<td>OSP-P40</td>
<td>119 346 346</td>
<td>4000 7100</td>
<td>4.167 0.701</td>
<td>1.531</td>
<td>M6</td>
<td>13509FIL</td>
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<tr>
<td>KF50</td>
<td>OSP-P50</td>
<td>170 480 480</td>
<td>4000 7500</td>
<td>7.328 0.936</td>
<td>2.760</td>
<td>M8</td>
<td>13510FIL</td>
</tr>
</tbody>
</table>
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 $v = 5 \text{ m/s}$

Options:
- With variable stop
- With intermediate stop module

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

$$\frac{M_x}{M_{x\text{max}}} + \frac{M_y}{M_{y\text{max}}} + \frac{M_z}{M_{z\text{max}}} + \frac{F_y}{F_{y\text{max}}} + \frac{F_z}{F_{z\text{max}}} < 1$$

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.

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

<table>
<thead>
<tr>
<th>Series linear</th>
<th>For</th>
<th>Max. moments [Nm]</th>
<th>Max. loads with guide carriage [N]</th>
<th>Mass of the linear drive guide without with 0 mm stroke [kg]</th>
<th>Mass * HD guide increase per 100 mm stroke [kg]</th>
<th>Order No. cylinder</th>
</tr>
</thead>
<tbody>
<tr>
<td>HD25</td>
<td>OSP-P25</td>
<td>260</td>
<td>320</td>
<td>320</td>
<td>6000</td>
<td>6000</td>
</tr>
<tr>
<td>HD32</td>
<td>OSP-P32</td>
<td>285</td>
<td>475</td>
<td>475</td>
<td>6000</td>
<td>6000</td>
</tr>
<tr>
<td>HD40</td>
<td>OSP-P40</td>
<td>800</td>
<td>1100</td>
<td>1100</td>
<td>15000</td>
<td>15000</td>
</tr>
<tr>
<td>HD50</td>
<td>OSP-P50</td>
<td>1100</td>
<td>1400</td>
<td>1400</td>
<td>18000</td>
<td>18000</td>
</tr>
</tbody>
</table>
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)
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 167

Slideline with Active Brake
Plain bearing guide SLIDELINE - SL
with integrated ACTIVE Brake
Piston diameters 25 - 50 mm.
See page 159

Proline with Active Brake
Aluminium roller guide
PROLINE - PL with integrated ACTIVE Brake
Piston diameters 25 - 50 mm.
See page 161

Multibrake with Slideline
MULTI BRAKE – PASSIVE Brake
with plainbearing guide
SLIDELINE - SL
Piston diameter 25 - 80 mm.
See page 168

Multibrake with Proline
MULTI BRAKE – PASSIVE Brake
with aluminium roller guide
PROLINE - PL
Piston diameters 25 - 50 mm.
See page 169
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

<table>
<thead>
<tr>
<th>Series</th>
<th>For linear drive</th>
<th>Max. braking force [N] (1)</th>
<th>Brake pad way [mm]</th>
<th>Linear drive with brake increase per 100mm stroke</th>
<th>Mass [kg]</th>
<th>brake*</th>
</tr>
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<tbody>
<tr>
<td>AB 25</td>
<td>OSP-P25</td>
<td>350</td>
<td>2.5</td>
<td>1.0</td>
<td>0.197</td>
<td>0.35</td>
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<tr>
<td>AB 32</td>
<td>OSP-P32</td>
<td>590</td>
<td>2.5</td>
<td>2.02</td>
<td>0.354</td>
<td>0.58</td>
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<tr>
<td>AB 40</td>
<td>OSP-P40</td>
<td>900</td>
<td>2.5</td>
<td>2.83</td>
<td>0.415</td>
<td>0.88</td>
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<tr>
<td>AB 50</td>
<td>OSP-P50</td>
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<td>2.5</td>
<td>5.03</td>
<td>0.566</td>
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<tr>
<td>AB 63</td>
<td>OSP-P63</td>
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<td>9.45</td>
<td>0.925</td>
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<td>3.0</td>
<td>18.28</td>
<td>1.262</td>
<td>5.82</td>
</tr>
</tbody>
</table>

(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 data, please refer to the data sheets for linear drives OSP-P see catalogue P-A4P011GB.

Note:
For combinations Active Brake AB + SFI-plus + Magnetic Switch contact our technical department please.
Multi-Brake
Passive Brake
with plain bearing guide Sildeline 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, please refer to the data sheets for linear drives OSP-P see catalogue P-A4P011GB.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>MB-SL 25</td>
<td>OSP-P25</td>
<td>14</td>
<td>34</td>
<td>34</td>
<td>675</td>
<td>470</td>
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<td>MB-SL 32</td>
<td>OSP-P32</td>
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<td>60</td>
<td>60</td>
<td>925</td>
<td>790</td>
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<td>OSP-P40</td>
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<td>110</td>
<td>110</td>
<td>1500</td>
<td>1200</td>
<td>5.16</td>
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<td>MB-SL 50</td>
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<td>77</td>
<td>180</td>
<td>180</td>
<td>2000</td>
<td>1870</td>
<td>8.29</td>
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<tr>
<td>MB-SL 63</td>
<td>OSP-P63</td>
<td>120</td>
<td>260</td>
<td>260</td>
<td>2500</td>
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<td>13.31</td>
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<td>OSP-P80</td>
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<td>260</td>
<td>2500</td>
<td>2900</td>
<td>17.36</td>
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</table>

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

** Braking surface dry – oil on the braking surface will reduce the braking force.
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:

\[
\frac{M_x}{M_{x_{\text{max}}}} + \frac{M_y}{M_{y_{\text{max}}}} + \frac{M_z}{M_{z_{\text{max}}}} + \frac{L_y}{L_{y_{\text{max}}}} + \frac{L_z}{L_{z_{\text{max}}}} \leq 1
\]

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

Function:
The 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.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>MB-PL25</td>
<td>OSP-P25</td>
<td>16 39 39</td>
<td>857 315</td>
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<td>MB-PL32</td>
<td>OSP-P32</td>
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<td>MB-PL50</td>
<td>OSP-P50</td>
<td>111 249 249</td>
<td>3111 1100</td>
<td>8.60</td>
<td>0.95</td>
<td>4.07</td>
<td>20867FIL</td>
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</tbody>
</table>

* Braking surface dry – oil on the braking surface will reduce the braking force.

Operating Pressure 4.5 - 8 bar. A pressure of min. 4.5 bar release the brake.
## Linear Drive Accessories
(Mountings and Magnetic Switches)
Series OSP-P

### Description

<table>
<thead>
<tr>
<th>Overview</th>
<th></th>
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<tbody>
<tr>
<td>Clevis Mounting</td>
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<tr>
<td>End Cap Mountings</td>
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<tr>
<td>End Cap Mountings (for Linear Drives with guides)</td>
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<tr>
<td>Mid-Section Support</td>
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<tr>
<td>Mid-Section Support (for Linear Drives with guides)</td>
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<tr>
<td>Inversion Mounting</td>
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<tr>
<td>Adaptor Profile</td>
<td>See Catalogue P-A4P011GB</td>
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<td>T-Slot Profile</td>
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<tr>
<td>Connection Profile</td>
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<tr>
<td>Duplex Connection</td>
<td></td>
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<tr>
<td>Multiplex Connection</td>
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<tr>
<td>Magnetic Switch, standard version</td>
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<tr>
<td>Magnetic Switch for T-Nut mounting</td>
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<tr>
<td>Magnetic Switch ATEX-version</td>
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<tr>
<td>Cable Cover</td>
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</table>
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 7 m/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 downstream
  (e.g. PLC, PC, digital counter)