

Contents Linear Drives



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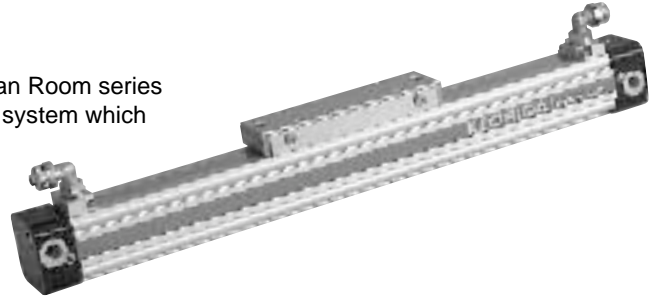
Custom Solutions with



ORIGA SYSTEM PLUS is a basis for providing custom solutions for particular applications and end user requirements.

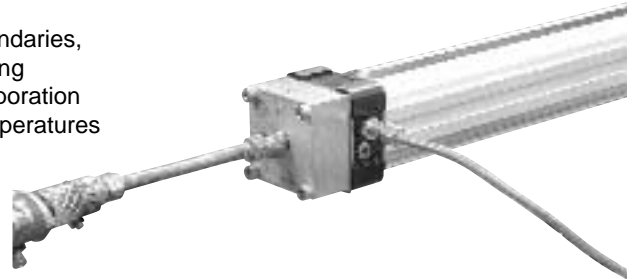
Clean Room Pneumatic Cylinders

Especially adapted for use in clean room environments, the Clean Room series incorporates wear resistant components and an in-built vacuum system which practically eliminates particle emissions from the actuator.



Thermal

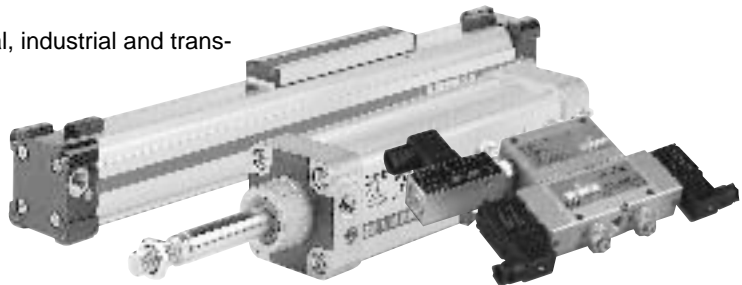
Designed for extreme temperature applications (glass and steel foundries, bakeries, etc) Generally, rodless cylinders have a maximum operating temperature of approximately 150 degrees F. Hoerbiger-Origa Corporation has designed a rodless pneumatic cylinder capable of reaching temperatures up to 500 degrees F.



Door Drive Systems

Pneumatic and electric door drive systems for commercial, industrial and transportation applications. Features may include:

- Extended end of stroke cushioning
- Obstruction detection and auto-reverse capability
- Specialist control requirements
- Electronic interface











Bi-Parting Actuators

Unique Electric Belt Drive systems providing bi-parting actuation from a single axis.

For applications in transportation systems, materials handling, machine guards and automatic door operation.



ONE CONCEPT – THREE DRIVE OPTIONS

<p>Basic Linear Drive – Standard Version</p> <ul style="list-style-type: none"> ● Series OSP-P 	<p>Page 13</p>	
<p>Air Connection on the End-face</p> <ul style="list-style-type: none"> ● Series OSP-P 	<p>Page 16</p>	
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<p>Mid-Section Support</p> <ul style="list-style-type: none"> ● Series OSP-P 	<p>Page 55</p>	
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<p>Linear Guides – PROLINE</p> <ul style="list-style-type: none"> ● Series OSP-P ● Series OSP-E Belt * ● Series OSP-E Screw * 	<p>Page 35</p>	
<p>Brakes</p> <ul style="list-style-type: none"> ● Active-Brakes ● Passive-Brakes 	<p>Page 37</p>	
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Modular Components - Overview

Linear Drives	OSP-P10 ^{(1) (4)}	OSP-P16 ⁽¹⁾	OSP-P25 ⁽¹⁾	OSP-P32 ⁽¹⁾	OSP-P40 ⁽¹⁾
Theoretical force / Effective force at 6bar [N]	47 / 32	120 / 78	295 / 250	483 / 420	754 / 640
Velocity v [m/s]	> 0,005	> 0,005	> 0,005	> 0,005	> 0,005
Magnetic piston (three sides)	X	□	□	□	□
Lubrication - Prelubricated	□	□	□	□	□
Multiple air ports (4 x 90°)	X	□	□	□	□
Both Air Connections at End-face	X	○	○	○	○
Air Connection on the End-face	X	○	○	○	○
Cushioning	□	□	□	□	□
Cushion length [mm]	2,50	11	17	20	27
Stroke length [mm]	1 - 6000	1 - 6000	1 - 6000	1 - 6000	1 - 6000
Pressure range [bar]	0,0 - 8,0	0,0 - 8,0	0,0 - 8,0	0,0 - 8,0	0,0 - 8,0
Temperature range [°C] *	-10 – + 80 °	-10 – + 80	-10 – + 80	-10 – + 80	-10 – + 80
Viton / chemical resistance	○	○	○	○	○
Stainless steel parts	○	○	○	○	○
Clevis mounting	○	○	○	○	○
Slow speed lubrication	○	○	○	○	○
Duplex Connection / Multiplex Connection	X	on request	○	○	○
Tandem piston	○	○	○	○	○
Self Guidance					
L [N]	20	120	300	450	750
M [Nm]	1	4	15	30	60
Ms [Nm]	0,2	0,45	1,5	3	6
Mv [Nm]	0,3	0,5	3	5	8
Slideline					
L [N]	X	325	675	925	1500
M [Nm]	X	11	34	60	110
Ms [Nm]	X	6	14	29	50
Mv [Nm]	X	11	34	60	110
Proline					
L [N]	X	X	1210	1460	2600
M [Nm]	X	X	55	91	198
Ms [Nm]	X	X	23	36	72
Mv [Nm]	X	X	55	91	198
Powerslide					
L [N]	X	1400	1400 - 3000	1400 - 3000	3000
M [Nm]	X	45	63 - 175	70 - 175	175 - 250
Ms [Nm]	X	14	14 - 65	20 - 65	65 - 90
Mv [Nm]	X	45	63 - 175	70 - 175	175 - 250
Guideline					
L [N]	X	X	1650 - 2500	1650 - 2500	4400 - 8000
M [Nm]	X	X	115	145	440
Ms [Nm]	X	X	75	90	330
Mv [Nm]	X	X	90	115	310
Guideline with shock absorber for cushioning	X	X	○	○	○
Active-Brake					
Braking force at 6 bar (Brake surface dry) [N]	X	X	350	590	900
Slideline SL / Proline PL with Brakes					
Active-Brake			SL/PL	SL/PL	SL/PL
Braking force at 6 bar (Brake surface dry) [N]	X	X	325/on request	545/on request	835/on request
Passive-Brake Multibrake			SL/PL	SL/PL	SL/PL
Brake force (no pressure, Brake surface dry) [N]	X	X	470/315	790/490	1200/715
Accessories					
Proximity Sensors					
RS (closer, opener) ; ES (PNP, NPN)	○	○	○	○	○
Displacement measuring systems					
SFI - incremental	X	X	○	○	○
SFA - absolute	X	X	○	○	X
Integrated valves 3/2 WV NO VOE	X	X	○	○	○
Motor package (stepper/servo)	X	X	X	X	X
Mountings					
End Cap Mounting / Mid-Section support	○	○	○	○	○
Inversion mounting	X	○	○	○	○
Shock absorber for intermediate position	X	X	on request	on request	on request
Adaptor Profile / T-Nut Profile	X	○	○	○	○
Special cylinders					
Cleanroom - class 10	X	on request	on request	on request	X
High-speed up to 30 m/s	X	on request	on request	on request	X

□ = Standard version
 ○ = Option
 X = not applicable
 * = other Temperature ranges on request

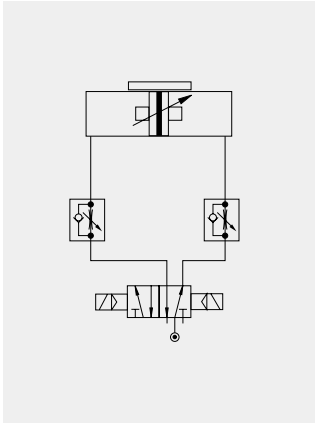
⁽¹⁾ = Rodless Pneumatic Cylinder ⁽²⁾ = Linear Actuator with ball screw
⁽²⁾ = Linear Actuator with toothed belt
⁽³⁾ = Linear Actuator with ball screw
⁽⁴⁾ = Rodless Pneumatic Cylinder according to Series P 210 other Temperature ranges on request

Modular Components - Overview

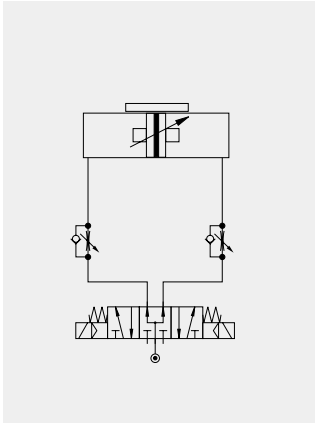
OSP-P50 ⁽¹⁾	OSP-P63 ⁽¹⁾	OSP-P80 ⁽¹⁾	OSP-E25-B ⁽²⁾	OSP-E32-B ⁽²⁾	OSP-E50-B ⁽²⁾	OSP-E25-S ⁽³⁾	OSP-E32-S ⁽³⁾	OSP-E50-S ⁽³⁾
1178 / 1000	1870 / 1550	3010 / 2600	50	100 - 150	300 - 425	250	600	1500
> 0,005	> 0,005	> 0,005	0,05 - 3,0	0,05 - 5,0	0,05 - 5,0	0,01 - 0,25	0,01 - 0,5	0,01 - 1,25
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X	X	X	X	X	X
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	X	X	X	X	X	X
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	X	X	X	X	X	X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X	X	X	X	X	X
30	32	39	X	X	X	X	X	X
1 - 6000	1 - 6000	1 - 6000	100 - 3000	100 - 5000	100 - 5000	100 - 1300	100 - 3200	100 - 3200
0,0 - 8,0	0,0 - 8,0	0,0 - 8,0	X	X	X	X	X	X
-10 - + 80	-10 - + 80	-10 - + 80	- 30 - + 80	- 30 - + 80	- 30 - + 80	- 20 - + 80	- 20 - + 80	- 20 - + 80
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	X	X	X	X	X	X
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	X	X	X	X	X	X
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	X	X	X	X	X	X
<input type="radio"/>	on request	on request	X	X	X	X	X	X
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1200	1650	2400	160	300	850	500	1200	3000
115	200	360	12	25	80	12	25	80
10	12	24	2	8	16	2	8	16
15	24	48	8	16	32	8	16	3
2000	2500	on request	X	X	X	675	925	2000
180	260	on request	X	X	X	34	60	180
77	120	on request	X	X	X	14	29	77
180	260	on request	X	X	X	34	60	180
3890	X	X	1210	1460	3890	1210	1460	3890
313	X	X	55	91	313	55	91	313
139	X	X	23	36	139	23	36	139
313	X	X	55	91	313	55	91	313
3000 - 4000	X	X	1400 - 3000	1400 - 3000	3000 - 4000	1400 - 3000	1400 - 3000	3000 - 4000
250 - 350	X	X	63 - 175	70 - 175	250 - 350	63 - 175	70 - 175	250 - 350
90 - 140	X	X	14 - 65	20 - 65	90 - 140	14 - 65	20 - 65	90 - 140
250 - 350	X	X	63 - 175	70 - 175	250 - 350	63 - 175	70 - 175	250 - 350
4400 - 8000	X	X	1650 - 2500	1650 - 2500	4400 - 8000	1650 - 2500	1650 - 2500	4400 - 8000
500	X	X	115	145	500	115	145	500
375	X	X	75	90	375	75	90	375
355	X	X	90	115	355	90	115	355
<input type="radio"/>	X	X	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1400	2170	4000	X	X	X	X	X	X
SL/PL 1200/on request	X	X	X	X	X	X	X	X
SL/PL 1870/1100	SL 2900	SL 2900	X	X	X	X	X	X
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X
<input type="radio"/>	on request	on request	X	X	X	X	X	X
X	X	X	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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on request	X	X	X	X	X	X	X	X
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X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X

Examples

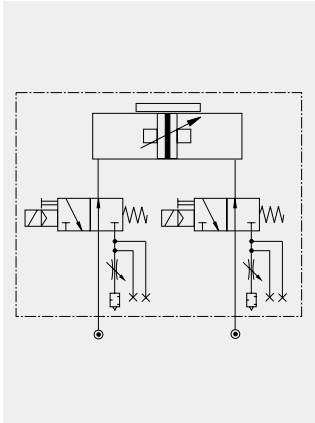
CONTROL EXAMPLES FOR OSP-P



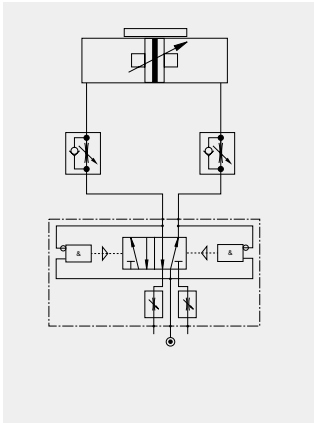
Control for an end-of-stroke application A 5/2-way valve controls the cylinder. The speed can be controlled separately for both directions.



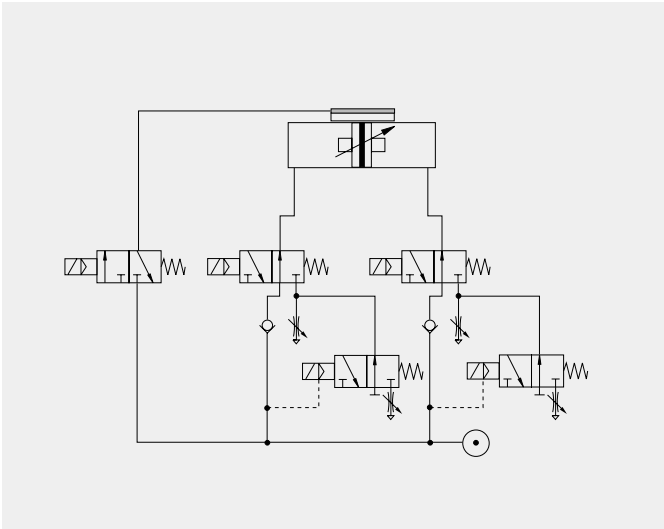
If a 5/3-way valve (with pressurized middle position) is used to control the cylinder, it is possible to stop at intermediate positions.



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

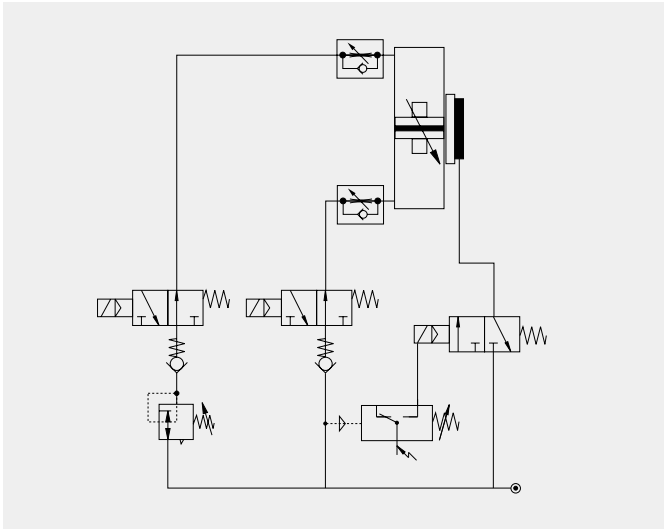


HOERBIGER-ORIGA's pneumatic oscillating valve allows automatic reciprocating motion, with full control of the oscillating motion's speed in both directions. This solution does not require any sensors or other pneumatic accessories.



Fast/Slow speed cycle control with pneumatic brake for accurate positioning at high velocities. Additional 3/2-way valves with adjustable throttle valves at the exhaust of the standard directional control valves for two

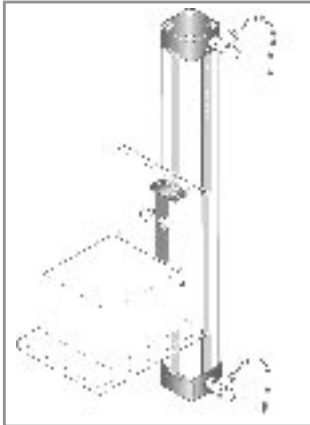
displacement speeds in each direction of the piston's travel. The valve controlling the brake is activated after the slow speed cycle is activated



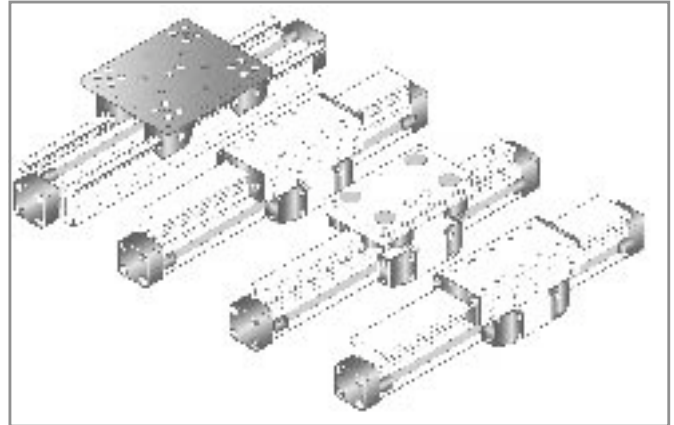
The combination of an OSP cylinder with the passive MULTIBRAKE as shown here, allows accurate positioning and safety in case of loss of pneumatic air pressure.

OSP-P APPLICATION EXAMPLES

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

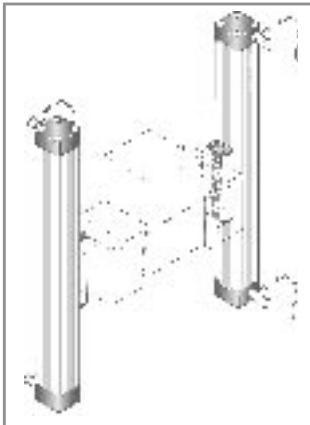


The high load capacity of the piston can cope with high bending moments without additional guides.



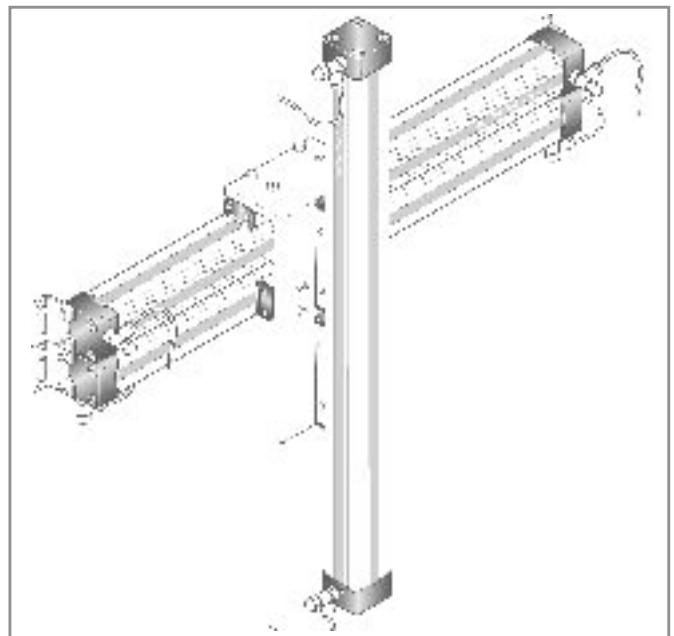
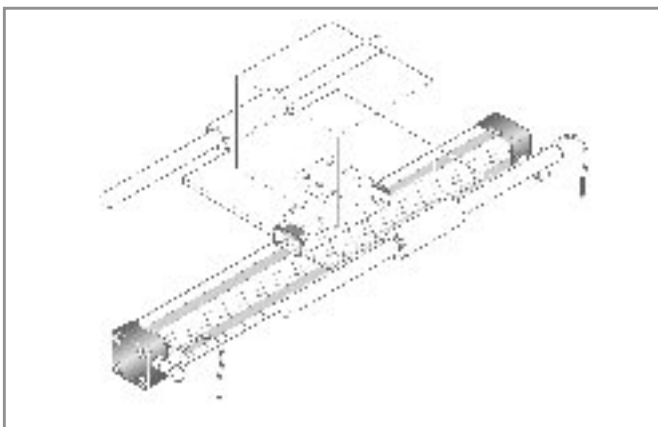
Integrated guides offer optimal guidance for applications requiring high performance, easy assembly and maintenance free operation.

Optimal system performance by combining multi-axis cylinder combinations.



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

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 HOERBIGER-ORIGA dealer.

