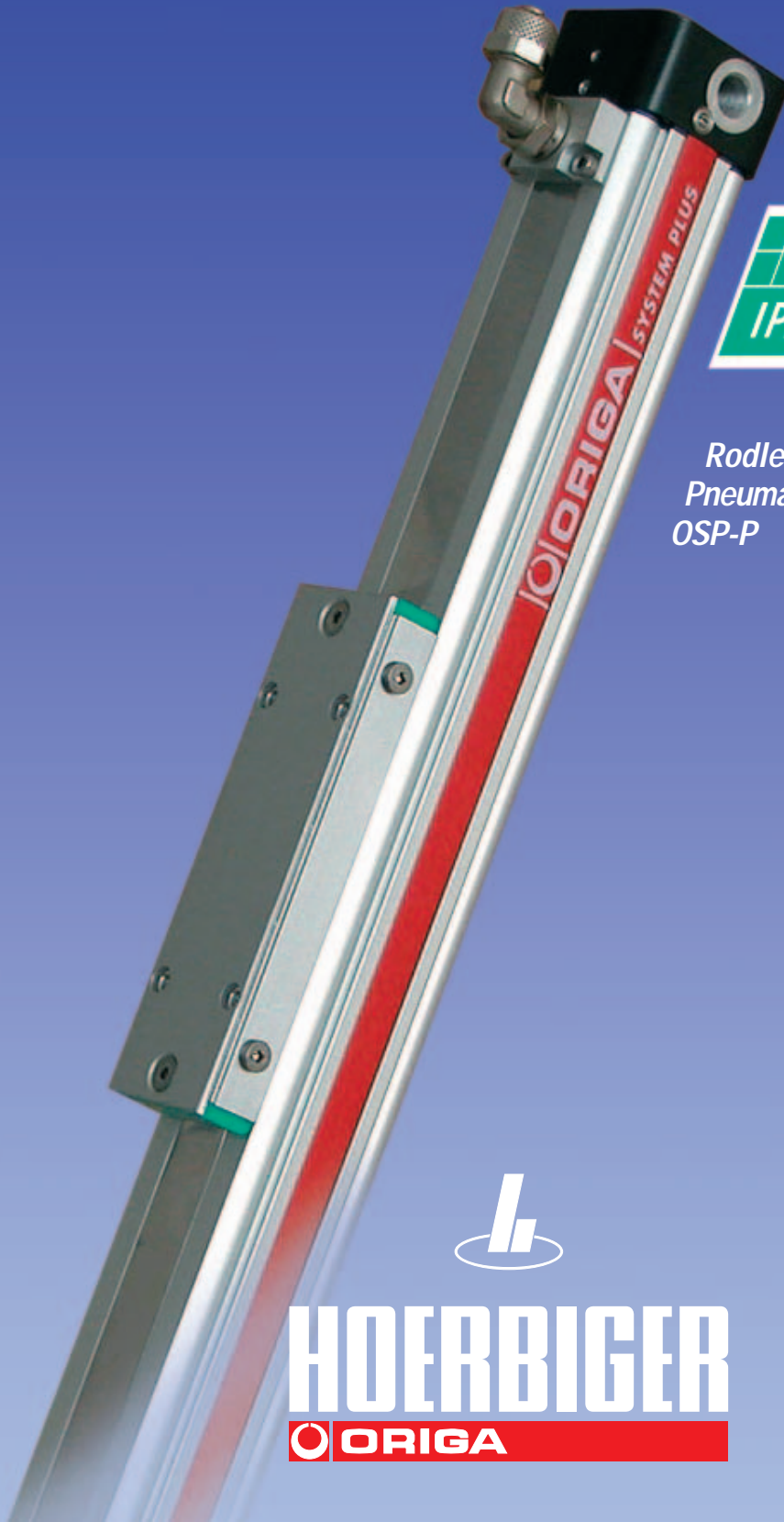


# OSP Clean Room Rodless Cylinder certified to DIN EN ISO 14644-1



*Rodless  
Pneumatic Cylinder  
OSP-P*



# HOERBIGER

 **ORIGA**





# Fraunhofer

## TESTED<sup>®</sup> DEVICE

Linearantrieb OSP-P25  
Report No. HO 0305-291

### Airborne Particulate Cleanliness Class Comparison

ISO 14644-1	RED STD 209E	
ISO Class	English	Metric
1		
2		
3	1	M1.5
4	10	M2.5
5	100	M3.5
6	1,000	M4.5
7	10,000	M5.5
8	100,000	M6.5
9		

Example: FS Class 10 cleanroom (ISO class 4)

### IPA Qualification Certificate

This is to certify that the product mentioned below manufactured by the company

**Hoerbiger-Origa GmbH**

Industriestraße 8  
D- 70794 Filderstadt

has been awarded an IPA Qualification Seal bearing the report number HO 0305-291.

In operation at the velocity of  $v_1 = 0.0$  m/s with vacuum suction the linear drive OSP-P25 is suitable for use in cleanrooms fulfilling the specifications of the cleanliness class 3 (according to ISO 14644-1).  
In operation at the velocity of  $v_2 = 0.14$  m/s with vacuum suction the linear drive OSP-P25 is suitable for use in cleanrooms fulfilling the specifications of the cleanliness class 4 (according to ISO 14644-1).  
In operation at the velocity of  $v_3 = 0.5$  m/s with vacuum suction the linear drive OSP-P25 is suitable for use in cleanrooms fulfilling the specifications of the cleanliness class 5 (according to ISO 14644-1).  
In operation at the velocity of  $v_4 = 0.5$  m/s without vacuum suction the linear drive OSP-P25 is suitable for use in cleanrooms fulfilling the specifications of the cleanliness class 8 (according to ISO 14644-1).

Detailed information and parameters of the test environment can be found in the IPA Test Report compiled by the Fraunhofer Society.

Certified on May, 13<sup>th</sup> 2003.

The duration of the validity of this certificate is unlimited. For further information visit our website at <http://www.ipa-qualification.com>

Stuttgart, Germany, May, 13<sup>th</sup> 2003

  
Signature



**Fraunhofer** Institut  
Produktionstechnik und  
Automatisierung



### Technical Data

Characteristics	Symbol	Unit	Description
<b>General Features</b>			
Type			Rodless cylinder
Series			OSP-P
System			Double-acting, with cushioning, position sensing capability
Mounting			See drawings
Air Connection			Threaded
Ambient temperature range	$\vartheta_{\min}$ $\vartheta_{\max}$	°C °C	-10      Other temperature ranges +80      on request
Weight (mass)		kg	See table below
Installation			In any position
Medium			Filtered, unlubricated compressed air (other media on request)
Lubrication			Permanent grease lubrication (additional oil mist lubrication not required) Option: special slow speed grease
Material	Cylinder Profile		Anodized aluminium
	Carrier (piston)		Anodized aluminium
	End caps		Aluminium, lacquered
	Sealing bands		Corrosion resistant steel
	Seals		NBR (Option: Viton®)
	Screws		Stainless steel
	Covers		Anodized aluminium
	Guide plate		Plastic
Max. operating pressure	$p_{\max}$	bar	8

\* Pressures quoted as gauge pressure

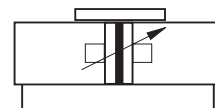
### Versions

#### Standard Versions:

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

#### Special Versions:

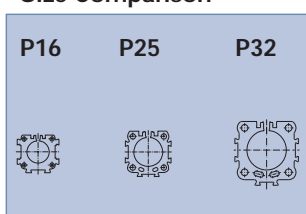
- Slow speed lubrication
- Viton® seals



#### Weight (mass) kg

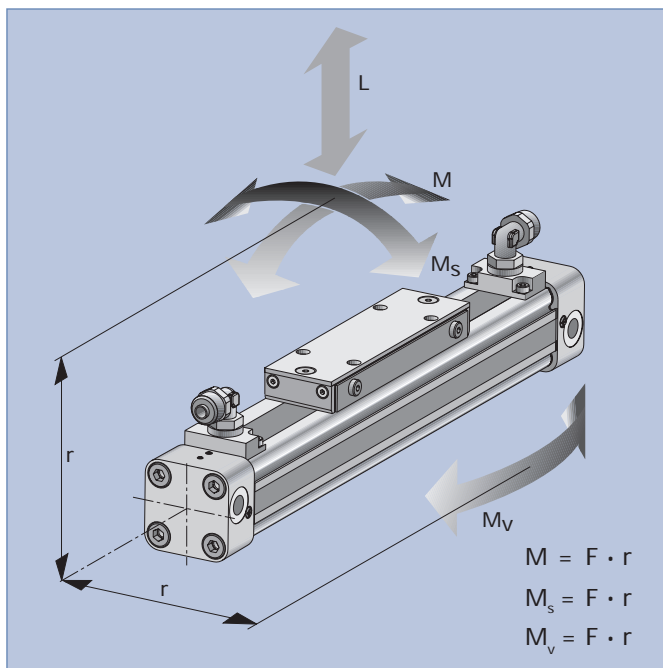
Cylinder series (Basic cylinder)	Weight (Mass) kg	
	At 0 mm stroke	per 100 mm stroke
OSP-P16	0.22	0.1
OSP-P25	0.65	0.197
OSP-P32	1.44	0.354

#### Size Comparison



Dimensions in mm

## Loads, Forces and Moments



Series	Cylinder Ø	Force at 6 bar [N]	Cushion length [mm]	max. allowed Load L [N]	max. allowed Bending Moment M [Nm] $M_s$ [Nm]		max. allowed Torque $M_v$ [Nm]
OSP-P16	16	78	11	120	4	0.45	0.5
OSP-P25	25	250	17	300	15	1.5	3.0
OSP-P32	32	420	20	450	30	3.0	5.0

Load and moment data are based on speeds  $v \leq 0.2$  m/s.

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

## Ordering Instructions

Same as standard 18 character order instructions

(see OSP Rodless Pneumatic Linear Drive Systems catalog)

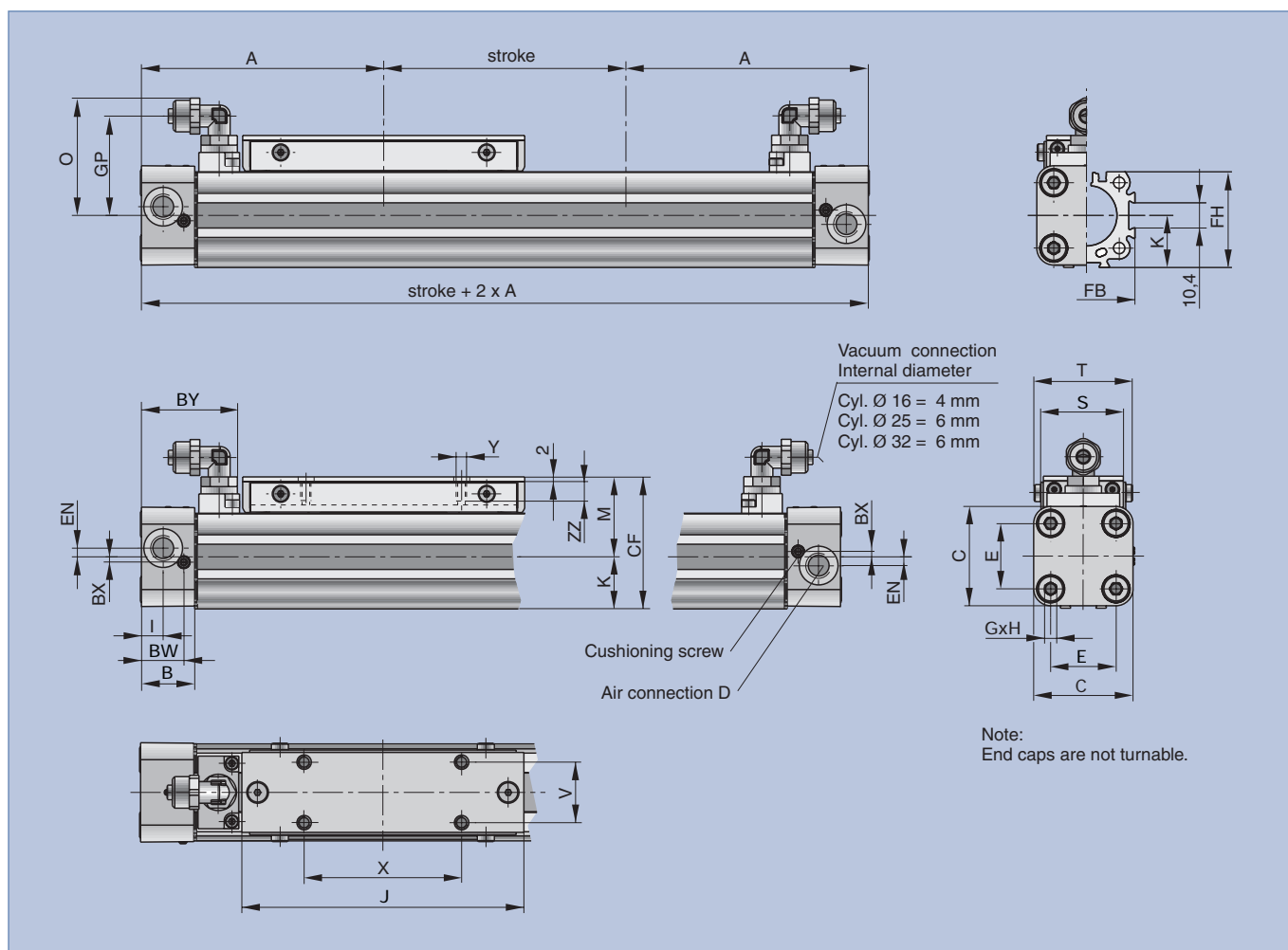
Example:

1	2	3
<b>Series</b>	<b>Bore</b>	<b>Mount Single Piston Mount</b>
P	1 16	C = Cleanroom
	2 25	
	3 32	

# ORIGA SYTEM PLUS – Clean Room Cylinder → 16, 25, 32 mm – Type Dimensions



## Dimensions (mm)



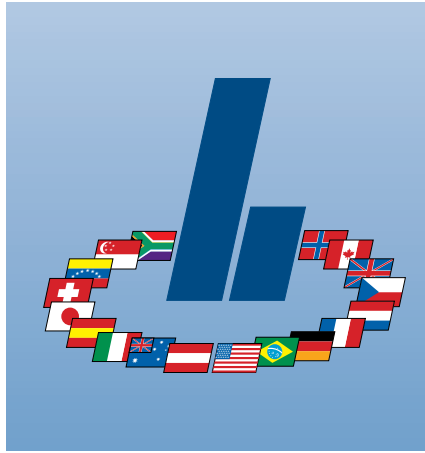
Cyl. Ø	A	B	C	D	E	G	H	I	J	K	M	O	S
16	65	14	30	M5	18	M3	9	5.5	69	15	25	31	24
25	100	22	41	G1/8	27	M5	15	9	117	21.5	33	48.5	35
32	125	25.5	52	G1/4	36	M6	15	11.5	152	28.5	40	53.6	38

Cyl. Ø	T	V	X	Y	BW	BX	BY	CF	EN	FB	FH	GP	ZZ
16	29.6	16.5	36	M4	10.8	1.8	28.5	40	3	30	27.2	25.7	7
25	40.6	25	65	M5	17.5	2.2	40.5	54.5	3.6	40	39.5	41	8
32	45	27	90	M6	20.5	2.5	47.1	68.5	5.5	52	51.7	46.2	10

Dimensions in mm





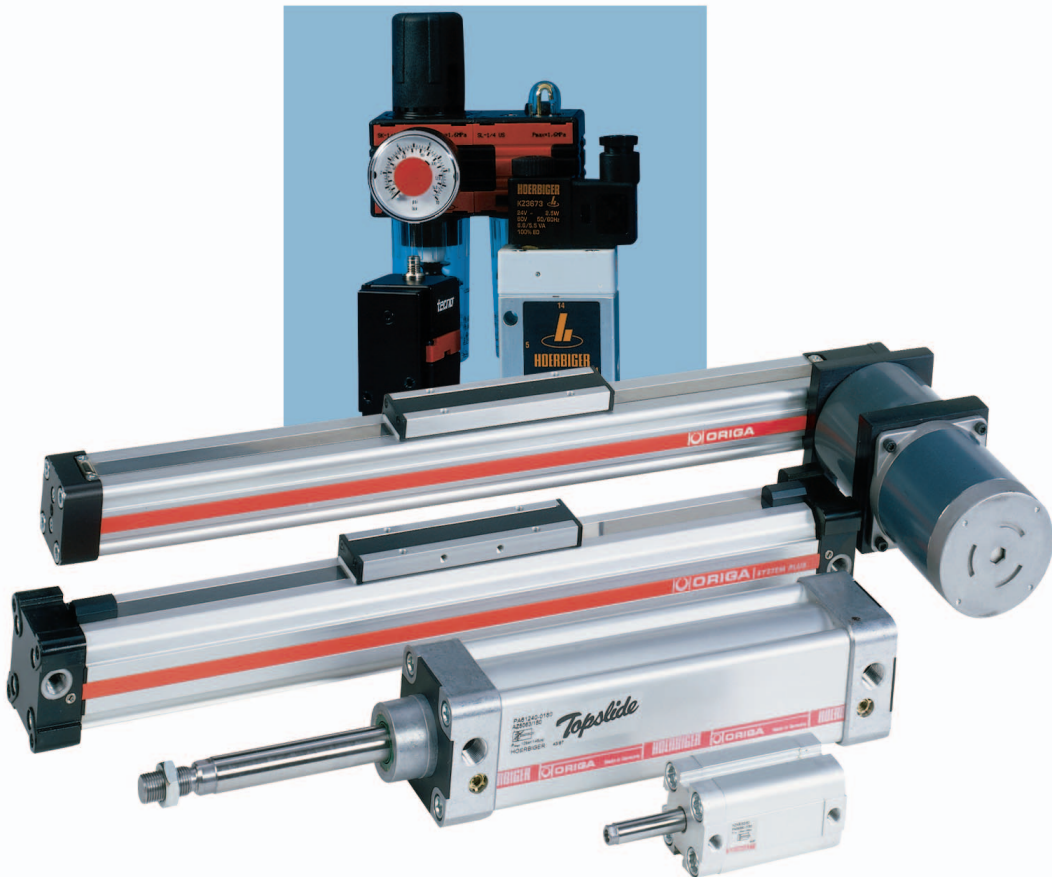


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- Automation Technology
- Drive Technology

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