The Pneumatic Rodless Cylinder

The following cylinder types are available:

1. **Series 2000 - Basic Cylinder**
   Available in the following bore sizes: 10 mm, 16 mm, 25 mm, 32 mm, 40 mm, 50 mm
   Single Piston and Double Piston configurations

2. **Series 2000 - Joint Clamp**
   Available in the following bore sizes: 25 mm, 32 mm, 40 mm, 50 mm
   Single Piston and Double Piston configurations

3. **Series 2000 - NR50** *(See OSP-P Series)*
   Available in the following bore sizes: 16 mm, 25 mm, 32 mm, 40 mm, 50 mm
   Single Piston and Double Piston configurations

4. **Series 2000 - Powerguide™** *(See OSP-P Series)*
   Available in the following bore sizes: 25 mm, 32 mm, 50 mm

5. **Series P120 - Basic Cylinder**
   Available in the following bore sizes: 40 mm, 63 mm, 80 mm
   Short and Long Piston configurations
The ORIGA Principle

Features

1. The cylinder barrel of extruded anodized aluminum has a slot along its entire length. To provide rigidity the bore is eccentric to the outside diameter.

2. A flexible hardened stainless steel inner band running the entire length of the bore and passing through the piston provides a near-zero-leakage metal to metal seal. An outer band of the same material acts as a cover over the slot preventing foreign particles from entering into the cylinders interior.

3. The aluminum piston is fitted with synthetic bearing rings. The power transmission outward takes place through a positive, physical connection through the slot to the external piston mounting. This solid guide permits the acceptance of external forces and moments and minimizes frictional losses.

4. The extensive experience in the development and production of rodless cylinders, as well as the use of high quality components and materials, ensure a very serviceable design lending itself to high operating safety and optimum performance.

5. This unique design, using only 4 main components, makes O R I G A cylinders reliable in operation and simple to maintain, providing long trouble free service.

6. O R I G A is the specialist in the rodless cylinder field. O R I G A has the largest range of bore diameters and can offer the longest stroke lengths with application oriented accessories for cost effective designs. O R I G A has experience in all conceivable areas of industry, attributable to the thousands of applications in which O R I G A rodless cylinders are used.

The O R I G A system is protected by worldwide patents.
Technical Benefits

Design Options

ORIGA cylinders can be supplied as a basic model, or as a basic model with external guides depending on the application requirements.

Cylinder Mountings

Various types of piston mounting are available including one which allows the cylinder to be inverted under adverse operating conditions thus protecting the sealing bands. End mounting brackets and mid-section supports are also available.

Operating Pressure

Max. 120 P.S.I.

End Of Stroke Cushioning

Adjustable cushioning is provided as standard and ensures the piston stops smoothly - even at high speeds. (10 mm not adjustable.)

Oil Free Operation

The ORIGA permanent lubricating grease eliminates the need for regular oil mist lubrication and provides long service life. Cylinders can be used in applications where maximum cleanliness is required. (e.g. electronics pharmaceutical and food processing industries).

Slow Speed Applications

The construction of the ORIGA rodless cylinder allows for a low friction characteristic permitting extremely slow traversing speeds. For speeds below 4 inches/second we recommend that ORIGA “slow speed” lubrication is specified.

Temperature Range/ Piston Speed

Standard Buna-N seals are suitable for temperatures from 15° F to +175° F. Viton seals are required for higher temperatures as well as for use when piston speeds exceed 5 ft./sec. Please contact the ORIGA Technical Department if the required operating temperature is above 175° F.

Magnetic Pistons

All Series 2000 cylinders are supplied as standard with magnetic pistons for proximity switch actuation.

Proximity Switches

Magnetically operated Hall Effect switches (IS) or Reed switches (RS) are available to sense piston position at any point over the entire stroke length.

Corrosive Environments

All screws are plated. In extreme applications stainless steel can be supplied. Special aluminum coatings are available for added protection against chemical or caustic wash down of equipment or in environments where corrosive gases are present.

Cylinder Loading

Values are based on shock-free duty and should not be exceeded during piston acceleration.

Note:

Seal life can be significantly influenced by extremes of speed, load and temperature which exceed the approved limits. Contact the ORIGA Technical Department for assistance with special applications.

All specifications are subject to change without notice.
Ordering Procedure

Series 2000

**Cylinder Series P120**

**Cylinder Bore Size:**
- 10, 16, 25, 32, 40 or 50

**Configuration:**

**Piston Mounting Type:**
- 20 = Standard Mount
- 25 = Floating Mount
- 30 = Inverted Mount
- PG = Powerguide

**Service Packs:**
- SP32-B-1 X S-M
- SP124-S-1 X S-M

**Grease Requirements:**
- M = Standard
- S = Slow Speed

**Prelube Specification:**
- Optional:
- M = Standard
- C = Cleanroom
- F = Food Grade
- S = Slow Speed

**Seal Type:**
- B = Buna-N
- V = Viton

**Stroke Length:**
- Enter metric strokes followed by "mm" (i.e. 200MM)

Series P120

**Cylinder Bore Size:**
- 4 = 40mm
- 6 = 63mm
- 8 = 80mm

**Piston Quantity:**
- 20 = Single Piston
- 22 = Double Piston

**End Cap Cushion Placement:**
- 20 = Standard Cushion Location
- 30 = Cushion at Rear of Cap

**Note:** Rear cushions are available on Ø25mm - Ø50mm only.

**Service Packs:**
- SP124-B-S X S-M
- SP124-B-S X S-M

**Grease Requirements:**
- M = Standard
- S = Slow Speed

**Service Pack References:**
- Bore Size: 124=40mm, 126=63mm, 128=80mm
- B = Buna-N
- V = Viton

**Series 2000:**
- SP32-B-1 X S-M

**Series P120:**
- SP124-B-S X S-M
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