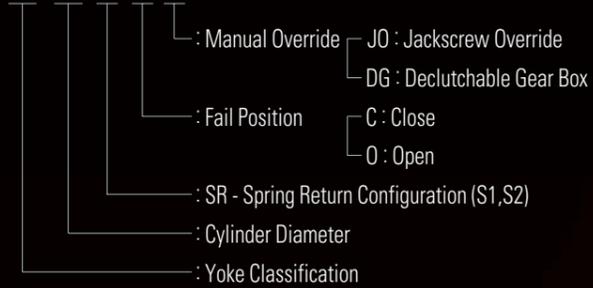


# Ordering Codes

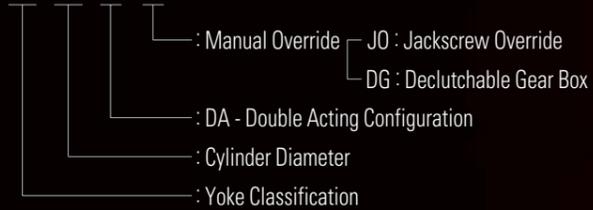
## Spring Return Actuator

EPA 040 - 080 - S1 - C - JO



## Double Acting Actuator

EPA 050 - 105 - DA - DG



# FLOWBUS®

## EPA Series

EP-Series Actuator For Quarter-Turn Valves



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Due to continuous development product data is subject to change without prior notice.  
 Literature # PA.008.03.Rev.3.APR/14



## Compact Pneumatic Actuators for Quarter Turn Valves

The EPA pneumatic actuators provide a rugged and compact solution for quarter turn valve actuation. The scotch yoke design offers high torque output while reducing maintenance requirements. Available in both double and spring return configurations, the modular design can be quickly and easily converted in the field. Flowbus is able to make the EPA actuators a high quality, reliable actuator, utilizing tried and tested methods of operation combined with the latest innovations in technology.



### >> Inherently Safe Design

The EPA actuators have been designed with an inherently safe spring return unit. The EPA spring rod is connected to both the spring and cover and to the retainers, so that the spring is fully retained during assembly or disassembly. This ensures the safety of personnel during installation and maintenance by preventing accidental release of the spring force.

### >> Efficient and Reliable

The EPA actuators are constructed to offer efficient and reliable performance with reduced repairs and increased actuator life. The permanently lubricated, sliding bearings combine with a low friction, corrosion resistant hard chrome internal coating to ensure perfect operation of the internal components while the heavy duty construction and external coating protect the actuator from corrosive environments. For flexible installation, dual valve mounting pads offer a simple method for changing the actuator fail position and the bidirectional travel stoppers allow easy adjustment of valve seating and fully open positions.

### >> Torque Outputs

The EPA double acting actuator torque output ranging from 243 to 6,957 N.m (2,150 to 61,570 ins.lbs.), while the spring return actuator produces spring end torques ranging from 36 to 1,905 N.m (310 to 16,859 ins.lbs.). The actuators are rated for continuous operation at pneumatic supply pressures from 3 to 10 bar (40 to 150 psig).

### >> Temperature Ranges

Standard EPA actuators are designed for operating temperatures of -20°C to +80°C (-4°F to +176°F). Options are available for low and high temperatures of -48°C (-54.4°F) and +177°C (+350°F) respectively. Special requirements can be supplied on request. For higher and lower temperature applications, consult Flowbus.

### >> Flowbus ; A Complete Solution

Flowbus can supply not only an actuator, but a complete tailored solution to meet your application. From basic ancillaries such as solenoids, through ESD systems and smart positioners, Flowbus is able to use their years of valve and actuator experience to enhance performance and provide the perfect solution to your application requirements.

## Key Advantages : EPA Series

### 01 Modular Design

The EPA actuators modular design allows the actuator to be easily converted from double acting to single acting configuration, and provides for the simple addition of ancillaries such as manual override units.

### 03 Replaceable Sliding Bearings

The EPA actuators have permanently lubricated, long lasting, sliding bearings. The soft nitrided finish provides superior corrosion and wear resistance for longer life.

### 04 External Tie Rods

The EPA actuators external tie rods protect the cylinder tube from accidental damage during installation or piping work. Also by removing the tie rod nuts a spring return unit can be simply added or removed to change the actuator configuration.

### 06 Wide Adjustable Stopper

The EPA actuators offer travel stops allowing +/-5°C of adjustment to give a travel range from 80°C to 100°C. Both the stoppers are externally accessible, for easy travel adjustment. Optional extended travel stoppers provide a greater range of adjustment.

### 09 NAMUR Standard Interface

For ancillary equipment such as positioners and switchboxes, the latest VID/VDE 3845 mounting interface is provided to allow quick and simple mounting with a direct pinion drive.

### 10 ISO5211 Standard Valve Pad

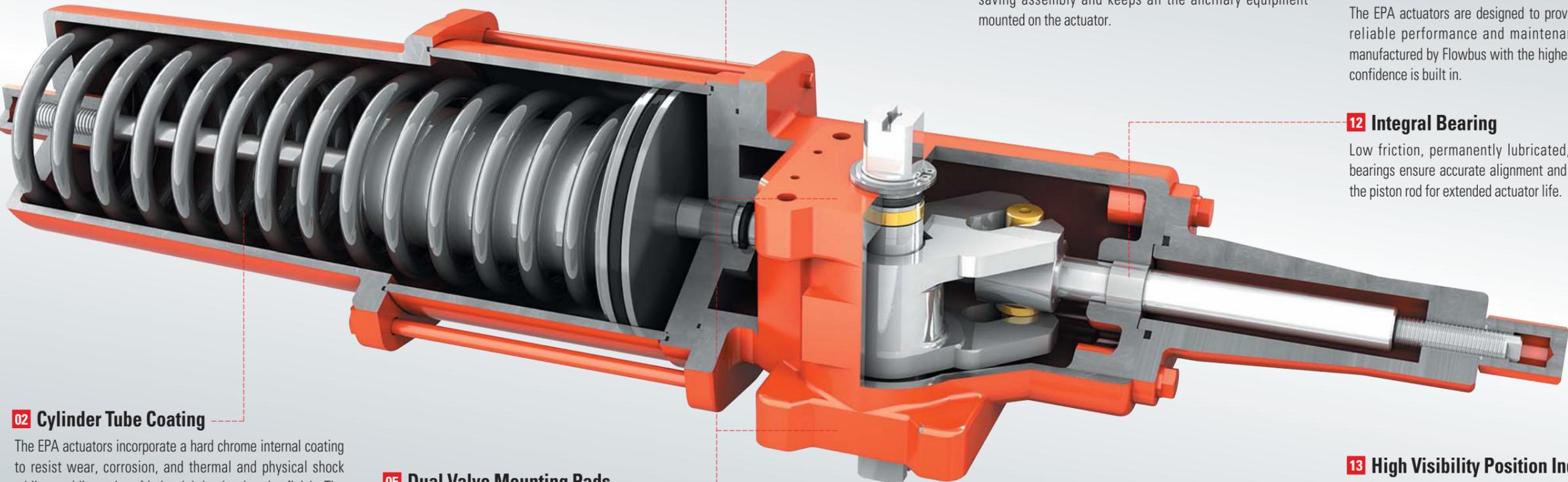
The EPA actuators are designed to the latest ISO5211 valve interface standards, for optimum strength, and standardized dimensions.

### 11 Safety and Confidence

The EPA actuators are designed to provide safe, simple and reliable performance and maintenance. The units are manufactured by Flowbus with the highest QA procedures, so confidence is built in.

### 12 Integral Bearing

Low friction, permanently lubricated, high performance bearings ensure accurate alignment and balanced support of the piston rod for extended actuator life.



### 02 Cylinder Tube Coating

The EPA actuators incorporate a hard chrome internal coating to resist wear, corrosion, and thermal and physical shock while providing a low friction lubricating interior finish. The coating ensures that the cylinder tube is fully protected regardless of what corrosive elements are drawn in from the surrounding atmosphere. To ensure long life, the coating is made to bond to the cylinder surface, eliminating the problems of cracking or flaking experienced with inferior solutions. As an option, electroless nickel and Teflon-plated cylinders are available in accordance with the industry application.

### 05 Dual Valve Mounting Pads

Valve mounting interfaces on either side of the actuator provide the ability to change the spring fail mode, from clockwise to anti-clockwise by simply inverting the actuator and allows installation in any required orientation.



### 07 Secondary Ancillary Interface

The secondary mounting interface allows ancillaries, such as filter regulators, to be mounted directly to the actuator. This removes the needs of a bracket making for a compact, space saving assembly and keeps all the ancillary equipment mounted on the actuator.

### 08 The Enhanced Maintenance & Repair Service Life

Flowbus actuators are designed to prevent failure and repair costs are minimal in comparison to competitive actuators. The EPA actuators are constructed to the highest quality standards, using engineering experience and the latest manufacturing techniques, and offers reliable performance

### 13 High Visibility Position Indicator

A high visibility position indication beacon is available as an optional feature on the EPA actuators. The indicator is impact resistant and weather-proof as per the IP66/67 standard.

### 14 High Torque and Compact Design

The EPA actuators are smaller in comparison with other actuator offering similar torque outputs. This reduces the overall valve package envelop providing a more compact design.

# Features and Benefits

## Manual Overrides

### 1. Jackscrew

A compact jackscrew override is available as an option, and offers efficient and precise performance with the following advantages.

- Full rated torque available even when the air supply fails.
- The jackscrew allows the actuator to be manually operated with no loss of torque or decrease in operating speed.
- Even when operating at maximum speed, the jackscrew is designed to withstand the forces produced without damage to itself or the actuator.

### 2. FB-Series : Declutchable Gear Box

The EPA actuators are available with a declutchable gear box option. This allows quick and simple operation of the highest torque valves, even when the air or power supply fails.

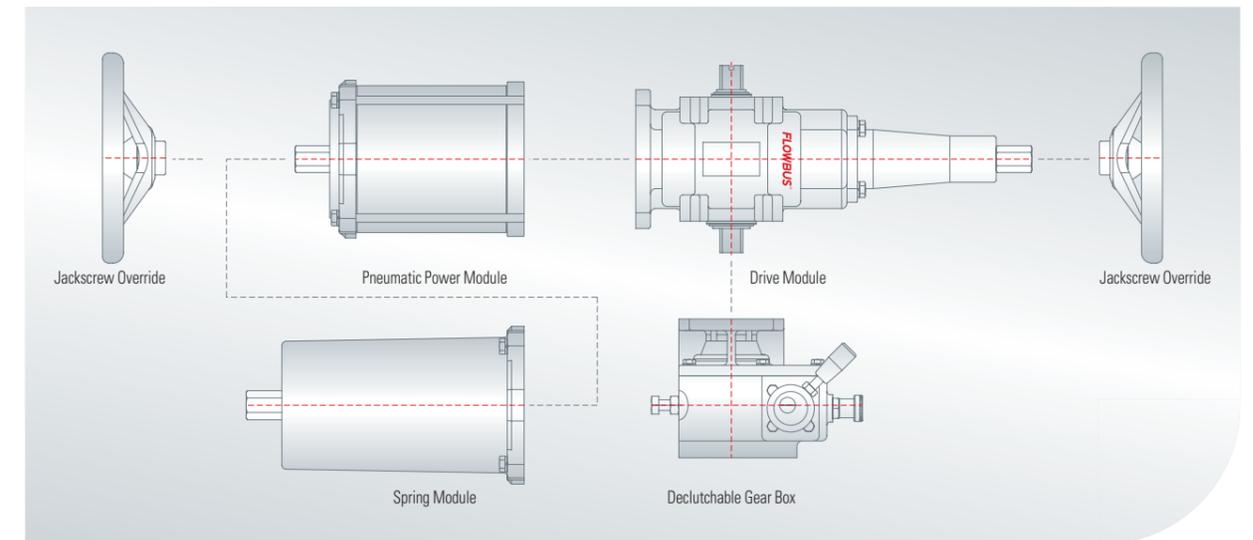


## Approval and Industry Standard

- Actuators manufactured in conformity with CE certification to PED 97/23/EC
- Actuators certified in accordance with ATEX 94/9/EC
- Actuators certified to IP66/IP67
- Actuators designed and manufactured under a third party accredited
- ISO 9001:2000 quality assurance program.
- Suitable for Safety Integrity Level applications in accordance with IEC 61508 : 2000
- GOST-R Russian certificate of conformity

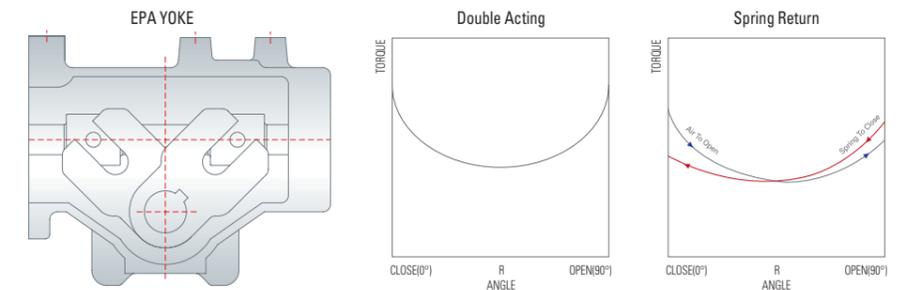
## Versatile Modular Design

The EPA actuators are designed to be flexible to meet the ever changing requirements of today's applications. The modular design is easily converted from spring return to double acting, without the need for special tools or equipment. The spring module can be stocked to allow quick change over, and has been designed so that the spring is not under tension until fitted to the actuator to prevent loss of power due to spring set. Manual overrides such as jackscrews and declutchable gear boxes can be also retrofitted.



## Torque Output Curves

The torque shown in the graph is measured values. The required size of the actuator can be constituted by comparing the values of the actuator with the required torque of the valve.



## Complete Tailored Solutions

Flowbus can supply not only an actuator but also a complete solution to meet the customer's applications. We offer comprehensive solutions with the latest innovations in technology for project specific customer requirements. By combining our high quality product range, expertise, and process experience, we are able to solve complicated process problems with reliable, on-time packages. Our aim is to exceed the quality and operational expectations of customers, providing them with added value and service.

