

Pneumatic Rotary Actuators

SPECIFICATIONS



(AP SERIES)



(APM SERIES)



• **Pressure range:**
2 bar (29 psig) to 8 bar (116 psig) double acting
3 bar (44 psig) to 8 bar (116 psig) spring return
max. working pressure 10 bar (145 psig).

• **Supply:**
filtered dry or lubricated air.
For non corrosive gas water or light hydraulic oil
please check with Sirca's technical department.

• **Temperature range:**
STD -20°C (-4°F) a + 80°C (175°F)
on request +20°C (+68°F) a +150°C (302°F)
on request - 50°C (-58°F) a +100°C (212°F).

• **Rotation:**
counterclockwise when Port'A' is pressurized;
clockwise when PORT 'B' is pressurized
and for spring return actuators (see principle of operation).

• **Stroke:**
90° with standard adjustment $\pm 3^\circ$ (AP Series)
or bi-directional travel adjustment $\pm 5^\circ$ (APM Series).

• **Lubrication:**
all moving parts are factory lubricated for
cycle life of the actuator.

• **Construction:**
in accordance to "Equipment or Protective system
intended for use in potentially explosive atmosphere
directive 94/9/CE".
Suitable for indoor and outdoor installation.

• **Connections:**
bottom drilling to match valve is in accordance
with ISO 5211/DIN 3337 Interface for solenoid valve,
shaft top end and top drilling to assemble accessories
are in accordance with VDI / VDE 3845, NAMUR.

• **Inspection:**
each unit is hydraulically tested and certified
and guaranteed for a minimum of 500.000 moves.

MATERIALS

- **Actuator body:**
extruded aluminium alloy.
- **End cap:**
pressure die casting aluminium alloy
- **Pinion:**
E.N.P. Carbon steel or 303 S.S.
- **Piston:**
pressure die casting aluminium alloy
- **Guide:**
Acetal resin
- **"O" rings:**
Buna-n (NBR), FKM or Silicone
- **Springs:**
Epoxy coated spring steel
- **Screws and nuts:**
Stainless Steel

Foreword

Thanks to its achieved experience in the field of the automation, since last 1979 SIRCA INTERNATIONAL has been producing and selling its rotary pneumatic actuators series AP.

The actuators are of rack and pinion type, and a kinetic energy turns a linear moving into a rotary one. The opposed movement of the pistons is protected, as performed in a cylinder, on which extremities two end-cups are inserted.

They can be easily mounted on each type of equipment, and have light weight.

You can easily mount any fitting on them (limit switches, solenoid valves, positioners, disengageable gear boxes, levers, and so on).

They find their best appliance on the actioning of ball, butterfly and plug valves, which have a rotation angle of 90°; they can also be used on other equipment, having rotation angle of 120°-180°.

The torque they generate is proportional to the air supply pressure; therefore, a higher supply pressure corresponds to a higher torque.

Both double acting and spring return actuators have twin cylinders horizontally opposed and incorporate piston guides to ensure correct contact between the rack and pinion, at any pressure.

Double acting and spring return models are of similar overall size.

Sirca Actuators offer an excellent cost-performance ratio