

P Series Pneumatic Actuators (Stainless Steel)

Chemline P Series are quarter turn pneumatic actuators specially chosen for all sizes of ball and butterfly valves. These actuators are designed to withstand highly corrosive environments, underwater and marine applications. All offer long cycling life.

Normal working temperatures are -32°C to 90°C. They may be actuated with air, water or non-aggressive fluids up to 120 psi pressure.

P Series is one in a range of actuators specially selected for ball and butterfly valves. Hardware kits are available for mounting of actuators in the field. Also offers complete actuated valves, fully assembled and bench tested.

Low Cost

Corrosion Resistant

Long Cycling Life

Features

Application Diversity

- Normal working temperatures are -32°C to 90°C.
- They may be actuated with air, water or non-aggressive fluids up to 120 psi pressure.

Long Cycling Life

- Double O-ring shaft seals
- Massive teeth engagement between racks and pinion
- Balanced internal forces
- Minimal backlash and no play in parts
- Self-Lubricating O-Rings

Compact, Simple Design

- Double piston, double rack and pinion design supplies constant torque output
- All porting is integral

Light Weight

- High torque-to-weight ratio

Standard ISO and NAMUR Dimensions

- Permits easy mounting of control accessories to actuator and actuator to valve



CHEMLINE
Plastics Limited

Your Pipeline To Quality

for Chemline Ball and Butterfly Valves[†]

SERIES: P3DA – 316 Stainless Steel
Double Acting
P3SR – 316 Stainless Steel
Spring Return

NOMINAL CONTROL PRESSURE: 80 psi

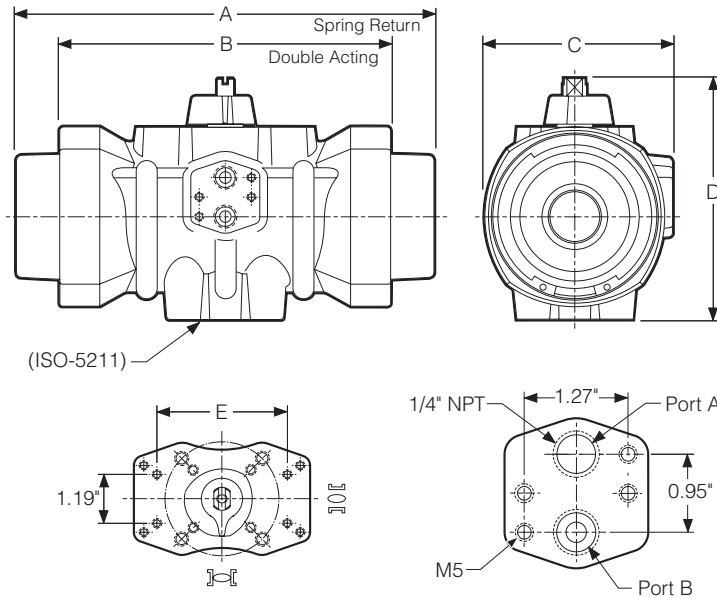


OTHER ACCESSORIES

- **Solenoid Valves** – Brass, aluminum or plastic with different voltages, optional speed controls
- **Limit Switch Boxes** – CSA approved with mechanical or proximity switches, NEMA 4X or 7, optional high visibility beacon
- **Positioners** – For 3-15 psi or 4-20 mA signal inputs
- **Other Accessories** – Full Range Open or Close Travel Stop
– Filter/regulator sets, etc.

[†] Consult Chemline for specifics for actuator sizing.

P Series 316SS Pneumatic Actuators

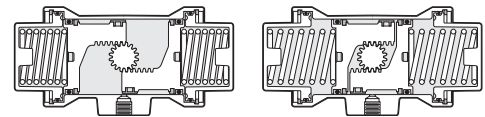


DIMENSIONS INCHES

Model	A	B	C	D	E
P00/P00S	5.87	4.92	3.14	4.37	3.15
P10/P10S	8.90	7.04	3.92	5.00	3.15
P20/P20S	11.42	9.33	4.92	6.34	3.15

Pressure to **Port A** moves pistons inward, turning output shaft 90° clockwise, as viewed from top of actuator.

Pressure to **Port B** moves pistons outward, compressing springs (on spring return models only) and turning output shaft 90° counter-clockwise, as viewed from top of actuator.

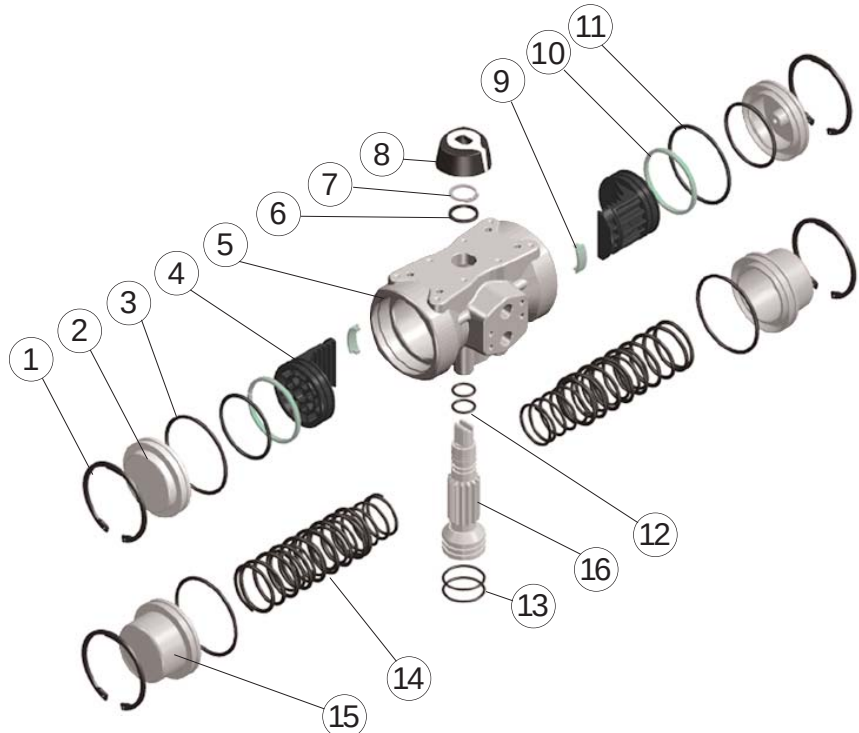


PARTS

▲ Recommended Spare Parts

No.	Part	Pcs.	Materials
1▲	Snap Ring	2	Steel ²
2	Double Acting Cap	2	AISI - 316 SS
3▲	Cap O-Ring	2	Nitrile Buna-N
4	Piston	2	Polyarilamide
5	Cylinder	1	AISI - 316 SS
6	Washer	1	Polyamide 6
7	Spring Clip	1	Stainless Steel
8	Position Indicator	1	Polyamide
9	Piston Guide	2	Polyacetal
10	Guide Ring	2	Polyacetal
11▲	Piston O-Ring	2	Nitrile Buna-N
12▲	Upper Shaft O-Ring	2	Nitrile Buna-N
13▲	Lower Shaft O-Ring	2	Nitrile Buna-N
14	Springs Set ³	1	DIN-17223-C ¹
15	Spring Return Cap	2	AISI - 316 SS
16	Shaft	1	303 SS ⁴

1. Covered with Cataphoresis.
2. Covered with Nickel-PTFE.
3. Variable quantity, please refer to the Spring Return Torque Chart.
4. With separate Cataphoresis coated pinion in P10 and P20 sizes.



P Series 316SS Pneumatic Actuators

CYCLE TIMES		SECONDS	WEIGHTS		CAPACITY	LITRES	TORQUE AT 80 PSI AIR PRESSURE	
Model No.	To Open	To Close	Lbs.	Kg.	To Open	To Close	Air Start	Spring End
PADA00	0.15	0.15	3.80	1.75	0.15	0.10	202	–
PASR00	0.20	0.20	5.07	2.30	0.15	–	102	100
PADA10	0.25	0.25	8.16	3.70	0.35	0.32	572	–
PASR10	0.3	0.3	9.37	4.25	0.35	–	290	286
PADA20	0.4	0.4	13.23	6.00	0.80	0.7	1,335	–
PASR20	0.5	0.5	18.96	8.60	0.80	–	778	557

OTHER ACTUATOR TYPES

High Temperature Actuators

The High Temperature Pneumatic Actuator is designed to operate in ambient temperatures up to 265°C. They are actuated only by air up to 120 psi pressure.

The housing and end caps are of die-cast aluminum specially treated to prevent deformation at high temperatures. The housing is coated with DACROMET (a corrosion inhibitor) with a top layer of 10 mils of Teflon® PTFE.

Plastic Actuators

The Plastic Pneumatic Actuator is designed to fit glass and composite valves and are light weight and very corrosion resistant. Normal working temperatures are -32°C to 90°C. They are actuated only by air up to 120 psi pressure.

The housing and end caps are of glass filled Polyamide 6. The Snap Rings are of carbon steel, covered by cathoporesis.

Aluminum Actuators

The Aluminum Pneumatic Actuator is epoxy and Rilsan coated for high corrosion resistance. Normal working temperatures are -32°C to 90°C. They may be actuated with air, water, natural gas or non-aggressive fluids up to 120 psi pressure.

180° Pneumatic Actuator

The 180° Actuator is for multiport or three-way valves, diverting the flow from one port to another. It is also offered with a center-off position. Its aluminum body is Rilsan coated, with polyaramide racks and pinion and a stainless steel shaft, same as for 90° aluminum actuators.

TRAVEL STOP

The travel stop is used to limit the amount of actuator travel. Independent adjustment of the open and close cycle is adjustable from 0° to 90°.

