CIRCLE SEAL CONTROLS

PR01 Series

Miniature Non-venting Regulator
Inlet 200 to 3,000 psig & Outlet 10 to 800 psig

Features

- Miniature size: 1¾″ diameter by 3½″ high
- Soft seat—suitable for dead-end service
- Tight shutoff
- Single hole panel mounting
- Optional pressure gauges

Applications

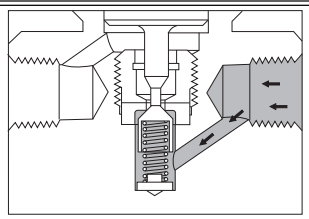
- R & D pilot plants
- Research laboratories
- Chromatography
- Cylinder pressurization
- Bubbling operations
- Instrument pressurization
- Slow gas purge control
- Inert gas blanketing (food processing)
- Pilot control for large control units
- Lecture bottles

Technical Data

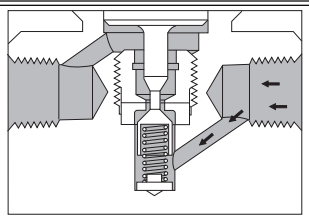
Body Construction Materials	Aluminum alloy, anodized blue, or brass
Seat Materials	Kel-F® or Nylatron®
Seal Materials	Buna N, ethylene propylene, neoprene, or Viton®
Trim Material	Stainless steel or plated steel
Handle Material	ABS plastic
Gauge material	Brass
Port Size	⅛″ NPT female
Media	Inert gases
Pressure Ratings	Inlet: 200 to 3,000 psig (207 BAR) Outlet: 10 to 800 psig
Temperature Range	–65° F to +160° F (–54° C to +71° C)
Weight	Regulators: 8.2 oz Gauges: 5.2 oz

Note: Proper filtration is recommended to prevent damage to sealing surfaces.

How it Works



Closed
With the poppet against seat, full upstream pressure is applied to the poppet, effecting a bubble-tight seal.



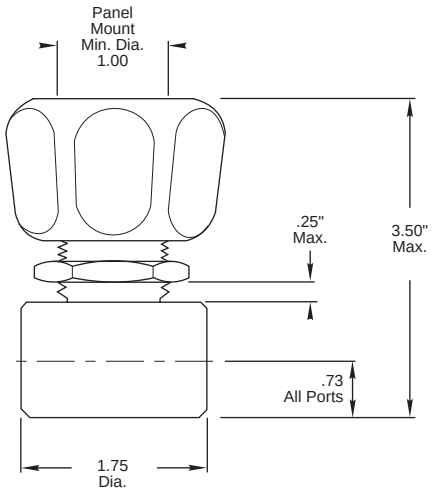
Regulating
As the downstream process demands flow, the pressure acting on the piston decays, allowing the adjusting spring force to push the piston down, which in turn unseats the poppet. This permits flow to start, and pressure under the piston to increase, until balance is achieved between adjusting spring force and downstream pressure. This condition continues until process demand ceases, at which point increasing pressure overcomes spring force, moving piston up and allowing the poppet to close.

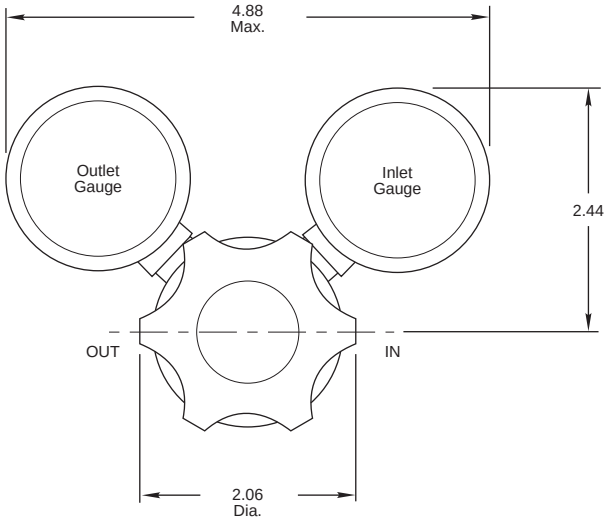
Circle Seal Controls
2301 Wardlow Circle • Corona, CA 92880
Phone (951) 270-6200 • Fax (951) 270-6201
www.circlesealcontrols.com

pressure regulators

PR01 Series

Dimensions





How to Order

K/ PR01 3 A 1P N D O

REPAIR KIT

MAXIMUM OUTLET PRESSURE
- **1** 100 psig (7 BAR)
- **2** 200 psig (14 BAR)
- **3** 400 psig (28 BAR)
- **4** 800 psig (55 BAR)

BODY & PANEL NUT MATERIAL
- **A** Aluminum alloy, anodized blue
- **B** Brass

PORT SIZE & TYPE
- **1P** ⅛″ NPT female

OPTIONS
- **O** None
- **G** Gauges, 1½″ diameter
- **P** Panel mount

SEAT MATERIAL
- **D** Nylatron® (standard)
- **B** Kel-F®

SEAL MATERIAL
- **E** Ethylene propylene
- **N** Neoprene
- **V** Viton®
- **9** Buna N

Model Number	Operating Pressure Range *(psi)*	Approx. Outlet Pressure Increase per 100 psi, Inlet Decrease PSI	Approx. Air Flow vs. Outlet Pressure *(SCFM/PSI)**	Approx. Cv*
PR011	10–90 psi	3.5 psi	10 scfm/70 psi	0.007
PR012	20–180 psi	3.5 psi	18 scfm/140 psi	0.012
PR013	40–360 psi	3.5 psi	31 scfm/280 psi	0.021
PR014	80–720 psi	8.0 psi	47 scfm/560 psi	0.031

* *At maximum inlet and set at maximum rated outlet lock-up pressure. 40µ absolute filtration of inlet fluid media recommended. Relief valve downstream of outlet port should always be used. Main seat is factory tested to be bubble-tight for a period of one minute with full inlet pressure.*

Please consult your Circle Seal Controls distributor, representative, or the factory for information on special connections, operating pressures and temperature ranges.

For Your Safety

It is solely the responsibility of the system designer and user to select products suitable for their specific application requirements and to ensure proper installation, operation, and maintenance of these products. Material compatibility, product ratings and application details should be considered in the selection. Improper selection or use of products described herein can cause personal injury or property damage.