



## PVRB Series

Inlet & Outlet To 60 psig

### Ultra Sensitive Back Pressure Regulator

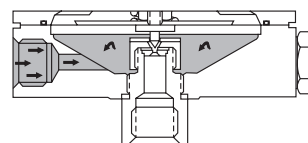
#### Features

- Low Pressure Control
- Full Range Capability
- Compatible with Corrosive and Non-corrosive Gases & Liquids
- Ultra-sensitive Pressure Regulator

#### Applications

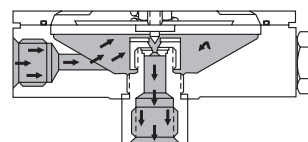
- Chromatography
- Process Stream Sampling
- Bubbling Operations
- Medical Instrumentation
- Research Laboratories
- Instrument Calibration

#### How It Works



##### CLOSED

With the unit spring load adjusted to the desired regulated "set" pressure, a dead tight seal is affected against the applied upstream pressure.



##### REGULATING

When the upstream process pressure (acting on the diaphragm) increases, an opposing force is generated which, through the diaphragm plate, acts against the "set" spring load.

As the increasing upstream pressure level reaches the "set" pressure, the poppet is gradually lifted off its seat. A consequent decrease in upstream pressure is experienced when the flowing fluid is relieved to the downstream side of the process at a faster rate than the upstream pressure can supply.

With decreasing upstream pressure, the spring force starts the poppet moving toward its closed position, thus maintaining the desired "set" pressure level within a narrow band.

When the upstream pressure has decreased to a level just below "crack," the adjusting spring load again creates a tight seal between the poppet and the sharp edge of the valve seat.

#### Technical Data

Body Construction Material:	• Polyvinyl Chloride
Spring Housing Materials:	• PVRB-2 & 3 – Polyvinyl Chloride • PVRB-4 & 5 – Aluminum Alloy
Seat Material:	• Kel F
Diaphragm Material:	• Teflon®
Adjustment Screw Material:	• Delrin
Lock Nut Material:	• Aluminum Alloy
Port Size:	• 1/4" Female Pipe
Pressure Rating:	• Max. Controlled Pressure – 60 psig (4 BAR)
Temperature Range:	• 0° F to +125° F (-18° C to +46° C)
Flow Capacity:	• $C_v = 0.011$ Max. • ESEOD = 0.025"
Weight:	• PVRB-2 & 3 – 14 oz; PVRB-4 & 5 – 1.5 lbs.
Leakage:	• Bubble Tight
Sensitivity:	• Less than 1/2 psi

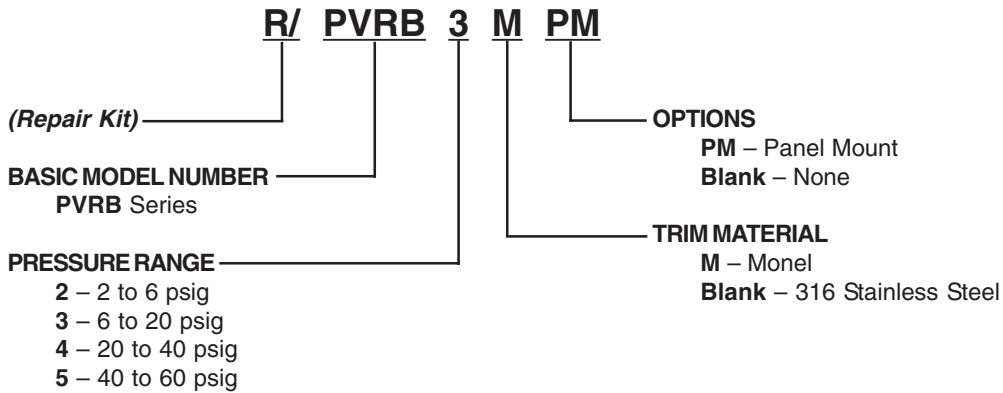
NOTE: Proper filtration is recommended to prevent damage to sealing surfaces.

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# PVRB Series

Inlet & Outlet To 60 psig

## How to Order



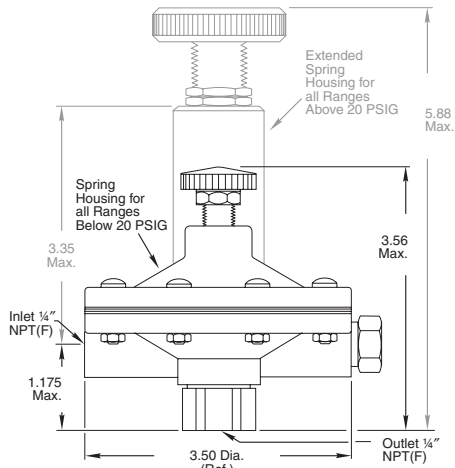
### NOTE:

If this regulator is to be used in oxygen service, specify "GENERAL OXYGEN SERVICE" when ordering or furnish the factory a copy of the special requirements.

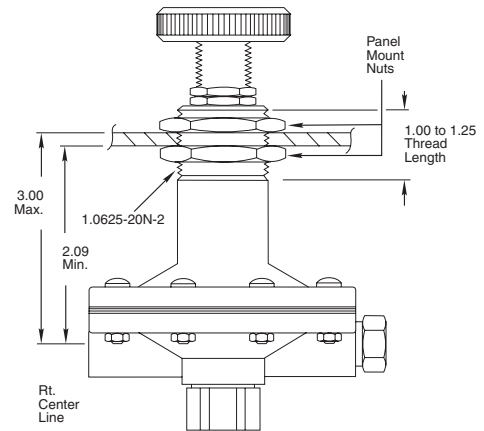
Please consult your Circle Seal Controls Distributor, Representative or the factory for information on special connections, operating pressures and temperature ranges.

Teflon® is a registered trademark of Dupont.

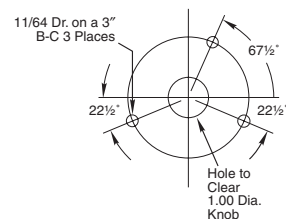
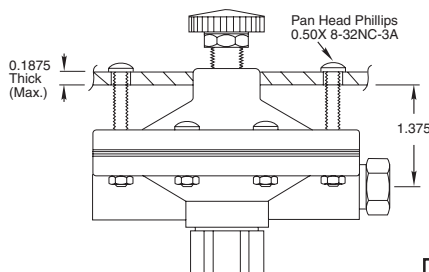
## Dimensions



### Panel Mounting for PVRB-4 & -5



### Panel Mounting for PVRB-2 & -3



### For Your Safety

It is the sole 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.