# Features

## 1/4" & 3/8" Ports

Precision/Air regulators are high precision, multi-stage pressure regulators. The highest degree of regulation and repeatability are achievable by reacting to down stream pressure fluctuations as small as 0.01 PSIG (0.07 KPA) above set pressure. Action occurs as downstream pressure is piloted to the control chamber to act on a finely tuned stainless steel measuring capsule. **A continuous bleed of less than 0.08 SCFM (0.15 m/hr.) works on the pilot diaphragm causing appropriate movement of the supply valve or the relief valve.** Movements as small as .0001 inches (.0025mm) will cause the main valve to correct to the proper position. Relief flows of up to 10 SCFM can be achieved on the high relief model (-100 models). Exhaust is achieved through the exhaust vents located in the side of the body.

- The Precision/Air Regulator controls output pressure with an accuracy of 0.1%, and has very low sensitivity to changes in supply pressure and flow.
- This regulator has been designed to eliminate need for any readjustment of the regulated pressure after long "down time." At start-up, the regulated pressure will return to its output setting.
- The regulated pressure is held constant over substantial changes in flow due to the high-gain pneumatic servoamplifier. Particularly good from dead end to 203.4 $m^3$/hr. (12 SCFM).
- The unit may be installed in any position. It can be panel mounted or supported by in-line plumbing.



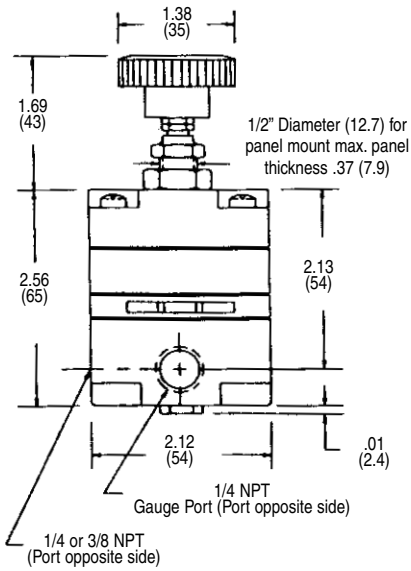
**APPLICATIONS**

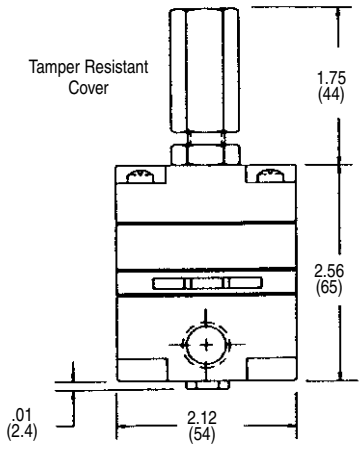
- Air gauging
- Gas mixing
- Web tensioning
- Roll loading
- Air hoists

# Performance Specifications

**Models & Dimensions, in. (mm)**

| | |
|---|---|
| **Body:** | Zinc die-cast |
| **Diaphragm:** | Buna N |
| **Metering Capsule:** | Stainless Steel |
| **Knob:** | Phenolic Plastic |
| **Flow Capacity:** | 14 SCFM (25 $m^3$/hr.) |
| **Exhaust Capacity:** | Up to 10 SCFM |
| **Sensitivity:** | .125 Inches (3.2 mm) Water Column |
| **Total Air Consumption:** | 6 SCFH (.17 $m^3$/hr.) |
| **Pilot Bleed Rate:** | 0.08 SCFM (0.15 $m^3$/hr.) |
| **Supply Pressure Variation:** | Less than .005 PSIG (.03 kpa) @ 25 PSIG variance |
| **Maximum Supply Pressure:** | 150 PSIG (1050 kpa) A filter with 5 micron element should be installed ahead of unit. |
| **Operating Temperature Range:** | 20° to 150°F (-7° to 66°C) |



# Ordering

## 1/4" & 3/8" Ports

| PORT SIZE NPT | FLOW 2 to 120 PSIG (.4-8.6 bar) | MODELS Spring Range 2 to 60 PSIG .4-4.1 bar) | 2-25 PSIG .4-1.7 bar) | WEIGHT lbs. (kg) |
|---|---|---|---|---|
| 1/4" | PR4021-100 | PR4021-200 | PR4021-300 | 1.4 (.64) |
| 3/8" | PR4031-100 | PR4031-200 | PR4031-300 | 1.4 (.64) |

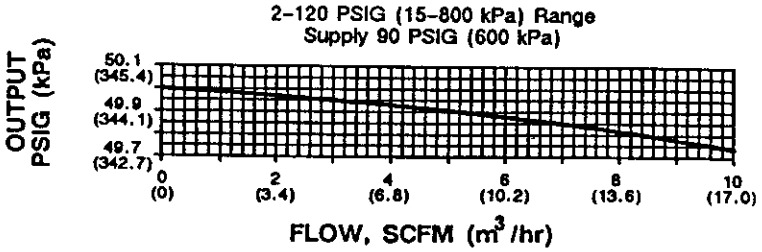
## Additional Models Available

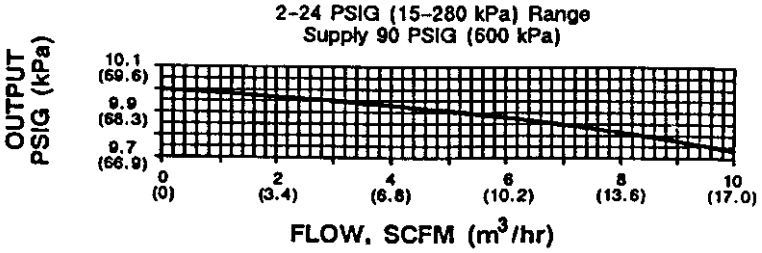
Port Size Basic Model

**1/4"** PR4021 - X X X
**3/8"** PR4031 - X X X

| X *Pressure Range PSIG (bar) | X Relieving Option | X Control Option |
|---|---|---|
| 1 = 2 - 120 (.1-8.3) no gauge<br>2 = 2 - 60 (.1-4.1) no gauge<br>3 = 2 - 25 (.1-1.7) no gauge | 0 = Relieving | 0 = Standard Knob<br>3 = Tamper Resistant Cover |

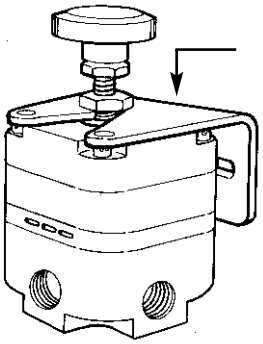
## Flow Characteristics




# Accessories

## Precision/Air Regulators



Wall Mount Bracket P/N 29077

See Page 48 For Bracket Dimensions

Service Kit: 100207-1 2 - 25 lb. or 2 - 60 lb. Spring Range
100207-2 2 - 120 lb. Spring Range

