



PR Series Pressure Regulator Valves

1/4" TO 1-1/2" PVC AND CPVC

KEY FEATURES

- Available in PVC and CPVC
- Hand Adjustable, No Tools Needed
- Integrally Molded Threaded Gauge Port
- Regulates from 5 to 75 PSI
- Prevents Downstream Pressure from Exceeding the Set Pressure

OPTIONS

- 0 to 30 PSI Pressure Gauge
- 0 to 60 PSI Pressure Gauge
- 0 to 160 PSI Pressure Gauge
- Gauge Guards
- Flanged Ends

MATERIALS

- PVC Cell Class 12454 per ASTM D1784
- CPVC Cell Class 23447 per ASTM D1784
- FPM O-Ring Seals

TECHNICAL INFORMATION

SELECTION CHART

SIZE*	MATERIAL	END CONNECTION	SEALS	PRESSURE SETTING	PRESSURE RATING
1/4" – 1-1/2" (DN8 – DN40)	PVC or CPVC	Threaded or Flanged	FPM	5 to 75 PSI	150 PSI @ 70°F 10 Bar @ 21°C Non-Shock

* Available with threaded ends to BS21.

Brisbane, Australia
www.monarchindustrial.com.au
www.monarchasiapacific.com.au

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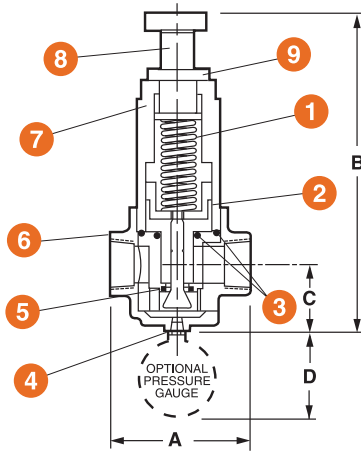
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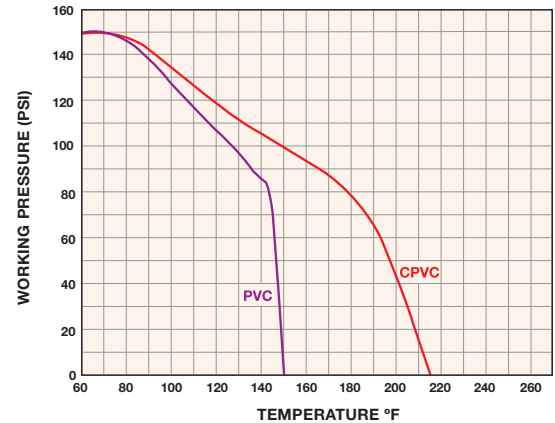
TECHNICAL INFORMATION, CONTINUED

PARTS LIST

1. Spring (Plastic Coated)
2. Diaphragm Assembly
3. O-Ring Seals
4. Gauge Port
5. Square Cut Seal
6. Body
7. Bonnet
8. Stem
9. Locknut



OPERATING TEMPERATURE/PRESSURE



DIMENSIONS

SIZE in / DN	A in / mm	B in / mm	C in / mm	D in / mm	WEIGHT lb / kg
1/4 / 8	4.13 / 105	9.25 / 235	2.13 / 54	2.38 / 60	1.38 / .63
1/2 / 15	4.13 / 105	9.25 / 235	2.13 / 54	2.38 / 60	1.38 / .63
3/4 / 20	4.13 / 105	9.25 / 235	2.13 / 54	2.38 / 60	1.38 / .63
1 / 25	5.50 / 140	14.00 / 356	3.00 / 76	2.38 / 60	4.75 / 2.15
1-1/2 / 40	5.50 / 140	14.00 / 356	3.00 / 76	2.38 / 60	4.75 / 2.15

Dimensions are subject to change without notice – consult factory for installation information

HOW TO SIZE A PRESSURE REGULATOR

Pressure regulator selection is based on the desired flow, inlet pressure and the desired outlet pressure.

Example: A system requires a flow rate of 10 GPM at a set pressure of 30 PSI, and the inlet pressure is 50 PSI. From the graph at right, a 1" regulator has a flow coefficient of 5.5 at a 30 PSI set pressure.

$$\Delta P = (Q \div Cv)^2 \quad \Delta P = \text{Pressure Drop}$$

$$\Delta P = (10 \div 5.5)^2 \quad Q = \text{Flow in GPM}$$

$$\Delta P = 3.3 \text{ PSI} \quad Cv = \text{Flow Coefficient}$$

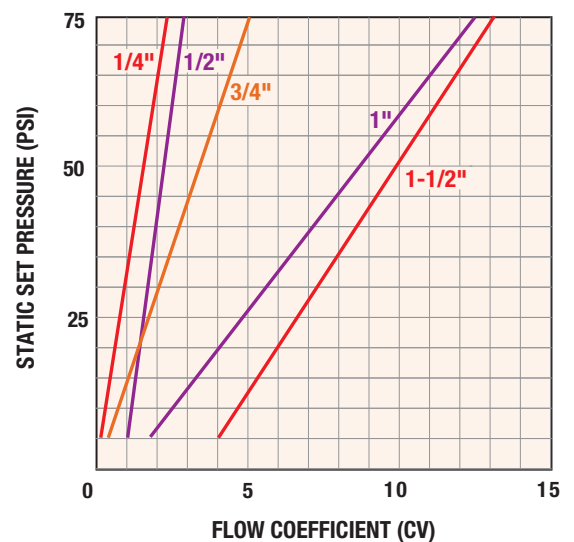
The 1" regulator will meet the requirements because 3.3 PSI is less than the required pressure drop of 20 PSI (50 PSI inlet pressure less 30 PSI set pressure). The maximum flow rate in this example is:

$$Q = Cv \sqrt{\Delta P}$$

$$Q = 5.5 \sqrt{20}$$

$$Q = 24.6 \text{ GPM}$$

FLOW COEFFICIENTS



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