



## PR Series Pressure Regulator Valves

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

### KEY FEATURES

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

### MATERIALS

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

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## 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 Non-Shock

\* Inlet pressure over 75 PSI cannot be regulated

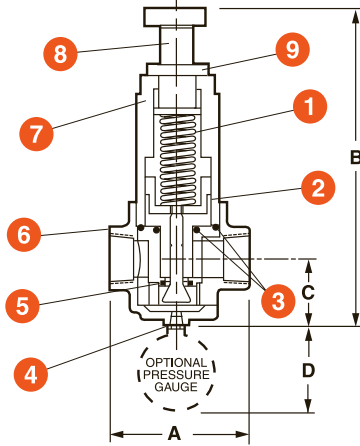
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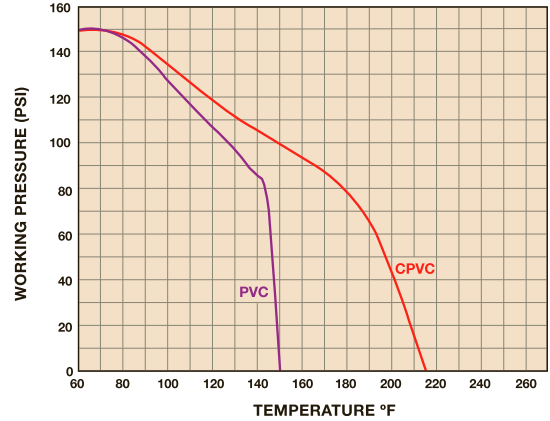
## TECHNICAL INFORMATION, CONTINUED

### 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.

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

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

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

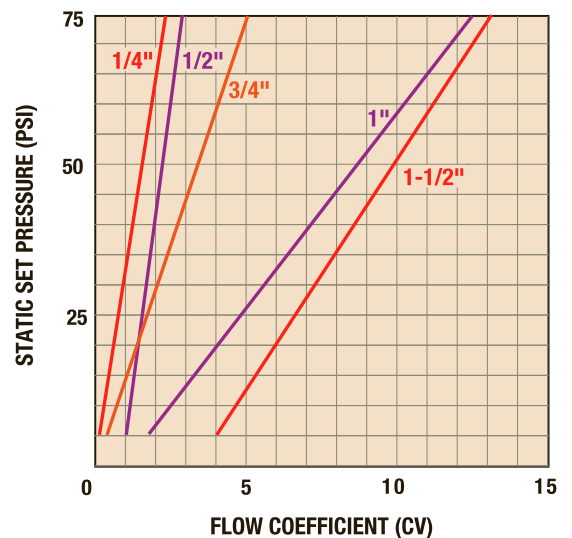
The 1" regulator will meet the requirements because 3.3 PSI is less than the required pressure drop of 20 PSI (50 PSI inlet pressure less 30 PSI set pressure). The maximum flow rate in this example is:

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

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

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

### FLOW COEFFICIENTS



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