

921 Series Pressure Regulator

Pressure Reducing or Back Pressure Relief Valve

PRESSURE REGULATORS



921 shown

- ▶ Self-Contained Design
- ▶ Spring-loaded Diaphragm Actuated
- ▶ Cast Ductile Iron Housing & Yoke
- ▶ 1/2" - 6" Valve Sizes

The Trerice **921Series** Pressure Regulator is fully self-contained and requires no external power source. This regulator requires that a user-supplied pressure sensing line be connected from the controlled point to the diaphragm actuator. Pressure in this line acts upon the diaphragm to develop the necessary thrust to stroke the valve, thereby maintaining the system at the desired condition.

- For pressure reducing applications, the pressure sensing line is mounted downstream, and the valve closes as this sensed pressure increases.

Reduced outlet pressure not to be less than 10% of inlet pressure.

- For back pressure relief applications, the sensing line is mounted upstream, and the valve opens as the sensed pressure increases.

For optimal performance, the service conditions (medium, flow, temperature, inlet and outlet pressures) of the application must be considered when selecting a valve. Please refer to the Valve Selection Section of this catalog. Improper application may cause failure of the valve, resulting in possible personal injury or property damage.

Specifications

Actuator Models

| | |
|---------------|---------------------------|
| 921PRV | (Pressure Reducing Valve) |
| 921BPR | (Back Pressure Relief) |

Housing Cast ductile iron, black finish

Pressure Plate Cast iron

Diaphragm Material Nylon reinforced Neoprene

Regulated Pressures
2-100 psi

Maximum PRV Inlet Pressure
1/2" - 2": 200 psi
2 1/2" - 6": 125 psi*

Maximum BRP Set Pressure
100 psi

Pressure Connection
1/4 NPT

Adjustment Nut
Steel

Adjustment Screw
Brass

Adjustment Spring
Cadmium plated steel

Body Material
1/2"-2": Bronze
2 1/2"-6": Cast iron

Trim Material Stainless steel

Trim Style Quick-opening

Connection
1/2"-2": Threaded, malleable Iron union ends
2 1/2"-6": Class 125 Flanged

Pressure & Temperature Rating
1/2"-2": 250 psi @ 410° F (210° C)
2 1/2"-6": 125 psi @ 350° F (175° C)

HOW TO ORDER

Sample Order Number: **921PRV-A55-075060**

| Model | Valve | Inlet Pressure | Outlet Pressure |
|--|----------------------|---|---|
| 921PRV- (Pressure Reducing Valve) | See Available Valves | Specify Upstream Pressure in psig (i.e., 75 psig = 075) | Specify Downstream Pressure in psig (i.e., 60 psig = 060) Omit if 921BPR |
| 921BPR- (Back Pressure Relief) | | | |

*200 psi inlet available with Class 250 flanged valve body. Consult Factory.

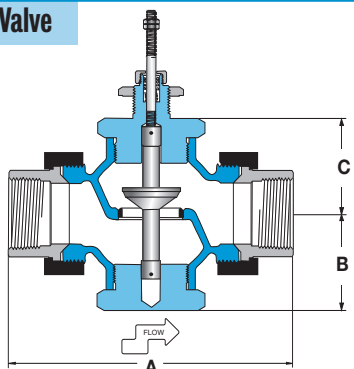
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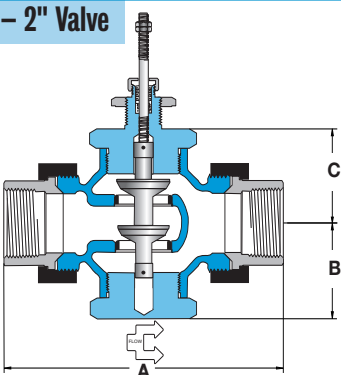
All dimensions are nominal. Dimensions in [] are in millimeters.

Pressure Reducing (PRV)

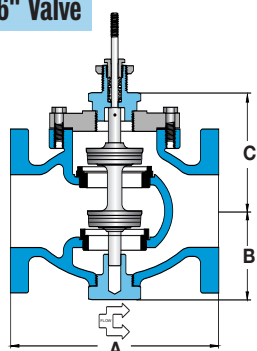
1/2" Valve



3/4" - 2" Valve

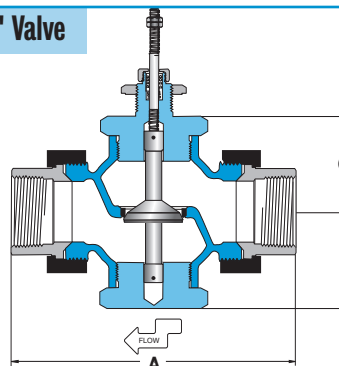


2 1/2" - 6" Valve

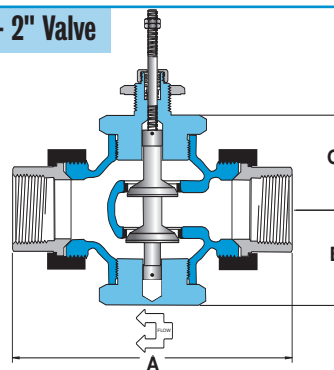


Back Pressure Relief (BPR)

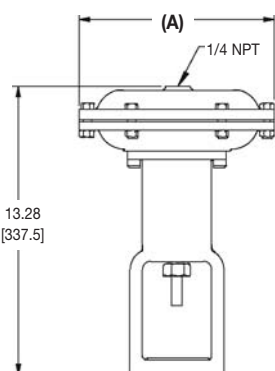
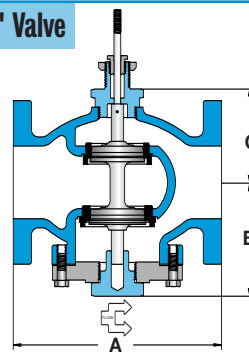
1/2" Valve



3/4" - 2" Valve



2 1/2" - 6" Valve



Actuator (A) Dimension

| | |
|---|------------|
| A | 6.1 [155] |
| B | 7.0 [178] |
| C | 8.1 [206] |
| D | 9.0 [229] |
| E | 11.0 [279] |

Note: Actuator size and internal spring are determined by the inlet and outlet pressure requirements and will be specified by the factory at the time of order.

Valve Selection

| (PRV) Pressure Reducing | (BPR) Back Pressure Relief | Size Connection | Nominal Port | Number of Seats | Capacity C _v * | Maximum** Inlet (psig) | Dimensions | | | Approximate Shipping Wt. |
|-------------------------|----------------------------|-----------------|--------------|-----------------|---------------------------|------------------------|------------|-----------|-----------|--------------------------|
| | | | | | | | A | B | C | |
| A14 | A15 | 1/2 NPT | 1/2" | 1 | 2.8 | 200 | 4.8 [122] | 1.8 [46] | 1.8 [46] | 3.0 lbs [1.35 kg] |
| A21 | A24 | 3/4 NPT | 3/4" | 2 | 8 | 200 | 5.6 [142] | 2.3 [58] | 2.3 [58] | 5.0 lbs [2.25 kg] |
| A29 | A33 | 1 NPT | 1" | 2 | 12 | 200 | 6.0 [152] | 2.3 [58] | 2.3 [58] | 6.1 lbs [2.75 kg] |
| A39 | A44 | 1 1/4 NPT | 1 1/4" | 2 | 21 | 200 | 7.2 [183] | 2.6 [66] | 2.6 [66] | 10.1 lbs [4.55 kg] |
| A50 | A55 | 1 1/2 NPT | 1 1/2" | 2 | 30 | 200 | 7.7 [196] | 2.6 [66] | 2.6 [66] | 11.1 lbs [5.00 kg] |
| A61 | A66 | 2 NPT | 2" | 2 | 47 | 200 | 7.6 [218] | 3.1 [79] | 3.1 [79] | 17.0 lbs [7.65 kg] |
| B73 | B74 | 2 1/2" | 2 1/2" | 2 | 78 | 125 | 7.8 [198] | 4.8 [122] | 5.4 [137] | 45 lbs [20 kg] |
| B78 | B79 | 3" | 3" | 2 | 110 | 125 | 9.0 [229] | 5.0 [127] | 5.6 [142] | 70 lbs [32 kg] |
| B83 | B84 | 4" | 4" | 2 | 220 | 125 | 11.4 [290] | 6.3 [160] | 6.5 [165] | 100 lbs [45 kg] |
| B88 | B89 | 5" | 5" | 2 | 275 | 125 | 12.0 [305] | 6.9 [175] | 7.3 [185] | 155 lbs [70 kg] |
| B93 | B94 | 6" | 6" | 2 | 378 | 125 | 14.1 [358] | 7.5 [191] | 8.0 [203] | 180 lbs [82 kg] |

*The valve selected should have a C_v approximately two times that required by the service conditions. This will allow the valve to operate in approximately the 50% open position. ** Maximum BPR set pressure 100 psi.