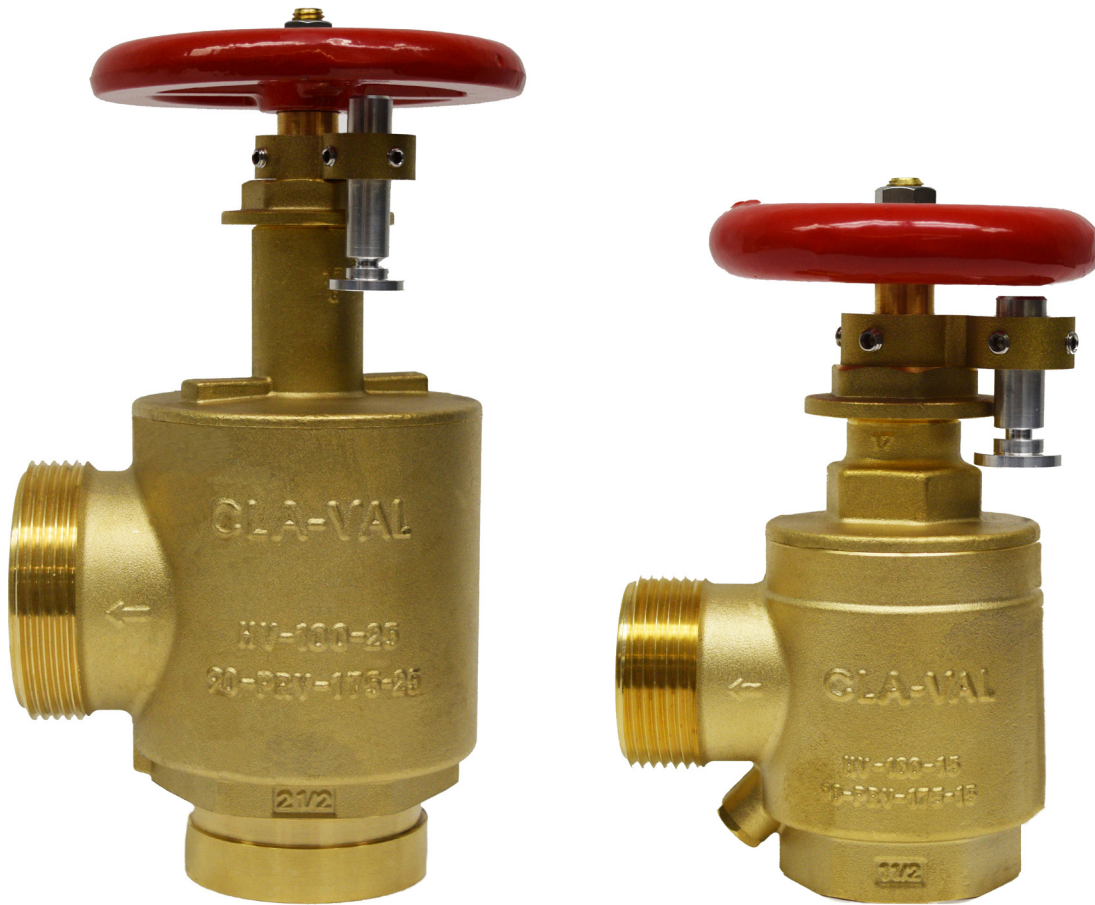




# 90-PRV-175 SERIES

*Pressure Reducing Valves*



**Installation / Operation / Maintenance**





## **Application**

The 90-PRV-175-15 series 1 ½" valve is designed for use as a pressure restricting valve in Class II fire protection standpipe systems and the 90-PRV-175-25 series 2 ½" valve is designed for use as a pressure restricting valve in Class I and Class III fire protection systems.

The 90-PRV-175-15 and 90-PRV-175-25 series of valves are intended to be shut off valves as well as flow throttling valves to reduce excess standpipe pressures under flow conditions only to a maximum inlet pressure of 175 psi.

## **Approvals & Listings**

These valves are listed by Underwriters Laboratories and Underwriters Laboratories Canada as Pressure reducing devices (VUTX and VUTXC). Requirements for the installation of pressure restricting valves in standpipe systems are given in Section 5-8 of NFPA 14, Standard for the installation of Standpipe and Hose Systems

## **Flow Rate Limits**

The following maximum flow rate limits should be observed for the Model 90-PRV-175-15 1-½" series valve:

- 1-½" valve Maximum Flow      100 GPM Maximum Pressure      175 PSI

The following maximum flow rate limits should be observed for the 90-PRV-175-25 2-½" series valve:

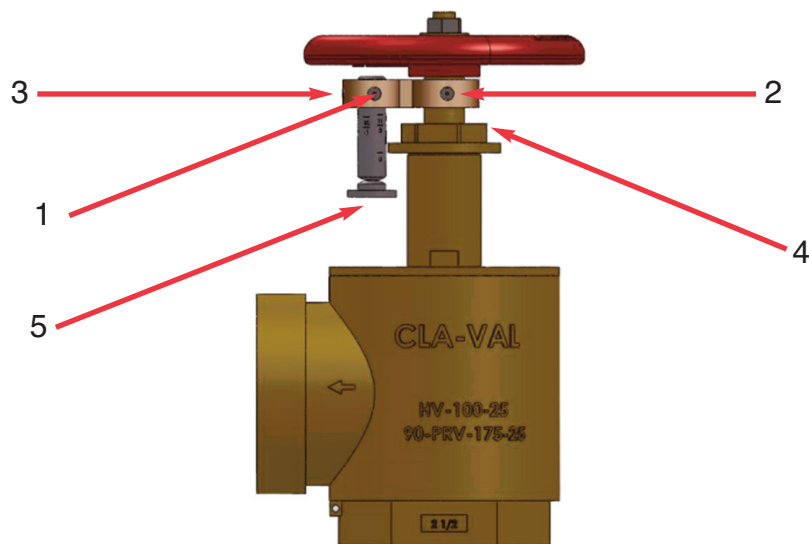
- 2-½" valve Maximum Flow      300 GPM Maximum Pressure      175 PSI

## **Pressure Range**

NFPA 14 requires that hose valve outlet pressure for Class I and Class III service be no greater than 175 PSI and no less than 100 PSI. When permitted by the authority having jurisdiction, pressures less than 100 PSI may be allowed, but in no case should the valve discharge pressure be less than 65 PSI. Class II hose valves must be limited to a maximum residual outlet pressure of 100 PSI, but the minimum outlet pressure shall not be less than 65 PSI.

## Construction and Principle of the 90-PRV-175-15 Series and 90-PRV-175-25 Series Pressure Reducing Valves

The 90-PRV-175-15 series and 90-PRV-175-25 series valves are similar to Standard Angle valves except the PRV series valves have a specially designed mechanism incorporated into the stem and bonnet to limit how far the valve can be opened. The valve design has no ability to reduce outlet pressure under no-flow conditions. If low supply pressure conditions should arise the adjustable gauge stem can be overridden by trained fire department personnel by breaking the base of the adjustable gauge with a spanner wrench or other tools available to the personnel.



### Instructions for Setting Valves

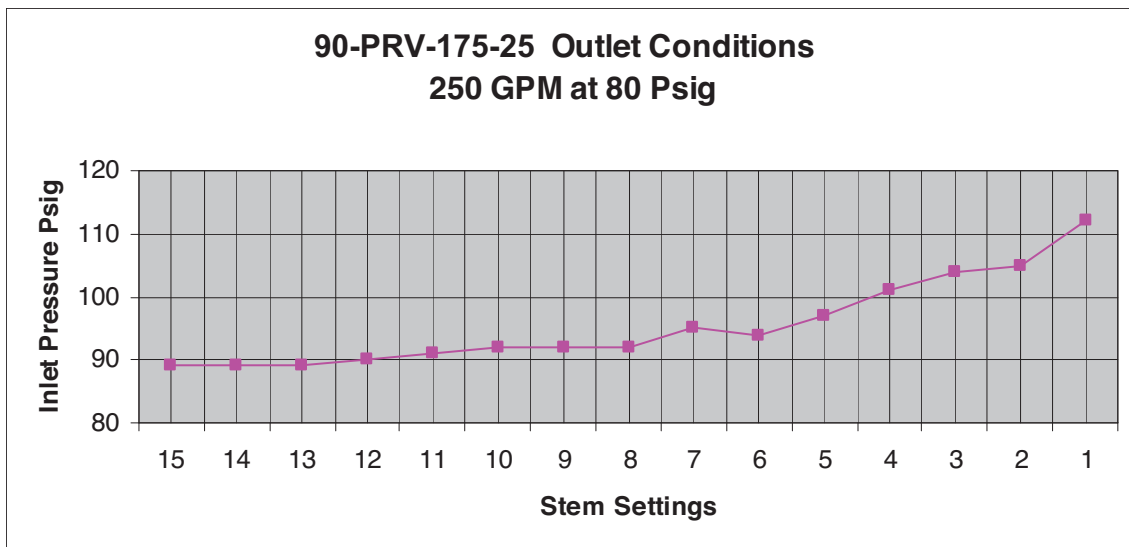
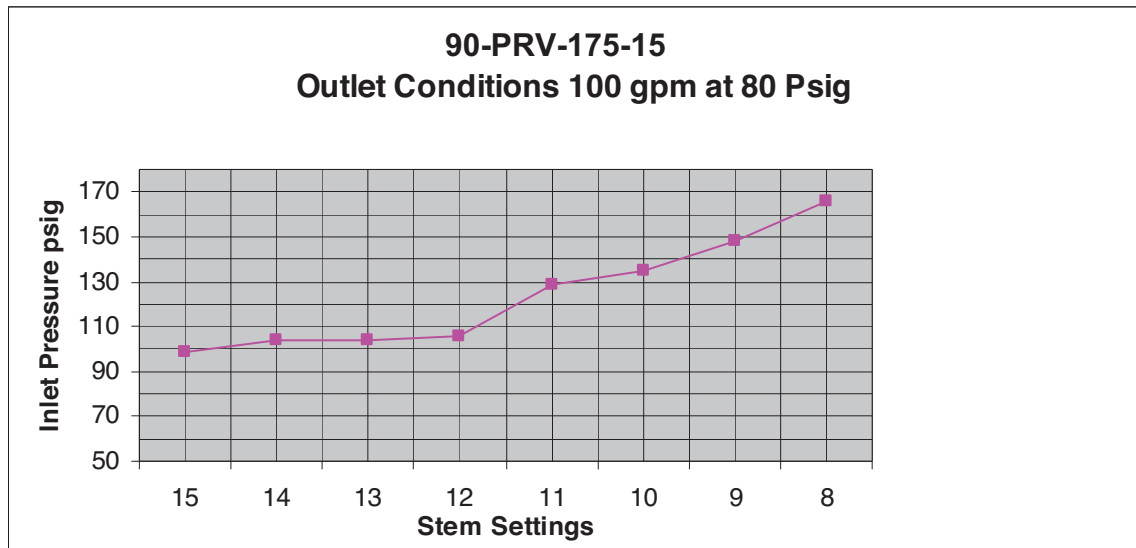
1. Close valve
2. Back off 4 sets screw (#1 & #2)
3. Allow bottom side of the gauge stop sleeve (#3) to rest upon the packing nut (#4)
4. Insert the gauge stem (#5) into the gauge stop sleeve (#3) until the dash directly about the 0 setting is flush with the bottom side of the gauge sleeve (#3)
5. Temporarily tighten one set screw (#1) which will the gauge stem (#5) in the gauge sleeve (#3)
6. Push upward on the bottom of the gauge stem(#5) unit it is stopped by the packing nut (#4)
7. Tighten the two set screws (#2)
8. Loosen off the set screw (#1)
9. Determine inlet pressure
10. Keeping the valve closed set gauge stem (#5) to desired setting and tighten two set screws (#1)



**INSTALLATION AND OPERATING INSTRUCTIONS**

Upon completion of the system, each pressure restricting hose valve shall be tested in accordance 8-5.5 of NFPA 14 to verify the following:

- The installation is correct
- The valve(s) are operating properly
- That the inlet and outlet pressures of the valve(s) are in accordance with the design parameters





90-PRV-175-15 1 ½" valve series valve

90-PRV-175-25 2 ½" valve series valve

## INSTALLATION AND OPERATING INSTRUCTIONS

### Maintenance and Testing

Maintenance and Testing should be done in accordance with NFPA 25, Standard for the inspection, testing and Maintenance of Water based Fire Protection Systems for a determination of the required test frequency and methods. The valve(s) should be inspected for damage or corrosion annually. Valves should be operated by hand, never using a torque bar or other device to exert pressure. Excess torque may cause damage to the seat, stem or other working parts. If a valve fails to perform as intended, the valve should be replaced



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**N-90-PRV-175 Series (R-06/2019)**

