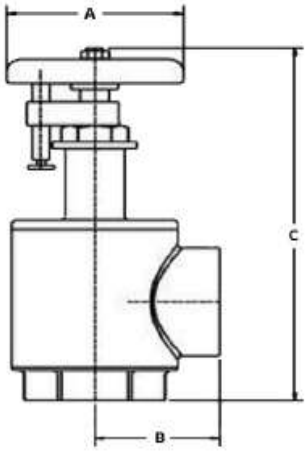
PRESSURE RESTRICTING ANGLE HOSE VALVES

Combination angle hose and pressure restricting valve are UL/ULC listed and FM Approved 300 lbs (2068 kPa) pressure tested, cast brass, pressure restricting angle hose valves where standpipe pressure at the inlet of the valve is less than 175 psi (1207 kPa) and greater than 90 psi (620 kPa).
Finish : Cast Brass

6520012: 2-1/2”(F) NPT x 2-1/2”(M) NST

Dimensions: 2-1/2” Valve



A: 5” (127 mm)
B: 3.187” (81 mm)
C: 11” (279 mm) [Open]
C: 9.25” (235 mm) [Closed]

System No.		Location		Spec Section		Paragraph	
Submitted By		Date		Approved		Date	

PRESSURE RESTRICTING ANGLE HOSE VALVES

Application

The Pressure Restricting Angle Hose Valve 2-½” is designed for use in Class I and Class III fire protection systems. Theses are intended to be shut off valves as well as a flow throttling valves to reduce excess standpipe pressures under flow conditions only to a maximum inlet pressure of 175 psi. 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.

2-½” Valve
Maximum Flow: 300 GPM
Maximum Pressure: 175 PSI

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 Pressure Restricting Angle Valves

The 2-½” size 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 by 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.

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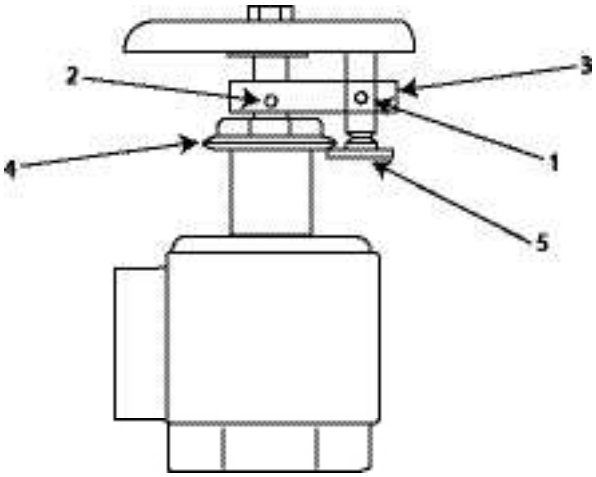
Instructions for Setting the Pressure Restricting Angle Valve

1. Assemble & close valve
2. Back off 4-set screws (#1, #2)
3. Allow bottom side of gauge stop sleeve (#3) to rest upon the packing nut (#4)
4. Insert the gauging stem (#5) into the gauge stop sleeve (#3) until the dash directly above the “0” setting is flush with the bottomside of the gauge stop sleeve (#3)
5. Temporarily tighten one set screw (#1) which will hold the gauging stem (#5) inthe gauge stop sleeve (#3)
6. Push upward on the bottom of the gauging stem (#5) until it is stopped by thepacking nut (#4)
7. Tighten the two set screws (#2)
8. Back off the set screw (#1)
9. Determine inlet pressure
10. Consult graph below to find the correct open position for the valve to produce a discharge pressure desired with the inlet pressure available.
11. Keeping the valve closed, set gauging stem (#5) to setting desired and tighten two set screws (#1)



Upon Completion of the system each pressure restricting hose valve shall be tested in accordance 8-5.5 of NFPA 14 to verify that the installation is correct and the valve(s) are operating properly, that the inlet and outlet pressures of the valve(s) are in accordance with the design.

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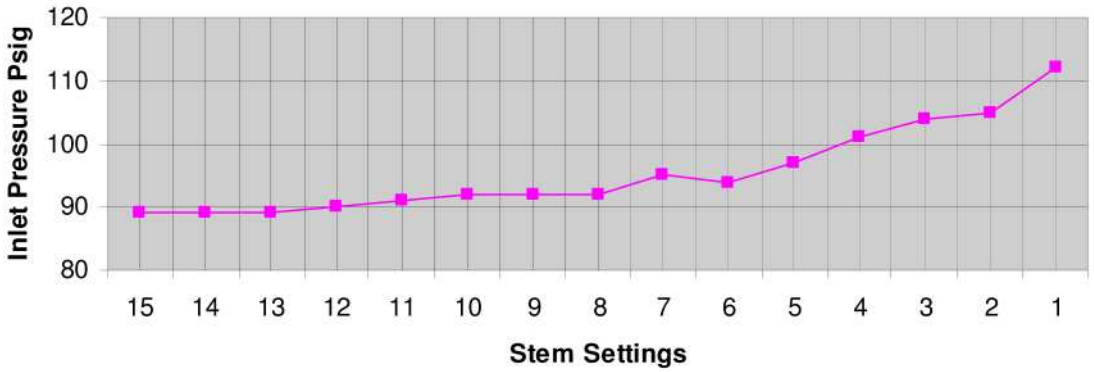
Pressure Restricting Angle Valve 2-½"
Outlet Conditions 250 GPM at 80 PSI



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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