



The Right Connection®

Data Sheet

Dixon's Field Adjustable Pressure Reducing Valve

This compact design fits into small spaces, while the setting of the valve requires less than 30 ft lbs of torque.



uses 3/8" rod:
<30lbs required to adjust

Features:

- UL listed
- allows flexibility during installation and the ability to adjust settings once installed as hydraulic conditions change
- used in applications when the inlet pressure is greater than 175 PSI
- 1/4" NPT gauge ports - both sides, drilled and tapped standard
- 3/8" adjusting rod included
- available with tamper switch

ANGLE

FAPRAV250F¹

- 2 1/2" female NPT x 2 1/2" male NST angle body

FAPRAVF250¹

- 2 1/2" female NPT x 2 1/2" female NPT angle body

FAPRAVG250F¹

- 2 1/2" groove x 2 1/2" male NST angle body

FAPRAVG250G¹

- 2 1/2" groove x 2 1/2" groove angle body

STRAIGHT

FAPRVG250²

- 2 1/2" groove x 2 1/2" groove inline body

FAPRVF250²

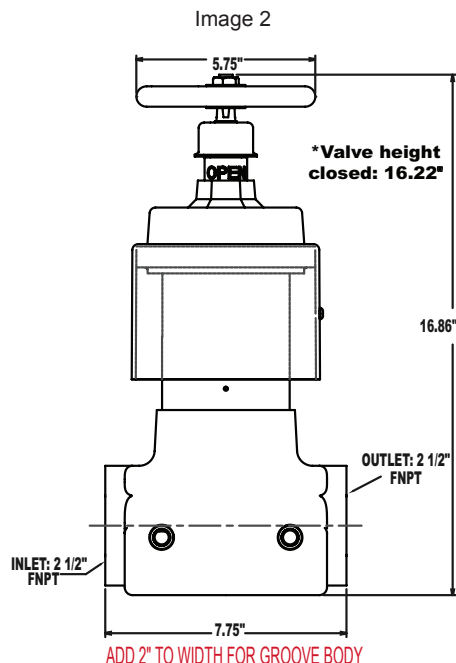
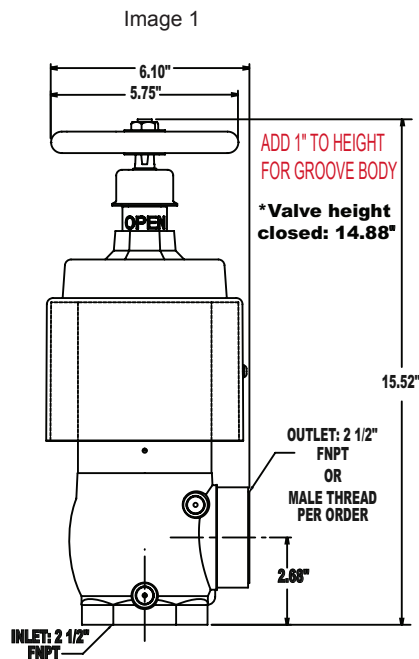
- 2 1/2" female NPT x 2 1/2" female NPT inline body

¹ image 1

² image 2

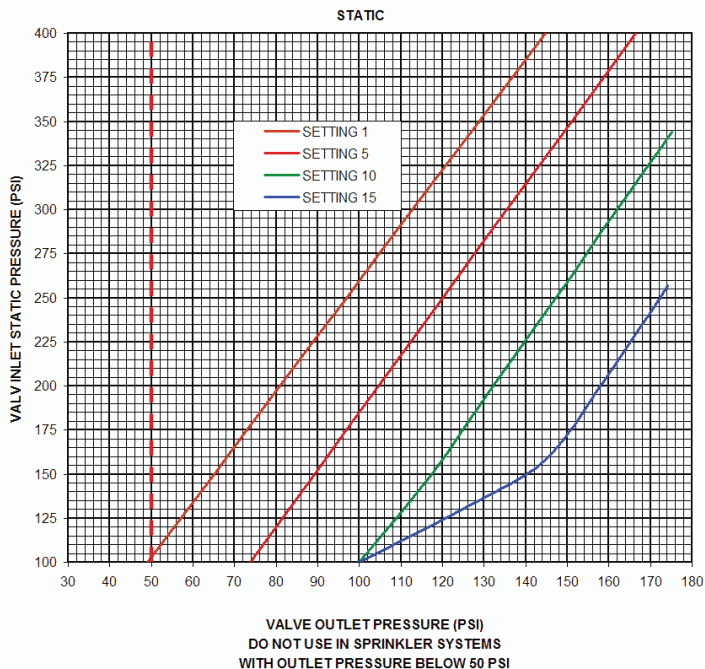
SETTING

1. Determine desired outlet pressure for known inlet pressure.
2. Remove the tamper-resistant screw and slide the plastic cover up to access the adjusting nut.
3. Use a 3/8" diameter rod in any one of the 6 holes in the adjusting nut and rotate counter clockwise to increase the pressure at the outlet.
4. Check valve under pressure under static and under the anticipated flowing conditions to ascertain that the setting produces the expected results.



Field Adjustable Pressure Reducing Valves

Valve Pressure Chart



⚠ WARNING:

The valve selected must not exceed 175 psi output either static or residual as indicated on the accompanying chart, nor can the inlet residual pressure exceed 400 PSI.

Inlet pressures as high as 400 PSI are permitted on settings 1 and 5. Inlet pressure on setting 10 should not exceed 350 PSI. Inlet pressure on setting 15 should not exceed 250 PSI.

Pressure can be expected to increase 20 – 25 PSI for each major division of the setting and to drop an average of 4 PSI per 50 GPM of flow.

For the '10' and '15' settings, Outlet pressure follows Inlet pressure up to 100 PSI, until pressure in the piston chamber overcomes the spring.

Refer to the chart at left for static setting.

To calculate intermediate settings and intermediate flows, use the following formulas:

$$\text{Outlet PSI} = \frac{(\text{inlet PSI}) - (.25 \times \text{GPM flow}) + (21.2 \times \text{set number}) + 33}{(.025 \times \text{set number}) + 3.115}$$

$$\text{Valve Set \#} = \frac{(-623 \times \text{outlet PSI}) + (200 \times \text{inlet PSI}) - (50 \times \text{GPM flow}) + 6600}{(5 \times \text{outlet PSI}) - 4240}$$

STANDPIPE SYSTEMS

For valves intended for use in a Class II standpipe system, use a straight stream nozzle with a ½ in. orifice or a 1½ in. combination fog/straight stream nozzle. Nozzles shall have a rated flow range compatible with the performance characteristics of the pressure-reducing valve. Valves shall be installed in accordance with NFPA 14 and/or 13 and NFPA 25 and shall have a minimum outlet pressure of 65 psi. The valve may be set for residual pressures less than 100 psi when permitted by the authority having jurisdiction. Upon system completion, each valve must be tested under both flow and no-flow conditions to verify outlet pressure rates satisfy system design requirements in accordance with NFPA14

AUTOMATIC SPRINKLER SYSTEMS

Automatic sprinkler systems are used to reduce the water supply pressure at which the sprinklers are designed to operate and may be used as a floor control valve suitable for indicating service and also as a checking device. Valves shall be installed in accordance with NFPA 13 and 25. A relief valve of not less than ½ in. shall be installed on the downstream side of the pressure reducing or pressure control valve and pressure gauges shall be installed on the upstream and downstream sides of the valve. Upon system completion, each valve must be tested under both flow and no-flow conditions to verify outlet pressure rates satisfy system design requirements in accordance with NFPA13

VALVE MAINTENANCE

Visual inspection of the valve body, threads, and cover should be conducted prior to installation and periodically to insure there is no physical damage. Valves are designed so the stem packing may be replaced without removing the valve from the piping system. The valve must be in the fully open position; remove handwheel and packing nut, replace stem packing o-ring. Visual inspection is recommended to assure no damage to the valve body, threads or handwheel. Replacement of internal parts is not recommended. The valve must be installed with pipe unions or rubber gasketed fittings upstream or downstream of the valve to permit easy removal of valve for replacement. The valve should be tested and maintained in accordance with NFPA 25.

WARNING: Failure to follow these installation and operating instructions could result in serious and disabling injury or death to the user or others or destructive damage to property. Never use or operate this valve without inspecting it for safe and appropriate operation.

connect with us on



Dixon Fire

ph 877-712-6179 • fx 800-283-4966
dixonvalve.com

scan to visit our website

