Instructions and Operations Manual for Field Adjustable Pressure Reducing Angle Valve

Read and understand this manual prior to installing, operating or servicing this valve

DIXON

The Right Connection®

Dixon Fire
325 Arbor Court • Winchester, Virginia 22602
ph: 877.712.6179 • fx: 800.283.4966
dixonvalve.com

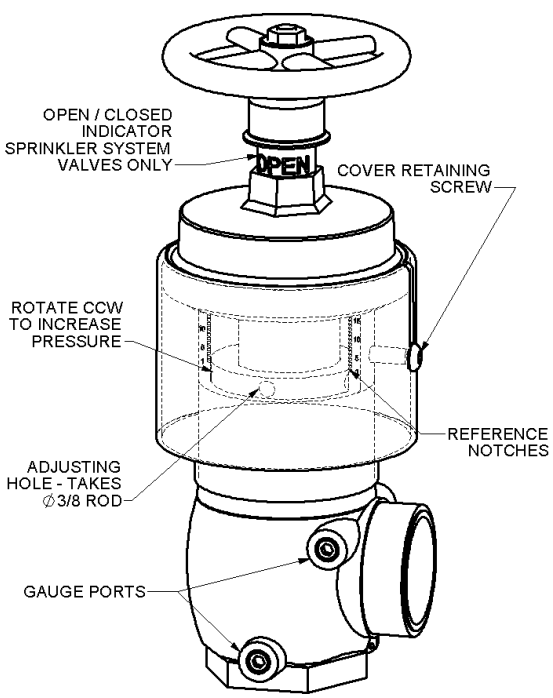
Introduction

This manual contains installation and operation instructions for the Dixon Fire Field Adjustable Pressure Reducing Angle Valve part number listed below. Please read and understand this manual prior to installing and operating this valve.

FAPRAV250F: angle 2½" female NPT inlet x 2½" male NH outlet
FAPRAVG250G: angle 2½" grooved inlet x 2½" grooved outlet
FAPRAVF250: angle 2½" female NPT inlet x 2½" female NPT outlet
FAPRVF250: straight 2½" female NPT inlet x 2½" female NPT outlet
FAPRVG250: straight 2½" grooved inlet x 2½" grooved outlet

Table of Contents

Settings

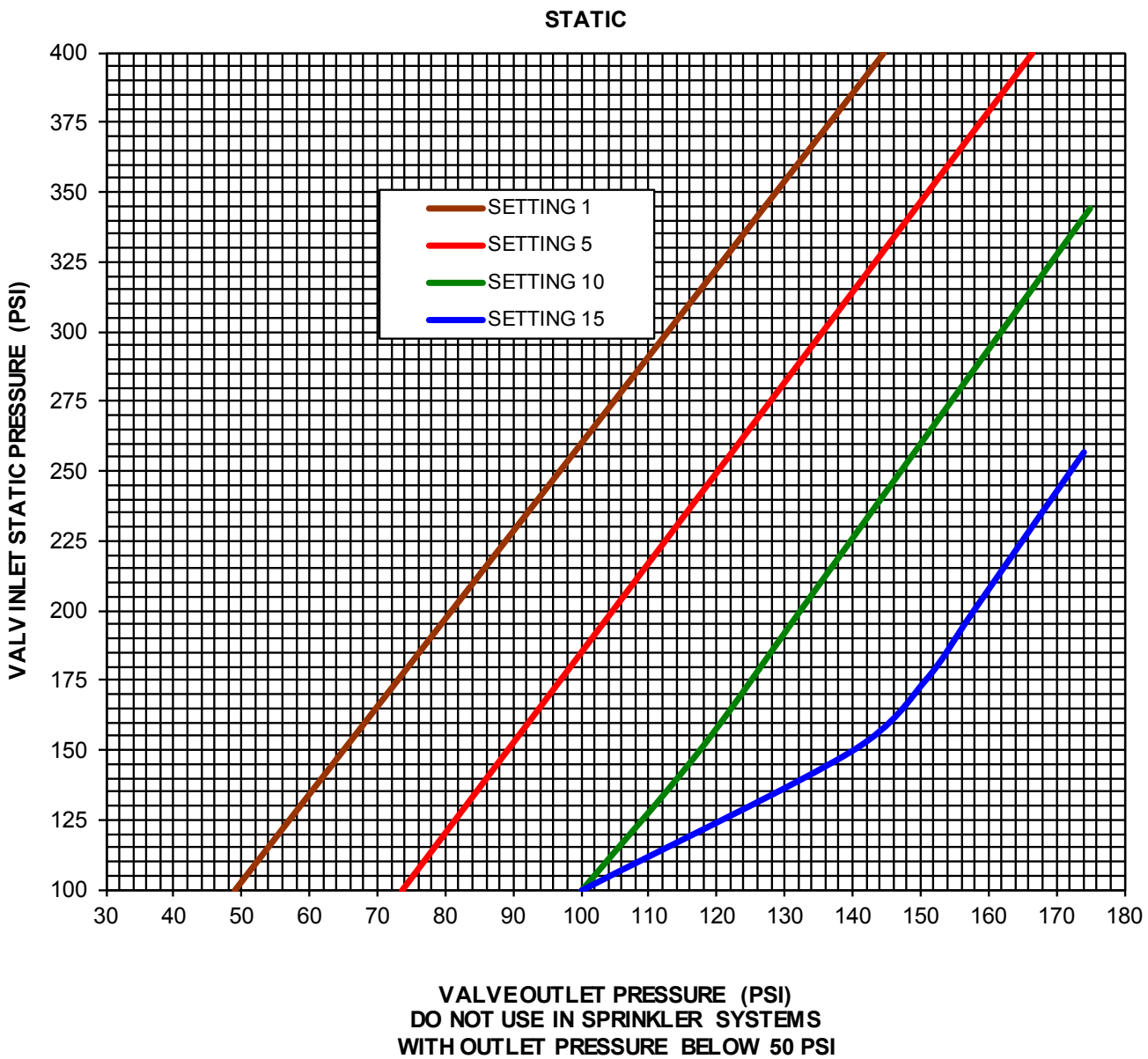


1. Determine desired outlet pressure for known inlet pressure.
2. Remove the tamper-resistant screw and slide the plastic cover up to access the adjusting nut.
3. Use a ⅜" diameter rod in any one of the 6 holes in the adjusting nut and rotate counterclockwise to increase the pressure at the outlet.
4. Check valve under pressure under static and under the anticipated flowing conditions to ascertain that the setting produces the expected results.

Note: Tamper cover is designed to be broken if access to setting is required by fire fighting personnel. Strike below retaining screw for best results. Order part# 4345700139 for replacement.

Specifications

- inlet pressures to **400 PSI**, flows to 500 GPM
- height 15.6" (396 mm) angle valve; 17.3" (440 mm) straight valve
- open / closed indication under handwheel
- all castings exposed to water low zinc brass
- ¼" NPT ports in body for pressure taps
- pressure adjustment markings cast into body
- functions as automatic check valve
- regulates under static or flow conditions



CAUTION

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

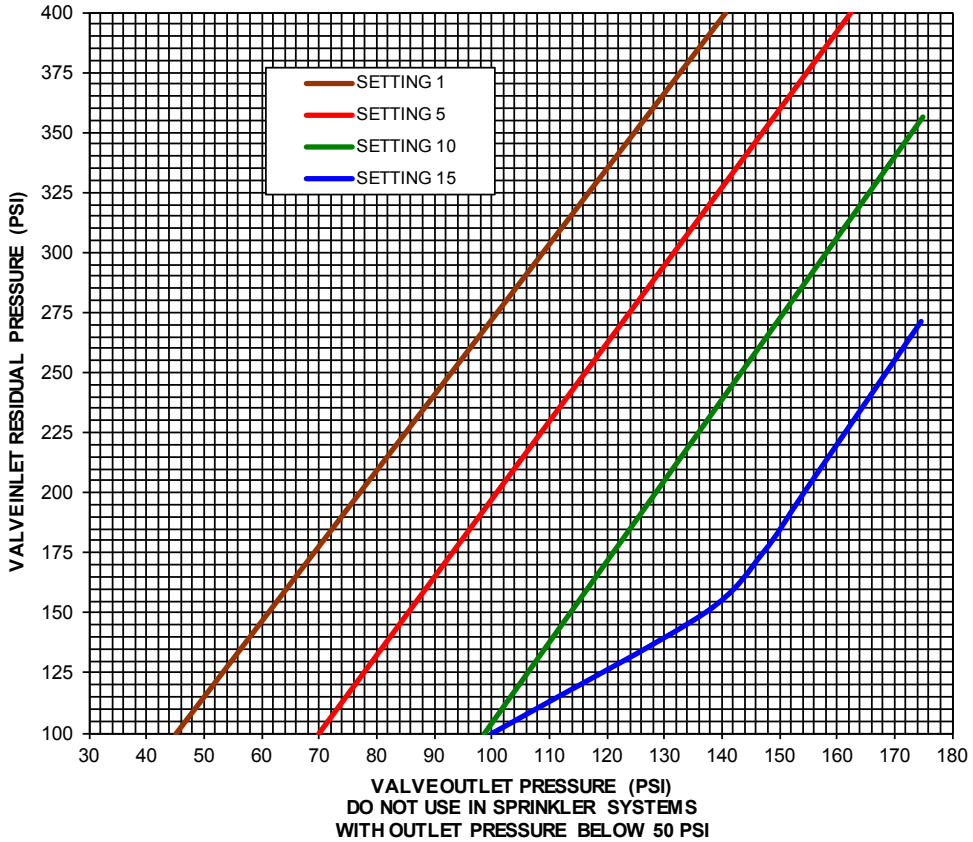
Inlet pressures as high as 400 PSI are permitted on settings 1 and 5. Inlet pressure on setting 10 should not exceed 350 PSI. Inlet pressure on setting 15 should not exceed 250 PSI.

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.

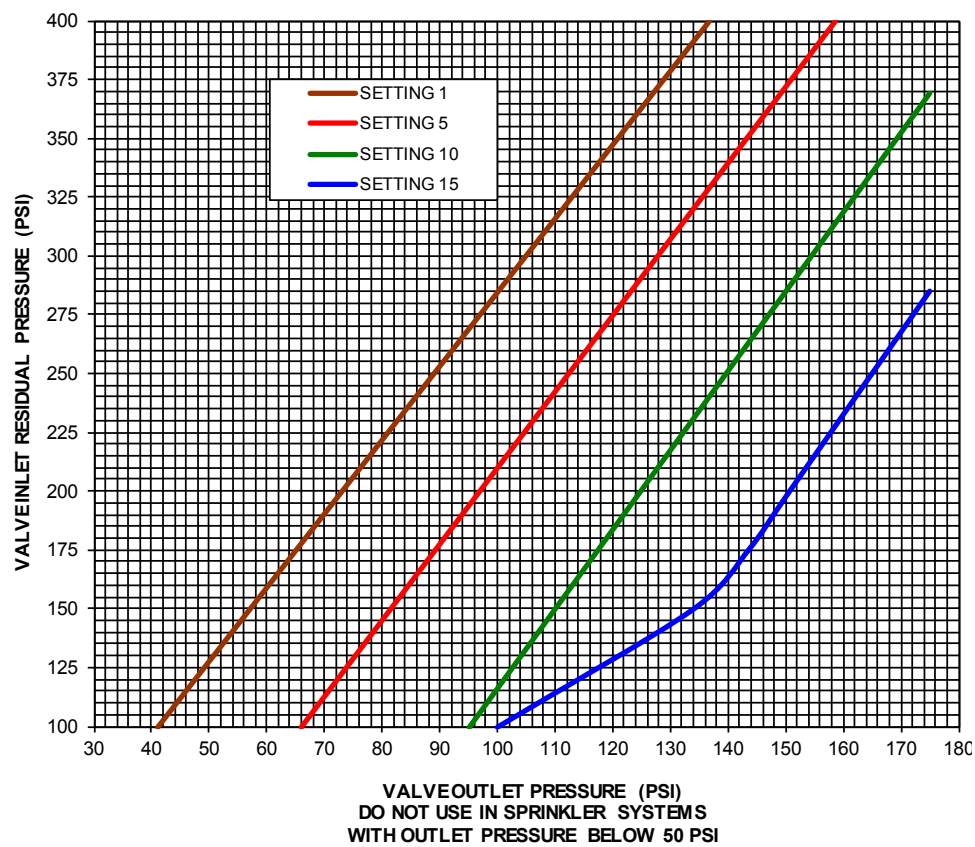
Refer to the chart above for static setting.

Specifications (cont.)

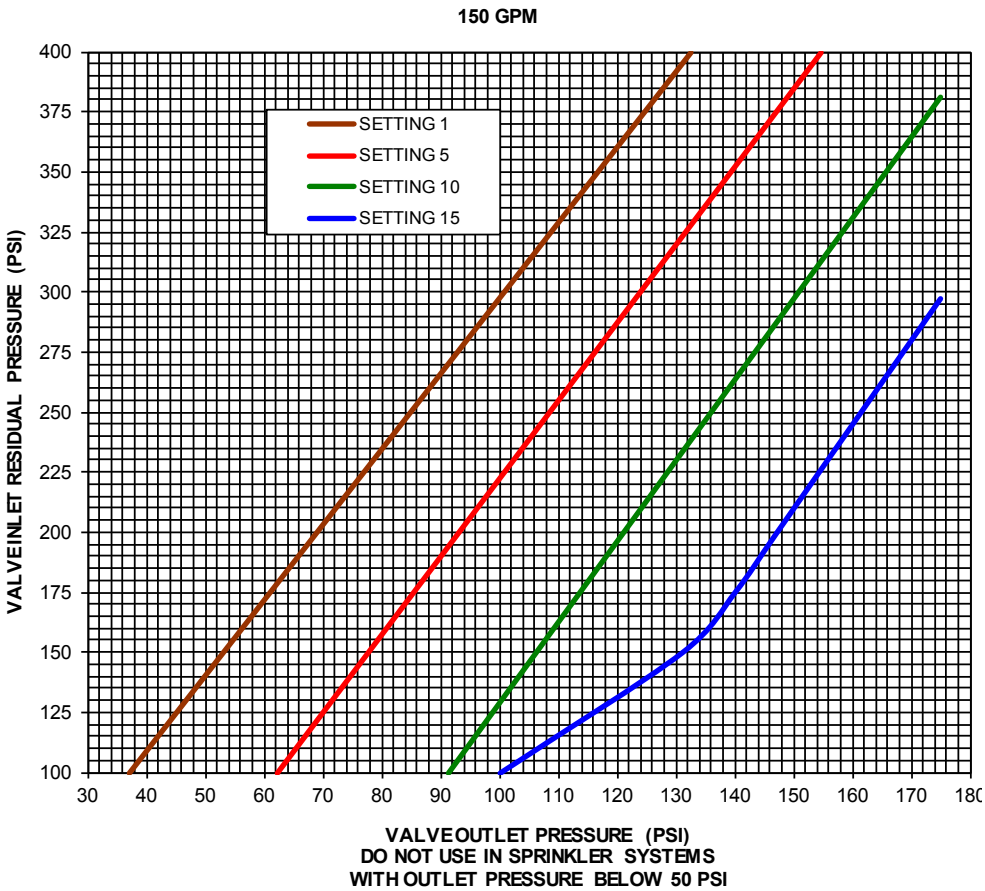
50 GPM

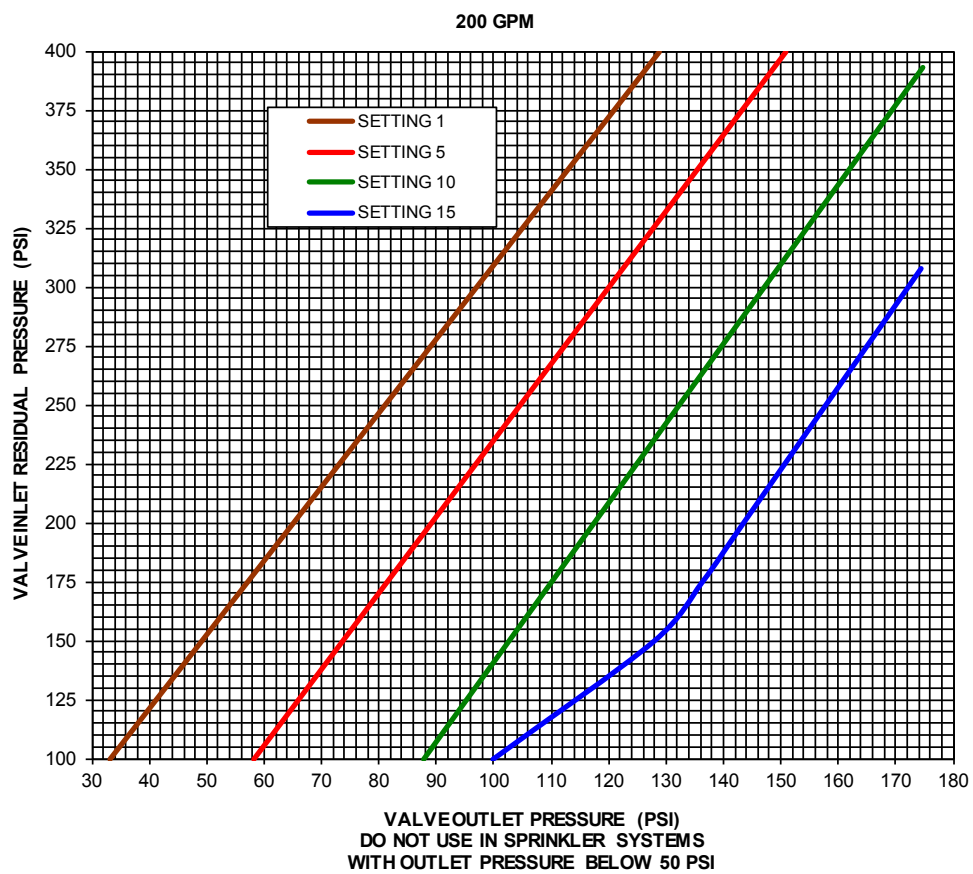


100 GPM



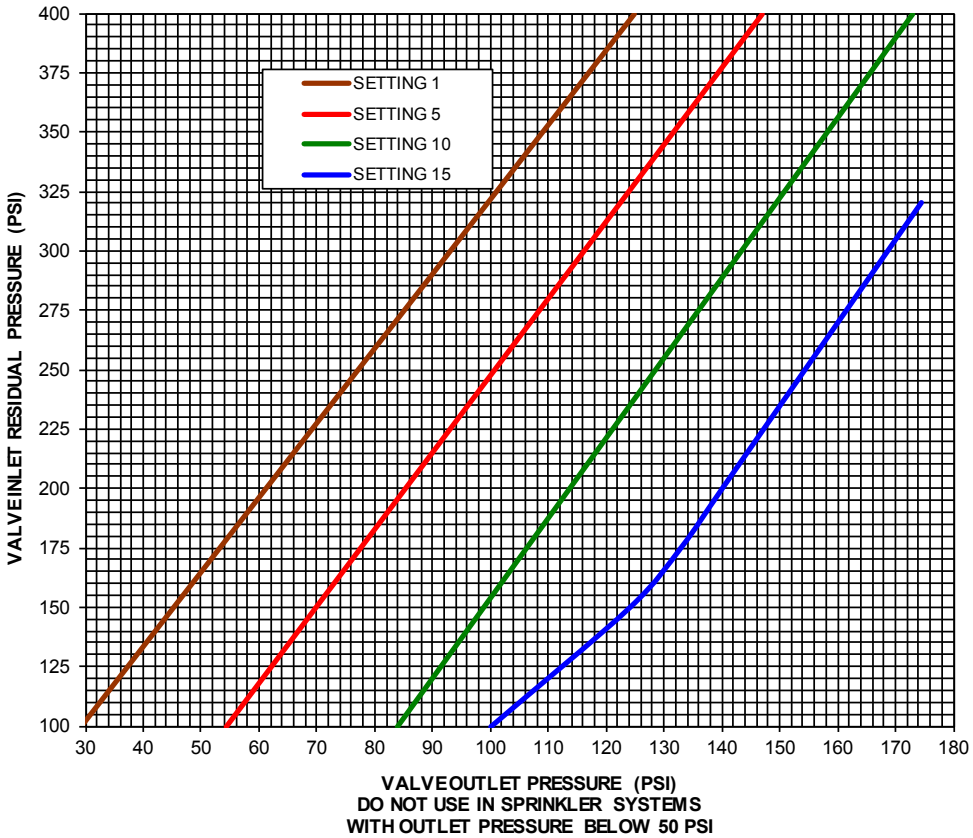
Specifications (cont.)



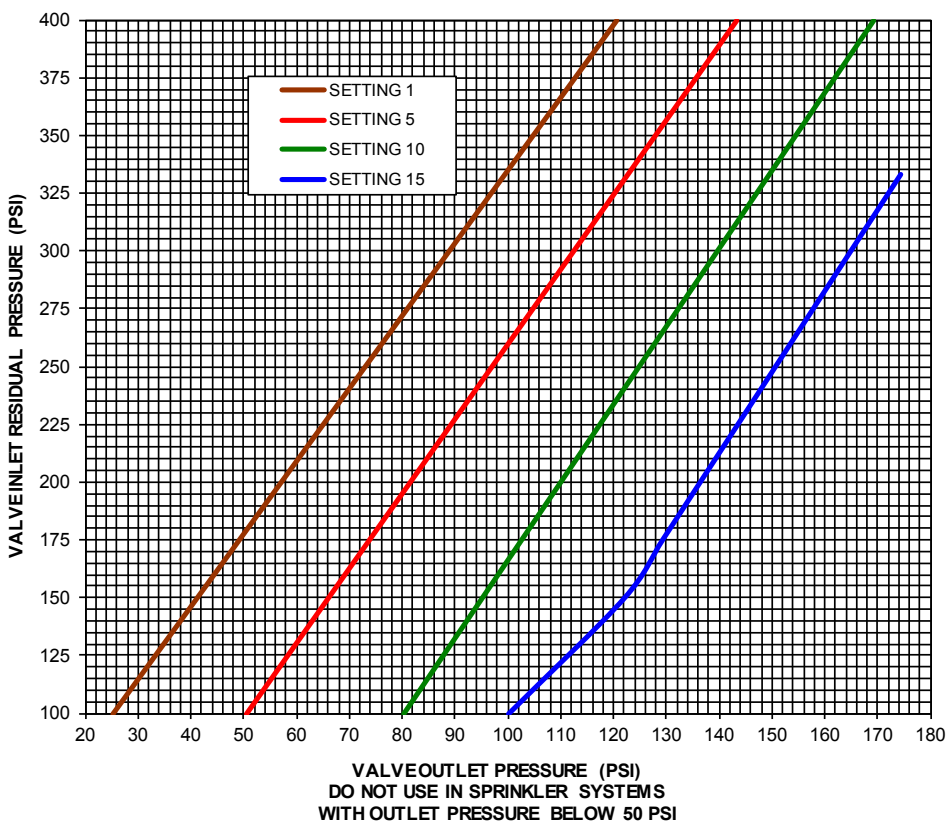


Specifications (cont.)

250 GPM

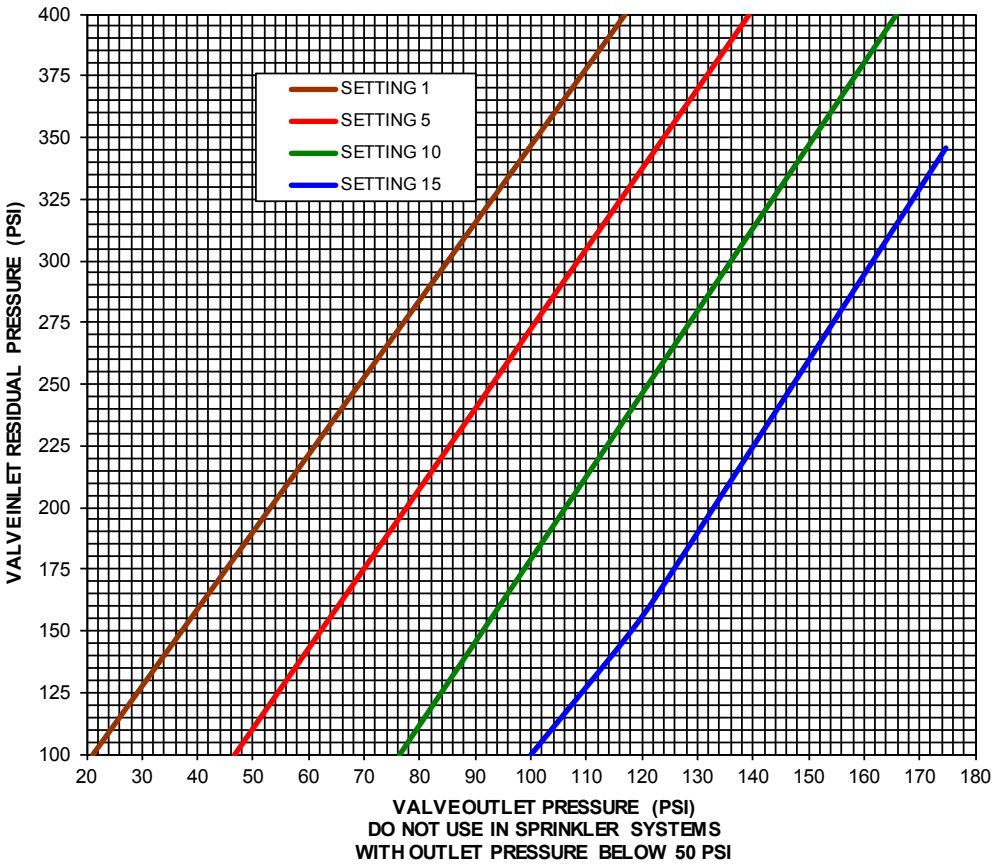


300 GPM

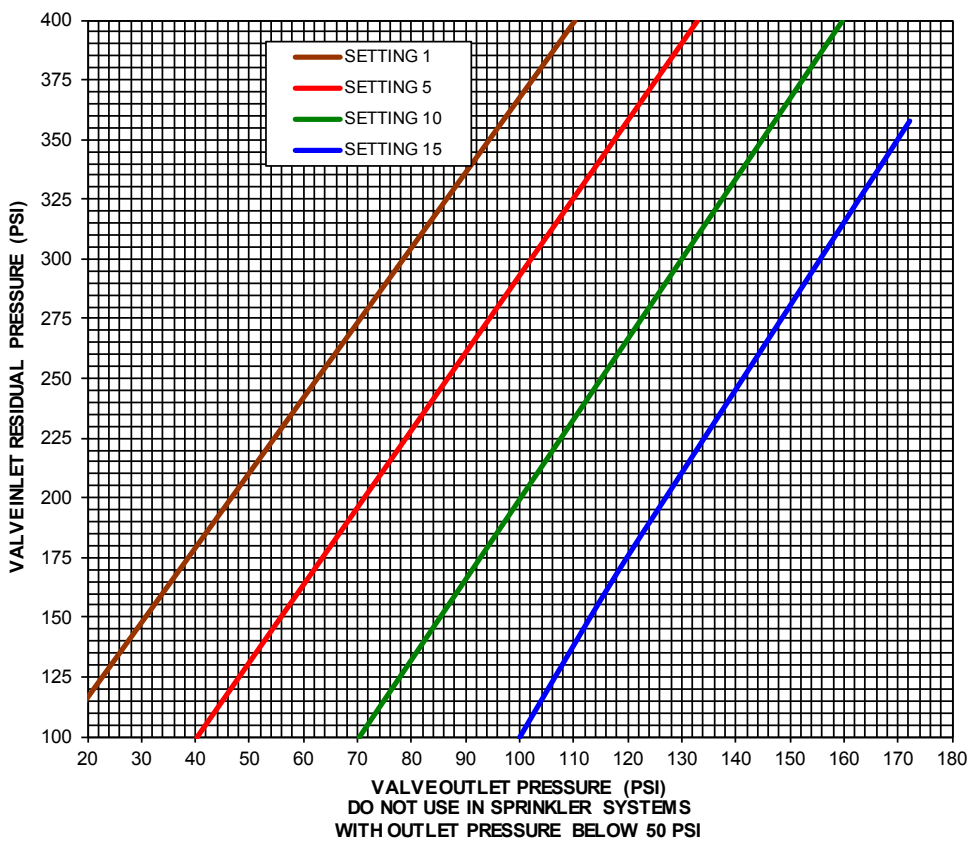


Specifications (cont.)

350 GPM

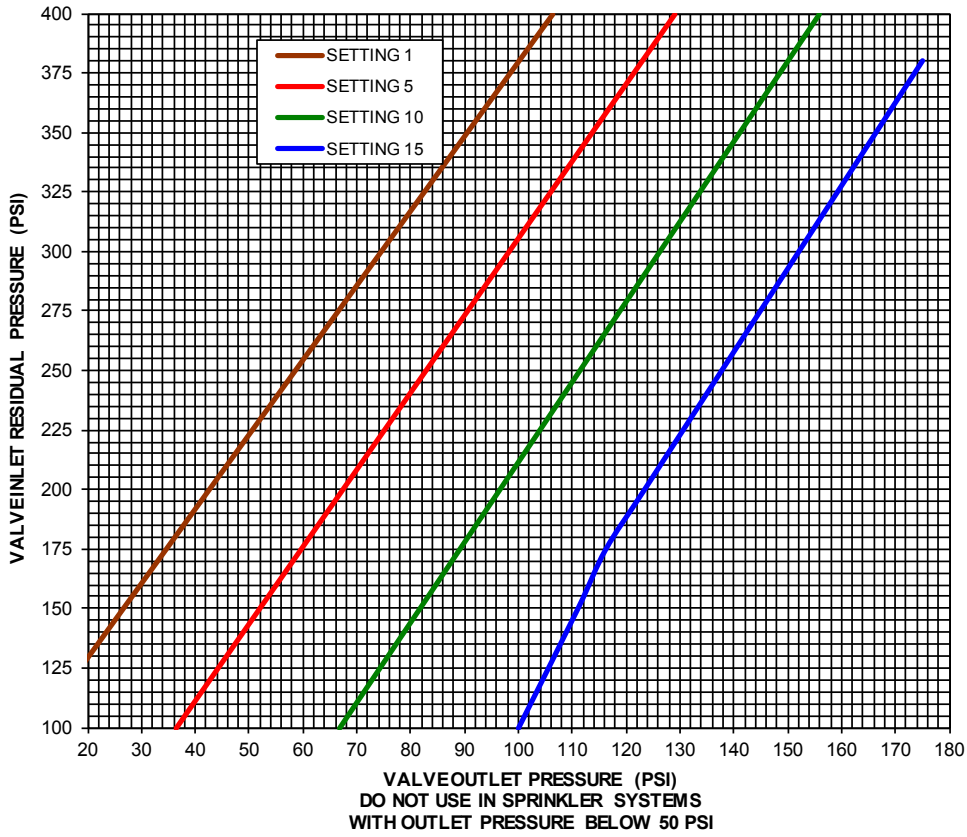


400 GPM

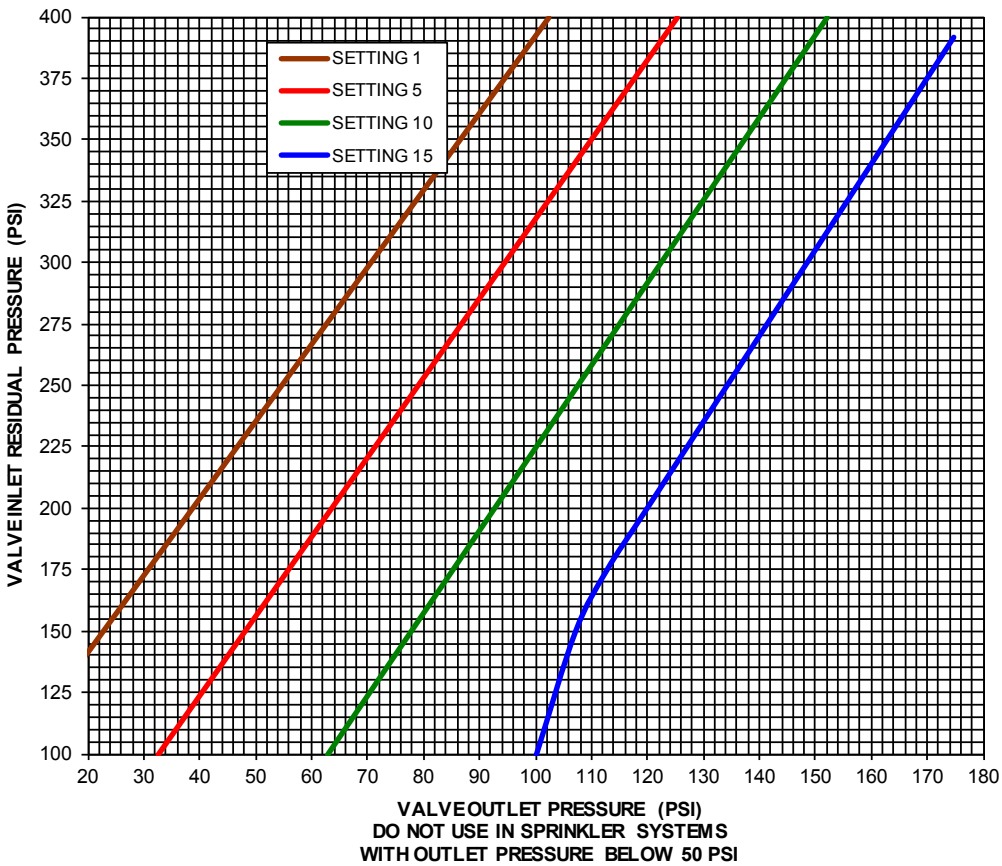


Specifications (cont.)

450 GPM



500 GPM



Standpipe Systems

For valves intended for use in a Class II standpipe system, use a straight stream nozzle with a ½" orifice or a 1½" 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

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

Dixon™, founded in 1916, is a premier manufacturer and supplier of hose couplings, valves, dry-disconnects, swivels, and other fluid transfer and control products. The company's global reach includes a wide range of products for numerous industries including petroleum exploration, refining, transportation, chemical processing, food & beverage, steel, fire protection, construction, mining and manufacturing. Dixon™'s strategic objective is to create solutions that make products safer, leak-free, longer lasting, and always available.

dixonvalve.com • *Customer Service:* **800.789.1718**

DIXON

The Right Connection®

Dixon Fire

325 Arbor Court • Winchester, Virginia 22602
ph: 877.712.6179 • fx: 800.283.4966
dixonvalve.com