



Reduced Pressure Principle Backflow Preventer

- Meets AWWA Standard C511-89
- Extremely Low Head Loss
- Designed for Easy Field Testing



Classified by Underwriters' Laboratories, Inc.® as to Friction Loss and Body Strength Only

The Cla-Val Model RP-4 Backflow Preventer protects potable water lines against contamination. This assembly combines protection against backflow with exceptionally low head loss characteristics. It operates on the reduced pressure principle, which is an accepted method of safeguarding potable water supplies against the hazards of cross-connections.

The Model RP-4 is carefully constructed of corrosion resisting materials. It consists of two independently acting toggle lever check valves, an automatic pressure differential relief valve located between the two check valves, two shutoff valves and four test cocks. The levers, links and pins are rugged, simple and direct with ample clearances to insure long, trouble free operation, even in very hard water and over prolonged periods of time.

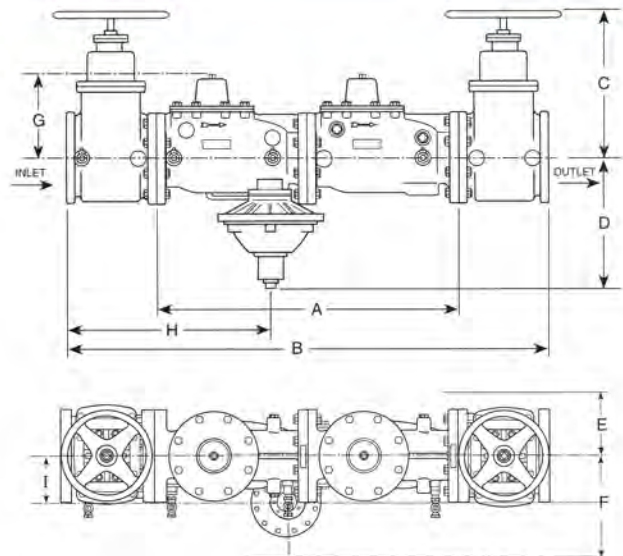
Operation

Under a normal flow condition, both check valves are open and the pressure differential relief valve is closed. During normal flow and at the cessation of flow, the pressure in the zone between the two check valves is maintained at least 2 psi less than the supply pressure by action of the pressure differential relief valve.

Under a no flow condition, both check valves are closed. When supply pressure drops to 2 psi above the "zone" pressure, then the relief valve discharges as necessary to maintain the "zone" pressure at 2 psi below supply pressure. When supply pressure drops below 2 psi above the "zone" pressure, then the relief valve opens fully.

The Model RP-4 operates efficiently at either high or low pressures. There are no pressure adjustments. The flow curves show the slight pressure drop at rated flow. (See other side.)

It is recommended that this unit be installed in a horizontal position and that provisions for adequate drainage be made. Right hand mount of relief valve is standard. Left hand mount is optional. Shut-off valves on 2" are resilient seat ball valves. Standard shut-off valves on 2½" and larger are a resilient seat non-rising stem design. When used in fire service, OS&Y shut-off valves must be used, which are available at extra cost.

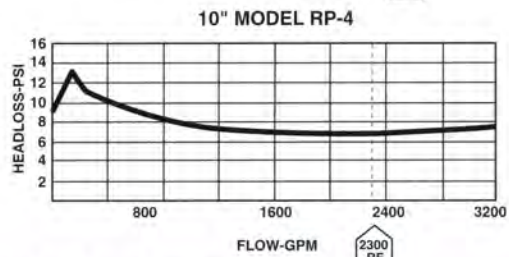
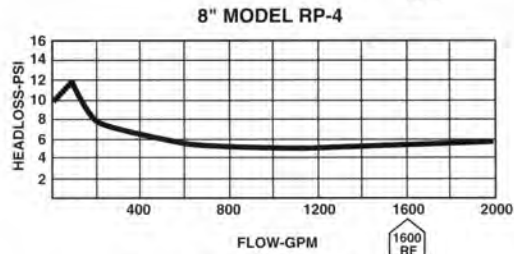
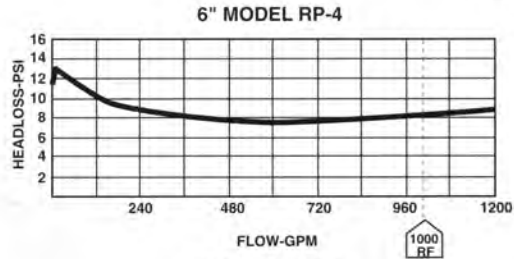
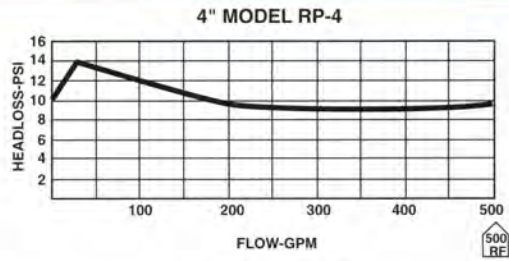
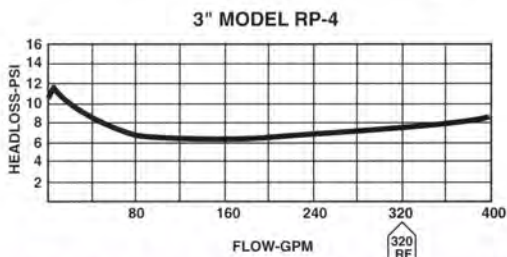
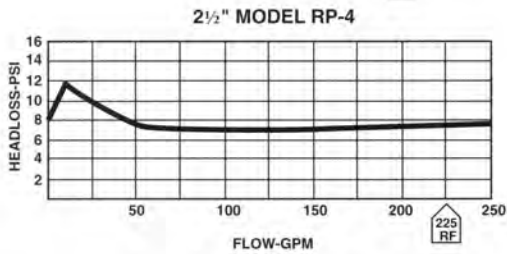
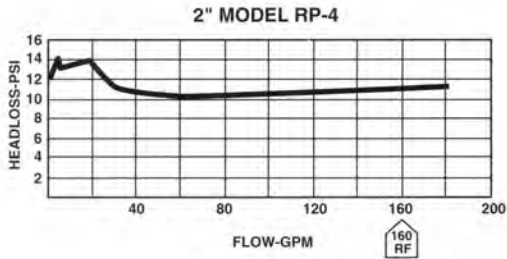


Dimensions (In Inches)

Valve Size	2" Screwed	2½"	3"	4"	6"	8"	10"
A	20.06	26.06	26.06	30.06	40.06	50.81	59.56
B	33.16	42.19	42.19	48.19	61.19	73.94	85.69
C Max	5.25	13.12	15.25	17.50	21.00	24.85	29.38
D	7.94	9.44	9.44	12.56	13.56	14.75	17.06
E	4.00	4.00	4.50	5.00	6.00	8.00	10.00
F	10.75	10.75	10.75	14.38	14.38	14.38	14.38
G	5.25	7.25	7.25	8.31	11.00	13.00	15.75
H	14.74	18.56	18.56	20.56	26.81	32.94	38.31
I	7.70	7.70	7.70	9.00	9.00	9.00	9.00

We recommend providing adequate space around assembly for maintenance work and testing.

RP-4 Reduced Pressure Principle Backflow Preventer Flow Curves



"Rated Flow" Values adopted by the American Water Works Association and the New England Water Works Association. Flow curve generated by the Foundation for Cross-Connection Control and Hydraulic Research at the University of California.

Specifications

Sizes:

2", 2½", 3", 4", 6", 8", 10"

End Details:

2" Screwed:

2-11½ NPT

2½"-10" Flanged:

125 lb. ANSI 16.1

Maximum Working Pressure:

175 psi

Hydrostatic Test Pressure:

350 psi

Max. Temperature:

to 110° F

Fluid

Water

Material:

2" Main Valve Body and Cover:

Bronze ASTM B-61

2½" and Larger Main Valve Body and Cover:

Cast Iron ASTM A-126 interior epoxy coated*

Main Valve Trim:

Bronze ASTM B-61

Differential Relief Valve:

Bronze ASTM B-61 with Stainless Steel 316 Trim

Shut-off Valves:

Resilient Seat Non-Rising Stem Type

Epoxy Coated Interior and Exterior AWWA C550

2" only Resilient Seat Ball Valve Type

*Exterior may be epoxy coated at extra cost.



E-RP-4 (R-10/95)

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