

LTV VALVE APPLICATION INSTRUCTIONS FOR LOW TEMPERATURE PROTECTION COPPER-FIN AND POWER-FIN MODELS

CB 495/497 - 2066/2067; CH 401/402 - 2071/2072 AND PB 501 - 2000

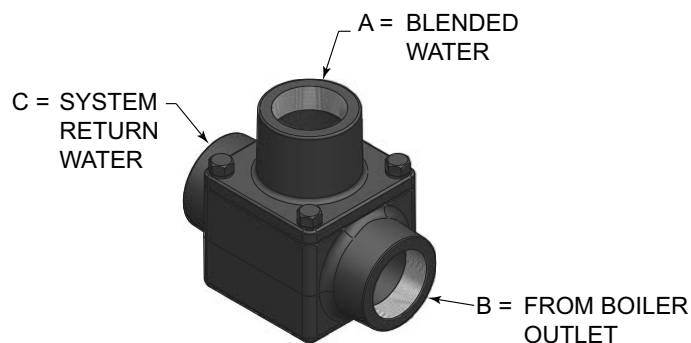
List of kit components

Kit Part No.	Model No.	Part No.	Component Description
VAL30000	CB 45 - 500	VAL20000	1-1/2" LTV Valve
		INS7238	Instruction Sheet
VAL3048	CB 495/497 - 745/747 CH 401/402 - 751/752	VAL2123	2" LTV Valve
		LBL2243	Label, Pump Return
		INS7328	Instruction Sheet
VAL3047	CB 986/987 - 2066/2067 CH 991/992 - 2071/2072 PB 501 - 2000	VAL2124	2-1/2" LTV Valve
		LBL2243	Label, Pump Return
		BLT2118	Bolt (12)
		BLT2119	Nut (12)
		BLT2026	Flat Washer (24)
		BLT2120	Star Washer (12)
		GKT2055	Gasket (3)
		TFL2092	Flange (3)
		INS7238	Instruction Sheet

CAUTION

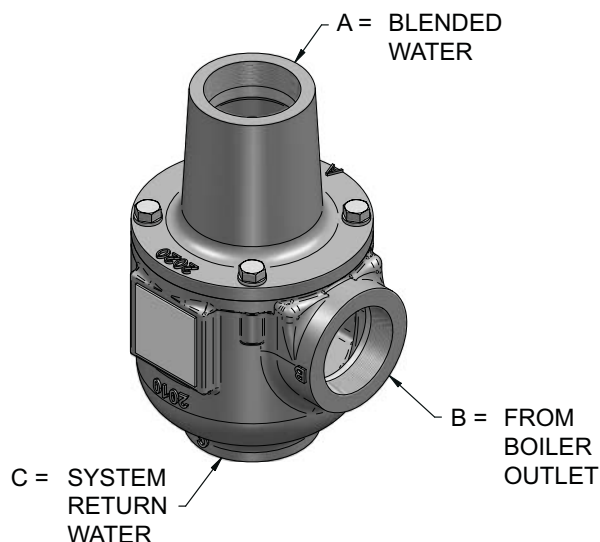
Pump and motor unit are designed to be supported by the inline piping only. Do not support in any other manner. When placing pump between flanges, tighten flange bolts evenly and do not tighten excessively.

Figure 1_ 1 1/2" Valve



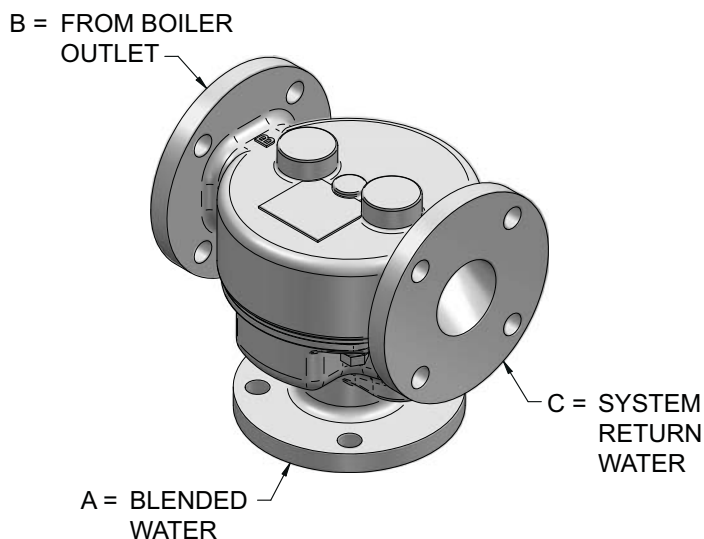
NOTE: A-B-C is noted on the valve to depict proper orientation.

Figure 2_ 2" Valve



NOTE: A-B-C is noted on the valve to depict proper orientation.

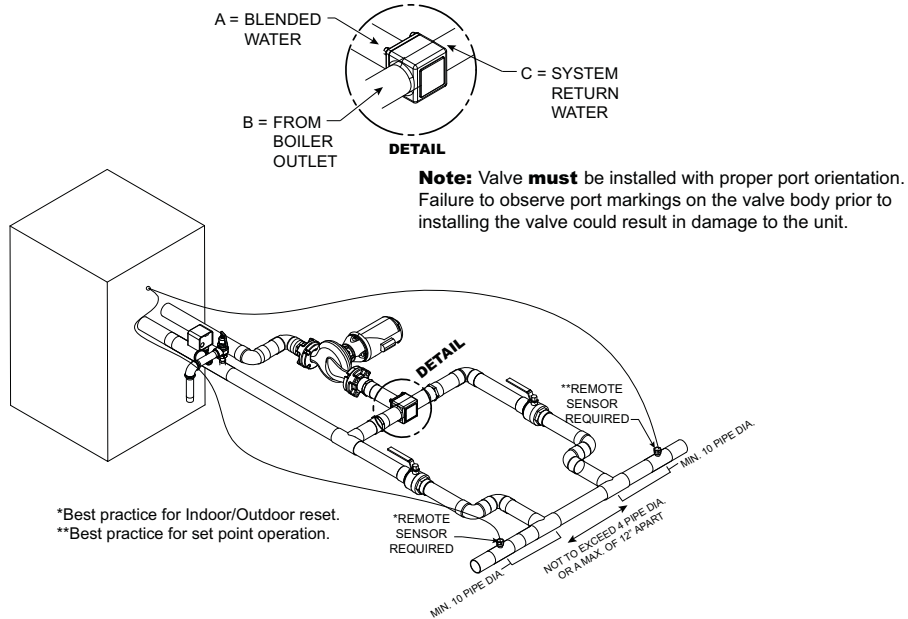
Figure 3_ 2 1/2" Valve



NOTE: A-B-C is noted on the valve to depict proper orientation.

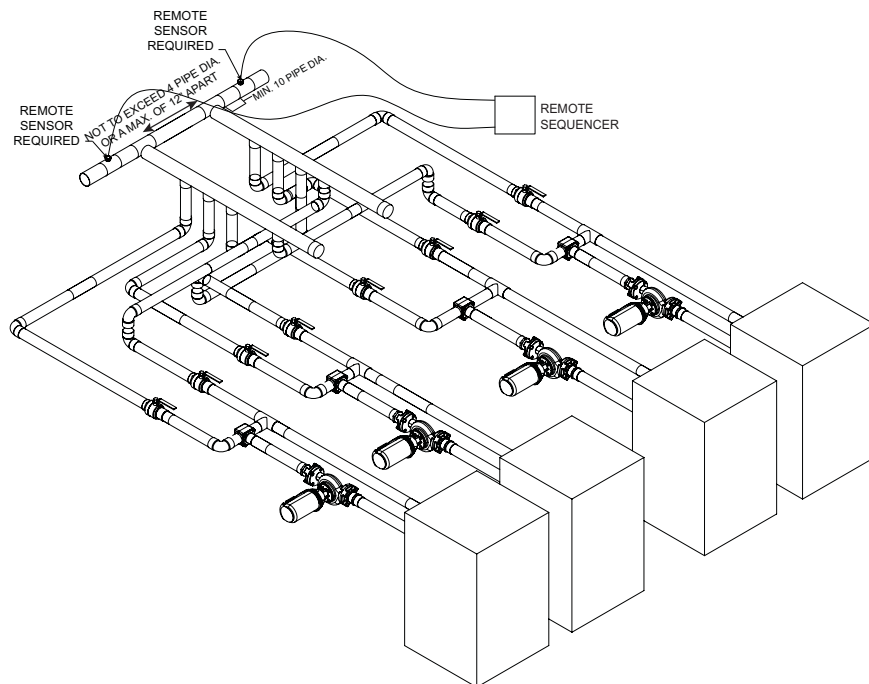
Typical piping applications:

Figure 4_Primary/Secondary Piping of a Single Boiler - 1 1/2" Valve



- NOTES:**
- 1) Unit(s) high limit must be set at max.
 - 2) Inlet and outlet connections to the boiler are shown for reference only. Actual connections may vary from those represented here. Consult the Installation and Service Manual for actual locations.
 - 3) Unit(s) pump should operate only during firing periods.

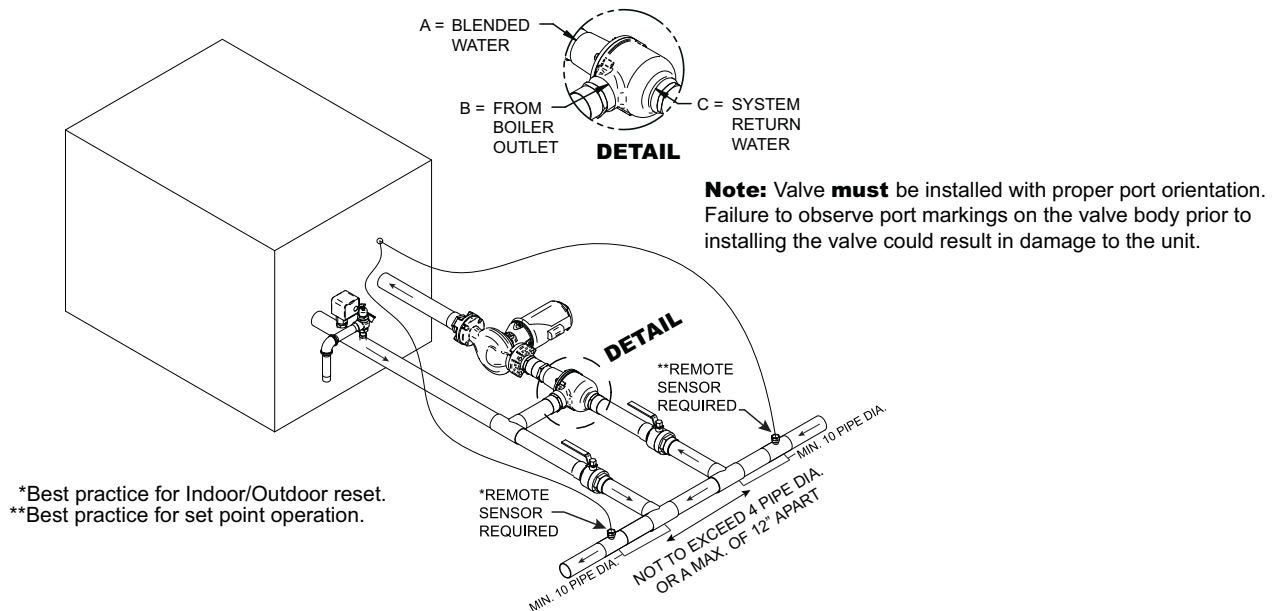
Figure 5_Primary /Secondary Piping of Multiple Boilers - 1 1/2" Valve for each boiler



- NOTES:**
- 1) Unit(s) high limit must be set at max.
 - 2) Inlet and outlet connections to the boiler are shown for reference only. Actual connections may vary from those represented here. Consult the Installation and Service Manual for actual locations.
 - 3) Unit(s) pump should operate only during firing periods.

Typical piping applications (cont.):

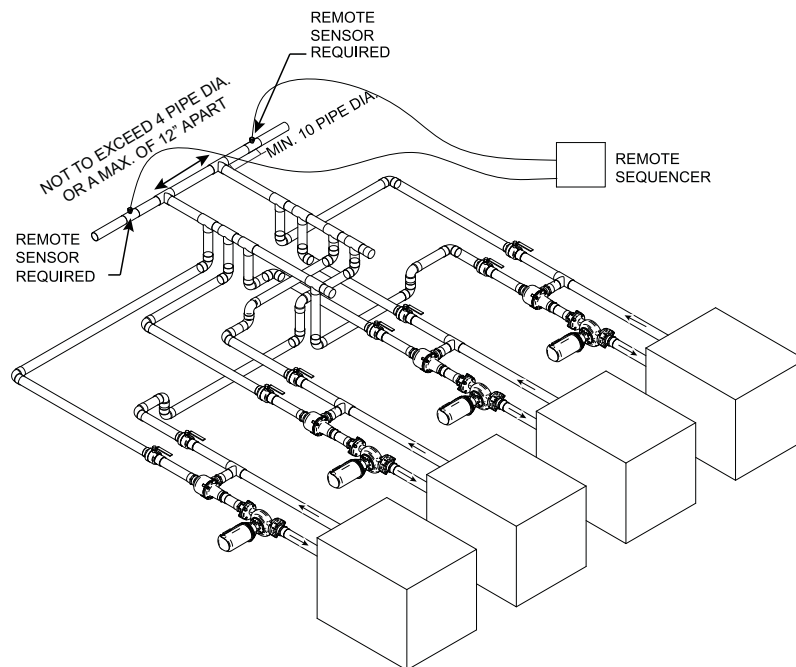
Figure 6_Primary /Secondary Piping of a Single Boiler - 2" Valve



NOTES:

- 1) Unit(s) high limit must be set at max.
- 2) Inlet and outlet connections to the boiler are shown for reference only. Actual connections may vary from those represented here. Consult the Installation and Service Manual for actual locations.
- 3) Unit(s) pump should operate only during firing periods.

Figure 7_Primary/Secondary Piping of Multiple Boilers - 2" Valve for each boiler

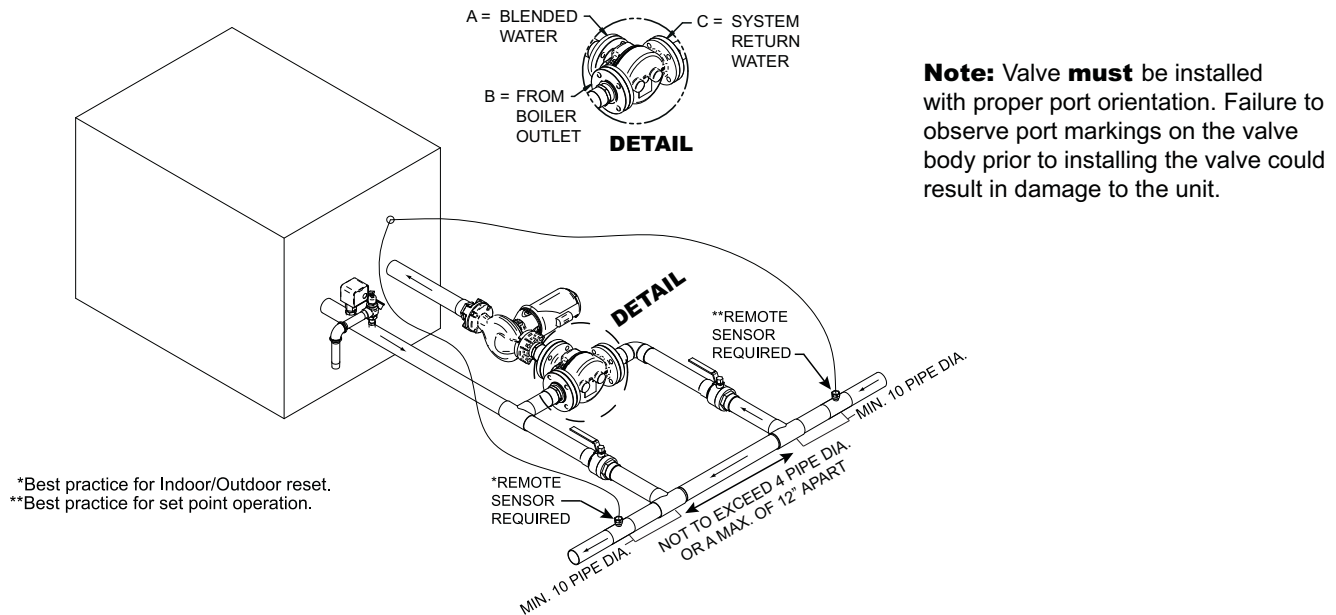


NOTES:

- 1) Unit(s) high limit must be set at max.
- 2) Inlet and outlet connections to the boiler are shown for reference only. Actual connections may vary from those represented here. Consult the Installation and Service Manual for actual locations.
- 3) Unit(s) pump should operate only during firing periods.

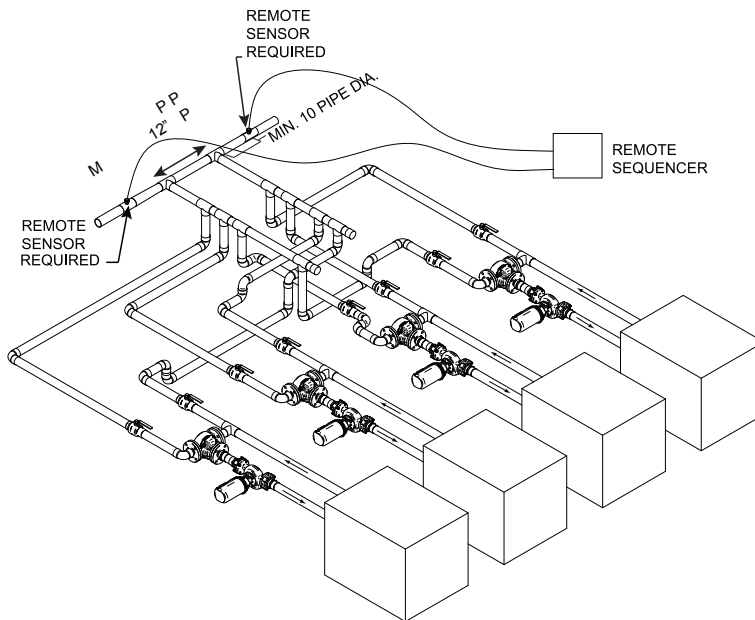
Typical piping applications (cont.):

Figure 8_Primary/Secondary Piping of a Single Boiler - 2 1/2" Valve



- NOTES:**
- 1) Unit(s) high limit must be set at max.
 - 2) Inlet and outlet connections to the boiler are shown for reference only. Actual connections may vary from those represented here. Consult the Installation and Service Manual for actual locations.
 - 3) Unit(s) pump should operate only during firing periods.

Figure 9_Primary/Secondary Piping of Multiple Boilers - 2 1/2" Valve for each boiler



- NOTES:**
- 1) Unit(s) high limit must be set at max.
 - 2) Inlet and outlet connections to the boiler are shown for reference only. Actual connections may vary from those represented here. Consult the Installation and Service Manual for actual locations.
 - 3) Unit(s) pump should operate only during firing periods.

Figure 10_1 1/2" LTV Valve - 45,000 - 500,000 Btu/hr

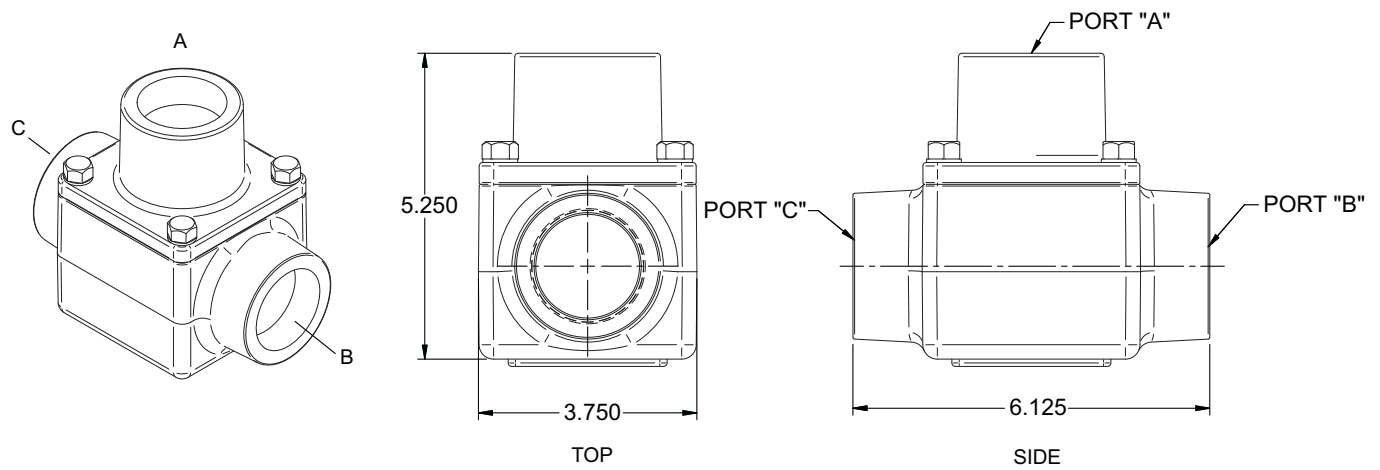


Figure 11_2" LTV Valve - Up to 750,000 Btu/hr

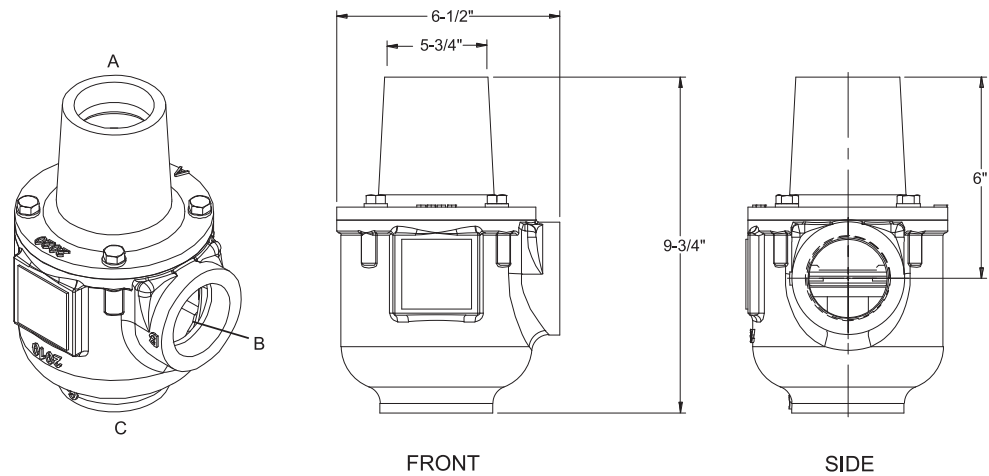


Figure 12_2 1/2" LTV Valve - 990,000 Btu/hr and up

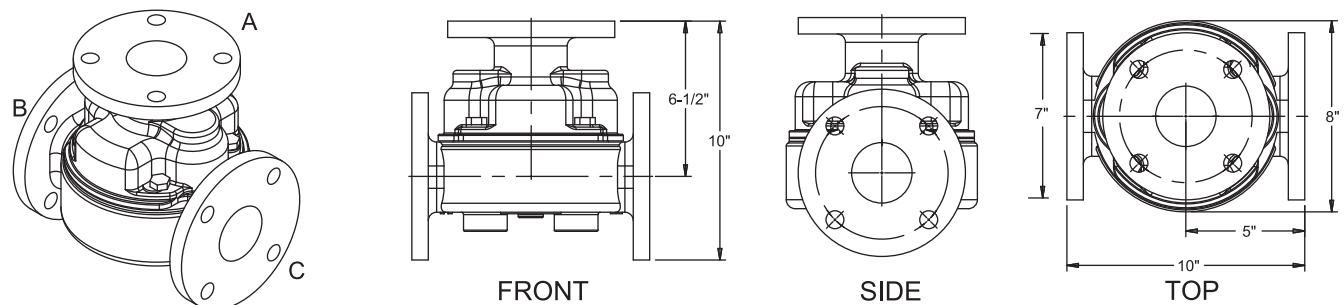


Figure 13_1 1/2" - Flow vs. Pressure Drop

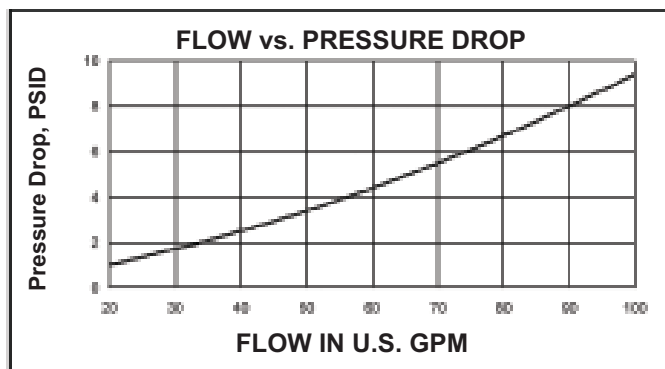


Figure 14_2" - Flow vs. Pressure Drop

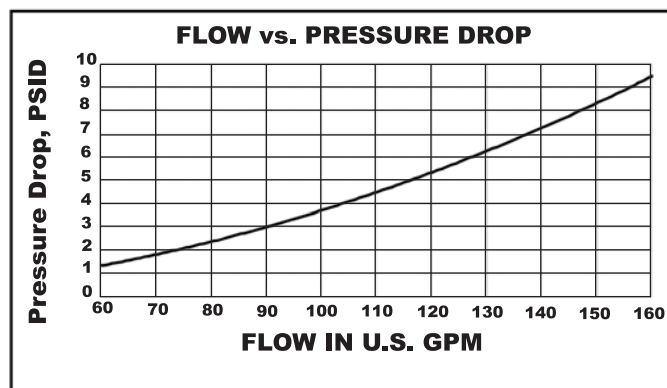
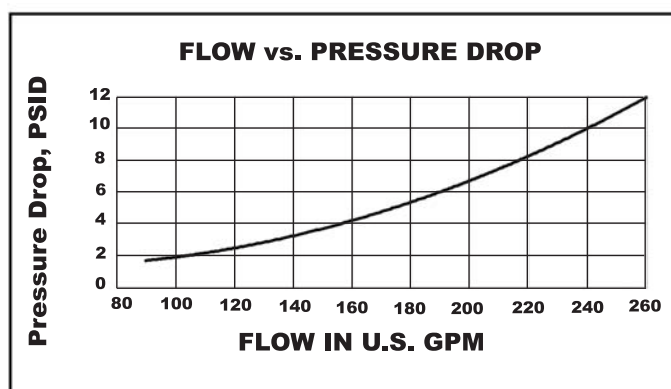


Figure 15_2 1/2" - Flow vs. Pressure Drop



Maintenance instructions

The LTV valve is maintenance free. It does not require regular cleaning or calibration. In most installations, the 1-1/2" and 2" valves are hard piped into place and do not afford access. The 2-1/2" valve has flanged connects which allows removal.

If the valve becomes unable to maintain a consistent inlet water temperature of 125°F during steady state firing conditions, replace the valve or the wax element inside the valve.

⚠ WARNING

The recommended maximum high temperature to the valve should be 175°F; the absolute maximum is 195°F.

Notes

Revision Notes: *Revision A (INS7238 Rev A) reflects the addition of the 1 1/2" valve.*

Revision B (INS7238 Rev B) reflects the addition of the maintenance instructions.

Revision C (ECO C02335) reflects the revision of FIG.'s. 1, 2, 3, 4, 6 & 8.

Revision D (ECO C10009) reflects the addition of Copper-Fin Redesign models and reformat of general warnings.