

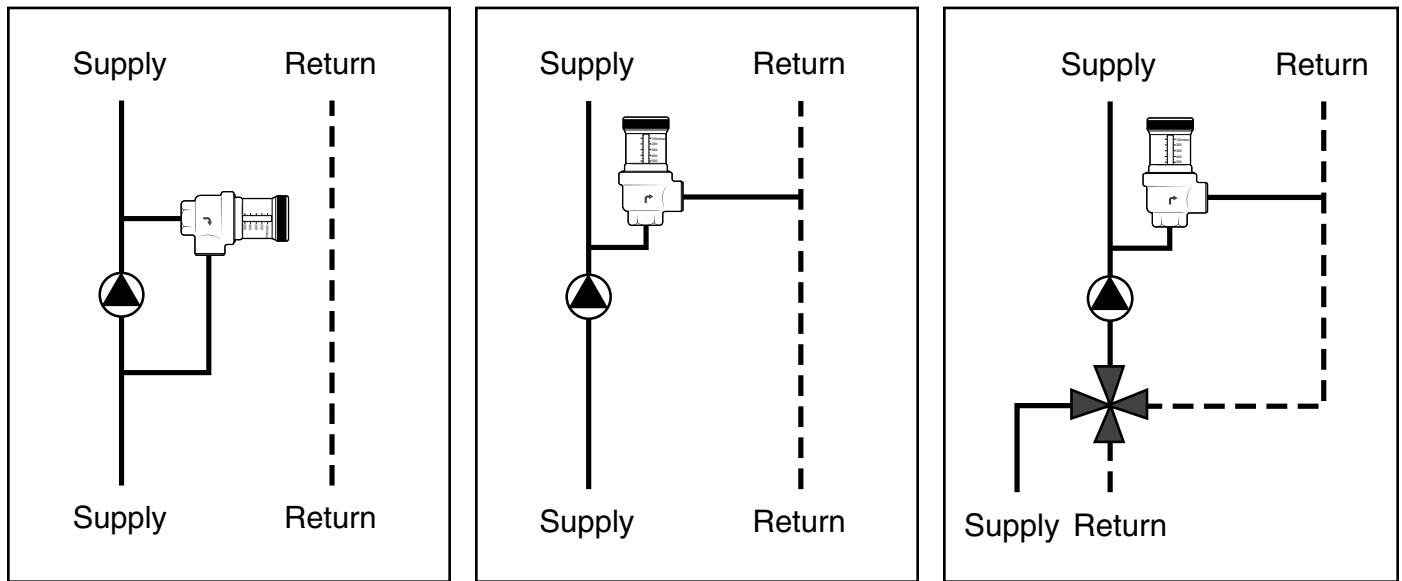
# Instructions for installation

## Pressure Activated Bypass Valve

### Installation Guidelines

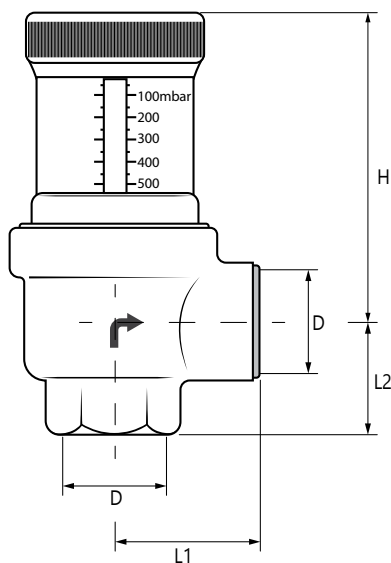
Installation can be made in virtually any position. For ease of use, the valve should be placed in the vertical position whenever possible. The following diagrams show recommended installation positions.

- Note:**
- Ensure that flow directions are obeyed.
  - For best performance, minimize the pressure drop in the bypass piping.



*The above diagrams show the position of the pressure bypass valve only. Do not use as piping schematic.*

### Dimensions



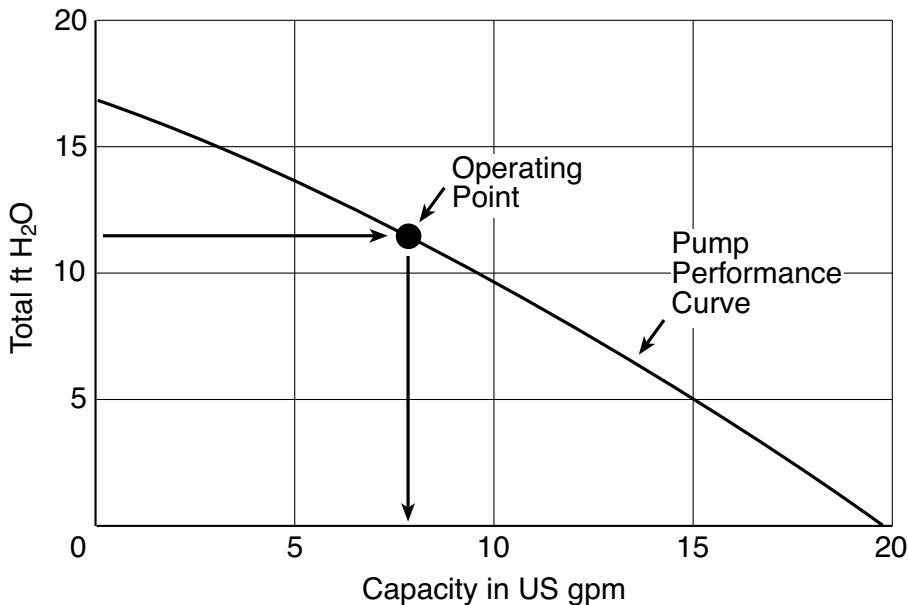
| Size | Stk. # | Dimension in/(mm) |                |                |           | Weight<br>lb/(kg) |
|------|--------|-------------------|----------------|----------------|-----------|-------------------|
|      |        | H                 | L1             | L2             | D         |                   |
| ¾"   | 60020V | 3.34<br>(84.8)    | 1.57<br>(39.9) | 1.36<br>(34.5) | ¾" FNPT   | 1.65<br>(0.748)   |
| 1"   | 60025V | 3.49<br>(88.6)    | 1.91<br>(48.5) | 1.57<br>(39.9) | 1" FNPT   | 2.40<br>(1.089)   |
| 1 ¼" | 60040V | 3.52<br>(89.4)    | 2.22<br>(56.4) | 1.81<br>(45.9) | 1 ¼" FNPT | 2.64<br>(1.197)   |

## Instructions for selection

### Pressure Activated Bypass Valve

#### Selection Guidelines

1. Note pressure drop and flow requirement information from the Heating System Summary, as per the HeatLink edition of LoopCad. Add the pressure drop for the supply pipes.
2. Using this information, select your pump size.
3. After pump has been selected, review pump performance curve to determine flow from the operating point of the curve.



#### How to Use Pump Performance Curves:

1. Determine total system head in feet of water based on the desired rate of flow.
2. Locate the total head on the vertical scale of the pump performance curve.
3. From the total head, move horizontally across the chart to the pump performance curve. This is the pump operating point.
4. From the operating point, move vertically downward to read the corresponding pump capacity in US gpm.

4. With this information, refer to the balancing valve chart below, and determine if the size of valve selected can produce the necessary flow requirements for the particular pressure drop.

| Description                          | Max. Flow   | Adjustment                                    |
|--------------------------------------|-------------|-----------------------------------------------|
| ¾" Pressure Activated Bypass Valve   | 8.7 US gpm  | 2 - 17 ft H <sub>2</sub> O<br>(50 - 500 mbar) |
| 1" Pressure Activated Bypass Valve   | 13.5 US gpm | 2 - 17 ft H <sub>2</sub> O<br>(50 - 500 mbar) |
| 1 ¼" Pressure Activated Bypass Valve | 26.9 US gpm | 2 - 17 ft H <sub>2</sub> O<br>(50 - 500 mbar) |

5. Loosen the screw at the end of the valve. Turn the black plastic cap to adjust the pressure indicator to the total system pressure. Tighten the screw to prevent the setting from being accidentally changed.

Note: General selection of the balancing valve will be close to the piping main size that it is bypassing. In other words, since the pressure balancing valve is a calibrated component, we want as little flow restriction (or pressure drop) to occur in the piping feeding the valve as possible. If necessary, one piping size reduction is acceptable. (i.e. With a 1" main, using a ¾" valve is possible if it falls within the flow requirements)