

Electronic Pressure Independent Valves (ePIV) for ANSI 125 and 250 Flanged

Installation

Inlet

The ePIV requires a section of straight pipe on the valve inlet to guarantee sensor accuracy. The length should be at least 5 diameters long.

2½" [DN65] 5 x nominal pipe size = 12½" [317 mm]

3" [DN80] 5 x nominal pipe size = 15" [381 mm]

4" [DN100] 5 x nominal pipe size = 20" [508 mm]

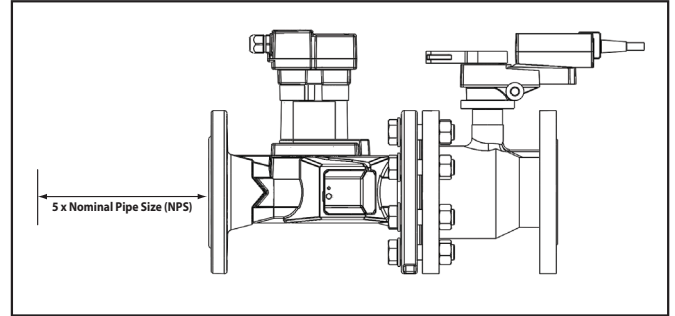
5" [DN125] 5 x nominal pipe size = 25" [635 mm]

6" [DN150] 5 x nominal pipe size = 30" [762 mm]

Outlet Length

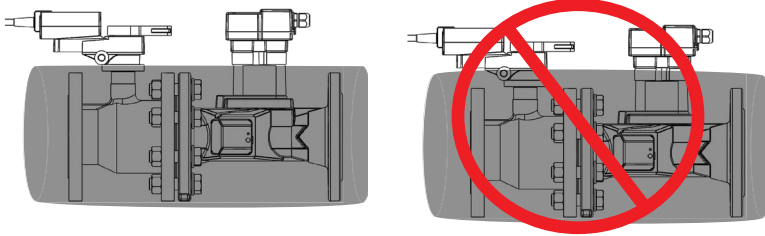
No requirements for outlet length.

Elbows can be installed directly after the valve.



Insulation

The insulation should be below the actuator



Valve Nominal Size

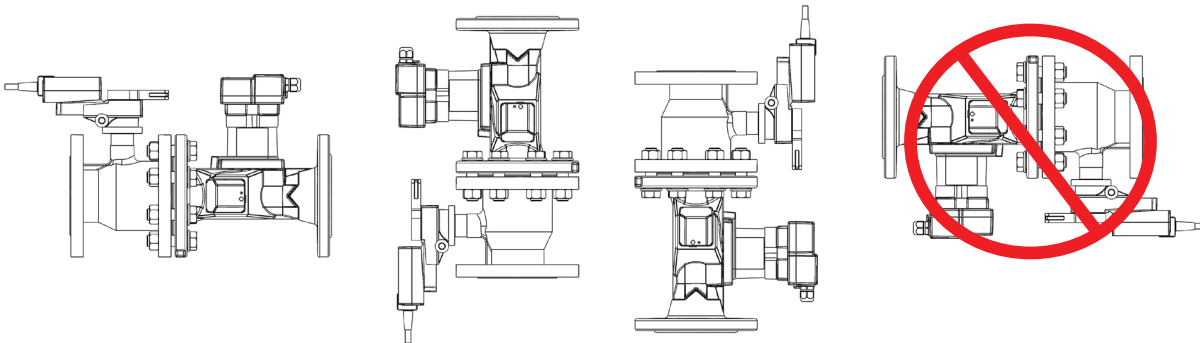
Weight Pounds [kg]

IN	DN [mm]	ANSI 125	ANSI 250
2½"	65	52 [23.3]	54 [24.5]
3"	80	63 [28.3]	63 [28.3]
4"	100	89 [40.1]	99 [44.9]
5"	125	120 [54.3]	126 [57.2]
6"	150	154 [69.6]	173 [78.5]

Orientation

ePIV shall be installed with flow in the direction of the arrow on the valve body.

The valve assembly can be installed in a vertical or horizontal arrangement, as long as the actuator is positioned to avoid condensation from dripping onto the actuator.



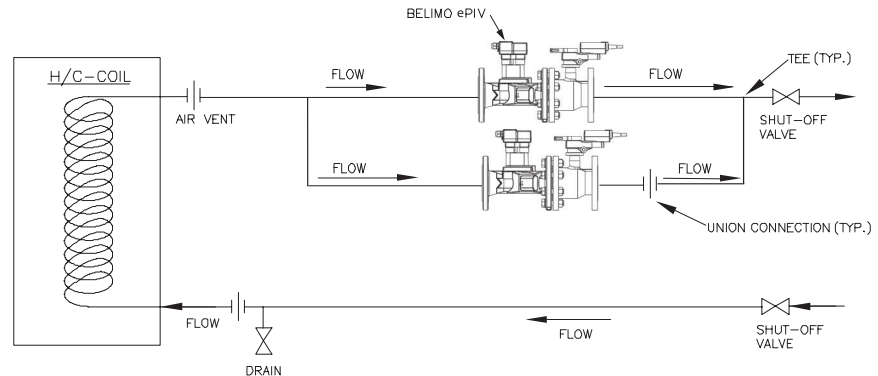
Installation Instructions

Electronic Pressure Independent Valves (ePIV)

Piping

The ePIV is recommended to be installed on the return side of the coil. Consult engineering specification and drawings for particular circumstances. P/T ports are recommended on either side of the valve for pressure measurement. Refer to Belimo documentation for flow verification and commissioning procedures.

To achieve flows larger than V_{nom} or nominal flow, it is recommended to connect two valves in parallel leading to a common manifold. To correctly operate these valves, the Multi-Function Technology (MFT) will be employed to utilize one common control signal. It is recommended to use the same signal in parallel (2-10 VDC); the two actuators are wired from the same control signal and the two valves control the flow in an identical pattern, the resulting flow will be the double controlled by an individual valve. This arrangement is preferable to a split signal since it offers a more stable and accurate flow and feedback signal is easier to interpret.



General Warnings

Valve should not be used for combustible gas applications. Gas leaks and explosions may result. Do not install in systems, which exceed the ratings of the valve.

- Avoid installations where valve may be exposed to excessive moisture, corrosive fumes, vibration, high ambient temperatures, elements, or high traffic areas with potential for mechanical damage.
- Valve assembly location must be within ambient ratings of actuator. If temperature is below -14°F a heater is required.
- The valve assembly will require heat shielding, thermal isolation, or cooling if combined effect of medium and ambient temperatures – conduction, convection, and radiation– is above 122°F for prolonged time periods at the actuator.
- Visual access must be provided. Assembly must be accessible for routine schedule service. Contractor should provide unions for removal from line and isolation valves.
- Avoid excessive stresses. Mechanical support must be provided where reducers have been used and the piping system may have less structural integrity than full pipe sizes.
- Sufficient upstream piping runs must be provided to ensure proper valve capacity and flow response. See installation section for details.

Installation

1. Inspect shipping package, valve, linkage, and actuator for physical damage. If shipping damage has occurred notify appropriate carrier. Do not install.
2. If a replacement, remove existing valve, linkage, and actuator from the piping system.
3. If actuator and linkage are removed, they must be reinstalled correctly. The actuator must be rotated so that the valve seats properly for close off.
4. Install valve with the proper ports as inlets and outlets. Check that inlet and outlet of 2-way valves are correct. Flow direction arrows must be correct.
5. Blow out all piping and thoroughly clean before valve installation.
6. Clean flanges with wire brush and rag. Clean pipes, flanges, and valve flanges before installation; check for any foreign material that can become lodged in trim components. Strainers should be cleaned after initial startup.
7. Valve must be installed with the stem towards the vertical, not below horizontal.
8. -125 models are designed to be installed between ANSI Class 125/150 flanges only. -250 models are designed to be installed between ANSI Class 250/300 flanges only.
9. Carefully follow installation using ANSI piping practices.
10. In cases where the valve body is electrically isolated from the water pipe, an earth ground must be installed in order for the sensor to work properly. Earth ground is connected directly on the sensor body. A connection point is provided on the flange of the sensor body.