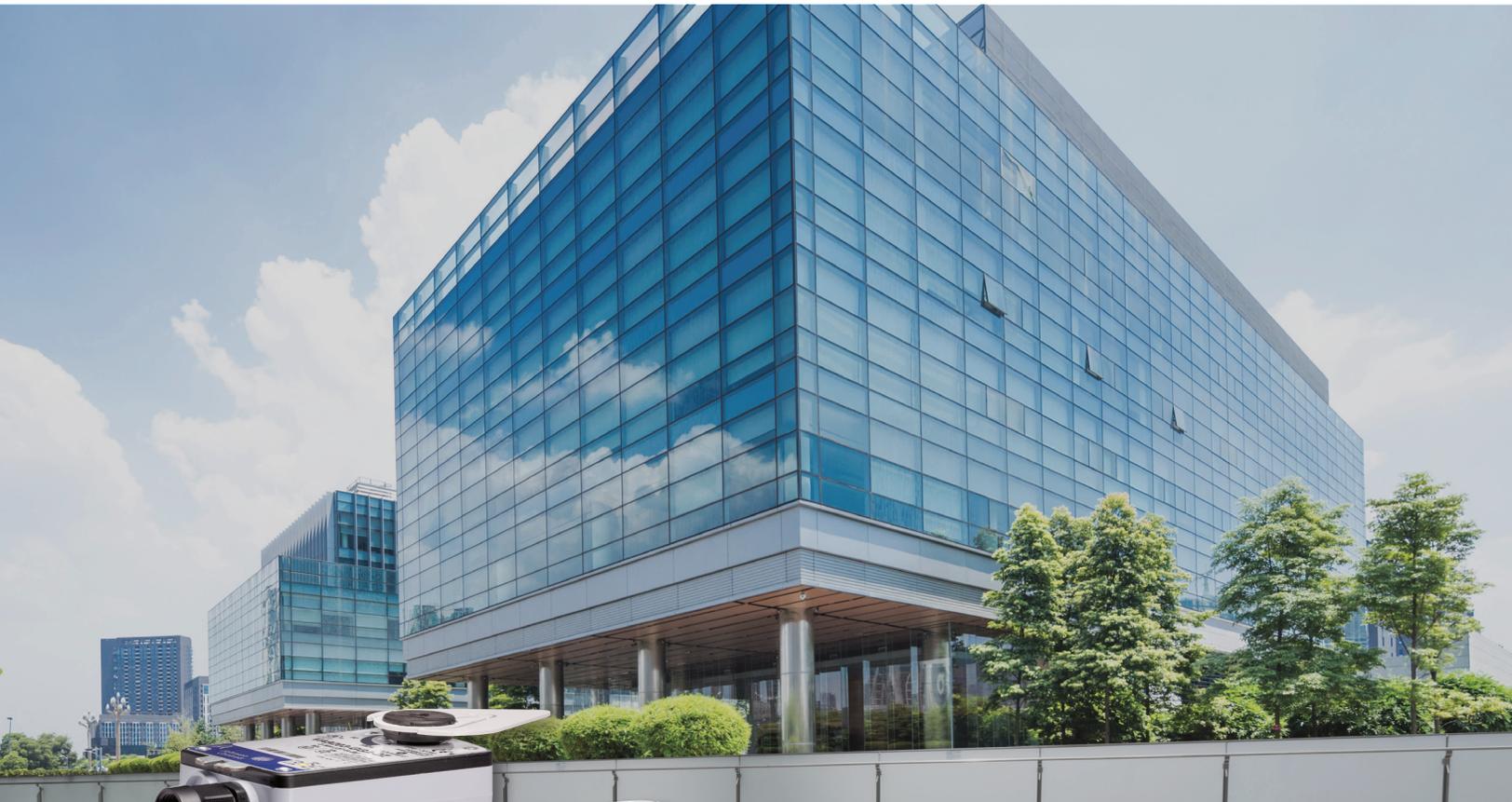




# VP140 Series Pressure Independent Control Valves



Achieving greater comfort and efficiency. Fast.



## Right in your comfort zone.

### Efficiency starts here.

System efficiency starts with the control valve. Getting the correct flow under varying load conditions means a more comfortable environment and a more efficient system. The new VP140 Series of Pressure Independent Control Valves (PICVs) from Johnson Controls delivers stable flow regardless of pressure fluctuations. Because traditional systems are balanced at full-flow positions in actual conditions, you get either too much or not enough flow through the coils, affecting comfort and overall efficiency. Automatic balancing properties deliver the correct flow. It's just one more way we continue to provide innovative technology to improve efficiency in building systems.

### More value, end-to-end.

Including a PICV simplifies your selection process. No need for Cv or pressure drop calculations. Simply select the valve based on the design flow rate of the coil. PICVs deliver the appropriate flow given the load requirement of the coil, determined by the actuator position and not the pressure differential seen by the valve. This means a coil is not over or under supplied, better managing comfort and energy efficiency. The Johnson Controls PICV also reduces installation and upfront equipment costs by enabling the right-sizing of equipment within the HVAC system. The PICV combines the function of a control and an automatic balancing valve. No need to spec a balancing valve, eliminating the need for intensive system balancing, saving time and money. As additional zones are added, the system can be commissioned zone-by-zone, reducing lifecycle costs by minimizing re-commissioning expense.

### With the VP140 Series, you can also take advantage of:

- Fewer components to spec and install
- Reduced adjustment and commissioning
- Greater installation flexibility in confined spaces
- Lower pump energy usage, up to 30%
- No manual balancing

## The VP140 PICV vs. a pressure dependent valve.

Compared to a pressure dependent valve, the automatic balancing action of the PICV regulates pressure to reduce temperature variations caused by changing load conditions in other temperature zones. This reduces pumping requirements and lowers demand on the heating or cooling system.



### VP140 Compact Axial (Globe) Valve:

Ideal for applications where you need a compact valve and actuator footprint, or water quality may be an issue. It can provide either a linear or equal percentage control characteristic, and maximum flow is easily set without any special tools. Available in 1/2" and 3/4" sizes.

### Extreme performance. Extra savings. Extended life.

The compact axial VP140 has an innovative patented pressure regulating cartridge that is resistant to the effects of contaminated water. As a result, the VP140 compact will outperform competitive axial PICVs, providing a long life of accurate, pressure independent performance, even as water quality degrades.



### VP140 Rotary (Ball) Valve:

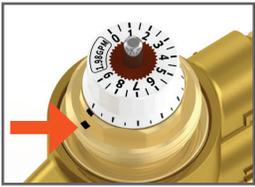
Ideal for applications that require enhanced flexibility for seasonal commissioning and different room layouts. It provides intrinsic equal percentage control and the maximum flow setting can be set by the building automation system via a characterized control signal. The valve will modulate the flow between close-off and the maximum setting based on the control signal input. Available in brass (1/2" to 1-1/4") or iron (1-1/4" to 2") construction.



## VP140 Compact Axial Flow Modulation

The Compact Axial PICV modulates flow as the valve stem moves up and down, closing or opening against the seat. The key in maintaining constant flow at a given valve plug position, regardless of the variations in pressure at the inlet (P1), is the ability of the pressure regulator to maintain a constant differential pressure between (P2) and (P3). This allows the control valve portion of the PICV to modulate the correct flow based on the position of the valve plug in relation to the seat.

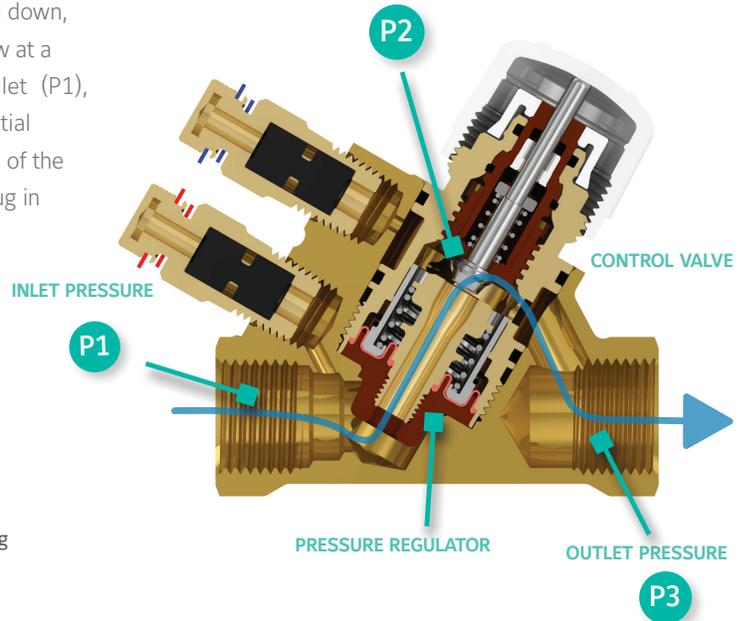
### Compact Axial Max Flow Setting Adjustment



Remove white cap or actuator  
Default Setting: Position 9



Turn the adjustment knob to line up the marking on the body with the appropriate setting that corresponds to the desired GPM

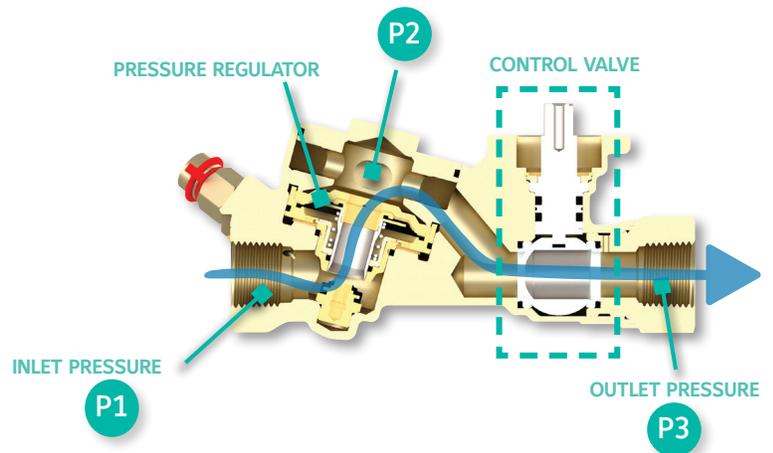


## VP140 Ball Valve Flow Modulation

The Ball Valve PICV modulates flow as the ball rotates to close the valve. As with the axial PICV, the key in maintaining constant flow at a given ball rotation, regardless of the variations in pressure at the inlet (P1), is the ability of the pressure regulator to maintain a constant differential pressure between (P2) and (P3). To modulate the flow rate, the actuator positions the ball between fully closed and open, controlled via the building automation system.

### Ball Valve Max Flow Setting Adjustment

Limiting the maximum flow allowed through the valve to something less than the maximum is achieved by characterizing the control signal to the actuator.



## Serviceability

The VP140 series PICVs can be easily serviced by either cleaning or replacing the pressure regulator with the valve still installed in the system.

## Whatever your application, wherever you are, we're there.

You can count on the backing of the world's largest portfolio of HVAC equipment and controls. No matter where you are in the world, you can rely on Johnson Controls to help meet your efficiency, comfort and application requirements. Also, count on our unsurpassed Five-year warranty coverage.

