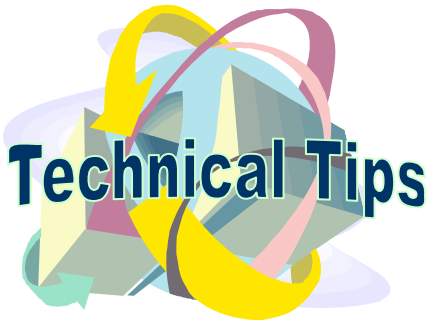


Mesurflo® Modulating Control Valve vs. Competitive Valves

The Mesurflo® Modulating Control Valve is latest addition to our lineup of Mesurflo Automatic balancing valves. Designed with performance and simplicity in mind, the Mesurflo® Modulating Control Valve provides accurate modulating flow control and reliable operation in a smaller package and lower initial cost.

The Mesurflo® Modulating Control Valve combines our patented Mesurflo technology and a characterized control valve to deliver 0 -100% flow. In a wide open control valve condition, the Mesurflo® has the authority and works as a regular Mesurflo® Automatic balancing valve which is selected at the rated terminal unit flow. The flow is constant across the entire pressure differential range 2-80 psi.

As the control signal from the thermostat changes, the characterized control valve portion gains authority and controls the flow. The characterized control valve in combination with the specially designed actuator controls the flow even as the pressure in the system changes. The equal percentage characteristic of the control valve guarantees a linear output from the terminal device.

SPECIFICATIONS

Actuator

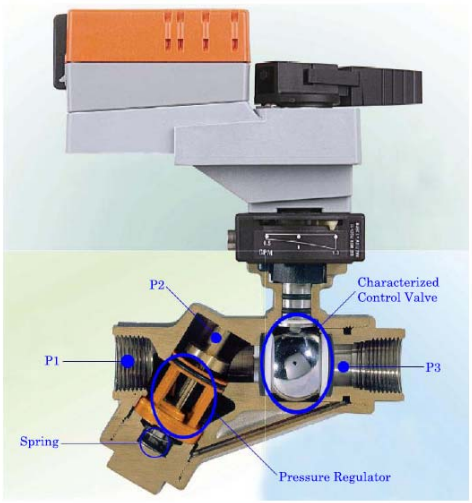
Voltage	24 Vac +20%, -15% @ 50/60 Hz
Power Requirements	2.3 W / 1.6W (AC/DC)
Control Signal	2-Position, Floating or Proportional; half wave rectified power supply
Manual Operating Lever/Position Indicator	Standard on all models
Auxiliary End Switch (optional)	SPST 24 Vac/Vdc, 101 mA to 5 A max
Materials	Thermoplastic base and cover .Approved for use in air plenums.
Shipping & Storage Temperature Limit	-40 to 169 °F (-40 to 76°C)
Operating Temperature Limit at max fluid temp	
Proportional	32 to 140 °F (0 to 60 °C)
Humidity	5 to 95% relative humidity, non-condensing
Locations	NEMA 2, IEC IP31 Indoor Use Only

Valve

Service	Hot and chilled water, up to 60% glycol .
System Static Pressure Limit	600 psi (4137 kPa) .
Fluid Temperature Limit	32 to 255°F
Close-off Pressure	130 psi
Differential Pressure	80 psi
Rangeability	Greater than 300:1 .
Body Material	Forged brass .
Stem Material	Stainless steel anti-blow out stem with dual Viton™ o-rings
Ball Material	Chrome plated brass
Seat Material	PTFE .
Characterized Insert	Glass-filled PEEK .

MESURFLO® MODULATING CONTROL VALVE VERSUS COMPETITIVE VALVES

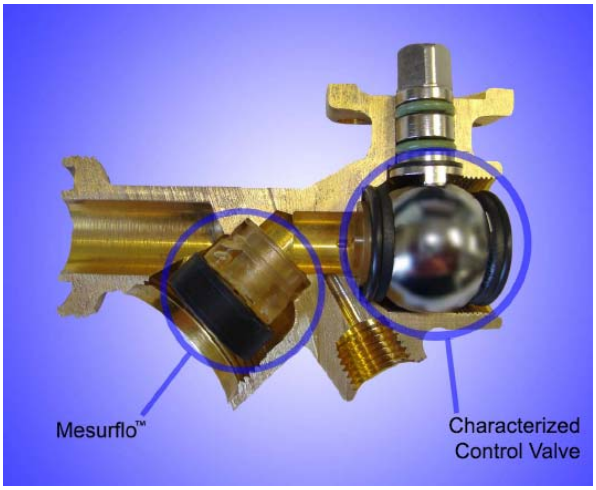
A commonly adopted technology by our competitors is to use a pressure regulator in series with a characterized control valve. In the market these valves are known as the PICC valves. This is one way to control and modulate the flow but we believe that the Mesurflo® Modulating Control Valve through its exquisitely simple design provides the same performance with reduced complexity. To understand the operation of PI valve and the Mesurflo® Modulating Control Valve, consider the side by side comparison of both valves.



As inlet pressure changes, the pressure regulator reacts to the forces exerted by the intermediate pressure, discharge pressure and the spring to maintain a constant flow.

In a modulating condition, as the ball valve closes in response to reduced flow requirements the intermediate pressure and discharge pressure change moving the regulator and adjusting the flow rate.

The flow is maintained by moving three elements internal to the valve – spring, a thin diaphragm and a stem running through the center of the regulator.



The Mesurflo® technology relies on a patented diaphragm and orifice assembly to control flow through the valve.

In modulating condition, the valve relies on the specially designed ball valve and characterized disc combination to provide the required flow rate. All the movement is external to valve.

The flow is maintained by moving only one element – ball valve. The actuator utilizes sophisticated algorithms to precisely position the valve without over-reacting or being sluggish.