

### Description

These two-way, 3/4" NPT, ball valves are designed for the control of hot or chilled water in HVAC applications. They can also control low-pressure (up to 30 psi) steam applications. Valves produce equal percentage flow, allowing the heat output at the coil to be linear when compared to the open area of the ball.

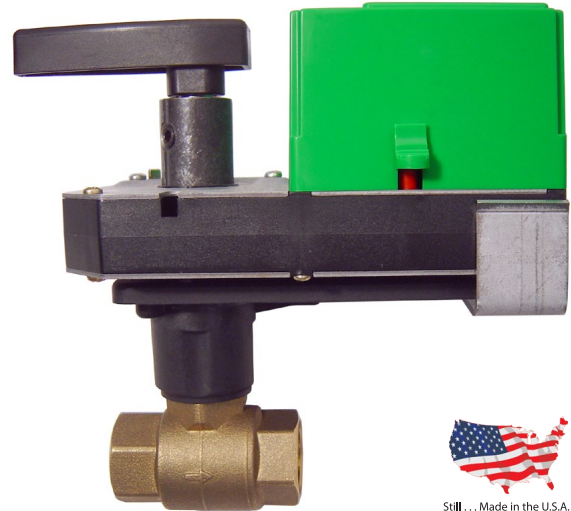
The MEP-5372 proportional actuators may be controlled via a 2–10 VDC control signal from a thermostat, controller, or building automation system. Actuators are factory-calibrated for a 2–10 VDC input signal (or 4–20 mA with an external 500 ohm resistor) and 90° clockwise rotation. Counterclockwise rotation is obtained by simply toggling a switch.

A 1–5 VDC feedback voltage output, proportional to the control signal, is provided. This feedback can be used for remote indication of valve position. An 18 VDC auxiliary power supply output is provided to power CTE-5100 series thermostats or other system control devices. An optional single or double auxiliary switch can be field-installed.

Capacitor-driven fail-safe provides efficient operation with switch-selectable fail direction. A gear disengagement button allows manual positioning of the valve without energizing the actuator.

### Features

- ◆ Steam applications up to 30 psi
- ◆ Equal percentage flow characteristics
- ◆ Stainless-steel ball
- ◆ Cv ratings (2.9 to 11) similar to globe valves
- ◆ Proportional 2–10 VDC (or 4–20 mA with an external 500 ohm resistor)
- ◆ Efficient, durable, capacitor-driven fail-safe option with switch-selectable direction
- ◆ Gear disengagement button to enable manual positioning



### Models

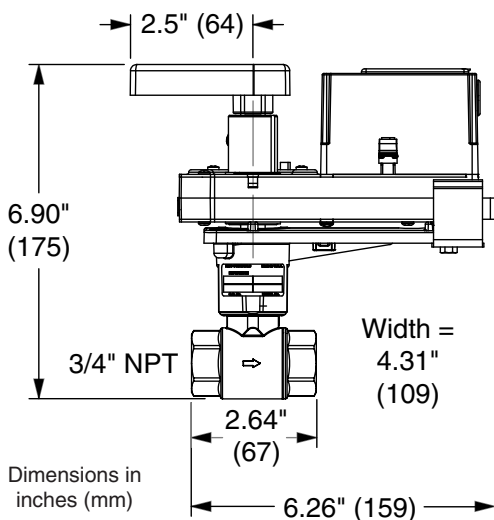
Select the 3/4" NPT model from the chart below.

Valve Model	Cv	Replacement Valve Body
VEB-4303XSDL	2.9	VFB-4303XSX
VEB-4303YSDL	5.3	VFB-4303YSX
VEB-4303ZSDL	11	VFB-4303ZSX

### Accessories/Repair Parts

CME-1002	Single auxiliary switch
CME-1004	Dual auxiliary switch
HMO-4518	Snap-in connector for 1/2" flexible metal conduit
HMO-4520	Compression connector for plenum cable
HMO-4526	Female connector for 1/2" conduit
HPO-5072	Ball valve to actuator repair kit
MEP-5372	Replacement proportional, fail-safe actuator
VFB-4303_SX	Replacement valve body (includes non-rotation brackets for both MEP-5000 and MEP-4000 series actuators)—see the Models section for Cv (X, Y, or Z)

## Specifications



Model	Flow Rate (U.S. gpm) at Differential Pressure (psi)										psi
	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	
VEB-4303XSDL	2.1	2.9	3.6	4.1	4.6	5.0	5.4	5.8	6.2	6.5	gpm
VEB-4303YSDL	3.7	5.3	6.5	7.5	8.4	9.2	9.9	10.6	11.2	11.9	
VEB-4303ZSDL	7.8	11.0	13.5	15.6	17.4	19.1	20.6	22.0	23.3	24.6	



**Action:**  
 Full CW = Valve Closed  
 Full CCW = Valve Open

### Actuator

<b>Supply Voltage</b>	24 VAC (+20/-15%), Class 2, 50/60 Hz
<b>Supply Power</b>	6 VA/19 VA peak inrush
<b>Control Input</b>	2-10 VDC
<b>Feedback</b>	1-5 VDC
<b>Aux. Power Supply</b>	18 VDC @ 10 mA
<b>Fail-Safe</b>	
Direction	Switch selectable
Charge/Delay	One minute delay allows full charge before normal operation
Timing	35-50 seconds, load dependent, for 95° rotation
<b>Torque</b>	50 in-lbs. (5.7 N•m) minimum
<b>Angular Rotation</b>	0-95°, stop adjustable, both ends
<b>Motor Timing</b>	45-60 seconds, load dependent for 95° rotation
<b>Connections</b>	Wire clamp type; 14-22 AWG, copper
<b>Enclosure</b>	Flame-retardant plastic
<b>Approvals</b>	UL Recognized

### Valve Body

<b>Material</b>	
Body	Forged brass, two-piece construction
End	Brass, 3/4" NPT
Ball	Stainless steel
Stem Seals	Single PTFE Seal and Dual Viton O-Rings
Ball Seals	PTFE Seals with Viton O-Rings
<b>Service</b>	Hot or chilled water, up to 50% glycol, up to 30 psi steam
<b>Connections</b>	Female NPT
<b>Flow Characteristics</b>	Equal percentage
<b>Rangeability</b>	300 to 1 turn-down ratio
<b>Leakage Rating</b>	ANSI Class IV
<b>Max. Close Off</b>	150 psi (1,034 kPa)
<b>Max. Differential Pressure</b>	150 psi (1,034 kPa)
<b>Max. Static Pressure</b>	500 psi (liquid), 30 psi (steam)

### Combined

<b>Weight</b>	3.6 pounds (1.6 kg)
<b>Temperature Limits</b>	
Medium (liquid)	-25° to 300° F (-31° to 149° C)
Operating	0 to 120° F (-18 to 49° C)
Shipping	-40 to 140° F (-40 to 60° C)

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