

Electronic Ball Valve (EBV) Zone Valve

The Taco Electronic Ball Valve (EBV) zone valve is the most intelligent zone valve in the world. The unique patented technology in the EBV utilizes a microcircuit based logic to control a gear driven, capacitor powered actuator which drives a ball valve based body design. All this adds up to a zone valve that leads the industry in flow rate capacity, shutoff pressure rating, ease of installation, energy efficiency, diagnostic capability, and the number of valves (12) that can be used per standard 40 VA transformer.



The Taco Electronic Ball Valve (

Driven by reliability.

The heart of the EBV Zone Valve is the Energy Storage Principle. The EBV is a gear driven, capacitor powered valve. Its unique, patented technology replaces the typical spring with a Prostar Capacitor for returning the valve to its normal position. Moreover, the old style synchronous AC motor has been replaced with an exceptionally reliable high torque, high efficiency miniature motor. These Taco innovations deliver dependability you never thought possible.

The EBV thinks for itself.

Inside the fashionably black box is a microprocessor that monitors the valve's operations. When a thermostat calls, the processor

makes sure the capacitor is fully charged, then sends power to the motor. The motor turns a set of gears that rotates the ball valve 90° to the Open position. Once at the Open position, the motor turns off. The LED remains lit as long as the thermostat is calling.

Once the zone has been satisfied, the capacitor discharges a portion of its stored energy and the motor turns the ball valve another 90° to the Closed position. An on-board optical sensor continuously ensures the proper Full Open and Full Closed position of the ball.

Universal thermostat compatibility.

No matter the brand or style of thermostat hanging on the wall, the

EBV works with them all. Now you can get all the features you want in a zone valve and a thermostat without having to worry about compatibility issues.

Manual operation is a breeze.

No need to worry about stripping gears or damaging the spring with the EBV. With the push of a button, the gears disengage and the valve can be rotated in any direction, to any position. Just release the button and the gears re-engage. What's more, the valve automatically resets itself to the proper ball position once power is restored. So you can't leave the valve open by mistake.

LED Indicator Light

Plug-In Terminals

Sweat or Threaded 1/2", 3/4" and 1"

Manual Operation Button with Automatic Reset

Actuator Head Can Be Mounted In Either Direction

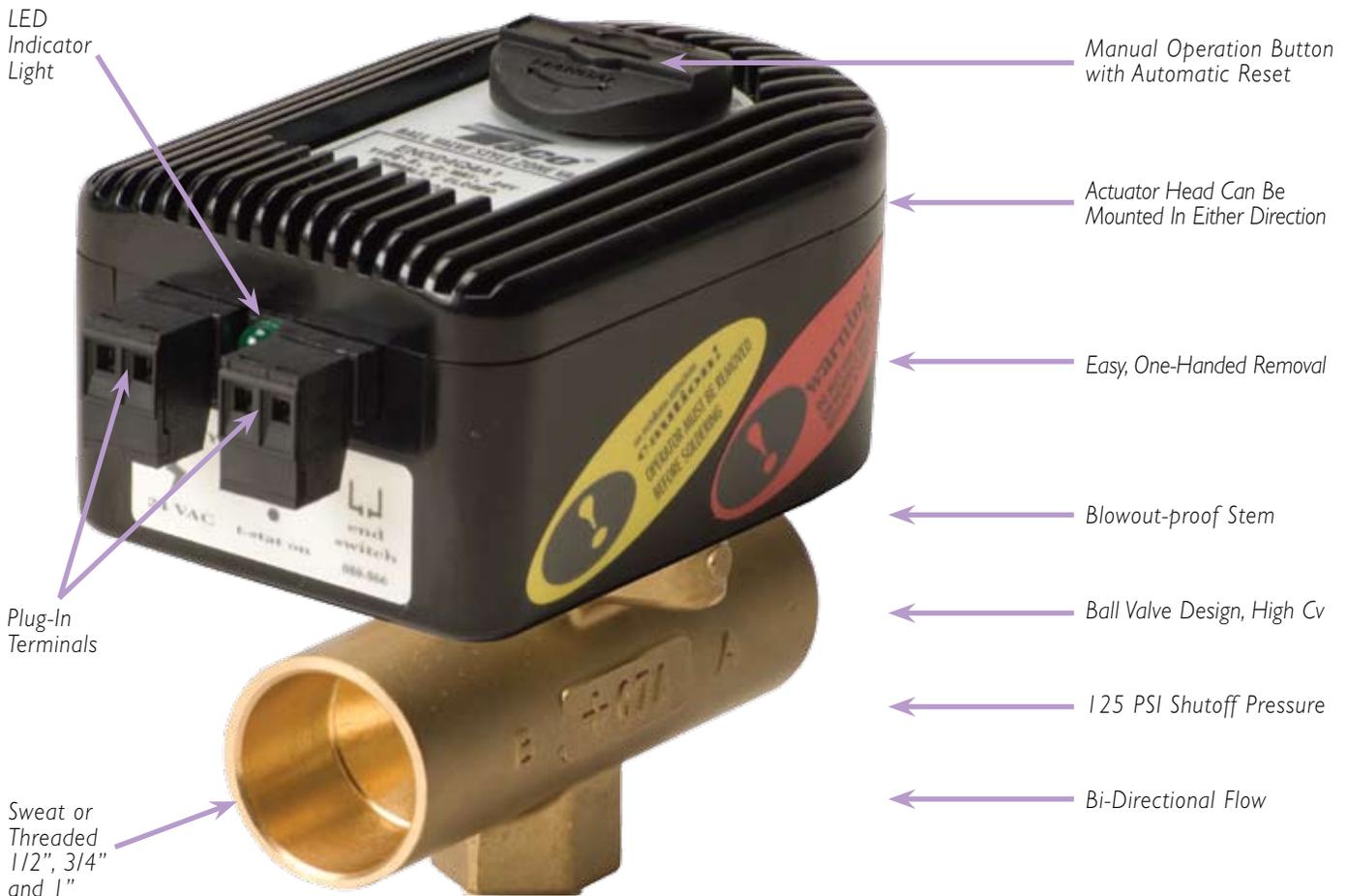
Easy, One-Handed Removal

Blowout-proof Stem

Ball Valve Design, High Cv

125 PSI Shutoff Pressure

Bi-Directional Flow



EBV) Smart for a lot of reasons.

Easy, easy, and easy.

Plug-in screw terminals make the EBV a breeze to install and operate. The valve can be installed in any direction, in any orientation, and features a dependable 1/4 turn one-handed twist lock for easy operator removal. The actuator head is a snap to replace and is great for tight baseboard jobs.

Let there be light.

The external LED shows you the full functionality of the valve's operation and thermostat status, making it a perfect companion to Taco's line of electronic zone valve controls.

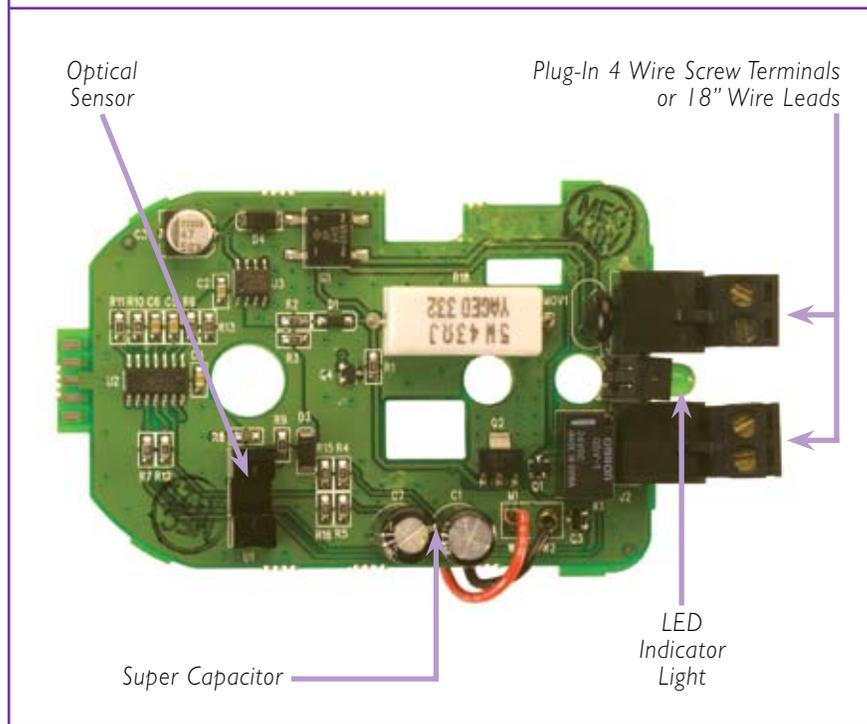
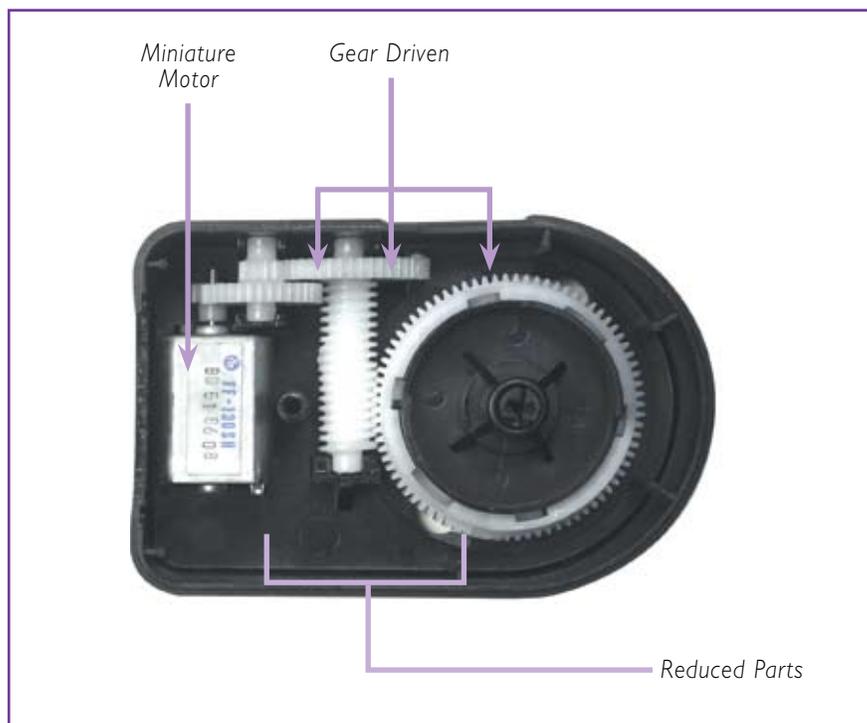
Less is more.

With the EBV, there are fewer parts to wear out, so the life of the valve is greatly increased. Microcircuit technology lowers the amp draw so you can install up to 12 valves per 40 VA transformer, or use a smaller transformer. Either way, you save on transformer costs. And because there's no bulky synchronous motor, the EBV has a lower profile to fit into tighter spaces. Last, the EBV features a universal actuator, so it fits all sizes of valves and reduces inventory.



A version for all of your needs.

The high flow, low head loss characteristics of the EBV combined with its compact design and 125psi shutoff pressure rating makes the EBV the most flexible valve on the market today.



“QUICK ORDER” PART NUMBERS

E050C2-2 > 1/2"	2-Way, Sweat, 24 VAC, Normally Closed, 4 Input Quick Connects
E075C2-2 > 3/4"	2-Way, Sweat, 24 VAC, Normally Closed, 4 Input Quick Connects
E100C2-2 > 1"	2-Way, Sweat, 24 VAC, Normally Closed, 4 Input Quick Connects
E050T2-1 > 1/2"	2-Way, Threaded, 24 VAC, Normally Closed, 4 Input Quick Connects
E075T2-1 > 3/4"	2-Way, Threaded, 24 VAC, Normally Closed, 4 Input Quick Connects
E100T2-1 > 1"	2-Way, Threaded, 24 VAC, Normally Closed, 4 Input Quick Connects

Product Specifications

Submittal Data # 101-090
Supersedes: 07/15/06

Effective: 03/03/08

- Maximum Operating Pressure..... 300 PSI (2,100 kPa)
- Maximum Shutoff Pressure..... 125 PSI (875 kPa)
- Fluid Temperature Range20° to 240°F, (-7° to 115°C) @ 135°F (57°C) ambient [Installation must be in a non-condensing application]
- ServiceVersion available for both open and closed systems (Hot and Chilled Water; up to 50% Glycol)
- Ball Rotation Speed..... Full Open to Full Close (90° turn), 4 seconds
Full Close to Full Open (90° turn), 6 seconds
- Seat Leakage..... Drop-Tight Close-Off
- Electrical Rating..... 24 VAC, 60 HZ, 0.54 Amps
Do not exceed number of valves per transformer rating.
Example: Do not use more than 12 zone valves per 40VA transformer
- Power Consumption, Charging 12.84 Watts, 0.54 Amps Max
- Power Consumption, Power On..... 1.44 Watts, 0.06 Amps Max
- Heat Anticipator Setting..... 0.5 Amps
- End Switch Rating..... 1 Amp @ 24 VAC

Materials of Construction, Actuator

- BodyHigh Performance Engineered Polymer
- GearsHigh Performance Internally Lubricated Engineered Polymer

Materials of Construction, Valve

- BodyForged Bronze
- StemBrass
- Press Ring.....Brass
- Ball.....Brass (Chrome Plated)
- Seat.....Modified Teflon
- O-rings.....EPDM

Flow Coefficients and Maximum Close-Off Pressure

VALVE SIZE	Cv (Kv)/Ft. of PIPE EQUIV.*	CLOSE-OFF PSI (kPa)
1/2"	4.9 (4.3) / 9.5	0-125 psi (0-862 kPa)
3/4"	10.3 (8.9) / 8.4	0-125 psi (0-862 kPa)
1"	8.9 (7.7) / 47.4	0-125 psi (0-862 kPa)

*At 4' per second (max. recommended residential flow rate).

Dimensions

VALVE SIZE	A	B	C	E	F	G	Approx. Wt. (valve + actuator)
1/2"	3"	2-3/8"	3-9/16"	2-9/16"	3-1/8"	1-9/16"	1.15 lbs
3/4"	3"	2-3/8"	3-3/4"	2-5/8"	3-1/8"	1-9/16"	1.20 lbs
1"	3"	2-3/8"	3-11/16"	2-5/8"	3-1/8"	1-9/16"	1.55 lbs

