



POPTOP™ SERIES
GENERAL CLOSE-OFF AND HIGH CLOSE-OFF TYPE
SECTION: MOTORIZED VALVES

POPTOP™ ACTUATOR AND VALVE

The new Erie PopTop™ actuator is specifically designed for use with Erie's new valve body. This combination provides convenient, reliable and easy installation for a variety of heating and cooling applications.

The valve actuator can be installed after the valve body has been installed onto the fan coil, baseboard or air handler.

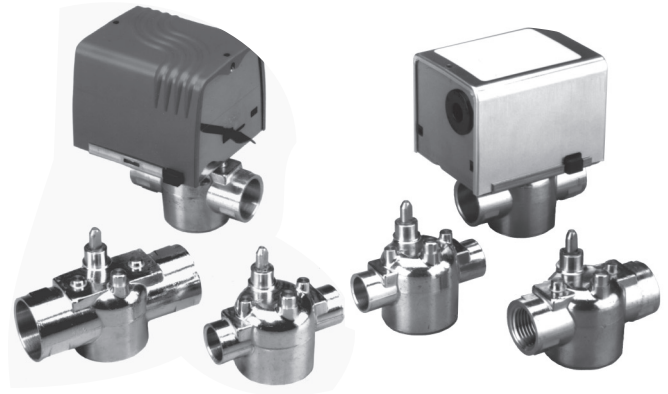
The flexibility provided by a variety of actuator voltages and functions makes for ease of installation. The PopTop™ features the reliable synchronous motor driven spring return operation proven in millions of Erie valves.

The PopTop™ actuators are available in general close-off and high close-off, normally open and normally closed configurations, and a variety of motor voltages.

The PopTop™ actuator mounts directly onto the body quickly and easily without the need for linkages and calibration.

High Close-Off HCO (H)

General Close-Off (G)



SPECIFICATIONS

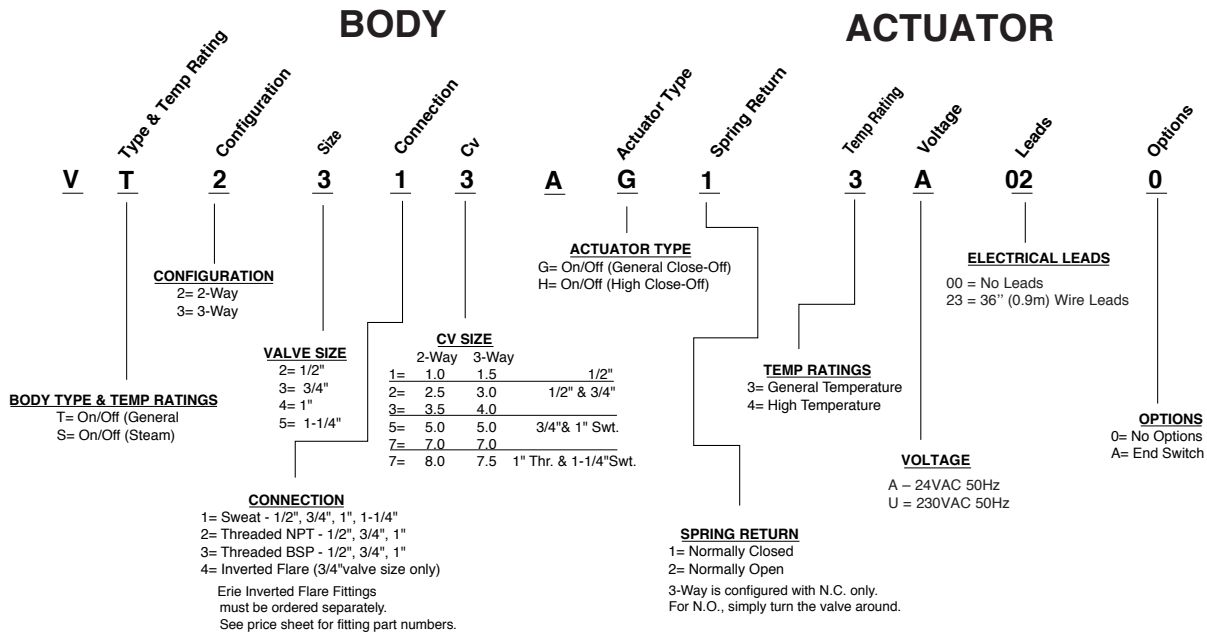
Operating Pressure Limits	300 PSI - PN20 (2,100 kPa)
Body Styles and Sizes	See Fig. 1
Service	Hot and Chilled Water, up to 50% Glycol
Motor Voltage	See Fig. 1
Power Consumption	6.5 Watts, 7VA
Stroke Speed	Power Stroke 9 to 11 Seconds (13 to 18 seconds on HCO) Spring Return Stroke 4 to 5 Seconds

Flow Coefficients & Maximum Close-Off Pressure	Valve Size	2-way C _V (k _V)	3-way C _V (k _V)	(G) Close-Off ΔP (kPa)	(H) Close-Off ΔP (kPa)
	1/2" Only	1.0 (0.9)	1.5 (1.3)	50 PSI (350)	75 PSI (525)
	1/2" & 3/4"	2.5 (2.2) 3.5 (3.0)	3.0 (2.6) 4.0 (3.4)	30 PSI (210) 20 PSI (140)	50 PSI (350) 30 PSI (210)
	3/4" & 1" Sweat	5.0 (4.3)	5.0 (4.3)	13 PSI (90)	20 PSI (140)
		7.0 (6.0)	7.0 (6.0)	10 PSI (70)	15 PSI (105)
	1" Threaded & 1-1/4" Sweat	8.0 (6.9)	7.5 (6.5)	15 PSI (103)	25PSI (175)

Seat Leakage	Zero Leakage (100% Bubble-Tight Close-Off)	
Body Materials	Body	Forged Brass
	Stem	Nickel-Plated
	Seat	Brass
Fluid @ Ambient Temperature Limits	Paddle (T)	Buna N General Temperature 32° to 200° F @ 104° F (94° C @ 40° C)
	Paddle (S)	Highly Saturated Nitrile Steam 32° to 250° F @ 169° F (121° C @ 77° C), 15 PSI (103 kPa) Steam
Actuator Materials	Stainless Steel Base Plate, Aluminum Cover,	
Fluid @ Ambient Temperature Limits	(3)	32° to 200° F @ 104° F (94° C @ 40° C)
	(4)	32° to 250° F @ 169° F (121° C @ 77° C), 15 PSI (103 kPa) Steam
Shipping Weight	1.0 lbs (453 g)	
Agency Listings	Most models cUL and UL Listed (File#MH7186), cUL and UL Recognized (File#MH25807), CE Mark.	

The specifications below are nominal and conform to generally acceptable industry standards. Erie Controls is not responsible for damages resulting from misapplication or misuse of its products.

GENERAL CLOSE-OFF & HIGH CLOSE-OFF TYPE POPTOP™ SERIES



When ordering Body and Actuator together, drop the "A" from the Actuator and add to the end of the Body number (Example: VT2313G13A020).

Body & Actuator Combination Requirements

TEMPERATURE CONFIGURATIONS

BODY TEMPERATURE **ACTUATOR TEMPERATURE**

V T X X X X A X X 3 A X X

T = General:
S = Steam:
If body style is T, actuator temp. rating can be 3 or 4
If body style is S, actuator temp. rating must be 4.

3 = General Temperature:
4 = High Temperature:
If actuator temp. rating is 3, body style must be T.
If actuator temp. rating is 4, body style must be S.

SPRING RETURN ACTION CONFIGURATIONS

BODY CONFIGURATION **ACTUATOR SPRING RETURN MODE**

V X 3 X X X A X 1 X X X X

2 = 2-way
3 = 3-way
If body configuration is 2, actuator return action can be 1 or 2.
If body configuration is 3, actuator return action must be 1.

1 = Normally Closed
2 = Normally Open
If actuator return action is 1, body configuration can be 2 or 3.
If actuator return action is 2, body configuration must be 2.

Fig. 1: Ordering Data & Configurations

Differential Pressure (psi) Δ		1.0 Cv	1.5Cv	2.5Cv	3.0Cv	3.5Cv	4.0 Cv	5.0 Cv	7.0 Cv	8.0 Cv
	1 ΔP	1.0	1.5	2.5	3.0	3.5	4.0	5.0	7.0	8.0
2 ΔP	1.4	2.1	3.5	4.2	4.9	5.7	7.1	9.9	11.3	
3 ΔP	1.7	2.6	4.3	5.2	6.1	6.9	8.7	12.1	13.9	
4 ΔP	2.0	3.0	5.0	6.0	7.0	8.0	10.0	14.0	16.0	
5 ΔP	2.2	3.4	5.6	6.7	7.8	8.9	11.2	15.7	17.9	

Fig. 2: Water Valve Sizing Table • Water Capacity in Gallons Per Minute (GPM)

PIPING & APPLICATION TIPS

These valves must be piped so that the paddle closes against the direction of flow (See Fig. 4). When installing the actuator to an NC valve, the actuator must be placed in the manually open position by using the manual operating lever. The first time the valve is operated electrically, the manual operating lever of the actuator will transfer to the automatic position. The manual operating lever can be used to allow for flushing of the system after installation.

Erie valves are designed for application to closed hydronic heating and cooling systems. Use in systems which have substantial make-up water (open systems) is not recommended. High levels of dissolved oxygen and chlorine found in open systems may attack the valve materials and result in premature failure. Due to condensation in chilled water applications, install over a drip pan.

BODY CONFIGURATION

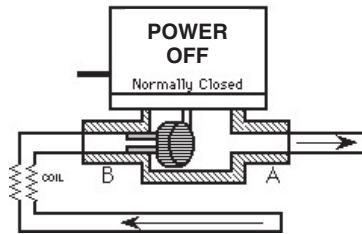


Fig. 4: 2-Way Normally Closed to the Coil

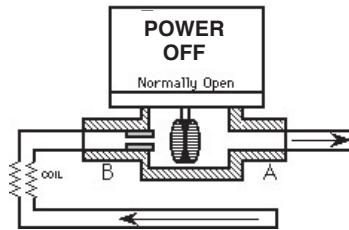


Fig. 5: 2-Way Normally Open to the Coil

**3-way is only configured as N.C. to B port
For N.O. configuration to the coil, simply turn the valve around.**

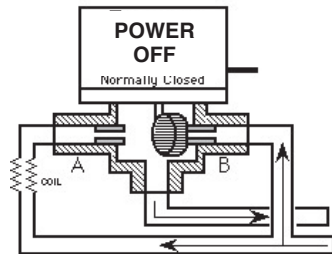


Fig. 7: 3-Way Valve in Mixing Configuration, Normally Open to the Coil

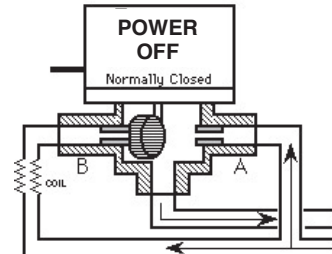


Fig. 6: 3-Way Valve in Mixing Configuration, Normally Closed to the Coil

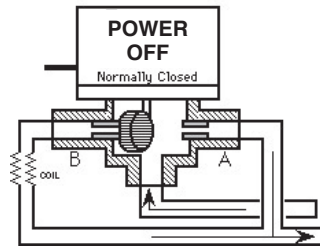


Fig. 8: 3-Way Valve in Diverting Configuration, Normally Closed to the Coil

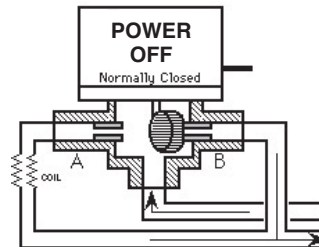


Fig. 9: 3-Way Valve in Diverting Configuration, Normally Open to the Coil

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