



# Thermaflo Type ETV Domestic Water Blending System

## DOMESTIC HOT WATER TEMPERATURE CONTROL WITH SAFEGUARD

### CONFORMS TO THE FOLLOWING

ASSE 1017

California Lead Free Plumbing Law

CSA B 125.3 (NSF/ANSI 61 Section 8)



### THE ETV PLATINUM PLUS CAN OPERATE IN ONE OF THE FOLLOWING MODES:

- ETV (temperature control)
- TMC (alarm condition safeguard)
- ETV Combo (temperature control with alarm condition safeguard)

### DESIGNED FOR CRITICAL TEMPERATURE APPLICATIONS

- Accurately maintains set point from 0.5 gpm domestic draw to full flow
- Accurately maintains set point within +/-2 °F
- Domestic hot water temperature control
- Heating and cooling or industrial applications
- Complete Packaged Systems Available

### STAINLESS STEEL VALVE BODIES

- Conforms to lead free requirements
- Rugged body design
- Minimizes scale build up
- External mounted actuator

### SAFEGUARD AGAINST HIGH TEMPERATURE CONDITIONS

- Optional safety valve output
- Dual alarm outputs

### REMOTE COMMUNICATION OPTIONS

- Internet
- BACnet (IP or MSTP)
- ModBus



## WHY ETV PLATINUM PLUS IS IMPORTANT

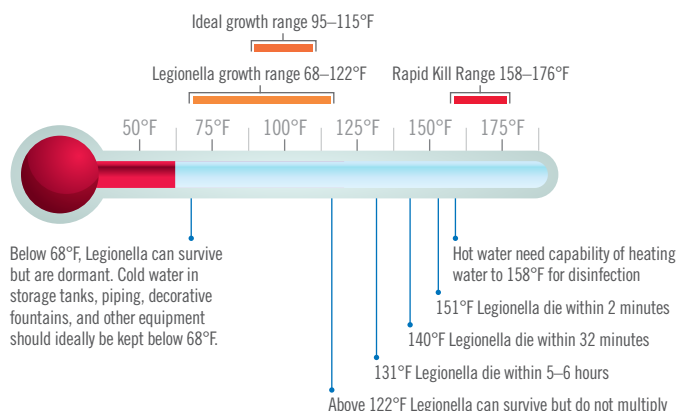
**Legionella**—Selection and controlling proper water temperature in domestic water storage and delivery systems is important in preventing illness from water-borne bacteria such as Legionella.

**Scald Hazard**—Scald hazards can be created in domestic water distribution systems when not properly controlled or monitored.

**Fluctuations**—Is the rapid and uncomfortable change in water temperature experienced at the faucet or shower by the end-user, which can lead to a fall or serious injury due to the thermal shock.

The ETV Platinum PLUS allows the domestic water system to be stored at higher temperatures to prevent the growth of Legionella, while being able to control and deliver a consistent tempered water out to the building.

### Legionella Growth Chart\*



### Scald Hazard

Water Temperature (°F)	Time to 3rd Degree Burn*
155°	1 second
148°	2 seconds
140°	5 seconds
133°	15 seconds
127°	1 minute
124°	3 minutes
120°	5 minutes
100°	Safe temperature for bathing

\*As per [www.asse-plumbing.org](http://www.asse-plumbing.org) and [www.osha.gov](http://www.osha.gov)



## ADVANTAGE

### DIGITAL TEMPERATURE CONTROL

- Accurately maintains set point from 0.5 gpm domestic draw to full flow per ASSE 1017

### QUICK STARTUP

- Single set point input, no multiple valve settings or balancing required

### MULTIPLE VALVE SIZES

- 7 Valve Sizes allow proper size selection for desired flow rates
- Multiple valves setup option for larger systems

### MAINTENANCE FREE

- The stainless valve body design reduces scale build up
- The external mounting of the actuator provides easy access
- There are no gaskets to maintain or replace as there are no motor to water contact concerns

### CONTROL SETTINGS & MENU FIELD ACCESSIBLE

- No laptop or dedicated software required

### FLEXIBILITY OF INSTALLATION

- HOT and COLD valve connections are interchangeable

### SINGLE CONTROL—MULTIPLE VALVES

- A single control module can control multiple valves in high flow applications

### 7 DAY SCHEDULING WITH 4 DAILY SETBACKS

- Capability to lower outlet set point during low usage periods
- Weekly schedule with 4 daily setbacks for maximum energy efficiency

### REMOTE COMMUNICATION OPTIONS

- Internet
- BACnet (IP or MSTP)
- ModBus



## APPLICATIONS

- Hospitals and Nursing Facilities
- Hotels and Resorts
- Correctional | Prison Facilities
- Military Installation | Barracks
- School | Educational Buildings | Dorms
- Multi Family Buildings
- Office Buildings
- Industrial Processes



## ACTUATOR

### EXTERNAL MOUNTING TO VALVE BODY

- Eliminates the potential of motor to water contact
- Eliminates the need for gasket maintenance or replacement

### SMART CALIBRATION

- Prevents motor damage due to over-torque conditions
- One motor fits all sizes

### REVERSE DIRECTION CAPABILITY

- Allows the HOT and COLD inlets of the valve to be interchangeable



## REMOTE COMMUNICATION OPTIONS

### INTERNET ACCESS

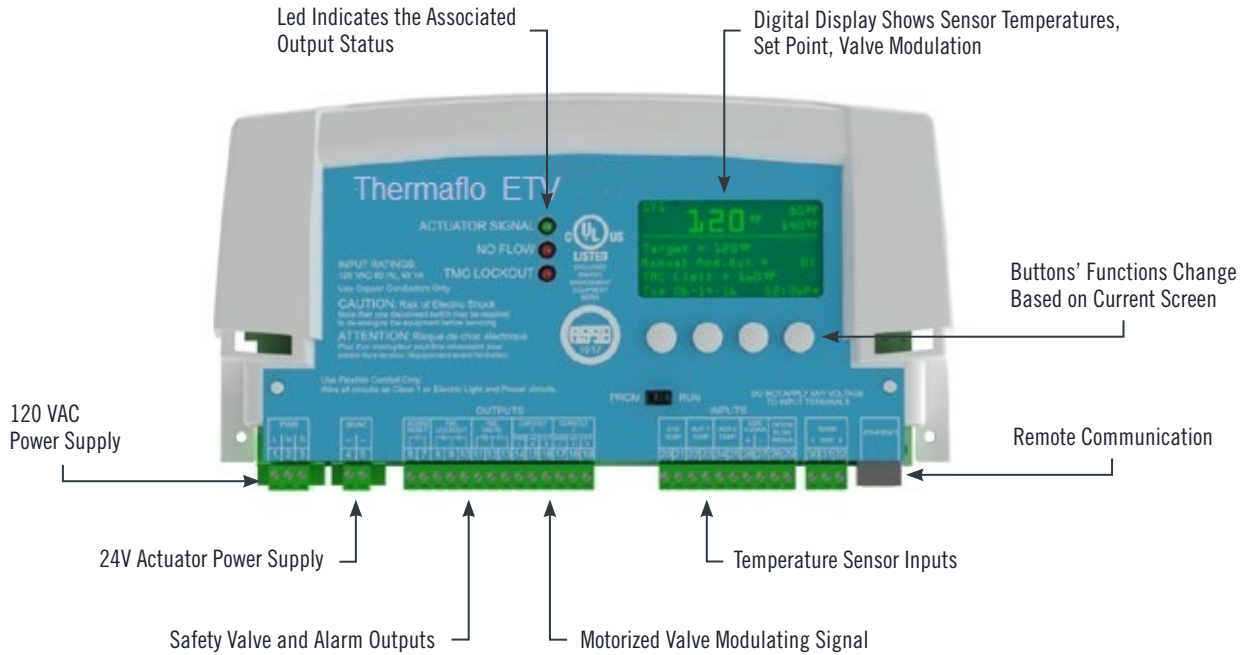
- Internet access through Internet Communication Management System (ICMS)
- Receive system critical alarms as an email or text message
- No license fees or special software required

### BUILDING AUTOMATION SYSTEMS (BAS)

- Supports BACnet and ModBus protocols
- Read and write access to control setting and temperature readings



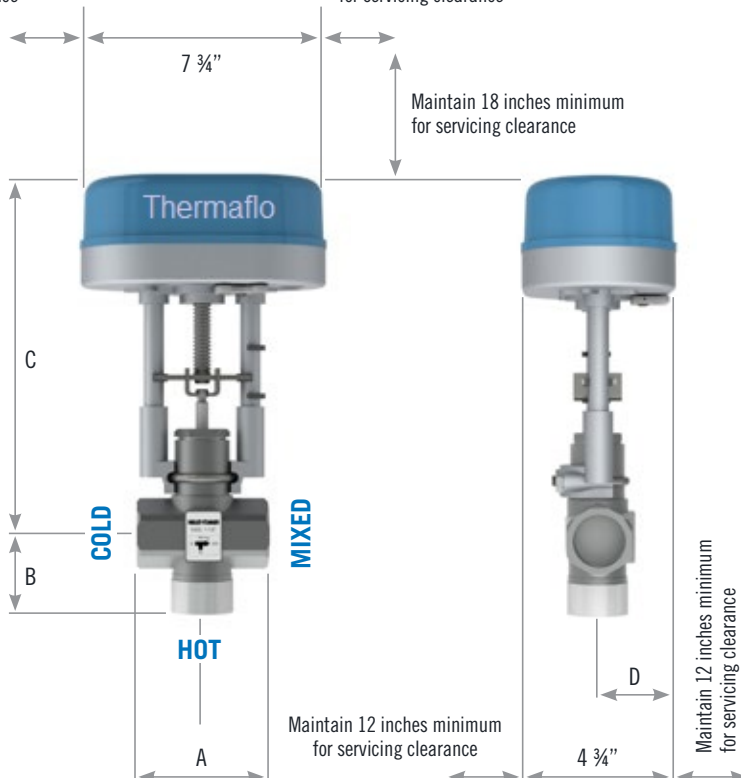
## LAYOUT



## DIMENSIONAL

Maintain 12 inches minimum for servicing clearance

Maintain 12 inches minimum for servicing clearance



ETV ASSEMBLY	DIMENSION			
	A	B	C	D
1/2"	3 1/8"	2"	10 1/2"	2 3/8"
3/4"	3 1/8"	2"	10 5/8"	2 3/8"
1"	4"	2 1/8"	10 3/4"	2 3/8"
1 1/4"	4"	2 1/2"	11"	2 3/8"
1 1/2"	4 4/5"	2 4/5"	11 3/16"	2 3/8"
2"	5 1/2"	3 3/8"	11 3/8"	2 3/8"
2 1/2"	6 5/16"	4"	2 3/4"	2 3/8"

ETV ASSEMBLY	VALVE CONNECTIONS—NPS		
	HOT	COLD	MIXED
1/2"	1/2"	1/2"	1/2"
3/4"	3/4"	3/4"	3/4"
1"	1"	1"	1"
1 1/4"	1 1/4"	1 1/4"	1 1/4"
1 1/2"	1 1/2"	1 1/2"	1 1/2"
2"	2"	2"	2"
2 1/2"	2 1/2"	2 1/2"	2 1/2"



## SPECIFICATIONS

### CONTROL MODULE

Voltage Input: 120 VAC 60 Hz  
 Maximum Input Rating: 48 VA maximum  
 Display: Graphic Display  
 Display/Temperature Units: °F and °C  
 Modes of Operation: ETV, TMC, ETV+TMC Combo  
 ETV Set Point: 40°F / 4°C to 200°F / 93°C  
 Alarm Set Point: 40°F / 4°C to 200°F / 93°C  
 Modulation Output Signal: 0–10V, 2–10V, 0–5V, 1–5V, 4–20mA  
 LED Indicators: 3 (Actuator Signal, No Flow, Alarm Status)  
 Inputs: Sensors (Hot, Cold, Mixed), Flow Prove, EMS 4–20mA  
 Dimensions: 11"W x 9"H x 3 3/4"D  
 Weight: 2.5 lbs.

### ACTUATOR

Voltage Input: 24 VAC 60 Hz  
 Power Consumption: 18 VA maximum  
 Input Signal: 0–10 V  
 Weight: 2.6 lbs.

### VALVE BODY

Body & Trim: 304 Stainless  
 Maximum Operating Temperature: 300°F / 149°C  
 Maximum Working Pressure: 225 PSI  
 Stem Material: 640 Stainless



## SIZING AND PART NUMBERS

### STAINLESS STEEL VALVE

PRESSURE DROP PSI	VALVE SIZE						
	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"
Cv	5	7	12	18	29	46	73
3	8	12	20	32	50	80	126
4	9	15	23	37	58	93	145
5	10	16	26	41	64	103	162
6	12	18	28	45	71	113	178
7	13	20	31	50	78	125	192
8	14	21	33	53	83	132	205
9	15	22	35	56	88	140	218
10	16	23	36	58	91	145	230
11	17	24	38	62	97	154	241
12	18	25	40	64	100	160	252
BUILDING RECIRC	GALLONS PER MINUTE						
	5 GPM			10 GPM		15 GPM	

### SAFETY VALVE

VALVE SIZE	PART NUMBERS	
	SAFETY MOTORIZED VALVE NO BATTERY BACKUP	SAFETY MOTORIZED VALVE WITH BATTERY BACKUP
1/2"	920540-00	920550-00
3/4"	920541-00	920551-00
1"	920542-00	920552-00
1 1/4"	920543-00	920553-00
1 1/2"	920544-00	920554-00
2"	920545-00	920555-00
2 1/2"	920546-00	920556-00
3"	920547-00	920557-00

**Sizing Recommendation:** Heat Timer recommends sizing the stainless valve with a design flow as close as possible to a 5 PSI pressure drop. Match safety valve size to ETV hot port size.

**Building Recirc:** The minimum building recirc flow rate shown is based on valve size and a flow velocity of 4 ft. per sec.

Consult Thermaflo Engineering for complete factory piped packages with check valves, isolation valves and base stands.

VALVE SIZE	PART NUMBERS				
	COMPLETE ASSEMBLY	VALVE/ACTUATOR TRANSFORMER	COMPLETE ASSEMBLY BACNET OPTION	COMPLETE ASSEMBLY MODBUS OPTION	COMPLETE ASSEMBLY RINET OPTION
1/2"	915670-00	915640-00	915670-BAC	915670-BUS	915670-RINET
3/4"	915671-00	915641-00	915671-BAC	915671-BUS	915671-RINET
1"	915672-00	915642-00	915672-BAC	915672-BUS	915672-RINET
1 1/4"	915673-00	915643-00	915673-BAC	915673-BUS	915673-RINET
1 1/2"	915674-00	915644-00	915674-BAC	915674-BUS	915674-RINET
2"	915675-00	915645-00	915675-BAC	915675-BUS	915675-RINET
2 1/2"	915676-00	915646-00	915676-BAC	915676-BUS	915676-RINET

**COMPLETE ASSEMBLY** includes sensor, stainless valve, actuator and control module.

**VALVE/ACTUATOR** for multiple valve applications.



# PIPING WITH OPTIONAL SAFETY VALVE

