



# CircuitSolver®

A ThermOmegaTech® brand



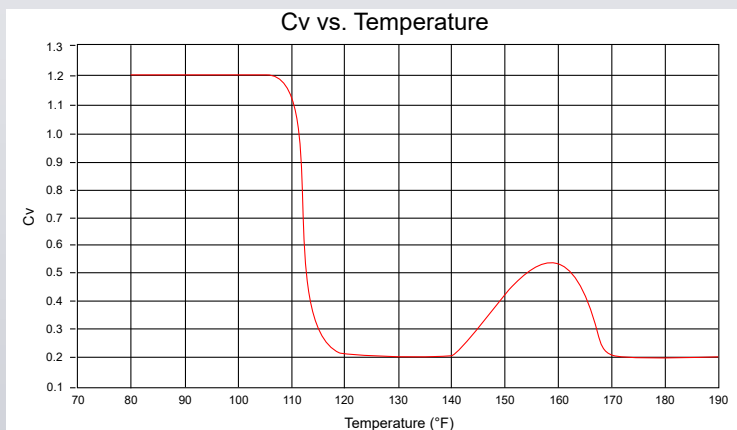
## CircuitSolver® Sanitary Flush thermostatic balancing valve for domestic hot water systems

CircuitSolver® is a self-actuating thermostatic balancing valve that automatically and continuously adjusts flow through a domestic hot water recirculation system to maintain the specified temperature at the end of the branch/riser.

The **CircuitSolver® Sanitary Flush (CSUSF)** valve allows for higher water temperatures to flow through the system during a thermal disinfection process to protect against Legionella growth.

This valve uses two thermal actuators to control the flow of water through a branch/riser. When the water temperature in the line reaches the set-point of the low temperature actuator, the CircuitSolver® modulates to its closed position to keep the hot water at the fixtures. This forces the additional water on to the other branches maintaining a constantly balanced system.

During the thermal disinfection process, the low temperature actuator will begin to reopen, allowing the high temperature water to flow through the branch again. When the water temperature reaches the set-point of the second (high temperature) actuator, the CircuitSolver® modulates to its closed position again to keep the high temperature water at the fixtures. *See the Cv Chart below.*



The **CircuitSolver® Sanitary Flush valve** is tamper-proof and operates at the ideal line temperature for standard balancing while also allowing higher water temperatures during disinfection processes. It is the ideal solution for a maintenance free high temperature flush.

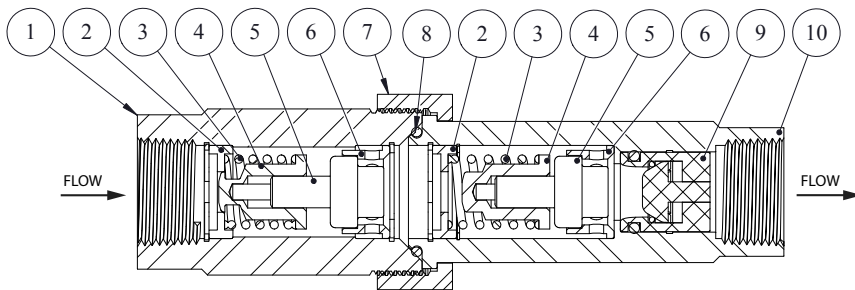
For more information and your local product representative, visit [www.CircuitSolver.com](http://www.CircuitSolver.com)

## Benefits

- Automatically and continuously adjusts to balance domestic hot water systems
- Eliminates balancing labor and callbacks
- Direct replacement for manual balancing valves
- Reliable, long lasting thermal actuators
- Allows for thermal disinfection flushing of the DHWR system to protect against Legionella growth
- Long service life and 3 year warranty
- NSF/ANSI 61 certified

## Design Features

- Never fully closes, small bypass of flow
- Two high thrust actuators keep orifices free of debris
- Low-temperature actuator maintains standard balancing temperature
- High-temperature actuator allows for higher temperatures during a disinfection process
- Lead free for use in potable water systems
- All stainless steel, corrosion resistant construction



ITEM #	DESCRIPTION	MATERIAL
1	Valve Body w/ Union Threads	303 SS
2	Insert - CircuitSolver®	303 SS
3	Spring	302 SS
4	Plug	303 SS
5	Thermal Actuator	303 SS
6	Carrier	303 SS
7	Union Nut	303 SS
8	O-ring	BUNA-N
9	Check Valve (optional)	GLASS FILLED NORYL
10	Insert - Female Threaded	303 SS

## Dimensions & Capacities

Model Number	SIZE	Diameter (D)		Length (L)		WEIGHT		MAXIMUM OPERATING PRESSURE		MAXIMUM TEMPERATURE		
		NPT	IN.	MM	IN.	MM	LBS.	KG	PSIG	BAR	°F	°C
CSUSF-1/2-XXX <sup>2</sup> /170 <sup>3</sup>	1/2"		2.0	51	6.3	160	2.5	1.1	200	14	250	121
CSUSF-1/2-XXX <sup>2</sup> /170 <sup>3</sup> -CV1												
CSUSF-3/4-XXX <sup>2</sup> /170 <sup>3</sup>	3/4"		2.0	51	6.3	160	2.5	1.1				
CSUSF-3/4-XXX <sup>2</sup> /170 <sup>3</sup> -CV1												
CSUSF-1-XXX <sup>2</sup> /170 <sup>3</sup>	1"		2.4	60	6.7	169	4.0	1.8				
CSUSF-1-XXX <sup>2</sup> /170 <sup>3</sup> -CV1												

### Model Selection

XXX refers to the desired closing temperature for standard balancing. For example, if you want 120°F desired return temperature during standard balancing and a 170°F maximum temperature flowing through the system fixtures installed on a 3/4" line, the model number would be CSUSF-3/4-120/170. To add optional check valve insert -CV1 directly after the temperature designation in the model number.

### Notes:

1. The CircuitSolver® valve is fully open approximately 10°F below the closing temperature.
2. Typical closing temperatures of the low temperature actuator include: 100°F, 105°F, 110°F, 115°F, 120°F, 125°F, 130°F, and 140°F.
3. Standard temperature for the high temperature actuator is 170°F.
4. Warranty information disclosed at [www.thermomegatech.com/terms-conditions/](http://www.thermomegatech.com/terms-conditions/)