

TEMPERATURE CONTROL  
**OVERBUILT.**



**THERMOSTATIC  
MIXING VALVES**



## Getting More Hot Water

### Thermostatic Mixing valves are the Solution

When more hot water is needed, Cash Acme has an easy, cost effective solution. Our Thermostatic Mixing Valves allow the existing heater to store water at a high temperature that might otherwise scald, while delivering it at a safe 120°F (49°C) or lower to all outlets. This makes the effective heater capacity much greater—typically 50% more gallons with electric heaters. And even more than that with gas. As shown in the chart, when the temperature is increased to 160°F (71°C) on a 30 gallon water heater, the effective gallons available at 120°F (49°C) will be 46 to 57 gallons depending on the cold water temperature. That's as much as an 89% increase in available hot water from the same water heater.

#### Percentage Increase of Hot Water by Temp.

Storage Temp °F (°C)	Cold Water Temp °F (°C)			
	45 (7)	55 (13)	65 (18)	75 (24)
120 (49)	100%	100%	100%	100%
140 (60)	127	131	136	144
160 (71)	153	162	173	189
180 (82)	180	192	209	233

\*Percentage increase compared to tank with water stored at 120°F (49°C)

(based on a 30 gallon water heater.)



NEW!

## HEATGUARD® TANK BOOSTER™ PRO

**Temperature Range: 90-130°F (32-54°C)**  
**Flow Range: 1-20 gpm (3.8-76 l/min)**

The Tank Booster Pro combines a Thermostatic Valve, a Flexible Connector and a Water Heater Tee in one package. The thermostatic valve is factory set at 120°F (49°C), but may be easily adjusted. Designed for use in residential and commercial applications, the Tank Booster Pro controls the temperature from the point of distribution. The Tank Booster Pro safeguards against scalding and bacteria growth while increasing hot water capacity by up to 50% and can decrease potential heat loss in household systems by up to 20%.

## Heatguard® 110-D LF Thermostatic Mixing Valve for Domestic Applications

**Temperature Range: 85-120°F (29-49°C), adjustable to 130°F (54°C)**  
**Flow Range: 1-20 gpm (3.8-76 l/min)**



Delivers water at a maximum temperature throughout the system and yields safer hot water from all outlets while aiding in preventing the growth of Legionella bacteria in the water heater. Robust, low complexity construction. Every valve is tested for performance prior to shipping. All valves now come with integral check valves in inlets and are lead free.

The Heatguard® 110-D LF can be used to control water temperature at the source of heat (water heater) or point-of-use (sinks, lavatories, or bath tubs) to provide a safe distribution temperature.



## Heatguard® 110-HX LF Thermostatic Mixing Valve for Domestic Heating and Radiant Applications

**Temperature Range: 85-176°F (29-80°C)**  
**Flow Range: 1-16 gpm (3.8-76 l/min)**



Outlet temperature range extending to 176°F (80°C), making it ideal for application in heating systems. It also applies to any installation requiring the delivery of reduced temperature hot water.



## Heatguard® 115 LF Thermostatic Mixing Valve for Large Domestic and Standard Commercial Potable Water, Radiant, and Heating Applications.

**Temperature Range: 85-176°F (29-80°C)**  
**Flow Range: 2.5-28 gpm (9.5-100 l/min)**



The 115 LF offers the same reliable protection of the 110 LF, but on a larger scale. The 115 LF incorporates a fast acting, high quality thermostatic element that senses the outlet water temperature and reacts to maintain a stable delivery temperature even under changing flows or variations in supply temperatures. The valve also greatly reduces the outlet flow in the event of a cold water supply failure. The 115 LF features an adjusting knob that can be locked at a desired temperature. Alternatively it can function in an adjusting mode. The Heatguard® 115 LF is intended for installation at the water heater to distribute controlled temperature water throughout a domestic hot water system. The Heatguard® 115 LF has an outlet temperature range extending to 176°F (80°C), making it ideal for applications in heating systems or in any installation requiring the delivery of reduced temperature hot water.



## Heatguard® 145 LF Mini Thermostatic Mixing Valve for Point-Of-Use Applications

**Temperature Range: 95-118°F (35-48°C)**  
**Flow Range: 0.34-5.8 gpm (1.3-22 l/min)**

The 145 LF provides a stable operation at flow rates as low as 0.34 gpm (1.3 l/min) to as high as 5.8 gpm (22 l/min). The valve also reduces the outlet flow to a trickle in the event of cold water supply failure. The 145 LF has inlet connections to suit a 3/8" flexible hose connector or a compression connection to 3/8" OD tube. Also available with cold water bypass and elbow inner fittings. Compact design, easily fits under or behind a single basin. Specifically intended for use in conjunction with individual faucets and electronic faucets.



## Heatguard® 800 Series Thermostatic Master Controller for Commercial and Industrial Applications

**Temperature Range: 95-150°F (35-66°C)**  
**Max Pressure: 145 psi (1000 kPa)**

Fast acting, high quality thermostatic elements that sense the outlet temperature and react to maintain a stable delivery temperature even under varying and extremely low flows. The adjusting handle can be locked at a desired temperature. Each valve has integral mounting feet to allow it to be securely fixed to a wall or frame. Complete with 4 in 1 service fittings on each inlet. Every valve is factory tested. The Heatguard® Series features a range of six high flow rate Thermostatic Mixing Valves that mix hot water with cold water to deliver tempered water at a controlled temperature, typically 120°F (49°C). Intended for installation in the plant room of commercial and industrial facilities to distribute controlled temperature water to the domestic hot water system of a whole building or a section of a building.

*\*Lead Free version coming soon.*



## Heatguard® 160 LF Thermostatic Mixing Valve for Commercial Point-Of-Use Applications

**Temperature Range: 95-120°F (35-49°C)**  
**Flow Range: 0.34-11 gpm (1.3-42 l/min)**

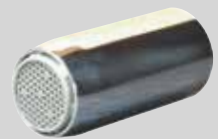
"Next generation" thermostatic technology provides optimum water temperature control. Long life and scale resistance ensured by use of high quality engineering polymers and inherently scale resistant design. Every valve is extensively factory tested. All valves now come with integral check valves in inlets and are lead free. The Heatguard® 160 is intended to control the water temperature to individual or multiple fixtures such as sinks, lavatories, or bath tubs to reduce the risk of scalding and thermal shock. It can also be installed in gang shower applications where the bather has no access to the temperature adjustment means.



## Heatguard® TAFR Temperature Actuated Flow Reducers

Thermal element senses high temperature water and reduces flow to protect user. Device will only reset when water temperature drops to a safe level. The Heatguard® TAFR is used for shower or faucet spouts to act as a "hot water fuse" to reduce flow of water if it reaches 120°F (49°C).

*\*Lead Free version coming soon.*



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Model	Markets	Applications	Outlet Temp Range	Factory Set Temp	Flow Rate (See Flow Curve)	Maximum Pressure PSI	Available Connections	Certifications	Listed With
Heatguard® Tank Booster Pro	Residential & Commercial	Source (Water Heater), Point-of-use (Sinks, Lavatories, Bath Tubs)	95-130°F (35-54°C)	120°F (49°C)	1-11 GPM (4-42 L/MIN)	230	3/4" MNPT mix outlet x 3/4" FNPT union fitting x 3/4" NPSH cold inlet	ASSE 1017, ASSE 1070, CSA B 125.3, NSF 372, & NSF 61	ASSE & IAPMO
Heatguard® Tank Booster	Residential & Commercial	Source (Water Heater)	90-130°F (32-54°C)	120°F (49°C)	1-11 GPM (4-42 L/MIN)	150	3/4" MNPT mix outlet x 3/4" FNPT union fitting x 3/4" NPSH cold inlet	ASSE 1017, NSF 372, & NSF 61	ASSE & IAPMO
Heatguard® 110-D LF	Residential & Commercial	Source (Water Heater), Individual or Multiple Fixtures (Sinks, Lavatories, Bath Tubs), Gang Showers	85-130°F (29-54°C)	120°F (49°C)	1-20 GPM (4-76 L/MIN)	230	Sweat: 1/2", 3/4" & 1" Barb, CPVC, SharkBite®, or Threaded (NPT): 1/2" & 3/4"	ASSE 1017, ASSE 1069, ASSE 1070, CSA B 125.3, NSF 372, & NSF 61	ASSE, CSA & IAPMO
Heatguard® 110-HX LF	Residential & Commercial	Heating Systems	85-176°F (29-80°C)	120°F (49°C)	1-20 GPM (4-76 L/MIN)	230	Sweat: 1/2", 3/4" & 1" Threaded (NPT): 1/2" & 3/4"	ASSE 1017, CSA B 125.3, NSF 372, & NSF 61	ASSE & IAPMO
Heatguard® 115 LF	Large Residential & Commercial	Source (Water Heater), Heating Systems	85-176°F (29-80°C)	120°F (49°C)	2.5-27 GPM (9.5-100 L/MIN)	230	Sweat: 3/4", 1" & 1 1/4" Threaded (NPT): 3/4" & 1"	ASSE 1017, CSA B 125.3, NSF 372, & NSF 61	ASSE & IAPMO
Heatguard® 145 LF	Residential & Commercial	Point-of-use (Sinks, Sensor Faucets, Two Handle Manual Faucets)	95-118°F (35-48°C)	104-110°F (40-43.3°C)	0.34-5.8 GPM (1.3-22 L/MIN)	230	Compression suitable for 3/8" OD Tube.	ASSE 1070, CSA B 125.3, NSF 372, & NSF 61	ASSE, CSA & IAPMO
Heatguard® 160 LF	Residential & Commercial	Individual or Multiple Fixtures (Sinks, Lavatories, Bath Tubs), Gang Showers	95-120°F (35-49°C)	120°F (49°C)	0.34 - 11 GPM (1.3 - 42 L/MIN)	145	Sweat: 1/2", Barb, CPVC, SharkBite®, 1/2" & 3/4", Threaded (NPT): 1/2" & 1"	ASSE 1069, ASSE 1070, CSA B 125.3, NSF 372, & NSF 61	ASSE, CSA & IAPMO
Masterguard 800 LF Series	Industrial & Commercial	Central mixtures to distribute tempered water to an entire building or section of a building	95-150°F (35-65°C)	117.5°F ± 35.6°F (47.5°C ± 2°C)	830 LF: 4 - 51 GPM 840 LF: 8 - 75 GPM 850 LF: 13 - 105 GPM 860 LF: 18.5 - 149 GPM	145	830 LF: 3/4" x 1" NPT 840 LF: 1" x 1 1/4" NPT 850 LF: 1 1/4" x 1 1/2" NPT 860 LF: 1 1/2" x 2" NPT	ASSE 1017, NSF 372, & NSF 61	IAPMO
Heatguard® TA9R	Residential	End of line temperature actuated flow reducers for shower or tap	N/A	117°F (47°C)	Shower Safe: 0.25 - 4 GPM Tap Safe: 0.25 - 2.5 GPM	145	Shower Safe: 1/2" NPT Tap Safe: Adapter for male or female laundry faucets	ASSE 1062, NSF 372, & NSF 61	ASSE & IAPMO

## Legionella and Scalding: A Clear Case For Thermostatic Mixing Valve

According to the U.S. Centers for Disease Control, an estimated 10,000 to 50,000 people get Legionnaires disease each year. The CDC also estimates that 10 to 30 percent of these cases result in death. Although Legionella bacteria can be found in many types of water systems, the bacteria reproduce to high numbers in warm, stagnant water (78-122°F/26-50°C). The organism is spread when water, in the form of fine mist, is inhaled. A drastic reduction in the number of bacteria results from storing hot water at 140°F (at 60°C). This effectively lowers the risk of infection. In conjunction with a higher storage temperature, a thermostatic mixing valve should be installed, to once again lower water temperature to 122°F (50°C) or below, thus providing greater protection from scalding. The Occupational Health and Safety Administration (OSHA) recommend the utilization of thermostatic mixing valves with a water heater installation. A simple solution to protect your family from Legionnaires Disease and scalding.

Internet links for more information: [www.osha.gov/SLTC/legionnairesdisease/index.html#alliances](http://www.osha.gov/SLTC/legionnairesdisease/index.html#alliances)  
[www.nwt.org/IndustryResources/Legionella03.pdf](http://www.nwt.org/IndustryResources/Legionella03.pdf)