

TEMPERATURE CONTROL
OVERBUILT.



**THERMOSTATIC
MIXING VALVES**

HEATGUARD®

TANK BOOSTER™

NEW!



Temperature Range: 90-130°F,
Flow Range: 1 - 11 gpm.

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, 110-DSB

**Thermostatic Mixing Valve
for Domestic Applications**

Temperature Range: 100-130°F,
Flow Range: 1 - 20 gpm.



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. Unique purpose designed adjuster tool minimizes unauthorized tampering with valve setting.

Heatguard® 110-HX

**Thermostatic Mixing Valve
for Domestic Heating and
Radiant Applications**

Temperature Range: 95-176°F,
Flow Range: 1 - 20 gpm.



The 110-HX includes all of the features of the 110-H, along with an adjustable and lockable handle for the prevention of tampering. 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-D, 115-DSB

**Thermostatic Mixing Valve
for Large Domestic and
Standard Commercial
Water Applications**

Temperature Range: 95-120°F,
Flow Range: 2.5 - 50 gpm.



The 115-D offers the same reliable protection of the 110-D, but on a larger scale. The 115-D 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-D also features an adjusting knob that can be locked at a desired temperature. Alternatively it can function in an adjusting mode. The Heatguard® 115-D, 115-DSB is intended for installation at the water heater to distribute controlled temperature water throughout a domestic hot water system.

Heatguard® 115-H, 115-HSB

**Thermostatic Mixing
Valve for Large Heating
Applications**

Temperature Range: 95-140°F,
Flow Range: 2.5 - 50 gpm.



The 115-H features a robust design based on the expertise gained from years of experience in the design and manufacture of safety valves. The 115-H incorporates a thermostatic element that senses the outlet water temperature and reacts to maintain a stable delivery temperature. It also features an adjusting handle that can be locked at a desired temperature setting. Every valve is tested for performance on an automated testing station during the assembly process.

Heatguard® 145LF

**Mini Thermostatic Mixing
Valve for Point-Of-Use
Applications**

Temperature Range: 100 - 118°F,
Flow Range: 0.34 - 5.8 gpm.



The 145LF provides a stable operation at flow rates as low as 0.34 gpm to as high as 5.8 gpm. The valve also reduces the outlet flow to a trickle in the event of cold water supply failure. The 145LF 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® 160

**Thermostatic Mixing Valve
for Commercial Point-Of-Use
Applications**

Temperature Range: 95-118°F,
Flow Range: 0.34 - 11 gpm.



"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. The Heatguard® 160 supplies hot water of controlled temperature directly to the point-of-use, such as showers, lavatory faucets, electronic sensor faucets etc., in commercial installations.

Heatguard® 160 4 in1 Thermostatic Mixing Valve for Point-Of-Use with 4 in 1 Service Fittings

Temperature Range: 95-118°F,
Flow Range: 1-11 gpm.



Each is complete with service fittings on each inlet. The fittings have a 1/2" female inlet thread and connect to the base valve via union connections. The valve reduces the outlet flow to a trickle in the event of cold water supply failure. Every valve is tested for performance on an automated testing station prior to shipping. Accurate temperature control even under varying supply conditions. The Heatguard® 160 4 in 1 is intended to supply controlled temperature hot water to any outlet requiring a higher level of protection, such as a tub or basin in a nursing home or lavatory faucets in a public place.

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

Temperature Range: 95-150°F,
Max Pressure: 145 psi.



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 4in1 service fittings on each inlet. Every valve is factory tested. The Masterguard® 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.

Heatguard® Series with Cabinet Assembly Thermostatic Master Controller with Cabinet for Commercial and Industrial Applications

Temperature Range: 95-150°F,
Max Pressure: 145 psi.

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 in1 service fittings on each inlet. Every valve is factory tested. Each cabinet assembly is made to order. The robustly designed cabinet allows for secure safety, peace of mind. The Masterguard® 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 whole section of building.

Heatguard® Fittings Thermostatic Mixing Valve Fittings Kits

Furnished with three union nuts and face seals. The kits contain three fittings of the selected type. Kits available in Sweat, Barb/PEX, Compression, Threaded (NPT), and CPVC (all kits are available with check). For use with Heatguard® thermostatic mixing valves. Sizes: Sweat - 1/2", 3/4" and 1" (checks not available for 1"), Barb/PEX - 1/2", 3/4" and 1", Compression - 1/2" and 3/4", Threaded - 1/2", 3/4", CPVC - 1/2" and 3/4", Compression with check - 3/8", 1/2", and 3/4" supply failure.



Model	Application	Service	Temp Range	Factory Set Temp	Flow Rate @ 45 PSI	Max PSI	Listings	Base Value	Connections
MultiFlex Water Heater Temperature Control Kit	Domestic	Safe distribution of potable water	90-130°F	120°F	1 - 11 GPM	200	ASSE 1017 and 1070, CSA B125.3 and is listed by ASSE and IAPMO	3/4" MNPT x 3/4" FNPT	3/4" MNPT x 3/4" FNPT
HG110-D	Domestic	Safe distribution of potable water	100 - 130°F	120°F	1 - 20 GPM	145	ASSE 1017 and 1070, CSA B125.3	1"	Sweat: 1/2", 3/4" & 1" (1/2" & 3/4" w/checks) SharkBite: 1/2" & 3/4" (1/2" & 3/4" w/checks) Barb: 1/2", 3/4", & 1" (w/ & w/o checks) Threaded: 1/2" & 3/4" (w/ & w/o checks) Compression: 3/8" 1/2" (w/ & w/o checks)
HG110-DLF (Lead Free)	Domestic	Safe distribution of potable water	100 - 130°F	120°F	1 - 20 GPM	145	ASSE 1017 and 1070, CSA B125.3	1"	Sweat: 1/2", 3/4" & 1" (1/2" & 3/4" w/checks) SharkBite: 1/2" & 3/4" (available with checks) Barb: 1/2", 3/4", & 1" (available with checks) Threaded NPT: 1/2" & 3/4" (available with checks) CPVC: 1/2" & 3/4" (available with checks)
H110-HX	Domestic	Safe distribution of potable water or radiant heating systems	95 - 176°F	120°F	1 - 20 GPM	145	ASSE 1017, CSA B125.3	1"	Sweat: 1/2", 3/4" & 1" (1/2" & 3/4" w/checks) Barb: 1/2", 3/4" & 1" (w/ & w/o checks) Compression: 3/8" 1/2" (w/ & w/o checks) Threaded: 1/2" & 3/4" (w/ & w/o checks) SharkBite: 1/2" & 3/4" (1/2" & 3/4" w/checks)
HG115-D	Large Domestic & Commercial	Safe distribution of potable water	95 - 120°F	120°F	2.5 - 50 GPM	145	ASSE 1017, CSA B125.3	1 1/2"	Sweat: 3/4", 1" & 1-1/4" (w/checks) Threaded: FNPT 3/4" & 1" (3/4" & 1" MNPT) (w/checks) CPVC: 3/4" (w/checks) SharkBite: 3/4" (w/checks)
HG115-H	Large Domestic & Commercial	Distribution of hot water in heating systems	95 - 140°F	120°F	2.5 - 50 GPM	145	ASSE 1017, CSA B125.3	1 1/2"	Sweat: 3/4", 1" & 1-1/4" (w/checks) Threaded NPT: 3/4" & 1" (available with checks) SharkBite: 3/4" (available with checks) Compression: 1/2" & 3/4" Compression w/ checks: 3/8", 1/2", & 3/4" Barb: 1/2", 3/4", & 1"
HG145LF	Domestic & Commercial	Individual faucets and electronic faucets.	95 - 118°F	104°F	0.34 - 5.8 GPM	145	ASSE 1070, CSA B125.3	3/8" compression	Compression: Available with cold water bypass and elbow fittings. Ideal for use with 1/4" SharkBite fittings and stops
HG160	Commercial	Point-Of-Use. Supply of controlled temperature hot water directly to showers, lavatory faucets, electronic sensor faucets etc.	95 - 118°F	104°F	0.34 - 11 GPM	145	ASSE 1069 and 1070 CSA B125.3	1"	Sweat: 1/2", 3/4" & 1" (1/2" & 3/4" w/checks) Threaded: 1/2" & 3/4" (w/ & w/o checks) SharkBite: 1/2" & 3/4" (1/2" & 3/4" w/checks) Barb: 1/2", 3/4" & 1" (w/ & w/o checks) Compression: 3/8" 1/2" (w/ & w/o checks)
HG160 4 in 1	Commercial	Point-of-use, higher level of protection. Intended to supply controlled temperature hot water to outlets such as a tub or basin in a nursing home or lavatory faucets in a public place.	95 - 118°F	104°F	0.34 - 11 GPM	145	ASSE 1069 and 1070 CSA B125.3	1/2"	Shutoffs, Sweat: 1/2", 3/4", 1" (1/2", 3/4" w/ checks) Threaded NPT: 1/2" & 3/4" (available with checks) SharkBite: 1/2" & 3/4" (available with checks) Compression: 1/4" ID (3/8" OD), 1/2" ID (5/8" OD), 3/4" ID (7/8" OD) (available with checks) Barb: 1/2", 3/4", & 1" (available with checks) CPVC: 1/2" & 3/4" (available with checks)
Master Guard 800 Series	Commercial and industrial plant rooms.	Master control of the temperature of hot water delivered to a whole building or a section of building.	95 - 150°F	120°F	MG810: 1 - 19 GPM MG820: 2.5 - 30 GPM MG830: 4 - 51 GPM MG840: 8 - 75 GPM MG850: 13 - 105 GPM MG860: 18.5 - 149 GPM	145	ASSE 1017, CSA B125.3	MG810: 1/2" X 3/4" MG820: 3/4" X 3/4" MG830: 3/4" X 1" MG840: 1" X 1-1/4" MG850: 1-1/4" X 1-1/2" MG860: 1-1/2" X 2"	Shutoffs

HG TAFR	Domestic	For shower, tub or faucet spouts to act as a "hot water fuse" to reduce flow of water if it reaches 120°F	117 - 120°F	N/A	HG Shower Safe: 0.25 - 4 GPM HG Bath Safe: 0.25 - 6.6 GPM HG Tap Safe: 0.25 - 2.5 GPM	145	ASSE 1062, CSA B125.3, NSF-61, and are listed by ASSE and IAPMO	HG Shower Safe: 1/2"NPT (inlet/outlet) HG Bath Safe: 1/2" NPT Tap Safe: adapter for standard male or female laundry faucets	Available to suit shower heads, faucets (male and female thread) and tub spouts.
Master Guard 800 Series with cabinet assembly	Commercial and industrial plant rooms	Rooms requiring limited access to system controls.	95-150°F	120°F	(See Chart)	145	ASSE 1017, CSA B125.3 and is listed by ASSE and IAPMO	Shutoffs 1/2" X 3/4" 3/4" X 3/4" 3/4" X 1" 1" X 1-1/4"	
Thermostatic Retrofit Kit	For use with Heatguard thermostatic mixing valves.	Use with SharkBite Push-Fit fittings to easily connect a Heatguard valve		N/A	N/A	N/A	N/A	Works on 1/2" and 3/4" valve sizes	1/2" and 3/4"
Mixing Valve Fitting Kits	Domestic & Commercial	Connection or adaptation of Heatguard valves to various pipe systems. Use with Heatguard 110, 160 and 115 base valves.		N/A	N/A	N/A	N/A	Works on HG 110D, 160 and 115 base valves	Sweat: 1/2", 3/4" & 1" (1/2" & 3/4" w/checks) Barb: 1/2", 3/4", & 1" (available with checks) CPVC: 1/2" & 3/4" (available with checks) Compression: 1/2" and 3/4" Compression with check: 3/8", 1/2" and 3/4"

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). 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. 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 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
www.awt.org/Legionella03.pdf

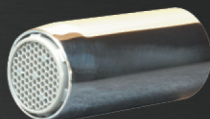
Percentage Increase of Hot Water by Temp.

	Cold Water Temp °F(°C)			
Storage 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



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, tub or faucet spouts to act as a "hot water fuse" to reduce flow of water if it reaches 120°F (49°C).

Thermostatic Retrofit Kit Retrofit Tailpiece Kit



The Thermostatic Retrofit Kit comes with 3 CTS tailpieces. The kit aids in the quick and easy installation of a thermostatic mixing valve in a domestic application. Use with SharkBite® fittings to easily connect a Heatguard® valve to 1/2" and 3/4" pipe. Heatguard® 110-D purchased separately. For use with Heatguard® 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 or lower to all faucets. 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 on a 30 gallon water heater, the effective gallons available at 120°F 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.

(based on a 30 gallon water heater.)

HEATGUARD® TANK BOOSTER™



Reliance Worldwide USA

2727 Paces Ferry Road SE
Building Two, Suite 1800
Atlanta, GA 30339
1-877-700-4242 • Fax: 1-877-700-4280
cashacme.com

Reliance Worldwide Canada

74 Alex Avenue
Vaughan, Ontario, L4L 5X1
1-888-820-0120
cashacme.ca



A Division of the Reliance Worldwide Corporation