

# INSTALLATION FOR THERMOSTATIC VALVES

# WATERMARK

SS-TH1000

1/2" Thermostatic Valve

SS-TH3000

3/4" Thermostatic Valve

SS-TH2000

1/2" Thermostatic Valve with  
built in volume control

SS-TH4000

3/4" Thermostatic Valve with  
built in volume control

**Features:**

- Ability to pre-select water temperature – thus conserving water
- Paraffin wax element maintains water temperature within  $\pm 1.8^{\circ}\text{F}$
- Compensates for water pressure fluctuations preventing scalding
- Safety button at  $100^{\circ}\text{F}$  prevents accidental scalding
- High flow rates allow for multiple shower applications
- Listed by IAPMO, CSA, NSF, and other municipalities

**Specifications:**

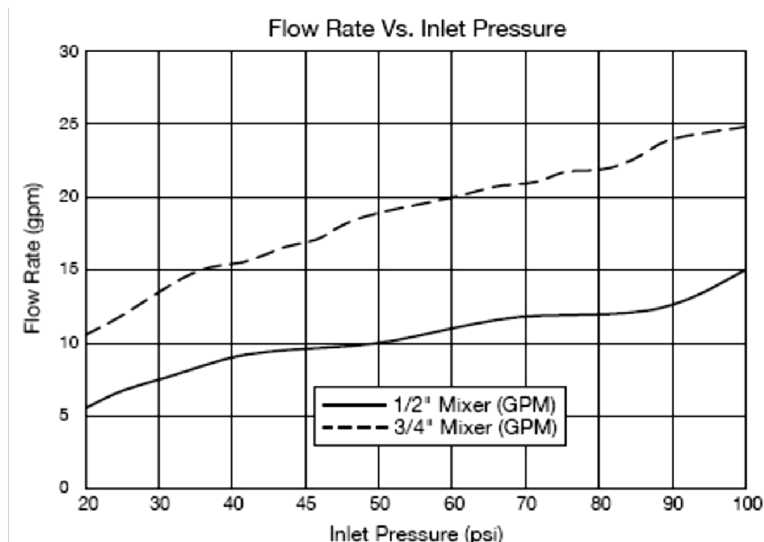
- Operating pressure is 2 PSI to 72 PSI
- When pressure is higher than 72 PSI a pressure reducer (fitted before the valve) is required.
- Temperature range is  $50^{\circ}\text{F}$  to  $180^{\circ}\text{F}$
- Recommended setting is 29 PSI and  $149^{\circ}\text{F}$

**Note:**

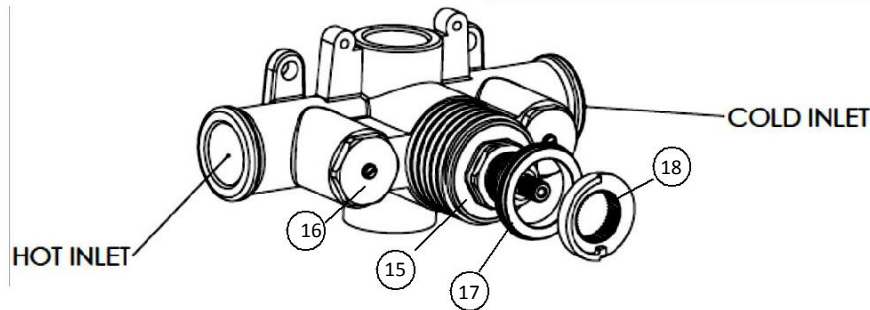
- DO NOT USE PLUMBER’S PUTTY ON ANY OF THE BRASS COMPONENTS  
This will cause the finish to tarnish and void the warranty. A non-corrosive Alkoxy Silicone is recommended.
- DURING SWEATING OF LINES DO NOT OVERHEAT CASTING  
Overheating may cause damage to internal mechanism and void the manufacturer’s warranty as well as increase the risk of scalding.
- COPPER ADAPTORS MAY BE REQUIRED TO COMPLETE YOUR INSTALLATION

**Note:**

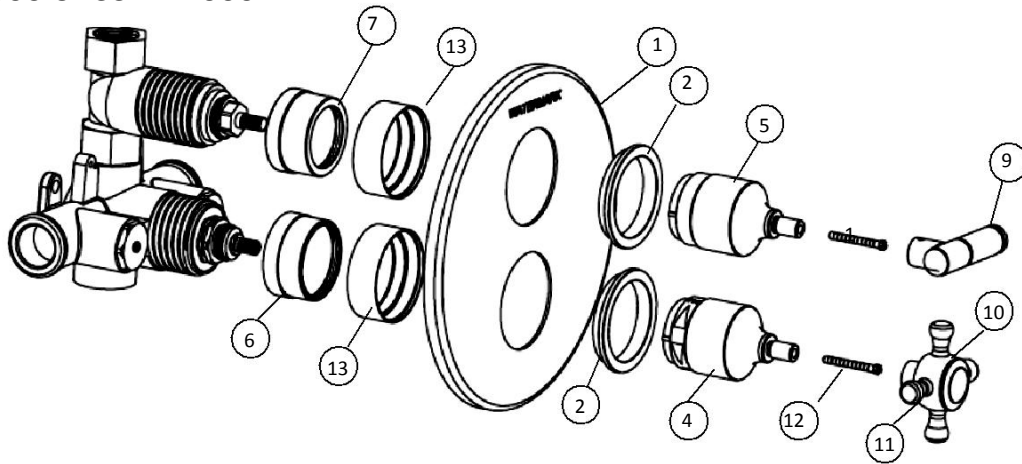
- Separate wall stops/ shut off valves/ volume controls (SS-TS100 or SS-TS150 or SS-TS200) may be needed in conjunction with this valve. A thermostatic valve’s only function is to mix temperature.



## SS-TH1000 or SS-TH3000



## SS-TH2000 or SS-TH4000



### Parts Checklist

Carefully remove all parts from the box. The following parts should be included.

Description	Qty	Description	Qty
1 Face plate	1	10 Temperature handle (representative handle)	1
2 Lock Ring	2	11 Temperature control set screw (for some models)	1
4 Temperature control handle post	1	12 Temperature control set screw (for some models)	1
5 Volume control handle post	1	13 Dome sleeve (raw brass)	2
6 Temperature control dome	1	15 CRT506.4 cartridge	1
7 Volume control dome	1	16 Check and integral stop	1
9 Volume control handle (representative handle)	1	17 Friction ring	1
		18 Thermostatic limit stop ring	1

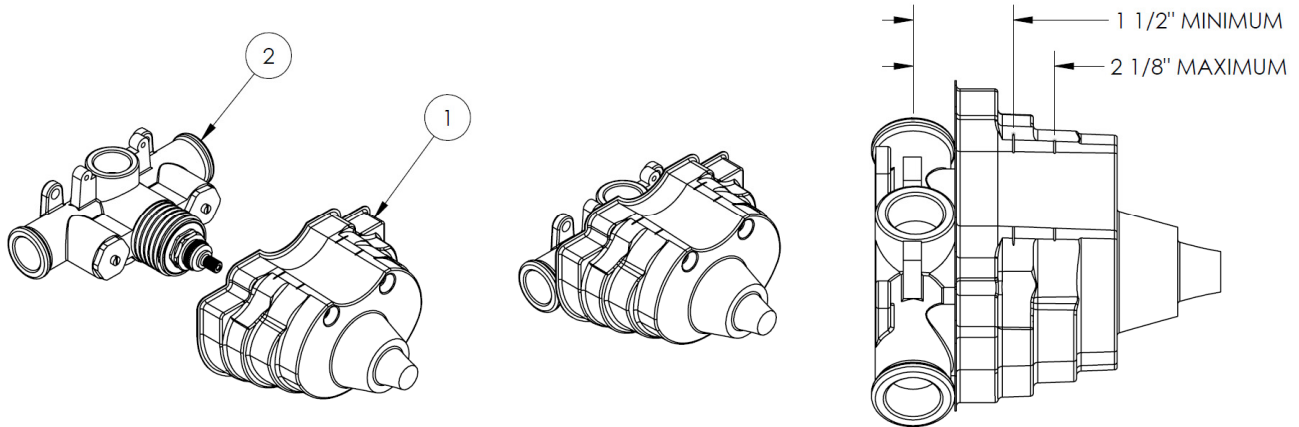
### Valve Installation

1. Flush the lines of all dirt and debris. Failure to completely flush the lines will cause valve failure and will void the manufacturer's warranty.

2. Fit the valve on the wall without removing the plastic cover on the control spindle. Turning the control spindle will change the temperature setting which is pre-calibrated at the factory.

3. Connect the hot water supply to the left inlet of the valve (HOT marked with RED paint) and cold supply to the right inlet (COLD marked with BLUE paint).

4. Use the **plastic mud guard template (1)** (part of the package) to position the **valve (2)** in the wall. This is done by checking the markings on the mud guard (3<sup>rd</sup> picture below) for the minimum/maximum settings which is 1 ½" to 2 1/8" from the center of the valve inlets to the finished wall.



5. Connect the outlet pipe(s). Install tile stops/ volume controls between the thermostatic valve and each device to be operated. See diagram 4 for sample installations. Ensure bottom outlet is plugged if not being used.

- **NOTE:** Water temperature from bottom outlet will be slightly colder than water temperature from top outlet.

## Trim Installation

1. Screw **Temperature Control Dome (6)** and **Volume Control Dome (7)** onto valve.  
*Volume Control Dome (7) is for valves with built-in volume controls (SS-TH2000 and SS-TH4000) and does not apply to valves with separate volume controls.*  
*Please note that the Temperature Control Dome (6) has a larger opening than the Volume Control Dome (7).*
  2. Secure the **Thermostatic Face Plate (1)** onto the valve by sliding over the **Temperature Control Dome (6)** and **Volume Control Dome (7)**
  3. Screw **Dome Sleeve (13)** onto **Temperature Control Dome (6)** and **Volume Control Dome (7)**.
  4. Lock the **Thermostatic Face Plate (1)** securely against the wall using the **Thermostatic Face Plate Lock Ring (2)**.
  5. Ensure **Temperature Limit Stop ring (18)** is installed with red dot at 12 o'clock position, and thermostatic handle is installed with push button at 12 o'clock position.
- **Note:** If thermostatic handle is a lever handle, make sure **Friction Ring (17)** is installed first by sliding over the valve.

## Temperature Setting

The delivered temperature of the valve varies depending on the temperature of the supplied hot water. The valve is factory set at a supplied temperature of 149°F under balanced pressures. Depending on your preferred hot water temperature setting, it may be necessary to adjust the calibrations of the valve. The limit override button is preset at 100°F and can be adjusted as described below.

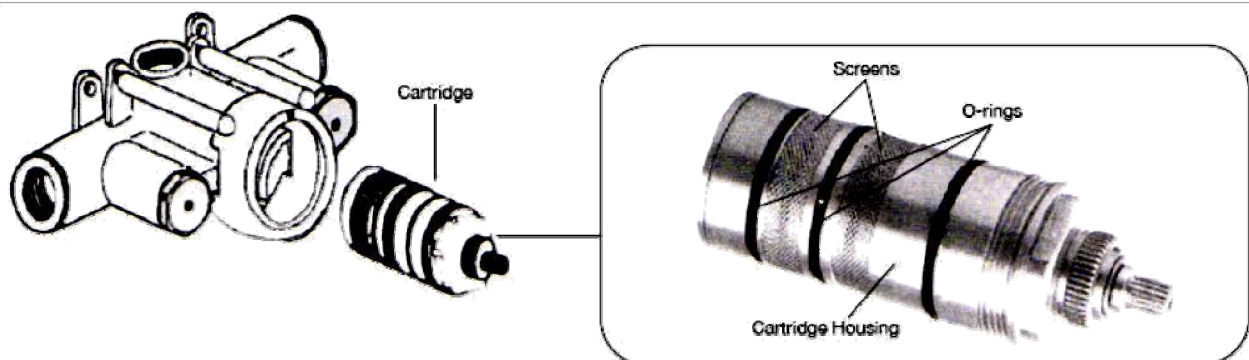
1. Select 100°F on the control handle.
2. Without turning the handle, remove the handle by unscrewing the screw and pulling off (screw may be concealed and/or fastened with set screws).
3. Use a thermometer to check the delivered temperature on one of the outlets.
4. Adjust water temperature to 100°F by hand turning the cartridge stem slowly left or right.
5. Ensure that the temperature stop-ring is installed with red dot at 12 o'clock position.
6. Push the handle back on the valve with the push button at the 12 o'clock position.

## Removal and Maintenance of Cartridge

This thermostatic valve has screens to prevent dirt and unwanted particles from damaging the valve. Clogged screens can cause reduced flow and inefficient temperature mixture by the valve. You can easily clean the screens by following the instructions below.

1. Unscrew the two screws on the cover faceplate and remove the plate.
2. Shut off the water inlets by tightening the two screws at the two check stop valves.
3. Remove the handle by unscrewing the screw and pulling off (screw may be concealed and/or fastened with set screws).
4. Pull off the temperature stop-ring.
5. Unscrew the cartridge with a 24 mm wrench or other adjustable wrench in a counter-clockwise position and gently pull it out.
6. Clean the screens and rinse with water. If necessary, soak in a 50/50 mix of white vinegar/ water or a de-scaling agent until all dirt is dissolved. Grease the o-rings with a silicone based grease and wipe the housing with a wet cloth before reassembling.
7. Reassemble the valve by reversing these instructions. Make sure the indentation on the shroud, the red dot on the temperature limit-ring, and push button on the handle are all in the aligned in the 12 o'clock position.

**Note:** To prevent the handle from accumulating mineral build up, which can cause the handle to “lock up”, the handle must be turned on an occasional basis.



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## Troubleshooting

Malfunction	Cause	Remedy
Cannot regulate temperature	Dirt in check valves Water supply reversed Valve Installed upside down	Remove and clean check valve Reverse hot and cold supply lines Reverse valve
Hot and cold water do not mix	Blocked shower head Lack of water pressure at one of the inlets	Remove shower head and clean debris. If necessary, soak in a 50/50 mix of white vinegar/water or a de-scaling agent until all dirt is dissolved. Correct water pressure at source
Water not hot enough/Water too hot	Debris in check valves Valve not properly calibrated Water heater setting incorrect	Remove and clean check valves Calibrate valve following instructions on previous page Adjust water heater temperature setting
Temperature selected on handle is different than actual water temperature	Debris in check valves Valve not properly calibrated Uneven hot & cold water pressure	Remove and clean check valves Calibrate valve following instructions on previous page Check and adjust water pressure for both hot & cold supply lines
Handle does not turn	Mineral build up	Remove and clean cartridge following instructions above
Low water pressure	Low water pressure Debris in cartridge Debris in check valves Blocked shower head	Check/adjust water pressure at source Remove and clean cartridge following instructions above Remove and clean check valves Remove shower head and clean debris. If necessary, soak in a 50/50 mix of white vinegar/ water or a de-scaling agent until all dirt is dissolved.
Leaking shower head	Fault cartridge in wall stop/ volume control	Repair or replace cartridge in wall stop/ volume control
Valve body too deep into wall	The measured rough in or finished wall surface is incorrect	Install the proper extension kit: <b>SS-EXT40</b> for ½" and ¾" valves (need to specify finish) <b>SS-EXT50</b> for ½" and ¾" valves with built in wall stop/ volume control (need to specify finish)

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