

Installation

S59-2005T1

Bradley TMVT1 Thermostatic Mixing Shower Valve

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For use with shower heads rated at 5.7 L/min (1.5 gpm) or higher.

Specifications

Inlet Connections:	1/2" NPT
Outlet Connections:	1/2" NPT
Temperature Range:	Cold - 110°F
Maximum Pressure:	125 PSIG
Inlet Temperature, Hot:	120°–180°F
Inlet Temperature, Cold:	40°–80°F
Minimum Temp. Differential (From valve set point):	20°F



Read the instructions in this manual before beginning installation. Save these instructions and refer to them for inspection, maintenance, and troubleshooting information.

For questions regarding the operation, installation or maintenance of this product, visit bradleycorp.com or call 800.BRADLEY (800.272.3539).

Product warranties and parts information may also be found under "Resources" on our website at bradleycorp.com.



Safety Information

To ensure proper operation:

Installation

Failure to comply with proper installation and maintenance instructions could contribute to a valve failure resulting in severe bodily injury including scalding, chilling, and/or death depending upon system water pressure changes and/or supply water temperature changes.

Hot limit screw is set in the maximum temperature position. Failure to properly adjust may result in serious scalding. This valve may not protect from scalding if there is a failure of other temperature-controlling devices elsewhere in the plumbing system. Excessive heat may cause damage to internal parts.

This valve is intended to be installed as an ASSE 1016 valve- at the point of use, where the user has access to flow or final temperature controls. This valve should not be used where an ASSE 1017, ASSE 1069, or ASSE 1070 device is required.

Make sure that all water supply lines have been flushed and are then completely turned off before beginning installation. Debris in supply lines can cause valves to malfunction.

Installation of this system must be completed by a qualified plumber in compliance with all national and local codes. Compliance and conformity to local codes and ordinances is the responsibility of the installer. Should these codes differ from the information in the manual, follow the local codes. Inquire with governing authorities for additional local requirements.

Inspection

Regular checking and cleaning of the valve's internal components and check stops is necessary for maximum life and proper product function. Periodic inspection and yearly maintenance by a licensed contractor is required. Corrosive water conditions and/or unauthorized adjustments or repairs could render the valve ineffective for its intended service. Frequency of cleaning and inspection depends upon local water conditions.

Supplies Required:

- Teflon Tape
- Allen key wrenches
- Screwdriver
- 1/2" NPT Brass pipe plug
- Adjustable wrench

LCD Display Information

The Bradley TMVT1 S59-2005T1 LCD Shower Valve is designed to operate for up to 2 years on a set of high-quality alkaline batteries*. Bradley strongly recommends using only high-quality, name-brand alkaline batteries for maximum performance.

When operating at normal room temperatures, the LCD display will convey accurate water temperatures between 40°F – 120°F (4°C – 49°C). For safety and comfort, a number of special features are built into the display:

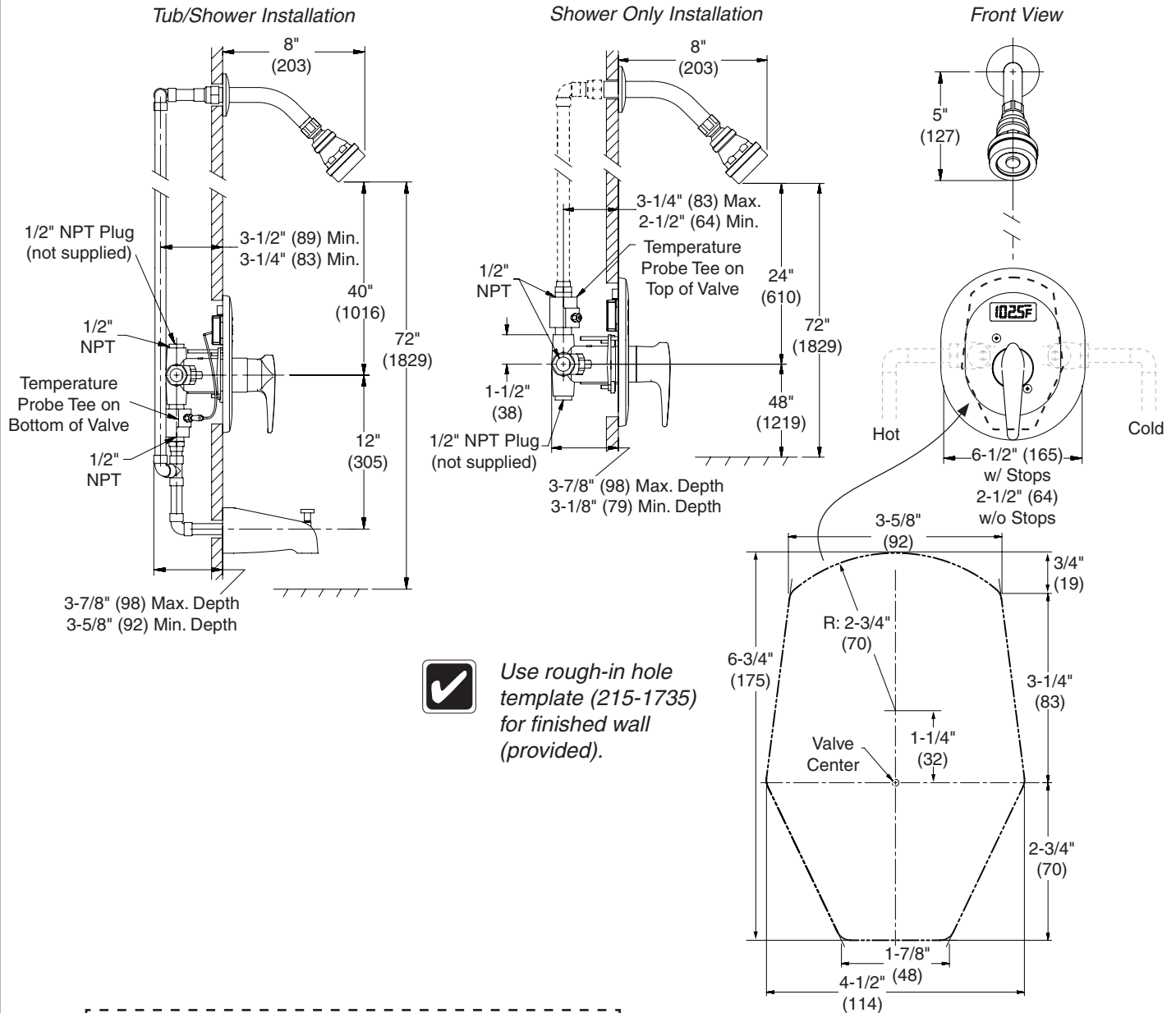
1. Display will flash "HHH" when water temperature exceeds maximum operating limit of 120°F (49°C). It will display "LLL" when water temperature falls below minimum operating limit of 40°F (4°C).
2. Display will refresh every 2 seconds when the water temperature reaches 70°F (21°C). If the water temperature is below 70°F (21°C), the display will refresh every 10 seconds.
3. The unit can be configured to display °F or °C by a slide switch inside the display's battery compartment (see Step 2).
4. A "Low Battery" indicator will turn on when batteries have approximately one month of power remaining.

* AAA alkaline batteries, supplied.

1 Rough-In

- Rough-in 1/2" NPT hot and cold water supply (supplied by installer).
- For finished wall, rough-in hole using template (215-1735) provided.

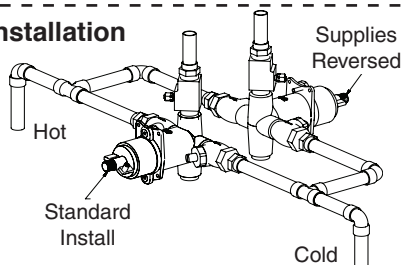
(mm)



Use rough-in hole template (215-1735) for finished wall (provided).

"Back-to-Back" Installation

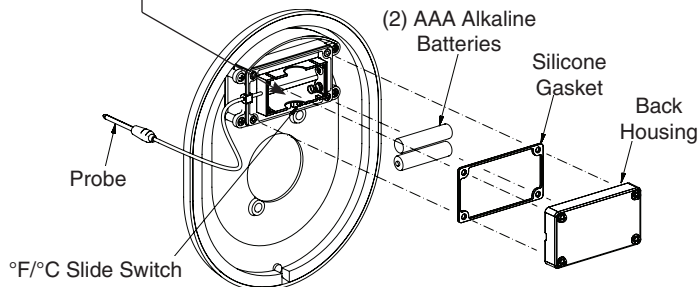
See Step 2 for required valve adjustment and "Back-to-Back" installation.



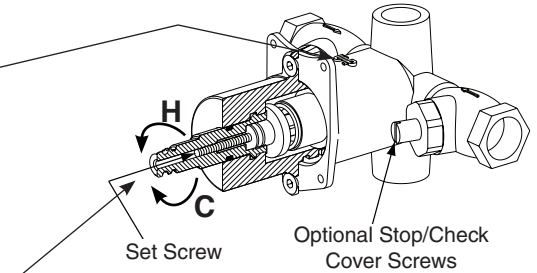
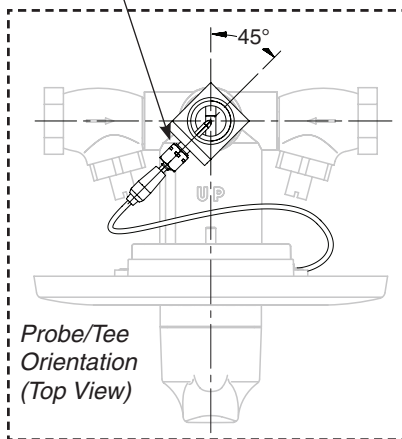
2 Connect Valve and Adjust Valve Temperature

A Position valve with port labeled "UP" towards showerhead. Connect valve to hot and cold supplies and showerhead or tub spout supplies (see rough-in diagram.)

B Set °F/°C selection as desired. Insert (2) AAA batteries (supplied) and attach back housing.



C Insert probe to depth shown and tighten nut securely.



Check the temperature when approximately 2.5-4 GPM water flow is reached (equivalent to one shower).

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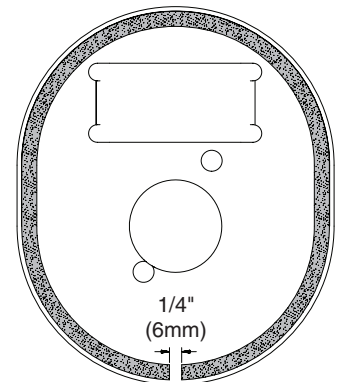
Turn on hot and cold supplies to pressurize valve and check for leaks. (Valve will not operate unless both hot and cold supplies are turned on.) Adjust maximum temperature using a 3/32" hex-head Allen key.



This device must be checked for final temperature and adjusted as necessary. The standard preset factory temperature setting is 110°F (43°C). Consult proper medical and/or safety authorities for the optimum temperature recommended for your particular application.



The included foam rim seal may be applied to the back of the escutcheon inside the outer edge, with the seam at the bottom.



"Back-to-Back" Installation

On the valve that is "backwards":

- Turn off hot and cold supplies.
- Remove (2) screws that hold down cap.
- Remove entire valve assembly from the valve body and rotate 180°. Arrow on cap must point to HOT side. Re-install screws.

3**Test Unit****DO NOT SKIP THIS STEP!!!**

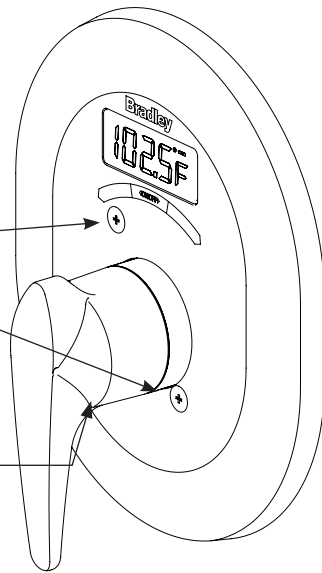
Shut the hot water supply off by closing hot water inlet valve or supply check valve. While the hot water supply is turned off, check to make sure the cold water is reduced to .5 GPM or less. If the cold water is reduced properly, reopen the hot water supply.

Shut the cold water supply off by closing the cold water inlet valve or supply check valve. While the cold water supply is off, check to make sure that the hot water flow has shut down. If hot water is shut down, reopen cold water supply. Test unit weekly for proper function and desired set temperature.

4**Attach Escutcheon and Handle**

A Place the escutcheon on the wall over the valve and secure with the screws provided.

B Place handle on stem as shown, and tighten setscrew.



Troubleshooting: Thermostatic Mixing Shower Valve



Before attempting to troubleshoot the valve or disassemble the components, check for the following:

- Stop/check valves are fully open and that all inlet and outlet shut-off valves are open
- Hot and cold inlet pipes are connected properly, and that there are no cross-connections or leaking stop/check valves
- Water heater output is at least 15°F above the set temperature.

Be sure to close the appropriate shut-off valves prior to disassembly of the valve and reopen the valves after inspection and repair is complete.

Problem	Cause	Solution
External leaks in the system	Either the NPT joints or the O-rings have been damaged.	Replace the NPT joints and/or O-rings where necessary. For replacement of O-rings, order the O-ring/seat kit as specified in the included Service Guide.
Limited water flow	Dirt and debris have collected on the stop/check valve seat, limiting the movement of the stop/checks.	Clean Stop and Check Valves: Remove the stop and checks, clean the screen and seat and reassemble the valve. Do not remove the seat. The components may be brushed with a small wire brush to remove debris. If the stop/check valves need to be replaced, contact your Bradley representative and ask for Stop/Check Valve (S27-102).
Temperature fluctuation or improper Temperature	Thermostat is slowly failing.	Inspect Thermostat: <ol style="list-style-type: none"> 1. At room temperature (80°F or less), remove the valve assembly from the valve body as described below. 2. Place the thermostat into a small container filled with 115°F water. The thermostat's pushrod should pop out of the thermostat approximately 1/10". 3. If the pushrod does not pop out, the thermostat must be replaced (it cannot be repaired). Order a new thermostat kit as specified in the Service Guide.
	Inlet supply line to the mixing valve is being shared by other pieces of equipment that are used only periodically, such as laundry appliances or washdown stations. It may reduce the inlet pressure to the mixing valve to less than 3 PSI. The supply line size may not be large enough to supply both the valve and the other appliances.	Enlarge the supply line size, reconfigure the supply line or regulate the supply usage.
	Valve temperature is not properly set.	Adjust the temperature as described on page 3.
	Piston does not move freely and must be cleaned.	Clean the piston as described below.

Troubleshooting: Piston Disassembly and Cleaning

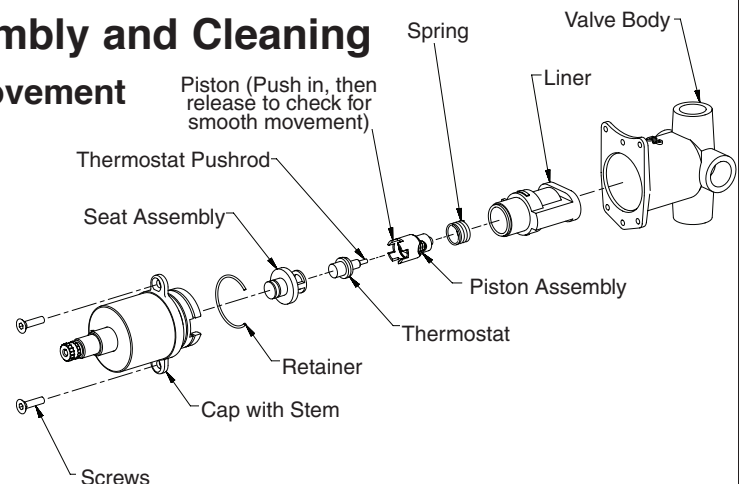
Check the piston for free and smooth movement

Remove the handle and escutcheon to expose the valve assembly. Loosen the two screws that hold the valve assembly in the valve body. Remove the valve assembly.

Gently pry the retainer off the valve assembly. This will separate the cap and liner exposing other components. Disassemble components.

Push in on the piston with your finger (the piston should move freely). If not, the piston and liner assembly needs to be cleaned.

Clean the piston and liner assembly with any cleaner suitable for brass and stainless steel (400-grit sandpaper may be used to polish and hone the piston and liner). If the piston does not move freely after a thorough cleaning, the piston/liner assembly must be replaced.



Arrow on cap must point to HOT side.