



Note:

Installation should be in accordance with accepted plumbing practices. Flush all pipes thoroughly before installation. Installation and field adjustment are the responsibility of the installer.

INSTALLATION

1. Locate suitable place for the tempering valve. Valves should be accessible for service and adjustment, and close to the point of use as possible.
2. Bleed pressure from the system.
3. Route copper tubing or piping to fit valve dimensions.
4. Remove tailpieces from the valve and make sure union nuts are over the tubing/piping before connecting to the tailpiece.

NOTE: If soldering, remove unions and gaskets from valve body prior to soldering to prevent damage to valve from excessive heat.

5. Flush piping again, install valve using filter gasket on hot and cold water inlets and fiber gasket on mixed water outlet.
6. Turn on the cold and hot water. If any leak are observed, tighten connections as necessary to stop leak before proceeding.

TO ADJUST TEMPERATURE (FIGURE 3)

LM495 is factory pre-set to 105° F (41° C) outlet temperature, under the following conditions:

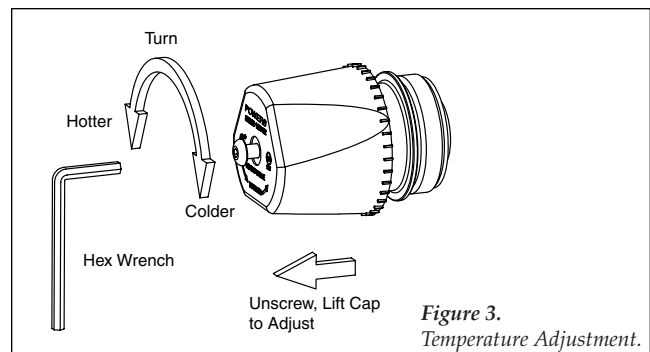
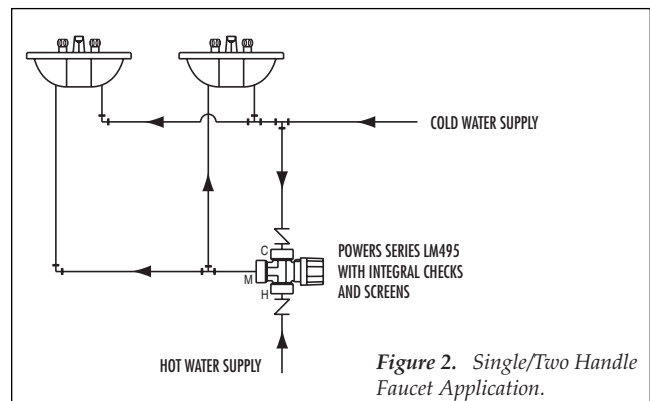
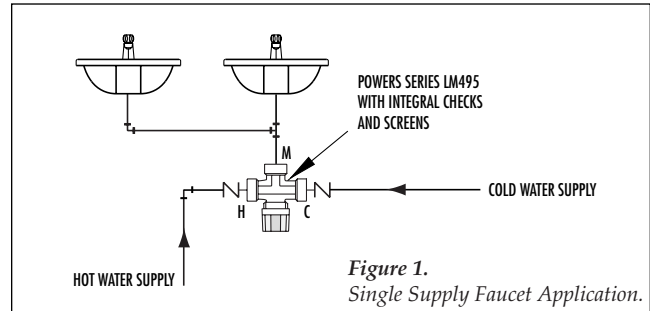
- Cold inlet: 60° - 70° F (16 - 21° C)
- Hot inlet: 140° - 145° F (60 - 63° C)
- Supply Pressures: 45 psi (310 kPa)

1. Let the water flow for at least two minutes to allow supply temperature to stabilize.
2. Place a thermometer in the outlet water stream.
3. Loosen handle screw with hex wrench.
4. Handle must be lifted 1/4" to adjust temperature. Rotate handle clockwise to decrease temperature and counter-clockwise to increase the temperature.
5. Lower handle and tighten screw.
6. Check for outlet temperature.

CAUTION: NEED PERIODIC INSPECTION

This valve requires periodic inspection and verification of outlet temperature by a licensed contractor. Corrosive water conditions, inlet temperatures over 200° F (93° C), unauthorized adjustments or repair could render the valve ineffective for service intended. Regular cleaning and checking of thermostat assembly helps to assure maximum life and proper product function. Frequency of cleaning depends upon local water conditions.

Note: It is recommended that shut-off valve(s) be installed on the inlet(s) to facilitate service of the LM495 valve.



WARNING:

When used in an ASSE 1017 application at the hot water source, the Powers Thermostatic Mixing Valve Series LM495 cannot be used by itself to control final temperature at fixtures where ASSE Standard 1016 or ASSE Standard 1070 listed devices are required. Such use may result in severe bodily injury (i.e. scalding or chilling) and/or death. Additional ASSE Standard 1016 or ASSE Standard 1070 listed devices, such as Powers Series E480 or LM495 should be used at fixtures to prevent possible injury.

Recirculation systems should recirculate water at temperatures over 140°F to reduce the risk of bacterial growth in the piping. This valve should not be used to achieve these elevated temperatures. This valve can be used at fixtures in conjunction with recirculation systems to reduce the system's hot water to a safe temperature at the point of use.

IMPORTANT!

Water temperatures in excess 110°F (43°C) are dangerous and may cause scalding, severe injury or death! This valve can be adjusted to deliver water at temperatures exceeding 110°F (43°C). Consequently, when used in an ASSE 1016 or ASSE 1070 application, the installer must check the mixed water outlet temperature at the point of use and adjust the Powers Thermostatic Mixing Valve Series LM495 to ensure delivery of water at a safe temperature not exceeding 110°F (43°C). Mechanical valves are not fail-safe. Due to the effects of various water conditions, periodic verification of outlet water temperature is required.

SPECIFICATIONS

Temperature Adjustment:

Series LM495 80° - 120° F (27° to 49° C)

Union Connections:

Female NPT			Sweat			CPVC			PEX		
1/2"	3/4"	1"	1/2"	3/4"	1"	1/2"	3/4"	1"	1/2"	3/4"	1"
LM495-1	LM496-1	LM497-1	LM495-2	LM496-2	LM497-2	LM495-3	LM496-3	LM497-3	LM495-4	LM496-4	LM497-4

Capacity:

PRESSURE DROP ACROSS THE VALVE							
(CV) 1 psi (7 kPa)	5 psi (34 kPa)	10 psi (69 kPa)	15 psi (103 kPa)	20 psi (138 kPa)	30 psi (207 kPa)	45 psi (310 kPa)	60 psi (414 kPa)
1.79	4.0 gpm (15.0 lpm)	5.7 gpm (22.0 lpm)	7.0 gpm (26.0 lpm)	8.0 gpm (30.0 lpm)	9.8 gpm (37.0 lpm)	12.0 gpm (45.0 lpm)	13.9 gpm (53.0 lpm)

Approach Temperature:

10°F (5.6°C) above set point

Max. Operating Pressure:

150 psi (1034 kPa)

Max. Hot Water Temperature:

200°F (93°C)

Minimum Flow:

0.5 gpm (1.90 lpm) [when tested in accordance with ASSE 1016 & ASSE 1070]

Check Valves:

Integral

Construction:

Cast Brass Body

Approval:

CSA B125 Certified

Listing:

ASSE 1016 and ASSE 1070



TROUBLESHOOTING

Fluctuating or erratic hot water temperature at fixture:

Unbalanced pressure. Install balancing or throttling valve at the hot and cold water supplies and adjust accordingly for demand.

Hot water backing up into cold water line:

Hot water pressure is higher than cold water pressure. Examine check valves for dirt & debris, clean as necessary.

Cannot adjust water temperature to desire temperature:

Install balancing or throttling valve at the hot and cold water supplies and adjust accordingly for demand.

High pressure drop through the tempering valve:

Valve undersized. Install larger thermostatic tempering valve.

Insufficient hot water during peak demand:

Check flow requirement during peak demand period. Use larger thermostatic tempering valve.

CALIFORNIA PROPOSITION 65 WARNING

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. (California law requires this warning to be given to customers in the State of California.)
For more information: www.wattsind.com/prop65

WARNING:

For valves with CPVC or PEX-end connections, do not exceed the tubing manufacturers pressure and temperature ratings. Refer to the tubing manufacturers product specifications for that information.

ATTENTION INSTALLER:

After installation, please leave this Instruction Sheet for occupant's information.
IMPORTANT: Inquire with governing authorities for local installation requirements.

REPAIR KIT

Parts Description	Part #
Plunger/Motor Assembly	495-100

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