



## Precision Plumbing Products

"Specify with Confidence - Install with Pride"

### PTMV-ASSE 1017 THERMOSTATIC MIXING VALVE INSTALLATION INSTRUCTIONS



#### IMPORTANT

Failure to comply with all aspects of these instructions may result in unsafe performance. All installations must comply with relevant State and Local Authority requirements.

#### A non-return valve is fitted to both inlets of this valve:

ENSURE the non-return valves are protected from system debris by the strainers provided and are functioning correctly. This is critical to ensure correct and safe system function. In situations where the hot pressure may exceed the cold pressure and on pumped systems, non-return valves **MUST** be fitted to **BOTH** inlets.

#### Flush the system thoroughly before fitting the PTMV:

It is **CRITICAL** that all debris is flushed from the pipework prior to installing the valve. Not flushing the system properly is the most common cause of system difficulties.

#### Commission the valve:

Every valve is factory-set to a nominal temperature of 105°F. Every valve must be adjusted on-site to ensure correct delivery of the desired mixed water temperature, as installation conditions can vary from site to site.

#### Check:

- Measure and note all site parameters (pressure, temperature, etc.) and check against the specifications of the chosen valve. If the site conditions are outside those specified for the valve then they must be rectified prior to installing the valve.
- Valve **MUST NOT** be subjected to heat during installation as this may damage the valve internals.
- Valve **MUST NOT** be fitted on steam-supplied systems but to water systems only.
- Valve **MUST NOT** be used on low pressure or instantaneous heating systems.
- Valve **MUST NOT** be frozen. If the valve is installed in a situation where freezing is a possibility, then suitable insulation must be fitted to prevent damage to the valve.
- **DO NOT** use excess thread sealant (in liquid, tape or other form) as this may cause the valve to fail.

Leave a copy of these instructions with the client for future reference. Recommend to the client that the valve be checked annually to ensure its continued functions.

#### 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.

(Installer: California law requires that this warning be given to the consumer).

#### VALVE SPECIFICATIONS

Outlet temperature range:	95 - 115°F (35 - 46°C)
Temperature, hot supply:	195°F max (91°C)
Temperature, cold supply:	40 - 80°F (4 - 27°C)
Temperature stability (nominal)	± 3°F <sup>1</sup> (± 1.8°C)
Temperature differential: (between hot supply and outlet temperature)	20°F <sup>2</sup> (11°C)
Hydrostatic pressure:	145 psi max (1000 kPa)
Permitted supply pressure variation:	± 20% <sup>3</sup>
Flow rate @ 45psi pressure loss:	10 gpm
Flow rate, minimum:	0.5 gpm (2L/min)
Flow rate, maximum:	11 gpm 60 psi pressure loss

#### Notes:

1. As per ASSE 1017.
2. This is the minimum difference required between the valve outlet temperature and the hot supply temperature to ensure shut-off of outlet flow in the event of cold supply failure, in accordance with ASSE1017.
3. Maximum permitted variation in either supply pressure in order to control the outlet temperature to within ± 3°F. Excessive changes in supply pressures may cause changes in outlet temperature that exceed ± 3°F.

Diagram 1 - Valve Dimensions

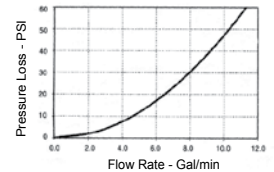
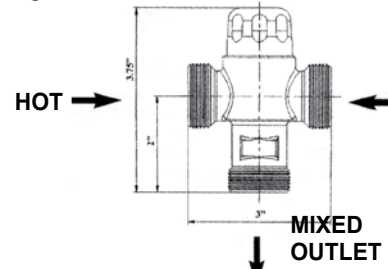


Diagram 2 - Flow Characteristics

- The mixed water outlet from the valve should be used to supply outlets used primarily for personal hygiene purposes.
- It is recommended that **isolating valves** be fitted immediately up stream of both hot and cold inlets to the valve. This allows quick and simple access to the valve in the event the strainers need to be cleaned. The PTMV Complete with inlet service fittings has integral isolators.
- It is recommended that the valve is installed **as close as possible to the point of use**, however it may be fitted anywhere on the hot water supply pipe.

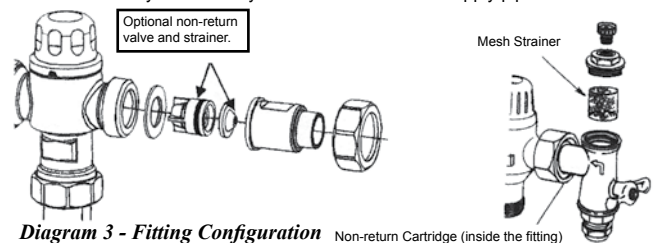


Diagram 3 - Fitting Configuration Non-return Cartridge (inside the fitting)

#### TEMPERATURE ADJUSTMENT

- Prior to setting the valve it is necessary for the hot water source to be switched on and delivering hot water at the design temperature.
- Test the mixed water temperature at the nearest outlet being supplied by the valve. This should be opened to allow a flow rate of 1 to 1.5 gpm (4 to 6 L/min).
- A thermometer must be used at the nearest outlet to the valve to ensure the correct mixed water temperature is achieved.
- Allow the water to run for at least one minute to ensure the mixed water temperature has settled. To adjust the mixed outlet temperature of the valve, remove the cap to gain access to the adjusting spindle. The spindle should be rotated - clockwise to reduce the temperature, counter - clockwise to increase the temperature - until the desired set point is reached. (Refer to diagram 4). Once the set temperature is achieved the cap should be snapped onto the valve to cover the spindle.

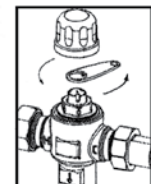
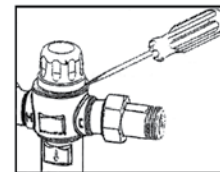


Diagram 4 - Valve Adjustment

#### CHECKING / SERVICING THE VALVE

- We recommend that the valve be checked at least once per year to ensure its continued function. For installations with poor or unknown water quality, or other adverse supply conditions, it may be necessary to check the valve at more frequent intervals.
- The temperature should be checked at the same outlet as was used for commissioning in the first instance (refer to the sticker). If the temperature is more than 3°F from the commissioning temperature, refer to fault/symptom table located in the Installation Instructions.
- There may be some variation in the temperature of the water from the thermostatic mixing valve due to seasonal temperature variations in the cold water supply.
- The strainers and non-return valves can be easily accessed for cleaning via the union connections.
- **If the water supply is of poor quality so that the valve's strainers will continue to block, an additional filter or strainer should be fitted to the system.**
- Note that this thermostatic mixing valve is a **SAFETY VALVE**. We recommend that it be replaced at intervals not exceeding 5 years.

