Precision Plumbing Products
"Specify with Confidence - Install with Pride"®

PTMV-ASSE 1070 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 105ºF. Every valve must be adjusted on-site to ensure correct delivery of the desired mixed water temperature, as installations 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.

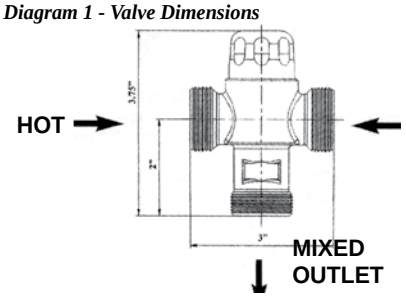
California Proposition 65 Warning:
Warning: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
(Installer: California law requires that this warning be given to the consumer).

VALVE SPECIFICATIONS

Outlet temperature range:	95 - 115ºF (35 - 46ºC)
Temperature, hot supply:	195ºF max (91ºC)
Temperature, cold supply:	40 - 80ºF (4 - 27ºC)
Temperature stability (nominal)	±3 ºF [1] (±1.8ºC)
Temperature differential: (between hot supply and outlet temperature)	20ºF [2] (11ºC)
Hydrostatic pressure:	145 psi max (1000 kPa)
Permitted supply pressure variation:	± 20% [3]
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 1070.
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, inaccordance with ASSE1070.
3. Maximum permitted variation in either supply pressure in order to control the outlet tmperature to within ±3°F. Excessive changes in supply pressures may cause changes in outlet temperature that exceed ±3ºF..

Diagram 1 - Valve Dimensions



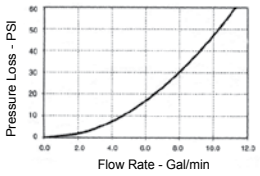


Diagram 2 - Flow Characteristics

- 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.

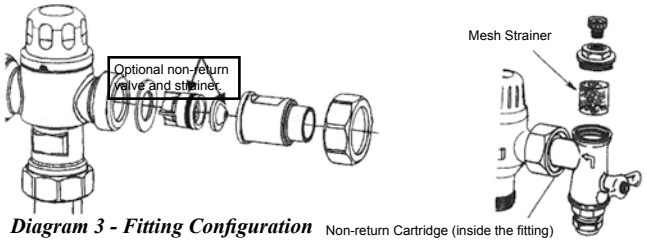


Diagram 3 - Fitting Configuration

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 mearest 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.

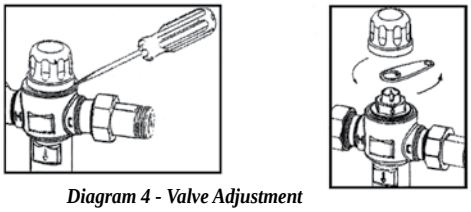


Diagram 4 - Valve Adjustment

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 3ºF from the comissioning 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.

SPECIFICATIONS

FAULT/SYMPTOM	CAUSE	RECTIFICATION
1. The desired mixed water temp. cannot be obtained or valve is difficult to set.	Inlet temperatures are not within specific limits. Hot and cold supplies are reversed. Strainers are blocked.	Ensure inlet temperatures are within the specific limits for the valve. Refit the valve with Hot/Cold supplies fitted to the correct connections. Clean strainers.
2. Mix temperature unstable or changing over time.	Strainiers are blocked. Fluctuating supply pressures.	Clean strainiers. Install pressure regulating valves on both hot and cold supplies.
3. Either full hot or full cold water flowing from outlet fixture.	Valve is incorrectly set. Hot and cold supplies are reversed. Hot and cold water has migrated to other inlet. Refer also to Point 1.	Adjust mix temperature as required. Refit the valve with Hot/Cold supplies fitted to the correct connections. Check non-return valve is not blocked. Clean if necessary
4. No flow from the valve outlet.	Hot or cold water supply failure. Strainers are blocked.	Restore inlet supplies and check mix temp. Clean strainiers.
5. Flow rate reduced or fluctuating.	Strainers are blocked. Fluctuating supply pressures.	Clean strainiers. Install pressure regulating valves .
6. Mixed water temp. does not change when temperature adjuster is altered.	Hot and cold supplies are reversed	Refit the valve with Hot/Cold supplies fitted to the correct connections.
7. Hot water flows into the cold water system or vise versa.	Non-returned valves fouled.	Clean strainers ensuring debris is removed.
8. Valve is noisy	Excessive water velocity. Valve sized incorrectly.	Reduce pressure locally (Best achieved by Check valve specifications and ensure the appropriate valve is used for required flow.

WARRANTY

The PTMV are guaranteed free from manufacturing defects for a period of 12 months, subject to the conditions outlined below;

PPP VALVE WARRANTY

Subject to the warranty conditions and exclusions set out below: PPP valves are warranted to be free from defects in material and/or workmanship for a period of 12 months service life and if found by PPP to be so defective will be replaced as set out below. If the valve is sold by a party other than PPP then it is sold by that seller as principal and the seller has no authority from PPP to give any additional warranty on behalf of PPP.

The benefits of this warranty are in addition to all other rights and remedies which the purchaser may have under the relevant laws of each State.

Warranty Conditions and Exclusions

Conditions:

1. The valve must have been installed by a licensed and registered plumber in accordance with the PPP Installation Instructions and Application Guidelines supplied with the valve, and in accordance with the relevant plumbing codes current at the date of installation and all relevant statutory and local requirements in the State in which the valve is installed.
2. Where the valve comprises part of a hot water system, installation of that system must be in accordance with its manufacturer's recommendations, relevant plumbing codes and all relevant statutory and local State requirements.
3. The valve must be returned to PPP together with a fully and correctly completed PPP RMA Form.
4. Where the valve is replaced under warranty the replacement valve carries a new warranty as detailed herein.

Exclusions:

Replacement work will be carried out as set out in the PPP Warranty above, but the following exclusions may cause the warranty to become void, and may incur a service charge including cost of parts where:

5. Damage has been caused by accident, Acts of God, misuse, incorrect installation, incorrect installation of the hot water system of which the valve forms a part of attempts to disassemble the valve.
6. It is found that there is nothing wrong with the valve.
7. The failure of the valve is due in part or in whole to faulty manufacture/installation of the hot water system of which the valve forms part.
8. The valve has failed directly or indirectly as a result of excessive water pressure or temperature outside the Application Guidelines, thermal input or corrosive environment.
9. The valve has failed due to foreign matter either from installation or the water supply.
10. The failure of the valve is due to scale formation in the waterways of the valve.
11. The failure of the valve is due in part, or in whole to installation not in PPP conformance with the requirements of relevant plumbing codes.
12. PPP reserves the right to change its specifications without prior notice and will not accept liability for any claim arising from such change.
13. Subject to any statutory provisions to the contrary, claims for damage to furniture, carpets, walls, foundations or any other consequential loss either directly or indirectly due to leakage from the valve are also excluded from warranty cover.
14. It is found that the valve has been tampered with.

Note: Goods returned without a Return Material Authorization will not be replaced. Please contact PPP prior to returning goods.

NOTES: _____

Installer, please provide the following information and leave these instructions with the client:

Installed By: _____

Date: _____

Pressure at the Valve: _____ PSI

Mix Temperature: _____ ºF

Precision Plumbing Products
Division of JL Industries, Inc.

802 SE 199th Avenue
Portland, Oregon 97233

T (503) 256-4010
F (503) 253-8165

www.pppinc.net

Made in the U.S.A.
We do not export jobs.