

# Thermostatic Mixing Valve

TSLP.120045

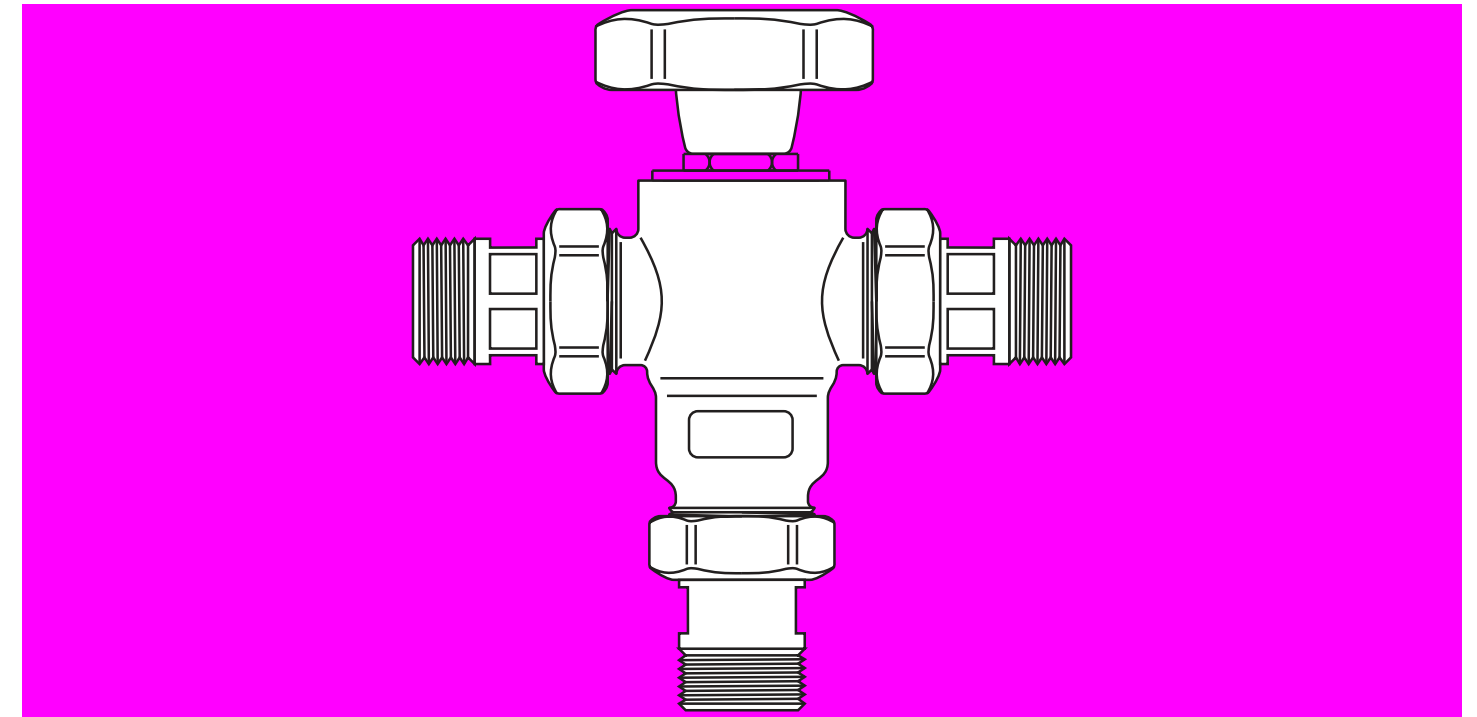
installation + maintenance

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# Thermostatic Mixing Valve

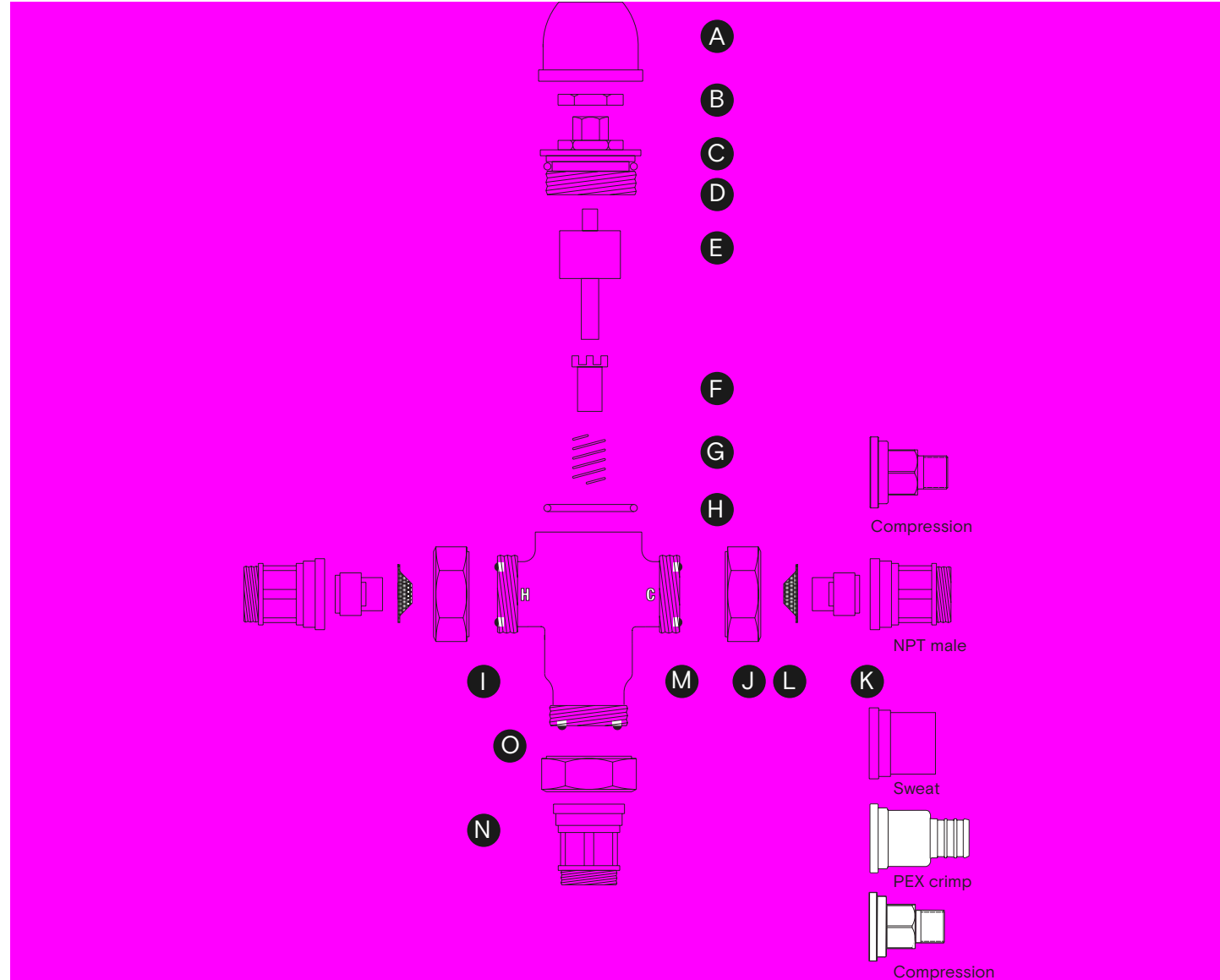


## **Thermostatic Mixing Valve**

**TSLP:120045**

The Thermostatic Mixing Valve (TMV) is designed for use with TSL's full range of faucets to provide mixed hot and cold water for a pleasant hand-washing temperature. The valve prevents the flow of water discharging from the mixed water outlet in the event of the failure of hot or cold supply, thus protecting the user from the danger of scalding.

# components list



A	Protective cap	I	Valve body
B	Temperature spindle locking nut	J	Union nut x3
C	Upper body	K	Inlet port male tailpiece x2
D	O-ring seal	L	Inlet port conic filter x2
E	O-ring seal	M	Posi-Stop™ union seal (all ports)
F	Thermostatic element	N	Outlet port tailpiece
G	Flow conveyor	O	Temperature gauge attachment point
H	Lower spring		

Please check that all components are included and advise The Splash Lab if any parts are missing.

# technical data

## Composition

Valve body and regulating spindle	Low-lead brass
Shutter, seat, and slide guides	PPO
Springs	Stainless steel
Seals	Peroxide-cured EPDM
Cover	ABS

## Performance

Temperature adjustment range	85-120°F
Temperature set	Must be commissioned onsite to achieve desired temperature
Temperature stability	±3°F
Cold inlet temperature	Minimum 39°F; maximum 85°F
Hot inlet temperature	Minimum 120°F; maximum 185°F
Maximum working differential pressure	Static 150 psi; dynamic 70 psi
Minimum working differential pressure (dynamic)	1.5 psi
Maximum unbalanced dynamic supply	6:1
Minimum temperature differential (hot/mixed)	18°F to ensure thermal shutoff function
Minimum temperature differential (cold/mixed)	9°F to ensure stable operation
Minimum flow rate	0.5 GPM
Maximum flow rate	9 GPM
Outlet temperature guage	2" diameter Dual-scale 30°F-210°F Accuracy 1% full scale

## Certifications

ASSE 1070/CSA B125.3-2012, certified by ICC-ES, file PMG-1357.  
NSF/ANSI/CAN, Drinking Water Systems Components-Lead Content Reduction of Lead in Drinking Water, California Health and Safety Code 116875 S.3874, Reduction of Lead in Drinking Water Act, certified by ICC-ES, files PMG-1360

# before you install

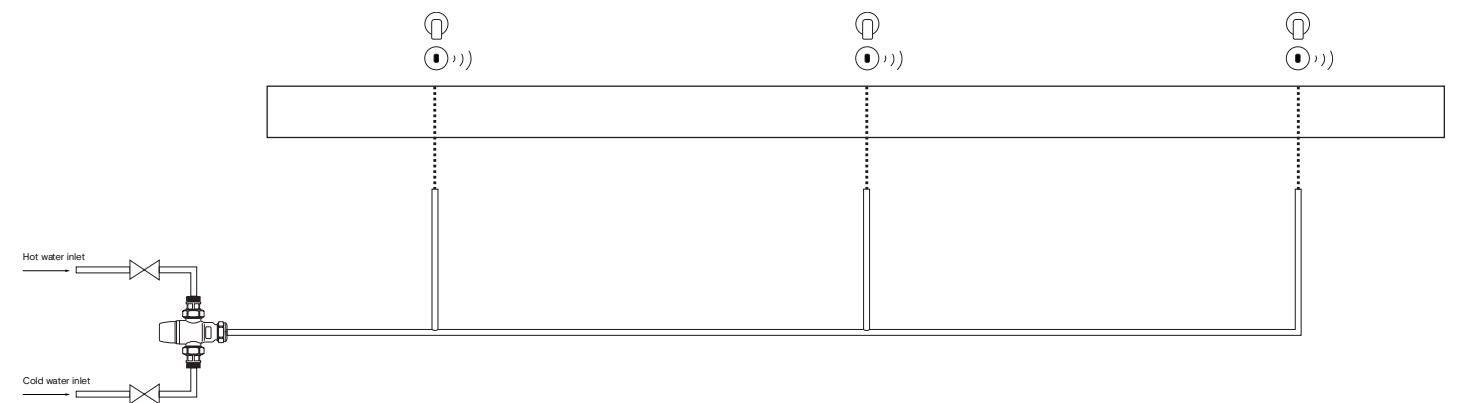
## Read and save these instructions

### WARNING

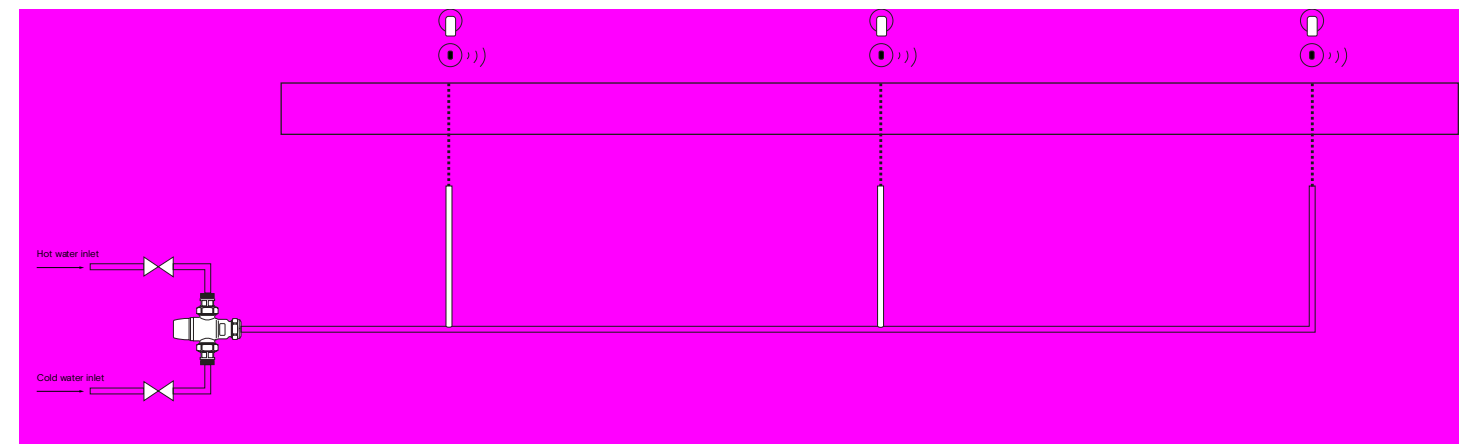
- + This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).
- + All work must be performed by qualified personnel trained in the proper application, installation, and maintenance of systems in accordance with all applicable codes and ordinances.
- + If the thermostatic mixing valve is not installed, commissioned and maintained properly, according to the instructions contained in this manual, it may not operate correctly and may endanger the user.
- + Make sure that all the connecting pipework is water tight.
- + When making the water connections, make sure that the pipework connecting the thermostatic mixing valve is not mechanically over-stressed. Over time this could cause breakages, with consequent water losses which, in turn, could cause harm to property and/or people.
- + Water temperatures higher than 100°F can be dangerous. During the installation, commissioning and maintenance of the thermostatic mixing valve, take the necessary precautions to ensure that such temperatures do not endanger people.
- + To prevent any damage which will cause the electronic mixing valve to not operate correctly, treat highly aggressive water before entering the thermostatic mixing valve.

- + Verify that the system conditions (i.e. temperature supply pressures, etc.) fall within the recommended operating range of the valved (see page 5 for technical specifications)
- + Thoroughly flush and clean the system of debris. Failure to remove debris will affect valve performance and manufacturer's warranty on the product.
- + Valve can be installed vertically or horizontally.
- + Valve must have sufficient access for ongoing maintenance.
- + Install and connect the valve according to current legislation and codes.
- + Installation should be conducted by a licensed plumber.
- + Ensure that piping to and from the valve is not used to support the weight of the valve.
- + Provision should be made to treat highly aggressive water before it enters the valve.
- + Connect hot and cold water supplies in accordance with the indicators on the body of the valve.
- + Where one or both of the incoming supply pressures are excessive, a pressure reducing valve should be employed to bring pressure within the recommended limits.
- + Must be installed with isolating valves, line strainers, and check valves to ensure optimum performance.
- + Verify the hot water supply at point of entry is at least 18°F higher than the mixed water discharge temperature.

# before you install



Multiple use with sensor faucet



Single use with sensor faucet

# how to install

**1**

Connect the hot water inlet to the male inlet port marked "H."

**2**

Connect the cold water inlet to the male inlet port marked "C."

**3**

Use the temperature adjustment cap to calibrate the hot to cold flow ratio to desired water temperature.

**4**

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# how to install

# commissioning

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# maintenance

The following actions are recommended at least every 12 months, or as needed, to maintain optimum performance.

- + Remove and clean the inlet conic filters on both hot and cold water supplies.
- + Access the check valves to ensure freedom of operation and correct function.
- + If required, disassemble the internal components for cleaning and de-scaling.

Following the above servicing, please follow the commissioning details above to ensure accurate function.

Should the valves still not function correctly, it or its constituent parts may need replacing. Please contact The Splash Lab at [info.usa@thesplashlab.com](mailto:info.usa@thesplashlab.com) for assistance.

Spare parts available upon request.

# troubleshooting

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## Fluctuating mixed water temperature

Restore inlet conditions within the limits of the valve by checking for:

- + erratic supply temperatures at the valve inlets
- + starvation of the water supplies at the valve inlets
- + incorrect commissioning of the valve

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## Erratic flow of water from the valve

Stabilize inlet supply conditions by checking for the following:

- + Insufficient water supply
- + Fluctuations in supply pressure and/or temperature
- + Adverse effect created by other draw-off points on the system

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## No water flowing from the valve

Could result from the following:

- + In-line filters blocked; clean filters
- + Insufficient supply pressures; restore inlet supplies
- + Debris obstructing valve operation; clean debris or scale from valve internals

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## Valve does not shut off when tested

Could result from the following:

- + Installation not in accordance with this manual; verify correct installation
- + Minimum temperature differential not achieved; raise hot water temperature
- + Internal mechanism impaired by debris; clean debris or scale from valve

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## Hot water at cold faucet

Could result from the following:

- + Inserted check operation failed; replace faulty check valves
  - + Check valves not installed; install check valves
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# warranty

We believe the future is personal. With a global mindset, we challenge conventional restroom norms via product innovation to create considered washroom solutions for corporate and educational spaces. We use rich raw materials, cutting-edge automation and considered washroom design to powerfully and positively influence the lives of people. We are The Splash Lab.

Demonstrating our commitment to quality and our belief in the strength of our designs, we can offer the following warranties.

The Splash Lab will warrant that its products will be free of manufacturing and material defects during normal use and environmental conditions as detailed below:

## **Thermostatic Mixing Valve      1 year limited warranty**

If a defect is found in normal use, The Splash Lab will, at their discretion, repair, provide a replacement part or product, or make appropriate adjustments. Damage caused by accident, misuse, or abuse is not covered by this warranty. Improper care and cleaning will void the warranty. Non-operation of the product due to environmental conditions beyond our control, installation error, incorrect maintenance, water quality, fair wear and tear, incorrect or inappropriate installation, misuse and abuse is not covered by the warranty.

Proof of purchase (original sales receipt) must be provided to The Splash Lab with all warranty claims. The above warranty is valid for goods supplied within the United Kingdom.

For goods supplied outside of the United States, The Splash Lab will honor the above stated warranty periods for the parts only.

**THE SPLASH LAB DISCLAIMS ANY LIABILITY FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

# contact



## **General information**

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