



# Instruction Sheet

102-413

## 5120 Mixing Valve

SUPERSEDES: New

EFFECTIVE: June 1, 2010

Plant I.D. 001-3948

### GENERAL:

- All installations should be carried out by a Licensed Professional.
- Ensure compatibility of valve installation, e.g. temperature of hot water, inlet pressure, and flow rates - refer to specification section.
- Install in accordance with markings on valve body, i.e. hot water inlet - marked "H", cold water inlet - marked "C" and mixed outlet - marked with directional arrow.
- Valve may be installed in any position.
- Any inconsistency between these instructions and any specific instructions, bylaws or codes issued by local authorities must be referred back to Taco, Inc. prior to any installation taking place.
- The Taco Series 5120 Mixing Valve must not be fitted on steam supplied systems.
- During startup ensure that the valve is set to the desired temperature (valve preset to 120°F (49°C) with 150°F (66°C) hot water inlet temperature). If the valve temperature needs to be adjusted please refer to the instructions below (**SETTING VALVE OUTLET TEMPERATURE**).

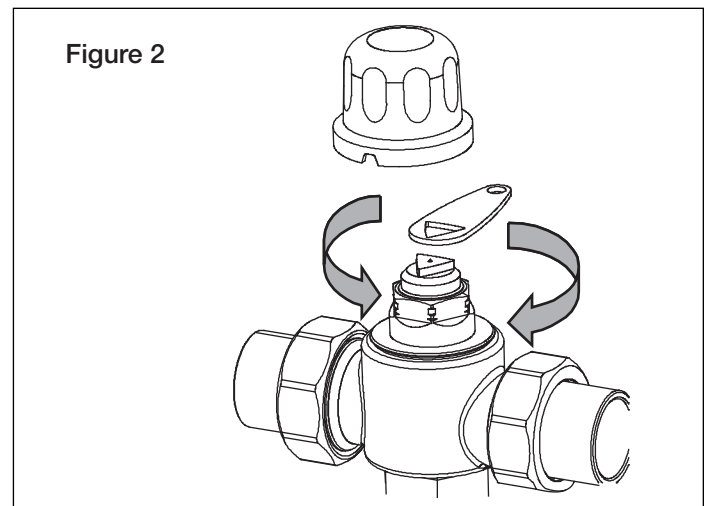
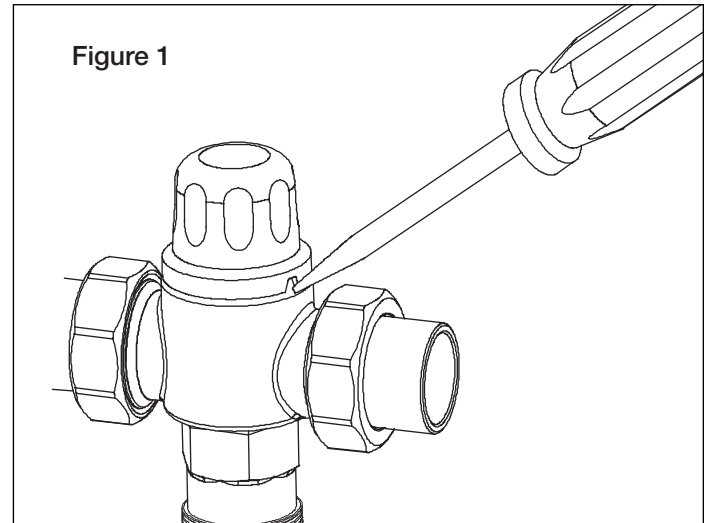
### FITTING VALVE TO PIPEWORK:

- Flush all piping thoroughly before installing the valve (using water only).
- Valve comes complete with union type connections for ease of installation and service.
- Valve must be removed from the piping prior to soldering the end connections. It is recommended to use a spacer piece while soldering.

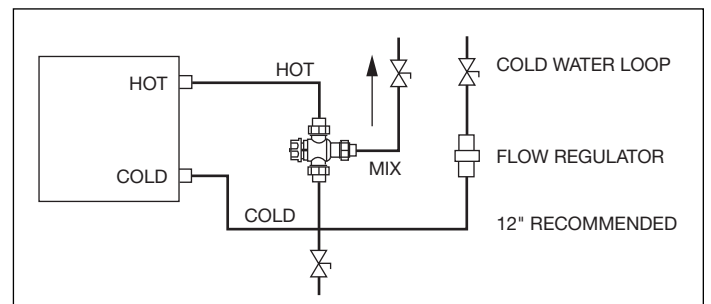
### SETTING VALVE OUTLET TEMPERATURE:

The Taco Series 5120 Mixing Valve is supplied factory set to 120°F with 150°F hot water inlet temperature. It may need to be altered depending on operating requirements.

1. Remove the green cap by inserting a small screwdriver in the notch and gently prying up. (See Figure 1.)
2. Turn both the hot and cold water supplies on. Open an outlet, preferably a sink or basin rather than a shower. To calibrate, let the water run for 2 minutes and measure the outlet temperature with a thermometer. Using the adjustment tool provided to fit over the spindle end, adjust the spindle counter clockwise to increase temperature and clockwise to decrease temperature. (See Figure 2.)
3. Once the desired outlet temperature has been achieved replace the cap over the spindle and snap it onto the body.



### TYPICAL DOMESTIC WATER INSTALLATION:



## SPECIFICATION:

Hot Water Inlet Temperature:	140 - 210°F (60 - 100°C)
Cold Water Inlet Temperature:	39 - 80°F (4 - 27°C)
Maximum Working Pressure:	200 psi
Minimum Flow Rate:	1 GPM
Outlet Water Temperature Range:	95 - 131°F (35 - 55°C)
Minimum Temperature Differential (between hot supply and outlet):	27°F (15°C)
Allowable Supply Pressure Variation:	±10%

The Taco Series 5120 Mixing Valve maintains a constant outlet temperature to  $\pm 5^\circ\text{F}$  given limited variations of water inlet temperature and pressures. Note: At low flow operation, the outlet temperature may vary slightly more.

Differential pressure at the valve inlets should be within a 2 to 1 ratio under normal flow conditions. Inline fittings, piping layout and sizing must be taken into consideration. In applications where hot water thermal siphoning is a concern, the valve should be "trapped", installing the valve below the cold water inlet to the heater.

## MAINTENANCE:

The Taco Series 5120 Mixing Valve does not require routine maintenance but should be checked annually. Replacement element assemblies are available.

**CAUTION:** The Taco Series 5120 Mixing Valve is certified to ASSE 1017-2009. It is not to be used to provide "anti-chill" or "anti-scald" service. Taco Mixing Valves are not designed to compensate for system pressure fluctuations and should not be used where more sophisticated pressure compensating temperature controls are required.

## O-RING/PISTON SUBASSEMBLY REPLACEMENT:

1. Isolate the valve from the water supply.
2. Unscrew the union nuts and remove the valve body from the system.
3. Using a screw driver, pry the cover from the valve.
4. Secure the valve body (using the flats on the body) and unscrew the brass cap to remove the internals of the valve.
5. Remove the piston assembly out of the top of the valve. If necessary, push the piston assembly from the outlet port of the valve.
6. Using a clean cloth gently wipe out the valve body paying particular attention to the o-ring half way down the inside of the valve body.
7. Remove the o-ring from the cap. Lightly grease the new cap o-ring and re-grease the o-ring half way down the inside of the valve with the grease packet provided.
8. Assemble in the reverse order.
9. When re-fitting the brass cap do not over tighten, as this is an o-ring seal.
10. Reinstall the valve into the piping arrangement using the union fittings and set the outlet mix temperature as indicated above (**SETTING VALVE OUTLET TEMPERATURE**).

# LIMITED WARRANTY STATEMENT

Taco, Inc. will repair or replace without charge (at the company's option) any product or part which is proven defective under normal use within one (1) year from the date of start-up or one (1) year and six (6) months from date of shipment (whichever occurs first).

In order to obtain service under this warranty, it is the responsibility of the purchaser to promptly notify the local Taco stocking distributor or Taco in writing and promptly deliver the subject product or part, delivery prepaid, to the stocking distributor. For assistance on warranty returns, the purchaser may either contact the local Taco stocking distributor or Taco. If the subject product or part contains no defect as covered in this warranty, the purchaser will be billed for parts and labor charges in effect at time of factory examination and repair.

Any Taco product or part not installed or operated in conformity with Taco instructions or which

has been subject to misuse, misapplication, the addition of petroleum-based fluids or certain chemical additives to the systems, or other abuse, will not be covered by this warranty.

If in doubt as to whether a particular substance is suitable for use with a Taco product or part, or for any application restrictions, consult the applicable Taco instruction sheets or contact Taco at [401-942-8000].

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