## SS-THVD2 -1/2" THERMOSTATIC VALVE WITH 2 WAY DIVERTER
## SS-THVD3 -1/2" THERMOSTATIC VALVE WITH 3 WAY DIVERTER

**Features:**
- Ability to pre-select water temperature – thus conserving water
- Paraffin wax element maintains water temperature within ± 1.8°F
- Compensates for water pressure fluctuations preventing scalding
- Safety button at 100°F prevents accidental scalding
- High flow rates allow for multiple shower applications

**Specifications:**
- Operating pressure is 2 PSI to 72 PSI
- When pressure is higher than 72 PSI a pressure reducer (fitted before the valve) is required.
- Temperature range is 50°F to 180°F
- Recommended setting is 29 PSI and 149ºF

**Note:**
- USE TEFLON TAPE OR PIPE SEALANT FOR THREADED CONNECTIONS
- DO NOT USE PLUMBER'S PUTTY ON ANY OF THE BRASS COMPONENTS
  This will cause the finish to tarnish and void the warranty. A non-corrosive Alkoxy Silicone is recommended.
- DURING SWEATING OF LINES DO NOT OVERHEAT CASTING
  Overheating may cause damage to internal mechanism and void the manufacturer's warranty as well as increase the risk of scalding.
- COPPER ADAPTORS MAY BE REQUIRED TO COMPLETE YOUR INSTALLATION

- Listed by IAPMO, CSA, NSF, and other municipalities
- Shipping weight (lbs.): 5.5
- Shipping dimension (in.): 11 x 9 x 7



Thermostatic Shower Trim w/ Built-in
Volume Control/ Diverter
P a g e | 1
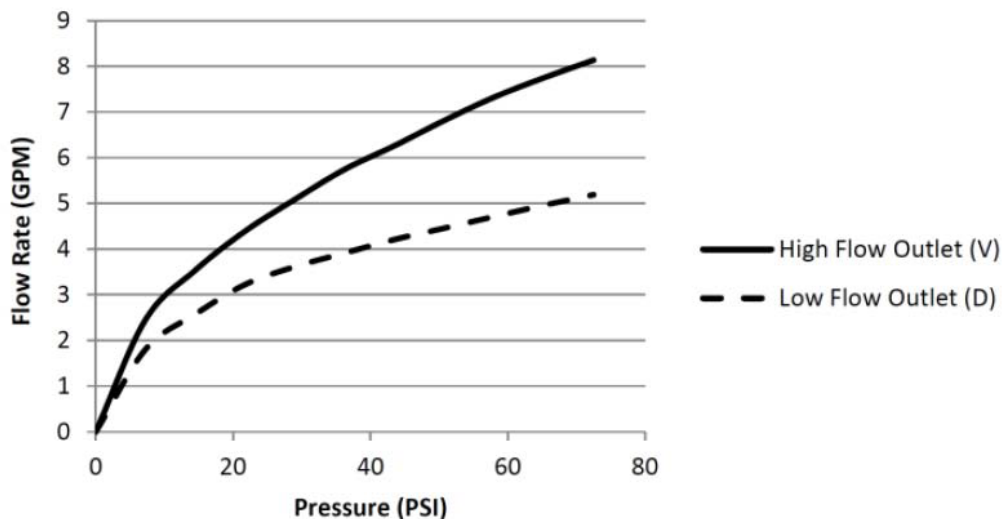
**Valve Installation**

1. Flush the lines of all dirt and debris. Failure to completely flush the lines will cause valve failure and will void the manufacturer's warranty

2. Fit the valve on the wall without removing the plastic cover on the control spindle. Turning the control spindle will change the temperature setting which is pre-calibrated at the factory

3. Connect the hot water supply to the left inlet of the valve (HOT marked with RED paint) and cold supply to the right inlet (COLD marked with BLUE paint).

4. Use the plastic mud guard template (part of the package) to position the valve on the wall. This is done by checking the label on the outer template for the minimum/ maximum settings which is 1 ½" to 2 1/8" from the center of the valve inlets to the finished wall.

5.  Connect the outlet pipe(s). Refer to Diagram 2 for SS-THVD2 valve and to diagram 3 for SS-THVD3 valve.

**NOTE: Port marked V will output about 6.5 gpm and port marked D will put out about 4.5 gpm at about 45 psi.**
**NOTE: Shared ports are only between ports marked D1 and D2 on the SS-THVD3 valve.**

Ensure bottom outlet is plugged if not being used.

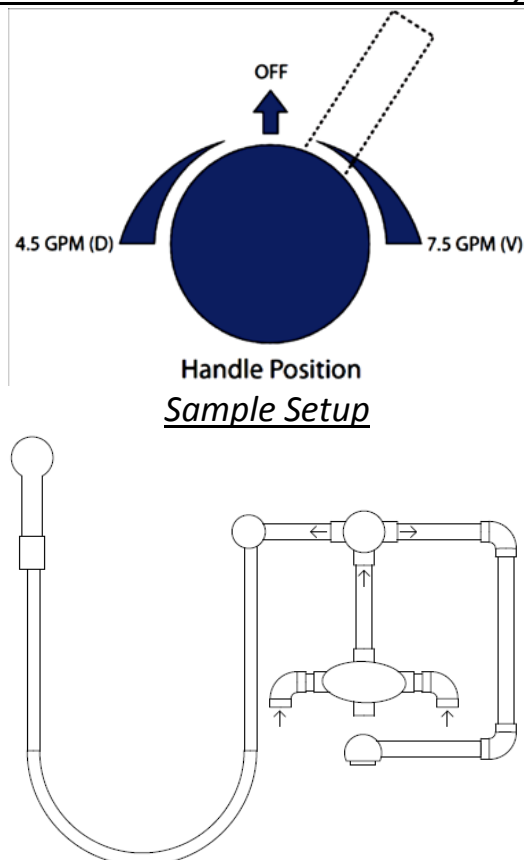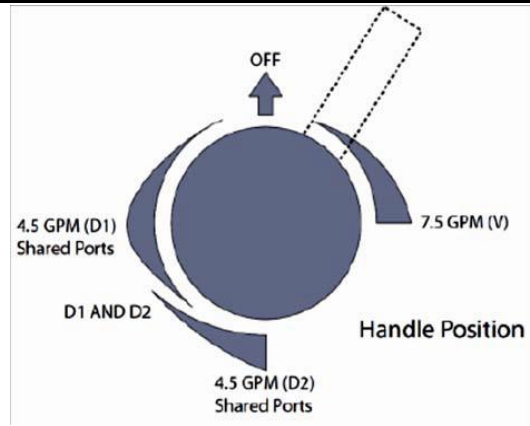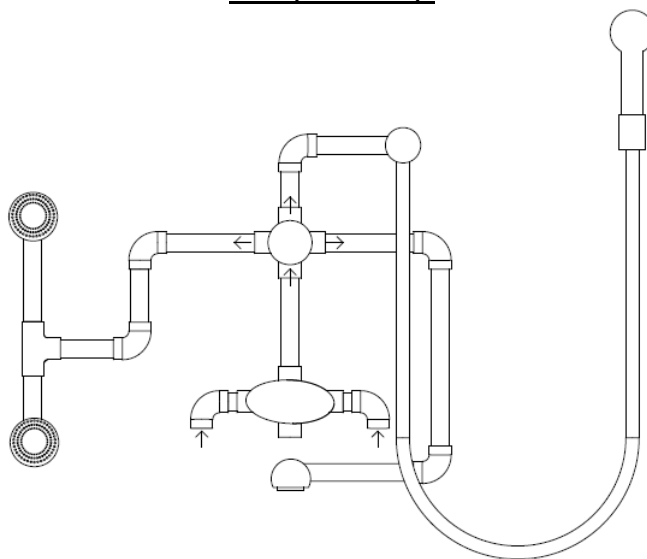## Diagram 2 – thermostatic valve with 2 way diverter



Sample Setup

## Diagram 3 – thermostatic valve with 3 way diverter



OFF

4.5 GPM (D1)
Shared Ports

7.5 GPM (V)

D1 AND D2

Handle Position

4.5 GPM (D2)
Shared Ports

### Sample Setup



**Trim Installation**

a. Screw **Temperature Control Dome (10)** and **Volume Control Dome (9)** onto valve.
    o *Please note that the* **Temperature Control Dome (10)** *has a larger opening than the* **Volume Control Dome (9).**

b. Secure the **Thermostatic Face Plate (1)** onto the valve by sliding over the **Temperature Control Dome (10)** and **Volume Control Dome (9)**

c. Screw **Dome Sleeve (8)** onto **Temperature Control Dome (10)** and **Volume Control Dome (9).**

d. Lock the **Thermostatic Face Plate (1)** securely against the wall using the **Thermostatic Face Plate Lock Ring (2).**

e. Ensure Temperature Stop ring is installed with red dot at 12 o'clock position, and thermostatic handle is installed with push button at 12 o'clock position.

Thermostatic Shower Trim w/ Built-in
Volume Control/ Diverter
P a g e | **3**

**Temperature Setting**

The delivered temperature of the valve varies depending on the temperature of the supplied hot water. The valve is factory set at a supplied temperature of 149ºF under balanced pressures. Depending on your preferred hot water temperature setting, it may be necessary to adjust the calibrations of the valve. The limit override button is preset at 100ºF and can be adjusted as described below.

1.  Select 100ºF on the control handle.
2.  Without turning the handle, remove the handle by unscrewing the screw and pulling off (screw may be concealed and/or fastened with set screws).
3.  Use a thermometer to check the delivered temperature on one of the outlets.
4.  Adjust water temperature to 100ºF by hand turning the cartridge stem slowly left or right.
5.  Ensure that the temperature stop-ring in installed with red dot at 12 o'clock position.
    Push the handle back on the valve with the push button at the 12 o'clock position.

**Removal and Maintenance of Cartridge**

This thermostatic valve has screens to prevent dirt and unwanted particles from damaging the valve. Clogged screens can cause reduced flow and inefficient temperature mixture by the valve. You can easily clean the screens by following the instructions below.

1.  Unscrew the two screws on the cover faceplate and remove the plate.
2.  Shut off the water inlets by tightening the two screws at the two check stop valves.
3.  Remove the handle by unscrewing the screw and pulling off (screw may be concealed and/or fastened with set screws).
4.  Pull off the temperature stop-ring.
5.  Unscrew the cartridge with a 24 mm wrench or other adjustable wrench in a counter-clockwise position and gently pull it out.
6.  Clean the screens and rinse with water. If necessary, soak in a 50/50 mix of white vinegar/ water or a de-scaling agent until all dirt is dissolved. Grease the o-rings with a silicone based grease and wipe the housing with a wet cloth before reassembling.
7.  Reassemble the valve by reversing these instructions. Make sure the indentation on the shroud, the red dot on the temperature limit-ring, and push button on the handle are all in the aligned in the 12 o'clock position.

**Note:** To prevent the handle from accumulating mineral build up, which can cause the handle to "lock up", the handle must be turned on an occasional basis.

**Representative Trim**



RED DOT
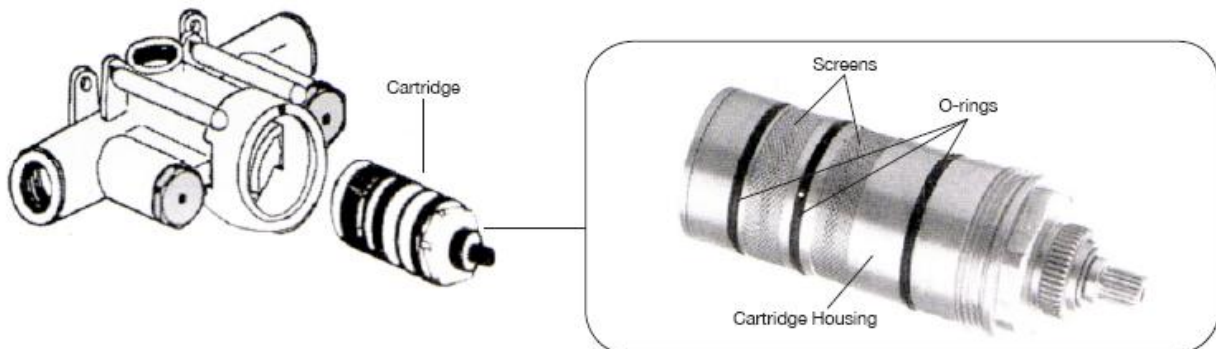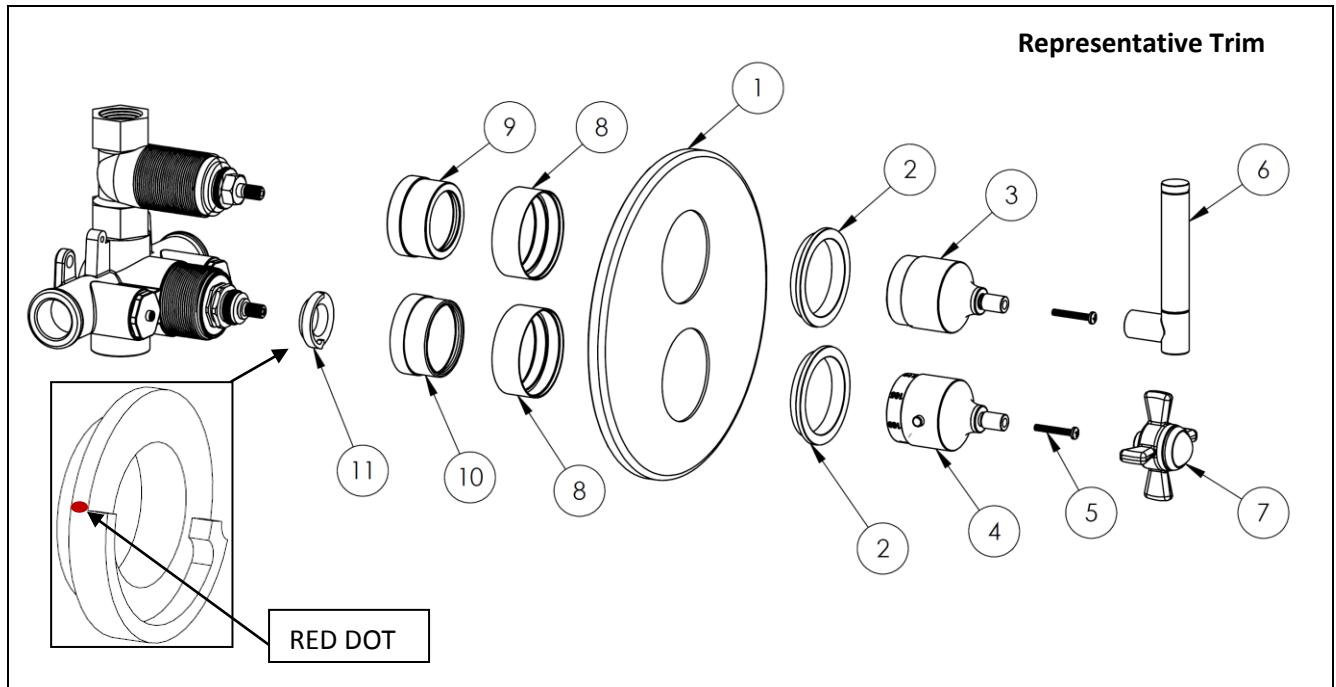
| Parts Checklist | | |
|---|---|---|
| Carefully remove all parts from the box. The following parts should be included. | | |
| | Description | Qty |
| 1 | Face Plate | 1 |
| 2 | Lock Ring | 2 |
| 3 | Volume Control Handle Post | 1 |
| 4 | Temperature Control Handle Post | 1 |
| 5 | Set Screw (for some models) | 2 |

| Parts Checklist | | |
|---|---|---|
| 6 | Volume Control Handle | 1 |
| 7 | Temperature  Control Handle | 1 |
| 8 | Dome Sleeve (Raw Brass) | 2 |
| 9 | Volume Control Dome | 1 |
| 10 | Temperature Control Dome | 1 |
| 11 | Limit Stop Ring | 1 |

**Representative Trim**



3/8"

3 3/4"

2 3/4"

2 1/2"

Ø 7 1/2"

3 3/8"
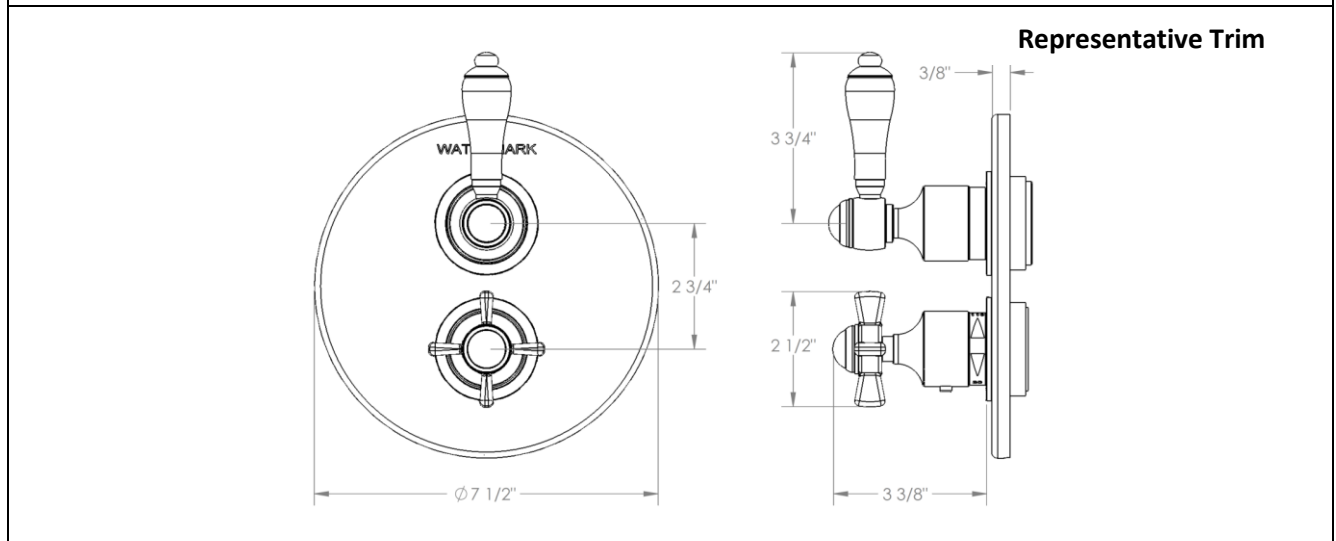
**Troubleshooting**

| Malfunction | Cause | Remedy |
|---|---|---|
| Cannot regulate temperature | Dirt in check valves | Remove and clean check valves |
| | Water supply reversed | Reverse hot and cold supply lines |
| | Valve installed upside down | Reverse valve |
| Hot and cold water do not mix | Lack of water pressure at one of the inlets | Correct water pressure at source |
| | Blocked shower head | Remove shower head and clean debris. If necessary, soak in a 50/50 mix of white vinegar/ water or a de-scaling agent until all dirt is dissolved. |
| Water not hot enough / Water too hot | Debris in check valves | Remove and clean check valves |
| | Valve not properly calibrated | Calibrate valve following instructions on previous page |
| | Water heater setting incorrect | Adjust water heater temperature setting |
| Temperature selected on handle is different than actual water temperature | Debris in check valves | Remove and clean check valves |
| | Valve not properly calibrated | Calibrate valve following instructions on previous page |
| | Uneven hot & cold water pressure | Check and adjust water pressure for both hot & cold supply lines |
| Handle does not turn | Mineral build up | Remove and clean cartridge following instructions above |
| Low water pressure | Low water pressure | Check and adjust water pressure at source |
| | Debris in cartridge | Remove and clean cartridge following instructions above |
| | Debris in check valves | Remove and clean check valves |
| | Blocked shower head | Remove shower head and clean debris. If necessary, soak in a 50/50 mix of white vinegar/ water or a de-scaling agent until all dirt is dissolved. |
| Leaking shower head | Fault cartridge in wall stop/ volume control | Repair or replace cartridge in wall stop/ volume control |
| Valve body too deep into wall | The measured rough in or finished wall surface is incorrect | Install the proper extension kit: SS-EXT50 (need to specify finish) |

**SS-THVD2**

Low Flow Out (D)
1/2-14 NPT

High Flow Out (V)
1/2-14 NPT

Hot In
1/2-14 NPT

Cold In
1/2-14 NPT

2 5/8"

2 3/4"

5 3/8"

4 3/8" Cut-Out

5 7/8"

3 3/4"

4 1/2"

**SS-THVD3**

Low Flow Out (D1)
1/2-14 NPT

Low Flow Out (D2)
1/2-14 NPT

High Flow Out (V)
1/2-14 NPT

Hot In
1/2-14 NPT

Cold In
1/2-14 NPT

2 5/8"

2 3/4"

6"

4 3/8" Cut-Out

5 7/8"

3 3/4"

4 1/2"