

Series TWH and LFTWH Tankless Water Heater Service Valve Set

Sizes: 3/4" and 1" (20-25mm)

Installation Instructions

STOP!

Before connecting any components, be sure to read all of the tankless water heater manufacturer's installation instructions. Failure to follow instructions below can result in serious injury, death and/or property damage.

1. Identify all components and orientations before beginning installation

1. **HOT WATER SERVICE VALVE** (Fig.1) Identified by a RED ring on the upper union connection and by the red insulator handle.
2. **COLD WATER SERVICE VALVE** (Fig.2) Identified by a blue ring on the upper union connection and by the blue insulator handle.
3. **CHECK MODULE**
Check element is integral to cold water service valve in TWH-QC-HC or LFTWH-QC-HC, TWH-UT-HC-RV or LFTWH-UT-HC-RV and TWH-QC-HC-RV or LFTWH-QC-HC-RV kits only.

4. PRESSURE RELIEF VALVE (Fig.3)

Identified by a silver test lever.

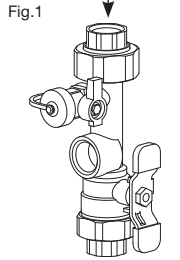
Note: ANSI Z21.22 and local codes govern the installation of pressure relief valves.

2. Before attaching any components to the tankless water heater, attach PRESSURE RELIEF VALVE to HOT WATER SERVICE VALVE (Figure 4)

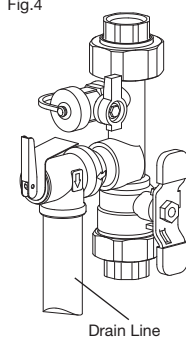
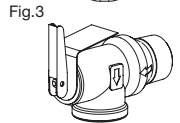
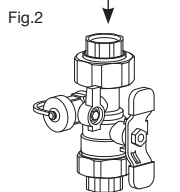
CAUTION: Do not over tighten relief valve. Do not tighten more than 2 turns past hand tight.

- a. Apply thread sealant to the exposed threads of the pressure relief valve.
- b. Thread the pressure relief valve into the 3/4" port on the side of the hot water valve and hand tighten. Using a wrench, tighten the pressure relief valve until the discharge on the pressure relief valve is positioned downward on the isolation valve, as shown in Figure 4.

Attach this end to tankless water heater



Attach this end to tankless water heater



3. Install COLD WATER SERVICE VALVE onto cold water inlet of tankless water heater

- a. Locate the cold water threaded inlet on the tankless water heater and apply thread sealant to the threads.
- b. Slightly loosen the union nut on the top of the cold water valve (i.e. the end with the blue insulator ring) so that the union tailpiece rotates freely.
- c. Holding the cold water valve beneath the cold water inlet, thread the union tailpiece onto the inlet and hand tighten. Using a wrench, tighten the union tailpiece. Next, position the cold water valve with the purge port pointing forward, towards the front of the water heater, and hand tighten the union nut.
- d. Verify that the blue insulator seats itself between the union tailpiece and the union nut. Tighten the union nut with a wrench, making sure that the valve does not rotate out of position.

4. Install HOT WATER SERVICE VALVE onto hot water outlet of tankless water heater

WARNING: There should not be a shutoff located between the tankless water heater and pressure relief valve. (see direction arrow in Fig. 5)

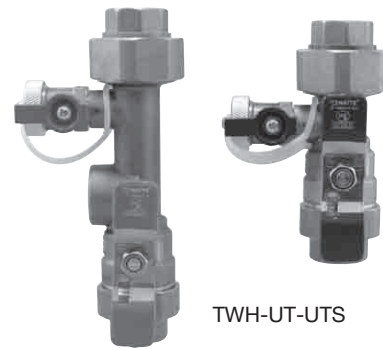
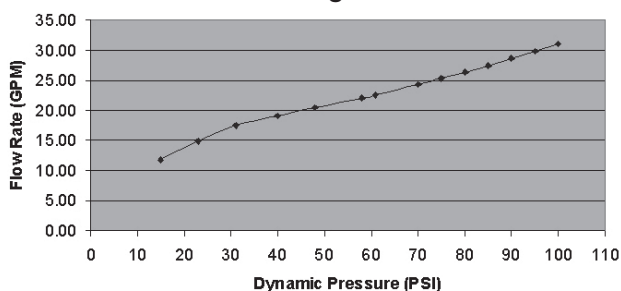
- a. Locate the hot water threaded outlet on the tankless water heater and apply thread sealant to the threads.
- b. Slightly loosen the union nut on the top of the hot water valve (i.e. the end with the red insulator ring) so that the union tailpiece rotates freely.
- c. Holding the hot water valve beneath the hot water outlet, thread the union tailpiece onto the outlet and hand tighten. Using a wrench, tighten the union tailpiece. Next, position the hot valve with the purge port and pressure relief valve pointing forward, towards the front of the water heater, and hand tighten the union nut. Verify that the insulator seats itself between the union tailpiece and the union nut. Tighten the union nut with a wrench, making sure that the valve does not rotate out of position.

ATTENTION INSTALLER: After installation, please leave this Instruction Sheet for occupant's information. IMPORTANT: Inquire with governing authorities for local installation requirements.

⚠ WARNING

For valves with CPVC or PEX end connections do not exceed the tubing manufacturers pressure and temperature ratings. Refer to the tubing manufacturers product specifications for that information.

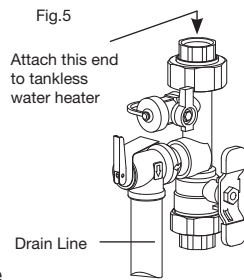
Hot Service Valve Purge Port Flow Data



TWH-UT-UTS

5. Connect water line and pressure relief drain line

- Attach the HOT water supply line to the threaded connection on the HOT WATER VALVE using thread sealant on the threads of the water fitting. On US (union sweat) models, detach the copper tailpiece from the union assembly and sweat to the hot water supply line. Be sure to remove the O-ring from the tailpiece before seating. Allow tailpiece to cool before reassembly to avoid damaging O-ring.
- Attach the COLD water supply line to the threaded connection on the COLD WATER VALVE using thread sealant on the threads of the water fitting. On US (union sweat) models, detach the copper tailpiece from the union assembly and sweat to the cold water supply line. Be sure to remove the O-ring from the tailpiece before seating. Allow tailpiece to cool before reassembly to avoid damaging the O-ring.
- Attach the drain line to the pressure relief valve and run line per local code requirements.



6. Start-up & Normal Operation

- Before turning on the supply water to the heater, make sure that the main valve handles on both the hot & cold valves are closed (Tee handle perpendicular to the main valve bodies). Also ensure that the purge port valve caps are tightened down and that the valves are in the closed position (Tee handle perpendicular to the purge port valve body). NEVER RELY ON THE PURGE CAP TO STOP THE WATER FLOW.
- For water heater start-up, refer to the water heater owners' manual.
- During normal operation, the main water valves are open when the main valve handle is parallel with the main valve body and closed when the main valve handle is perpendicular to the main valve body.
- For the purge port valves, the purge port valve is open when the slot is parallel with the purge port valve body and closed when the slot is perpendicular to the purge port valve.

7. Inspection and Maintenance

- See tag attached to pressure relief valve for details.

WARNING: Hot water may be present in the system, use extreme caution when servicing tankless water heater. Hot water can cause personal injury, death and/or property damage.

8. Drain/Flush Operation

Note: The following are suggested instructions for the use of the service valves during draining and flushing of the tankless water heater. Please refer to the water heater owner's manual for specific instructions.

- Disconnect the power supply to the water heater.
- Close the main water valve handles on the cold water valve (blue handle) and the hot water valve (red handle) by rotating each until they are perpendicular with the respective valve body. This shuts off the incoming cold water to the water heater and isolates the water heater from the hot water piping within the rest of the home.
- The purge valve on the cold water valve (blue) is used as the flushing inlet and the purge valve on the hot water valve (red) is used for the flushing outlet or drain. Ensure that the purge port is closed (Tee handle perpendicular to the purge port valve body) before removing the purge port valve cap.
- Slowly open the drain caps on each purge port valve. Ensure that the rubber washer stays in the cap.
- Continue with the manufacturer's recommendations for attachment of the lines and for specific draining and flushing instructions. To open the purge port valves, the slots are rotated so that they are parallel to the purge port valve body.
- When flushing is complete and before the lines are removed, ensure that the purge port valves are closed. Remove the lines and reinstall the purge port valve caps, ensuring that the rubber washer is in the cap, and tighten.

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. (California law requires this warning to be given to customers in the State of California.)

For more information: www.watts.com/prop65

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