

Series TWH and LFTWH Tankless Water Heater

Sizes: ¾" Service Valve Set

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

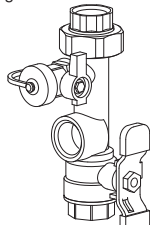
- HOT WATER SERVICE VALVE** (Fig.1)
Identified by the red insulator handle.
- COLD WATER SERVICE VALVE** (Fig.2)
Identified by the blue insulator handle.
- PRESSURE RELIEF VALVE** (Fig.3)
Identified by a silver test lever.
Note: ANSI Z21.22 and local codes govern the installation of pressure relief valves.

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

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

- Apply thread sealant to the exposed threads of the pressure relief valve.
- Thread the pressure relief valve into the ¾" 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
Fig.1



Attach this end to tankless water heater
Fig.2

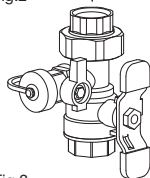


Fig.3

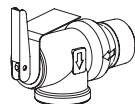
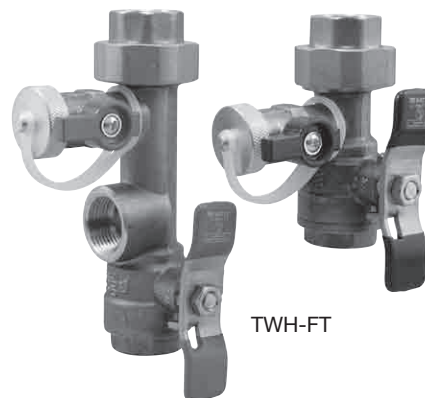
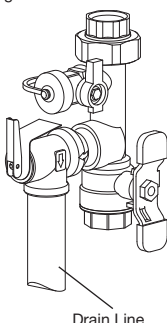


Fig.4



TWH-FT

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

- Locate the cold water threaded inlet on the tankless water heater and apply thread sealant to the threads.
- Slightly loosen the union nut on the top of the cold water valve so that the union tailpiece rotates freely.
- 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.
- 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.)

- Locate the hot water threaded outlet on the tankless water heater and apply thread sealant to the threads.
- Slightly loosen the union nut on the top of the hot water valve so that the union tailpiece rotates freely.
- 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. Tighten the union nut with a wrench, making sure that the valve does not rotate out of position.

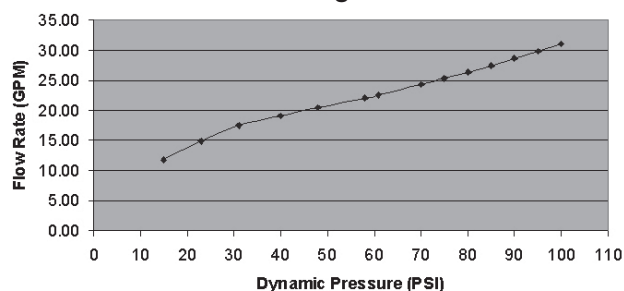
ATTENTION INSTALLER: After installation, please leave this Instruction Sheet for occupant's information.

IMPORTANT: Inquire with governing authorities for local installation requirements.

⚠ WARNING

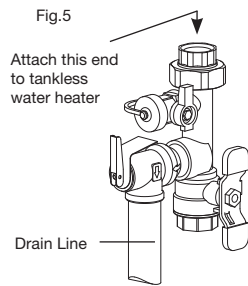
For valves with CPVC or PEX end connections do not exceed the tubing manufacturers pressure and temperature ratings. Refer to the tubing manufacturers product specifications for that information.

Hot Service Valve Purge Port Flow Data



5. Connect water line and pressure relief drain line

- Attach the HOT water supply line to the 3/4" threaded connection on the HOT WATER VALVE using thread sealant on the threads of the water fitting, sweat copper pipe on TWH-FS models.
- Attach the COLD water supply line to the 3/4" threaded connection on the COLD WATER VALVE using thread sealant on the threads of the water fitting, sweat copper pipe on TWH-FS models.
- 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 (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 (slot 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 (perpendicular to the purge port valve body) before removing the purge port valve cap.

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

- 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.

8. Diagnostic & Testing

Note: Diagnostic and testing of the water heater can be performed using the purge port on the hot water valve. Diagnostic testing such as flow rate, firing rate and temperature testing can also be performed. Please refer to the water heater owner's manual for the manufacturer's specific testing instructions and specifications. All testing must be done in accordance with manufacturers' recommendations.

Purge port valve flow rate data is provided in the graph below. Refer to this data during diagnostic testing of the tankless water heater.

- Close the main water valve handle on the hot water valve (red handle) by rotating until it is perpendicular with the valve body. Ensure that the hot valve purge port is closed (perpendicular to the purge port valve body) before removing the purge port cap.
- Slowly open the hot valve purge port cap. Ensure that the rubber washer stays in the cap. Attach the drain line and confirm that line is run to a safe and acceptable area for discharge of hot water.
- Continue with the manufacturer's recommendations for diagnostics and testing.
- When testing is complete and before the drain line is removed, ensure that the hot valve purge port valve is closed (the tee handle should be perpendicular to the purge port valve body). Remove the drain line and reinstall the purge port valve cap, ensuring that the rubber washer is in the cap, and tighten.

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