

# Installation Instructions

## Series LFTWHG2

### Tankless Water Heater Valves with VersaFit™ Technology

Sizes: 3/4" Service Valve Set

#### ⚠ WARNING



Read this Manual **BEFORE** using this equipment. Failure to read and follow all safety and use information can result in death, serious personal injury, property damage, or damage to the equipment. Keep this Manual for future reference.



#### 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 the red handle insert.
2. **COLD WATER SERVICE VALVE** (Fig.2)  
Identified by the blue handle insert.

3. **PRESSURE RELIEF VALVE** (Fig.3)  
Identified by a silver test lever.

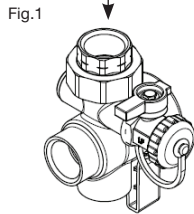
**Note: ANSI Z21.22 and local codes govern the installation of pressure relief valves.**

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

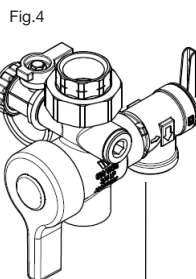
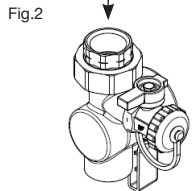
**⚠ CAUTION** Do not over tighten relief valve. Do not tighten more than one full turn past hand tight.

- 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.

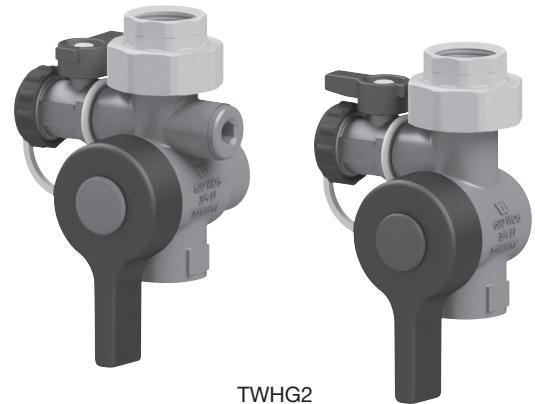
Attach this end to tankless water heater



Attach this end to tankless water heater



Drain Line



TWHG2

#### 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 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. 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.)

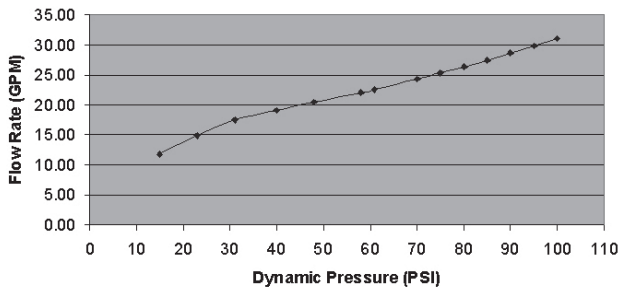
- a. Locate the hot water threaded outlet on the tankless water heater and apply thread sealant to the threads.
- b. Slightly loosen the union nut on the top of the hot water valve so that the union tailpiece rotates freely.
- c. Holding the hot water valve beneath the hot water outlet, thread the union 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. 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

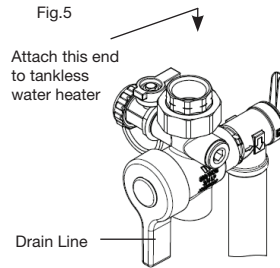
For valves with CPVC or PEX end connections do not exceed the tubing manufacturers pressure and temperature ratings. Refer to the tubing manufacturers product specifications for that information.

## 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 to a safe place of disposal.



**⚠ WARNING** To avoid water damage and/or scalding due to valve operation, a discharge line must be connected to valve outlet and run to a safe place of disposal. The discharge line shall be installed to allow complete drainage of both the valve and the discharge line. No reducing coupling or other restriction shall be installed in the discharge line. The discharge line must pitch downward from the valve and terminate with a 6" (152mm) air gap from an approved location or building drain. The discharge line must terminate through plain (unthreaded) pipe. Discharge line material must conform to local plumbing code or ASME requirements. Excessive length - more than 30 feet (9.14m), use of more than four elbows or bends in discharge piping, or reduction of discharge line size will cause a restriction and reduce the discharge capacity of the valve. No shut-off valve shall be installed between the relief valve and tank, or in the discharge line.

### 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. **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 handle is parallel with the purge port valve body and closed when the handle 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. Hot Valve Field Configuration

The LFTWHG2 hot valve assembly can be field configured to better fit certain installations.

The hot valve is factory configured to position the main valve handle on the left and the relief valve on the right with the drain valve facing forward as shown in Illustration 1. The valve can be field configured to position the relief valve on the left, the main valve handle on the right with the drain port facing forward as shown in Illustration 2.

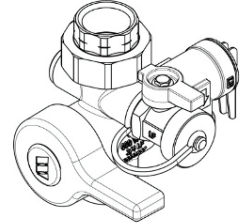


Illustration 1 - Factory Configuration

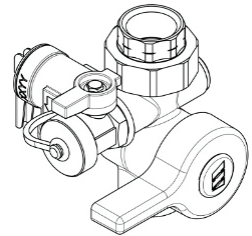


Illustration 2 - Field Configured

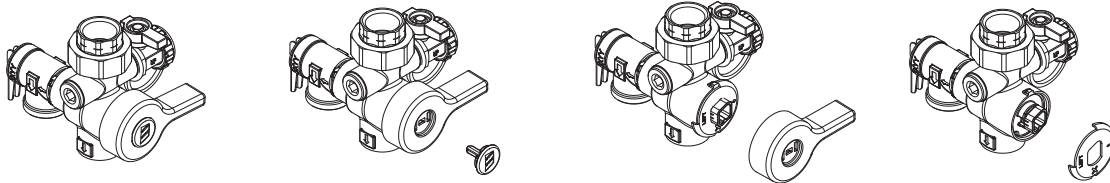
Field configure the hot valve as follows;

- With the valve in the closed position, note the valve handle is facing in the same direction as the drain port.
- Remove the red handle retainer plug by prying it out with a small screwdriver, then remove the handle by pulling straight off. With the handle removed, remove the LEFT stop plate from the rotor stub.
- Install the RIGHT stop plate on the keyed rotor stub (it can only be installed in the correct position), then reinstall the main valve handle facing the opposite direction away from the drain port. Once the handle is snapped into place, re-install the red handle retainer plug.
- Remove the drain valve assembly and the secondary drain port plug from the valve body.
- Re-install the drain valve assembly in the opposite port so it is facing the same direction as the closed valve handle. Re-install the plug in the unused drain port.

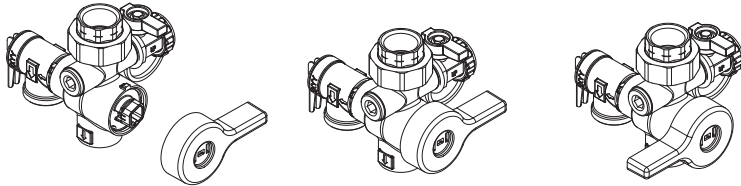
## 9. Modular Installations

When used in modular installations, the LFTWHG2 hot valve assembly can be field configured to provide hydraulic isolation of units that need service or repair while other units remain operating. To provide hydraulic isolation from a pressurized hot water main, the pressure-activated seal must be rotated 180 degrees from the bottom port to the upper port as follows;

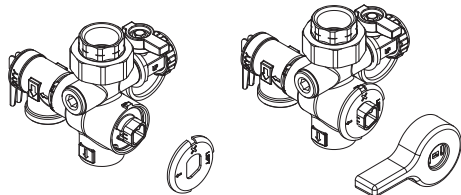
1. With the valve in the closed position (handle facing forwards), remove handle plug, handle and stop plate;



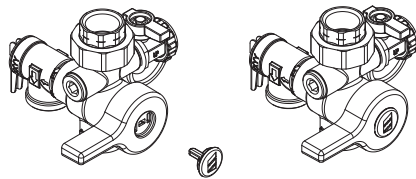
2. Place handle back on rotor hub and rotate 180 degrees so handle is facing rearward;



3. Remove handle and re-install stop plate aligning the notch (marked with a X) with the nub on the body;



4. Re-install handle (facing to the rear) and handle plug. The valve will now provide hydraulic isolation from a pressurized hot water main and be locked closed to prevent operation of water heater.



5. To place heater back in commission, reverse the above process.

**Limited Warranty:** Watts (the "Company") warrants each product to be free from defects in material and workmanship under normal usage for a period of one year from the date of original shipment. In the event of such defects within the warranty period, the Company will, at its option, replace or recondition the product without charge.

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