

# **Installation and Operating Instructions**

## **Dedicated Recirc System – Controller Only DRS-TC**



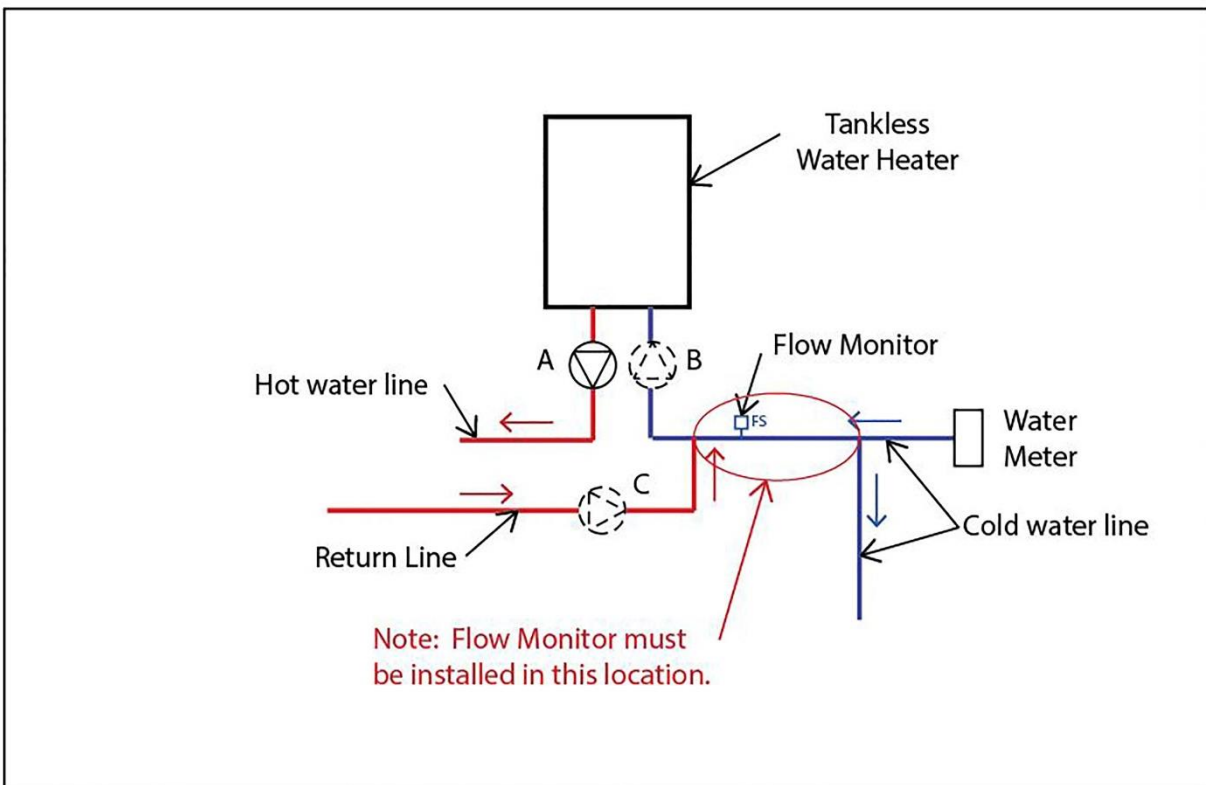
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## Installation

### Step 1. Choose the appropriate place to install the Controller and Flow Monitor:

Please refer to the **Figure 1** below for installation options. Existing circulation pumps may be installed at Point A (hot water out), Point B (cold water in) or Point C (return line). Point C is the traditional installation point, but Points A and B are valid locations as well.



**Figure 1:** Installation Options

### Step 2. Turn off water heater:

Turn off water heater to make sure it does not come on during installation.

### Step 3. Turn off water:

Turn off the water to the water heater. In most cases there is a valve located near the water heater on the cold-water supply line.

#### Step 4. Drain the hot water lines:

Turn on any hot water faucet in the house and let it run until the water stops flowing. Leave the faucet on for the duration of the installation. Open the water drain valves to allow water to drain from the water heater.

**Note:** If water continues to flow, check to make sure that the water has been completely turned off. If the valve does not shut off the water flow completely turn off the valve supplying water to the house or at the water meter.

#### Step 5. Cut the water line where the Flow Monitor is to be installed:

Remove a section of pipe equivalent to the length of the **Flow Monitor** plus any extra length for required fittings.

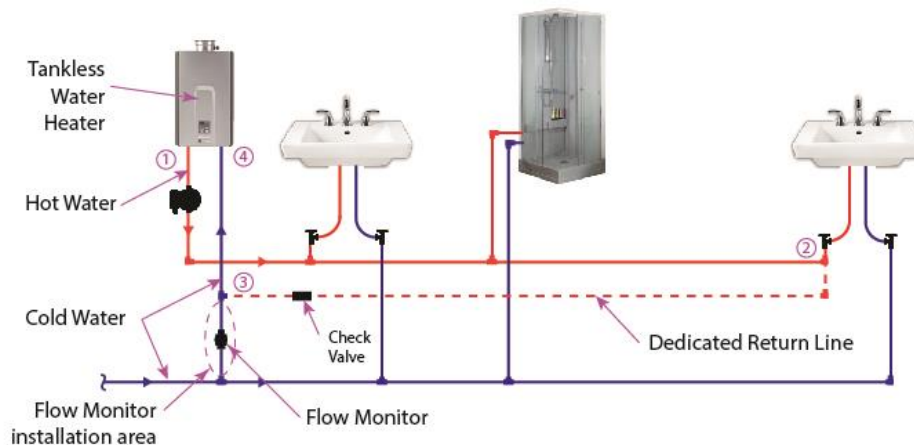
#### Step 6. Orientation of Flow Monitor:

Make sure the arrows on the **Flow Monitor** are pointing in the direction of flow.

#### Step 7. Install the Flow Monitor:

Proper location of the **Flow Monitor** is critical to the operation of the system. The **Flow Monitor** must be installed outside the recirculation loop.

In **Figure 3** below the loop includes ①-②, ②-③, ③-④ and ④-①. The pump will not stop once it starts if the **Flow Monitor** is installed anywhere within the loop. It must be installed in the cold-water line outside of the loop. Shown as the **Flow Monitor** installation area in **Figure 3**.



### **Figure 3: Hot Water Circulation Loop**

Insert 1 gasket in the female end of the **Flow Monitor** (an extra gasket is provided). Using the appropriate fittings (not included) install the **Flow Monitor** in the cold-water line as indicated above. Do not over tighten.

#### **Step 8. Complete connections and turn on water:**

Make sure that a hot water faucet is turned on in the house and then slowly turn the water back on to the water heater. Check for leaks and repair as necessary. Leave the water running until all of the air has been purged from the water pipes. Turn off the faucet.

#### **Step 9. Connect the Pump Manager and the Flow Monitor:**

Locate the **Pump Manager** in proximity to the pump, the **Flow Monitor** and an electrical outlet.

Connect the 2 wires from the **Flow Monitor** to the 2 wires from the **Pump Manager**. The color of the wires does not matter. Use thermostat wire (or equivalent) if the wires need to be extended.

**Note:** If you have a multi speed pump set pump to the highest speed.

[Return to Top](#)

#### **Step 10. Connect the pump and the Pump Manager:**

Plug the **Pump Manager** into a properly grounded 110 vAC outlet. Then plug the pump into the **Pump Manager**.

#### **Step 11: Test Dedicated Recirc System:**

Turn on any hot water faucet in the house for 1 second and turn it off. Pump will continue to operate for approximately 180 seconds after the faucet has been turned off.

**Note:** The 180 second timer will not start until all demand for hot water has ended.

## **Electrical Information**

### **Safety Warning**

#### **Risk of Electrical Shock**

This pump is supplied with a grounding conductor. To reduce the risk of electrical shock, be certain that it is connected only to a properly grounded grounding type receptacle.

The safe operation of this pump requires that it be grounded in accordance with the national Electrical Code and local government regulations.

### **Operating Instructions**

To activate the **Dedicated Recirc System**, simply turn on any hot water faucet in the house and quickly turn it off.

This will start the pump which will run for approximately 180 seconds. Typically, it takes about 30 to 45 seconds to heat up the entire circulation line. Once the line is hot you will have hot water everywhere you want it.

The pump will shutoff approximately 180 seconds after the demand for hot water ends.

### **Installation Notes:**

A portion of the **Dedicated Recirc System** is installed in the cold-water line in or the hot water line out of a tankless water heater. Failure to follow these instructions may lead to system failure and/or property damage. Although a plumber is not required to install the system familiarity with basic plumbing is necessary.