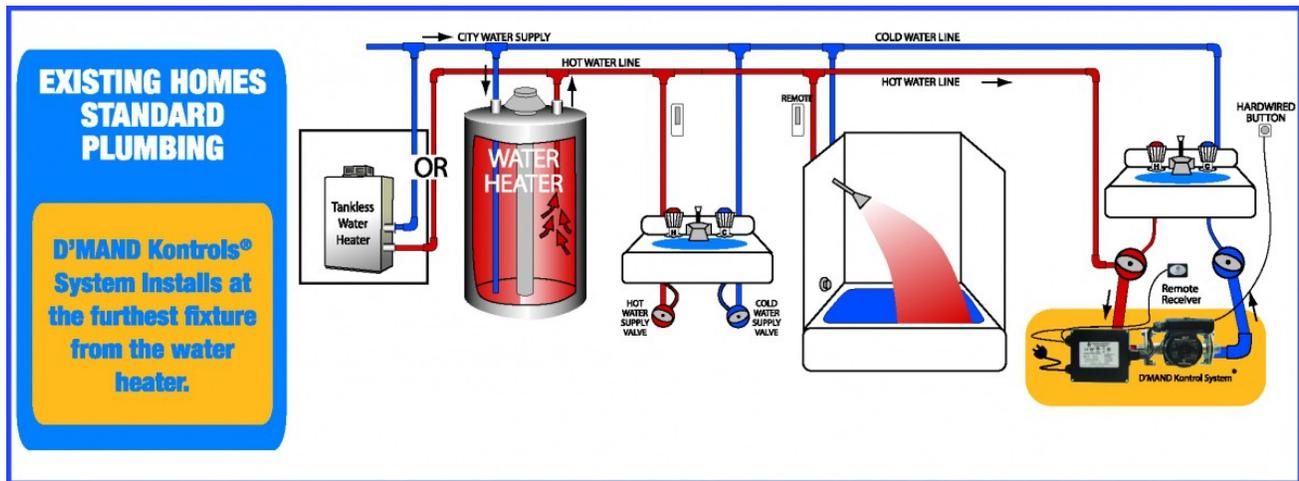
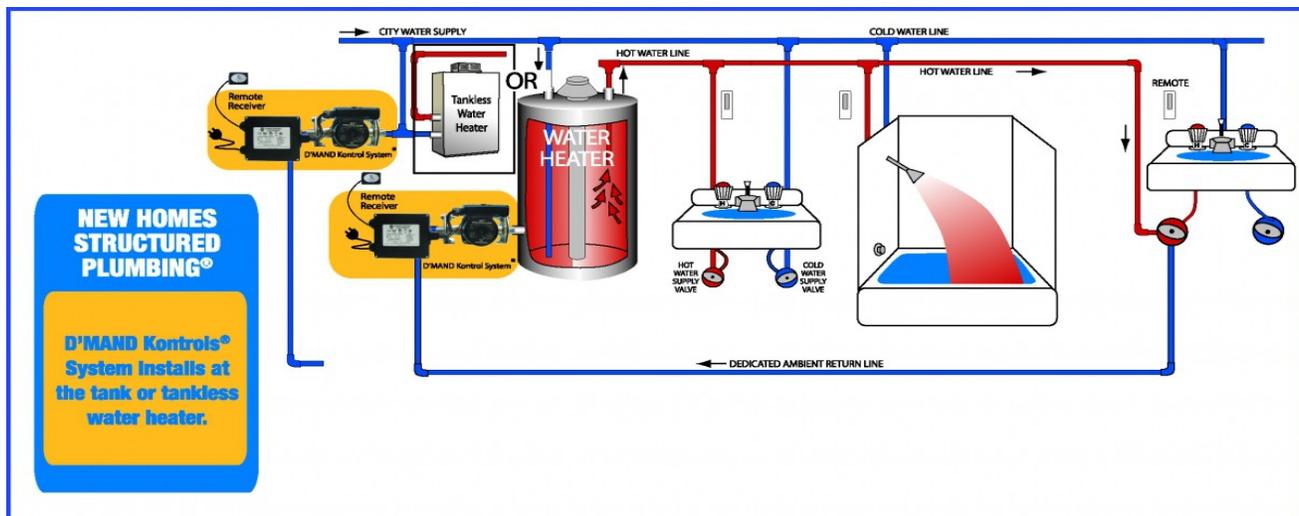


How it Works



At the push of a button, the ACT, Inc. Hot Water D'MAND Kontrol Systems® circulate the ambient temperature water in the hot water lines (water that is normally lost down the drain) back to the water heater. This occurs up to 80% faster than just letting the water run down the drain—the usual scenario. Depending on the plumbing layout, the route and time can vary. The D'MAND Kontrol Systems® move the water rapidly, so that the hot water arrives at the fixtures before the heat is lost through the pipe.

As the ambient temperature water in the cold water line travels towards the water heater, the D'MAND Kontrol Systems® fill the hot water line with hot water. When the hot water reaches the D'MAND Kontrol Systems®, a thermal sensor (thermister) senses a temperature rise and quickly shuts the pump off. The sophisticated electronic circuitry that does this is attached to the high-performance pump housing.



This results in getting hot water to the fixtures three to four times faster (on average), greater convenience in not having to wait, a savings in water and energy, and a reduction in sewage costs! As a by-product of these savings, a cumulative result is the improvement of air quality.

The D'MAND Kontrol Systems® can utilize the cold water line as a return line or it can use a dedicated return line. By using the existing cold water line, it is easy to retrofit existing homes or businesses. Special plumbing is not needed, and since the System will not allow for hot water to cross over to the cold water line, all the cold water fixtures still have cold water.

Activating the System

Every model of the D'MAND Kontrol® System can be activated by one or more methods. Regardless of which of the methods below is used, all D'MAND Kontrol® Systems include D'MAND Kontrol® Activation, a unique method of controlling the pump.

D'MAND® Button

A small doorbell-type button connects to the electronic controller by a 12-volt, 18-gauge standard bell wire. These buttons may be placed at one or all locations where there is a demand for hot water. This type of activation is commonly used on new home construction or remodeling of existing homes.

Wireless Remote Control

A small receiver is connected to the master controller. Small remote control buttons can be placed at any location in the home. Working on radio frequencies, a signal can be transmitted up to 80' through walls. This method of activation is most common on existing homes where the wiring for the D'MAND® button (mentioned above) is difficult to install.

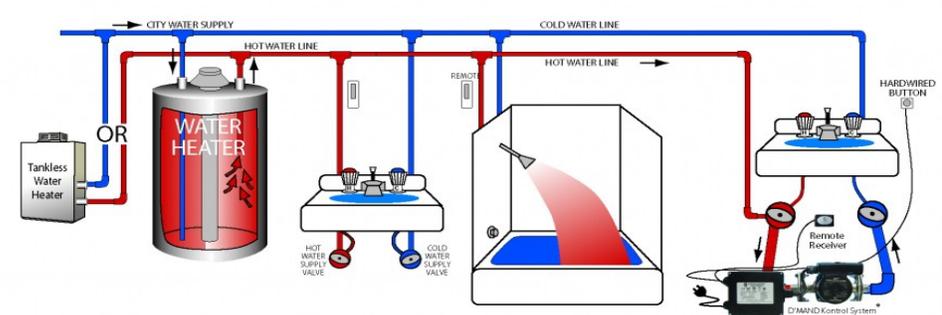
Motion Sensor

Motion Sensors are adaptable to both new homes and existing homes. On new homes, they are hard-wired by low voltage wires to specific locations that require hot water use. For existing homes, wireless motion sensors are available that will send signal up to 100 feet to activate the D'MAND Kontrol® System. Motion Sensors are designed not to allow activation of a subject under 4 feet high or 40 pounds of weight.

Tankless Water Heaters

D'MAND Kontrol® Hot Water Systems and Tankless Water Heaters

**EXISTING HOMES
STANDARD
PLUMBING**



HOW IT WORKS:
 The D'MAND Kontrol® System is designed to move the hot water from your water heater to your most remote fixture (kitchen, master bath, etc.) within seconds. At the push of a button, or wireless transmitter, the cool water you normally let run down the drain is circulated back to the water heater through the cold water line. The D'MAND Kontrol® System is easily installed under the sink farthest from your water heater.

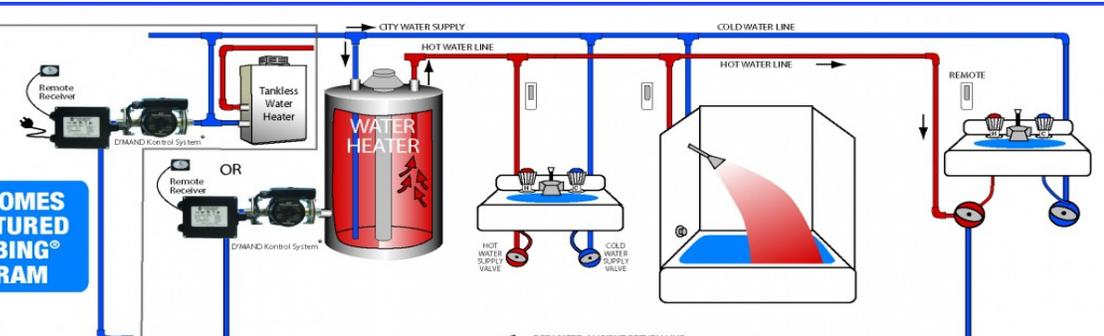
At your D'MAND Kontrol®, the pump pulls the hot water from the water heater moving only the cold water back through the cold water line into the water heater to replace the hot water being moved. When the hot water arrives at the D'MAND Kontrol® System it is automatically shut off by a thermo sensor at a 3 to 5 degree temperature change.

How long do you have to wait for hot water in the morning? If you often find yourself standing around waiting for hot water, or even worse, walking away and doing other things while you wait for hot water, it's time for a change. The D'MAND Kontrol® System can reduce your waiting time significantly – with the Hot Water D'MAND Kontrol® System you get hot water at the touch of a button!

Will the D'MAND Kontrol® System Work with Tankless Water Heaters?

D'MAND Kontrol® Hot Water Systems work with all water heaters – even your gas and electric tankless water heater. Installation of the D'MAND Kontrol® Hot Water System is quick and easy – with no welding or soldering required your new D'MAND Kontrol® System may be installed in new or existing homes or businesses. In less than two hours, you will be on your way to hot water, water conservation and energy conservation too! In addition, the installation of the D'MAND Kontrol® System will extend the life of your electric or gas tankless water heater.

**NEW HOMES
STRUCTURED
PLUMBING®
DIAGRAM**



HOW IT WORKS:
 There are two options for Structured Plumbing®, both using the D'MAND Kontrol® System. The first option is to locate the pump and the thermo sensor at the fixture furthest from the water heater. The second option is to locate the pump at the water heater and extend the thermo sensor from the electronic control board back to the fixture furthest from the water heater. Both options can be activated by hand with buttons, remote wireless transmitters or motion sensors. Both the D'MAND Kontrol® pump and the thermo sensor should be installed on the dedicated return line pipe. When hot water is demanded, using any of our activation methods, the D'MAND Kontrol® System brings hot water rapidly to the farthest fixture from the water heater where the sensor will pick up the temperature rise and send a signal to turn the pump off. This concept prevents the hot water passing the thermo sensor, thus saving lost energy in the dedicated return line.

Testing by the U.S. Department of Energy has concluded that the D'MAND Kontrol® Hot Water System saves both energy and water at a fractional cost of operation. Life expectancy of the D'MAND Kontrol® System with tankless gas hot water heaters or tankless electric water heaters is 15 to 20 years, without any required service.

How does the D'MAND Kontrol® System Work with Tankless Water Heaters?

The Hot Water D'MAND Kontrol® Recirculation System swiftly moves existing ambient temperature water in the lines through the cold water line back to the water heater, allowing tankless water heaters to work more efficiently, not allowing colder city water into the water heater at this time. The D'MAND Kontrol® System moves the interior water in the home supply line back to the water heater. Once a tap is opened, the outside water is drawn through the heater to supply hot water to fixtures, providing you with hot water quickly and efficiently.