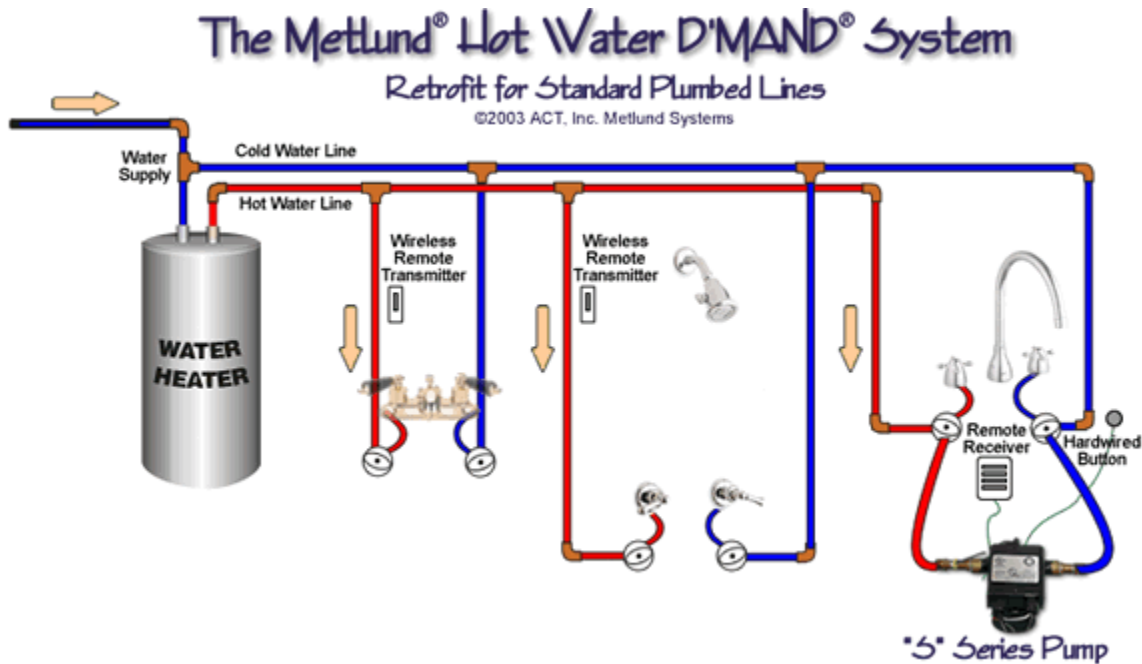


How It Works

At the push of a button, the Metlund® Hot Water D'MAND® System circulates the ambient temperature water in the hot water pipes (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 Metlund D'MAND System moves the water so rapidly, that 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 hot water heater, the D'MAND System fills the hot water line with hot water. When the hot water reaches the D'MAND System, a thermal sensor (thermistor) senses a temperature rise and quickly closes the zone valve while it 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 four to five times quicker (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 Metlund D'MAND System can utilize the cold water line as a return line or 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.

Courtesy ACT Inc. Metlund Systems www.hvacquick.com

A Variety of Applications

The Metlund D'MAND System has both commercial and residential applications.

Residential

Typical residential applications cost less than \$1.00 per year to operate. They can be activated by any combination of methods, and result in a savings of energy and water, a decrease in pollution, and an increase in convenience to the user.



WARRANTY

The S-50 models are designed for smaller homes where the distance is less than 50 feet from the water heater. Warranty: 3 years

The S-70T models are designed to effectively deliver hot water rapidly up to 100 feet from the water heater. They are designed for most residential homes. Warranty: 5 years

The S-02 models will accommodate larger homes and commercial applications where distance from the water heater and larger diameter piping are factors. Warranty: 5 years

Which Model is Right for Me?

What is the Longest You Have to Wait for Hot Water?

Select the proper D'MAND System for your home or commercial application

	Less than 1 minute	1-3 minutes	More than 3 minutes
Standard Plumbing	S-50	S-70T	S-02T
Dedicated Return Line	—	S-70T	S-02T

Commercial

The Metlund D'MAND System is often installed for industrial and commercial applications such as restaurants, hospitals, day-care centers, government buildings etc. In those cases, automatic activation is most often used. These larger, more powerful models are designed for high performance and low cost and are intended for use with re-circulating dedicated hot water return lines.

Courtesy ACT Inc. Metlund Systems www.hvacquick.com

Tankless Water Heaters and D'MAND Systems

The Metlund® D'MAND® SYSTEMS are the most efficient hot water distribution systems for all types of water heaters: tank or tankless, gas or electric. Metlund D'MAND Systems are easy to install on existing homes, new homes or commercial buildings. By installing a Metlund D'MAND System you will be extending the life of the water heater.

Testing by the U.S. Department of Energy has concluded that the Metlund D'MAND Systems save both energy and water at a fractional cost of operation. Life expectancy is 15 to 20 years and servicing is not required.

How Do They Work?

The Metlund D'MAND System rapidly moves the ambient temperature water in the existing lines. In a tankless water heater system, this allows the water heater to work less bringing hot water to the fixture because colder city water is not coming into the water heater at this time. The Metlund D'MAND System is simply moving the interior water in the home supply line back to the water heater.



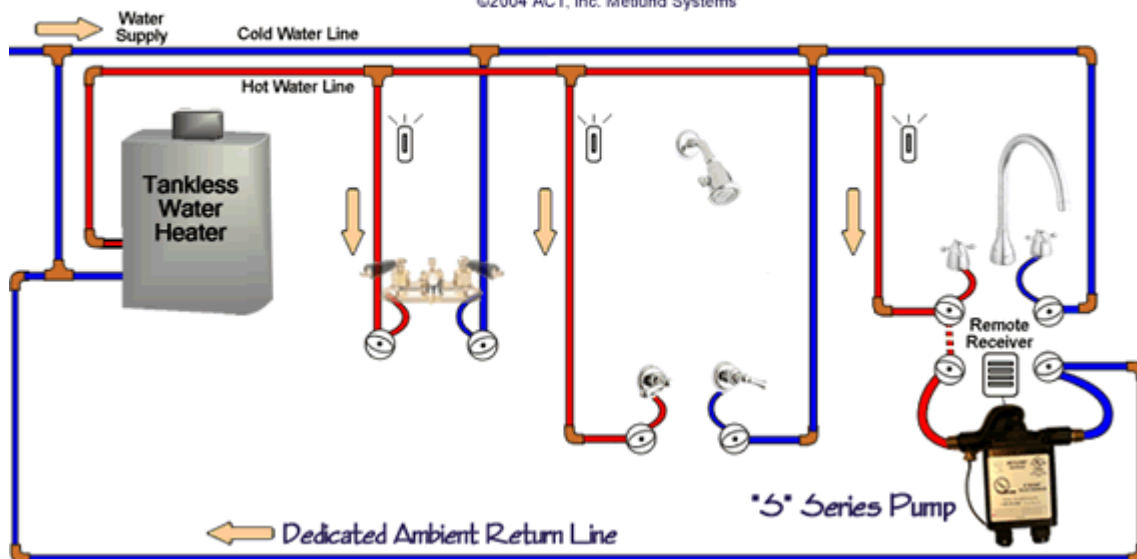
Once a tap is opened, the outside water is drawn through the heater to supply hot water to the fixture. The Delta-T (rise of temperature) can be set to a lower "set" point, thus using less energy to supply the hot water before you turn the tap on.

Plumbing Schematics

There are two ways to plumb in a tankless water heater. The difference is whether the D'MAND System pump is located at the water heater or at the furthest fixture from the heater.

The Metlund® Hot Water D'MAND® System Structured Plumbing for New Home Construction or Remodeling

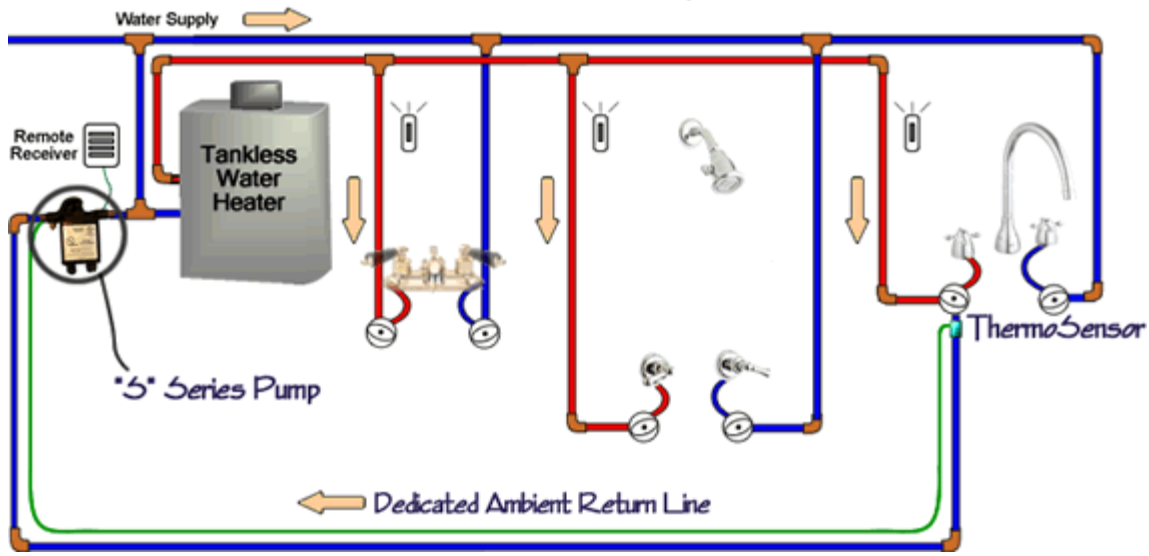
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The Metlund® Hot Water D'MAND® System

Structured Plumbing for New Home Construction or Remodeling

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Activation

Activation of D'MAND Systems includes choices of hard wired buttons, wireless remote RF (radio frequency) buttons, motion sensors, and in some cases flow switches. In most cases flow switches are only used in commercial or multi family operations.

WARNING: If your home has a Pressure Regulator Valve that acts as a back flow prevention valve, you must have an expansion tank in the system before installing a D'Mand System.

Courtesy ACT Inc. Metlund Systems www.hvacquick.com