

Water Shortage? Hot Water Circulating Systems Save Lots of Water!

If you live in an area affected by severe water shortages you should look into obtaining a hot water circulating system. Hot water circulating systems can save tremendous amounts of water, and at the same time provide the user with fast hot water. Fast hot water is a convenience that once experienced, is difficult to do without. Not only that, but when you do have to run water down the drain for long periods of time to obtain your hot water, you feel exceedingly guilty about doing so...or at least I do.

There is a variety of hot water circulating systems on the market, so we shall examine several systems to get a feel for what the differences are. There are pros and cons to every system, and by knowing what they are you can make an intelligent decision as to whether or not you would benefit from such a system, and which kind of system to purchase.

We can begin with the traditional hot water circulating system. The traditional system, the hot water pipe connects from the outlet of the water heater to the first fixture, and then loops from fixture to fixture, and finally it connects back to the inlet of the water heater. There is circulating pump in the hot water line that keeps hot water circulating in the piping. The pump can be placed on a timer to reduce the heat loss from the system and the pumping energy during periods of little or no use.

The traditional system is very wasteful of energy, since it keeps all the hot water piping full of hot water, which continuously loses heat to the environment. The water heater must work a lot harder than with a non circulating system, and could end up needing replacement much sooner than normal. The system is so wasteful of energy that it can't be used in California for new residential construction. Grundfos and Taco are manufacturers of traditional pumps.

A better approach is to use what is being called a "hot water demand system". It's similar to a traditional system, but it uses the cold water line as the return line. A small pump is placed under the sink furthest from the water heater. When the pump is turned on, it pumps water out of the hot water line and into the cold water line. In effect, it's pumping the water in a big loop out of the water heater and back into the heater. No water goes in or out of the water main and no water gets run down the drain.

When hot water reaches the pump it shuts off. Now you have instant hot water without running water down the drain. According to Grundfos, a large international manufacturer of circulating pumps, a typical family can save up to 16,000 gallons of water per year with a circulating system. Demand systems do not use any more energy than a non circulating system, since they don't really circulate the water; they just pump it to the sink where it was going to go anyway. The pumps run for such a brief time that the energy usage is very small...typically less than \$2.00 per year. With a demand system you save time, water, energy, and money. Metlund and Chilipepper Sales are two manufacturers of demand systems.

Another type of system is kind of halfway between a traditional system and a demand system. This system uses a pump that connects between the hot and cold water lines like the demand systems, but run continuously or on a timer like the traditional system. The pumps turn on at one temperature and off at a second higher temperature, keeping the water in the piping at warm temperature range. Since the pump runs often, the cold water line ends up with a lot of luke-warm water, and when you turn on the hot faucet you get warm water not hot. Like the traditional system it uses a lot of energy since it keeps the piping warmer than normal for long periods of time. Laing's AutoCirc and RedyTemp are two such systems.

True hot water demand systems are by far the most energy efficient and save the same amount of water as the traditional types of systems. Traditional systems are not usually installed in existing homes due to the extensive plumbing usually required along with the expense of operation due to the heat loss. Demand systems range in price from under \$200.00 to over \$500.00. In many cases the systems are eligible for rebates from the local water company. In some cases the rebate can cover the entire cost of the system.

Saving water and energy also reduces the greenhouse gases released into the atmosphere as a result of the pumping, treating, and distribution of drinking water. So be green and install a circulating system in your home now.

About the Author

William Lund has been an inventor for over 35 years, and has been working with circulating systems for many years. He has been issued several patents for hot water systems. For more information about hot water circulating systems visit his website: [Faster Hot Water](#) Mr. Lund also has a blog: [Pondering Everything](#)