

Faster Hot Water – Save Time, Water, Money and Be Green!

Have you ever considered how much water you run down the drain while you wait for hot water to arrive at the fixture? According to one study, done in Southern California, a typical family of four can save up to 10,000 gallons per year by installing a hot water circulating system. Grundfos, a major manufacturer of hot water circulating systems states on their website that homeowners can save up to 16,000 gallons per year with a circulating system.

It takes a lot of energy to pump and treat all of that water, then, when you run it down the drain, it takes a whole lot more energy to pump, process, and treat all of that extra sewage created by the wasted water. Generating all of that required energy, results in a whole lot of greenhouse gases being released into the atmosphere.

The biggest reason people install hot water circulating systems though is for the convenience of faster hot water. Think about all of the kitchen appliances that started out as just a convenience, and then became standard products. Washing machines, garbage disposals, dishwashers, microwave ovens, all started out as optional conveniences and now they are standard in almost all new homes.

There are two types of hot water circulating systems that we shall examine, beginning with the traditional residential hot water circulating system. The traditional system requires a pipe connecting the far end of the hot water pipe with the inlet to the water heater. A pump circulates the hot water through the pipe continuously, making nearly instantaneous hot water available at the fixtures all of the time. Sometimes the pump is put on a timer so that it shuts off during periods of little usage, and sometimes the pump is temperature controlled.

Whatever the control method, the traditional system is not “green” since it is such a big energy waster. Circulating the hot water through the hot water piping is like heating the whole house. The water heater has to work much harder than if there was not a circulating system, and will wear out more quickly. The wasted energy is far more expensive than the saved water, so you will be losing money constantly. Generating the energy that gets wasted produces more green house gases than are saved by not wasting the water. It’s a lose-lose situation for traditional hot water circulating systems.

A “demand” type hot water circulating system is much more “green”. A demand system consists of a pump connected between the hot and cold water lines under a fixture, usually the furthest fixture from the water heater. The demand system uses the cold water line as the hot water return line.

When the user wants hot water, he pushes a button to start the pump. The water is pumped out of the hot water pipe, into the cold water line and back to the inlet of the water heater. When hot water reaches the pump, it shuts off. That way no hot water enters the cold water line, and when you turn on the hot water faucet you have instant hot water.

Demand systems only fill the hot water pipe from the water heater to the fixture with heated water. It doesn’t use more energy than a non-circulating system does. Since the pump only runs for a brief period of time, usually less than a minute, it uses very little electricity, typically less than .00 per year.

Most demand type hot water systems deliver the hot water to the fixture faster than if the faucet is run at full blast. So you save time, water, energy, and money. Clearly it’s a win for you and a win for the environment.

Demand systems are easily installed and some models can be found for less than 0.00. On top of that some water companies offer rebates to their customers when purchasing a demand hot water system. Be sure to check with your local water supplier to see if there are rebates you could claim for installing a hot water circulating system in your home.

About the Author

William Lund has been an inventor for over 35 years and has been issued over a dozen patents including patents for hot water circulating systems. For more information about hot water circulating systems visit Mr. Lund’s website: [Hot Water Demand Systems](#) Mr. Lund invites you to visit his blog: [Pondering Everything](#)

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