

HOT WATER CIRCULATING PUMPS

It seems like it takes forever. You turn on the hot water in your kitchen or bathroom and wait...eventually, the hot water arrives, and you are able to complete the task you started what seems “forever” ago.

How can you reduce the time it takes for hot water to travel from your water heater to the point of use? Well, you might consider installing a hot water circulating pump.



PROBLEM ONE:

Waiting for hot water.

PROBLEM ONE SOLUTION:

Install a hot water circulation pump. The pump will continuously pump hot water to all points of use, so it can instantly be enjoyed.

PROBLEM TWO:

Problem one is solved, but now there is a new problem – increased water heater operation.
But why?

1. The pump draws hot water from your water heater and circulates it throughout your house.
2. As the water circulates through the plumbing of the house, it cools.
3. If no hot water is consumed, it all returns to the water heater. Since it is now cooler than when it left the water heater, it must be reheated.
4. The water heater thermostat(s) realize the water is cooler and engages the element(s) until the water is heated to the set temperature on the thermostat.
5. This happens over and over, 24 hours a day, 7 days a week. **The result is usually a much higher electric bill.**

How much electricity will a water heater use when a circulating pump is installed?

Well, it actually depends on several factors:

- How far must the hot water travel before it makes it back to the water heater in order to be reheated? A bigger house typically means more distance to travel.
- What is the temperature of the water? The greater the temperature difference in the hot water and the ambient air surrounding your plumbing, the faster the heat will leave the water.
- Is your hot water plumbing insulated? Doing this will help reduce heat loss as the water travels.

EXAMPLE: 9 hours per day x 30 days x 4.5 kW = 1,215 kWh of additional usage

**based on estimated 9 hours per day of additional water heater operation and typical water heater wattage*



PROBLEM TWO SOLUTION:

- Purchase a timer for your hot water circulation pump. Only operate the pump during periods of high use, typically in the morning and evening.
- Purchase a circulation pump that detects when hot water is demanded and only operates until hot water has arrived at the point of use.
- Purchase a circulation pump that is activated by a hardwired button or a remote control.
- If you have an existing standard circulation pump, plug it into a remote-control outlet. Use the remote to activate the pump from the point of use when hot water is needed.

