

# Using Tankless Water Heaters



Tankless water heaters save energy by producing hot water only when it is needed, instead of heating and maintaining the temperature of many gallons of water in a storage tank 24 hours a day, seven days a week. Tankless hot water heaters save energy but are more expensive to install. There are several types of tankless water heaters available. Tankless water heaters may be small, point of use electric models or large gas appliances. The type to install depends on how much hot water is needed, and how quickly; and whether natural gas, electricity, solar power or a combination of fuels is available to the home. To replace a conventional water heater, you need a whole house tankless water heater.

## How They Work

As soon as you turn on the hot water tap, cold water moves through a pipe into the tankless water heater unit. As the water starts flowing through the heater, an electric or gas-fired element is activated. While the water travels through the unit, it is heated to a desired temperature.

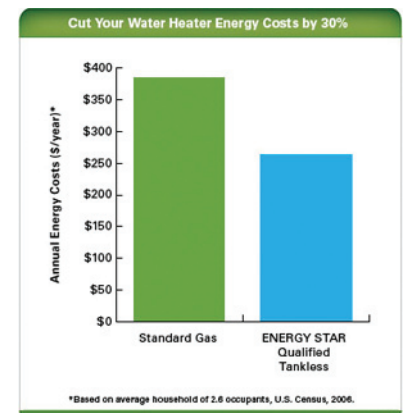
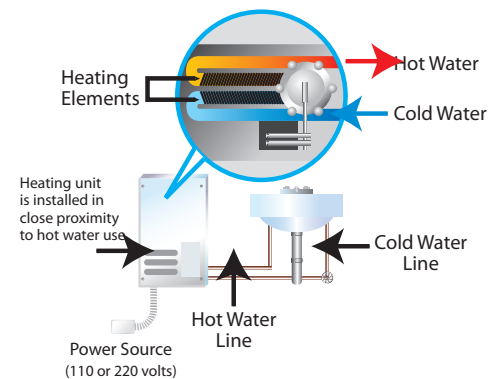
When you turn off the faucet, the tankless water heater shuts down and goes into a standby mode.

## Three Key Advantages

- 1. Reduced Energy Consumption and Cost Savings.** With a tankless water heater, there is no need to keep hot water in your tank around the clock. An ENERGY STAR-qualified tankless water heater can cut energy costs up to 30 percent. This can wind up saving a typical family more than \$100 per year on gas bills compared to a standard storage model. Larger families can save even more.
- 2. Tax Credit Eligibility.** The American Recovery and Reinvestment Act of 2009 provides homeowner tax credits for specific energy-efficient home improvements, including qualifying residential water heaters. Tankless water heaters installed between January 1, 2009 and December 31, 2010 are now eligible for a tax credit equal to 30 percent of the full purchase and installation price up to a maximum of \$1,500. The tax credit is **ONLY** available for existing homes. For details, go to [www.energystar.gov/credits](http://www.energystar.gov/credits).
- 3. Longer Life Expectancy.** Compared to conventional tank type water heaters, tankless water heaters have a life expectancy of about 20 years. In addition, there is no risk of tank leaks and water damage.

## Water Heater Energy Efficiency Comparisons

The initial costs to purchase and install a tankless water heater are higher than those for conventional hot water tanks. Saving on energy and on tank replacement, however, pays off this installation cost difference quickly. The tankless water heater is designed to outlast other heater units, mainly because of its “on demand” usage. **See the chart on the next page.**



Courtesy of [www.energystar.gov](http://www.energystar.gov)



### Comparison of Water Heaters

High Efficiency Water Heater Type	Energy Savings vs. Minimum Standards	Best Climates	Expected Energy Savings Over Equipment Lifetime	Expected Lifetime	Major Advantages
High Efficiency Storage (Tank) (Oil, Gas, Elec.)	10%–20%	Any	Up to \$500	8-10 years	Lowest initial cost
Demand (Tankless) Using Gas or Elec.	45%–60%	Any	Up to \$1,800	20 Years	Unlimited supply of hot water
Heat Pump	65% (Compared to electric resistance)	Mild-Hot	Up to \$900	10 Years	Most efficient electric fuel option
Solar with Electric Back-Up	70%–90%	Mild-Hot	Up to \$2,200	20 Years	Largest energy savings using a renewable energy source

[www.energystar.gov/ia/new\\_homes/features/WaterHtrs\\_062906.pdf](http://www.energystar.gov/ia/new_homes/features/WaterHtrs_062906.pdf)

## A Quick Look At Tankless Water Heater Installation

- Proper tankless water heater installation depends on many key factors, including fuel type, climate, local building code requirements, and safety issues. That's why it is important that a plumbing or heating contractor be trained and qualified to install a tankless water heater.
- Some households install a tankless water heater at each hot water outlet (bathing, dishwashing, clothes washing). This generally saves even more energy, since water is heated for specific, periodic use.
- Before installation, a contractor must contact the local city or town for information about obtaining a permit, if necessary, and to confirm local water heater installation codes.



### Link and Learn

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