



Water Heaters

Discover options that will satisfy your home's needs & budget.

Looking to buy a new water heater?

The four common classifications of water heaters are tank, tankless, pump and solar. Understanding the differences will help you choose the right water heater for your home. A few things to consider are initial cost, energy efficiency, the space where it will be installed, and the size of your home.



PROS & CONS

Tank

PROS

- Lower upfront costs
- Easy to install
- The life of the unit is 10-15 years

CONS

- Takes up a lot of room
- More expensive to operate
- Can build up rust and scale

Tankless

PROS

- Uses gas or electricity only when someone needs hot water, therefore uses less energy
- Provides an unlimited supply of hot water
- The life of the unit is 10-15 years

CONS

- High installation cost
- Improper sizing will result in not enough heated water
- Can build up rust and scale

Heat Pump

PROS

- They can be as much as 2.5 times more efficient, saving you money
- Cools surrounding space in the summer, making the area more comfortable
- Uses waste heat from the central furnace during winter months

CONS

- Initial costs are higher
- Requires additional space for air flow
- Ground source water heaters are not meant to meet 100% of the water heating needs of an average size house

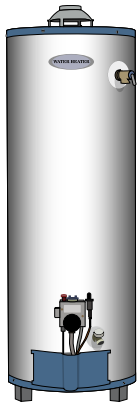
Solar-powered

PROS

- Very cost effective to operate
- Renewable fuel source

CONS

- They do require maintenance (scaling, weatherization damage)
- Not meant to meet 100% of the water heating needs of an the average household



Tank, Tankless, Pump or Solar?

Conventional Storage Tank Water Heater

A conventional storage tank water heater holds a certain amount of water to be heated. The tank is insulated and keeps the water constantly hot until it is used. Once the water is used up in the tank, it takes a while to heat the tank up again. Energy can be wasted because the water in the tank is constantly heated; this wasted heat is called standby heat loss. Conventional water heaters are powered by either gas or electricity to heat water.



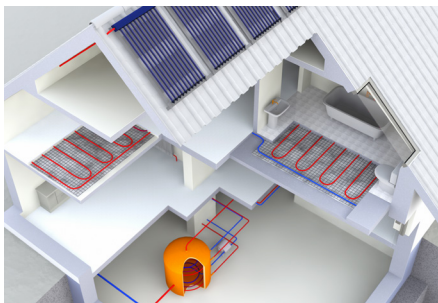
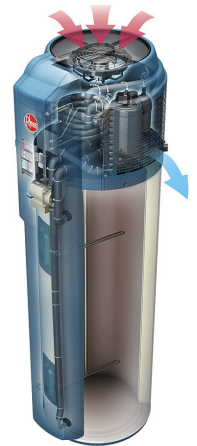
Tankless Water Heater

A tankless water heater, also known as an on-demand water heater, offers a constant supply of hot water. Instead of a tank, hot coils fill up with water and heat the water in an instant as it is needed. Tankless water heaters must be properly sized to a home. They can be powered by gas or electricity.

Heat pump water heater

A heat pump water heater has a tank like a conventional water heater but uses the heat from under the ground or the surrounding air above ground to heat the water; therefore, there are ground-source and air-source heat pump water heaters. Heat pump water heaters require electricity only to move heat from the ground or the air from the surrounding unit.

For comparison, they work in the opposite way a refrigerator does. Instead of releasing warm air into the surrounding room, heat pump water heaters pull heat from the surrounding air it into a tank in order to heat water. (Statistics from: www.southcentralpower.com/news/pros-cons-heat-pump-water-heaters/)



Solar-powered water heater

A solar-powered water heater has a tank and requires roof-mounted solar panels to provide power. Energy is transferred from the solar panels to a closed-loop system containing heat-conductive material that heats the water in the tank. Solar powered water heaters are quite expensive and, in unfavorable weather conditions, will need an alternate source of power; however, they can be used in any climate.

Water Heater Type	Fuel Source	Cost to Install	Cost to Operate	Notes
Tank	Natural Gas or Electric	Electric: \$ Gas: \$\$\$	Electric: \$\$\$ Gas: \$\$	Conventional water heaters have been the most popular due to their low installation costs
Tankless	Natural Gas or Electric	Electric: \$\$ Gas: \$	Electric: \$\$ Gas: \$	Must be sized to fit the water heating needs of the home
Air Source Heat Pump	Electric	\$\$\$\$	\$	Needs adequate space to achieve the most efficient performance
Solar Photo Voltaic	Renewable	\$\$\$\$	\$	Intended to be paired with a conventional water heater
Ground Source Heat Pump	Electric	\$\$\$\$\$\$	\$	Intended to be paired with a conventional water heater

The United States Department of Energy recommends setting your water heater's temperature to 120 degrees Fahrenheit. The default setting is typically 140 degrees, but turning it down to 120 degrees will save energy and money in the long term.

Fostering stewardship and the wise use of electricity and water, this information is brought to you by the Energy Smart program of Holland Board of Public Works. Learn how Energy Smart can help you save energy & money at hollandbpw.com/en/rebates.

