



Residential domestic water heating

Water heating systems fall into four categories; storage tank water heaters, indirect water heaters, heat pump water heaters and demand water heaters. *Storage tank water heaters* are the most common water heaters in homes. The energy used to maintain the hot water in this type of heater adds 10% to 20% to the energy used for water heating because of the loss of heat by the storage tank when no hot water is being used. *Indirect water heaters* are storage heaters with a hot water coil immersed in the water. Indirect water heaters are generally associated with gas or oil fired boilers that provide space heating. *Heat pump water heaters* use a heat pump cycle to improve energy performance for electric water heating. *Demand tankless water heaters* heat water on demand as it goes through the heater. Advantages of this heater are that there is a continuous hot water supply. Disadvantages are that they limit the rate of the heated water flow.

Water heater size



There are a few different sizes that the industry recommends for heater storage tanks.

Natural gas heaters are for up to five people and require 150 litres (33 Imperial gallons) and 36000 Btu per hour (10.6kW) burner rating. Those homes with more than 5 people and/or heavy hot water use need 189 litres (42 Imperial gallons) and 45000 Btu per hour (13.2kW) burner rating. Electric heaters are for households with up to 4 members and require 175 litres (40 Imperial gallons) with two 3 kilowatt heating elements. Homes with five or more people and/or heavy hot water usage need 270 litres (60 Imperial gallons) with two 4.5-kilowatt elements.

Ways to reduce the costs of water heating

- You should install an efficient showerhead on your bathroom shower. It can save up to 15% of water use in your home.
- Take short showers which are no longer than 5 minutes, a shower uses half the amount of water that a bath uses.





- Add aerators to your kitchen, bathroom and laundry faucets, which can reduce up to 40% of your hot water consumption.
- Always run full loads in both the dish and clothes washer. Use cold water for the rinse cycles wherever possible.
- Fix all leaking faucets right when it has been detected. That little drip from the faucet can result in 13000 litres of wasted water.
- In order to reduce sediment build-up on the bottom of your tank and on the heating elements, it is important to flush your system every two to three years.

