

## Overview

Gas water heaters make up approximately 48 per cent of water heaters in Australia. The term “*gas water heaters*” covers three main product types, gas storage water heaters (GSWH), instantaneous or continuous flow gas water heaters (IGWH) and solar water heaters with instantaneous gas boosting (SWHs).

Gas hot water systems use either reticulated/piped natural gas or Liquefied Petroleum Gas (LPG) to heat water.

Remember that the colder the water is that you want to heat – the more natural gas you are going to use to achieve the optimum temperature.

## Gas Storage hot water systems

Storage gas hot water systems use a gas burner located underneath the storage tank to heat the water.

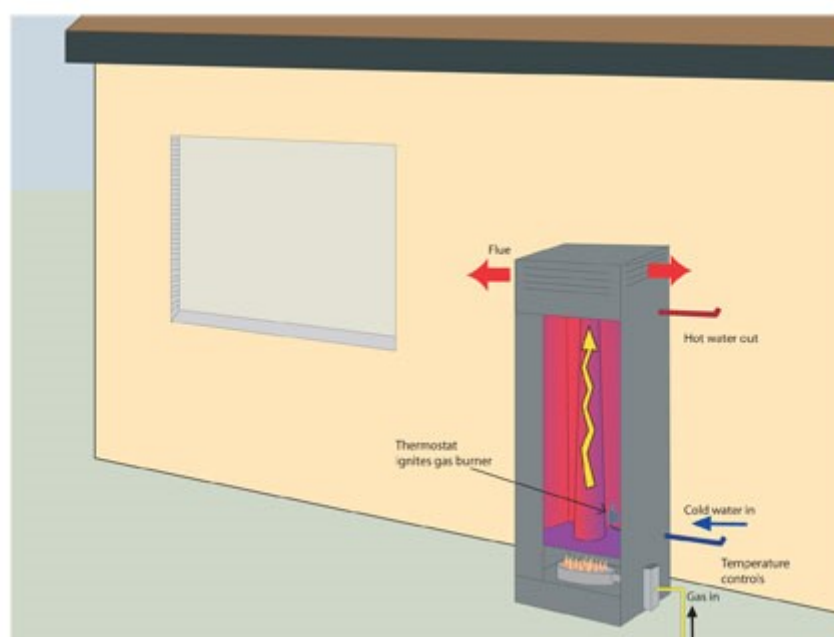
They usually have a continuously burning pilot flame that ignites the main burner when it is needed. Heat is then transferred from the gas burner through the bottom of the cylinder.

Some heat also flows from the hot flue pipe into the water. When hot water is drawn off at the top of the tank, cold water enters the tank at the bottom.

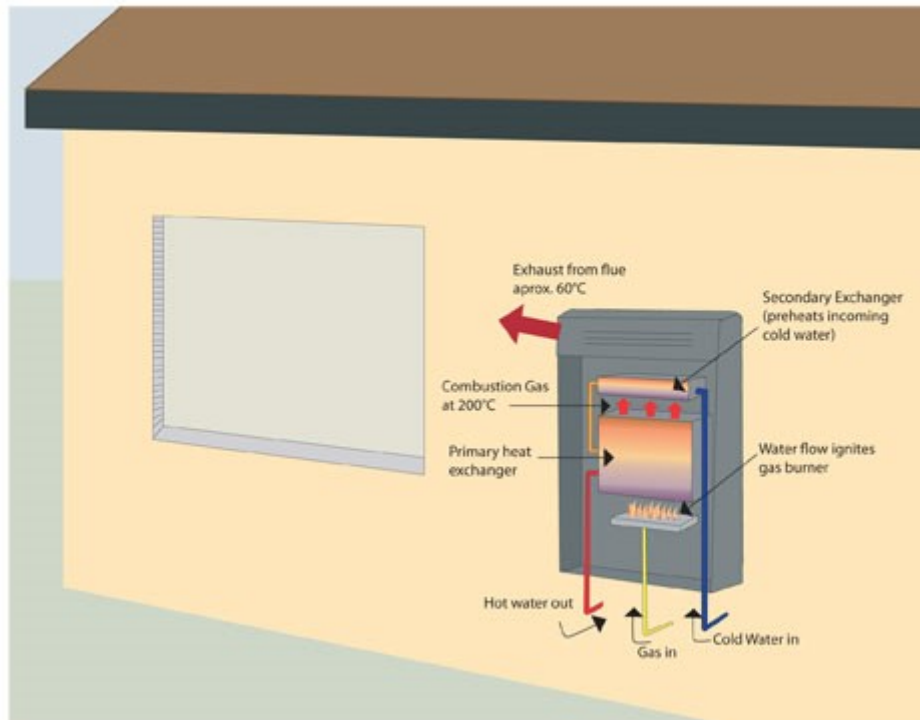
Most units have an adjustable thermostat to set the water temperature. When the temperature at the bottom of the tank drops below the level set on the thermostat the pilot flame ignites the main burner so the water is kept constantly hot. The energy from the pilot flame is not wasted as it helps to heat the water in the tank.

Storage hot water systems come in a range of tank sizes from about 90 litres to 300 litres. Some units use a special flue system to recirculate the hot flue gases around the outside of the tank to increase heat transfer into the water and increase their efficiency.

Gas storage system



Instantaneous gas hot water unit



## Instantaneous (continuous flow) hot water systems

Instantaneous gas hot water systems, also known as continuous flow, don't have storage tanks and heat water only when required.

Water is heated by a gas burner as it flows through a coiled pipe called a heat exchanger. The gas burner starts when a hot water tap is turned on. It only heats the amount of water that is required instead of continuously heating a full tank. As they don't store any hot water, there is no heat loss from a tank and so can have energy and cost savings.

To allow enough time for heating, the water is slowed down as it flows through the heat exchanger. This means that instantaneous units supply hot water at a lower pressure than storage systems. They can typically deliver hot water at flow rates per minute of between 10 litres and 30 litres, depending on the model.

## Is Your Product Regulated?

**Find out which GEMS determination or regulatory standard applies to your product**

All products covered by energy efficiency regulations must meet certain requirements before they can be supplied or sold in Australia or New Zealand.

Depending on the product, this may include Minimum Energy Performance Standards (MEPS), energy rating label requirements or both.

## Regulation for Gas Water Heaters

Gas water heaters are regulated to meet minimum energy performance standards (MEPS). MEPS levels for gas water heaters are based on a maximum annual energy consumption performance level. This must be met for gas storage and instantaneous water heaters to be registered for sale.