



Point of Use Hot Water Heaters

What are point of use hot water heaters?

Point of use (POU) hot water systems provide hot water at the location it is used, i.e the tap or sink. These systems are more efficient than central hot water storage systems as they reduce the need to transport hot water and therefore remove the heat loss from the hot water system.

With a central hot water tank, each time the tap is turned on downstairs, the water already sitting in the pipes must run out before more hot water is pulled through from the tank. When the tap is turned off, the pipes are now filled with hot water which sits and cools down. When the tap is turned on again this cooled water is again drawn off and sent down the sink. This system wastes heat and therefore energy and also water.

The solution to this are POU systems. There are two types of system available: **instantaneous** and **point of use**. Instantaneous systems have no storage at all, and work in principle similar to an electric shower. Point of use has a small amount of storage, typically 10-20 litres, but is always located under or around the sink where it is used.

A few examples of these systems and how they operate are shown below. All of these systems use electricity:

Point of Use Hot Water	Point of Use	Inline Instantaneous	Over Sink Instantaneous
Looks like?			
How does it work?	An immersion heater heats water in the small tank to the desired temperature. This is then drawn up via the tap.	This electric heater sits in the pipe to the hot water tap. When the tap turns on, it draws water through the pipe and into the heater where it is heated on its way to the tap.	This heater is separate to the taps on this sink and is typically installed over handwashing sinks. It works in the same way as the inline heater.
Cost?	£100-250	£80-£250	£80-£250
Pros	<ul style="list-style-type: none"> Suits high flow taps 	<ul style="list-style-type: none"> More efficient as no storage at all Works with a normal tap/sink set up 	<ul style="list-style-type: none"> Low flow rate means its very efficient
Cons	<ul style="list-style-type: none"> Takes up space under the sink 	<ul style="list-style-type: none"> For high flow taps a higher kW rated unit may be required which may impact on electrical requirements 	<ul style="list-style-type: none">