



**Oregon Plumbing Specialty Code
Chapter 5 – Water Heaters
Chapter 6 – Water Supply and Distribution**

Code Section: OPSC Chapter 5 and Chapter 6

Code Edition: 2011 Oregon Plumbing Specialty Code

Date: April 1, 2014

Subject: Instantaneous and combination tankless water heaters

Question: What are the permit requirements for instantaneous domestic tankless water heaters used for heating potable water? What additional permit requirements may be triggered if this type of water heater also provides space heating?

Answer: Depending on the installation and use of the water heater, a mechanical permit may be required with the standard plumbing permit.

Instantaneous water heaters used for heating potable water only.

- a. A plumbing permit is required for domestic potable water piping connected to a water heater.
- b. A mechanical permit is required for the gas piping and combustion air and flue/vent.

Water heaters utilized for both domestic potable water heating and space-heating applications (combination type):

- a. A plumbing permit is required for the installation of the water heater and for the space-heating portion of the piping if the water heater and associated piping utilizes potable water.
- b. A mechanical permit applies when the water heater being installed uses gas to heat the water. This permit would also cover the space-heating portion of the piping when the piping used for space-heating is isolated from the domestic potable water.
- c. The isolation of non-potable water piping used for space-heating shall be an approved backflow device or an approved method according to the Oregon Plumbing Specialty code.

Analysis: Instantaneous tankless water heaters also known as continuous flow, inline, flash, on-demand, or instant-on water heaters are water heaters that instantly

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heat water as it flows through the device, and do not store and heat the stored water. Some models of instantaneous tankless water heaters are equipped with a small capacity “buffer” tank. These tanks are not heated storage tanks. Instantaneous tankless water heaters are capable of supplying both domestic potable water and hot water for space-heating. These types of water heaters are typically known as combination or “combi” water heaters.

The State Building Code regulates the installation of instantaneous water heaters and associated piping when the water heater is also used for “space heating”. Depending on the type of water heater (electric or gas) and its use determines which specialty code applies and which permits must be obtained. It is not uncommon for a combination water heater to require more than one permit.

Instantaneous tankless water heaters, regardless of size or BTU input, are treated differently than heated tank-type water heaters under the Oregon Boiler and Pressure Vessel Safety Law. While some water heaters meet the definition of a pressure vessel, instantaneous tankless water heaters are exempt from the Boiler and Pressure Vessel Safety Law (ORS 480.525(1)(c)) and permit requirements for both commercial and residential installations.

Local governments acting thru their authority of the State Building Code must issue permits for tankless water heaters to include plumbing, mechanical, or electrical permits as applicable to the individual installation.

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