

	CITY OF SAN JUAN CAPISTRANO BUILDING DEPARTMENT 32400 Paseo Adelanto San Juan Capistrano CA 92675 949-443-6347 www.SanJuanCapistrano.org	WATER HEATER (TANKLESS)
		2016 CALIFORNIA CODES <small>CODE CYCLE</small>
		01/01/2017 <small>EFFECTIVE DATE</small>
RESIDENTIAL TANKLESS WATER HEATERS		

INTRODUCTION

This handout summarizes information contained in the 2016 California Residential Code, 2016 California Plumbing Code (CPC), 2016 California Mechanical Code (CMC) and the 2016 California Energy Efficiency Standards (CEES) and is not meant to replace them. All water heater installations and replacements require a permit and final inspection per CPC section 503.0.

In no case is a Tankless water heater a direct replacement for a tank type water heater. For a “like for like” Tankless water heater replacement, both the existing and the new heaters must be equivalent in nature.

Tankless for Tank replacements, new installations, and relocations are required to meet the requirements of new construction.

All Tankless water heater installations **may not** assume that a fuel gas and venting system already exists that will be adequate. See CPC Section 1208.1.1. Each installation must meet the requirements based on the unit being installed. It is common for Tankless water heaters to require **four to five** times the typical BTU input of a standard water heater. Consequently, the gas line to the existing tank type water heater in a retro fit application may not have sufficient capacity to supply a Tankless water heater.

If conditions are encountered that are not covered, please consult the appropriate plumbing code books. They are available for review in many libraries and the Building Department Customer Service Counter.

PERMITS

All new and retrofit Tankless water heater permit applications must contain the following information:

- A completed permit application form.
- For new exterior installations, an 11 x 17 site plan will be required.
- Tankless heaters installed on the outside of a building will require Planning Department approval and be the type approved for outside installation.
- A cut sheet listing the Manufacturer, Model number and BTUs required for the unit to be installed.
- A supply gas pipe sizing and load calculations.

GENERAL REQUIREMENTS

- A 120V electrical receptacle, located within 3 feet of the water heater and accessible to the water heater with no obstructions is required.
- Water heaters located in garages must be protected from mechanical damage. This means placing them out of the path of vehicular traffic or providing a protective post or partition.
- Provide a temperature and pressure relief valve as required by the manufacturer. Hard pipe plumb to the outside and directed to the ground and terminate a minimum of 6” and a maximum of 24” above grade. When replacing an existing tank type water heater, the T & P must be re-installed to drain to the outside. Relief valve may not discharge into a secondary drain pan.

- High efficiency condensing type Tankless water heaters shall have a condensate system installed and drainage shall be to an approved receptor. Condensate shall not drain to the site.
- A water heater located above habitable space, where damage may occur if a leak developed, a secondary pan with a ¾" minimum drain line to the outside is required. (CPC 507.5)

ENERGY REQUIREMENTS

The prescriptive requirements of the 2016 California Energy Codes require that a single instantaneous water heater (Tankless) installation have:

- A minimum gas input rating < 200,000 Btu./Hr.
- No supplemental storage tank is installed
- No recirculation systems can be installed.

For recirculating, multiple unit installations, and/or units with a supplemental storage tank installation shall have a Performance Energy Analysis compliance method only.

PROHIBITED LOCATIONS

Water heaters that are located in a bedroom or bathroom are required to be in accordance with one of the following:

1. Be installed in a dedicated closet with a listed, gasketed door assembly and a self-closing device, the door assembly installed with a threshold and door bottom seal, all combustion air shall be obtained from the outside and the closet shall be for the exclusive use of the water heater. CPC 504.1(1).
2. The water heater shall be of the direct vent type.

Water heaters installed in attic spaces or floor ceiling / floor subfloor assemblies where damage may result from a leaking heater, a watertight pan of corrosion resistant materials shall be installed beneath the water heater with a minimum ¾" dia. Drain to an approved location. CPC 508.4.

FUEL GAS

Fuel gas piping must be sized for the demand upon it, per CPC section 1208.4. An inadequate sized pipe system shall be enlarged as required or a separate gas piping of approved capacity shall be installed.

A listed, properly sized flexible supply with a maximum length of 3 feet is allowed. Do not re-use an old flexible supply line. A readily accessible gas shut off valve is required prior to the flexible connection.

COMBUSTION AIR

Tankless water heaters shall be provided with combustion air per the manufacturer's installation instructions

Tankless water heaters located within habitable space will require submittal of the manufacturer's specifications for combustion air supply and venting.

VENTING

Tankless water heaters shall be provided with proper venting per the manufacturer's installation instructions.

CLEARANCES

- Clearances for most water heaters are found on the appliance label.
- Please note the front and top clearance is usually greater than the side and rear.
- Access and working space must be provided.
- The opening must be at least 24" wide and large enough to remove the Tankless water heater.
- Tankless water heaters installed in a garage must be elevated 18" above the floor unless listed as having a sealed combustion chamber.