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## **TANKLESS WATER HEATERS**

This information is intended to provide general guidance on the installation of Tankless Gas Water Heaters in Single and Two-Family Dwellings of R-3 occupancies. Installation shall comply with all of the provisions as required by the current California Plumbing Code (CPC), the California Energy Code (CEC), and the California Mechanical Code (CMC). This sheet summarizes some of the key information there in and is not meant to replace these codes.

The City of Petaluma does not consider a tankless water heater as a direct replacement for a Storage Tank type heater since the equipment is very different. The installed tankless water heater must meet the required minimum energy efficiency standards. Not all tankless units meet those standards. Existing gas storage tank water heaters can be replaced by tankless units provided the equipment is approved by the California Energy Commission and the Energy Factor of the tankless unit is 0.82 or higher as of April 16, 2015. Electric instantaneous heaters must have an Energy Factor of 0.93 or higher.

All new and retrofit tankless water heater permit applications for R-3 (residential) occupancies must contain the following information:

### **Permit Submittal Requirements:**

- **A Completed Residential Permit Application**
- **Supply gas pipe sizing calculations & piping diagram**
- **The Manufacturer, Model number and BTUs required for the unit to be installed.**
- **The Manufacturer's installation instructions or specifications.**
- **Exterior installations must be of a type approved for exterior use and may require approval of the Planning Department.**

We will make every effort to issue your permit as quickly as possible, but review of your submittal may take 1-2 business days.

The Permit, Job Card, Approved Fuel Calcs, and Manufacturer's Spec Sheets must be on site at the time of inspection.

**Gas Line:**

You may not assume that the fuel gas system that already exists will be adequate for a tankless water heater (CPC 507.18). 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 an existing tank water heater in a retrofit application must be verified to have sufficient capacity to supply a new tankless water heater and supply line alterations may be needed. All new gas lines must be pressure tested as prescribed by Code.

**Electric Line:**

Gas fired Instantaneous tankless water heaters approved for residential installation will require a 120 volt electrical connection to operate the fan assisted system and ignite the burner. The outlet must be grounded and be within 6ft of the water heater. Installation of new electrical outlets must be in compliance with the requirements of the current California Electrical Code.

**Combustion Air :**

All water heater installations must comply with current codes for combustion air. Air shall be provided per the manufacturer's installation instructions. Tankless water heaters located within habitable space or enclosed spaces must follow manufacturer's specifications for combustion air supply and venting.

**Venting:**

Tankless water heaters shall vent to exterior per manufacturer's printed instructions. Flue materials and location must also meet the requirements of the CMC/CPC. Type B flues used for standard water heaters typically cannot be used for tankless water heaters.

**Clearances:**

Clearances for most water heaters are found on the appliance label. Note: front and top clearances are usually greater than side & rear.

- Access and a 30 x 30 inches minimum working space must be provided.
- The opening must be at least 24" wide and large enough to remove the water heater.
- Tankless units installed in a garage must be elevated 18" above the floor unless it is listed as having a sealed combustion chamber (CPC 507.13).
- Tankless water heaters located on roofs must have a permanent or foldaway inside stairway or ladder for access (CPC 508.3.1 & 508.3.2)