



**GENERAL NOTES**

1. This information is intended to provide general guidance on the installation of gas water heaters in single family residences. It summarizes information contained in the California Plumbing Code (C.P.C.) and the Building Code, but does not replace it. Manufacturer's installation instructions are an integral part of the installation requirements and shall be followed accordingly. If conditions are encountered that are not covered herein, the codes need to be consulted. Copies of the code can be reviewed in many libraries or at your local building department.
2. Most home improvement stores sell kits to anchor strap water heaters. These kits must be approved by the State of California, State Architect. This is demonstrated by the seal of the State Architect, which looks like a sea-shell with "ACCEPTABLE METHOD" written below. Install these kits per the manufacturer's instructions. Other methods which have been approved by the State Architect may be submitted to the Building Official for approval.

(See the notes on page 2 for additional information.)



**WATER HEATER**

**HELP FOR THE HOMEOWNER  
FOUNTAIN VALLEY BUILDING & SAFETY**

*Darik Doggett, CBO*

2/16/16

Building Official:

Date:

Date: 1/27/11

Sheet 1 of 2

P-1

## GENERAL NOTES (Continued)

3. Manufacturer's labels include instructions for installation and requirements for required clearances from combustibles and other important information, so it is important to review this information prior to installation.
4. Access to water heaters must be provided. The opening to water heater closets must be at least 24" wide and large enough to remove the heater. See the code for additional requirements.
5. Fuel gas piping flex connectors must be approved for the type of installation exterior or interior grade, based on the location.
6. The inlet and outlet water lines must be at least 6" above and 6" away from the draft hood. Provide a full-way valve on the inlet side of the heater.
7. Mixing of dissimilar metals is not permitted, unless dielectric insulators are used in the connections.
8. Never store combustible materials near water heaters or their vents.
9. If the water system is closed an expansion tank at the water heater will be required. Closed systems include backflow devices and check valve systems.

## LOCATION REQUIREMENTS

1. Interior Installation - Water heater must not be installed in a room used for sleeping purposes, in clothes closets, or in any confined space opening into a bedroom or bath. A drain pan at least 2" deep and 2" wider than the unit, must be provided with a drain to the outside or an approved fixture.
2. Exterior Installation - The water heater must be located on a level concrete slab at least 3" above grade and located in an approved enclosure.
3. Garage Installation - The burner for the water heater must be located at least 18" above the floor to preclude the ignition of combustible vapors. The water heater must be protected from vehicular damage.
4. Change of Water Heaters - Water heaters replaced in the same location must be installed per the manufacturer's installation instructions. Water heaters which are relocated must comply with all new code requirements.

## COMBUSTION AIR

1. Fuel burning water heaters must be provided with air to assure proper combustion of fuel and ventilation. The required size of combustion air openings is detailed in the C.P.C. For water heaters 50 gallons or less, a combustion air duct of 25 square inches (6" round) is required. The combustion air duct can take air from the outside of the building or a ventilated attic (min. of 30" in height).
2. Combustion air openings must be placed so that one-half of the required air supply enters the water heater enclosure within 12" of the ceiling and one-half enters within 12" of the floor. The cross section of the duct cannot be less than 3" in the smallest dimension. They shall be at least 10' from the return air inlet of a blower-type furnace.
3. For larger water heaters, multiple fuel burning appliances in a single area, or if different duct sizes are used, review the code for the combustion air requirements.

## VENTING REQUIREMENTS

1. Vents must terminate in accordance with the drawing to the right. The code may be consulted for conditions not shown.
2. Single wall vent connectors must be fastened with sheet metal screws, rivets, etc.
3. Single wall vent connectors must start and end in the same space as the water heater. No portion of the connector can be concealed within the construction of the building.
4. Vent connectors must be the same size as the draft hood outlet on the appliance. They must slope up from the draft hood to the vent at least 1/4" per foot. The total horizontal length of the venting system, including vent and vent connector, must not exceed 75% of the vertical height of the vent.
5. Provide separation to combustible materials as required by labeling requirements of vent pipe selected.
6. When a vent penetrates a ceiling, a timble (also known as a bucket or firestop) shall be installed at the ceiling line.

