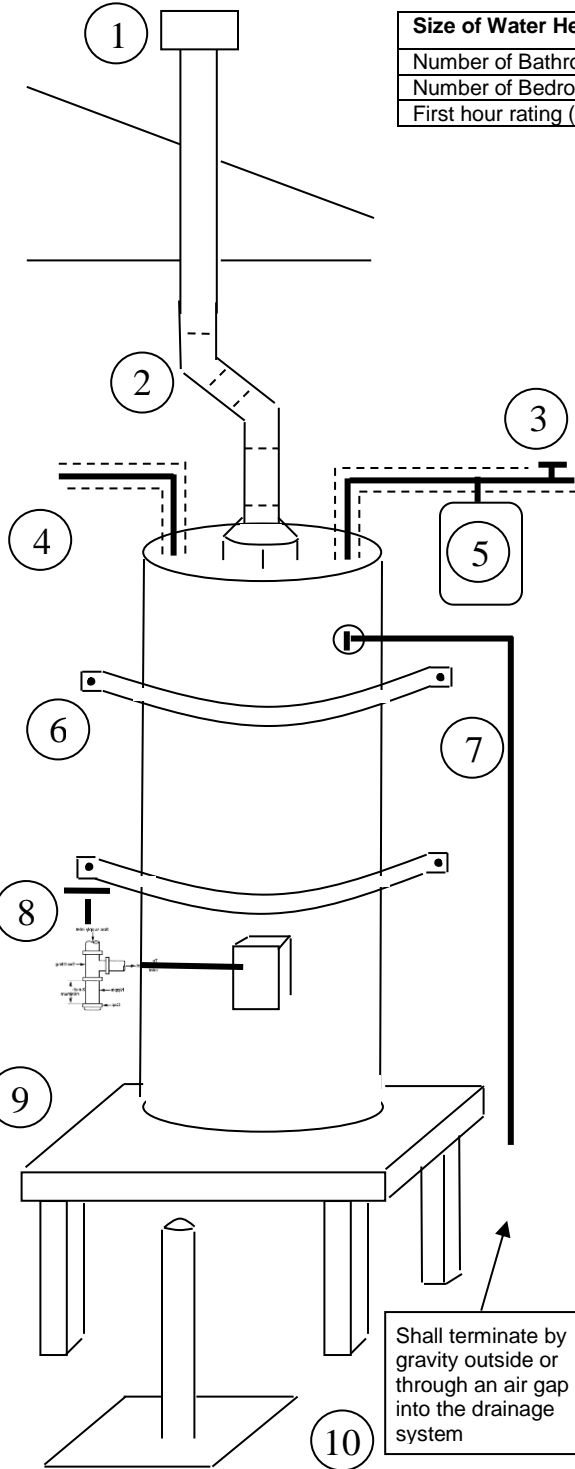




REPLACEMENT OF WATER HEATERS

| Size of Water Heater (CPC table 501.1)(2) | | | | | | | | | | | |
|---|----------|----|----|----------|----|----|----|----------|----|----|----|
| Number of Bathrooms | 1 to 1.5 | | | 2 to 2.5 | | | | 3 to 3.5 | | | |
| Number of Bedrooms | 1 | 2 | 3 | 2 | 3 | 4 | 5 | 3 | 4 | 5 | 6 |
| First hour rating (gallons) | 38 | 49 | 49 | 49 | 62 | 62 | 74 | 62 | 74 | 74 | 74 |



Combustion Air (CPC 506) Where located in a confined space (less than 50 cubic feet of area for each 1000 BTU input rating of water heater) a high and low combustion air opening must be provided within 12 inches of the top and bottom of the enclosure. Min. size 10x10 per opening. Openings shall open to the outside or other unconfined space.

Installation in Bedroom or Bathroom (CPC 504)
 1. Direct vent water heater, or
 2. Water heater installed in a closet with listed self closing device and listed gasketed door assembly. All combustion air taken from outside.

Flammable Vapors (CPC 507.12) Gas appliances shall not be installed where the open use, handling, or Dispensing of flammable liquids occurs. Unless FVIR.

Clearance (CPC 504.3) As per manufacturer's installation instructions.

1 **Venting (CPC 509)** Standard venting of category 1 appliances (non-positive vent pressure and flue temp. that will not allow condensation) is by means of a double wall (type B) vent. Typically clearance to combustibles is 1 inch. Min. 5 feet vertical required between vent collar and vent cap. Vent may have offsets of up to 45 degrees and one offset of up to 60 degrees. Vent must terminate in a listed vent cap.

2 **Vent Connectors (CPC 509.10)** A vent connector shall be used to connect a water heater to a gas vent. Vent connector must be exposed and cannot run into or through concealed construction. Min. 6 inch clearance to combustibles. Min. pitch 1/4 inch per foot. Entire vent connection must be accessible for inspection.

3 **Shutoff Valve (CPC 606.2)** A fullway shutoff valve is required on the cold water supply to the water heater.

4 **Pipe Insulation (CPC 403.3)** Exposed water supply & drain pipe shall be insulated. Insulation must be kept a minimum of 6" from the gas flue. Insulation is not required to penetrate walls or ceilings.

5 **Expansion Tank (CPC 608.3)** An expansion tank must be installed on water systems with a check valve, back flow preventer, or other device preventing dissipation of pressure back into the water main. Typically, expansion tanks are not required for replacement water heater installations but are recommended.

6 **Protection from Seismic Damage (CPC 507.2)** Braced, anchored or strapped within the upper and lower third to resist falling due to earthquake motion. Strapping shall be maintained a min. of 4" above controls.

7 **Temp. & Press. Relief Valve (CPC 608.3, 608.4, 608.5)** A temperature & pressure relief valve is required. Equal to the size of the valve outlet and shall discharge full size to the flood level of the receiving area. Discharge pipe shall discharge by gravity through an air gap system or outside of building. T & P must terminate between 6 and 24 inches of surface and pointing down. Each Pressure relief valve shall be an approved automatic type with drain and set pressure no more than 150 psi.

8 **Gas Connector (CPC 1212.6)** Accessible approved shutoff valve within 6 ft. and a sediment trap downstream of the shutoff valve but prior to the flex connector (CPC 1212.9) are required for connection to the gas appliance.

9 **Installation in a Garage (CPC 507.13)** In a residential garage, gas water heaters must be installed so that burners and ignition devices are 18 inches above the floor, installed in an enclosed space with combustion air from the exterior of the garage, or be listed as flammable vapor ignition resistant. For repair garages see CPC 507.14.2.

10 **Protection from Physical Damage (CPC 507.13.1)** Appliances installed shall be guarded against vehicle damage. Protective barriers, elevated or located out of normal path of vehicles.