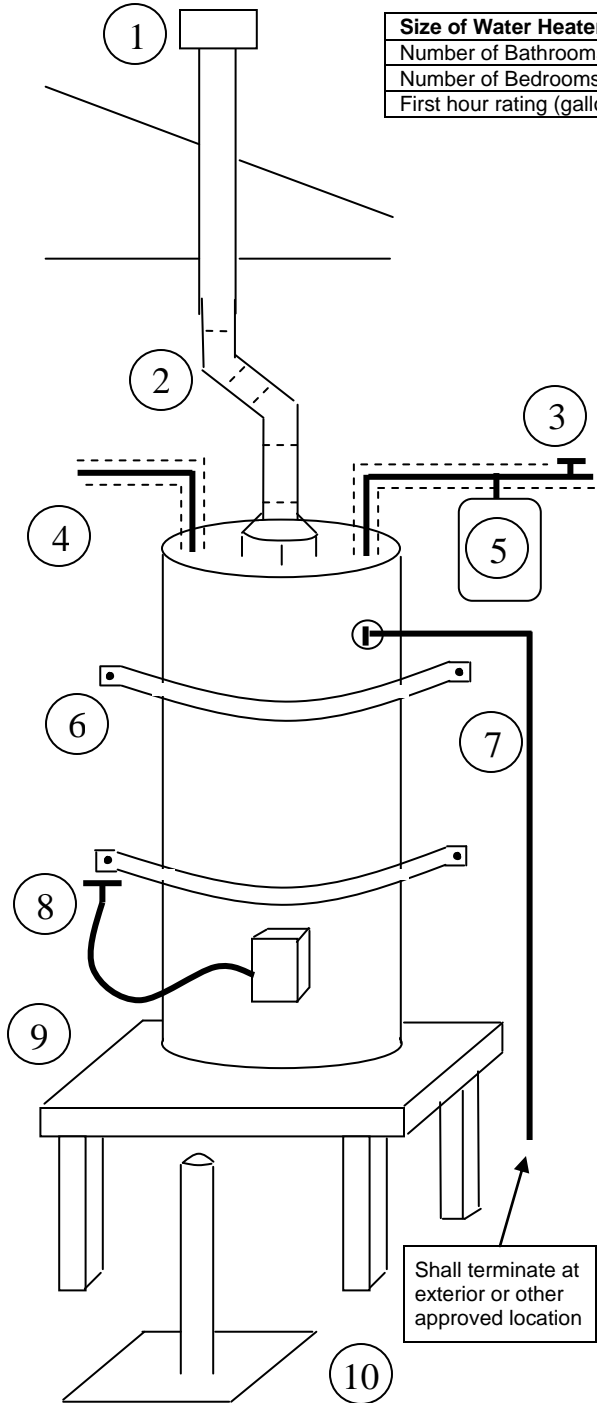




INSTALLATION OF WATER HEATERS



Size of Water Heater (CPC table 5-1)											
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)	42	54	54	54	67	67	80	67	80	80	80

Combustion Air (CPC 507) 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 unconfined space.

Installation in Bedroom or Bathroom (CPC 505)

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 508.13) Gas appliances shall not be installed where the use, handling, or Dispensing of flammable liquids occurs.

Clearance (CPC 505.3) As per manufacturers installation instructions.

1 Venting (CPC 510) 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 one offset of up to 60 degrees. Vent must terminate in a listed vent cap.

2 Vent Connectors (CPC 510.10) Single wall vent connector is allowed to connect a water heater to its 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.

3 Shutoff Valve (CPC 605.2) A shutoff valve is required on the cold water supply to the water heater.

4 Pipe Insulation (CEC 150(j)2) Pipe insulation must be installed on the first 5 feet of piping on both the hot and cold systems. 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 508.2) Listed Seismic restraint strap required at upper and lower third of heater. Maintain 4 inch clearance above water heater controls.

7 Temp. & Press. Relief Valve (CPC 608.3, 608.5) A temperature and Pressure relief valve is required. 3/4 drain line must run with fall to approved location: exterior of building, deep floor sink, floor mounted mop sink. T & P must terminate between 6 and 24 inches of surface. A Watts 210 valve may be used where drain line cannot extend to the exterior. A pressure relief valve must be installed on the system in conjunction with the watts 210 valve.

8 Gas Connector (CPC 1212.5) A listed gas valve connector and a sediment trap downstream of the shutoff valve (CPC 1212.7) are required for connection to the gas appliance.

9 Installation in a Garage (CPC 508.14, 508.15) In a residential garage gas water heater 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 vapor ignition resistant. For repair garages see CPC section 508.15.

10 Protection from Vehicle Damage (CPC 508.17) Protection from a vehicle path is required. Typically this is a 3 inch concrete filled post in 12x12x12 footing.