



City of Vacaville  
Community Development  
Building Division

## Water Heater Checklist

***This is to be used as a general checklist; it is not inclusive of all code requirements and inspection criteria.***

**Per 2016 California Plumbing Code (CPC) and 2016 California Mechanical Code (CMC)**

- Permit required for replacement or repair of water heaters. CPC 101.2
- Cold water supply has full bore ball type shut off valve (CPC 606.2) and pipe unions are within 12" of unit. CPC 609.5
- Approved flex lines are installed in accessible space. CPC 604.5
- The first five feet of hot and cold piping shall be insulated per California Energy Code Section 150(j)2A.
- For commercial the first 8 feet of hot and cold piping shall be insulated per California Energy Code Section 120.3(a)3B.
- Minimum access to water heater in attic is 22"x30". CPC 508.4
- Light fixture and service receptacle required for water heater in attic. CPC 508.4.4
- Water heater installations in bedrooms, bathroom, clothes closet or closets openings into bedrooms or bathrooms. (See Mechanical code for exceptions) CPC 504.1, 504.1.1, & 504.1.2
- Approved safety pan required under unit when leakage would cause structural damage to the building. CPC 507.5
- In garage or carport area unit is to be protected from damage. CPC 507.13.1
- Installation in garage or warehouses, the pilots, burners, heating elements and switches must be at least 18" above floor. CPC 507.13.1
- Double wall type B vent has at least 1" clearance to combustible materials. Table 814.3
- Combustible clearances per appliance nameplate or manufacturer's listing.
- Electric water heaters to have a labeled disconnect in sight and clearly visible from unit. CEC 422.34 A through D
- Overcurrent device and conductors are rated at not less than 125% of the rating found on the nameplate of the unit. CEC 422.10A
- Combustion Air Requirements per CPC 506 and appliance manufacturer.
- Pressure relief valve and temperature relief valve or a combination type valve is required. CMC 1005.1 & CPC 506.2
- TPR valve not directly connected to the drainage system. CPC 801.5
- Pressure temperature relief line terminates outside, 6 to 24 inches from ground and pointing down. Line is to be of approved material, drain at 1/4" per foot with no traps, reductions or threads on end. CPC 505.2 and 608.5
- Seismic strapping required: one in the upper 1/3 and one in the lower 1/3 and minimum 4 inches to controls. CBC 510.6 & CPC 507.2

- If outside must be on concrete pad at least 3" above grade. CPC 507.4
- Indoor installations require a watertight pan to protect building structure.
- If rooftop installation, units shall have inside means of access to the roof through a minimum 22"x24" scuttle or trap door when building is more than 15' in height. Units and/or access closer than 6' to the edge of the roof require guards to 42" in height. Units on the roof shall have a service receptacle (GFCI) located on the roof adjacent to the equipment and switched light at access. CMC 304.3
- Each water heater has own gas shut-off valve. (CPC 1211.0) Maximum approved type length flex connector 6 feet. CPC 1212.0 & 1212.5
- Provide pressure test and isometric/calculations for new and extended gas systems. CPC 1213.2 & 1203.3.2
- Single wall metal vent connectors require 6" minimum clearance to combustibles. (CMC Table 802.7.3.4). Vent connectors are for exposed areas and not for use in attics or crawl spaces. Vent connectors are to rise at least ¼" per foot. Single wall vents to be securely fastened in place with 3 fasteners per connection. CMC 805.2 & 802.10.2.4 Table 8.2
- Termination of type B vent at least 12" above any portion of flat roof, not within 8' of any vertical surface and 2' above any part of building within 10'. CPC Table 509.4 & CMC 802.6.2
- Vacuum relief valve required for water heaters above the appliances they serve. CPC 608.7
- An expansion tank or other approved device shall be installed per CPC 608.2 & 608.3
- Carbon monoxide detector(s) per CBC 420: on each level and in hallways serving bedrooms.
- Smoke detectors per CBC 907 same as carbon monoxide detectors but also inside bedrooms.