



CITY OF FOSTER CITY

Community Development Department

Building Division

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WATER HEATER (TANKLESS) GUIDELINES – 2022 CA Plumbing & Electrical Code

These guidelines cover any Tankless Water Heater (TWH) installation, whether new construction or replacement. Tankless Water Heater installations shall comply with all the provisions as required by the current California Plumbing Code (CPC), California Mechanical Code (CMC), and any applicable City Ordinances or Policies. The manufacturer's installation instruction for the TWH and the listed venting system must be available at the jobsite for **all** inspections. **Provide floor plan showing location of installation. Clarify installation is a like for like replacement or new installation within scope of work. Reference applicable codes. Provide gas line sizing calculations with length, and isometric riser diagram of the gas delivery piping system for the TWH for new installations with floor plan and permit application.**

Tankless Water Heater Location (2022 CPC 504.1):

- TWHs are installed in garages, basements, or on exterior walls of garages or structures. TWHs may be installed in bedroom or bathroom closets ONLY if they are of the direct-vent type or they are in a closet dedicated solely to the TWH, with self-closing gasketed doors and all combustion air from the exterior.
- A TWH may be located in an attic when all requirements for a Code compliant installation are met including required access, clearances to combustibles, lighting with a switch near the attic entry, and an adjacent receptacle. Provide floor plan showing location within attic, attic access location and dimensions. (2022 CBC 1209.3)
- A TWH shall not be installed in locations where damage to the supporting structure would occur from an undetected leak unless a watertight corrosion resistant pan is installed beneath the TWH with a minimum ¾ inch diameter drain line discharging to an approved location. (2022 CPC 507.5)
- If appliance is listed and proposed for exterior installation, verify with Planning for approval for exterior placement.

Tankless Water Heater Venting and Installation (2022 CPC 509.0):

- Most TWHs use positive pressure (forced) vents. Such vents shall comply with the vent manufacturer's installation instructions for Category III and IV appliances. Most are stainless steel due to the slightly acidic content of the condensate. Most do not allow common vent with other appliances. All positive pressure vent pipes shall be sealed airtight at each joint from flue collar to termination. *Type B venting material is not acceptable for positive pressure vents.*
- Listed pressure-only relief valves (PRVs) shall be installed as required by the manufacturer.
- CPVC piping used with any TWH shall be installed with restrictions as required by TWH or CPVC manufacturer, whichever is most restrictive.
- Condensate drains need not comply with the same requirements as for AC condensate and are allowed to discharge onto soil. They should not discharge over hardscaped (concrete) surfaces or walkways.

Tankless Water Heater Electrical (2022 CEC 422.47):

- Gas-fired TWH units usually require a 120-volt receptacle for operation of the thermostatic controls.
- When installed in a garage, the power for these gas-fired units may be provided by an adjacent GFCI-protected receptacle.
- When installed outdoors, the receptacle must be GFCI protected and listed Weather-Resistive (WR) with a weatherproof "bubble cover" or be hard wired with a disconnect switch in sight of the unit.
- Attic or basement installations will require a 120-volt receptacle and switched luminaire at or near the TWH. The switch for the luminaire must be located adjacent to the attic or basement access.
- *All new electrical work requires an electric permit.*

Gas Piping:

- All new and altered gas piping systems must be pressure tested as prescribed by 2022 CPC 1213.0.

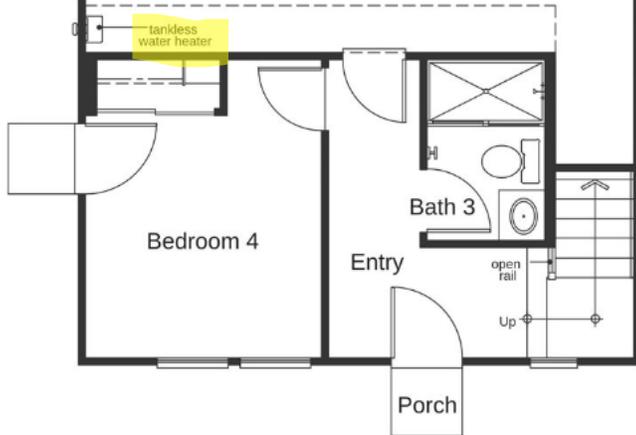
Combustion Air:

- TWH installations shall comply with manufacturer's requirements and current CPC and CMC requirements for combustion and make-up air or be the direct-vent type (2022 CPC 509.2.6). Properly sized combustion air vents are to be located commencing within the upper 12" of an enclosure and commencing within the lower 12" from the bottom of an enclosure.

Scope of work: Remove Existing
30-gallon Water
Heater & Install New Tankless Water
Heater in Garage.
All work done under 2022 CPC, CMC, CEC
Garage

Floor plan example

123 Walkway Drive,
Foster City, CA.



<https://up.codes/viewer/california/ca-plumbing-code-2022/chapter/12/fuel-gas-piping#1215.1.1>

