



TECHNICAL BULLETIN
Planning & Development Services
Building Inspections Division

TOPIC: Water Heater Installations

This Technical Bulletin describes code requirements for water heater new installations and replacements. The requirements are summarized below (see the 2015 IRC and the 2015 IPC for detailed code requirements).

- Water heaters and storage tanks must be located and installed to provide access for maintenance and replacement.
- Gas-fired water heaters cannot be installed in a room used as a storage room or clothes closet.
- The temperature and pressure (T&P) relief valve may discharge to the safety overflow pan serving the water heater, a waste receptor, or the outdoors. The T&P drain line must discharge through an air gap located in the same room as the water heater.
- The T&P drain line must discharge in a manner that does not cause personal injury or damage.
- A safety overflow pan measuring 1-½ inches deep with a ¾ inch drain line to the exterior is required on all water heaters installed in locations where leakage will cause damage. Gas-fired water heaters may only utilize metal drain pan.
- If the T&P line discharges into the pan, the pan drain line cannot be PVC and the pan must be metal for gas-fired and electric water heaters.
- Upper and lower combustion air is required for all gas-fired water heaters.
- Flexible piping is allowed on T&P drain lines if it is not kinked or crimped during installation.
- Elevation of the ignition source in the garage is not required for gas-fired water heaters that are listed as flammable vapor resistant.
- A water shut-off valve is required on the cold-water inlet side of the water heater.

Frequently Asked Questions

- **Question:** My existing water heater is in the center of the house and the existing T&P runs overhead to the outside. What are my options when I replace my water heater?

Answer: Because the T&P line and/or pan drain will not be able to drain by gravity to the outside, the line may terminate in the pan. The incoming cold-water supply must have automatic water shut off device with an alarm installed in the pan.

- **Question:** My existing heater is in the center of the house and has a T&P drain line to the outside. A drain pan must be added, and it is not possible to pipe the pan drain line to the outside. What do I do?
Answer: Cap pan drain outlet and install an alarm in the drain pan.
- **Question:** Can the T&P drain, and the overflow pan drain lines connect to only one pipe?
Answer: No. These two drain lines must be provided with separate pipes and must terminate independently outside the building.
- **Question:** I have an existing water heater that does not have an overflow pan. Do I have to bring it up to code?
Answer: It is not necessary until it is time to replace the water heater. Then, it must comply with current code requirements which may require the installation of a drain pan if the water heater is installed in a location where leakage will cause damage.
- **Question:** I want to replace my existing storage water heater with a tankless water heater. How can this best be accomplished?
Answer: Tankless or instantaneous water heaters require large amounts of energy in short bursts. Therefore, the size of the gas piping or size of the electrical wire to the new tankless or instantaneous water heater must be upgraded. In some cases, the electrical service to the house may not have adequate capacity to add the increase wire size.

If you have specific questions, please contact at (817) 459-6502.