



Water Heater Installations

Revised: May 7, 2018

Note: It is the plumber's responsibility to have the water heater inspected immediately after installation. Failure to receive inspection approval of the water heater immediately after installation could result in the filing of a complaint with the Texas State Board of Plumbing Examiners and the issuance of citations.

Replacing Existing Water Heater

- 1) **Combustion Air** – If the existing water heater did not have combustion air and the structure was built prior to 1980, you will not be required to provide combustion air (if the water heater is gas fired).
If the structure was built after 1980 or there has been a history of water heater combustion issues, combustion air must be provided in the upper twelve inches (12") and the lower twelve inches (12") of the closet (if the water heater is gas fired). Each vent must be a minimum of one-hundred square inches (100).
- 2) **Drain Pan** – Drain pans (1½" deep) will be required for any replaced water heater. If the pan can be drained to the outside of a building, a ¾" drain line must be installed that drains to the outside of the building.
If there is no way to drain the pan to the outside of the building, you must install a boiler drain with hose bibb threads in the pan. This will allow the occupant to connect a water hose and drain any water accumulating in the pan if a leak occurs. In addition to the boiler drain, you must install: 1) a WAGS valve, 2) a Floodstop valve, or 3) other approved device that will stop the flow of water when water is detected in the drain pan.
Drain lines may discharge into a garage if the garage utilizes concrete stem walls that will prevent the water from damaging structural wood members.
- 3) **T&P Line** – the T&P line must discharge outside of the building between six inches (6") and twenty-four inches (24") above the ground with a ninety degree (90°) on the end of the pipe with the outlet facing the ground. Drilling a hole through the floor and discharging the line below the structure must be approved by a building inspector prior to requesting inspection. T&P lines must have positive drainage and fall from the T&P valve to the outlet of the pipe.
- 4) **Flue Vent** – Flue vents must have proper clearance from any combustible material. Double wall (Type B) vents must be used for any vents that extend through an attic. Single wall vents may only be used in spaces that are not concealed and to a point six inches (6") below the ceiling that divides the room (or closet) from the concealed space or attic.
- 5) **Flex Line** – The maximum length of a gas flex line is thirty-six inches (36") and the minimum diameter is one-half inch (½"). An approved gas valve must be installed immediately prior to the flex line.

New Construction or Remodels

- 1) **Combustion Air** – Combustion air must be provided in the upper twelve inches (12") and the lower twelve inches (12") of the closet (if the water heater is gas fired). Each vent must be a minimum of one cubic inch for every 4,000 BTU of the appliance rating. (A 40,000 BTU water heater will require a ten (10) square inch vent in the bottom twelve (12) inches of the closet and a ten (10) square inch vent in the upper twelve (12) inches of the closet.
Drain Pan – Drain pans (1½" deep) are required to be installed. A ¾" drain line must be installed that allows the pan to drain to the outside of the building. As an exception, you may install a boiler drain with hose bibb threads in the pan. This will allow the occupant to connect a water hose and drain any water accumulating in the pan if a leak occurs. In addition to the boiler drain, you must install: 1) a WAGS valve, or 2) a Floodstop valve, or 3) other approved device that will stop the flow of water when water is detected in the drain pan.
- 2) **T&P Line** – see above regulations for water heater replacements.
- 3) **Flue Vent** – see above requirements for water heater replacements.
- 4) **Flex Line** – The maximum length of a gas flex line is thirty-six inches (36") and the minimum diameter is one-half inch (½") – unless the plumber can provide documentation that the flex line used will support the BTU rating of the water heater. An approved gas valve must be installed immediately prior to the flex line.