

WATER HEATERS

Water heaters must supply hot water while safely controlling the energy that it takes to heat the water. Most water heaters have storage tanks, though instantaneous water heaters—known as “on-demand” heaters—are becoming more popular. Water heaters that are part of a boiler system providing space heating are discussed in *Code Check HVAC*.

Water Heaters General

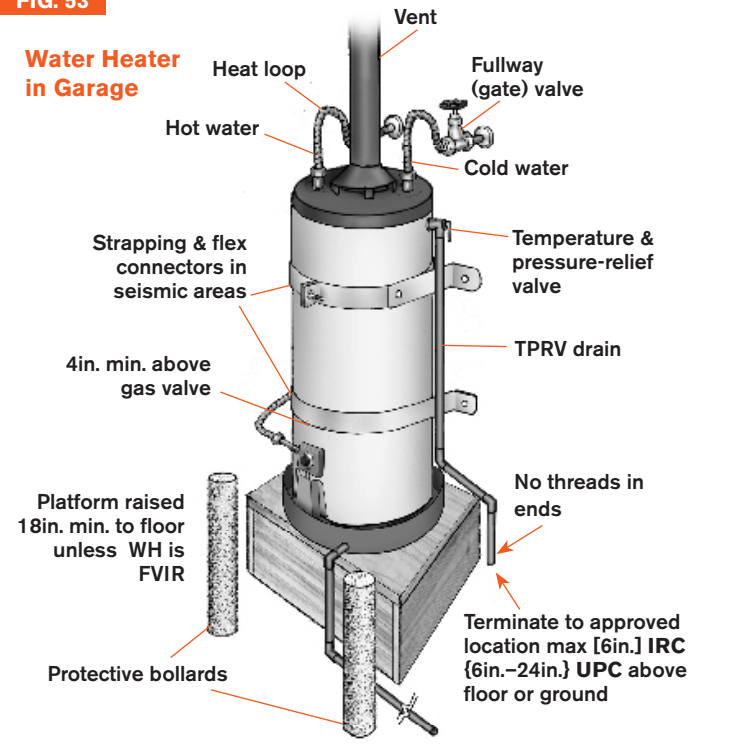
- Valve req'd on cold-water supply at or near WH _____ [2903.9.2] (605.2)
- Valve must be full-bore type **F41,42** _____ [2903.9.2] (605.2)
- WH also used for space heating must be L&L for both [2448.2] {n/a}
- Systems also used for space heating req master mixing valve to temper domestic water to 140°F {120°F} or less _____ [2802.2] {n/a}
- Unions req'd (≤12in from heater) to allow removal _____ [2801.3] (609.5)
- Electric req's in-sight or lockable disconnect_ [1307.5,T4001.5] (506.1)

Special Locations

- Fuel-fired WH prohibited in storage closets _____ [2005.2] {n/a}
- Not in BRs, BAs, or their closets EXC _____ [2005.2] (505.1)
- Direct-vent WH OK w/o enclosure, OR _____ [2801.4X1] (505.1)
- WH OK in dedicated enclosure w/ solid, weatherstripped, self-close door & all combustion air from ext _____ [2801.4X2] (505.1)³³
- Ignition source min elevation 18in above garage floor **F53** _____ [2801.6] (508.14)
- Ignition source elevation req'd if in room open to garage [1307.3] (508.14)
- Elevation not req'd for FVIR WHs **F59** _____ [2408.2X] (508.14)
- Min 18in above floor in area where flammables stored (basements) _____ [2801.6, manu] (508.13)
- On the ground—3in pedestal (concrete, etc) req'd _____ [n/a] (508.3)
- SDC D & C (townhouses) 1 strap req'd in upper 1/3 of tank & 1 in lower 1/3 of tank (4in above controls) **F53** _____ [2801.7]³⁴ (508.2)
- Barrier or elevation req'd in garage or carport **F53** _ [1307.3.1] (508.14)

FIG. 53

Water Heater in Garage



Access & Working Space

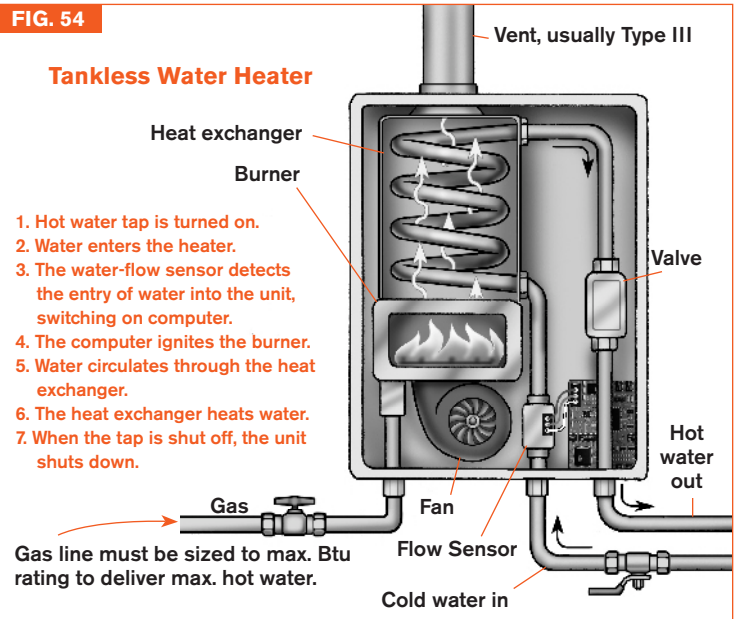
- Remain accessible for service, inspection, & removal _ [2801.3] (505.3.1)
- Appl must fit through attic door _____ [2005.1,1305.1.3] (509.4.1)³⁵
- Attic hatch or door min 22in by 30in _____ [2005.1,1305.1.3] (509.4.1)³⁵
- Attic min 24in passageway, solid floor to WH [2005.1,1305.1.3] (509.4.3)³⁵
- Attic—WH max 20ft from access {if ceiling <6ft} _____ [2005.1,1305.1.3] (509.4.2)³⁵
- Attic req's light & receptacle near WH _ [2005.1,1305.1.3.1] (509.4.5)³⁵
- Light switch req'd at entrance to attic eqpmt space _____ [2005.1,1305.1.3.1,3803.4] (509.4.5)³⁵

Water Heater Size

- Must be sufficient for cleaning & cooking **T28** _____ [2801.1] (501.0)

FIG. 54

Tankless Water Heater



Tankless Water Heater

- Type III vent typically req'd **F54** _____ [manu] [manu]
- TPRV/PRV if req'd by manu _____ [manu] [manu]
- Size gas line to max Btu rating **F54** _____ [manu] [manu]

TABLE 28 MINIMUM HOT-WATER CAPACITY {5-1}

# of BAs	# of BRs	1st-hr. Rating ^A (in gals.)
1-1½	1	42
	2	54
	3	54
2-2½	2	54
	3	67
	4	67
3-3½	5	80
	3	67
	4	80
	5	80
	6	80

A. Non-storage & solar water heaters shall be sized to meet the appropriate 1st-hr. rating as shown in the table.