

Provided your friends (Ben & Ruth) at WNC Stoves: 828-683-0023  
6 days a week until 11 PM ET

### Hooking up the Hot Water Heater

With an electric hot water heater, we recommend that you drain the water and unscrew the pop-up valve (it could be on the side or on the top) and replace it with a 'T' fitting (using Teflon or plumbers tape). See the photos on the next page. Screw the pop-up valve back on one side of the T and mount the circulating pump on the other side of the T. Attach the Pex pipe to the pump with a SharkBite 3/4" fitting.

Remove the drain and do the same, putting in a T with the drain screwed back in on one side and the Pex Pipe connector (incoming heated water) on the other.

Some people do it the opposite way, with the pump on the bottom (at the drain) and the heated water returning in the top. It does not matter which way you do it UNLESS you have an older hot water heater that may have a lot of sediment in the bottom which could be picked up by the pump.

### **PREFERABLY use the existing Hot Water Heater Thermostat!**

TURN POWER OFF and then remove existing wires on thermostat and move them out of the way. Connect the power wire to one terminal and use *another* wire on the 2<sup>nd</sup> terminal to power up the pump. Reverse procedure the next year when using your H/W heater again.

OR if you want to add another thermostat:

Remove the lower access plate on the hot water heater OR cut a hole on the exterior shell, if there is not one (as with a gas hot water heater). Mount a surface-mount hot water heater thermostat on the tank with silicone around the outside edge ONLY, to hold it in place - above, below or beside the existing thermostat, at the bottom element.

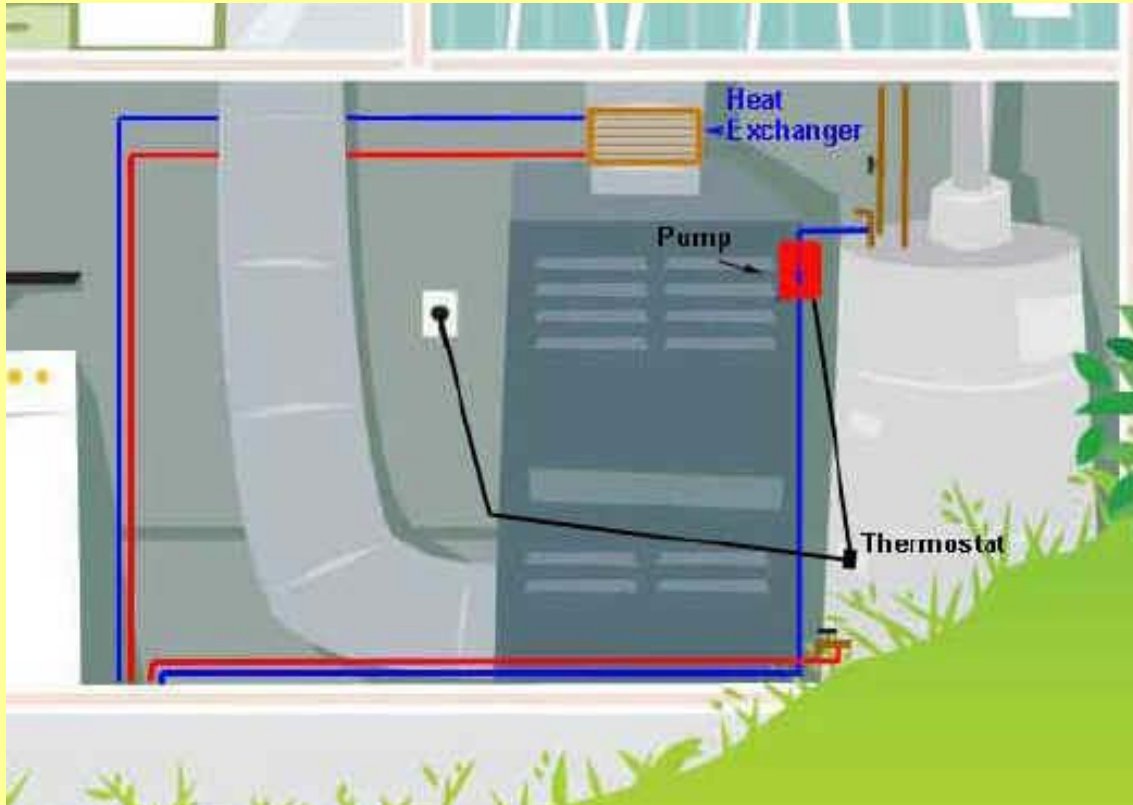
Temporarily hold the thermostat in place with strong tape, first and while the silicone is drying (24 hr). A tube is about \$8 or less at your local hardware store. ALSO smear the bottom of the thermostat with dielectric grease (available at auto parts stores) before installing it. This facilitates better heat transfer to the thermostat.

Wire it so that 110V is on one terminal and the pump on the other, with the thermostat acting just like a light switch. Common and ground wires go to the pump.

Remember that you will have to move the wires back and forth every year. Remember to mark the wires so that you remember where they go, or take a photo...

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You just saved \$200 for a side-arm heat exchanger PLUS you would have to buy a tempering valve or anti-scald valve! You can still use the heater as normal in the summer and it also serves as a backup in the winter, *automatically*. Just turn your thermostat down lower, than the one you just installed OR if you don't want a backup, turn your Hot Water heater circuit breaker off during the winter. Turn the breaker back on in the summer and remember to turn up thermostat for normal use.

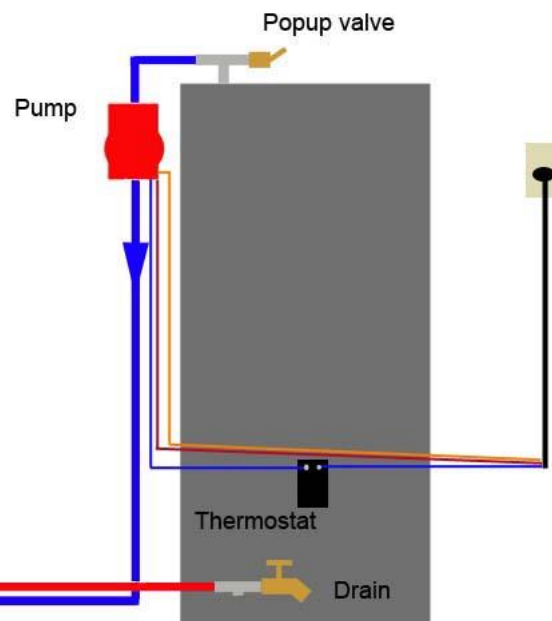
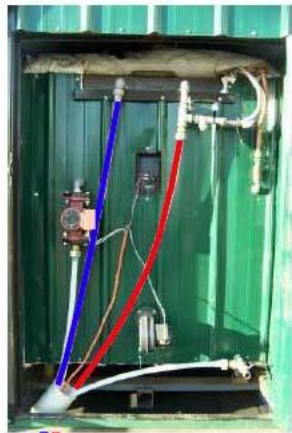


Alternatively, if you didn't order or deleted it or don't want to use the Hot Water coil, you can run the incoming (hot) Pex pipe to a brazed plate heat exchanger for your hot water heater – *before* running to your heat exchanger for your furnace. It is usually about \$175. In this case, you would only need 3 Pex lines running to your house, which may save a little, if the furnace is going to be a long distance away. The downside is that your pump on the furnace would have to run continuously (24/7), instead of cycling on and off as needed. They don't use a lot of electricity (about 100 watts) but it is increased wear and tear. Eliminating the built-in water coil reduces the cost of the furnace by \$100. Our system is a LOT better, does not need a tempering or anti-scald valve because you have accurate temperature control. You don't end up with scalding water as is possible with the external plate HE or side-arm.

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### Gas Hot Water Heater

For a gas heater, there is usually a plate than can be removed to gain access to the tank itself (or cut an access hole in the outer skin). Simply mount the thermostat on the tank and follow the other instructions for water hookup above.



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Customer supplied photographs: *Make sure using a single unprotected wire is safe and to code in your area.*

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Unscrew drain and screw 'T' into its place. Remount drain on one side and attach flange with pump on the other side.

Use TEFLON tape, as shown, on all threaded fittings.

Connect return line from the outdoor boiler to the cold water inlet on the hot water heater, as shown below.

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