

How to Strap Your Water Heater

These instructions are for installing a water heater restraint for a water heater on a straight wall using the conduit method:

1. Mark the water heater 9" down from the top and approximately 4" up from the top of the controls. Locate the wood studs in the wall on both sides of the water heater.
2. Using a stud finder or other appropriate methods, locate the closest stud behind and to one side of the water heater.
3. Transfer the marks on the water heater horizontally to the adjacent wall where the stud identified in step 2 was located.
4. Drill a 3/16" diameter and 3" deep pilot hole at the marked locations for the 1/4" diameter by 3" long lag screw.
5. Measure around the water tank and add 2" to the measurement. Cut two pieces of 3/4" x 24 gauge perforated steel plumbers tape to this length. Place a bolt with the washer through the hole of one end and bend out 90 degrees as close to the edge of the washer as possible. Most plumbers tape comes with 1/4" diameter holes 1" apart with 1/8" diameter holes in between. The tape can be easily broken at the smaller holes by grabbing it with pliers and bending it several times.
6. Place the tape around the tank and place the bolt with the washer through the nearest hole in the end of the tape. Place a washer and nut on the bolt and tighten. The tape should be tight. If the tape is not tight, remove the bolt, place it through the next adjacent 1/4" hole and tighten.
7. Using a straight stick, place the end at the hole in the wall with the side of the stick against the side of the tape around the tank. Measure the distance from where the stick touches the water heater to the hole in the wall. Add 1" to this measurement and cut 1/2" diameter conduit to this length. Repeat this for each piece of conduit.
8. Using a hammer or vise, flatten 1" at each end of the 4 pieces of conduit. Be sure to flatten both ends of each piece of conduit in the same plane.
9. Drill a hole in one end of each conduit approximately 1/2" from each end. Measure 1" from each end and bend up approximately 45 degrees. This angle will have to be corrected slightly as the work progresses. Hold the conduit on the wall with the hole in the conduit over the hole in the wall, and mark the other end at one of the holes in the plumbers tape. Mark the holes in the tape and on the tank and conduit. Take down the conduit and drill a hole at the mark for the bolt through the flattened end of the conduit. Repeat for the conduit on the other side.

If you strap your water heater and fit it with a flexible gas supply line, you will reduce the risk of a fire or explosion from a gas leak after an earthquake. If your water heater does not have a flexible gas supply line, contact a licensed plumber to install one.

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10. Loosen the strap around the tank and place a bolt with the washer from the inside through the holes in the tape at all locations. Tighten the tape around the tank so that the bolts are at the marks on the tank. It may be easier to do one side of the tank at a time because positioning the tape can be difficult. Place the conduit on the bolt protruding from the strap and place a washer and nut on the bolt and tighten. (A 4d finish nail inserted in the slot in the bolt will prevent

the head from turning.) Position the opposite end at the hole in the wall and insert the lag screw with the washer and tighten. Do not drive the lag screw with a hammer.

11. Repeat the above procedure for the rest of the conduits.

NOTE: The 1/4" x 1" bolts referred to in the above are known as 1/4" x 1" round head machine screws with a nut.

This information on strapping water heaters is current, accurate, and in conformance with the state's code requirements. Individual jurisdictions may, however, impose requirements that are different. Check with your local building authority for the specific requirements in your local jurisdiction.

