

Water Heater Strapping Requirements

The State requires that all water heaters in our area to be supported and strapped to prevent movement during an earthquake. There are several methods of doing this task. Each jurisdiction at present is enforcing this in a different manner. This presents problems to the various contractors working in the different areas. Add to this the fact that the Office of the State Architect (OSA) has tested and listed several “approved methods”.

These methods include the use of over-the-counter products that fit over the nipples of the water heater to secure them to the structure. Additionally, there is a strap that is installed 6” above the control unit and this is also secured to the structure; see diagram #1 for this method. Another acceptable method is the use of 2 heavy duty straps going completely around the water heater and secured to the structure at two (2) points within the upper 1/3 of the heater and the other within 1/3 of the bottom of the heater; see the diagram #2 for this method.

The Plumbing Subcommittee by a consensus opinion, has declared that the term “heavy duty” shall be deemed to be a METAL STRAP, NOT LESS THAN 22 GAUGE, NOR LESS THAN 3/4” WIDE. The means of connection to the structure shall be made by the use of a screw not less than 1/4” in size with a minimum penetration of 1 1/2” into a wood stud of the wall. A cut washer shall be used between the head of the screw and the strap to insure a positive support.

Conversations with some of the manufacturers indicate that none would allow a direct connection to their units. Simply stated this means that none of them want any fittings or screws attached or installed into the shell of the heater. The California Plumbing Code, section 508.2, requires the use of two (2) supports, one in the upper 1/3 of the top of the heater and another in the lower 1/3 of the bottom of the heater. This is consistent with the recommendations of the OSA.

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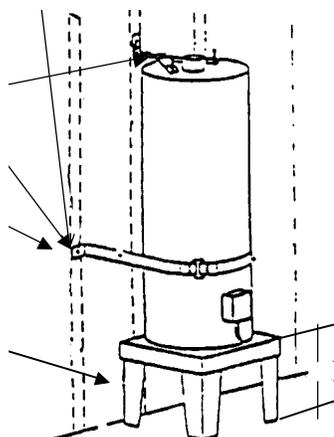
#1

#2

THESE TYPES OF SUPPORTS
 ARE OVER THE COUNTER
 PRODUCTS SOLD AS A
 PACKAGED UNIT.

THIS STRAP IS INSTALLED 6”
 ABOVE THE CONTROL UNIT

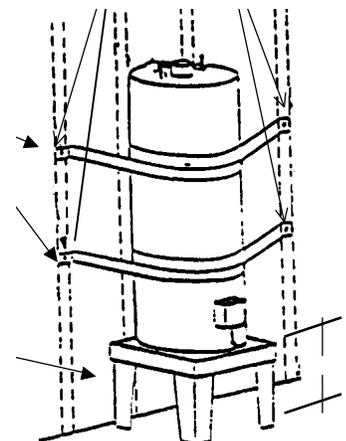
FOR HEATERS INSTALLED IN
 A GARAGE LOCATION THIS
 18” HEIGHT IS REQUIRED. IT
 MAY BE THE USE OF A
 STAND OR BY A RAISED
 FLOOR AREA.



22 GAUGE METAL STRAP
 MATERIAL INSTALLED
 WITHIN THE TOP 1/3 OF THE
 HEATER AND THE BOTTOM
 1/3 OF THE HEATER (GOING
 COMPLETELY AROUND)

MINIMUM 1/4” SCREWS WITH
 MINIMUM 1 1/2” PENETRATION
 ARE ALLOWED

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*****Please contact the Poway Building Division if you have any questions or concerns at (858) 668-4645 or building@poway.org*****