

Method Statement for Installation of Electric Water Heater

The procedures for the installation and fixing of electric water heater with supports and accessories shall be done as per the manufacturer's recommended guidelines and installation instructions and as per the approved water supply drawings/layouts and detailed drawing as follows.

This method statement for installation of electric water heater must be changed as per site conditions and as per applicable regulations etc.

Tool required for installation of Water Heaters

- Drilling / Grinding Machine
- Pipe Cutter
- Hammer
- Spirit Level
- Set of Pipe Wrench
- Chain Blocks
- Shackles
- Mobile Scaffolds
- Ladders

Pre-Installation Checks of Electric Water Heaters

- Ensure all civil works are completed for the area of installation i.e. plastering/waterproofing etc. and clearance is obtained from respective parties to proceed further.
- Check the coordination with other MEP services for piping and heater location, ensure that there is no interference between each service and ensure reasonable access is available to do installation and maintenance works.
- Cover the heaters to be protected from moisture, paint, plaster, corrosion, dust and any physical damage etc.
- Select the installations location as per approved drawing and perform the installation as mentioned below for two types of heater i.e. wall mounted or ceiling hanged.

Installation of Wall Mounted Electric Water Heater

- Upon confirmation of the correct model and size of the water heater, mark the final location with exact bolts holes dimension on the RC wall/block wall with reference to the manufacturer's product catalogue.
- If there is requirement for additional steel structure supports, such as steel channels or angle bar supports, mark and drill the correct bolts holes on the steel support strictly according to the exact dimensions of the heater's base support.

- Use appropriate drilling machine to drill for anchor bolts' insertion on the wall with correct drill bit and fix with the approved anchor bolts accordingly making sure that all bolts and nuts are properly tightened, supports are aligned and secured.
- Raise and install the electric hot water heater to the structure supports with isolation pads to the inserted anchor or stud bolts. Recheck that water heater is properly and securely installed, all bolts and nuts are fastened and brackets and/or supports are rigid.
- Install necessary piping by removing plastic caps from the water heater inlet and outlet connection nipples as per approved water supply drawings. Recheck to ensure that all pipes, valves, fittings and accessories are properly connected and direction of water flow are correct.
- Provide proper pipes supports and/or pipe hangers to the associated piping, ensure pipe supports and hangers are secured. The potential steam water from pressure safety relief valve is recommended to connect to the nearest drain pipe or to any nearby floor drain.
- Make sure to complete electrical work i.e. power supply, grounding, wiring and other connections as required.

Installation of Ceiling Hanged / Mounted Electric Water Heater

- Mark the final location of heater installation as per the latest approved drawings with exact bolt holes dimensions to the soffit for fixing the threaded rods and hangers.
- Use appropriate drilling machine to drill for push in anchors or stud bolts with the correct drill bit and insert the approved push in anchors or stud bolts accordingly.
- Install threaded rods to the inserted anchor bolts and fix the structural supports/hangers accordingly to the design drawings. Ensure that all nuts are fastened and hangers are secured.
- Install the hot water heater to the hangers/supports with isolation pads, and properly tighten all bolts and nuts to the hangers/supports.
- Install necessary piping by removing plastic caps from the water heater inlet and outlet connection nipples as per approved water supply drawings. Recheck to ensure that all pipes, valves, fittings and accessories are properly connected and direction of water flow are correct.
- Provide proper pipes supports and/or pipe hangers to the associated piping, ensure pipe supports and hangers are secured.
- The potential steam water from pressure safety relief valve is recommended to connect to the nearest drain pipe or to any nearby floor drain.
- Make sure to complete electrical work i.e. power supply, grounding, wiring and other connections as required.

- Provide identifications and directions for all piping, heater and accessories.

Alternative Domestic Water Heater Installation Method Statement

- When received at site, heaters shall be checked for quantities, model numbers and physical damages, if any.
- Safety valves shall be checked for size, model and quantity, receiving inspection shall be conducted by the storekeeper, Safety Valves and drain cock shall be segregated as per sizes / models and stored on racks within covered area.
- Upon completion of receiving QC inspection the heaters will be segregated model / size wise and stored accordingly for easy retrieval. Water heaters shall be stored on a flat surface in ventilated and covered area and protected from dust. Inlet, outlet blanks shall not be removed until ready for connection to pipe work.

Preparation Works

- Check and ensure that the shop drawings used are latest and approved for construction. Check coordination with other services prior to the installation. Check the piping supports locations and power supply routing locations in coordination with water heater and piping layout.
- Ensure that water heater and accessories do not obstruct the space around water heater for removal and maintenance. Ensure easy access and sufficient clearance for servicing and maintenance i.e. for replacement of water heaters, thermostat, heating elements.

Water Heater Installation Steps

- Install the fabricated water heater support using approved anchors. Anchors and supports shall be installed as per the orientation and type of water heater i.e. complying the manufacturer recommendations for wall mounted or ceiling mounted heaters. Install and fix the water heater on the support.
- Complete the piping and valve package installation as per approved drawings. Remove the end caps on the inlet, outlet points. Safely install the electrical power connections as per approved drawings.
- Connect the Safety valve. Check and ensure availability of adequate access for removal and maintenance of water heater. Provide grounding wiring as per approved drawings / suppliers instruction. Ensure compliance to the manufacturer's instructions while installing the water heaters. Work Inspection Request WIR shall be raised for consultant's inspection and sign off.