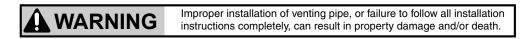
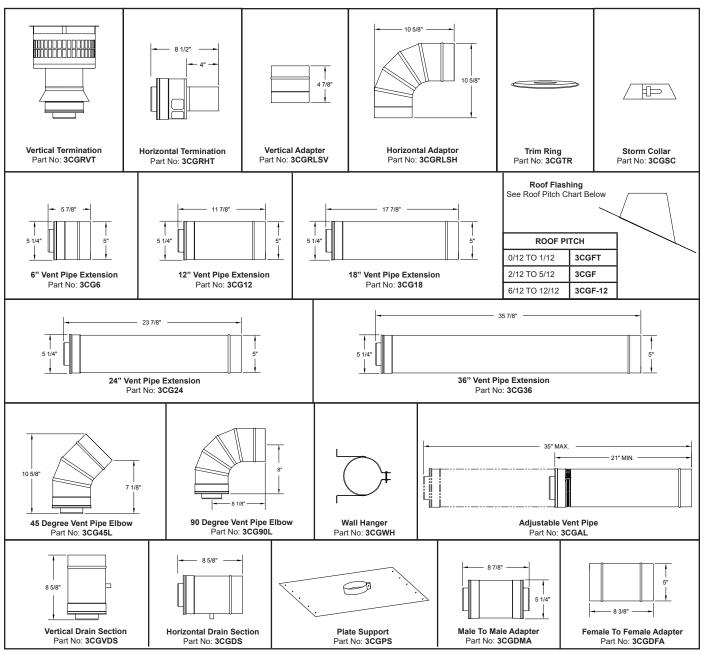
Corr/Guard Direct Vent Water Heater Vent/Air Intake System

Installation and service must be performed by a qualified installer, service agency or the gas supplier. Installation must meet all state and local codes regarding installation and location of vent systems for direct vent appliances. The maximum vent length, as stated in the Water Heater Owner's Manual and these instructions, should never be exceeded. Follow the instructions below and all instructions located in the Water Heater Owner's Manual when installing a vent pipe system.



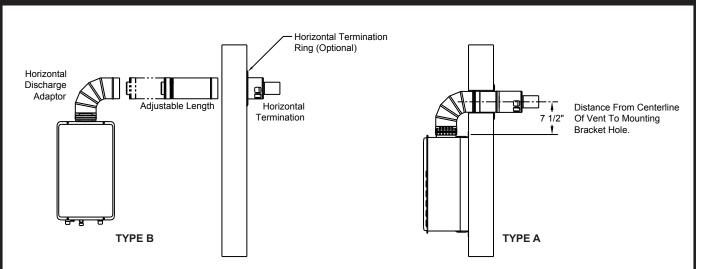
Components needed for direct vent applications:

Refer to the following drawings of vent system components and installations to determine the parts required for your particular vent system application:



NOTE: When installed, each connecting vent pipe joint will have 2-1/4" of overlap.

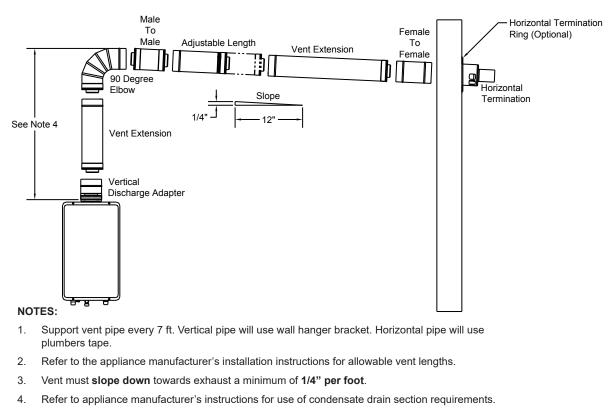
HORIZONTAL VENTING WITH SIDE WALL EXHAUST



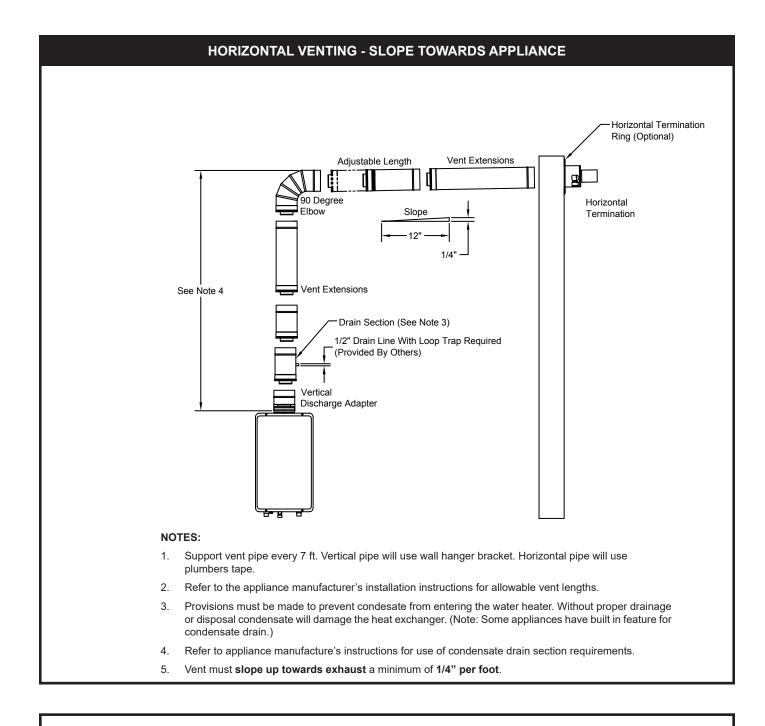
NOTES:

- 1. Support vent pipe every 7 ft. Vertical pipe will use wall hanger bracket. Horizontal pipe will use plumbers tape.
- 2. Refer to the appliance manufacturer's installation instructions for allowable vent lengths.

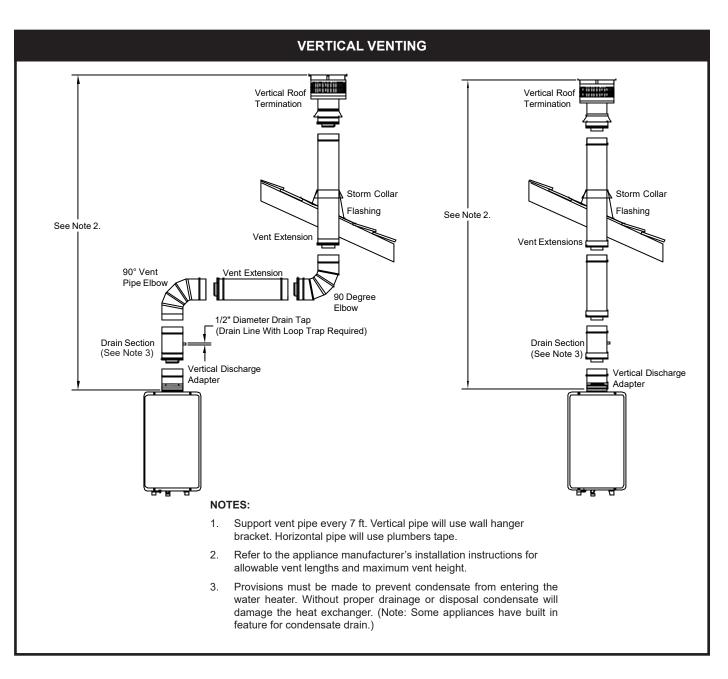
HORIZONTAL VENTING - SLOPE TOWARDS EXHAUST



5. For installations that slope towards exhaust, use male to male and female to female adaptors to provide proper drain direction of condensate.



IMPORTANT NOTE: For Direct Vent applications (venting systems that bring outside combustion air directly to the gas appliance), the outer surface of the direct vent can be in direct contact with combustible construction, unless prohibited per appliance Manufacturer's Installation Instructions. For more information, contact Metal-Fab, Inc. at 1-800-835-2830.



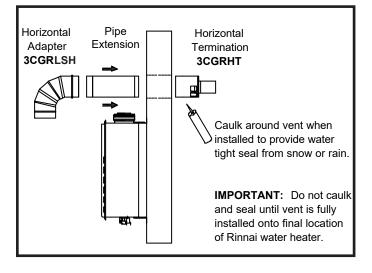
Refer to the Water Heater Owner's Manual for details concerning vent system termination positions and required clearances, allowable vent pipe lengths, and proper dip switch selection for your particular vent pipe system. If you do not understand how to configure your vent pipe system and/or how to set dip switches, please contact Rinnai at 1-800-621-9419 for assistance prior to the installation of direct vent systems.

Your water heater has two adjustable wall mounting support brackets fitted on top and bottom of the appliance. When installing a horizontal vent directly out the wall to the back of the water heater, these brackets should be adjusted so that the water heater is spaced it's maximum distance or 2" away from the wall.

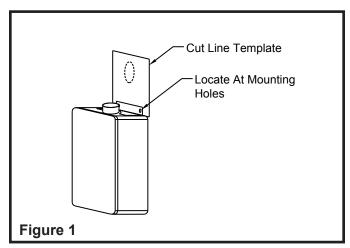
Installation of "Standard Vent Discharge Kit":

Horizontal Vent Installation Type A:

Horizontal Vent Installation When Mounting To And Venting Directly Out An Exterior Wall.



 This step presumes the water heater is installed. Using the template provided (attached at the end of these instructions), locate the preferred area for wall penetration and align with the water heater upper wall mounting bracket holes provided on the template (See Figure 1).



- 2) Tape the template to the wall. Make sure the mounting bracket holes are located exactly over the holes on the upper wall mount bracket of the water heater.
- Using a pencil, or sharp scoring tool, mark the "PILOT HOLE" location by pressing hard enough to penetrate the template leaving a mark on the wall. Removed the template from the wall.

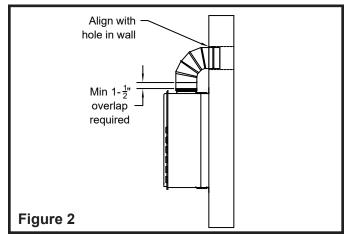
- 4) Remove the water heater from the wall, or completely cover it, using plastic and tape, so that dust or debris will not fall into the vent opening or any of the ventilation slots when cutting the opening through the wall.
- 5) Using a ¼" or smaller drill bit (long enough to drill completely though wall), drill a pilot hole from the inside wall surface completely through the outside wall surface.

IMPORTANT: Be certain the drill bit is kept level and straight during the drilling operation.

- 6) Using scissors, carefully cut the Wall Discharge Terminal Template along the outside edge of the dashed circle labeled "CUT LINE" leaving the hatched "Cut Line Template".
- 7) Align the "PILOT HOLE" on the "Cut Line Template" with the pilot hole drilled in the wall and using a pencil, carefully trace a cut line on the inside wall surface along the edge of the "Cut Line Template". The cut line circle should be 5-5/16" diameter.
- 8) Repeat Step 7 to trace a cut line on the exterior surface of the wall.
- 9) Using a cutting tool suitable for the wall construction (i.e. drill, skill saw, hole saw, etc.), drill or cut the vent termination hole through the wall along the cut lines drawn in Steps 7 and 8.
- 10) Install the Horizontal Adaptor (**3CGRLSH**) directly onto the water heater vent collar.

IMPORTANT: If finished interior wall exists, the water heater will temporarilly need to be lowered 2" to connect the vent onto the outlet collar.

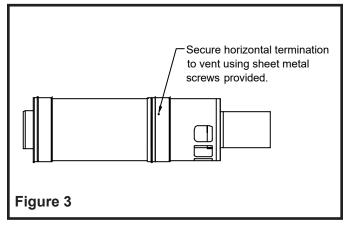
Press vent downward so that at least 1-1/2" overlap occurs and position so that the horizontal end of the vent adaptor is in line with the hole in the wall (See **Figure 2**).



11) Moving to the exterior side of the wall, assemble the Horizontal Termination to a short section of Vent Pipe.

Note: For most wall thicknesses, a 12" Vent Pipe Extension (**3CG12**) is recommended. In the case of a thin wall thickness or wall that does not have an interior surface, a 6" Vent Pipe Extension (**3CG6**) may be applicable.

The assembled parts will appear as shown in **Figure 3**.

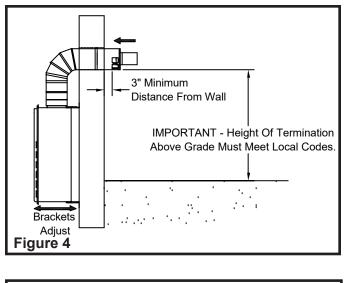


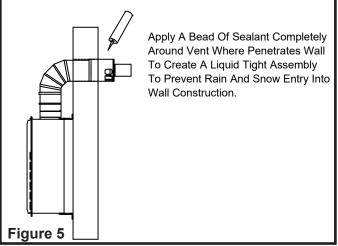
- 12) If the water heater is not securely fastened to the wall, do so now. The water heater should be installed in its final location before proceeding with the next steps to install the vent.
- 13) Assemble the vent pipe section from **Figure 3** into the hole cut in the wall and connect the vent pipe to the Horizontal Adaptor as shown in **Figure 4**.

Note 1: It is recommended to have someone inside the building holding the Horizontal Adaptor steady to counter the force applied in order to join the vent sections.

Note 2: If the installation will be conducted by one person, the installer can opt to assemble all the vent components, insert through the wall opening (from the interior side) and then connect the Horizontal Adaptor onto the water heater outlet collar.

- 14) The Horizontal Termination must be rotated so that the openings are located on the bottom side of the vent (See **Figure 4**). The distance from the openings must be no less than 3" from the exterior surface of the wall.
- 15) Using a general purpose silicone sealant approved for outdoor use, apply an adequate bead of sealant around the vent and exterior of the home (See **Figure 5**). Failure to properly seal this wall penetration will result in long term damage due to weather conditions.





When using the horizontal termination on some types of construction, such as masonry block or stucco, you may want to use the optional horizontal termination ring (part number 3CGTR) to improve the aesthetics of the finished installation. The termination ring can be installed on the exterior of the wall, the interior of the wall, or both.

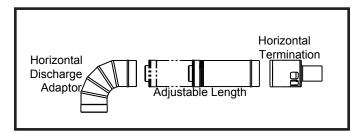
To Install the 3CGTR: Put a bead of sealant around the inside (bottom) of the termination ring. Slide the termination ring down the vent pipe until it contacts the wall, and press on it with enough force to ensure a water tight seal between the termination ring and the wall.

For use on the inside of the structure slip the termination ring on before the termination is installed. For use of the outside of the structure, slip the termination ring on after the horizontal termination has been installed.

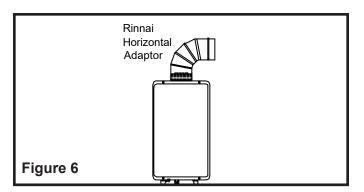
16) Installation is complete. Refer to tankless water heater instructions for initial operation checks to ensure proper operating conditions.

Horizontal Vent Discharge Installation Type B:

Horizontal Vent installation when mounting to interior wall and venting directly out an exterior wall located near the appliance.



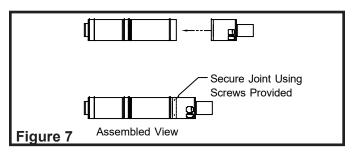
1) Connect Horizontal Adaptor to water heater vent outlet. Make sure that rubber seal is seated properly and that the fitting is fully engaged on the water heater. (See **Figure 6**)



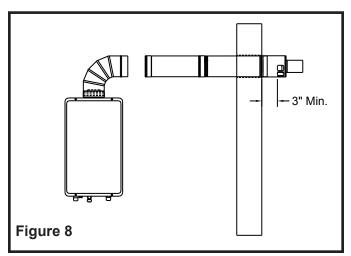
- 2) Turn the Horizontal Adaptor to the right or left of the water heater towards the location where the vent will penetrate the wall. Using a level, run from the top of the Horizontal Adaptor to the location on the outside wall where the vent will penetrate the wall, to mark the top of the vent termination hole. Align the top of the Cut Line on the Wall Discharge Terminal Template (attached at the end of these instructions) with the mark just made. (Tape the template in place temporarily.)
- Using a pencil, or sharp scoring tool, mark the "PILOT HOLE" location by pressing hard enough to penetrate the template leaving a mark on the wall. Remove the template from the wall.
- 4) Using a ¼" or smaller drill bit (long enough to drill completely though wall), drill a pilot hole from the inside wall surface completely through the outside wall surface.

IMPORTANT: Be certain the drill bit is kept level and straight during the drilling operation.

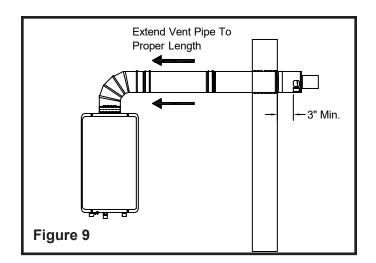
- 5) Using scissors, carefully cut the Wall Discharge Terminal Template along the outside edge of the dashed circle labeled "CUT LINE" leaving the hatched "Cut Line Template".
- 6) Align the "PILOT HOLE" on the "Cut Line Template" with the pilot hole drilled in the wall and using a pencil, carefully trace a cut line on the inside wall surface, along the edge of the "Cut Line Template". The cut line circle should be 5-5/16" diameter.
- 7) Repeat Step 6 to trace a cut line on the exterior surface of the wall.
- 8) Using a cutting tool suitable for the wall construction (i.e. drill, skill saw, hole saw, etc.), drill or cut the vent termination hole through the wall along the cut lines drawn in Steps 6 and 7.
- Assemble the Adjustable Vent Pipe to the Horizontal Termination. Secure termination to vent pipe using sheet metal screws provided. (See Figure 7)



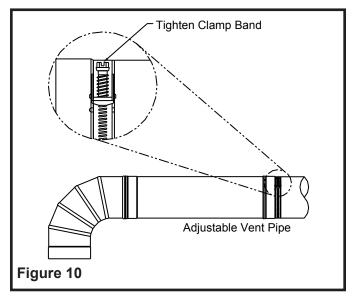
10) Then slide the assembly through the hole in the wall (See **Figure 8**). The Horizontal termination should be located so that the opening of the lower side of the termination is a minimum of 3 inch distance away from the wall of the building structure.



11) The Adjustable Vent Pipe is capable of being stretched or compressed to meet the exact vent length required for proper installation. Simply pull or compress the Adjustable Vent Pipe to the desired length (max 35") and connect to the Horizontal Adaptor. (See **Figure 9**).

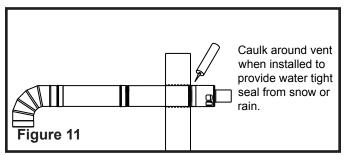


- 12) Now that all the vent pipes are connected, verify that the Adjustable Vent Pipe is at the appropriate length so that the opening of the lower side of the termination is a minimum of 3 inch distance away from the wall of the building structure.
- 13) Using a screw driver or nut driver, firmly tighten the compression band on the Adjustable Vent Pipe to prevent the pipe from changing length during future use. (See **Figure 10**).



14) If the water heater is not securely fastened to the wall, do so now. The water heater should be installed in its final location before proceeding with the next steps to install the vent.

- 15) The vent is now ready for final steps of installation. Move outside to view the exhaust termination. (Note: The opening of the lower side of the termination should be a minimum of 3 inch distance away from the wall of the building structure.)
- 16) Using a general purpose silicone sealant approved for outdoor use, apply an adequate bead of sealant around the vent and exterior of the home. (See Figure 11). Failure to properly seal this wall penetration will result in long term damage due to weather conditions.



17) Installation is complete. Refer to tankless water heater instructions for initial operation checks to insure proper operating conditions.

Non-Standard Installations Using Miscellaneous Vent Components

Horizontal Venting with Extensions and Wall Termination:

When venting out an exterior wall, some distance away from the water heater:

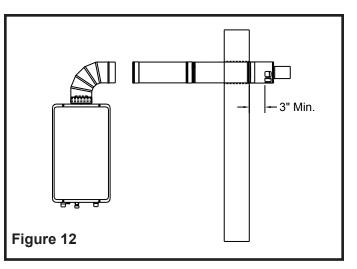
- Determine the location that the Horizontal Termination will be installed. IMPORTANT: Vent must slope ¼" per foot of horizontal vent length. Slope vent down towards wall or provide a Drain Section if sloped towards water heater.
- Using the template provided with this installation manual, center the hole cut pattern of the template onto the center of the location of where the vent will penetrate the wall. Temporarily tape the template to the wall.
- Using a pencil, or sharp scoring tool, mark the "PILOT HOLE" location by pressing hard enough to penetrate the template leaving a mark on the wall. Remove the template from the wall.

4) Using a ¼" or smaller drill bit (long enough to drill completely though wall), drill a pilot hole from the inside wall surface completely through the outside wall surface.

IMPORTANT: Be certain the drill bit is kept level and straight during the drilling operation.

- 5) Using scissors, carefully cut the Wall Discharge Terminal Template along the outside edge of the dashed circle labeled "CUT LINE" leaving the hatched "Cut Line Template".
- 6) Align the "PILOT HOLE" on the "Cut Line Template" with the pilot hole drilled in the wall and using a pencil, carefully trace a cut line on the inside wall surface, along the edge of the "Cut Line Template". The cut line circle should be 5-5/16" in diameter.
- 7) Repeat Step 6 to trace a cut line on the exterior surface of the wall.
- 8) Using a cutting tool suitable for the wall construction (i.e. drill, skill saw, hole saw, etc.), drill or cut the vent termination hole through the wall along the cut lines drawn in Steps 6 and 7.
- 9) Connect the Horizontal or Vertical Adaptor (whichever is appropriate for your installation) to the water heater vent outlet. Make sure that the rubber seal on the inner duct is seated properly and that the fitting is fully engaged on the water heater.
- 10) Continuing from the appliance adaptor, and working toward the Horizontal Termination, connect all of the other venting system components. Make sure that the rubber seal for each joint is seated properly and that each vent joint is fully engaged. **IMPORTANT**: For lateral routing of vent system, the maximum distance between supports must be every 7 feet or less. Use Wall Hangers or plumber's strap to provide support.
- 11) Route vent pipe through the hole cut into the wall in Step 8. For precise location of the Wall Termination, an Adjustable Vent Pipe may be required to establish proper vent pipe length to reduce the amount of vent extruding from the exterior wall.
- 12) Once vent pipe is assembled and penetrating the wall, install the Wall Termination and secure the termination to the vent using the sheet metal screws provided.

13) The opening of the lower side of the termination should be a minimum of 3 inch distance away from the wall of the building structure (See Figure 12). If applicable, the Adjustable Vent Pipe is capable of being stretched or compressed to meet the exact vent length required for proper installation. Simply pull or compress the Adjustable Vent Pipe to the desired length to provide the minimum distance the vent can terminate from the wall.



- 14) If applicable, using a screw driver or nut driver, firmly tighten the compression band on the Adjustable Vent Pipe to prevent the pipe from changing length during future use.
- 15) If the water heater is not securely fastened to the wall, do so now. The water heater should be installed in its final location before proceeding with the next steps to install the vent.
- 16) The vent is now ready for final steps of installation.Move outside to view the exhaust termination.(Note: The opening of the lower side of the termination should be a minimum of 3 inch distance away from the wall of the building structure.)
- 17) Using a general purpose silicone sealant approved for outdoor use, apply an adequate bead of sealant around the vent and exterior of the home. Failure to properly seal this wall penetration will result in long term damage due to weather conditions.

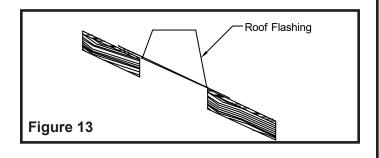
Installation is complete. Refer to tankless water heater instructions for initial operation checks to insure proper operating conditions.

Non-Standard Installations Using Miscellaneous Rinnai Vent Components

Horizontal Venting with Extensions and Wall Termination:

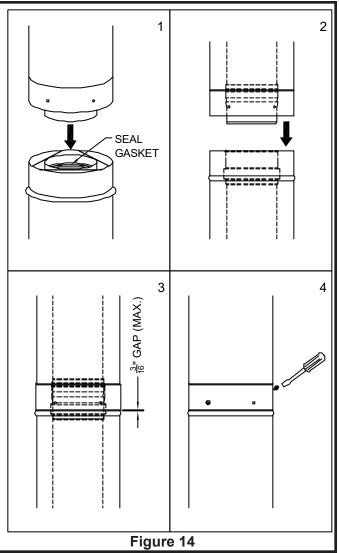
When venting out an exterior wall, some distance away from the water heater:

 Determine the location that the Horizontal Termination will be installed. IMPORTANT: Vent must slope ¼" per foot of horizontal vent length. Slope vent towards wall or provide a Drain Section if sloped towards water heater.

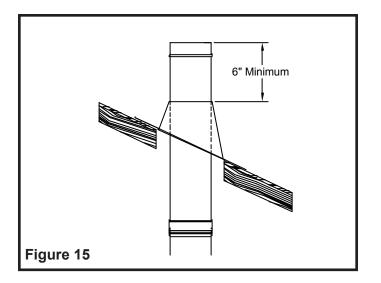


- 2) Using the template provided with this installation manual, center the hole cut pattern of the template onto the center of the location of the where the vent will penetrate the wall. Temporarily tape the template to the wall.
- Using a pencil, or sharp scoring tool, mark the "PILOT HOLE" location by pressing hared enough to penetrate the template leaving a mark on the wall. Remove the template from the wall.
- Using a ¼" or smaller drill bit (long enough to drill completely though wall), drill a pilot hole from the inside wall surface completely through the outside wall surface.

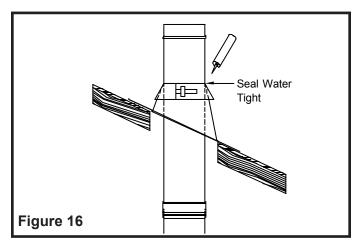
IMPORTANT: Be certain the drill bit is kept level and straight during the drilling operation.



- Using scissors, carefully cut the Wall Discharge Terminal Template along the outside edge of the dashed circle labeled "CUT LINE" leaving the hatched "Cut Line Template".
- 6) Align the "PILOT HOLE" on the "Cut Line Template" with the pilot hole drilled in the wall and using a pencil, carefully trace a cut line on the inside wall surface, along the edge of the "Cut Line Template". The cut line circle should be 5-1/4' in diameter.
- 7) Repeat Step 6 to trace a cut line on the exterior surface of the wall.
- Using a cutting tool suitable for the wall construction (i.e. drill, skill saw, hole saw, etc.), drill or cut the vent termination hole through the wall along the cut lines drawn in Steps 6 and 7.

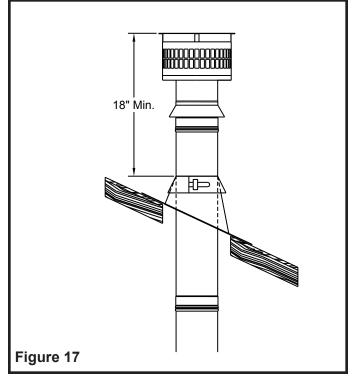


- Connect the Horizontal or Vertical Adaptor (whichever is appropriate for your installation) to the water heater vent outlet. Make sure that the rubber seal on the inner duct is seated properly and that the fitting is fully engaged on the water heater.
- 10) Continuing from the appliance adaptor, and working toward the Horizontal Termination,



connect all of the other venting system components. Make sure that the rubber seal for each joint is seated properly and that each vent joint is fully engaged. **IMPORTANT**: For lateral routing of vent system, the maximum distance between supports must be every 7 feet or less. Use Wall Hangers or plumber's strap to provide support.

11) Route vent pipe through the hole cut into the wall in Step 8. For precise location of the Wall Termination, an Adjustable Vent Pipe may be required to establish proper vent pipe length to reduce the amount of vent extruding from the exterior wall.



Refer to last page for Wall Discharge Terminal Template.



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