

Category II, III and IV Gas Heater Venting Installation Instructions

GENERAL INSTALLATION REQUIREMENTS

- More than one Category II, III or IV appliance may not be connected into the same vent system, unless the appliance manufacturer specifically approved such a system and the appliances are designed for multiple venting. Cat. II, III or IV appliances may not be common vented with Cat. I, natural draft appliances.
- Cat. II, III or IV must not come in contact with plumbing or electrical systems.
- Except for installation in one or two family dwellings, a vent system that extends through any zone above that on which the connected appliance is located, shall be provided with an enclosure having a fire resistance rating equal to or greater than that of the floor or roof assemblies through which it passes.

- Never install Cat. II, III or IV on an appliance that is not listed for use with a Special Gas Vent or Type BH vent.
- Cat. II, III or IV shall not be routed into, through, or within any vent, such as an existing masonry or factory-built chimney, that is connected to another appliance.
- Do not install insulation in any required clearance space around Cat. II, III or IV.
- Maintain rated clearances to combustibles over the entire length of the vent system. Refer to **Table 1** for clearance to combustible requirements.



IMPORTANT

Follow appliance manufacturer's allowances for elbows.

Single Wall Outer Diameter	Outer Single Wall to Thimble Clearance	Thimble to Combustible Clearance	Combustible Wall Inside Opening MINIMUM	Thimble Outer Plate Dimensions	Maximum Vent Gas Temperature
3"	1"	0"	5" x 5"	8" x 8"	480°F
4"	1"	0"	6" x 6"	9" x 9"	480°F
5"	1"	0"	7" x 7"	10" x 10"	480°F

Table 1

VENT SIZE AND LENGTH

Refer to the appliance manufacturer's installation instructions for proper size and vent configuration. Follow any horizontal/vertical length and height limitations, minimum clearances (air space) to combustibles, or specifications for the use of Elbows, Tees, or Drain Tees.

Although our Adjustable Vent Length and Wall Thimble are designed to eliminate cutting, there may be occasions when you must field cut a vent length.

FIELD CUTTING: When necessary, cut the male end only and keep in mind that a minimum of 2" vent length is needed to obtain a seal on the female end. Make a **straight cut** to ensure the gasket is completely covered. **Sand all burrs off to avoid damaging the gasket** during installation.

JOINT CONNECTIONS

The female end of each Cat. II, III or IV component incorporates a sealing gasket and a mechanical locking band. Examine all components prior to installation. Gaskets must be in proper position or flue gases could leak and result in carbon monoxide poisoning.

1. Insert the male end into the female section. Push the units together and turn them until half of the bead on the male end is covered by the flared edge of the female end. (*see Figure 2*). This creates the needed airtight seal for Category II, III or IV appliances. Align the seams on the vent lengths and orient them upward in all horizontal applications.
2. Tighten the locking band with a nut driver until snug plus 1/4 turn.

Before proceeding, recheck all joints and ensure that all male sections extend to the top of the flared female end and all clamps are tightened.

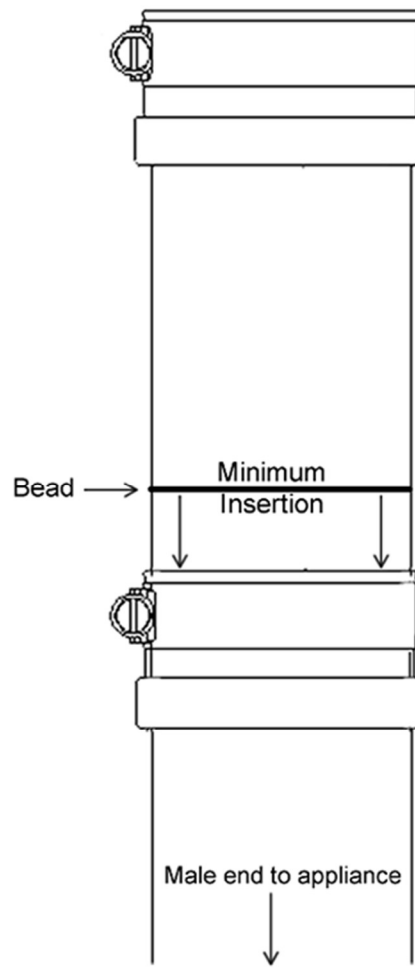


Figure 2

APPLIANCE CONNECTION

Secure appliance adapter to the heater with the included screws. Apply a bead of silicone sealant with a temperature rating of at least 500°F to provide an airtight seal between the adapter and appliance.

NOTE: Instructions above are for appliance adapters with a gasket on one end only, silicone sealant and screws are not needed for adapters with gaskets on both ends.

CONDENSATE DRAINS

If instructions or local regulations call for a condensate drain, use a Cat. II, III or IV drain fitting and approved silicone tubing of appropriate size to connect the vent into a sanitary sewer drain. Always create a siphon loop in the plastic tube. Follow all local and national codes for draining acidic effluent. Do not use copper as a drain as it may corrode.

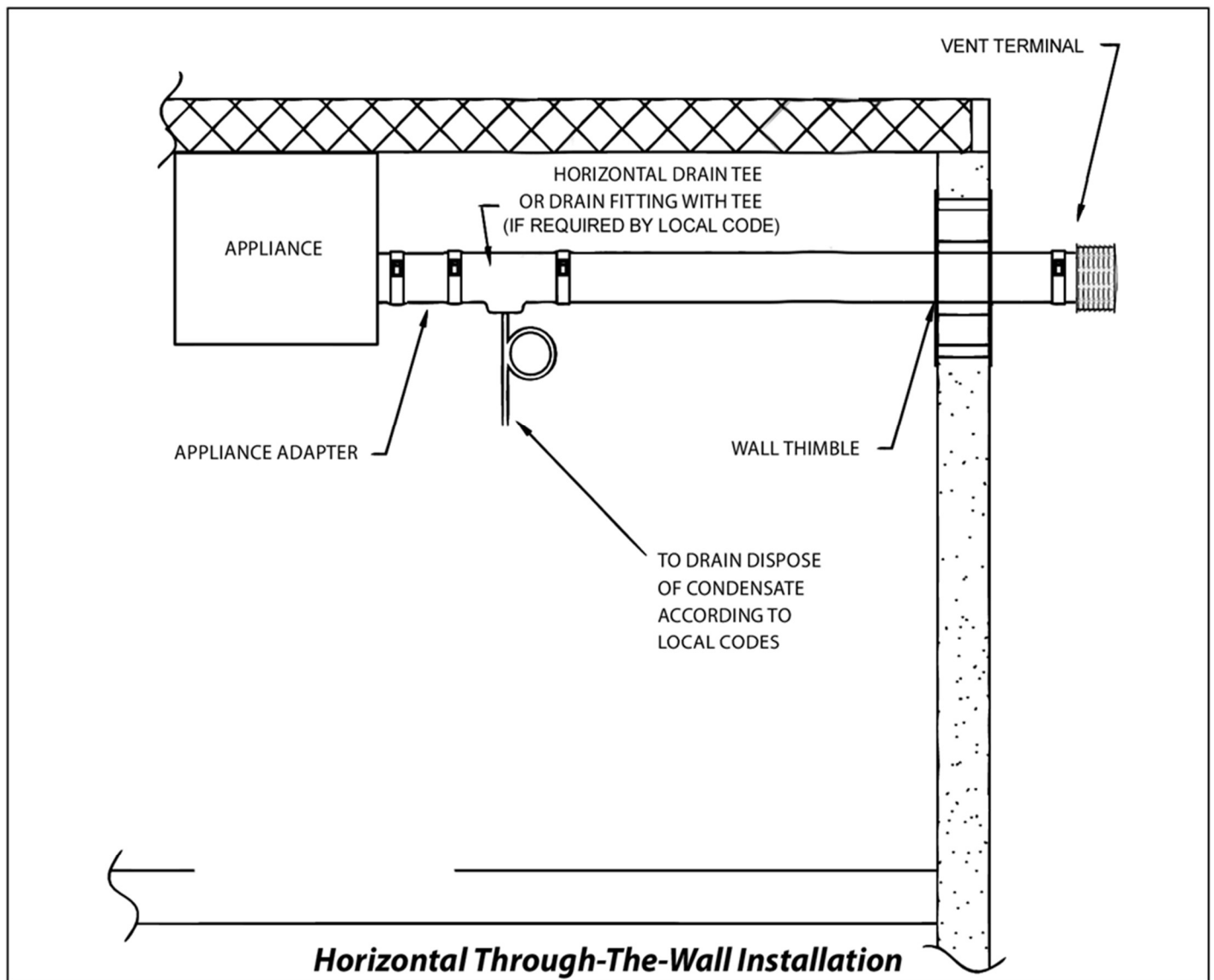
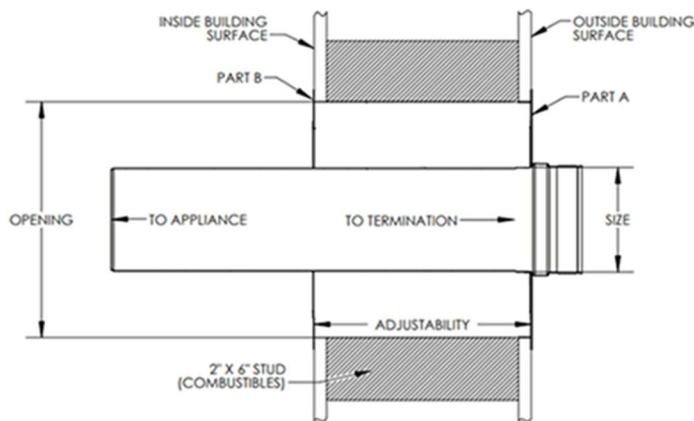


Figure 3

HORIZONTAL, THROUGH THE WALL INSTALLATION

- For a typical Horizontal Through the Wall installation, refer to **Figure 3**. When venting through a sidewall, terminate the system not less than 12" (.3m) above the ground and above the snow line in geographical areas where snow accumulates. The termination area must be kept clear of snow and ice at all times.
- Terminate the system at least 7' (2.1m) above a public walkway or driveway, no less than 6' (1.8m) from the combustion air intake of any appliance or 3' (.9m) from any other building opening, gas utility meter, service regulator or the like. It also shall terminate at least 3' (.9m) above any forced air inlet within 10' (3.1m) and shall terminate at least

- 4' (1.2m) below, 4' horizontally from or 1' (.3m) above any door, window, or gravity air inlet into any building as provided in the National Fuel Gas Code ANSI Z223.1/NFPA 54 or the International Fuel Gas Code. Proper judgement may require greater distances depending on the size of the equipment installed or to allow for snow drifting or falling from overhead roofs or trees. The termination should be far enough away from trees, shrubs or decorative items to prevent damage.
- The total vent length from the appliance flue collar to the outside termination shall not be greater than specified in the appliance manufacturer's instructions.
- Installation shall have a slope of no less



Wall Thimble Installation

Figure 4

than 1/4" (6.4mm) every 12" (305mm) to prevent collection of condensates, formation of ice build up, or blockage at any location within the assembly. Refer to appliance manufacturer's installation instructions for further details regarding the installation of condensate drain fittings and the pitch of the system.

•Use non-combustible hanger straps a minimum of every 6' (1.8m) to support the vent system from ceiling joints or other solid structures. Do not puncture the vent system!

1. Determine the location and install the Wall Thimble so that a continuous minimum slope of 1/4" per foot is maintained in any horizontal portion of the vent system.

Condensate must flow freely and may not be retained in any part of the vent system.

2. Cut the opening for the Wall Thimble to allow the interior thimble sleeve of the outer plate to sit comfortably within the opening. (See **Figure 4**, Wall Thimble Installation diagram)

3. Position Part A into the opening so that the gasketed end of the Wall Thimble is located on the outside of the structure.

4. Apply a bead of silicone between the two surfaces and around the edges before nailing or screwing the plate on Part A to the outside of the structure.

5. From the inside, slide the sleeve of Part B onto the sleeve of Part A until Part B's plate is flush against the inside structure surface. Fasten with screws or nails.



IMPORTANT

When terminating through a non-combustible wall, the wall thimble is optional.

6. Use an approved vent terminal to finish the system's exterior.

7. When the vent system must pass through a combustible interior wall, install a Wall Thimble using the same method as for an exterior wall.

Do not drill through or penetrate any part of the vent system.