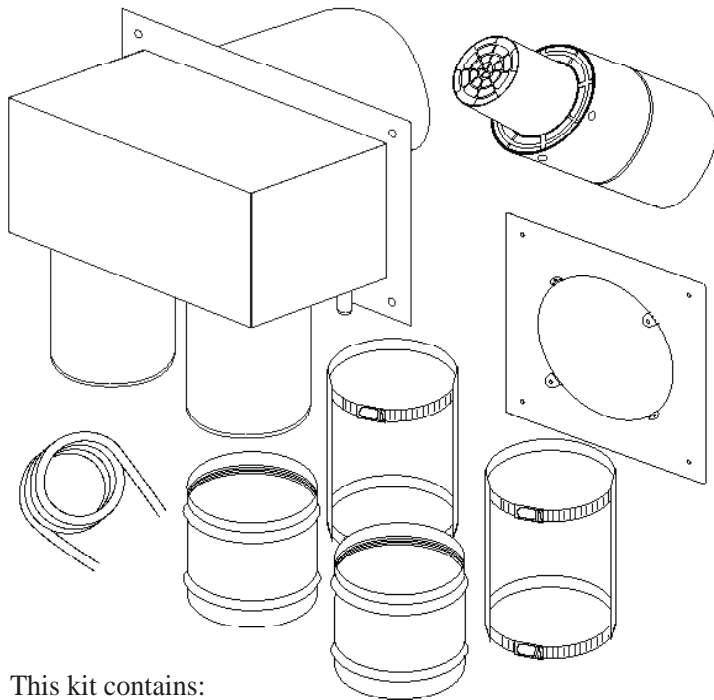


# Tankless Water Heater Direct Vent Sweet Termination™ Installation Instructions



This kit contains:

- 1 - Termination Box Assembly and Vent Assembly ,
- 2 - Vent Adapters, 2 - Clamp Assemblies, 1 - Wall Plate,
- 1 - 10ft Drain tube, 6 - #8 x 1/2" Screws, 8 - # 8 x 1" Screws

The Sweet Termination™ Direct Vent System is designed for use with the following models:

PH-28 R DVS

PH-28 C DVS

It is very important that all persons who are expected to install, operate or adjust this Direct Vent Sweet Termination™ vent system and/or water heater read these instructions along with those instructions provided with the tankless water heater.



Recognize this symbol as an indication of Important Safety Information!


**Refer to the Instruction Manual provided with your tankless water heater for the proper installation procedures and location for the water heater.**

This manual will only cover the installation of the Sweet Termination™ Vent Kit. Refer to the Owners Instruction Manual provided with your Direct Vent Tankless Water Heater for additional installation considerations and directions.

Unpack the vent kit and inspect for any damage and ensure no components of the kit are missing.

To install this kit, you will need the following tools:

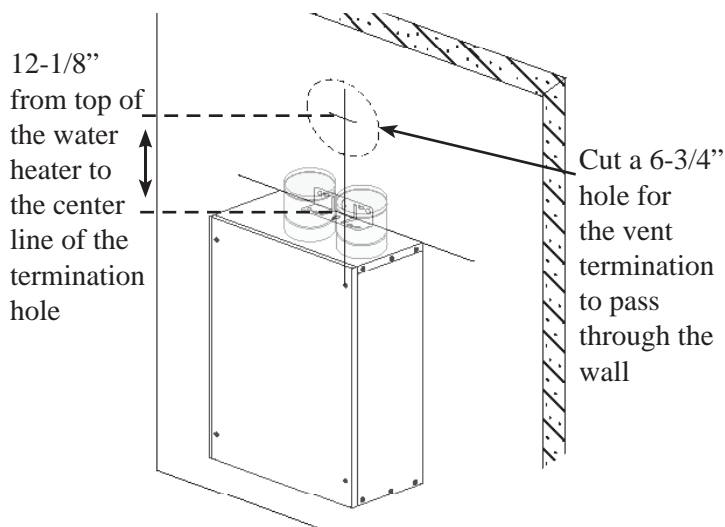
- Level and ruler
- Pencil or chalk
- # 2 Phillips head screwdriver
- 5/16" Nut driver or large flat blade screwdriver
- 1/4" Drill bit at least 12" long (depends upon the thickness of the wall)
- Electric drill
- Reciprocating saw or a 6-3/4" hole saw
- 1 tube of silicone sealant
- Silicone lubricant
- Utility knife
- Leather gloves and safety glasses

 **CAUTION:** This kit contains sheet metal parts, some of which may have very sharp edges. Use leather gloves when handling vent components.

Determine the proper location for installation of the water heater. Refer to Figure 4 and Figure 5 on page 3 and 6 of this manual for installation location information.

Mark the wall where the top of the water heater will be located and draw a level line (see Figure 1). Determine the center of the water heater and mark a plumb line. From the level line, measure up and place a center mark at 12-1/8" from the line. This mark will be the center of vent terminal.

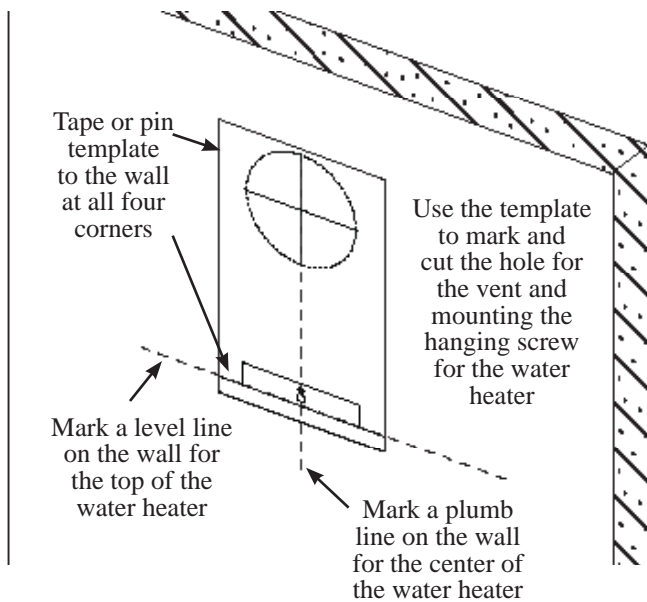
## Marking the Installation Location - Figure 1



**⚠ Caution:** Do not cut the hole through the wall with the water heater installed. Debris may fall into the vent openings located on top of the water heater.

On the inside fold of this manual, page 4 and 5, there is a template to assist in the proper alignment of the vent opening and the top of the water heater. Use this template to mark the opening location and water heater hanging screw (Figure 2). Specific directions are listed on the template.

**Installation Template - Figure 2**



At the center point drill a 1/4" hole from the inside to the outside at a downward angle of 4 degrees dropping down approximately 1/2" for a standard 8" wall. This drop will enable condensate to drain from the flue to the outside and prevent rain and snow from entering from outside. Using a reciprocating saw or hole saw, cut a 6-3/4" hole through the wall for the vent termination.

Use the pilot hole on the outside as the center to cut a 6-3/4" opening for the vent.

With the utility knife cut away and remove any insulation and debris from opening in the wall.

### Preparing the Vent Box for Installation

Before joining the sections or fittings together, use an alcohol pad or cloth to wipe the joint area of both ends of the vent pipe. This will remove any foreign matter.

Apply a liberal amount of Silicone lubricant to the vent pipes on the bottom of the Termination Box Assembly. Carefully slide the two vent adapters onto the vent pipes

of the Termination Box Assembly. Push them all the way against the bottom of the box. (Figure 3)

### Termination Box Installation

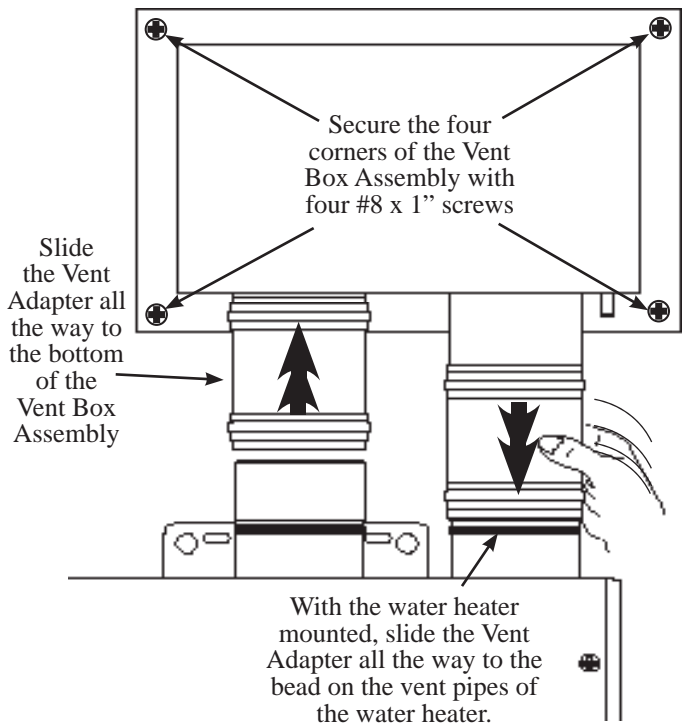
Apply a bead of Silicone sealant around the inside opening in the wall. Lift the vent box up and slide it into the opening. Press the vent box to the wall, level and secure with screws in all four corners of the Termination Box Assembly.

### Hanging the Tankless Water Heater

Adjust the top and bottom wall mount brackets of the water heater out by 3/8" so the vent pipes will line up when the heater is installed.

Following the instructions in the Owner's Instruction Manual for the Tankless Water Heater, hang and mount the water heater on the wall directly under the Termination Box Assembly. There should be a 1/2" to 1" gap between the vent pipes of the box and those of the water heater. (Figure 3)

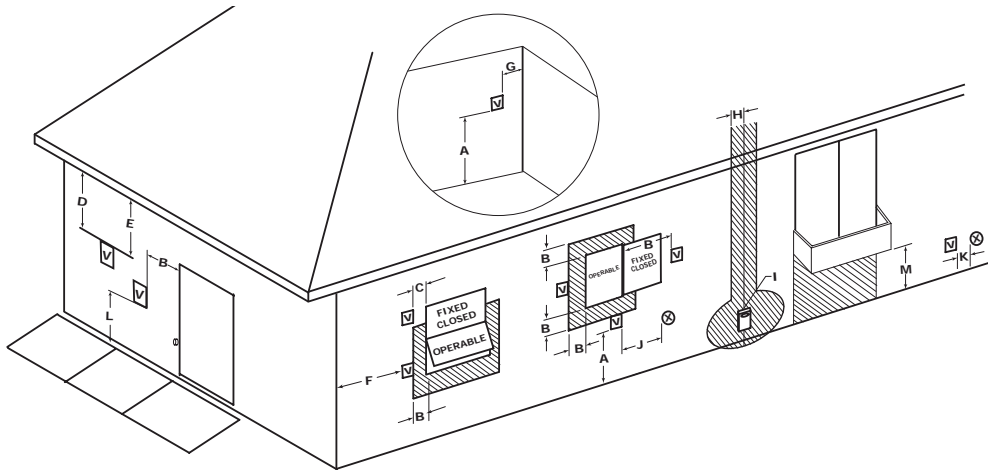
**Marking the Installation Location - Figure 3**



Apply a liberal amount of Silicone lubricant to the vent pipes of the water heater. Carefully pull down on the vent adapters and slide them over the vent connectors of the water heater. Seat them to the rib located on the water heaters vent connector. (Figure 3)

Continued on page 7.

## Horizontal Vent Terminal Location - Figure 4



VENT TERMINAL     
  AIR SUPPLY INLET     
  AREA WHERE TERMINAL IS NOT PERMITTED

### Horizontal Vent Terminal Location

The following information should be used for determining the proper location of the vent terminal for direct vent tankless water heaters.

	Canadian Installations <sup>1</sup>	US Installations <sup>2</sup>
A= Clearance above grade, veranda, porch, deck or balcony.	12 inches (30 cm) above anticipated snow level.	12 inches (30 cm) above anticipated snow level.
B= Clearance to window or door that may be opened.	6 inches (15 cm) for appliances ≤ 10,000 Btuh (3 kW), 12 inches (30 cm) for appliances > 10,000 Btuh (3kW) and ≤ 100,000 Btuh (30kW), 36 inches (91 cm) for appliances > 100,000 Btuh (30kW).	6 inches (15 cm) for appliances ≤ 10,000 Btuh (3 kW), 9 inches (23 cm) for appliances > 10,000 Btuh (3kW) and ≤ 50,000 Btuh (15kW), 12 inches (30 cm) for appliances > 50,000 Btuh (15kW).
C= Clearance to permanently closed window.	*	*
D= Vertical Clearance to ventilated soffit located above the terminal within a horizontal distance of 2 feet (61 cm) from the center line of the terminal.	*	*
E= Clearance to unventilated soffit.	*	*
F= Clearance to outside corner.	*	*
G= Clearance to corner.	*	*
H = Clearance to each side of center line extended meter/regulator assembly. above	3 feet (91 cm) within a height 15 feet (4.57 m) above the meter/regulator assembly.	*
I = Clearance to service regulator coaxial vent outlet.	3 feet (91 cm)	*
J = Clearance to nonmechanical air supply inlet to the combustion air inlet to any building or other appliance.	6 inches (15 cm) for appliances ≤ 10,000 Btuh (3 kW), 12 inches (30 cm) for appliances > 10,000 Btuh (3kW) and ≤ 100,000 Btuh (30kW), 36 inches (91 cm) for appliances > 100,000 Btuh (30kW).	6 inches (15 cm) for appliances ≤ 10,000 Btuh (3 kW), 9 inches (23 cm) for appliances > 10,000 Btuh (3kW) and ≤ 50,000 Btuh (15kW), 12 inches (30 cm) for appliances > 50,000 Btuh (15kW).
K = Clearance to mechanical air supply inlet.	6 feet (1.83 m)	3 feet (91 cm) above if within 10 feet (3 m) horizontally.
L = Clearance above paved sidewalk or paved driveway located on public property.	Not Allowed	Not Allowed
M = Clearance under veranda, porch, deck or balcony.	Not Allowed	Not Allowed

<sup>1</sup> In accordance with current CAN/CGA-B149 Installation Codes.

<sup>2</sup> In accordance with current ANSI Z223.1/ NFPA 54 National Fuel Gas Code.

\* If clearances are not specified, then follow local installation codes and the requirement of the gas supplier.

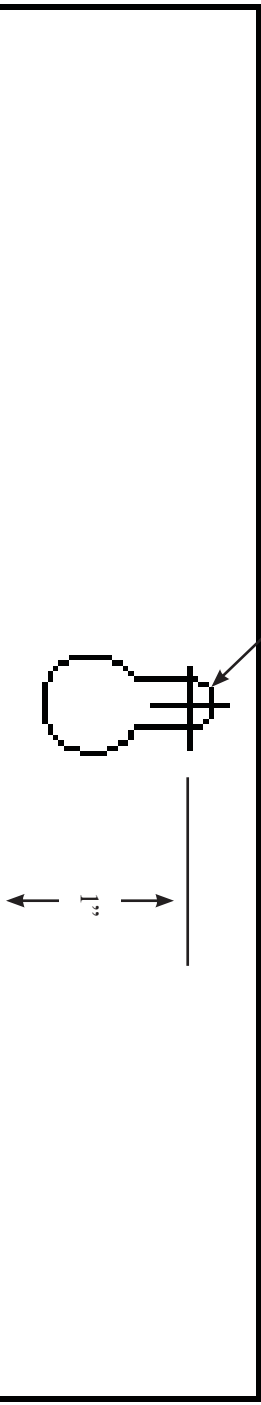
\*\* For condensing appliances: The vent for this appliance shall not terminate over public walkways, near soffit vents, crawl space vents, or other areas where condensate or vapor could create a nuisance, hazard or cause property damage, or where condensate or vapor could cause damage or could be detrimental to the operation of regulators, relief valves or other equipment.

# Vent Location

Use this template to locate  
above the tank

1. Remove this Template from the booklet and tape or pin to the wall where the water heater and vent termination kit will be installed.
2. Install a hanging screw for the water heater (see "A" below) with the head of the screw sticking out 1/4".
3. Drill a pilot hole through the center of the vent opening (see "B" above) to the outside wall. Angle the drill bit down approximately four (4) degrees (about 1/2" drop through a standard 8" wall) and drill through the outside wall. This will be your center mark for the outside hole location.
4. With either a 6-3/4" inch hole saw, small hand saw, or reciprocating saw, cut out the opening for the vent on the inside wall by following the dashed line on this template.
5. Using the pilot hole made earlier on the outside wall as a center point, mark a 6-3/4" circle for the outside location of the vent. With either a 6-3/4" inch hole saw, a small hand saw, or reciprocating saw, cut out the opening for the vent on the outside wall.
6. With the utility knife, cut away and remove any insulation and debris from the opening in the wall.
7. Remove this template and resume with the instructions on page 2.

A Install hanging screw for  
the water heater



Tape or Pin  
Here

Heater Level Line

Top of the Tankless Water Heater

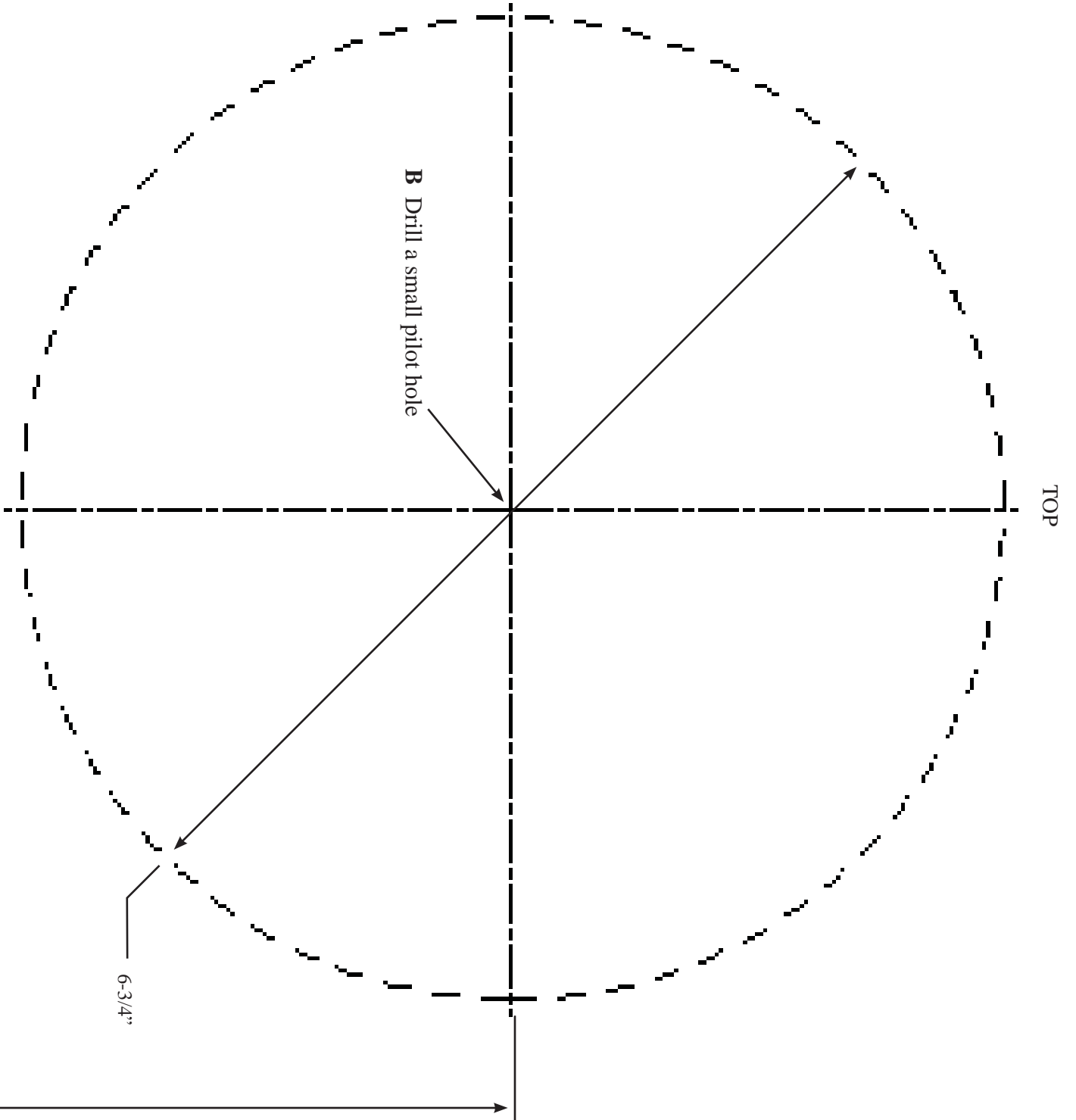
Heater Level Line

12-1/8"

# n Template

the vent termination opening  
less water heater.

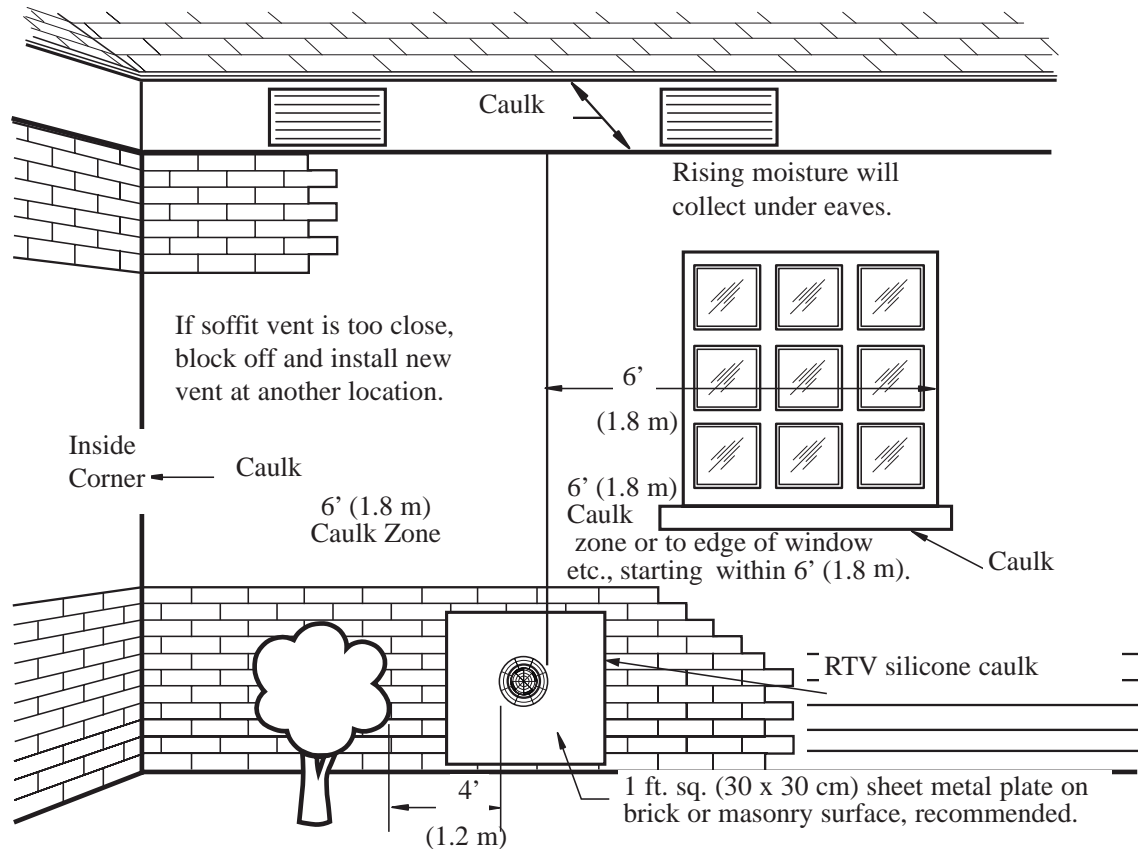
Tape or Pin  
Here



TOP

Tape or Pin  
Here

## Additional Considerations - Figure 5



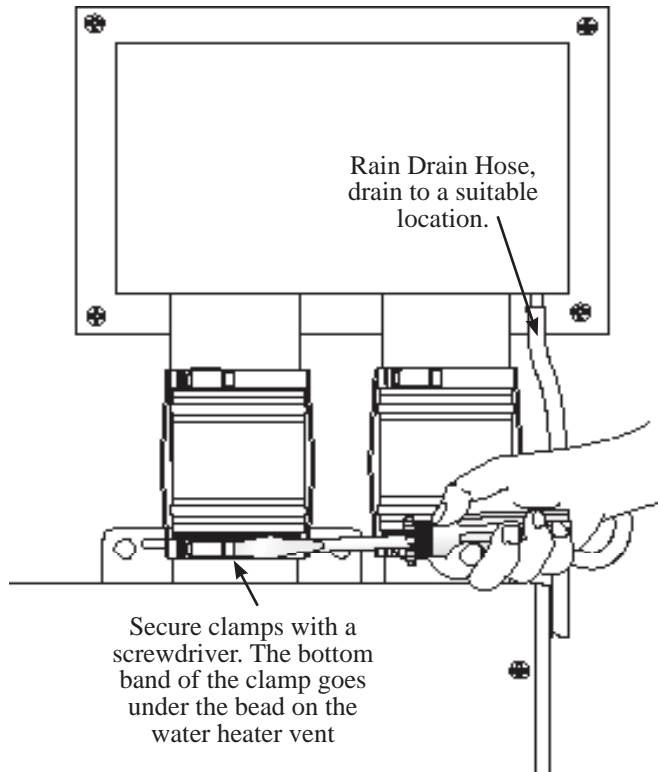
### Additional Considerations

1. Do NOT install vent terminal under any patio or deck.
2. To help prevent moisture from freezing on walls and under eaves, do not locate vent terminal on the side of a building with prevailing winter winds.
3. To help prevent water lines from freezing, do not locate vent terminal on the side of a building with prevailing winter winds.
4. Do NOT locate vent terminal too close to shrubbery, as flue gases may damage them.
5. Caulk all cracks, seams and joints within six (6) feet (1.8 m) of vent terminal.
6. Caulk around thimble face plate for weather-tight seal.
7. All painted surfaces should be primed to lessen the chance of physical damage. Painted surfaces will require maintenance.
8. Do NOT extend exposed vent pipe of indoor water heaters outside of building.
9. Guard vent against accidental contact with people and pets.

Continued from page 2.

Install the two clamp assemblies around the vent adapters, the bottom clamp goes just below the rib on the vent pipe of the water heater. (Figure 6.) Tighten and secure with a 5/16" nut driver or large flat blade screwdriver.

#### Inside Finish - Figure 6



#### Vent Termination Installation (Outside)

Before joining the sections or fittings together, use an alcohol pad or cloth to wipe the joint area of both ends of the vent pipe. This will remove any foreign matter.

Apply a bead of Silicone sealant on the wall around the hole for the vent termination for a weather seal.

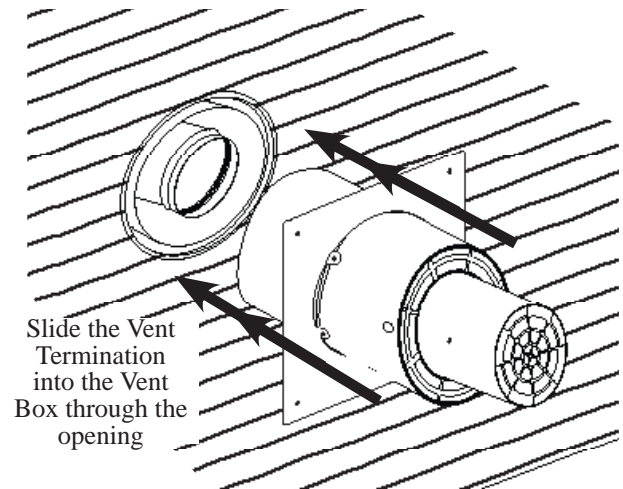
Slide the outside wall flashing on to the vent termination assembly with the four tabs facing the screened end of the vent (Figure 7).

Apply a liberal amount of Silicone lubricant to the 4" center pipe of the termination assembly and apply a bead of Silicone Sealant to the inside edge of the 6" outer pipe. Carefully push the vent termination assembly into the female opening of the vent box with a twisting motion (Figure 7). Push the vent termination into the opening until the groove around the outside of the termination assembly is even with the surface of the wall. Rotate the termination assembly so that the holes on the large outer diameter pipe are facing the ground.

Slide and press the face plate to the wall and secure with screws to the wall. Secure vent termination with the four screws provided to the four tabs of the face plate.

Seal the joint between the face plate and the vent termination assembly with a Silicone sealant.

#### Outside Vent Termination Installation - Figure 7



**CAUTION:** Condensate is known to be acidic; refer to local, state (provincial) or federal codes for proper handling and discharge methods.

**CAUTION:** Condensate must drain away from the water heater and should not be allowed to drain back into any part of the vent system.

#### Draining the Condensate

Provision should be made to collect and dispose of condensate from venting systems. When a water heater is vented using the Sweet Termination™ Vent Kit, the vent pipe must have a DOWNWARD slope towards the termination. This slope is already built into the assembly.

#### Rain Drain

The Sweet Termination™ Vent Kit is equipped with a rain drain for the air intake. Attach the Drain Tube to the drain fitting and plumb the hose to a sanitary sewer drain or another suitable location. The Drain Tube should be fashioned into a "pigtail" trap (Figure 8) and must be filled with water to prevent air infiltration into the building prior to operating the appliance.

Typical Installation of a Direct Vent Tankless Water Heater with the Sweet Termination™ Kit - Figure 8

