Installation of Compact, Aesthetic Concentric Vent/Combustion Air, Horizontal Vent Kit, Option CC14

Applies to: Models UDAS and UDBS, Sizes 30, 45, 60, and 75

Outside view of an Option CC14 Vent Terminal Installation

NOTE: Siding and trim block are not included in the vent kit. See component list below.

Application

This option is designed for horizontal venting of Models UDAS and UDBS Sizes 30, 45, 60, and 75. When vented horizontally, these models are Category III appliances. Option CC14 is a separated-combustion vent terminal/combustion air kit.

When an existing appliance is removed or replaced in a venting system, the venting system may not be properly sized to vent the attached appliances. An improperly sized venting system may result in the formation of condensate, leakage, and/or spillage.

Model UDAS 30, 45, 60, and 75 are certified for both residential and commercial/industrial installations. Utility heaters certified for "residential use" are intended for heating of non-living spaces that are attached to, or part of, a structure that contains space for family living quarters. They are not intended to be the primary source of heat in residential applications or to be used in sleeping quarters.

Model UDBS 30, 45, 60, and 75, are certified only for commercial/industrial installations.

These instructions apply to both residential and commercial/industrial installations.

WARNING: Use this option only on the specified heater models and sizes. Any other use could result in an unsafe condition that could cause damage to the heater, property damage, personal injury and/or death.

Components

Option CC14, Pkg P/N 209343, includes:

P/N	Qty	Description
208994	1	Assembled Vent/Combustion Air Terminal (See **FIGURE 2.**)
209320	1	Concentric Adapter Box (See **FIGURE 4**)
209337	2	Mounting Brackets
195638	6	Sheetmetal Screws #8-18 X 3/8
209338	1	Sealing Gasket
53335	1	Clear Sealant, #732, 3 oz tube

Installation Instructions

IMPORTANT: Venting must comply with any additional requirements in Form I-UD-V-SC (supplied with the heater).

WARNING: Installation should be done by a qualified service agency in accordance with these instructions and in compliance with all codes and requirements of authorities having jurisdiction. Failure to follow instructions could result in death, serious injury, and/or property damage. The qualified agency performing this work assumes responsibility for this installation.

1. Select a location on the outside wall that is in compliance with the vent length, wall thickness, and clearance requirements in **FIGURE 1** and **TABLE 1** and **TABLE 2**.
2. **Prepare the wall**. At the selected location, cut a 4-1/2 inch (114mm) diameter clearance hole in the wall.

Installation Instructions (cont'd)

FIGURE 1 - Side View of Horizontal Vent using Option CC14 Concentric Vent/Combustion Air Terminal

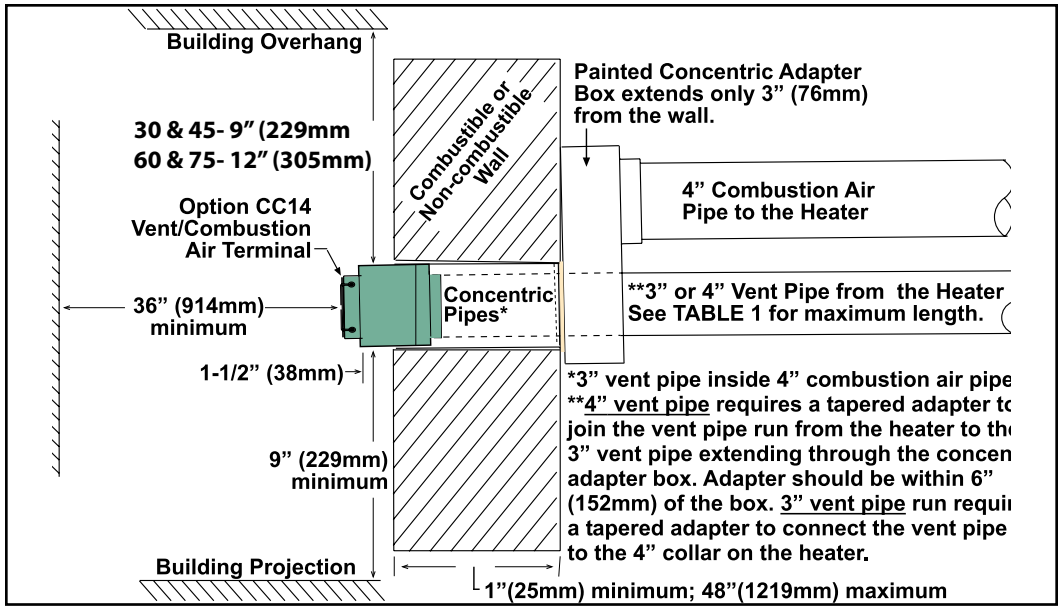


TABLE 1 - Pipe Diameters and Vent Length (All pipes and adapters are field supplied; see NOTES.)

UDAS & UDBS	Pipe Diameter (inches)		Maximum Length		Equivalent Length of 90° Elbow	
	Vent Pipe [A]	Combustion Air Pipe [B]	Ft	M	Ft	M
30 & 45	3 [C]	4	10	3	2	0.6
	4 [D]	4	10	3	2	0.6
60 & 75	3 [C]	4	10	3	3	0.9
	4 [D]	4	15	4.6	3	0.9

TABLE 1 NOTES:

[A] Category III vent pipe is required.

[B] Single-wall pipe with all joints sealed or Category III pipe.

[C] Requires a tapered adapter at the 4" heater outlet.

[D] Requires a tapered adapter to connect the 4" vent pipe from the heater to the 3" inner concentric vent pipe attached to the terminal. Required length of the 3" vent pipe is the sum of the width of the wall plus 5" (127mm).

Vent Pipe Condensation: On units with long vent runs (over 50% of maximum vent length allowed) or installed in low ambient conditions (below 50°F), it is recommended that the vent pipe be fitted with a tee, a drip leg, and a cleanout cap to prevent moisture in the vent pipe from entering the unit. The drip leg should be inspected and cleaned out periodically during the heating season.

CAUTION: Exceeding the specified vent pipe diameter and length may result in condensate forming in the vent pipe.

The horizontal vent run **must be pitched down toward the terminal end** 1/4" per foot for condensate drainage. The slope applies to the entire length of the horizontal vent run. Failure to pitch the vent run properly may damage the heater due to condensate running back into the unit.

TABLE 2 - Horizontal Vent Terminal Clearances

Structure	Minimum Clearances for Vent Terminal Location (all directions unless specified)
Forced air inlet within 10 ft (3.1M)*	3 ft (0.9M) above
Combustion air inlet of another appliance	6 ft (1.8M)
Door, window, or gravity air inlet (any building opening)	4 ft (1.2M) horizontally
	4 ft (1.2M) below
	1 ft (305mm) above
Electric meter, gas meter ** and relief equipment	U.S. - 4 ft (1.2M) horizontally; Canada - 6 ft (1.8M)
Gas regulator **	U.S. - 3 ft (0.9M); Canada - 6 ft (1.8M) horizontally)
Adjoining building or parapet	***3 ft (.9M)
Adjacent public walkways	7 ft (2.1M) above
Grade (ground level)	3 ft (.9M) above****

*Does not apply to the inlet of a direct vent appliance. **Do not terminate the vent directly above a gas meter or service regulator. *** Clearance based on certification testing. **** Consider local snow depth conditions. The vent must be at least 6" (152mm) higher than anticipated snow depth.

3. Assemble the field-supplied concentric pipes, the vent terminal, and the concentric adapter box.

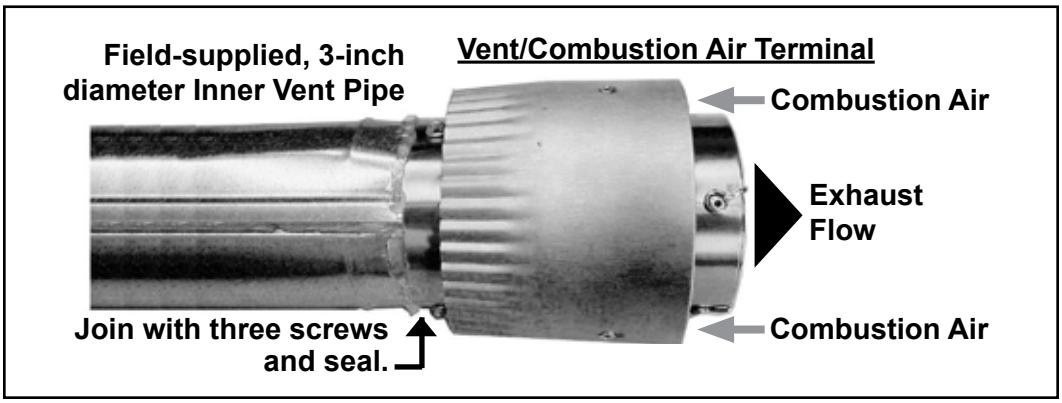
a) Cut to length the field-supplied, 3-inch diameter vent pipe that will be the inner portion of the concentric pipes:

Length must be at least 5" (127mm) plus the thickness of the wall. The inner (vent) pipe must be one piece of continuous pipe.

(**NOTE:** If using 4” vent pipe to the heater, the length of this 3” pipe should be no longer than 5” (127mm) plus the thickness of the wall.)

b) Attach the 3” concentric pipe to the collar on the vent terminal with three sheetmetal screws. Seal the joint with the silicone sealant provided. (See **FIGURE 2.**)

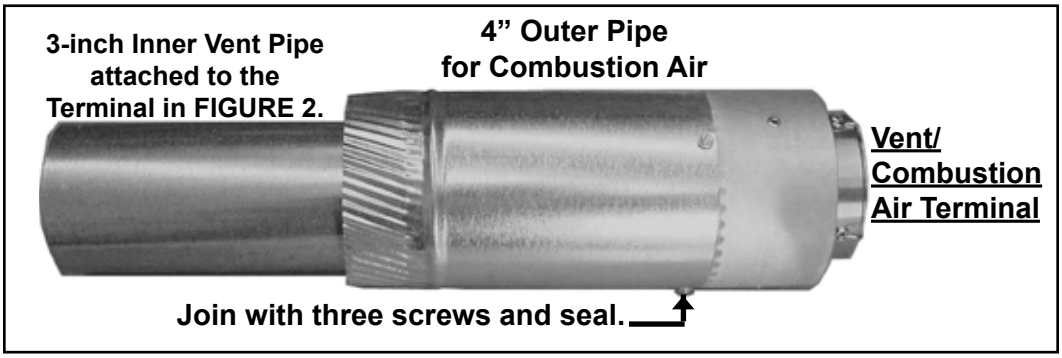
FIGURE 2 - Vent terminal with 3” inner concentric exhaust pipe attached and sealed.



c) Cut to length the field-supplied, 4-inch diameter combustion air pipe that will be the outer portion of the concentric pipes:
Pipe length must be 1-1/2 inches (38mm) less than the wall thickness. This pipe must be one continuous piece.

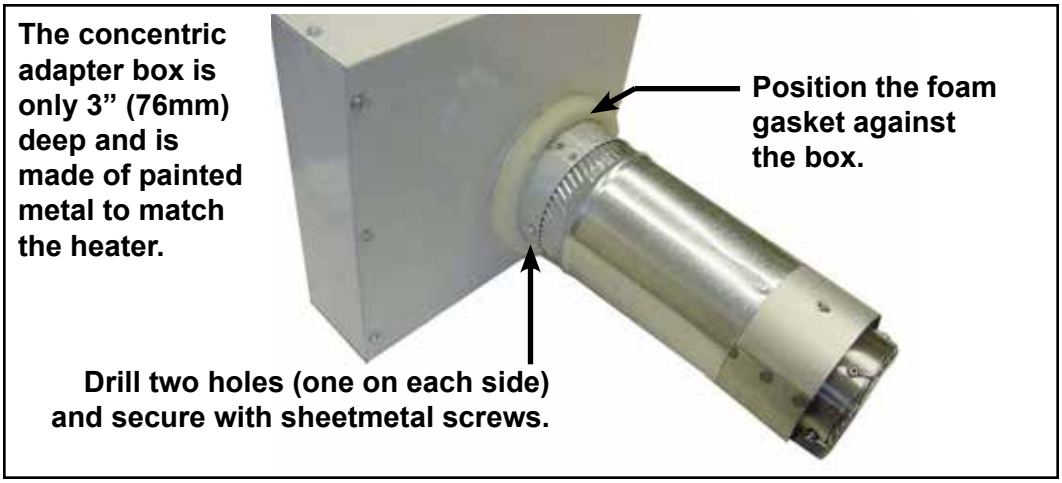
d) Slide the cut piece of 4” pipe over the 3” pipe and onto the crimped portion of the terminal. Drill three holes equally spaced and secure with three sheetmetal screws. Seal the joint with the silicone sealant provided. (See **FIGURE 3**.)

FIGURE 3 - Slide the 4” outer pipe over the inner pipe and attach to the terminal.



e) Attach the assembled vent terminal and concentric pipes to the box. On the side of the box with only a 4” collar, slide the three-inch diameter pipe through the collar into the concentric adapter box, inserting the outer 4-inch diameter pipe into the collar. Drill two holes, one on each side, and secure the pipe to the collar with sheetmetal screws. (See **FIGURE 4**.)

FIGURE 4 - Assembled concentric pipes and vent/ combustion air terminal attached to the concentric adapter.

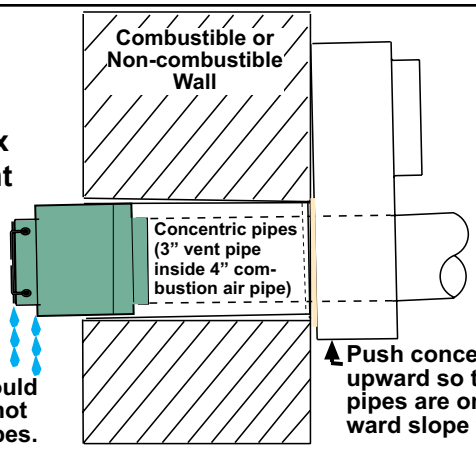


f) Install the foam gasket. Slide the foam gasket over the terminal and the 4-inch pipe and position it against the concentric adapter box. (See **FIGURE 4**.) The gasket will provide a seal between the pipe and wall.

Installation Instructions (cont'd)

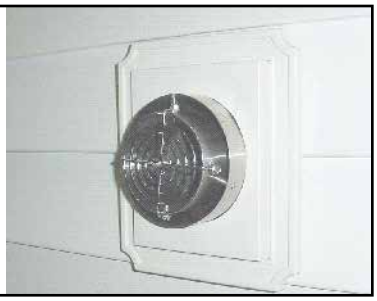
4. **Install the assembled box and vent/ combustion air terminal.**
   Slide the terminal end out through the hole in the wall; 4" pipe should extend 1-1/2" (38mm). Using the brackets furnished with this option or field fabricated brackets, position the concentric adapter box against the wall. When securing the concentric adapter box, be certain to upward bias the box to cause a slight downward slope of the concentric pipes to allow any rain water that may enter the pipes to drain to the outside. (See **FIGURE 5**.) Attach box securely.

FIGURE 5 - Secure the concentric adapter box with a slight slope as illustrated.



5. Complete the installation of the venting system following the requirements shown in **FIGURE 1** and the venting instructions in Form I-UD-V-SC (furnished with the heater).
6. **Seal the outside vent terminal.** Use either field-supplied grout or mortar to seal the gap between the vent terminal and surrounding material or use finishing blocks (available at local builders' supply center) as illustrated in **FIGURES 6A and 6B**.

FIGURE 6A - Example of a Vent Terminal on a Vinyl Sided Installation using a field-supplied vinyl mounting block



On an installation with vinyl siding, the vent terminal may be finished by adding a vinyl mounting block as shown in **FIGURE 6A**.

For an installation with the outer wall made of brick or masonry, a vinyl surface block may be adapted as shown in **FIGURE 6B**.

FIGURE 6B - Example of a Vent Terminal on a Brick Wall using a field-supplied vinyl surface block adapted for the purpose

- Left view above shows the rear side of a standard vinyl surface block.
- Center view above shows the surface block with the tabs removed.
- Right view above shows the surface block with a 4-1/8" (105mm) diameter hole in the center. Just prior to placing the surface block on the wall, put a generous bead of silicone sealant along the top edge. The sealant will serve as waterproofing and to secure the surface block to the wall.
- Bottom right shows the vent terminal with vinyl block finish installed in a brick wall.

7. Installation of the Option CC14 kit is complete. Before operating the heater, verify compliance with all venting requirements.
   Follow the instructions in the heater manual to complete the installation.

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FORM I-UDAS/UDBS-ASC, PN209344R7