INSTALLATION INSTRUCTIONS
VENT TERMINATION KIT
NAHA00301VT AND NAHA00401VT

NOTE: For the application of a termination bracket on 90+, 35 inch (889mm), multipoise, condensing furnace, 2−pipe vent.

NOTE: Read the entire instruction manual before starting the installation.

SAFETY CONSIDERATIONS

Improper installation, adjustment, alteration, service, maintenance, or use can cause explosion, fire, electrical shock, or other conditions which may cause death, personal injury, or property damage. Consult a qualified installer, service agency, or your distributor or branch for information or assistance. The qualified installer or agency must use factory−authorized kits or accessories when modifying this product. Refer to the individual instructions packaged with the kits or accessories when installing.

Follow all safety codes. Wear safety glasses, protective clothing, and work gloves. Have a fire extinguisher available. Read these instructions thoroughly and follow all warnings or cautions included in literature and attached to the unit. Consult local building codes, the current editions of the National Fuel Gas Code (NFGC) NFPA 54/ANSI Z223.1 and the National Electrical Code (NEC) NFPA 70.

In Canada, refer to the current editions of the National Standards of Canada CAN/CSA−B149.1 and .2 Natural Gas and Propane Installation Codes, and Canadian Electrical Code CSA C22.1.

Recognize safety information. This is the safety−alert symbol ⚠. When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury.

Understand the signal words **DANGER**, **WARNING**, and **CAUTION**. These words are used with the safety−alert symbol. **DANGER** identifies the most serious hazards which **will** result in severe personal injury or death. **WARNING** signifies hazards which **could** result in personal injury or death. **CAUTION** is used to identify unsafe practices which **may** result in minor personal injury or product and property damage. **NOTE** and **NOTICE** are used to highlight suggestions which will result in enhanced installation, reliability, or operation.

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⚠ WARNING

CARBON MONOXIDE POISONING HAZARD

Failure to follow the instructions outlined below for each appliance being placed into operation could result in carbon monoxide poisoning or death.

For all venting configurations for this appliance and other gas appliances placed into operation for the structure, provisions for adequate combustion, ventilation, and dilution air must be provided in accordance with:

U.S.A. Installations: Section 9.3 NFPA 54/ANSI Z223.1 1−2009, Air for Combustion and Ventilation and applicable provisions of the local building codes.

Canadian Installations: Part 8 of CAN/CSA−B149.1−10. Venting Systems and Air Supply for Appliances and all authorities having jurisdiction.

NOTICE

RECOMMENDED SUPPORT FOR VENT TERMINATIONS

It is recommended that sidewall vent terminations of over 24 inches (0.6 M) in length or rooftop vent terminations of over 36 inches (1 M) in length be supported by EITHER the factory accessory vent termination kit or field-supplied brackets or supports attached to the structure. A factory accessory vent termination kit may be used for direct vent terminations. Termination kits are available for 2-in. or 3-in. pipe. See **Table 1** for available options.

Table 1	**Vent Termination Kit for Direct Vent (2−Pipe) Systems**	
Direct Vent (2−Pipe) Termination Kit	**Termination System**	**Diam. Of Combustion Air and Vent Pipes in.(mm)**
2−in (51 mm) Termination Bracket Kit	2−Pipe Termination System	1, 1−1/2, 2, or 2−1/2 (25, 38, 51, 64 mm)
3−in (76 mm) Termination Bracket	2−Pipe Termination System	2−1/2, 3 or 4 (64, 76, 102 mm)

NOTICE

RECOMMENDED SUPPORT FOR VENT TERMINATIONS

It is recommended that side−wall vent terminations in excess of 24 inches (0.6 M) in vertical length be supported by EITHER the Direct Vent Termination Kit in **Table 1** or by field-supplied brackets or supports fastened to the structure.

⚠ CAUTION

CUT HAZARD

Failure to follow this caution may result in personal injury.

Sheet metal parts may have sharp edges or burrs. Use care and wear appropriate clothing, safety glasses and gloves when handling parts and servicing furnaces.

⚠ WARNING

ELECTRICAL SHOCK HAZARD

Failure to follow this warning could result in personal injury or death.

Before beginning any installation, be sure the main electrical disconnect switch is in the OFF position and a lockout tag is installed.

INTRODUCTION

This instruction covers installation of the Vent Terminal Kit, Part No. NAHA00301VT and NAHA00401VT, on all upflow and downflow gas−fired condensing furnaces.

NOTE: If these instructions differ from those packaged with the furnace, follow these instructions.

DESCRIPTION AND USAGE

Two terminal kits are the 2−in. kit for 1−1/2−in. and 2−in. diameter pipe systems and the 3−in. kit is for 2−1/2−in., 3−in. and 4−in. diameter pipe systems. (See **Figure 3** through **Figure 7** for the different applications). The combustion−air and vent pipes must terminate outside the structure. This termination kit must be installed as in one of the installations shown in **Figure 3** through **Figure 7**. The roof termination is preferred.

Field−supplied pipe and fittings are required to complete the installation. Elbows used with the terminal bracket must conform to the dimensions shown in **Figure 2**. The combustion−air and vent pipe fittings must conform to American National Standards Institute (ANSI) and American Society for Testing and Materials (ASTM) standards D1785 (schedule−40 PVC), D2665 (PVC−DWV), D2441 (SDR−21 and SDR−26 PVC), D2661 (ABS−DWV), or F628 (schedule−40 ABS). Pipe cement and primer must conform to ASTM standards D2564 (PVC) or D2235 (ABS).

Canada

Special venting requirements for installations in Canada: Installations in Canada must conform to the requirements of CAN/CSA B149 code. Vent systems **must** be composed of pipe, fittings, cements, and primers certified to ULC S636.

Follow all clearances for vent termination installation in furnace installation instructions.

Figure 1 **Vent Terminal Bracket**

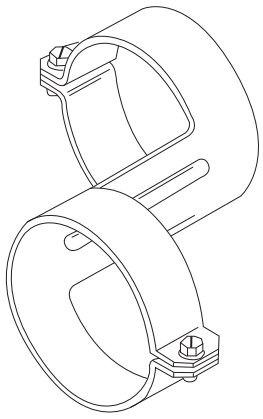

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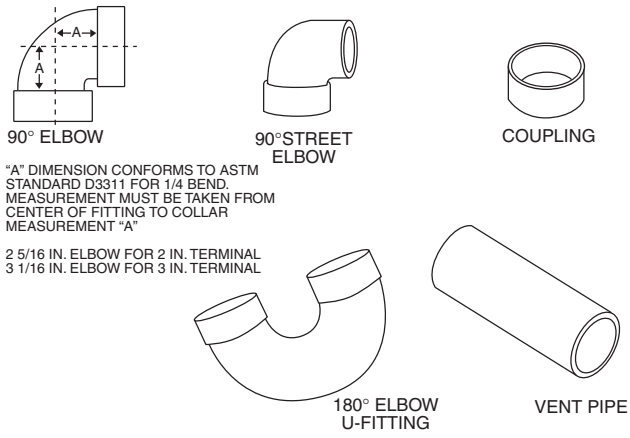
Figure 2 **Field Supplied Pipe and Fittings**



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NOTE: Depending on termination installation not all fittings will be required.

NOTE: 90° elbows may be used to construct a 180° U−FItting

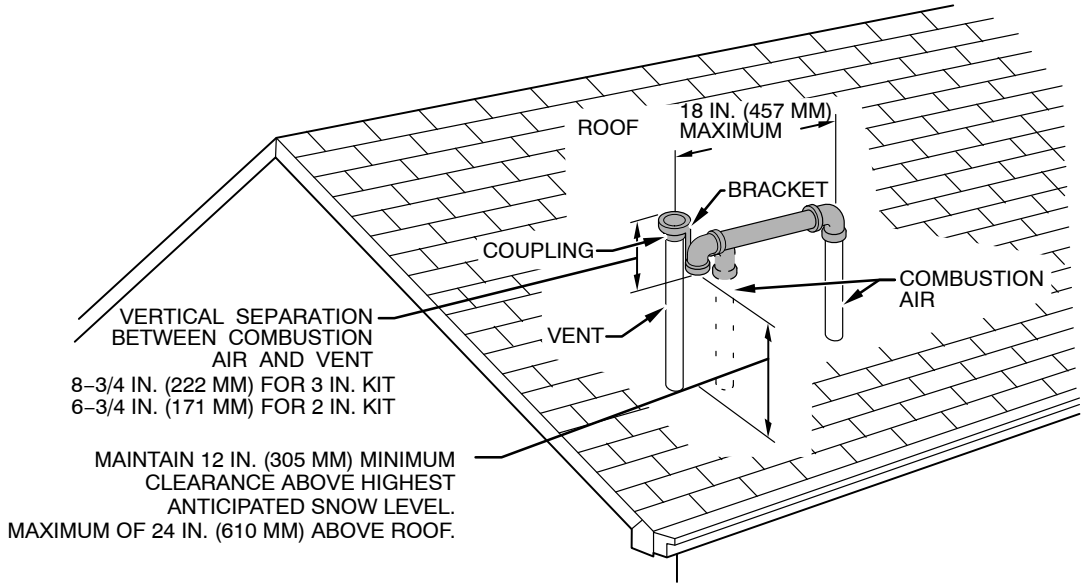
INSTALLATION

PROCEDURE 1 −

ROOF TERMINATION

1. Loosely install elbow in bracket and place assembly on combustion−air pipe.
2. Loosely install pipe coupling on properly cut vent pipe. The coupling must be positioned so the bracket will mount as shown in **Figure 3**.
3. Disassemble loose pipe fittings. Clean and cement using procedures found in installation literature packaged with furnace.
4. Install bracket as shown in **Figure 3**.
5. For applications using combustion−air pipe option, indicated by dashed lines in **Figure 3** install 90° street elbow into 90° elbow, making U−fitting. A 180° U−fitting may be used. (See **Figure 2**)

Figure 3	Roof Termination



PROCEDURE 2 –

SIDEWALL TERMINATION

Combustion–Air and Vent Pipes exit through sidewall 12–in. or above highest anticipated level or grade

1. Install elbows as shown in **Figure 4** using procedures for cementing found in installation literature packaged with furnace.
2. Install bracket as shown in **Figure 4**.
3. Position vent pipe and elbow to maintain vertical 12–in. (305 mm) separation between vent pipe outlet and combustion–air inlet. Cement vent pipe in elbow as shown in **Figure 4**.
4. For applications using vent pipe option indicated by dashed lines in **Figure 4**, rotate vent elbow 90° from position shown in **Figure 4**.
5. For terminations in Canada where clearance to adjacent structure or property line are required, terminate pipe as shown in **Figure 6** or **Figure 7**.

PROCEDURE 3 –

SIDEWALL TERMINATION

Combustion–Air and Vent Pipes exit through sidewall <u>less than</u> 12–in. or above highest anticipated level or grade

1. Install one elbow in bracket.
2. Install 90° street elbow into elbow in bracket, making U–fitting, or use 180° U–fitting. (See **Figure 2**)
3. Loosely install coupling on end of vent pipe.
4. Loosely install U–fitting and bracket as shown in **Figure 5**. Position U–fitting so open end is against structure wall.
5. Loosely install vent outlet pipe and elbow in coupling as shown in **Figure 5**.
6. Check required dimensions as shown in **Figure 5**.
7. Disassemble loose pipe fittings. Clean and cement using procedures found in installation literature packaged with furnace.
8. Install bracket as shown in **Figure 5**.
9. For terminations in Canada where clearance to adjacent structure or property line are required, terminate pipe as shown in **Figure 6** or **Figure 7**.

Figure 4	Sidewall Termination (12–in. or more above snow level and grade)

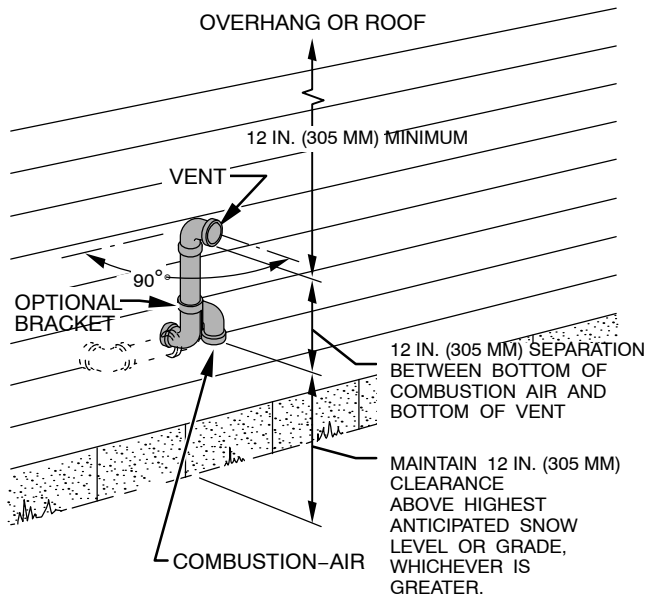


Figure 5	Sidewall Termination (less than 12–in. Above snow level or grade)

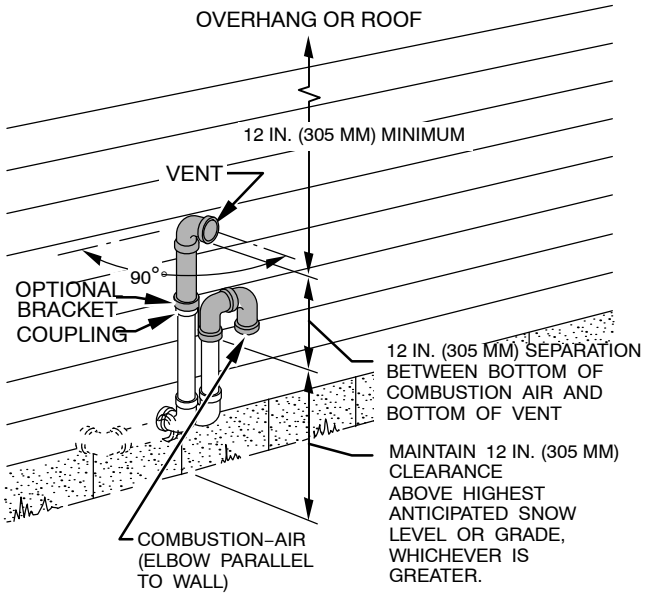


Figure 6	Vent Terminations (where required for Canada)

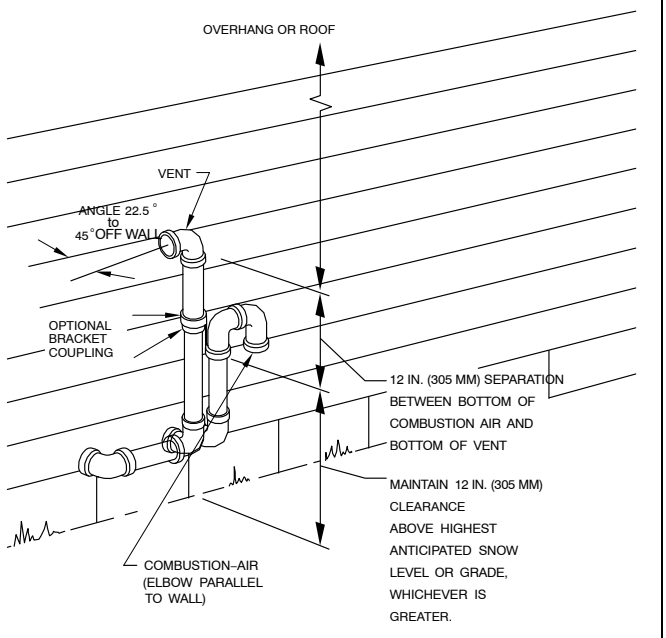


Figure 7	Tee at Termination Outlet (where required for Canada)