

Concentric Vent Termination Kit for Condensing Furnaces

Installation Instructions



WARNING / ADVERTISSEMENT

Risk of carbon monoxide poisoning or fire due to joint separation or pipe breakage.

- Zero clearance to combustible construction is allowed.
- Follow manufacturer's instructions for installation.

Risque d'intoxication au monoxyde de carbone ou d'incendie à cause d'une séparation d'un joint ou d'une rupture de tuyau.

- Une absence d'espace libre entre le système de ventilation et une construction combustible est permise.
- Respectez les instructions du fabricant pour l'installation.

INTRODUCTION

These instructions are intended to assist qualified individuals in the proper installation of this concentric vent termination kit. If these instructions differ from those packaged with the furnace, follow these instructions.

READ ALL INSTRUCTIONS CAREFULLY BEFORE STARTING THE INSTALLATION.

INSTALLATION

WARNING!

Installing and servicing heating equipment can be hazardous due to gas and electrical components. Only trained personnel should install or service heating equipment. Untrained personnel can perform basic maintenance such as cleaning coils, or cleaning and replacing filters. All other operations should be performed by trained service personnel. When working on heating equipment, observe all precautions in the literature, and on tags and labels attached to the unit. Follow all safety codes. Wear glasses and work gloves and have a fire extinguisher available.

WARNING!

ELECTRICAL SHOCK, FIRE OR EXPLOSION HAZARD.

Failure to follow safety warnings exactly could result in serious injury, death or property damage.

Improper servicing could result in dangerous operation, serious injury, death or property damage.

- Before servicing, disconnect all electrical power to the indoor blower.
- When servicing controls, label all wires prior to disconnecting. Reconnect wires correctly.
- Verify proper operation after servicing.

VENTING REQUIREMENTS FOR CANADIAN INSTALLATIONS

Installation in Canada must conform to the requirements of CSA B149.1 Natural Gas, Propane Inst. Code or CSA B149.2 Propane Storage, Handling Code. Vent systems must be composed of pipe, fittings, cements, and primers listed to ULC S636. This concentric vent termination kit has been certified to ULC S636 for use with vent components which have been certified to this standard. Do not mix primers and cements from one manufacturer with a vent system from a different manufacturer. Follow the manufacturer's instructions in the use of primer and cement. Never use primer or cement beyond its expiration date.

The safe operation, as defined by ULC 636 of the vent system and this termination kit is based on following these installation instructions, the vent system manufacturer's installation instructions, and proper use of primer and cement. It is recommended the vent system be inspected once a year by qualified personnel. Acceptability under the Canadian standard CSA B149 is dependent upon full compliance with all installation instructions. All proper permits shall be obtained from the proper authorities prior to installation.

EXIGENCES DE VENTILATION POUR LES INSTALLATIONS CANADIENNE

L'installation au Canada doit être conforme aux exigences du code CSA B149. Les systèmes de ventilation doivent être composés de tuyaux, raccords, ciments et apprêts homologués selon les normes ULC S636. Cette trousse de terminaison de ventilation concentrique a été certifiée selon les normes ULC S636 pour utilisation avec des composants de ventilation qui ont été certifiés selon ces normes. Ne mélangez pas les apprêts et les ciments d'un fabricant avec le système de ventilation d'un fabricant différent. Respectez les instructions du fabricant quant à l'utilisation de l'apprêt et du ciment. N'utilisez jamais un apprêt ou un ciment au-delà de sa date d'expiration.

Le fonctionnement sécuritaire, tel que défini par les normes ULC 636, du système de ventilation et de cette trousse de terminaison, est basé sur l'adhérence aux instructions d'installation qui suivent et aux instructions d'installation du fabricant du système de ventilation ainsi que sur l'utilisation adéquate de l'apprêt et du ciment. Il est recommandé de faire inspecter le système de ventilation une fois l'an par du personnel qualifié. L'acceptabilité selon la norme canadienne CSA B149 dépend de la conformité totale avec toutes les instructions d'installation. Tous les permis adéquats doivent être obtenus des autorités adéquates avant l'installation.

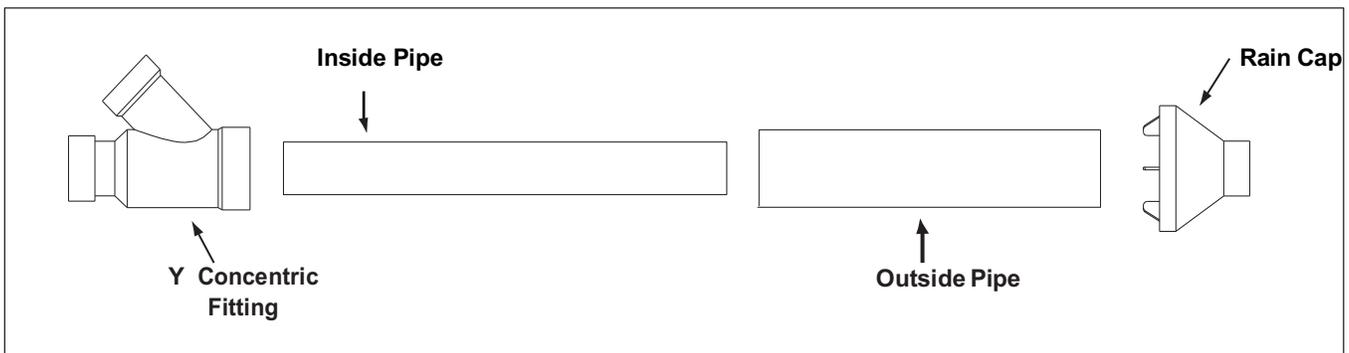


Figure 1. Kit Components

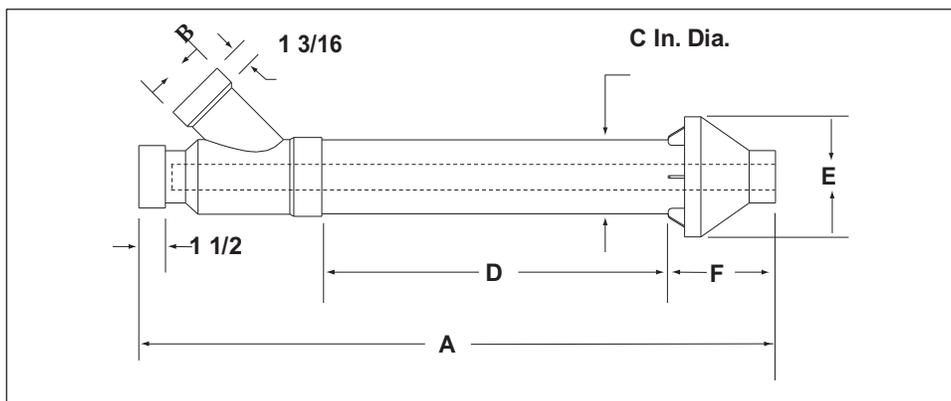


Figure 2. Dimensions

Kit No.	A	B	C	D	E	F
72951 (3")	40"	3.80"	4.50"	21.50"	7.30"	6.50"
72950 (2")	34"	2.70"	3.50"	17"	6.40"	6.00"

Table 1.

INSTALLATION

⚠ WARNING!

These kits are to be used only for terminating condensing Category IV furnaces. DO NOT use kits to terminate Category I, II, or III vent furnaces. Failure to follow these instructions could result in fire, personal injury, or death.

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), or D2665 (PVC-DWV), or D2441 (SDR-21 and SDR-26 PVC), or D2661 (ABS-DWV), or F628 (schedule-40 ABS). Pipe cement and primer must conform to ASTM standards D2564 (PVC) or D2235 (ABS).

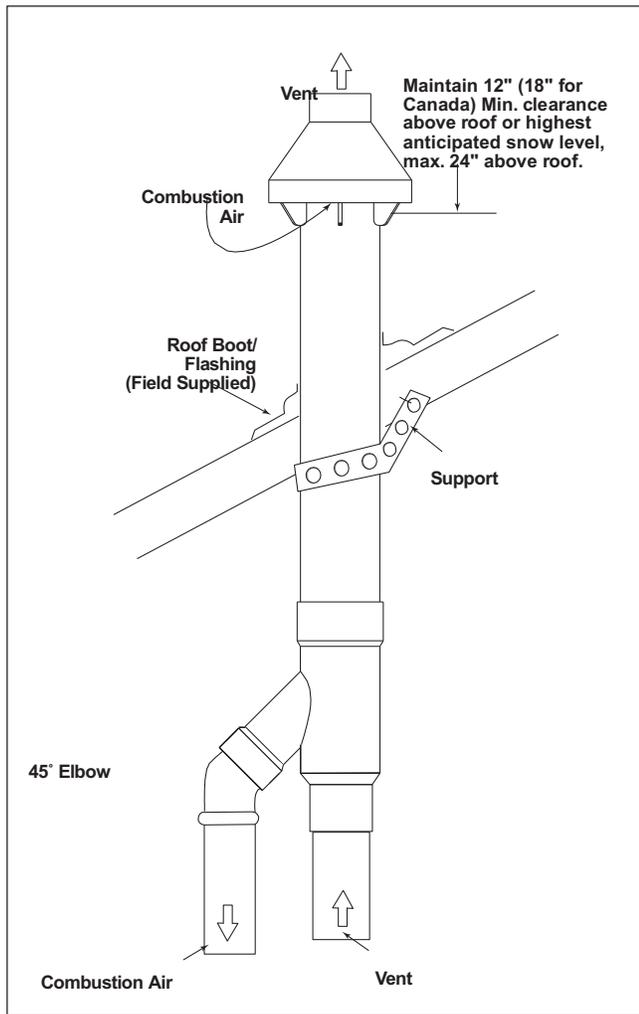


Figure 3. Roof Installation

Consult your furnace installation instructions for the allowable length and size of the plastic vent pipe. The concentric vent termination assembly is equal to 4 feet of 3" inlet and outlet pipe, or 3 feet of 2" inlet and outlet pipe.

The Concentric Vent Termination Kit is shipped assembled but not cemented. Disassemble the kit and cement per Figures 1 and 2.

Procedure 1 - Roof Termination

1. Determine the best location for termination kit.
2. Cut one hole, 5-inch diameter when using kit no. 72951 or a 4-inch diameter hole when using kit no. 72950.
3. Partially assemble the concentric vent termination kit per Figures 1 and 2.
 - a. Cement Y concentric vent fitting to larger diameter kit pipe. (See figure 1.)
 - b. Cement rain cap to smaller diameter kit pipe. (See figure 1.)
4. Install cemented Y concentric fitting and pipe assembly through structure's hole and field supplied roof boot/flashing (See Figure 3).

NOTE: do not allow insulation or other materials to accumulate inside pipe assembly when installing through hole.
5. Secure assembly to roof structure as shown in Figure 3 using field supplied metal strapping or equivalent support material. NOTE: Ensure termination height is above the roof surface or anticipated snow level (12 inches in U.S.A. or 18 inches in Canada). If the assembly is too short to meet the height requirement, the 2 pipes supplied in the kit may be replaced by using the same diameter, field supplied SDR-26 PVC (D2241) pipe. Do not expand dimension "D" more than 60 inches (see figure 2)

⚠ CAUTION:

DO NOT use field supplied couplings to extend pipes. Airflow restriction will occur and the furnace pressure switch may cause intermittent operation.

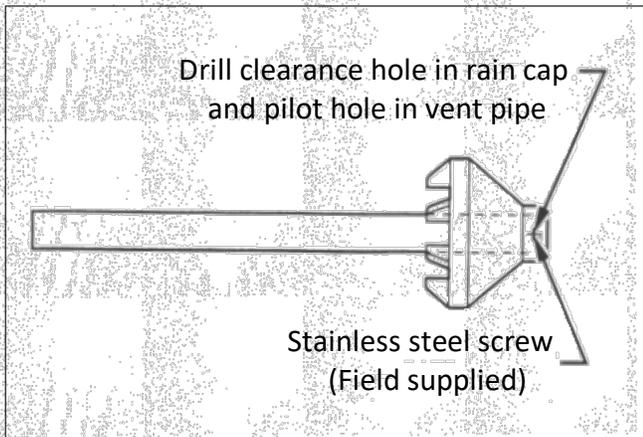


Figure 4. Rain Cap to Vent Pipe Alternate Assembly

NOTE: Instead of cementing the smaller pipe to the rain cap, a field-supplied stainless steel screw may be used to secure the 2 components together when field disassembly is desired for cleaning. (See Figure 4.)

⚠ WARNING!

Do not operate the furnace with rain cap removed. Recirculation of combustion products may occur, or water may accumulate inside larger combustion air pipe and flow into the burner enclosure. Failure to follow this warning could result in product damage or improper operation, personal injury or death.

6. Cement furnace combustion air and vent pipes to concentric vent termination assembly.
7. Run furnace through a complete heat cycle to ensure combustion air and vent pipes are properly connected to concentric vent termination connections.

Procedure 2 - Side Wall Termination

1. Determine the best location for termination kit.
 - Termination kit should be positioned where the vent vapors will not damage plants/shrubs, or air conditioning equipment.
 - Termination kit should be positioned where it will not be affected by wind eddies or currents that may allow recirculation of combustion products or unwanted intake of airborne leaves or light snow.
 - Termination kit should not be positioned where it may be damaged by foreign objects such as stones, balls, etc.
 - Termination kit should not be positioned where the vapors may be objectionable.

2. Cut one hole, 5-inch diameter for kit no. 72951 or a 4-inch diameter hole when using kit no. 72950.
3. Partially assemble the concentric vent termination kit per Figures 1 and 2.
 - a. Cement Y concentric vent fitting to larger diameter kit pipe. (See Figure 1.)
 - b. Cement rain cap to smaller diameter kit pipe. (See Figure 1.)
4. Install cemented Y concentric fitting and pipe assembly through structure's hole (See Figure 5). **NOTE:** do not allow insulation or other materials to accumulate inside pipe assembly when installing through hole.
5. Secure the assembly to the structure as shown in Figure 5 using field supplied metal strapping or equivalent support material. **NOTE:** Ensure termination location clearance as shown in Figure 5.

⚠ CAUTION:

DO NOT use field supplied couplings to extend pipes. Airflow restriction will occur and the furnace pressure switch may cause intermittent operation.

⚠ CAUTION!

Due to ice buildup and blockage the venting system shall be sloped upwards not less than 20mm per 1000mm from the appliance to the vent terminal, so that the vent system be installed to prevent collection of condensate. See the appliance installation instruction for further details regarding the installation of condensate drain fittings.

6. Cement furnace combustion air and vent pipes to concentric vent termination assembly.
7. Run furnace through a complete heat cycle to ensure combustion air and vent pipes are properly connected to concentric vent termination connections.

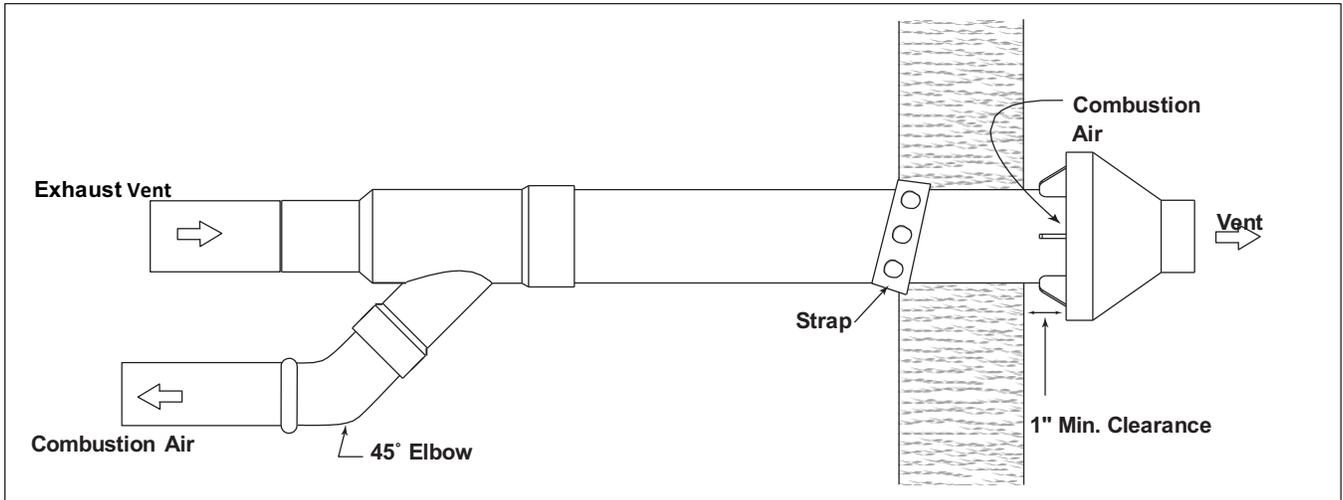


Figure 5. Side Wall Installation

Procedure 3 - Multi-Venting Terminations

When two or more direct vent furnaces are vented near each other, each furnace must be individually vented. (See Figure 6 and 7.) NEVER common vent or breach vent this furnace. When two or more direct vent furnaces

are vented near each other, each vent termination may be installed as shown in Figure 6 and 7. It is important that vent terminations be made as shown to avoid recirculation of flue gases. A minimum distance of 18 inches or a maximum distance of 36 inches MUST be maintained.

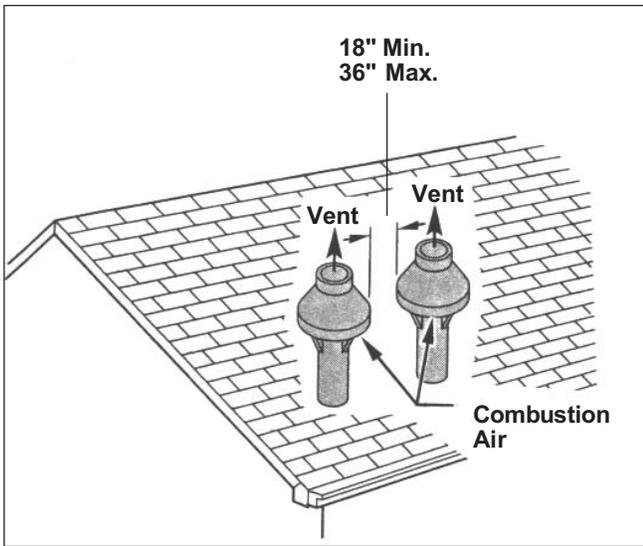


Figure 6. Concentric Vent and Combustion-Air Roof Termination

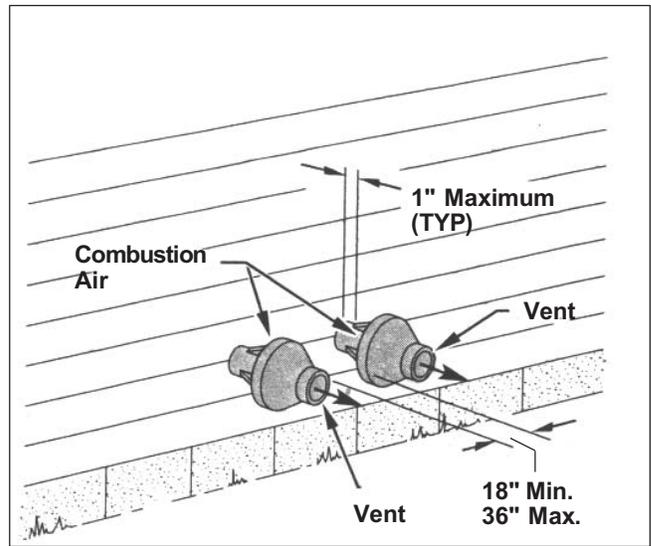


Figure 7. Concentric Vent and Combustion-Air Termination

INSTALLER: PLEASE LEAVE THESE INSTALLATION INSTRUCTIONS WITH THE HOMEOWNER.