

Concentric Vent Termination Kit for Condensing Furnaces

INSTALLATION INSTRUCTIONS

IMPORTANT SAFETY INFORMATION

Please read all instructions before installing this kit. Pay attention to all safety warnings and any other special notes highlighted in the manual. Safety markings are used frequently throughout this manual to designate a degree or level of seriousness and should not be ignored. **WARNING** indicates a potentially hazardous situation that if not avoided, could result in personal injury or death. **CAUTION** indicates a potentially hazardous situation that if not avoided, may result in minor or moderate injury or property damage. These instructions are intended to assist qualified individuals in the proper installation of the 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.**

WARNING:

ELECTRICAL SHOCK, FIRE OR EXPLOSION HAZARD

Failure to follow safety warnings exactly could result in serious injury 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.

WARNING:

The information listed in this manual must be followed during the installation of this kit. Unqualified individuals should not attempt to interpret these instructions or install this equipment. If you do not possess mechanical skills or tools, call your local dealer for assistance.

Installing and servicing heating equipment can be hazardous due to gas and electrical components. 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.

Failure to follow safety recommendations could result in possible damage to the equipment, serious personal injury or death.

SPECIAL VENTING REQUIREMENTS FOR INSTALLATIONS IN CANADA

Installation in Canada must conform to the requirements of CSA B149 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 vent components which have been certified to this standard. The primer and cement must be of the same manufacturer as the vent system. 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 and never use primer or cement beyond its expiration date.

The safe operation, as defined by ULC S636, 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. Acceptability under Canadian standard CSA B149 is dependent upon full compliance with all installation instructions. Under this standard, it is recommended that the vent system be checked once a year by qualified service personnel. The authority having jurisdiction (gas inspection authority, municipal building department, fire department, etc) should be consulted before installation to determine the need to obtain a permit.

CONSIGNES SPÉCIALES POUR L'INSTALLATION DE VENTILLATION AU CANADA

L'installation faite au Canada doit se conformer aux exigences du code CSA B149. Ce système de ventilation doit se composer de tuyaux, raccords, ciments et apprêts conformes au ULC S636. Ce système de ventilation concentrique a été certifié ULC S636 pour être utilisé avec les composantes qui sont certifiés. L'apprêt et le ciment doivent être du même fabricant que le système de ventilation; ne pas mélanger l'apprêt et le ciment d'un fabricant avec le système de ventilation d'un autre fabricant. Bien suivre les indications du fabricant lors de l'utilisation de l'apprêt et du ciment et ne pas utiliser ceux-ci si la date d'expiration est atteinte.

Le bon fonctionnement de ce système de ventilation est conditionnel à l'installation tel que défini par le ULC S636 c'est à dire: bien suivre les consignes ci-haut mentionnées ainsi que les instructions du fabricant et aussi une bonne utilisation de l'apprêt et du ciment. L'acceptation du standard Canadien CSA B149 est directement relié à l'installation conforme aux instructions ci-haut mentionnées. Le standard Canadien recommande l'inspection par un personnel qualifié et ce, une fois par année. Les autorités ayant juridiction (inspecteurs de gaz, inspecteurs en bâtiments, département des incendies, etc) devraient être consultées avant l'installation afin de déterminer si un permis est requis.

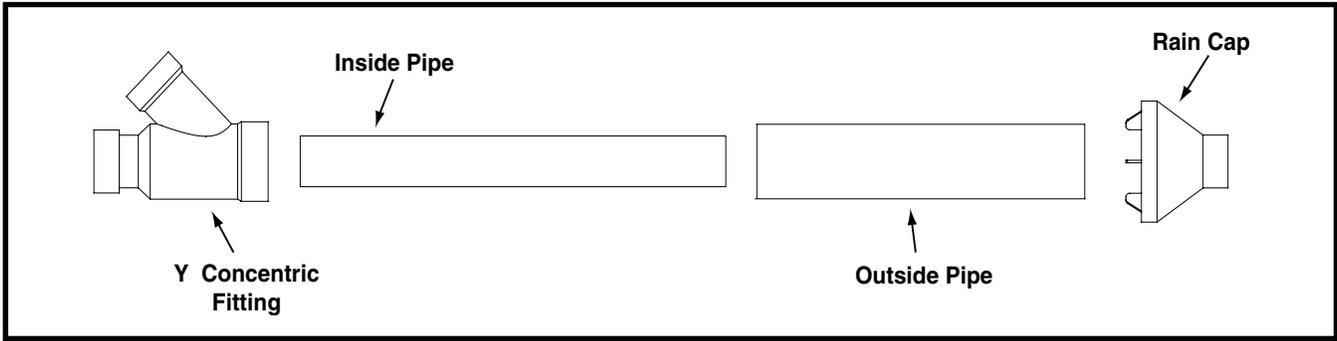


Figure 1. Kit Components

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.

Vent and combustion air pipe and fittings must be one of the following materials in the list and must conform to the indicated ANSI/ASTM standards. Cement must conform to ASTM Standard D2564 for PVC and Standard D2235 for ABS. PVC primer must meet standard ASTM F656. When joining PVC piping to ABS, use PVC solvent cement. See procedure specified in ASTM Standard D3138. In Canada, all plastic vent pipes and fittings including any cement, cleaners, or primers must be certified as a system to ULC S636.

Materials	Standards
SCHEDULE 40PVC.....	D1785
PVC-DWV.....	D2665
SDR-21 & SDR-26.....	D2241
ABS-DWV.....	D2661
SCHEDULE 40 ABS.....	F628
FOAM / CELLULAR CORE PVC.....	F891

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 as shown in Figures 1 and 2.

Procedure 1: Roof Termination

- Determine the best location for the termination kit.
- Cut one hole, 5 inch diameter when using a 3" kit or a 4" diameter hole when using a 2" kit.
- Partially assemble the concentric vent termination kit as shown in Figures 1 and 2.
 - Cement Y concentric vent fitting to larger diameter kit pipe. See Figure 1.
 - Cement rain cap to smaller diameter kit pipe. See Figure 1.

- Install cemented Y concentric fitting and pipe assembly through structure's hole and field supplied roof boot/ flashing. See Figure 3 (page 3).

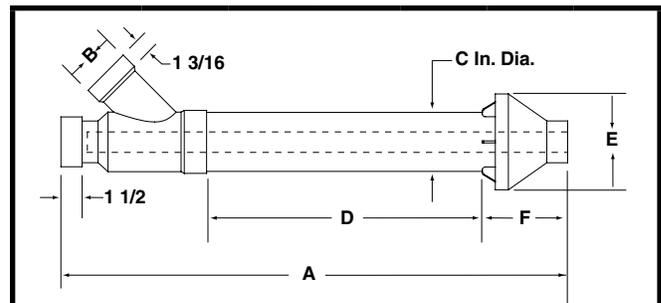
NOTE: do not allow insulation or other materials to accumulate inside pipe assembly when installing through hole.

- Secure assembly to roof structure as shown in Figure 3 using field supplied metal strapping or equivalent support material.

IMPORTANT: Make sure the 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 3.

⚠ 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.



KIT NO.	A	B	C	D	E	F
904953 (3")	38 7/8	3	4 1/2	21 1/8	7 3/8	6 1/2
904952 (2")	33 3/8	2	3 1/2	16 5/8	6 1/4	5 3/4

Figure 2. Dimensions

⚠ CAUTION:

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

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.

6. Cement field supplied 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.

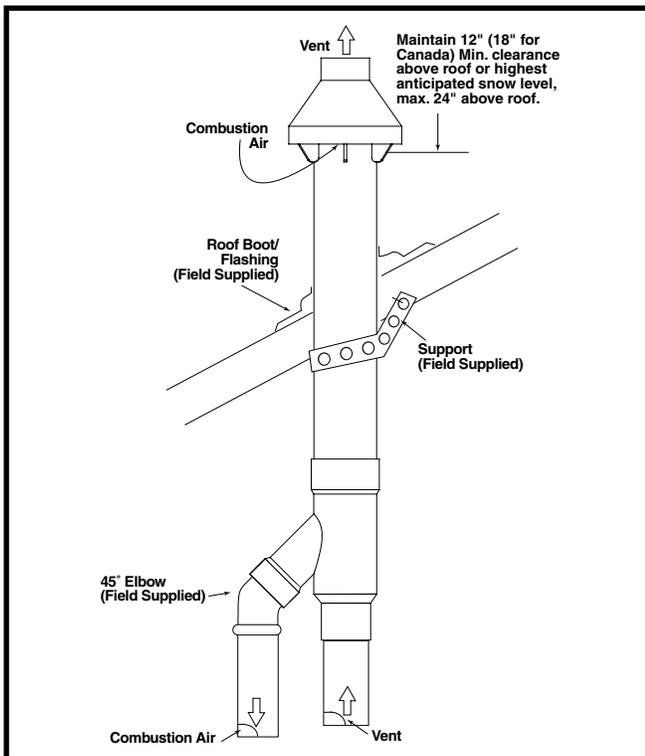


Figure 3. Roof Installation

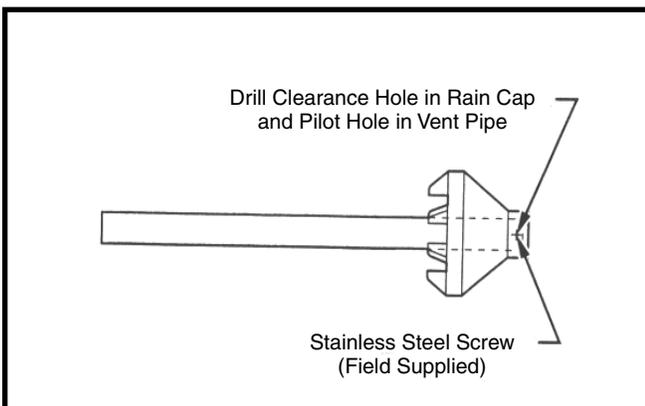


Figure 4. Rain Cap to Vent Pipe Alternate Assembly

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 if using a 3" kit or a 4 inch diameter hole if using 2" kit.
3. Partially assemble the concentric vent termination kit as shown in Figures 1 and 2.
 - a. Cement Y concentric vent fitting to larger diameter kit pipe.
 - b. Cement rain cap to smaller diameter kit pipe.
4. Install cemented Y concentric fitting and pipe assembly through structure's hole (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.

NOTE1: Ensure termination location clearance as shown in Figure 5.

NOTE2: If assembly needs to be extended, 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).

⚠ 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.

⚠ CAUTION:

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

6. Cement field supplied 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.

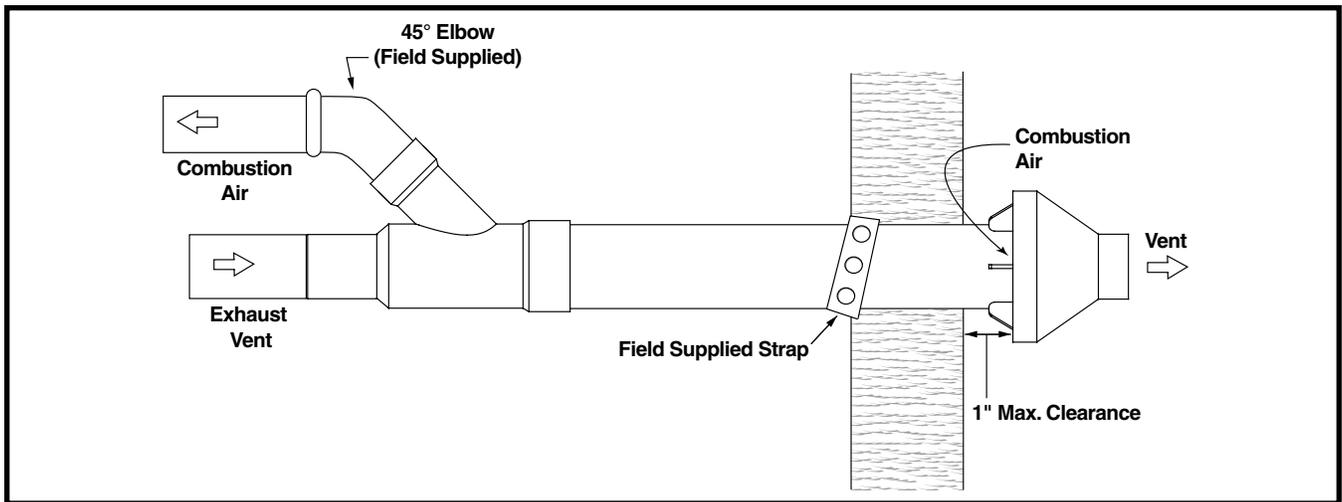


Figure 5. Side Wall Installation

Procedure 3: Multiventing Terminations

When two or more direct vent furnaces are vented near each other, each furnace must be individually vented as shown in Figures 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 8 inches MUST be maintained.

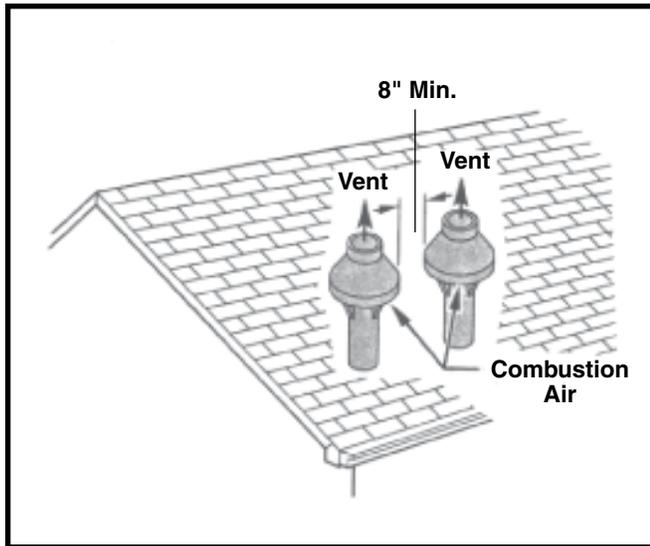


Figure 6. Concentric Vent & Combustion-Air Roof Terminations

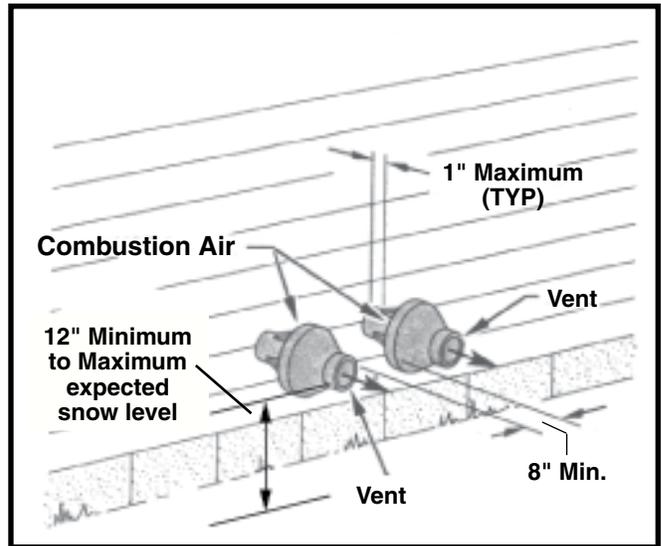


Figure 7. Concentric Vent & Combustion-Air Wall Terminations



INSTALLER: PLEASE LEAVE THESE INSTRUCTIONS WITH THE OWNER.

