

# Concentric Vent Termination Kit for Condensing Furnaces

## Installation Instructions

### 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.**

### SAFETY CONSIDERATIONS

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:

Electric shock hazard. Disconnect all electrical power to the appliance before beginning any installation or modification.

### 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.

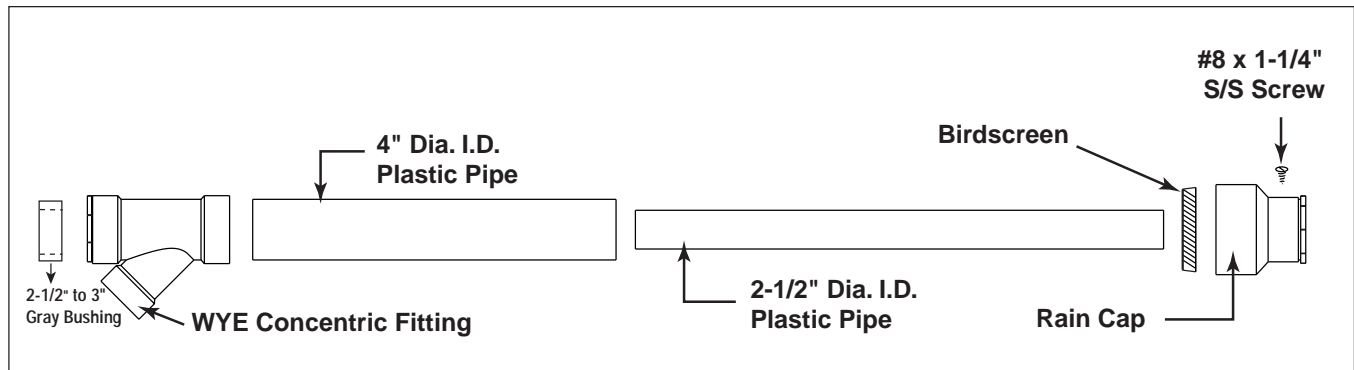


Figure 1. Kit Components

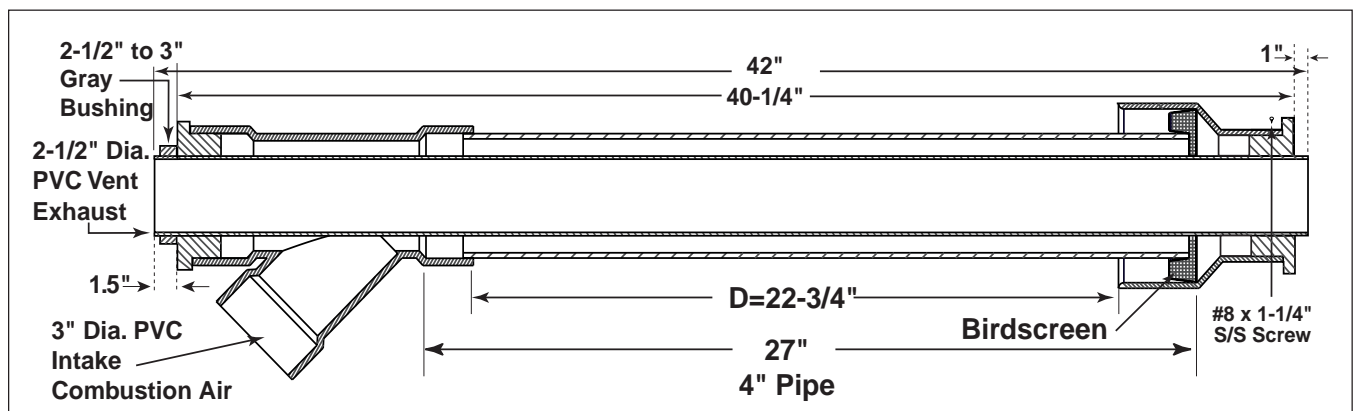


Figure 2. Dimensions

Field supplied pipe and fittings are required to complete the installation. 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).

For Canadian installations, construct all combustion air and vent pipes for this unit of CSA or ULC certified schedule-40 PVC or PVC-DWV, or ABS-DWV pipe and pipe cement.

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.

Concentric flue 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" in diameter.
3. Partially assemble the concentric vent termination kit per Figures 1 and 2.
  - a. Cement 1 of 2, 4" x 2-1/2" bushing reducer into 4" end of the rain cap.
  - b. Cement 4" x 2-1/2" bushing reducer into combustion exhaust side of WYE fitting.
  - c. Cement 4" pipe into opposite end of WYE fitting.
  - d. Insert 2-1/2" combustion exhaust pipe through the WYE fitting until it protrudes out of the WYE intake end by 1-1/2".
  - e. Cement 2-1/2" x 3", 1-1/4" long gray bushing onto 2-1/2" pipe protrusion.
4. Install cemented WYE 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 termi-

nation height is above the roof surface or anticipated snow level (1 ft. in U.S.A. or 1-1/2 ft. in Canada). If assembly is too short to meet height requirement, the 2 pipes supplied in the kit may be replaced by using same diameter, field supplied SDR-26 PVC (D2241) pipe. Do not expand dimension "D" more than 60 inches (See Figure 2).

6. Install the birdscreen into the rain cap. Install the rain cap assembly over the piping assembly, making sure to seat the 4" pipe at the center of the birdscreen. Adjust the assembly to allow the 2 1/2" pipe to protrude approximately 1" (See Figure 2). Failure to center the raincap over the piping may damage the screen. Secure the rain cap to the vent pipe assembly with the included #8 x 1-1/4" stainless steel sheet metal screw. Drill a 1/8" pilot hole before securing the screw. Failure to drill the pilot hole may cause the plastic pipe to crack.

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

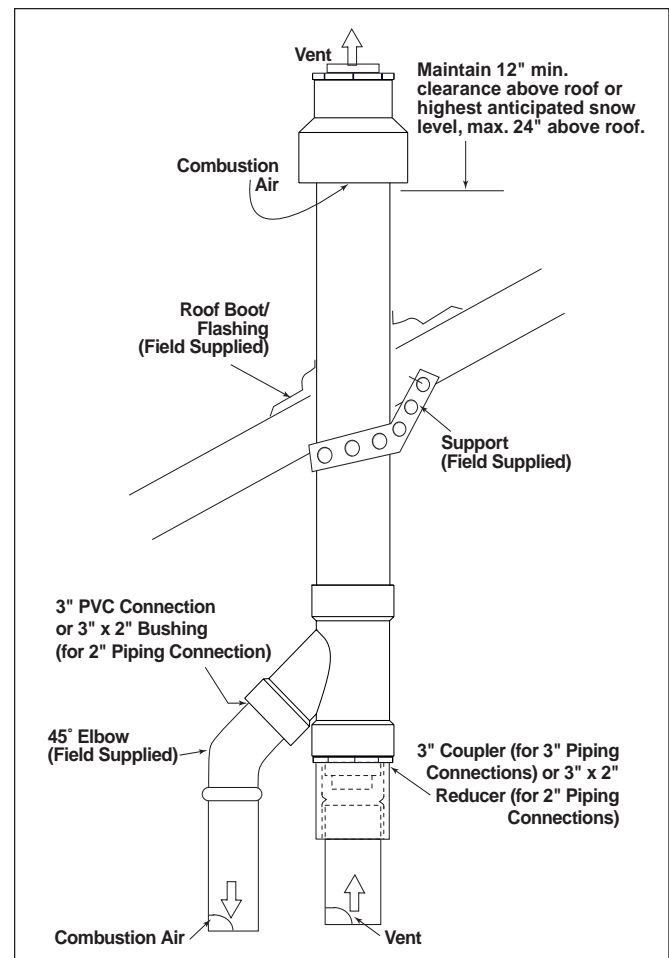


Figure 3. Roof Installation

## **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.**

7. Cement field supplied furnace combustion air and vent pipes to concentric vent termination assembly.
8. 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" in diameter.
3. Partially assemble the concentric vent termination kit per Figures 1 and 2.
  - a. Cement 1 of 2, 4" x 2-1/2" bushing reducer into 4" end of the rain cap.
  - b. Cement 4" x 2-1/2" bushing reducer into combustion exhaust intake of WYE fitting.
  - c. Cement 4" pipe into opposite end of WYE fitting.
  - d. Insert 2-1/2" combustion exhaust pipe through the WYE fitting until it protrudes out of the WYE intake end by 1-1/2".
  - e. Cement 2-1/2" to 3", 1-1/4" long gray bushing onto 2-1/2" pipe protrusion.
4. Install cemented WYE concentric fitting and pipe assembly through structure's hole (See Figure 4). 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 4 using field supplied metal strapping or equivalent support material. NOTE: Ensure termination location clearance as shown in Figure 4.

NOTE: If assembly needs to be extended, the 2 pipes supplied in the kit may be replaced by using 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.**

6. Install the birdscreen into the rain cap. Install the rain cap assembly over the piping assembly, making sure to seat the 4" pipe at the center of the birdscreen. Adjust the assembly to allow the 2 1/2" pipe to protrude approximately 1" (See Figure 2). Failure to center the raincap over the piping may damage the screen. Secure the rain cap to the vent pipe assembly with the provided #8 1-1/4" stainless steel screw. Drill a 1/8" pilot hole before securing the screw. Failure to drill the pilot hole may cause the plastic pipe to crack.

## **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.**

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

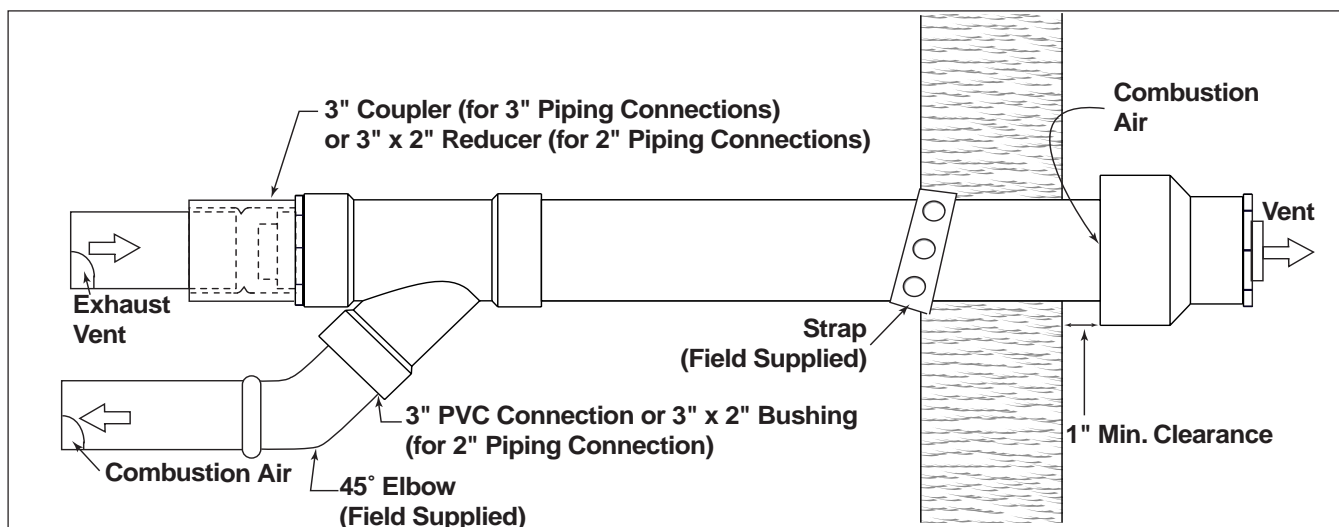


Figure 4. Side Wall Installation

**INSTALLER: PLEASE LEAVE THESE INSTALLATION  
INSTRUCTIONS WITH THE HOMEOWNER.**

