



**CONCENTRIC VENT / COMBUSTION AIR KIT FOR
SIDEWALL OR VERTICAL VENTING APPLICATIONS**

⚠️ WARNING

ELECTRIC SHOCK HAZARD/FIRE AND/OR EXPLOSION HAZARD.

Failure to carefully read and follow all instructions in these instructions could result in death, personal injury, property damage and/or furnace malfunction.

Installation or repairs made by unqualified persons could result in hazards to you and others. Installation **MUST** conform with local codes or, in the absence of local codes, with codes of the country having jurisdiction.

The information contained in these instructions is intended for use by a qualified service technician familiar with safety procedures and equipped with the proper tools and test instruments.

⚠️ WARNING

ELECTRIC SHOCK HAZARD/FIRE AND/OR EXPLOSION HAZARD.

Failure to follow this warning could result in death, personal injury, property damage and/or equipment damage.

Turn OFF gas supply at manual gas valve before turning OFF electric power supply and starting installation.

Turn OFF electric power supply at disconnect switch or service panel before starting installation.

⚠️ WARNING

CARBON MONOXIDE POISONING, AND PROPERTY DAMAGE HAZARD.

Failure to follow this warning could result in death, personal injury, property damage and/or equipment damage.

This kit is to be used for terminating condensing Category IV vent furnaces. **DO NOT** use kit to terminate Category I, II, or III vent furnaces.

ALL INSTALLATIONS AND SERVICE MUST BE PERFORMED BY QUALIFIED SERVICE PERSONNEL.

This termination vent/combustion air kit is for horizontal or vertical venting of Thermo Pride's condensing gas furnaces. This kit is designed for extreme cold conditions when traditional combustion air intakes may frost over causing nuisance shut downs of the furnace. In addition to cold weather applications, this kit may also be utilized in other sidewall vent applications where a single hole through the foundation or basement wall is desired.

The following parts are included in the termination kit.

ITEM	DESCRIPTION	
	AOPS7488 2" KIT	AOPS7489 3" KIT
1	2" Rain Cap	3" Rain Cap
2	3" dia x 19-1/2" long, SDR-26 pipe	4" dia x 24" long, SDR-26 pipe
3	2" dia x 31-5/8" long, SDR-26 Pipe	2-1/2" dia x 37-1/8" long, SDR-26 pipe
4	2" Wye Fitting	3" Wye Fitting

Assembled Concentric Vent Kit (2" Kit shown)

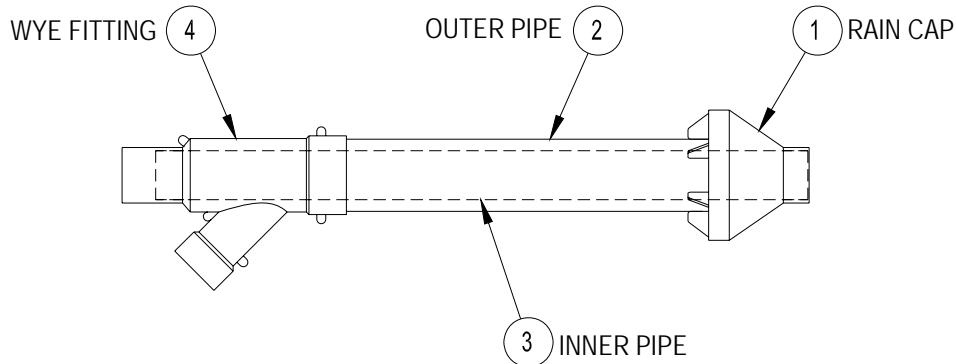


FIG-1

Follow the furnace installation instructions for locating the furnace, clearances, operation and safety procedures. Use these instructions for installation of the concentric vent termination kit. Read these instructions completely before attempting installation. Field supplied pipe and fittings are required to complete installation.

Vent Termination Clearances

Determine termination locations based on clearances specified in furnace installation instructions. The vent termination must be located at least 12" above ground or normally expected snow accumulation levels.

ALL INSTALLATIONS AND SERVICE MUST BE PERFORMED BY QUALIFIED SERVICE PERSONNEL.

These kits are for vertical or horizontal termination of the combustion air inlet and the exhaust vent pipes on Category IV gas-fired condensing furnaces. The AOPS7488 kit can be used for 2" diameter pipe systems. The AOPS7489 kit can be used for 3" diameter pipe system. Refer to Furnace Installation Instructions for the correct pipe size for the furnace. Both the combustion air inlet and the exhaust vent pipes must attach to the termination kit. The termination kit must terminate outside the structure and must be installed per the instructions outlined below for vertical or horizontal termination. Vertical termination is preferred.

Vertical & Horizontal Termination

1. Determine the pipe diameters required for the installation from Furnace Installation Instructions.
2. Determine the best location for the termination kit. See (Fig-2) for vertical termination or (Fig-3) for horizontal termination. Roof termination is preferred since it is less susceptible to damage, has reduced intake contaminants and less visible vent vapor. For side wall termination, consideration should be given to -
A) possible damage from the vapors to plants/shrubs, other equipment and building materials, B) possible damage to the terminal from foreign objects, C) wind effects that may cause recirculation of flue products, debris or light snow and D) visible vent vapor.
3. Cut one 4" diameter hole through the structure for the AOPS7488 kit or one 5" diameter hole for the AOPS7489 kit.
4. "Length" dimension may be increased to 60" max. or decreased to 12" min. by cutting the pipes. (see Fig-4A / 4B)

⚠ CAUTION

UNIT OPERATION HAZARD.

Failure to follow this caution may result in intermittent unit operation.

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

If assembly needs to be extended to meet height or side wall thickness requirement, the two pipes supplied in the kit may be replaced with single piece (no coupling connections allowed) same diameter solid core, field supplied SDR-26 PVC (ASTM D2241) pipe. (see Fig-4A / 4B)

ALL INSTALLATIONS AND SERVICE MUST BE PERFORMED BY QUALIFIED SERVICE PERSONNEL.

VERETICAL TERMINATION

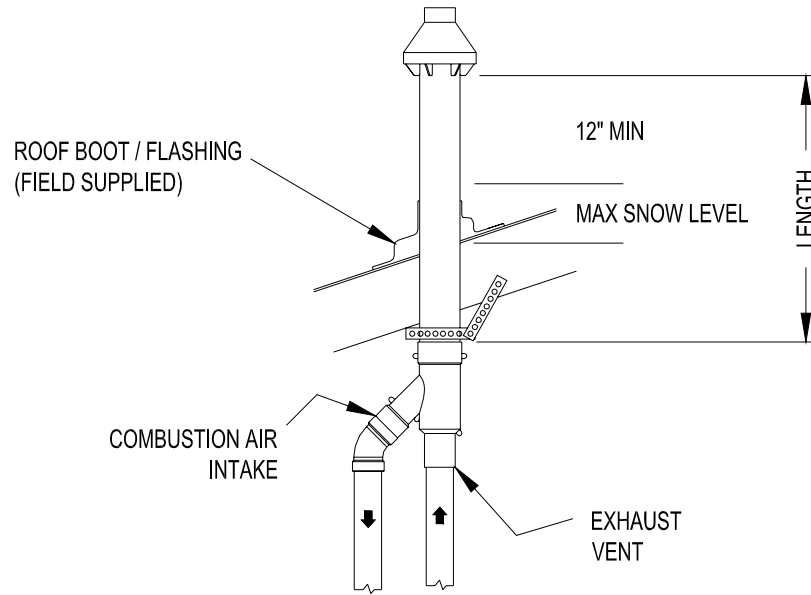


FIG-2

HORIZONTAL TERMINATION

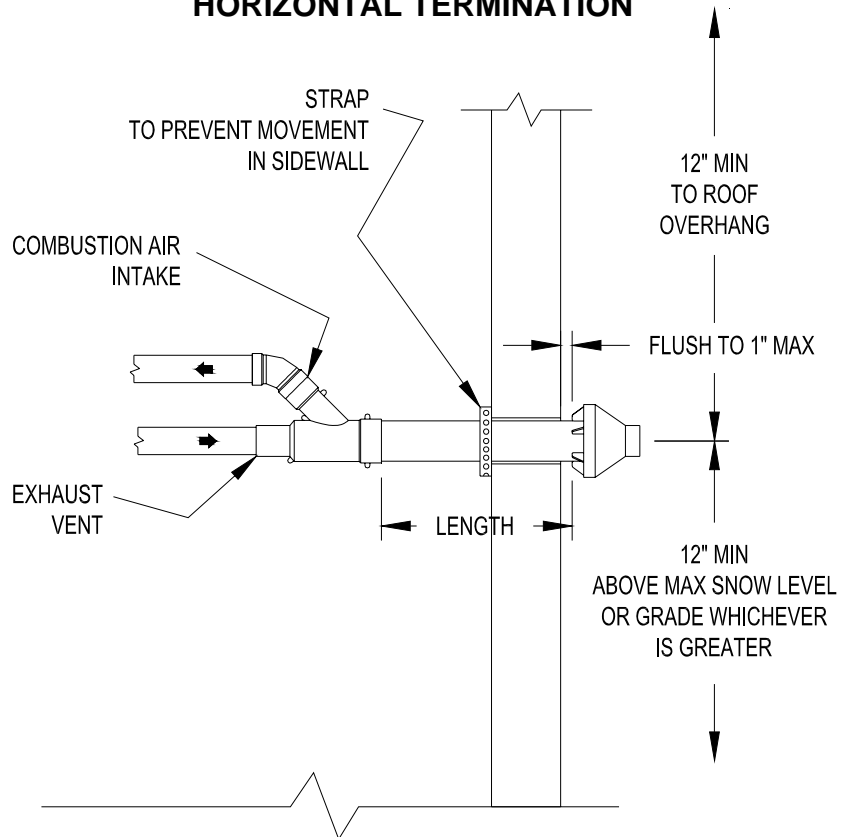
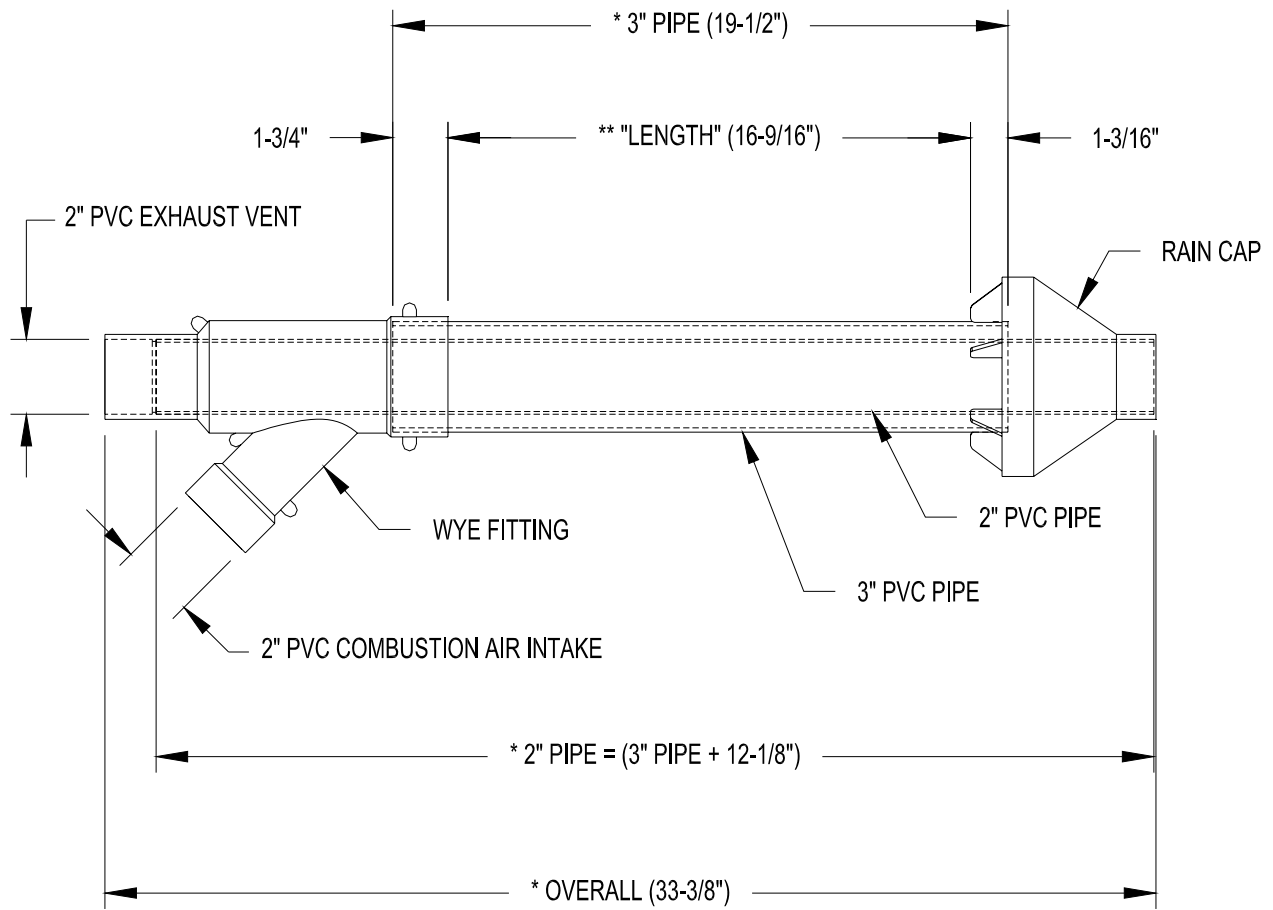


FIG-3

ALL INSTALLATIONS AND SERVICE MUST BE PERFORMED BY QUALIFIED SERVICE PERSONNEL.

2" CONCENTRIC VENT KIT (AOPS7488)



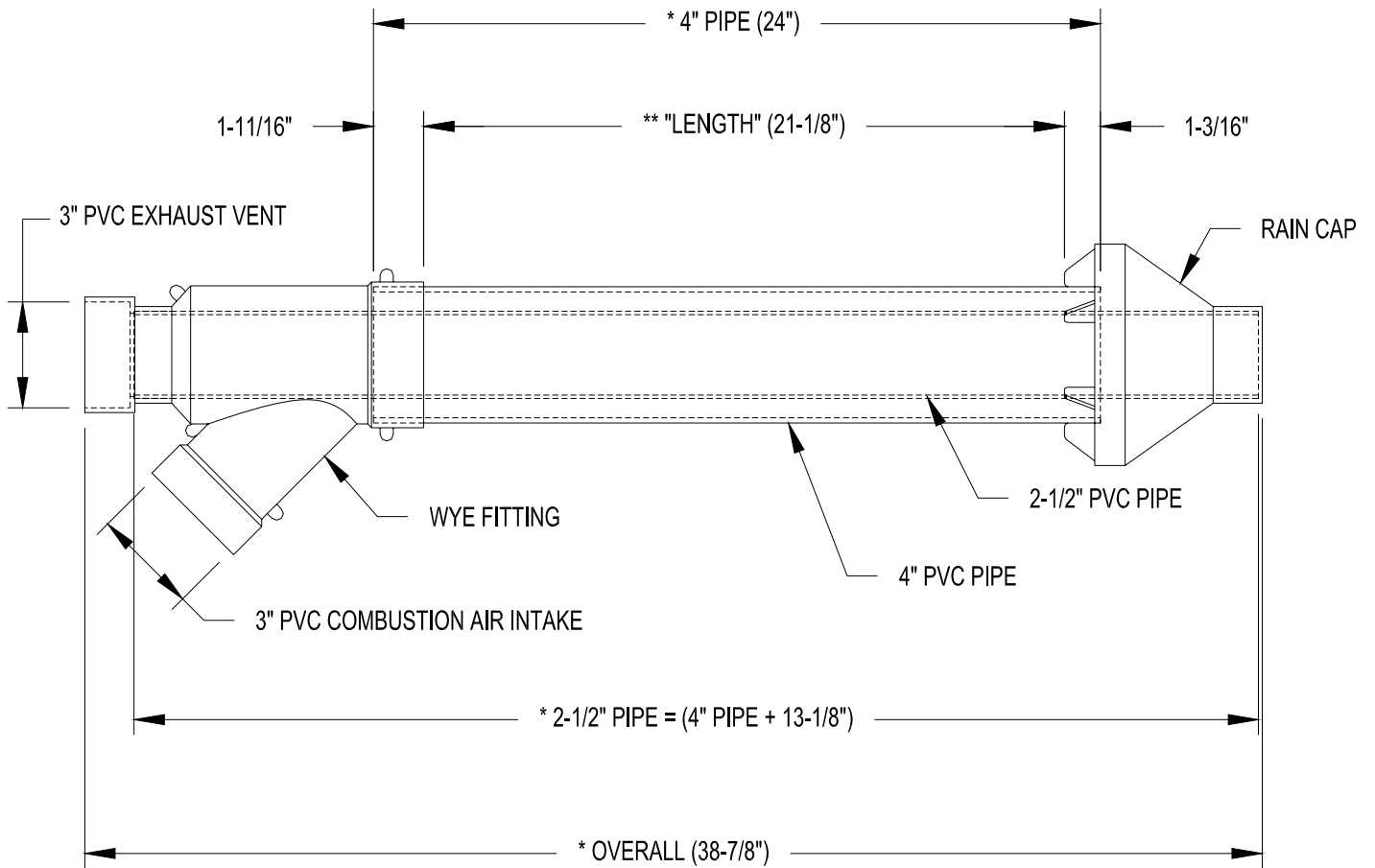
* DIMENSION WILL CHANGE ACCORDINGLY AS "LENGTH" DIMENSION IS INCREASED OR DECREASED.

** "LENGTH" DIMENSION MAY BE INCREASED TO 60" MAXIMUM OR DECREASED TO 12" MINIMUM.

FIG-4A

ALL INSTALLATIONS AND SERVICE MUST BE PERFORMED BY QUALIFIED SERVICE PERSONNEL.

3" CONCENTRIC VENT KIT (AOPS7489)



* DIMENSION WILL CHANGE ACCORDINGLY AS "LENGTH" DIMENSION IS INCREASED OR DECREASED.

** "LENGTH" DIMENSION MAY BE INCREASED TO 60" MAXIMUM OR DECREASED TO 12" MINIMUM.

FIG-4B

ALL INSTALLATIONS AND SERVICE MUST BE PERFORMED BY QUALIFIED SERVICE PERSONNEL.

5. Partially assemble the concentric vent termination kit. Clean and cement the parts using the procedures for Joining Pipe and Fittings section of the furnace installation manual. A) Cement the wye fitting to the larger diameter outer pipe. (see Fig-5) B) Cement the rain cap to the smaller diameter inner pipe. (see Fig-6)

NOTE: A field supplied stainless steel screw may be used to secure the rain cap to the inner pipe instead of cementing when field disassembly is desired for cleaning (see Fig-7).

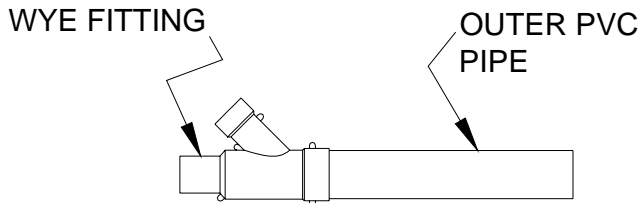


FIG-5

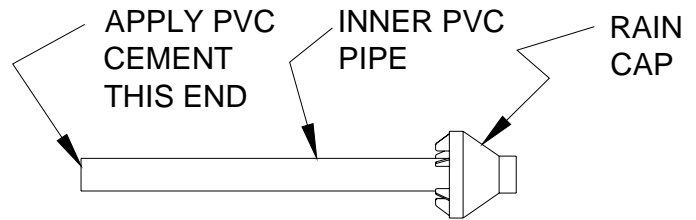


FIG-6

NOTE: DRILL CLEARANCE HOLE IN RAIN CAP AND PILOT HOLE IN VENT PIPE

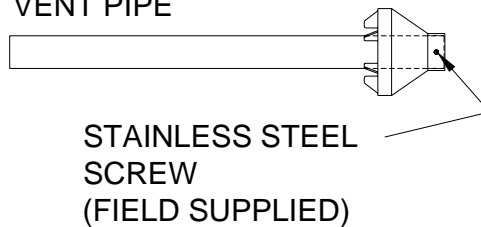


FIG-7

⚠ WARNING

CARBON MONOXIDE POISONING, FIRE AND EXPLOSION HAZARD.

Failure to follow this warning could result in death, personal injury and/or property damage.

When using the alternate screw assembly method, drill a clearance hole in the rain cap and a pilot hole in the vent pipe for screw size being used. Failure to drill adequate holes cause cracking o the PVC components, allowing flue gasses to be recirculated.

⚠ WARNING

CARBON MONOXIDE POISONING, FIRE AND EXPLOSION HAZARD.

Failure to follow this warning could result in death, personal injury and/or property damage.

Do not operate the furnace with the rain cap removed as recirculation of the flue gases may occur. Water may also collect inside the larger combustion air pipe and flow to the burner enclosure.

6. Install the wye fitting and outer pipe assembly (Fig-5) through the structure's hole. For vertical termination, install the parts through the field supplied roof boot/flashing. **NOTE:** Do not allow insulation or other materials to accumulate inside the pipe assembly when installing through the structure's hole.

7. Secure the assembly to the structure as shown in (Fig-2) or (Fig-3) using field supplied metal strapping or equivalent material.

NOTE: Ensure the termination height is above the roof surface or anticipated snow level as shown in (Fig-2) for vertical termination. Ensure the termination location clearance dimensions are as shown in (Fig-3) for horizontal termination.

8. Install the rain cap and the small diameter inner pipe assembly (Fig-6) in the wye fitting and large outer pipe assembly (Fig-5). Ensure that the small diameter inner pipe is bottomed out and securely cemented in the wye fitting.
9. Cement the furnace combustion air and vent pipes to the concentric vent termination assembly. See (Fig-2) or (Fig-3) for proper pipe attachment.
10. Operate the furnace through one heat cycle to ensure combustion air and vent pipes are properly connected to the concentric termination connections.