

INSTALLATION INSTRUCTIONS FOR VENT PIPE DRAIN KIT (51W18) USED WITH  
CONDENSING GAS FURNACES

**⚠ WARNING**

Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life. Installation and service must be performed by a licensed professional installer (or equivalent), service agency or the gas supplier.

**⚠ WARNING**



Risk of Carbon Monoxide poisoning.  
Can cause injury or death.  
Failure to follow these instructions could result in injury or death.

**Shipping & Packing List**

Package 1 of 1 contains the following:

- 1 - Drain trap assembly
- 1 - 2" Sanitary tee
- 1 - 3" Sanitary tee
- 1 - Rubber boot
- 1 - Clamp

**Application**

Use vent pipe drain kit (51W18) to install 2" or 3" PVC exhaust piping through the floor joists and into the the crawl space.

This kit can also be used as a supplemental drain for installations with an excessive amount of condensate run back in the vent pipe (ie. long horizontal runs, unconditioned spaces, etc.)

Refer to the furnace installation instruction for proper venting and vent termination. This instruction is for the installation of the vent kit only.

**Condensate Trap Assembly (Figure 1)**

- 1 - Assemble the condensate trap using the drain trap assembly, rubber boot, clamp and sanitary tee (2" or 3") as shown in figure 1. Make note of the position of the sanitary tee. Do not assemble trap as shown in figure 2.
- 2 - Torque the clamp on the rubber boot approximately 60 in-lbs.

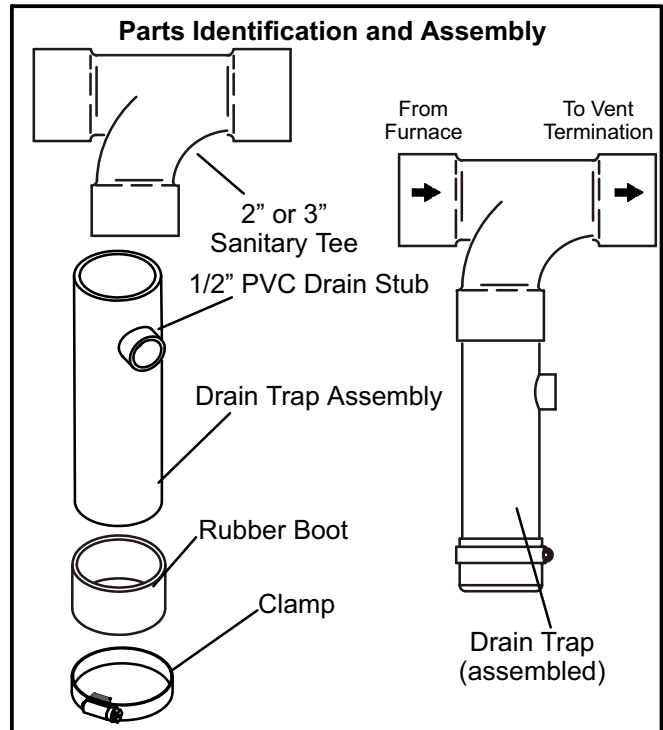


FIGURE 1

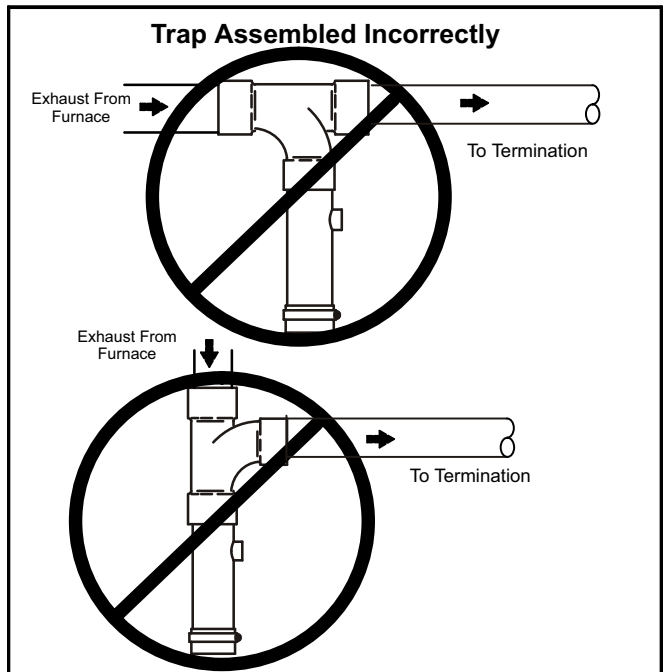


FIGURE 2



## Installation

- 1 - See figures 3, 4, and 5 for installation options. For crawl space application, determine best location for exhaust pipe to penetrate flooring and route for exhaust to exit crawl space. The kit should be installed as close to the furnace as possible.

## ⚠ IMPORTANT

For crawl space applications, the condensate trap **MUST** be located at the lowest point in the vent system and no more than 24" horizontally away from where the vent exits the furnace to achieve proper drainage.

- 2 - Cut and install desired length of exhaust PVC pipe.  
**NOTE** - All horizontal runs of exhaust pipe must slope back toward the trap kit a minimum of 1/4" (6mm) for each 12" (305mm) to ensure drainage.
- 3 - Glue the exhaust pipe and elbows to the appropriate tee.

## ⚠ DANGER

### DANGER OF EXPLOSION!

Fumes from PVC glue may ignite during system check. Allow fumes to dissipate for at least 5 minutes before placing unit into operation.

- 4 - Route the remaining PVC pipe through as shown in figures 3, 4 and 5. Glue 1/2" PVC to the 1/2" PVC drain stub and route to code approved drain.

**NOTE** - Do not drain condensate onto crawl space floor. Installation of the condensate trap and drain must comply with local codes.

## ⚠ CAUTION

Do not use copper tubing or existing copper condensate lines for drain line.

- 5 - See furnace Installation instruction for trap priming and unit start up procedures.

## ⚠ CAUTION

The condensate trap should be primed with water prior to start-up to ensure proper condensate drainage. Failure to follow this caution may cause furnace intermittent operation.

## ⚠ CAUTION

The exhaust vent pipe operates under a positive pressure and must be completely sealed to prevent leakage of combustion products into the living space or crawl space.

## Unheated Space

When the furnace is installed in an unconditioned space, consider provisions required to prevent freezing of condensate drain system. A heating cable kit is available in various lengths from the manufacturer.

**NOTE** - Exhaust piping must be insulated with 1/2" Armaflex or equivalent when run through unheated space. Do not leave any area of exhaust pipe open to outside air; exterior exhaust must be insulated with 1/2" Armaflex or equivalent.

## ⚠ CAUTION

Unit should not be installed in areas normally subject to freezing temperatures.

## SERVICE

### Winterizing and Condensate Trap Care

- 1 - Turn off power to the unit.
- 2 - Have a shallow pan ready to empty condensate water.
- 3 - Remove the rubber boot from the condensate trap and empty water. Inspect the boot for any damage.
- 4 - Reinstall the rubber boot on the trap. **DO NOT LEAVE THE TRAP UNCAPPED.** Torque the clamp on the PVC boot to approximately 60 in-lbs.
- 5 - To winterize leave trap empty. To prime trap, pour approximately 10 fl. oz. (300 ml) of water down the end of the exhaust pipe termination to refill the condensate trap.

### Upflow Or Downflow Furnace With Exhaust Through Crawl Space

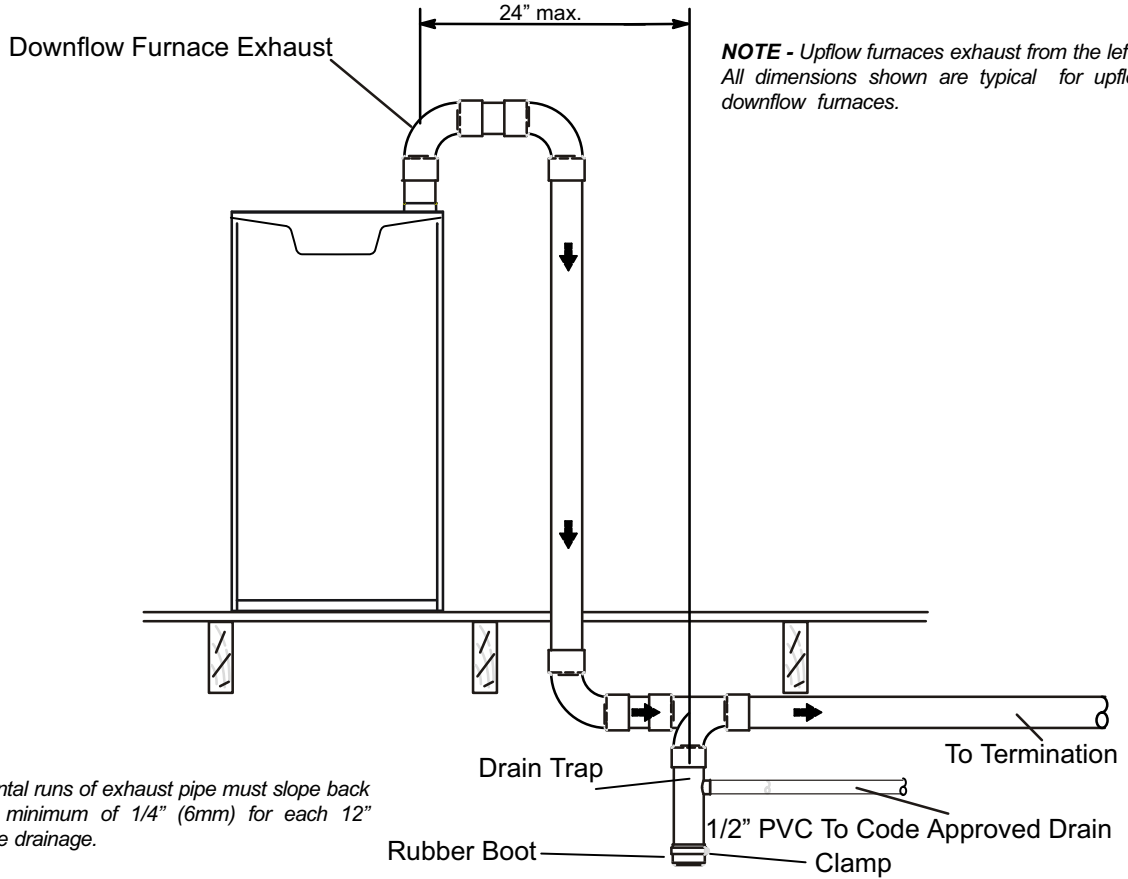


FIGURE 3

### Horizontal Furnace With Exhaust Through Crawl Space

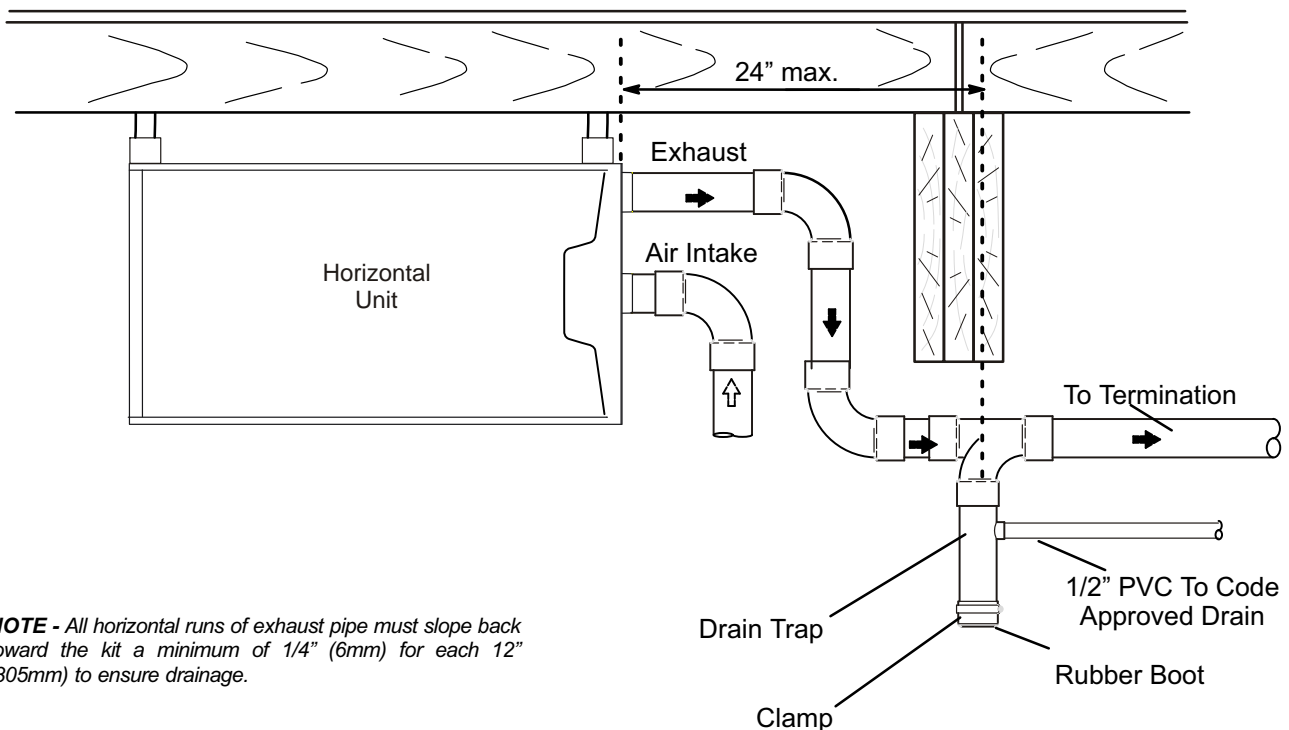
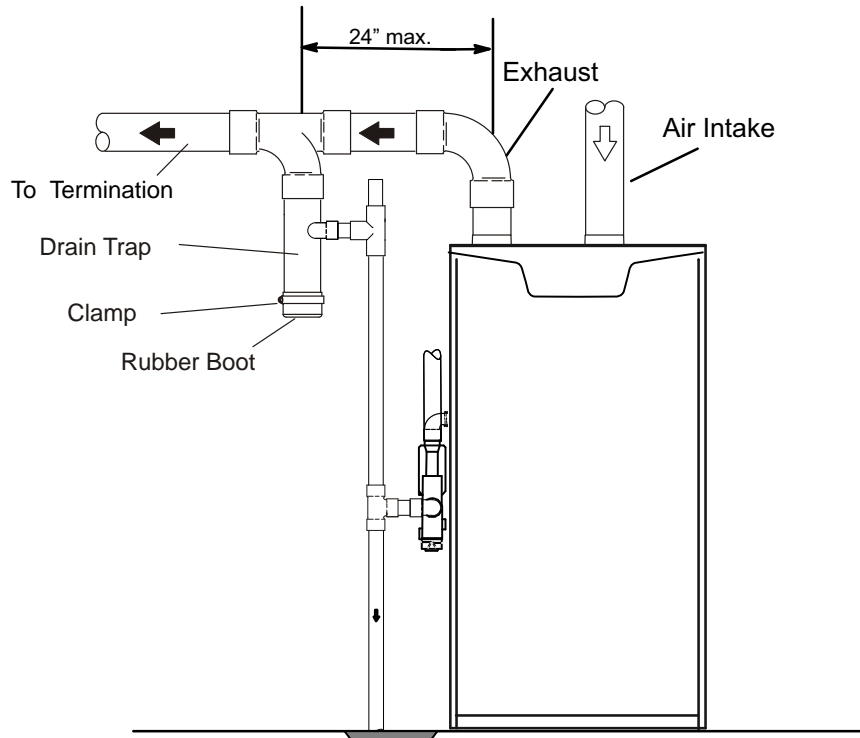


FIGURE 4

## Upflow Furnace With Optional Vent Pipe Drain Kit



**NOTE** - All horizontal runs of exhaust pipe must slope back toward the kit a minimum of 1/4" (6mm) for each 12" (305mm) to ensure drainage.

FIGURE 5