

INSTALLATION INSTRUCTIONS

DOWNFLOW VENT GUARD KIT

NAHB00301VC

NOTE: For the application of an 80%, 33.3 inch (846mm), multipoise, non-condensing furnace in a downflow application.

NOTE: Read the entire instruction manual before starting the installation.


SAFETY CONSIDERATIONS

Installing and servicing heating equipment can be hazardous due to gas and electrical components. Only trained and qualified personnel should install, repair, or service heating equipment.

Untrained personnel can perform basic maintenance functions, such as cleaning and replacing air filters. Trained service personnel must perform all other operations. When working on heating equipment, observe precautions in the literature, on tags, and on labels attached to or shipped with the unit, and other safety precautions that may apply.

Follow all safety codes. In the United States, follow all safety codes including the National Fuel Gas Code (NFPA) NFPA 54-2009/ANSI Z223.1-2009. In Canada, refer to the National Standard of Canada, natural Gas and Propane Installation Codes (NSCNGPIC), CAN/CGA-B149.1 and .2.

Wear safety glasses and work gloves. Have a fire extinguisher available during start-up, adjustment steps, and service calls.

Recognize safety information. This is the safety-alert symbol . When you see this symbol on the furnace and in instructions or manuals, be alert to the potential for personal injury.

Understand the signal words DANGER, WARNING, and CAUTION. These words are used with the safety-alert symbol. DANGER identifies the most serious hazards which **will** result in severe personal injury or death. WARNING signifies a hazard which **could** result in personal injury or death. CAUTION is used to identify unsafe practices which **may** result in minor personal injury or product and property damage. NOTE is used to highlight suggestions which **will** result in enhanced installation, reliability, or operation.

ISO 9001:2000



Kit Contents

DESCRIPTION	QUANTITY
Guard Front	1
Guard Back	1
Door Spacer	1
Guard Bottom	1
Screw	14
Installation Instructions	1



CAUTION

CUT HAZARD

Failure to follow this caution may result in personal injury. Sheet metal parts may have sharp edges or burrs. Use care and wear appropriate clothing, safety glasses and gloves when handling parts and servicing furnaces.



WARNING

ELECTRICAL SHOCK HAZARD

Failure to follow this warning could result in personal injury or death.

Before beginning any installation, be sure the main electrical disconnect switch is in the OFF position and a lockout tag is installed.

INTRODUCTION

To protect against exposed hot surfaces, the downflow vent guard should always be used when the vent pipe is installed along the outside of the furnace casing in a downflow application. This kit contains spacers to accommodate for both shallow door and deep door designed furnaces. This kit is designed for single- or double-wall 4" pipe. Type B vent connector after the Vent Guard is REQUIRED for all two-stage applications.

1. Remove appropriate vent opening. In the downflow position, remove knock-out for vent pipe on the lower left-hand side of the furnace casing.
2. Install spacer. Attach supplied spacer to Guard Front using three screws provided. (See Figure 1)

Figure 1

Install Spacer

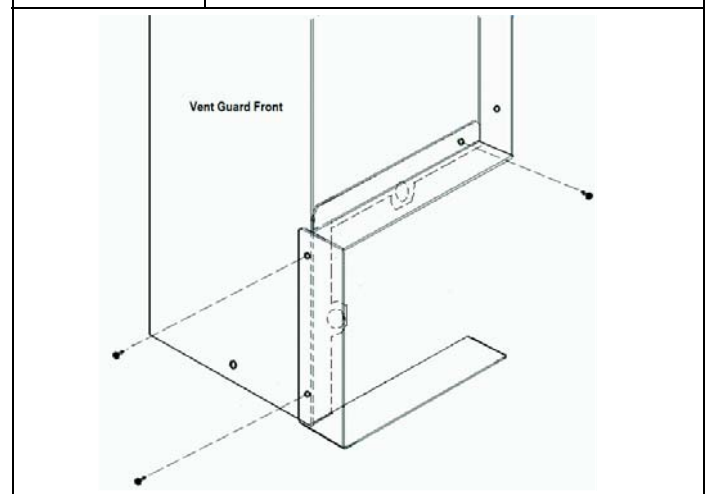


Figure 2 Locate Mounting Holes

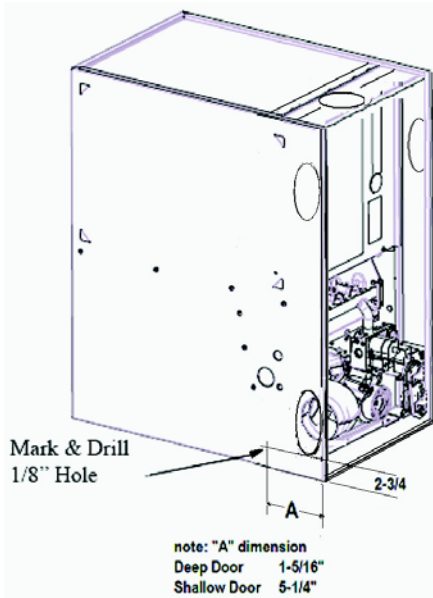
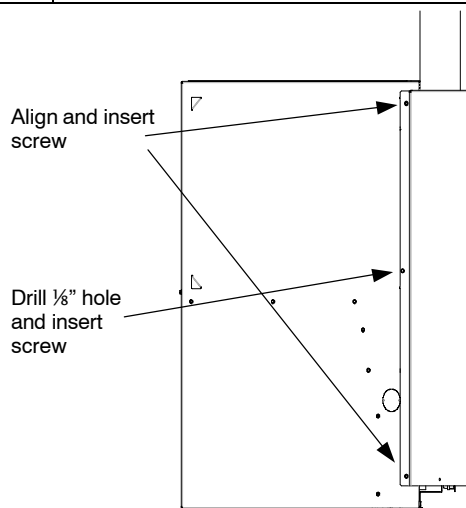
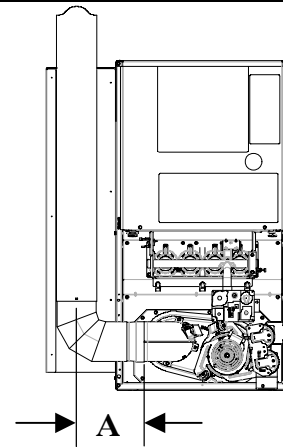


Figure 3 Install Guard Back



3. With the furnace in the downflow orientation, measure and mark location for the Vent Guard bottom mounting hole. (See Figure 2)
4. Drill a 1/8" hole thru the casing where indicated by mark.
5. Position the Guard Back on the casing side, aligning the bottom hole in the Guard Back flange with the drilled hole in the furnace casing. Secure the Guard Back to the casing with a screw (See Figure 3).
6. While assuring the flange is parallel with the front edge of the furnace, drill 1/8" holes through the furnace casing at the center and top Guard Back flange hole locations. Insert screws and tighten. (See Figure 3).
7. Reposition furnace vent elbow so outlet is towards left. (See furnace installation instructions.)
8. Attach vent pipe and elbow to furnace vent elbow with at least two field-supplied corrosion resistant sheet metal screws located 180 degrees apart at each connection joint. (See Figure 4)

Figure 4 Install Vent Pipe



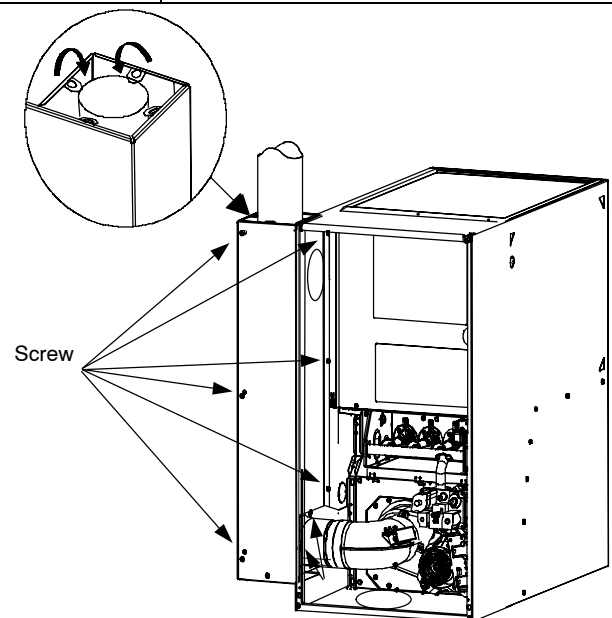
DIMENSIONS inch (mm)

Furnace Width	'A' – Centerline of Pipe to Elbow (Includes Flange)
14–3/16 (360.4)	5–9/32 (134.1)
17–1/2 (444.5)	7 (177.8)
21 (533.4)	8–3/4 (222.3)
24–1/2 (622.3)	10–1/2 (266.7)

9. Position Guard Front on Guard Back. (See Figure 5) Bend centering tabs equally at top of Guard Back and Guard Front to allow Guard Front to mount flush with Guard Back. Centering tabs on lower right-hand opening of Guard Front may also require bending.
10. Secure Guard Front to Guard Back with six screws. (See Figure 5) If necessary, rebend centering tabs so that vent pipe is securely centered in vent guard and will not rattle.
11. Position Guard Bottom at bottom of vent guard and secure with two screws. (See Figure 5)

NOTE: Guard Bottom will have a gap at the back and side when installed.

Figure 5 Install Guard Front



12. Install furnace door on casing and check fit.
13. If vent guard needs additional support, field fabricated angle brackets may be installed between the furnace casing and back of vent guard. (See Figure 7)

Figure 6 Install Guard Bottom

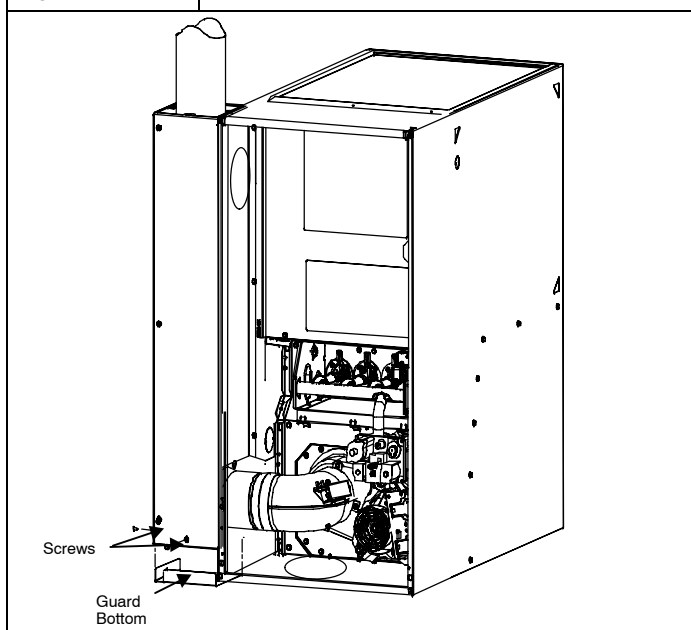
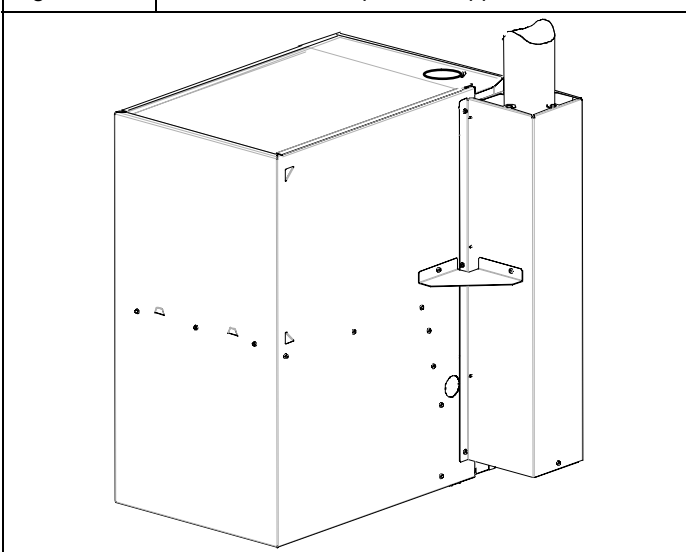


Figure 7 Field Fabricated Optional Support Bracket



WARNING

ELECTRICAL SHOCK AND CARBON MONOXIDE POISONING HAZARD

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

Before drilling additional holes in furnace casing or vent guard, be aware of what is on the other side. Screws tips may damage internal furnace components or vent system resulting in electrical shocks or shorting, flue gas leakage, or other hazardous conditions.