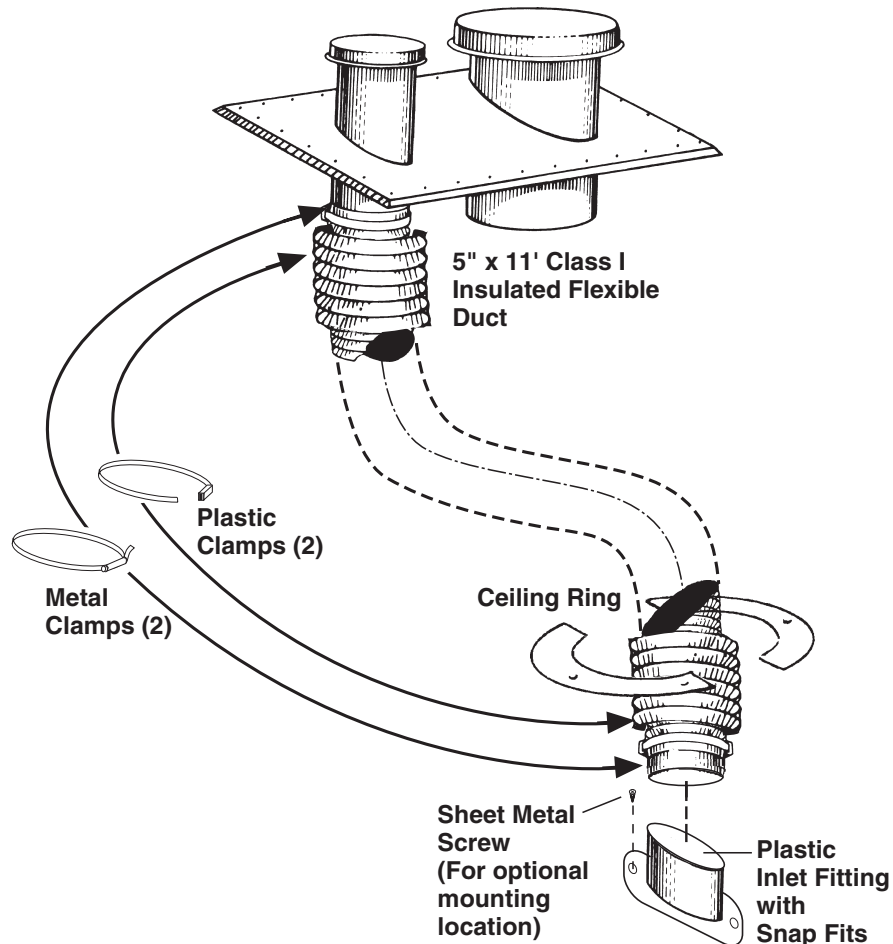


VentilAire™ IV Whole-House Fresh Air Supply System

Installation Instructions

914228 – Flat Roof Kit

914229 – Sloped Roof Kit



Components Included in Each Kit

Kits conform to H.U.D. Manufactured Home Construction and Safety Standard for ventilation, paragraph 3280.103(b)(2)(1-6). Effective May 30, 2006.

These instructions are primarily intended to assist qualified individuals experienced in the proper installation of heating and/or air conditioning appliances. Some local codes require licensed installation/service personnel for this type of equipment. All installations must be in accordance with these instructions and with all applicable national and local codes and standards.

Before beginning the installation, read these instructions thoroughly and follow all warnings and cautions in the instructions and on the unit.

Introduction

The VentilAire IV assembly provides fresh air to the living space and ventilation of the attic. VentilAire IV is an efficient way to introduce outdoor freshness to interior environments. It works in conjunction with the furnace blower and existing duct system and is able to work independently when the heating and cooling system is off. Best of all, VentilAire is a cost-effective way to substantially improve air quality and help control attic condensation in manufactured homes.

The attic ventilator is a power ventilator which automatically provides attic ventilation to reduce winter condensation and summer heat build up in the attic. To control condensation the ventilator operates at relative humidity levels above 40 percent and temperatures above 35°F. To control heat build-up the ventilator operates at temperature above 110°F.

The VentilAire system is designed for use with all NORDYNE manufactured housing series gas, oil and electric furnaces and air handlers.

Warranty

NORDYNE offers a limited warranty with the purchase of your new VentilAire system. The system is warranted for one (1) year, Parts and Labor, against any defects in materials and/or workmanship.

Due to many variable factors and conditions which the VentilAire System cannot control, the system is not warranted to prevent or cure moisture condensation problems in the home.

How It Works:

The home's Thermostat is the control device for selecting continuous Whole-House Ventilation. When the Thermostat is in the "WHOLE-HOUSE VENTILATION" position, the unit blower will operate continuously; independent of COOL or HEAT modes. When the furnace blower is operating, a negative pressure (suction) is created in the furnace plenum. This suction draws in fresh outdoor air which is mixed with the homes return air then distributed through the home duct system. When HEAT or COOL modes are selected, the fresh outdoor air and home return air are conditioned prior to being distributed throughout the home.

Attic Ventilator-Winter — When the attic space humidity level is above 40 percent R.H. and temperatures are above 35°F the ventilator will operate. The ventilator draws in fresh outside air and exhausts moisture laden air out of the attic space. This helps to reduce condensation problems. **Summer** — when the attic space temperature is above 110°F the attic ventilator will operate. The ventilator draws in cool outside air and exhausts hot air out of the attic space. This helps reduce heat build-up in the attic, thus reducing the air conditioning load.

Installation Instructions

DO NOT REMOVE THE OVAL KNOCKOUT IN FURNACE TOP BEFORE COMPLETING STEP ONE.

1. Determine the location of the plastic inlet fitting.

Gas Furnace (See Figure 1)- Oval knockout located at the top, near the front of the furnace.

Air Handler - Oval knockout located on the sides of the air handler.

Downflow Electric Furnace (see Figure 1) - The plastic inlet fitting may be mounted in the rear of the cabinet over the return air filter. When using an optional air conditioning coil, it may be mounted to the front or rear coil end-plate flange using the mounting holes provided.

An optional VentilAire Attachment Kit may be purchased to attach the plastic inlet fitting to the coil or wall in Heat/Cool and Heat only (no coil) applications. The plastic inlet fitting snaps into the Bracket opening without screws. The kit is Nordyne part number **919328**; bulk kit with 24 brackets along with fasteners.

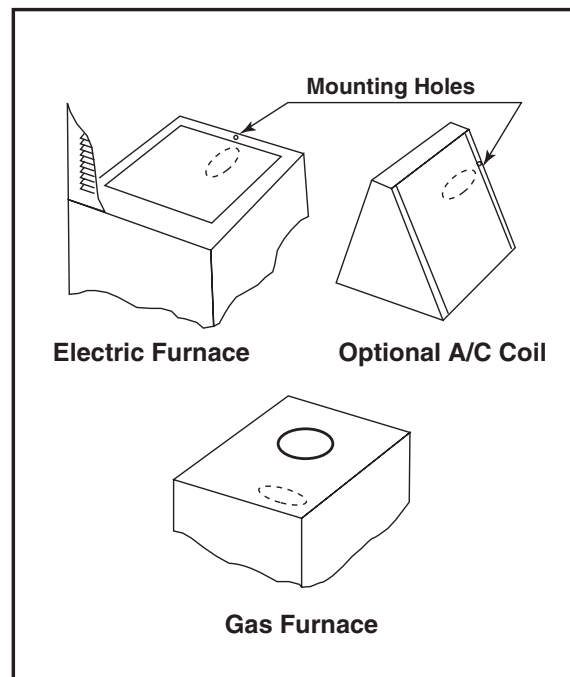


Figure 1. Plastic Inlet Fitting Location

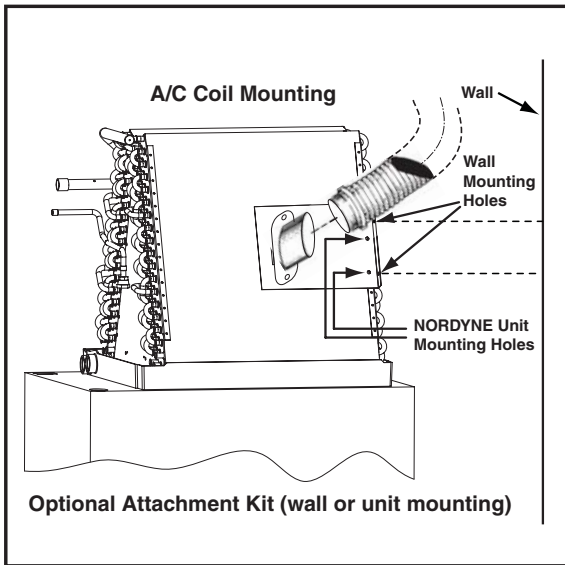


Figure 2. Downflow Electric Furnace with A/C

Electric Furnace with Nordyne A/C coil (see Figure 2) - Align and fasten the Ventilare Attachment bracket with the holes of the Nordyne coil end-plate flange.

*Electric Furnace with non-Nordyne A/C coil (see Figure 2) - When using other brands of coils, the installer has the option to attach the bracket to the wall of the furnace cavity. Fastening **must** penetrate into a framing member or sheetrock anchors.*

Electric Furnace, Heating only, no coil (see Figure 3) - The bracket may also be mounted directly to the front of the Electric Furnace.

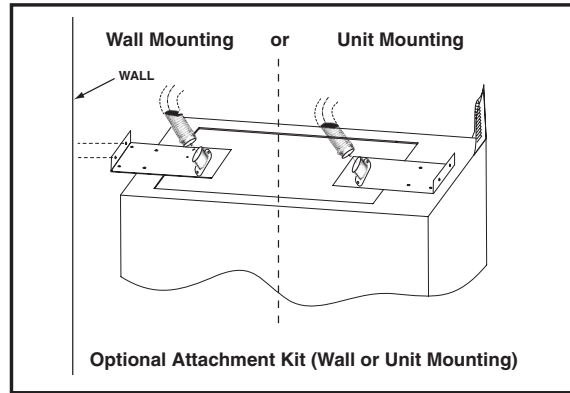


Figure 3. Downflow Electric Furnace with Heat Only

In wall mounting applications, the bracket should be positioned at the rear of the unit with the entire bracket opening located over the return air inlet.

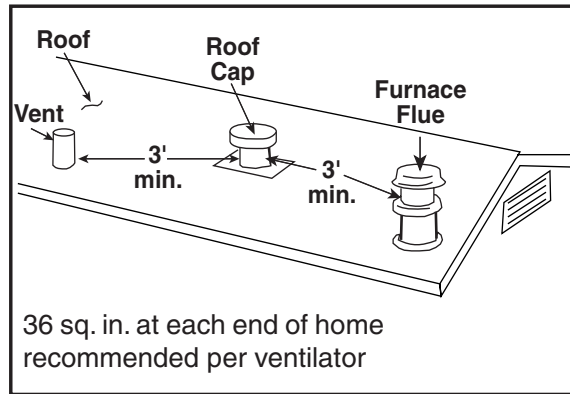


Figure 4. Roof Spacing

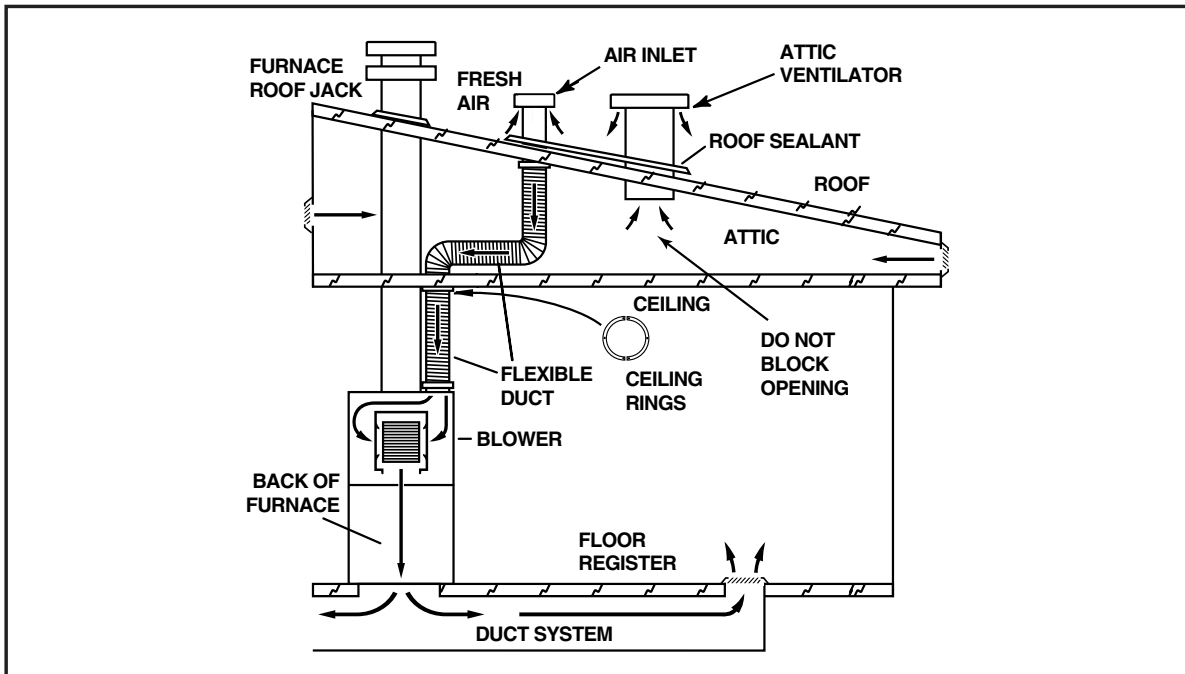


Figure 5. General Install Setup

NOTE: In all applications, the VentilAire system should be positioned no more than two inches (2") from the return air inlet opening of the Furnace or Coil without interfering with the filter or coil fins.

Upflow Electric Furnace - a special adaptor (914427) may be applied over the square refrigerant line knockout.

- 2a. For oval knockout installation, place the plastic inlet fitting with locking tabs onto the sheet metal. The side with tabs further apart (back) should be inserted first, then push gently on the front in the center of the part until front tabs fall below the sheet metal and release. Part will tighten securely in place after application of metal clamp.
- 2b. For optional locations use the sheet metal screw provided through one of the clearance holes on the plastic inlet flange.
3. Cut approximately a 7-inch diameter hole in ceiling directly above the duct fitting. Avoid ceiling joists and other obstructions in the ceiling cavity and keep debris from falling into furnace.
4. Determine location of roof opening. The roof cap assembly should be located as closely as possible to the center of the home, allowing connection of the fresh air intake to the furnace using the 11-foot length of flexible duct provided (See Figure 4) on page 4.

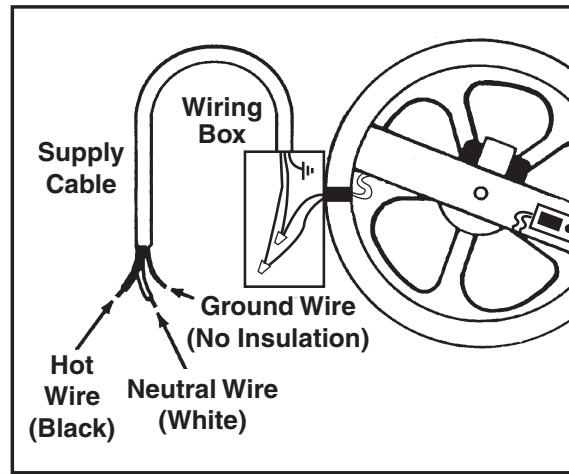


Figure 6. Hot, Neutral, and Ground Wire Connections

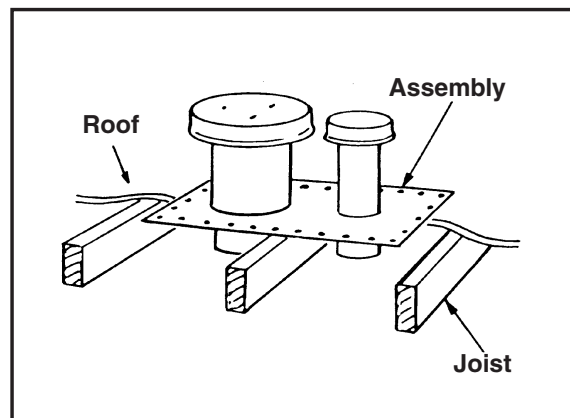


Figure 7. Ventilator Roof Alignment

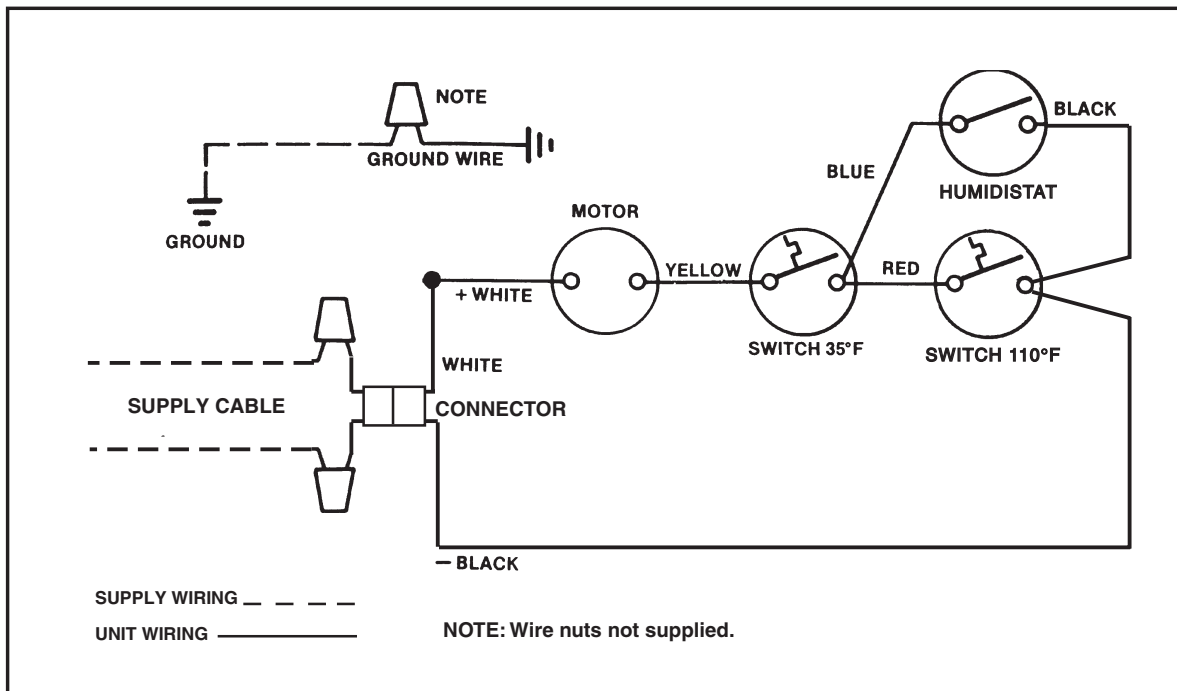


Figure 8. VentilAire IV Wiring Diagram

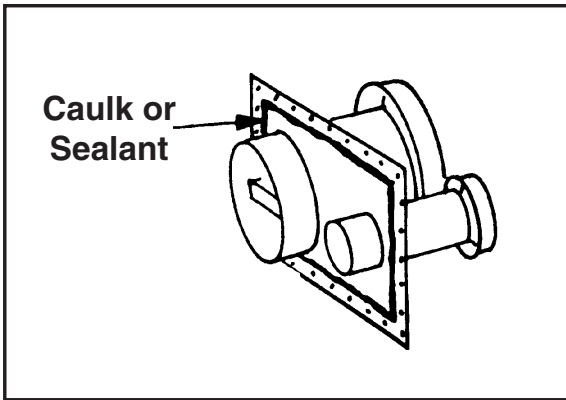


Figure 9. Sealant Application

! CAUTION:

The air inlet cap MUST be located at least 3 feet from any plumbing vent or exhaust vent (gas or oil furnaces, water heater, fireplace, etc.).

Note: The attic must be vented to the outside at each end of the manufactured home. This venting is recommended to be a minimum of 36 sq. in. of free open area at each end of the home, preferably at the roof or at the eave. Other locations may be used as long as they are located so as to provide even air movement through the attic space.

On double-section manufactured homes at least one vent on each side of each end on the home must be used (minimum of 4-vents,

total), preferably at the roof or at the eave. These vents are recommended to have at least 18 sq. in. of free area each. There must also be an opening in the marriage wall of at least 144 sq. in. for proper venting.

5. Cut approximately a 9" x 19" opening in roof.
Note: Separate round openings of 9" and 6" may be cut on 12" centers if desired.
6. Route flexible duct through ceiling hole between the roof opening and the furnace area.
7. Attach one end of flexible duct to bottom flange of air intake opening. Secure the inner duct with one of the metal clamps provided and the insulation duct with one of the plastic clamps provided.
8. Electrical hook-up. Refer to wiring diagram in figure 8 on page 5.
 - a. The ventilator is equipped at the factory with a wiring box and connector for 14/2 or 12/2 ROMEX supply cable with ground, or equivalent.
 - b. Connect "HOT" wire to BLACK lead and "NEUTRAL" wire to WHITE lead. Secure connections with suitable wire nuts (See Figure 6) on page 5.
 - c. Connect "GROUND" wire at appropriate ground connection (wiring box green grounding screw).
9. Apply appropriate caulking or roof sealing material to ventilator cap assembly. Apply compound to underside of ventilator cap flashing to form a continuous strip around the underside of the perimeter of the flashing as seen in figure 9.

VentilAire III and IV Application Chart

Furnace Model	Fresh Air Supply CFM - Blower Speed			
	Low	Med-Low	Med-High	High
M1*B		50 (1,429)	65 (1,857)	85 (2,429)
M1*C	60 (1,714)	70 (2,000)	80 (2,286)	90 (2,430+ *)
M2RC	75 (2,143)	90 (2,430+ *)		
M2RL	80 (2,286)	90 (2,430+ *)		
M3RL	65 (1,857)	80 (2,286)	90 (2,430+ *)	
E3EB	50 (1,429)	70 (2,000)	80 (2,286)	90 (2,430+ *)
B5BV-000K-B	50 (1,429)	65 (1,857)	90 (2,430+ *)	
B5BV-000K-C	70 (2,000)	90 (2,430+ *)		

* Manufactured homes with square footage greater than or equal to 2430 ft² should use a maximum 90 cfm rating per H.U.D. 3280.103(b)(1-6).

- Values in parentheses are maximum living space area in sq. ft. per H.U.D. 3280.103(b)(1-6).
- Furnaces are factory preset to HIGH blower speed for Whole-House Ventilation.

10. Attach ventilator cap assembly to roof. Press down firmly over caulking on flashing to ensure a waterproof seal. Secure roof cap flashing with appropriate fasteners for your specific roof construction. As an added protection against leaks, coat the ventilator flashing and fasteners with roofing compound.
 11. Pull slack in flexible duct down through ceiling hole to inlet fitting, being careful not to damage or severely bend the duct. Trim off any excess length of duct to minimize restrictions.
 12. Shape end of flexible duct to fit over collar on inlet fitting and attach with clamp provided.
 13. Install ceiling ring around flexible duct and attach to the ceiling. Note: Alternate ceiling ring(s) or other suitable materials may be used.
 14. Be sure that the bottom of the attic ventilator sleeve is not blocked by roof installation. A minimum clearance of 1¹/₂" is needed below the sleeve to ensure proper airflow and a minimum clear space in the attic of 1" is recommended for good ventilation.
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Recommendations to Home Owner

Moisture Control in the Home:

Follow the recommendations of the manufacturer of your home to maintain low levels of moisture in your home.

NORDYNE Recommendations:

- When moisture-producing activities (cooking, bathing, etc.) are occurring, operate exhaust fans.
- Avoid hanging clothes to dry within your manufactured home.
- Vent all fuel burning appliances.
- Avoid using humidifiers.
- Avoid having large quantities of houseplants, pools of water, and other moisture-producing conditions.
- Place a vapor barrier (such as plastic sheeting) on top of the ground underneath your manufactured home.
- Ventilation openings should be provided in skirting.
- The fresh air supply to your home may be energized at any time by switching the furnace control (or the thermostat control, if so equipped) to "VENTILATION."
- Periodically check that the unit is operating properly. Call for service if the unit is not functioning.

— INSTALLER —

Do Not Discard These Instructions.

After completing the installation, return these instructions to the Homeowner's Package for owner-user's future reference.

Complies with H.U.D. Manufactured Home Construction & Safety Standards.



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Specifications and illustrations subject to change
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