

CB-200A Cottage Base

Installation Instructions

IMPORTANT: Read all instructions carefully before beginning the installation.

! WARNING:

This base must be installed by a qualified installing agency and in accordance with applicable local codes and ordinances that govern this type of equipment. Failure to properly install the furnace, base assembly, and venting system as described herein may damage the equipment and/or the home, can create a fire or asphyxiation hazard, violates U.S. listing requirements, and will void the warranty. This furnace is NOT approved for installation with split system air conditioning. Use a NORDYNE packaged air conditioning system.

GENERAL SPECIFICATIONS

The model CB-200A cottage base is designed for use with the CMF furnace and can be used in two different installations (See Table 1):

1. A residential† single-story dwelling type installation, for which no ductwork can be used. In some special cases, a direct vent system‡ is required for this type of installation. Refer to the “Combustion and Ventilation Air Requirements” section later in these instructions for more details.
2. A direct vent residential† single-story dwelling type installation, for which ductwork can be attached to the cottage base.

INSTALLATION REQUIREMENTS

Equipment Check

All units are securely packaged at the time of shipment and should be carefully inspected upon arrival for damage. Claims for damages (apparent or concealed), shortage in shipment, or nondelivery should be filed immediately against the carrier by the consignee. The carrier is responsible for making prompt inspection of damage and for a thorough investigation of each claim. The manufacturer will not accept claims for transportation damage.

Requirements and Codes:

All installations must conform with these instructions, all applicable local building codes, ANSI Z223.1/NFPA 54 (National Fuel Gas Code), ANSI/NFPA 31 (Installation of Oil-Burning Equipment), ANSI/NFPA 70 (National Electrical Code), and NFPA 211 (Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances).

The National Fuel Gas Code is available by writing:

American National Standards Institute, Inc.
1430 Broadway
New York, NY 10018

NFPA publications are available by writing:

National Fire Protection Association
Batterymarch Park
Quincy, ME 02269

The CMF furnaces are certified to the UL 307 standards (UL 307A for the oil models; UL 307B for the gas models).

| Type of Installation | Ducted Application | Direct Vent System‡ Required | Flue Products Exhausted By |
|----------------------|--------------------|------------------------------|--|
| Residential† | Yes | Yes | Nordyne SRJ Roof Jack or an Existing Chimney** |
| Residential† | No | No* | Nordyne SRJ Roof Jack or an Existing Chimney** |

† Residential is only defined herein as a non-manufactured housing single-story dwelling type application.

‡ A direct vent system is one that draws the combustion air directly from outside the home through an air pipe.

* In some installations, a direct vent system must be used. Refer to the “Combustion and Ventilation Air Requirements” section later in these instructions for more details.

** Refer to the “Venting Requirements” section later in these instructions for more details on properly venting this appliance through an existing chimney.

Table 1. Approved CB-200A Cottage Base Installation Requirements.

Combustion Air and Ventilation Requirements

Provisions for adequate combustion air and ventilation air must be in accordance with these instructions, all applicable local building codes, ANSI Z223.1/NFPA 54 (National Fuel Gas Code), NFPA 31 (Installation of Oil-Burning Equipment), and NFPA 211 (Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances).

! WARNING:

If an inadequate supply of combustion air is supplied to the furnace, then incomplete combustion may occur which can produce poisonous gases causing asphyxiation resulting in sickness or death.

Depending upon the type of installation (refer to Table 1), the CMF can draw the combustion air either from outside the home (direct vent) or from the room being conditioned. An adequate supply of combustion air must be supplied to the furnace in either type of installation.

! CAUTION:

The combustion air openings in the side of the unit and the warm air registers of the cottage base must NOT be restricted or blocked.

For direct vent applications, the direct vent kit must be installed. Refer to the Replacement Parts Listing for more information on ordering the kit. To install the direct vent kit, follow the instructions provided with that kit.

For applications that draw the air from the conditioned space, an adequate supply of combustion and ventilation air must be provided to the conditioned space. When unsure about the combustion air supply availability, a direct vent system should be used. No ductwork can be used, when drawing the combustion air from the conditioned space. In such instances, only the registers in the cottage base are to be used to distribute the conditioned air. Furthermore, the combustion air openings of the furnace must not be restricted or blocked.

For small rooms, confined spaces, tight construction, or similar situations in which the combustion air requirements of the furnace might not be met, a direct vent system MUST be used. In such cases where the combustion air is supplied by permanent openings in the building, NEVER obstruct or block those openings.

! CAUTION:

Be sure to follow all applicable codes when installing the means for the combustion air.

Combustion air must not be drawn from a contaminated atmosphere. Excessive exposure to contaminated combustion air will result in safety and performance related problems. Some examples of chemical contaminants are chlorine, fluorine, and sulfur, which can be found in a wide variety of some common commercial and household products.

Venting Requirements

For venting requirements, see the section entitled "Venting the CMF Furnace."

BASE INSTALLATION WITHOUT DUCTWORK ATTACHED

Combustion Air

The combustion air may be drawn directly from the conditioned space using the side panel grilles, as shown in Figure 1. However, some installations require a direct vent system (see the "Combustion and Ventilation Air Requirements" section for more details).

Combustion Air Grille Installation

- Locate the four dimples in each side panel.
- In each side panel, cut out the rectangle created by the outside of the dimples, as shown in Figure 1. The approximate location and size of the rectangular area to be cut out is shown in Figure 1.
- Secure the grilles to the side panels using the self-drilling fasteners provided with the kit.
- Remove the hose clamp that secures the flexible hose to the burner. Remove the hose from the unit and discard.

NOTE: the open area of the grille should not be restricted or blocked.

Conditioned Air Distribution

This type of installation must not have ductwork attached to the cottage base or use the cottage base as a plenum for ductwork. The conditioned air must be distributed to the room by the registers of the cottage base. Note that the front register is not adjustable and remains fully open.

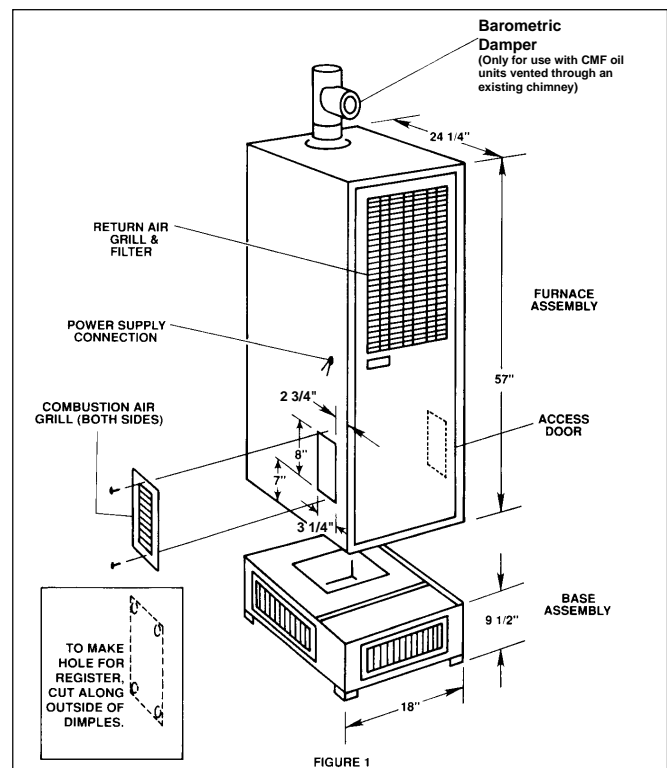


Figure 1. Non-Direct Vent Furnace Installation

Unit Location and Clearance to Adjacent Material Requirements

The unit must be installed in a level position. The unit may be located in a corner or with the rear of the unit against an open wall, as shown in Figure 2. The furnace and cottage base must be installed with the minimum clearances from adjacent materials as stated in Table 2. Additional clearance should be provided to permit servicing of filters, blower, motors, controls, combustion air connections, and vent connections.

The base should be located on a hard surface. When the furnace location is carpeted, a hard surface platform underneath the cottage base must be used.

To Install the Unit on the CB-200A Base

- Position the CB-200A cottage base in the desired location, which must abide by the minimum clearances to adjacent materials detailed in Table 2.
- Set the furnace on the cottage base without damaging the foam gasketing material on the base top, as shown in Figure 1. Ensure that the furnace is seated on the back of the base.
- Fasten the front of the furnace to the base with fasteners provided with the kit.

BASE INSTALLATION WITH DUCTWORK ATTACHED

Combustion Air

This type of installation must use a direct vent system. For proper installation of the direct vent kit, follow the instructions provided with that kit. The combustion air opening of the direct vent kit must not be restricted or blocked.

Conditioned Air Distribution

The ductwork must be designed and installed in accordance with all applicable local codes and NFPA 90B (Standard for Installation of Residence Type Warm Air Heating and Air Conditioning Systems). The ductwork

must be properly sized for the airflows listed in Table 3 at the given the external static pressures (ESP). Improperly designed ductwork could result in noisy operation, nuisance cycling, and other related problems.

The unit must be installed in a level position. The furnace and cottage base must be installed with the minimum clearances from adjacent materials as stated in Table 2. Additional clearance should be provided to permit servicing of filters, blower, motors, controls, combustion air connections, and vent connections.

The base should be located on a hard surface. When the furnace location is carpeted, a hard surface platform underneath the cottage base must be used.

| | Front | Back | Sides | Top | Vent Pipe |
|-------------------|-------|------|-------|-----|-----------|
| Minimum Clearance | 36 | 3* | 2** | 17 | 9* |

* Rear clearance may be zero inches, but vent clearance will then be reduced to 6 inches. Refer to Appendix B of NFPA 31 for requirements to achieve 6 inch vent clearance.
 **The minimum clearance to the warm air registers of the cottage base must be 36 inches. Use a blank off panel (#100427) to replace register when clearance is less than 36 inches.

Table 2. Minimum Clearances to Adjacent Materials

| External Static Pressure (In. WC) | Airflow on Low Speed For 65 Kbtu/h Input (CFM) | Airflow on Low Speed For 75 Kbtu/h Input (CFM) | Airflow on Low Speed For 90 Kbtu/h Input (CFM) |
|-----------------------------------|--|--|--|
| 0.1 | 730 | 920 | 1000 |
| 0.2 | 690 | 880 | 960 |
| 0.3 | 650 | 840 | 900 |
| 0.4 | 610 | 780 | 860 |
| 0.5 | 560 | 740 | 810 |
| 0.6 | 510 | 690 | 760 |

Table 3. Airflow Data

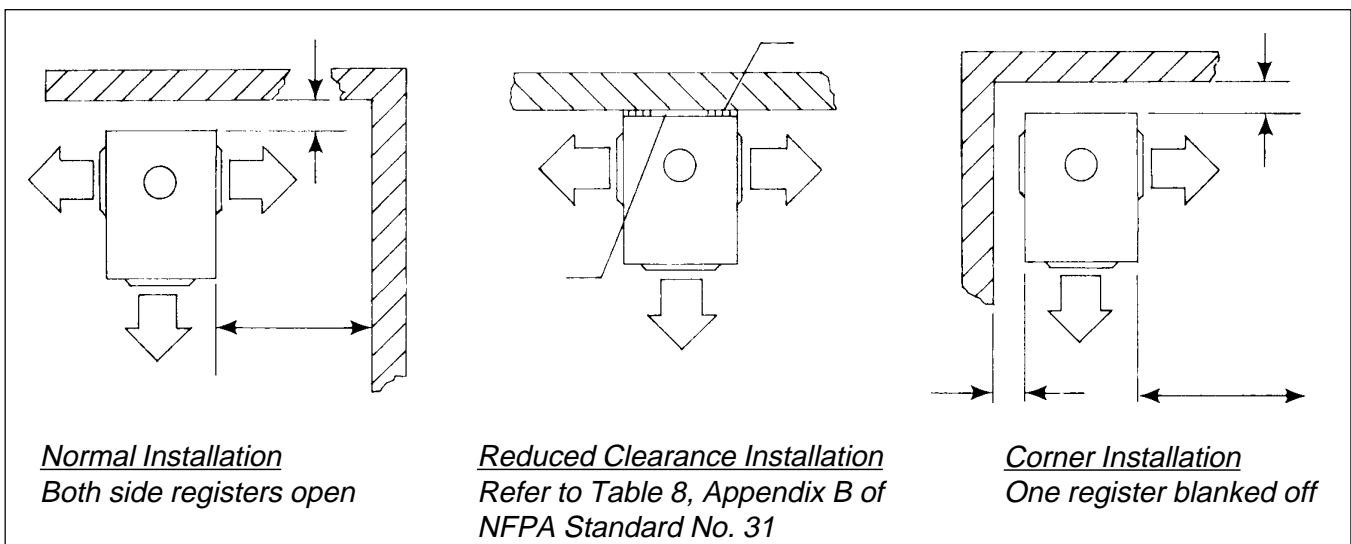


Figure 2. Typical Furnace Installations Without Ductwork

To Install the Unit on the CB-200A Base

- Position the CB-200A cottage base in the desired location, which must abide by the minimum clearances to adjacent materials detailed in Table 2.
- Set the furnace on the cottage base without damaging the foam gasketing material on the base top. Ensure that the furnace is seated on the back of the base.
- Fasten the front of the furnace to the base with fasteners provided in the kit.
- Attach the ductwork to the cottage base.

VENTING THE CMF FURNACE

WARNING:

This furnace must not be connected to a chimney serving a separate appliance designed to burn solid fuel.

WARNING:

DO NOT vent into the home or attic space. This appliance must be vented directly to the outdoors.

When installed as described in Table 1, the CMF furnace may be vented through the SRJ series roof jack or through an existing chimney. If the SRJ roof jack is to be used, then the instructions for selecting the proper roof jack for your installation are detailed in the installation instructions provided with the furnace. If venting through an existing chimney, then the venting system used must be in accordance with these instructions, all applicable local building codes, ANSI Z223.1/NFPA 54 (National Fuel Gas Code), NFPA 31 (Installation of Oil-Burning Equipment), and NFPA 211 (Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances).

WARNING:

WARNING: When venting through a chimney, check the chimney for soot, leaks, obstructions, and proper installation.

The materials used to construct the venting system must be capable of withstanding exposure to temperatures of at least 700 degrees F. The existing chimney servicing this furnace must be vertical. Horizontal distances to an existing chimney must be as short as possible, and the connecting pipe must slope upward to the chimney at not less than a 45 degree angle. The total length of the sloping pipe must not exceed 6 feet. The venting system must have no obstructions or sharp bends where soot and other foreign matter can accumulate.

If an inspection determines that the chimney is obstructed, the chimney must be cleaned. In such instances, the connecting vent pipe should be cleaned or replaced.

ONLY for installations of a CMF power oil furnace vented into an existing chimney: a barometric damper can be installed at the vent connection of the furnace to regulate the draft. The barometric damper must be properly installed per the manufacturer's instructions. Refer to all applicable codes to determine whether or not a barometric damper can be used for your CMF power oil furnace installation. The barometric damper used must be installed such that air from the conditioned space can only enter the vent passageway. Do not use a double acting barometric damper. All vent pipe joints should be fastened with sheet metal screws for rigidity.

The chimney height, required draft, and number of appliances served by the chimney must be in accordance with all applicable codes. To prevent down draft, the chimney should extend at least two feet above the peak of the roof.

It is recommended that the furnace vent serve no other appliances. When the chimney serves only the furnace, the vent area must be sized according to all applicable codes. The minimum internal area of the vent must be equal to at least the area of the furnace flue exit.

When two or more appliances must vent through a common vent, the area of the common vent should be sized in accordance with all applicable codes.

When an existing furnace is removed or replaced in a venting system, then the venting system may not be properly sized to vent the attached appliances. The venting system must be checked to ensure proper venting. Improperly sized venting systems can result in the formation of condensate, leakage, spillage, et cetera. Refer to ANSI Z223.1/NFPA 54 (National Fuel Gas Code), ANSI/NFPA 31 (Installation of Oil-Burning Equipment), and NFPA 211 (Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances) for correcting any improperly operating venting system.

The following steps shall be followed with each appliance connected to the venting system placed in operation, while any other appliances connected to the venting system are not in operation:

- Seal any unused openings in the venting system.
- Inspect the venting system for proper size and horizontal pitch, as required in the ANSI Z223.1/NFPA 54, (National Fuel Gas Code) and ANSI/NFPA 31 (Installation of Oil Burning Equipment), and these instructions. Determine that there is no blockage or restriction, leakage, corrosion or other deficiencies which could cause an unsafe condition.

- c. In so far as is practical, close all building doors and windows and all doors between the space in which the appliance(s) connected to the venting system are located and other spaces of the building. Turn on clothes dryers and any appliance not connected to the venting system. Turn on any exhaust fans, such as range hoods and bathroom exhausts, so they shall operate at maximum speed. Do not operate a summer exhaust fan. Close fireplace dampers.
- d. Follow the lighting instructions. Place the appliance being inspected in operation. Adjust thermostat so appliance shall operate continuously.
- e. Test for draft hood equipped appliance spillage at the draft hood relief opening after 5 minutes of main burner operation. Use the flame of a match or candle.
- f. After it has been determined that each appliance connected to the venting system properly vents when tested as outlined above, return doors, windows, exhaust fans, fireplace dampers and any other gas burning appliance to their previous conditions of use.
- g. If improper venting is observed during any of the above tests, the venting system must be corrected.

FUEL PIPING, ELECTRICAL WIRING, AND THERMOSTAT CONNECTIONS

For proper installation, follow the Installation Instructions provided with the furnace.

FINISHING THE INSTALLATION

Run the unit through a complete cycle to assure proper operation. The operating sequence of the furnace is outlined in the installation instructions provided with the furnace.

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

