

Code Contradictions forced by HUD on Mfd Homes

HUD Code for HVAC home mfd Homes See Next Sheet

Counterflow Gas or Oil Heating Appliance

Owners Manual/Installation Instructions

- CMF80-PG Convertible (65, 75, and 90 KBTU/H Inputs),
- CMF 100-PG (90 KBTU/H Input)
- CMF80-PO Convertible (65, 75, and 90 KBTU/H Inputs),
- CMF 100-PO (90 KBTU/H Input)

Read all instructions carefully before beginning the installation. Read all labels and tags on the furnace carefully and follow all precautions outlined on those labels and tags.

FOR YOUR SAFETY

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

! WARNING:

Improper installation, alteration, service or maintenance can cause injury or property damage. Refer to this manual for assistance or consult a qualified installer, service agency, or the gas supplier for additional information.

FOR YOUR SAFETY WHAT TO DO IF YOU SMELL GAS

- Do not try to light any appliance.
- Do not touch any electric switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

Rated BTUH	CMF-PG 80 CONV.	CMF-PO 80 CONV.	CMF-PG 100	CMF-PO 100
Input	75,000	75,000	90,000	90,000
Output	56,000	60,000	68,000	72,000

GENERAL

CMF furnaces are high quality, direct vent furnaces used for manufactured housing, rec-

reational vehicle, and residential† applications. These furnaces are offered in either power gas (designated by PG) or power oil (designated by PO) models. The power gas models are designed for operation with either natural or propane (LP) gas.

The CMF series is convertible from power oil to power gas, and vice versa. Furthermore, the firing rate of the CMF80 Convertible Series can be changed using a certified NORDYNE conversion kit field-installed by a qualified service technician. Refer to the "Firing Rate Conversion" section later in these instructions for more information on the firing rate change.

These furnaces are certified to the UL307 standards (UL 307A for oil models; UL 307B for gas models), and can be installed in a variety of applications, as shown in Table 1. This furnace is not to be used for temporary heating of buildings or structures under construction.

! WARNING:

This furnace 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.

WARNING:

1. The roof jack and vent pipe as determined from the chart on in Figure 7 must be applied.
2. The indicating line near the bottom of the roof jack must extend below the finished ceiling.
3. The vent pipe must be attached to the furnace flue collar with the sheet metal screw provided.
4. **DO NOT** install any elbows (adjustable or non-adjustable) or a stack damper in the venting system.

NOTICE: Accuracy in locating the base pan and the roof jack openings with respect to the flue outlet is required to avoid hazardous misalignment of the air and vent systems. (See Figure 1)

Use only the SRJ series roof jack as specified on the furnace label.

Cut an approximate 8-1/4" diameter opening through the roof and ceiling directly in line with the flue connection on the top of the furnace.

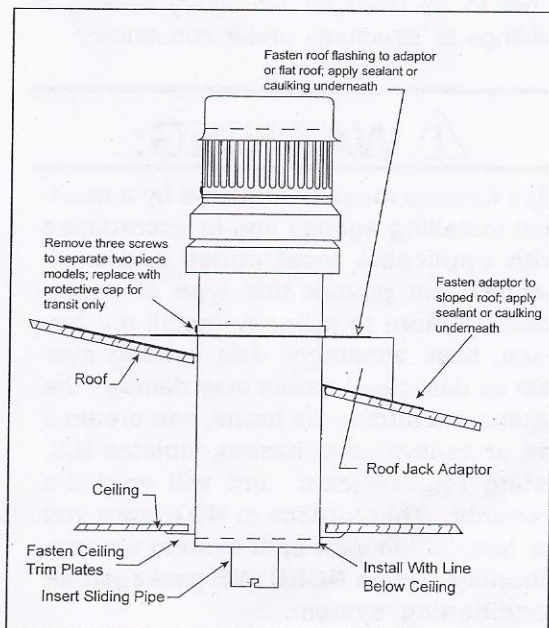


Figure 8. Roof Jack

A roof jack adaptor is required for use on a sloping roof. Center the adaptor opening over the roof opening, use sealant or caulking under the adaptor. Use roofing nails or screws on wood construction or sheet metal screws on metal roofs (caulking, nails or screws not provided).

Insert the vent pipe into the bottom of the roof jack; locking slot, downward, toward the furnace. Slide the pipe into the roof jack to a length that will allow a convenient reach to the connection at the top of the furnace.

Ease the roof jack assembly through the openings. The lower portion of the outer barrel must extend through the finished ceiling as indicated on the barrel. Use sealant or caulking on the roof or adaptor to seal under the flashing of the roof jack assembly.

Extend the vent pipe down to engage the locking slot with the screw in the top of the furnace flue pipe. Turn to lock and tighten the screw. All joints and connections should be inspected before start up of the furnace. (See Figures 8 & 9)

Fasten the ceiling trim/fire stop plates around the upper barrel with four nails or wood screws (not provided).

NOTE: Model SRJ-3, 4, and 5 roof jacks permit the top section to be removed for transit of the dwelling. If the top is removed, remaining openings must be sealed from rain, debris, etc., until the top is replaced. A plastic accessory cap is to be fastened to the lower roof jack section with the same screws used to mount the roof jack cap assembly. (See Figure 8)

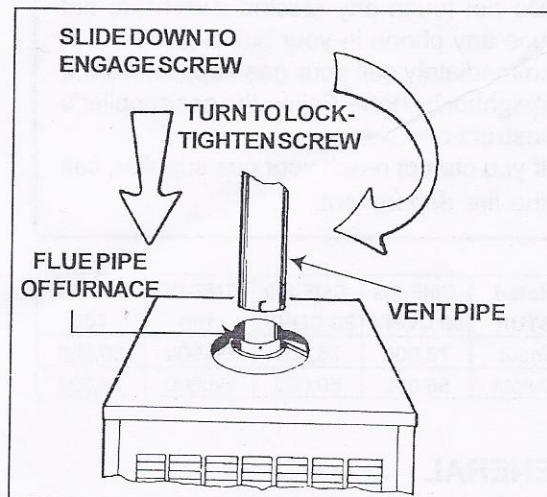
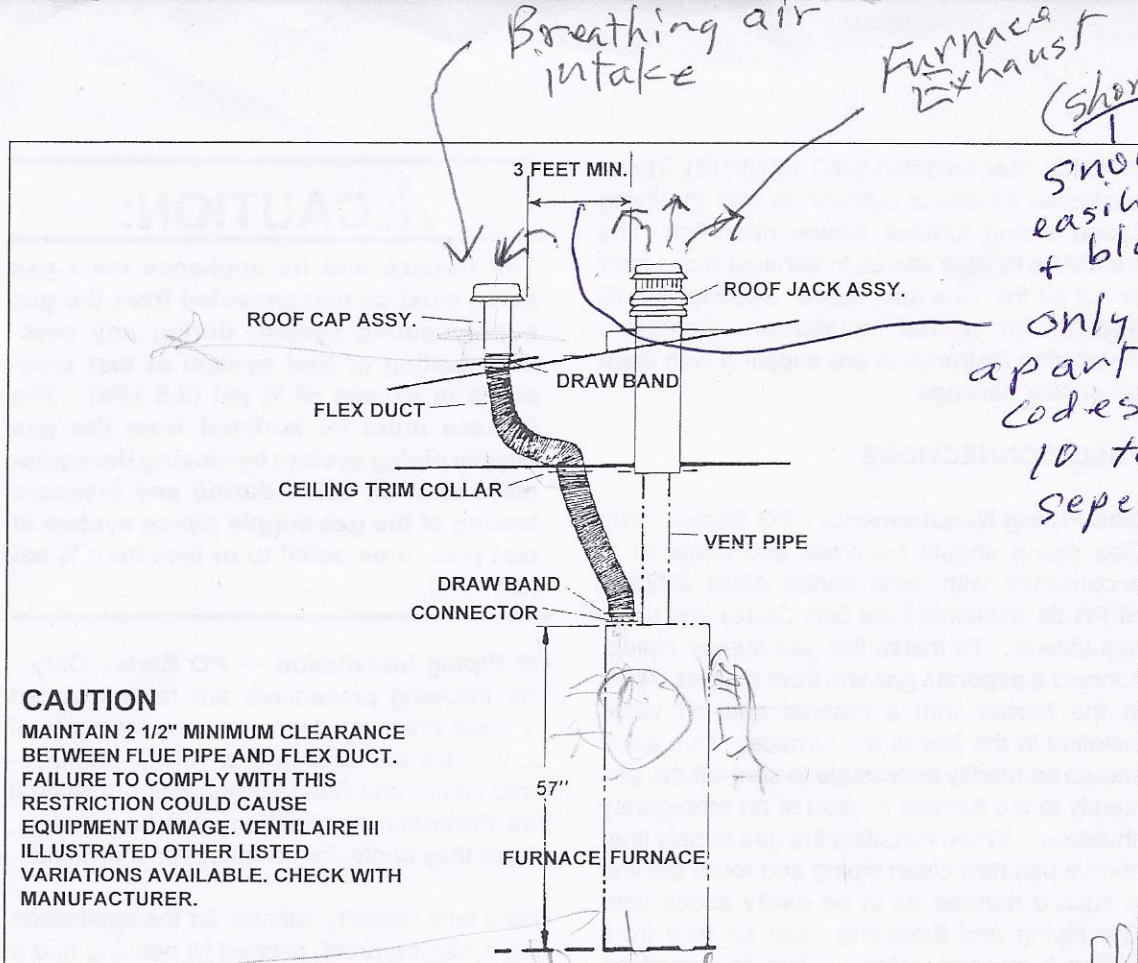


Figure 9. Vent Pipe Installation



Snow can easily cover + block!
only 3 feet apart - all other codes require 10 to 12 feet separation

Figure 10. Typical Installation

IMPORTANT: When the top section of the roof jack is removed for transit, a special warning label must be attached adjacent to the fuel line connection of the gas or oil burner. The special warning label is supplied with two piece roof jack assemblies.

Chimney Installation

When venting the CMF through an existing chimney, the materials, sizing, and installation of the chimney must be in accordance with the ANSI Z223.1/NFPA 54, (National Fuel Gas Code), ANSI/NFPA 31(Installation of Oil Burning Equipment), NFPA 211 (Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances) and all applicable local codes. The materials used must be capable of withstanding exposure to temperatures of at least 700°F .

The CMF power gas units are fan-assisted.

Installation of VentilAire III or IV Air Quality Package (Accessory)

The VentilAire air quality packages are available to meet the ventilation requirements as outlined

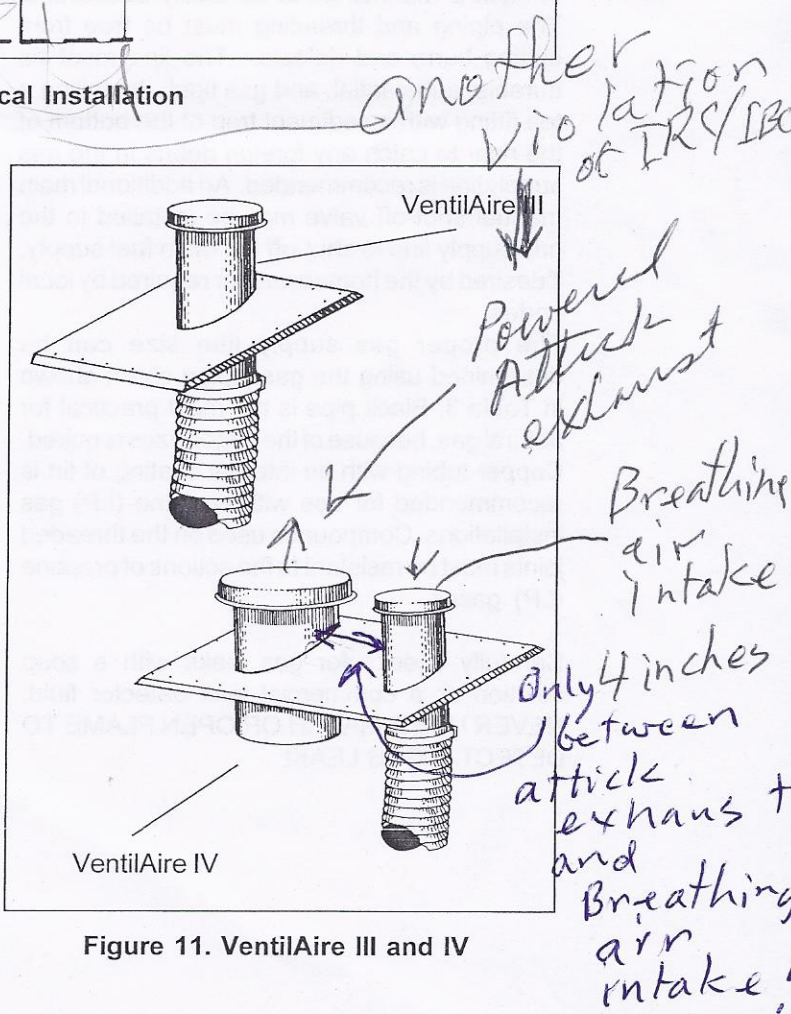


Figure 11. VentilAire III and IV

in H.U.D. Standard Part 3280.103 (b) (2). These packages introduce outdoor air into the living space during furnace blower operation. The VentilAire IV also serves to exhaust moist and/or hot air from the attic space. See Figures 10 and 11 for typical installation. Complete installation instructions are supplied with each air quality package.

FUEL CONNECTIONS

Gas Piping Requirements - PG Series Only

Gas piping should be sized and installed in accordance with local codes ANSI Z223.1/ NFPA 54 (National Fuel Gas Code) and utility regulations. To install the gas supply piping, connect a separate gas line from the gas meter to the burner with a manual shut-off valve installed in the line at the furnace. This valve should be readily accessible to shut-off the gas supply to the furnace in case of an emergency shutdown. When installing the gas supply line, always use new clean piping and route the line in such a manner as to be easily accessible. The piping and threading must be free from cutting burrs and defects. The line must be durable, substantial, and gas tight. Installing a tee fitting with a sediment trap at the bottom of the riser to catch any foreign debris in the gas supply line is recommended. An additional main manual shut-off valve may be installed in the gas supply line to shut-off the main fuel supply, if desired by the homeowner or required by local codes.

The proper gas supply line size can be determined using the gas piping chart, shown in Table 3. Black pipe is the most practical for natural gas, because of the larger sizes required. Copper tubing with an internal coating of tin is recommended for use with propane (LP) gas installations. Compounds used on the threaded joints must be resistant to the actions of propane (LP) gases.

Carefully check for gas leaks with a soap solution or a commercial leak detector fluid. **NEVER USE A MATCH OR OPEN FLAME TO DETECT A GAS LEAK!**

CAUTION:

The furnace and its appliance main gas valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of ½ psi (3.5 kPa). The furnace must be isolated from the gas supply piping system by closing the equipment shut-off valve during any pressure testing of the gas supply piping system at test pressures equal to or less than ½ psi (3.5 kPa).

Oil Piping Installation — PO Series Only

The following procedures are recommended as good practice. However, requirements of local codes and ordinances, H.U.D. Manufactured Home and Safety Standards or National Fire Protection Association must be satisfied, where they apply, for an approved installation.

Use a tank capacity suitable for the application with a weatherproof, capped fill opening and a shielded vent to let in air as fuel is used. The tank must be clean inside before filling. All water, rust, sediment, and other foreign matter must be flushed out.

If a two pipe system is used or if oil is taken from the bottom of the tank, a filter is recommended. Furthermore, a manual shut-off valve may be used on a single pipe or two pipe system. Please note that local codes will dictate the specific installation requirements.

Type of Pipe	Maximum Possible Pipe Length Required for Different Pipe Diameters			
	1/2"	5/8"	3/4"	1"
Black Iron Pipe for Natural Gas	20'	—	60'	100'
Aluminum or Copper Tubing* for Natural Gas	10'	—	30'	—
Aluminum or Copper Tubing for LP Gas	—	40'	100'	—

*Copper tubing should be internally tin coated.

Table 3. Pipe Length Selection Chart